

**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 275879

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

|                                                                                                                             |                                         |                               |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------|
| 1. Operator Name and Address<br>ADVANCE ENERGY PARTNERS HAT MESA, LLC<br>11490 Westheimer Rd., Ste 950<br>Houston, TX 77077 |                                         | 2. OGRID Number<br>372417     |
|                                                                                                                             |                                         | 3. API Number<br>30-025-46662 |
| 4. Property Code<br>319603                                                                                                  | 5. Property Name<br>MERCHANT STATE UNIT | 6. Well No.<br>554H           |

**7. Surface Location**

|               |               |                 |              |              |                  |               |                  |               |               |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|---------------|
| UL - Lot<br>A | Section<br>35 | Township<br>21S | Range<br>33E | Lot Idn<br>A | Feet From<br>100 | N/S Line<br>N | Feet From<br>677 | E/W Line<br>E | County<br>Lea |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|---------------|

**8. Proposed Bottom Hole Location**

|               |              |                 |              |              |                  |               |                  |               |               |
|---------------|--------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|---------------|
| UL - Lot<br>P | Section<br>2 | Township<br>22S | Range<br>33E | Lot Idn<br>P | Feet From<br>100 | N/S Line<br>S | Feet From<br>825 | E/W Line<br>E | County<br>Lea |
|---------------|--------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|---------------|

**9. Pool Information**

|                                  |       |
|----------------------------------|-------|
| WC-025 G-06 S213326D;BONE SPRING | 97929 |
|----------------------------------|-------|

**Additional Well Information**

|                           |                             |                                        |                         |                                    |
|---------------------------|-----------------------------|----------------------------------------|-------------------------|------------------------------------|
| 11. Work Type<br>New Well | 12. Well Type<br>OIL        | 13. Cable/Rotary                       | 14. Lease Type<br>State | 15. Ground Level Elevation<br>3656 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>21383 | 18. Formation<br>Bone Spring           | 19. Contractor          | 20. Spud Date<br>12/18/2019        |
| 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             | 1750          | 915             | 0             |
| Int1 | 12.25     | 9.625       | 40               | 4000          | 385             | 0             |
| Int1 | 12.5      | 9.625       | 40               | 5240          | 360             | 4000          |
| Prod | 8.5       | 5.5         | 20               | 21383         | 2890            | 0             |

**Casing/Cement Program: Additional Comments**

|  |
|--|
|  |
|--|

**22. Proposed Blowout Prevention Program**

| Type       | Working Pressure | Test Pressure | Manufacturer |
|------------|------------------|---------------|--------------|
| Double Ram | 5000             | 5000          |              |

|                                                                                                                                                                                                                                                                                                    |                                  |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------|
| 23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. | <b>OIL CONSERVATION DIVISION</b> |                                 |
| Signature:                                                                                                                                                                                                                                                                                         |                                  |                                 |
| Printed Name: Electronically filed by David C Harwell                                                                                                                                                                                                                                              | Approved By: Paul F Kautz        |                                 |
| Title: VP Engineering                                                                                                                                                                                                                                                                              | Title: Geologist                 |                                 |
| Email Address: dharwell@advanceenergypartners.com                                                                                                                                                                                                                                                  | Approved Date: 12/31/2019        | Expiration Date: 12/31/2021     |
| Date: 12/17/2019                                                                                                                                                                                                                                                                                   | Phone: 832-672-4604              | Conditions of Approval 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 (505) 748-1285 Fax: (505) 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) 476-3480 Fax: (505) 476-3482

State of New Mexico  
Energy, Minerals and Natural Resources Department

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 4, 2011

Submit one copy to appropriate  
District Office

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

☐ AMENDED REPORT

|                         |                                                   |                                               |
|-------------------------|---------------------------------------------------|-----------------------------------------------|
| API Number              | Pool Code<br>97929                                | Pool Name<br>WC-025 H-06 D213326F;BONE SPRING |
| Property Code<br>319603 | Property Name<br>MERCHANT STATE UNIT              | Well Number<br>554H                           |
| GRID No.<br>372417      | Operator Name<br>ADVANCE ENERGY PARTNERS HAT MESA | Elevation<br>3656'                            |

**Surface Location**

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | SOUTH/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 35      | 21 S     | 33 E  |         | 100           | NORTH            | 677           | EAST           | LEA    |

**Bottom Hole Location If Different From Surface**

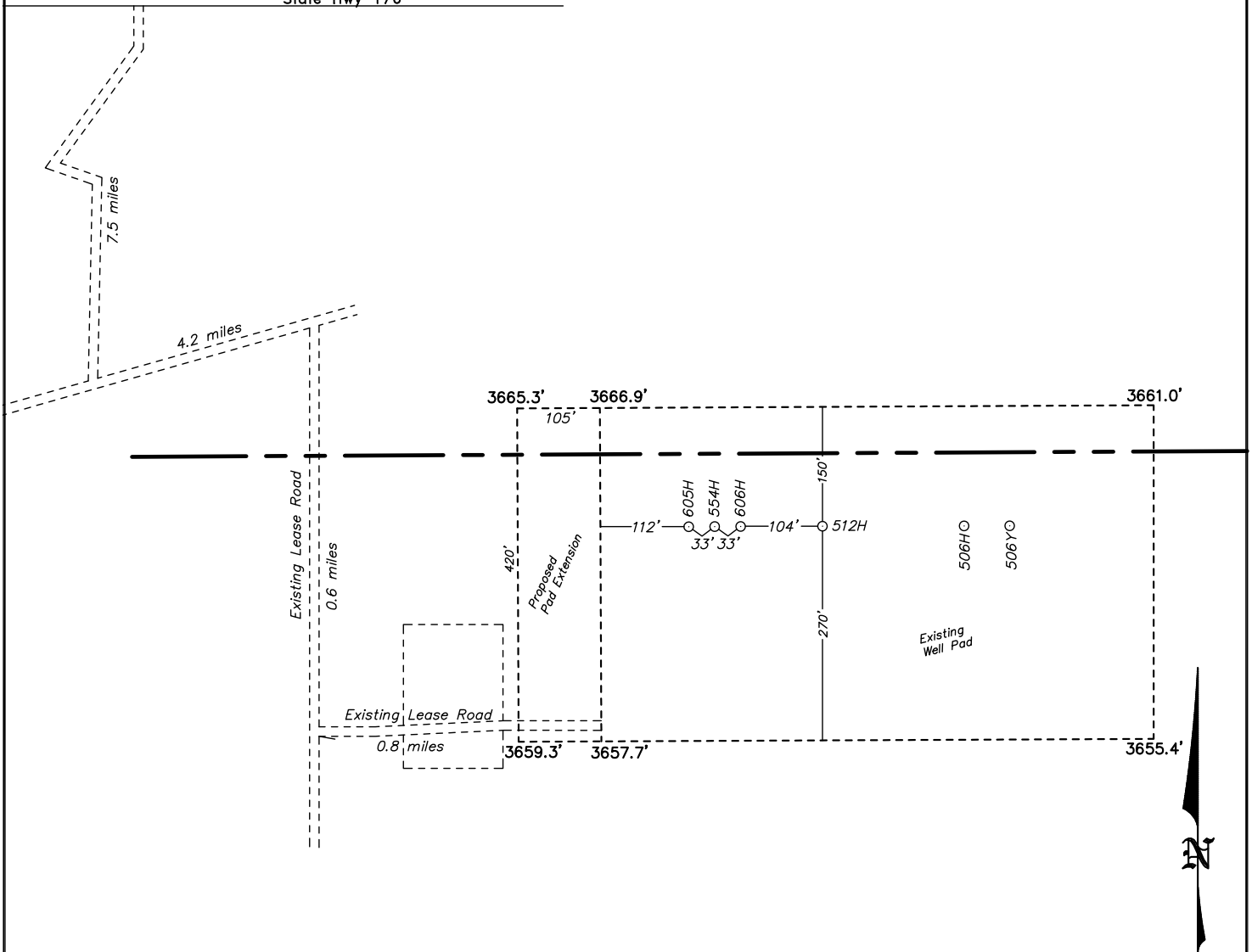
| UL or lot No.   | Section         | Township           | Range     | Lot Idn | Feet from the | SOUTH/South line | Feet from the | East/West line | County |
|-----------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| P               | 2               | 22 S               | 33 E      |         | 100           | SOUTH            | 825           | EAST           | LEA    |
| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |         |               |                  |               |                |        |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|  |                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                      |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>SURFACE LOCATION</b><br/>Lat - N 32.442253°<br/>Long - W 103.536849°<br/>NMSPCE - N 525539.0<br/>E 787048.9<br/>(NAD-83)</p>                             | <p><b>OPERATOR CERTIFICATION</b><br/>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.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>Email Address _____</p> |                                                                                                                                                                                                                                                                                                                                                                      |
|  | <p><b>FIRST TAKE POINT</b><br/>100' FNL &amp; 825' FEL<br/>Lat - N 32.442254°<br/>Long - W 103.537330°<br/>NMSPCE - N 525538.2<br/>E 786900.8<br/>(NAD-83)</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>SURVEYOR CERTIFICATION</b><br/>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.</p> <p>DECEMBER 11 2019</p> <p>Date Surveyed _____</p> <p>Signature &amp; Seal of Professional Surveyor _____</p> |
|  | <p><b>BOTTOM HOLE LOCATION</b><br/>Lat - N 32.413770°<br/>Long - W 103.537321°<br/>NMSPCE - N 515175.4<br/>E 786980.7<br/>(NAD-83)</p>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Certificate No. Gary L. Jones 7977<br/>BASIN SURVEYS</p>                                                                                                                                                                                                                                                                                                          |
|  | <p>Scale: 1" = 2000'<br/>WO Num.: 34992</p>                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                      |

**SECTION 35, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,  
LEA COUNTY,  
NEW MEXICO.**

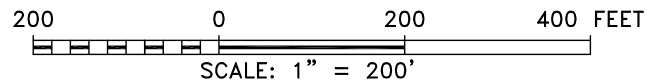
State Hwy 176



**ADVANCE ENERGY PARTNERS HAT MESA  
MERCHANT STATE UNIT 554H  
ELEV. - 3656'**

Lat - N 32.442253°  
Long - W 103.536849°  
NMSPCE - N 525539.0  
E 787048.9  
(NAD-83)

EUNICE, NM IS ±26 MILES TO THE EAST OF LOCATION.



**ADVANCE ENERGY PARTNERS HAT MESA**

REF: MERCHANT STATE UNIT 554H / WELL PAD TOPO

THE MERCHANT STATE UNIT 554H LOCATED 100' FROM  
THE NORTH LINE AND 677' FROM THE EAST LINE OF  
SECTION 35, TOWNSHIP 21 SOUTH, RANGE 33 EAST.

N.M.P.M., LEA COUNTY, NEW MEXICO.

**basin  
surveys**  
focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 393-7316 - Office  
(575) 392-2206 - Fax  
basinsurveys.com

W.O. Number: 34992

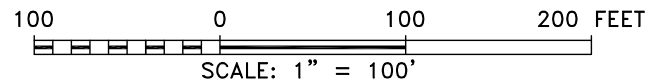
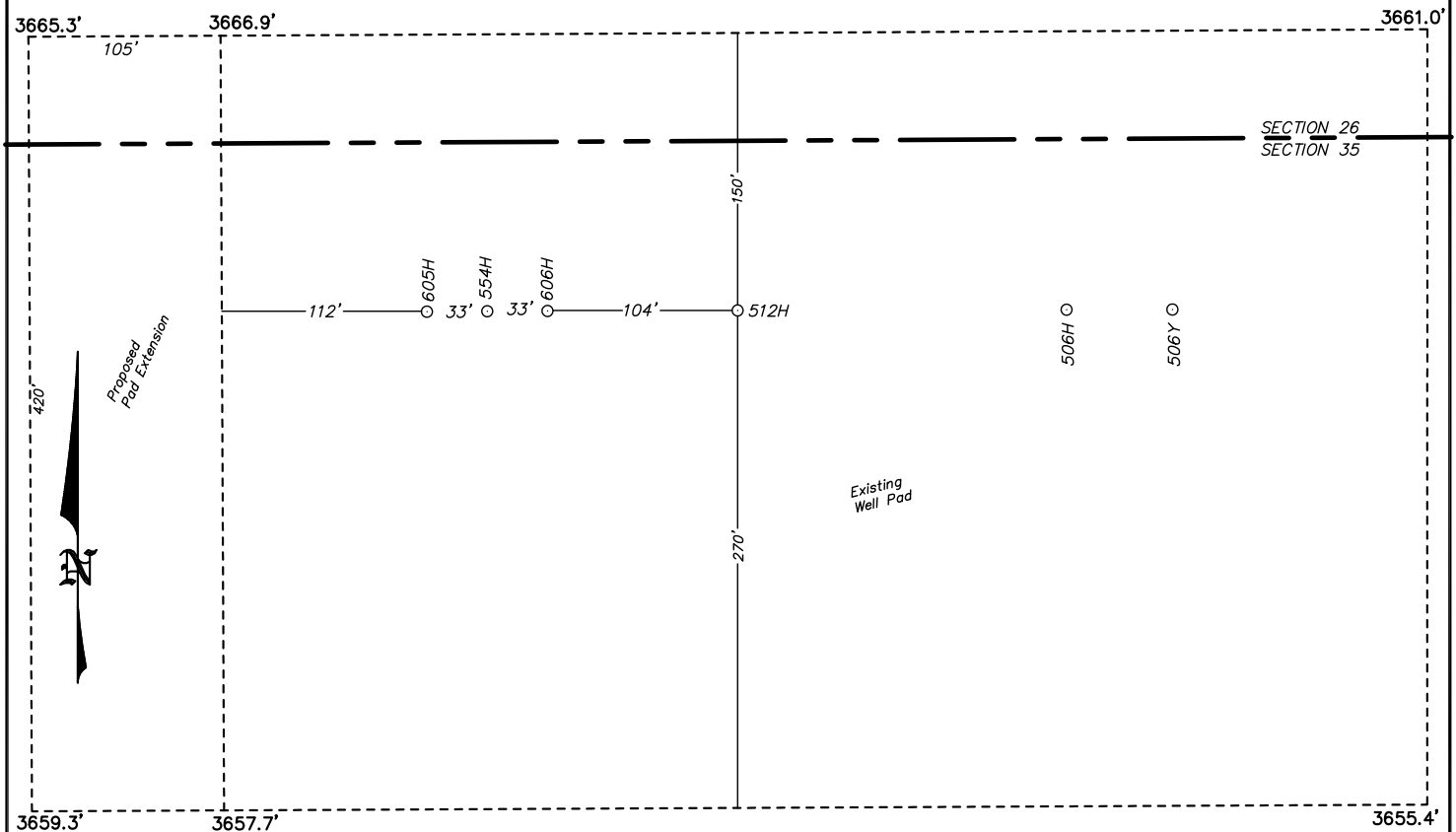
Drawn By: K. GOAD

Date: 12-13-2019

Survey Date: 12-11-2019

Sheet 1 of 1 Sheets

**SECTION 35, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,  
LEA COUNTY,  
NEW MEXICO.**



**ADVANCE ENERGY PARTNERS HAT MESA**

REF: MERCHANT STATE UNIT 554H / WELL PAD TOPO

THE MERCHANT STATE UNIT 554H LOCATED 100' FROM  
THE NORTH LINE AND 677' FROM THE EAST LINE OF  
SECTION 35, TOWNSHIP 21 SOUTH, RANGE 33 EAST.

N.M.P.M., LEA COUNTY, NEW MEXICO.

**basin  
surveys**  
focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 393-7316 - Office  
(575) 392-2206 - Fax  
basinsurveys.com

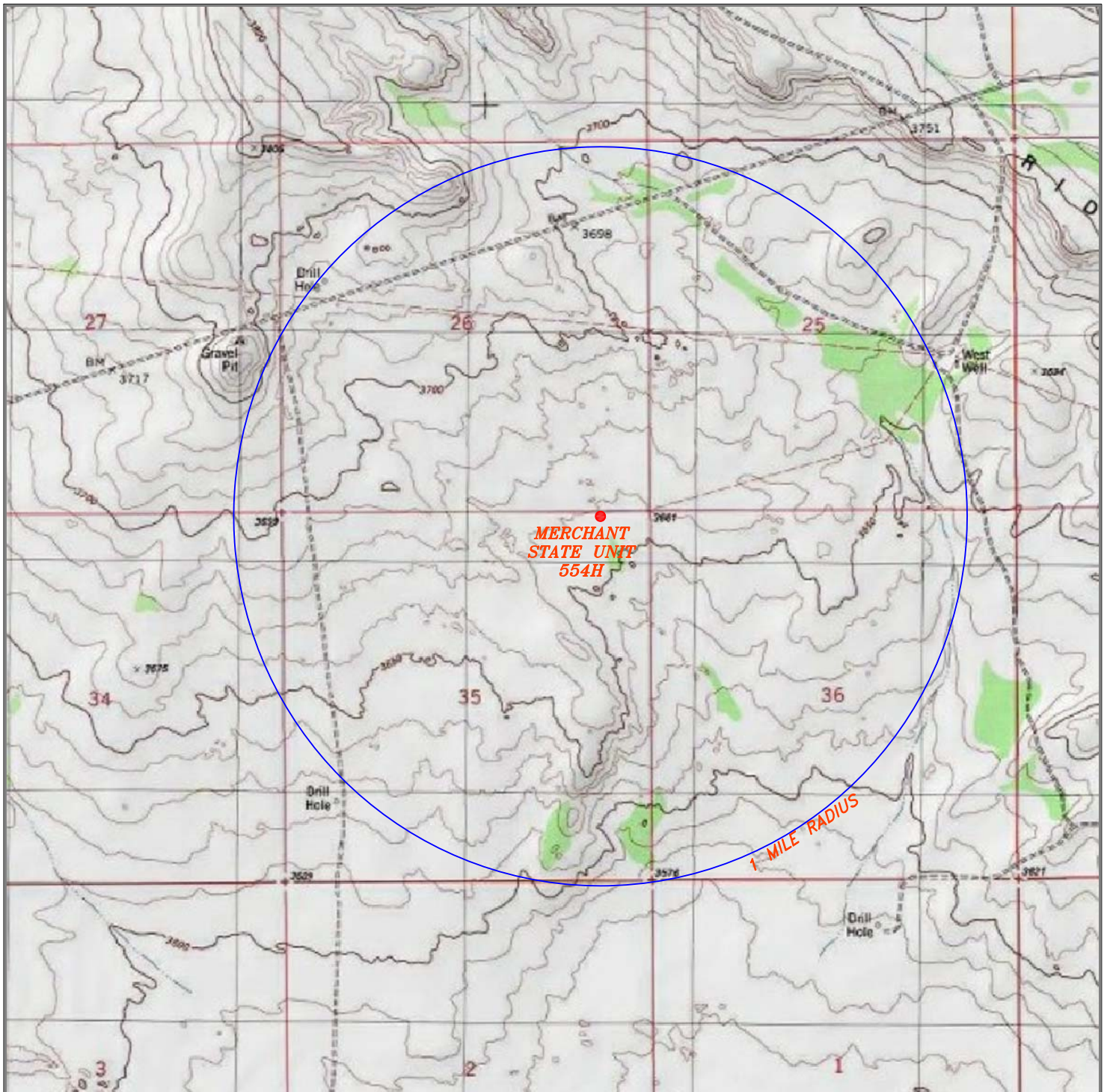
W.O. Number: 34992

Drawn By: K. GOAD

Date: 12-13-2019

Survey Date: 12-11-2019

Sheet 1 of 1 Sheets



### MERCHANT STATE UNIT 554H

Located 100' FNL and 677' FEL  
 Section 35, Township 21 South, Range 33 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
[basinsurveys.com](http://basinsurveys.com)

0' 1000' 2000' 3000' 1500'  
 SCALE: 1" = 2000'

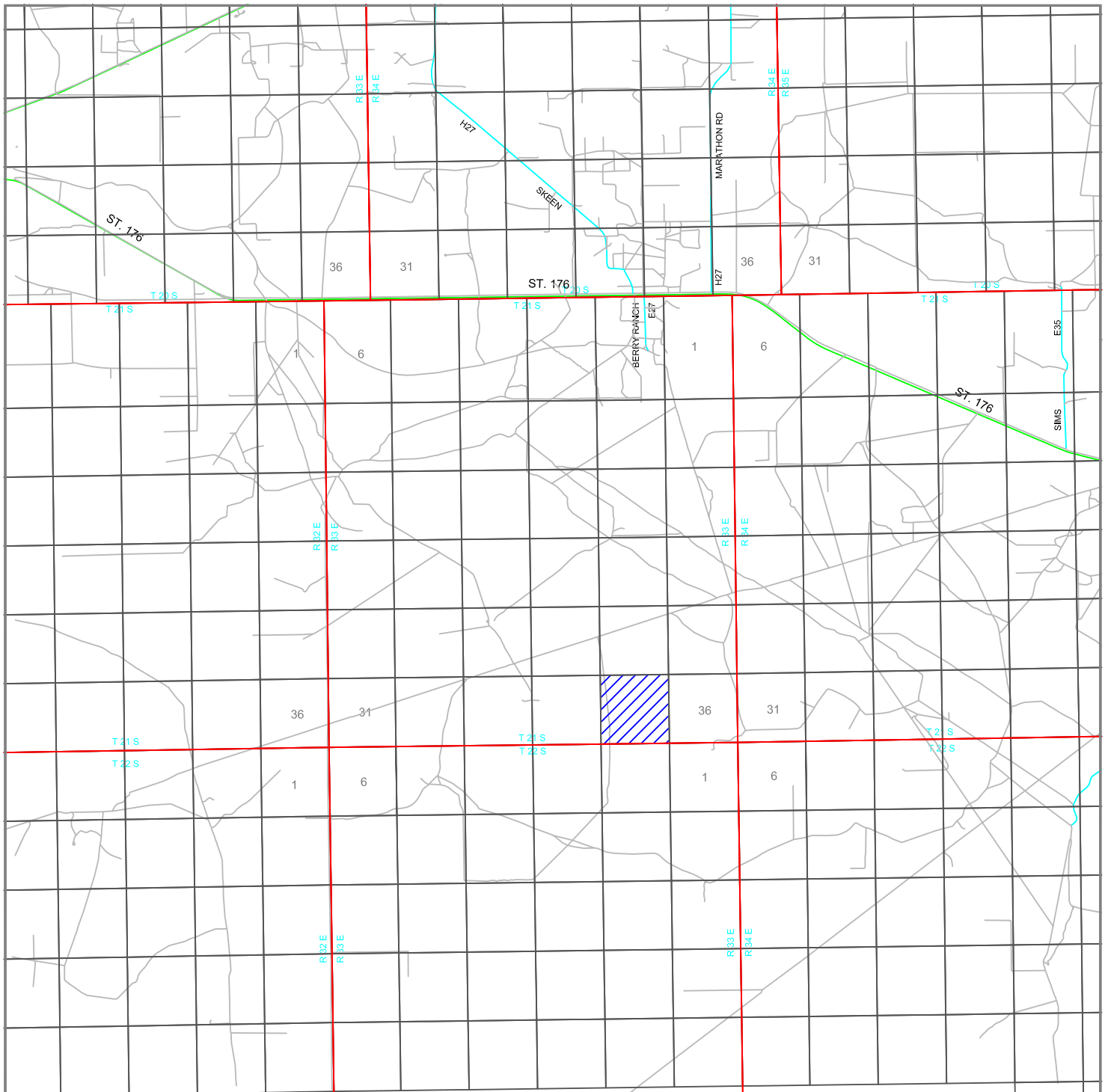
W.O. Number: KJG 34992

Survey Date: 12-13-2019

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND



**ADVANCE  
 ENERGY  
 PARTNERS  
 HAT MESA**



## MERCHANT STATE UNIT 554H

Located 100' FNL and 677' FEL  
 Section 35, Township 21 South, Range 33 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

0 1 MI 2 MI 3 MI 4 MI  
 SCALE: 1" = 2 MILES

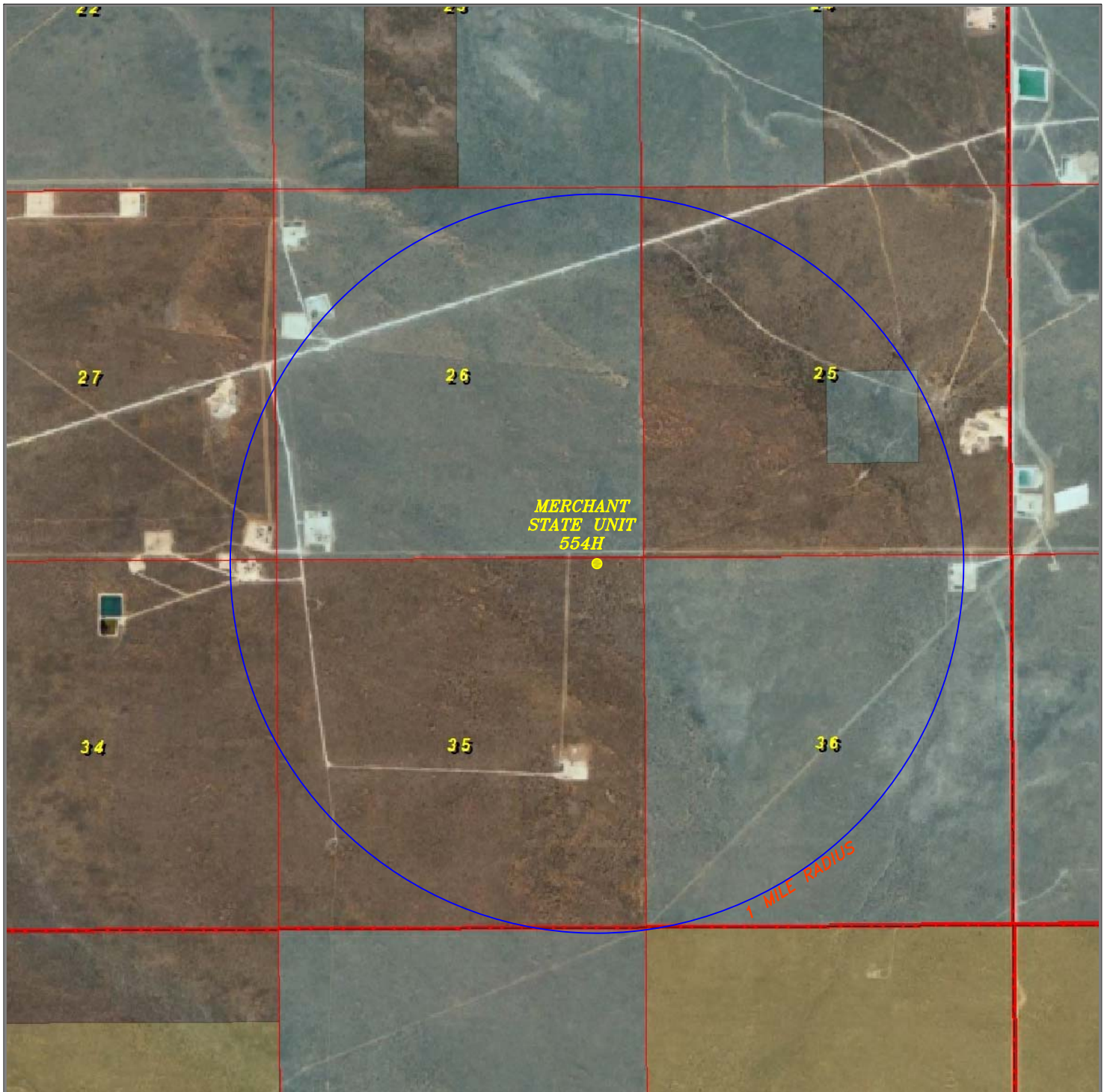
W.O. Number: KJG 34992

Survey Date: 12-13-2019

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND



**ADVANCE  
 ENERGY  
 PARTNERS  
 HAT MESA**



## MERCHANT STATE UNIT 554H

Located 100' FNL and 677' FEL  
 Section 35, Township 21 South, Range 33 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
[basinsurveys.com](http://basinsurveys.com)

0' 1000' 2000' 3000' 1500'  
 SCALE: 1" = 2000'

W.O. Number: KJG 34992

Survey Date: 12-13-2019

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND



**ADVANCE  
 ENERGY  
 PARTNERS  
 HAT MESA**

**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**

## GAS CAPTURE PLAN

Date: 1/2/2020

☒ Original

Operator & OGRID No.: [372417] ADVANCE ENERGY PARTNERS HAT MESA, LLC

☐ Amended - Reason for  
Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### **Well(s)/Production Facility – Name of facility**

The well(s) that will be located at the production facility are shown in the table below.

| Well Name                 | API          | Well Location<br>(ULSTR) | Footages    | Expected<br>MCF/D | Flared or<br>Vented | Comments                                 |
|---------------------------|--------------|--------------------------|-------------|-------------------|---------------------|------------------------------------------|
| MERCHANT STATE UNIT #554H | 30-025-46662 | A-35-21S-33E             | 0100N 0677E | 1500              | Flared              | Flare during initial testing and cleanup |

### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to TARGA MIDSTREAM SERVICES LLC and will be connected to TARGA MIDSTREAM SERVICES LLC Low Pressure gathering system located in Lea County, New Mexico. It will require 0' of pipeline to connect the facility to Low Pressure gathering system. ADVANCE ENERGY PARTNERS HAT MESA, LLC provides (periodically) to TARGA MIDSTREAM SERVICES LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, ADVANCE ENERGY PARTNERS HAT MESA, LLC and TARGA MIDSTREAM SERVICES LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at TARGA MIDSTREAM SERVICES LLC Processing Plant located in Sec. 36, Twn. 19S, Rng. 36E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### **Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on TARGA MIDSTREAM SERVICES LLC system at that time. Based on current information, it is ADVANCE ENERGY PARTNERS HAT MESA, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**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 APD Comments

Permit 275879

**PERMIT COMMENTS**

|                                                                                                                                    |                                    |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Operator Name and Address:<br>ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417]<br>11490 Westheimer Rd., Ste 950<br>Houston, TX 77077 | API Number:<br>30-025-46662        |
|                                                                                                                                    | Well:<br>MERCHANT STATE UNIT #554H |

|            |         |              |
|------------|---------|--------------|
| Created By | Comment | Comment Date |
|------------|---------|--------------|

**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 APD Conditions

Permit 275879

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                                                                    |                                    |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Operator Name and Address:<br>ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417]<br>11490 Westheimer Rd., Ste 950<br>Houston, TX 77077 | API Number:<br>30-025-46662        |
|                                                                                                                                    | Well:<br>MERCHANT STATE UNIT #554H |

|              |                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OCD Reviewer | Condition                                                                                                                                                                                                                                                                                                                                                                                              |
| pkautz       | Will require a directional survey with the C-104                                                                                                                                                                                                                                                                                                                                                       |
| pkautz       | Potash Area - Three String Casing Program - In accordance with R-111-P all strings shall be cemented to surface. Salt Protection String - If the cement fails to reach the surface or the bottom of the cellar, where required, the top of the cement shall be located by a temperature or other survey and additional cementing shall be done until the cement is brought to the surface.             |
| pkautz       | If cement does not circulate to surface, must run temperature survey or other log to determine top of cement                                                                                                                                                                                                                                                                                           |
| pkautz       | Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water                                                                                                                                                                                                                                                                                                   |
| pkautz       | 1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104                                                    |
| pkautz       | It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required. |
| pkautz       | Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.                                      |



11490 Westheimer Road, Suite 950, Houston, Texas 77077 • Phone 832-672-4700 • Fax 832-672-4609

December 16, 2019

Oil Conservation Division  
Energy Minerals and Natural Resources Department  
1625 N. French Dr.  
Hobbs, New Mexico 88240

Attn: Mr. Paul Kautz

**Re: Application for Merchant State Unit 554H  
Unit A, Section 35-T21S-R33E  
Lea County, New Mexico**

Dear Mr. Kautz,

I am providing answers to your questions and requests for additional information about any potash leases within 1 mile of the referenced Section 35.

This letter is to confirm there are no potash leases within 1 mile of Section 35, Township 21 South, Range 33 East, Lea County, NM.

Sincerely,

A handwritten signature in cursive script that reads 'Paul Burdick'.

Paul J. Burdick  
Land Advisor  
Advance Energy Partners Hat Mesa, LLC  
Email: [PBurdick@Advanceenergypartners.com](mailto:PBurdick@Advanceenergypartners.com)  
Office Telephone: 832-672-4623  
Cell Telephone: 713-228-7320



Merchant State Unit 554H  
Lea County, New Mexico  
H&P 620  
Plan 0.1



## SITE DETAILS: Merchant State Unit 554H

Site Centre Northing: 525539.00  
Easting: 787048.90

Positional Uncertainty: 0.00  
Convergence: 0.43  
Local North: Grid



Azimuths to Grid North  
True North: -0.43°  
Magnetic North: 6.14°

Magnetic Field  
Strength: 48069.3nT  
Dip Angle: 60.20°  
Date: 12/16/2019  
Model: MVHD

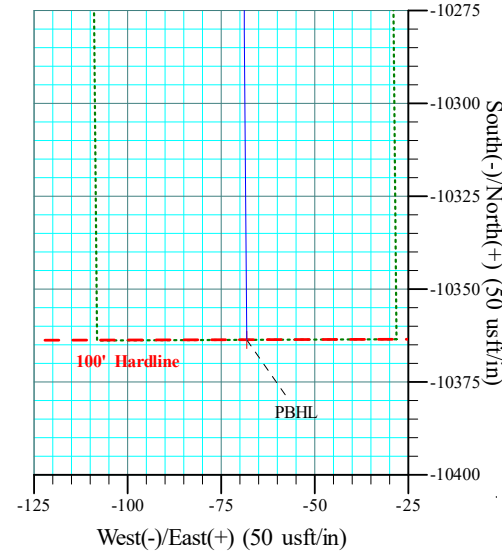
Magnetic North: 6.14° to Grid North

## PROJECT DETAILS: Lea County, New Mexico

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Depth Reference:  
3656'GL+26.5'KB @ 3682.50usft (H&P 620)

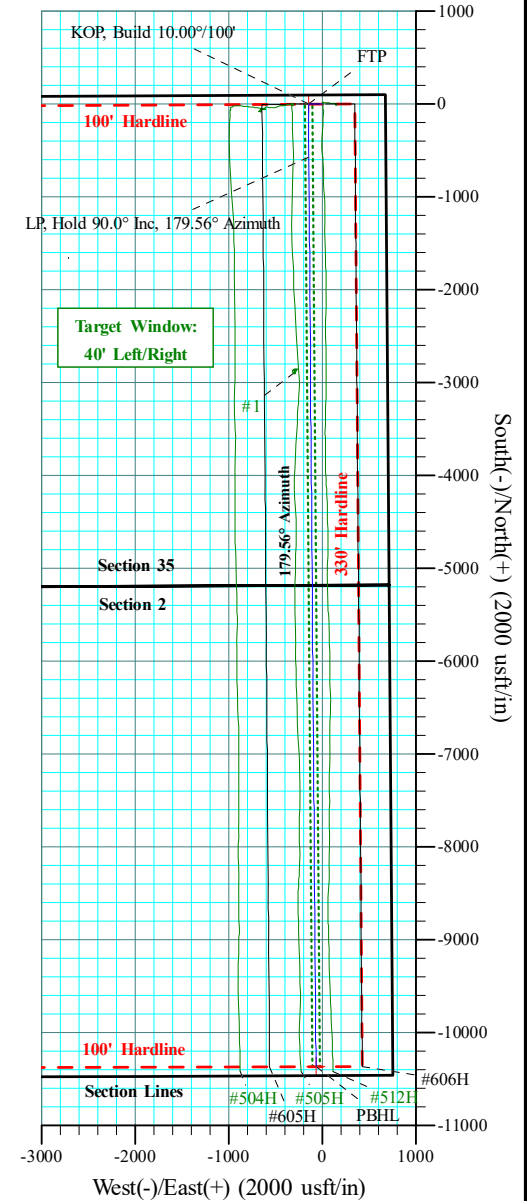
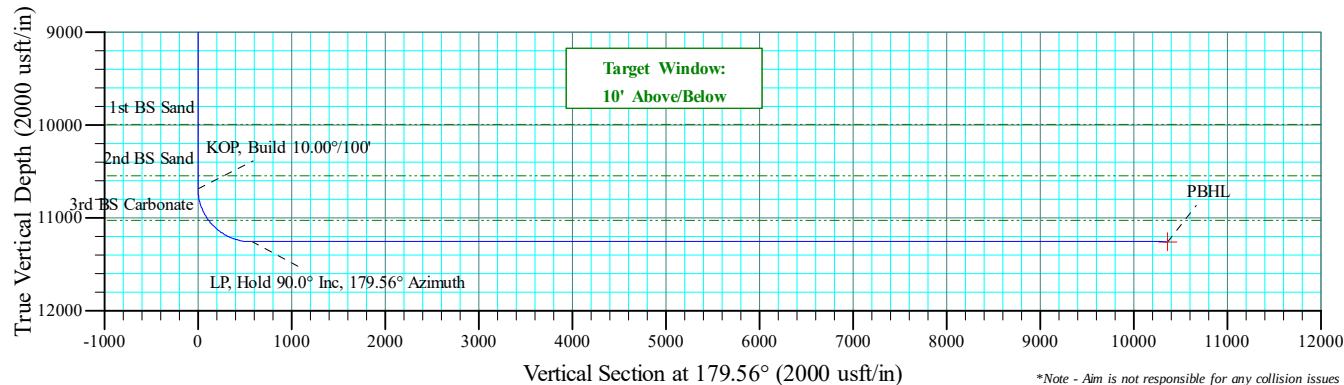


## SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD      | +N/-S     | +E/-W   | Dleg  | TFace  | Vsect    | Annotation                          |
|-----|----------|-------|--------|----------|-----------|---------|-------|--------|----------|-------------------------------------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00     | 0.00      | 0.00    | 0.00  | 0.00   | 0.00     |                                     |
| 2   | 6200.00  | 0.00  | 0.00   | 6200.00  | 0.00      | 0.00    | 0.00  | 0.00   | 0.00     | Build 1.00°/100'                    |
| 3   | 6700.00  | 5.00  | 269.69 | 6699.37  | -0.12     | -21.80  | 1.00  | 269.69 | -0.05    | Hold 5.0° Inc, 269.69° Azimuth      |
| 4   | 7898.96  | 5.00  | 269.69 | 7893.77  | -0.68     | -126.30 | 0.00  | 0.00   | -0.29    | Drop 1.00°/100'                     |
| 5   | 8398.96  | 0.00  | 0.00   | 8393.13  | -0.80     | -148.10 | 1.00  | 180.00 | -0.34    | Hold Vertical                       |
| 6   | 10692.87 | 0.00  | 0.00   | 10687.04 | -0.80     | -148.10 | 0.00  | 0.00   | -0.34    | KOP, Build 10.00°/100'              |
| 7   | 11592.87 | 90.00 | 179.56 | 11260.00 | -573.74   | -143.68 | 10.00 | 179.56 | 572.62   | LP, Hold 90.0° Inc, 179.56° Azimuth |
| 8   | 21383.02 | 90.00 | 179.56 | 11260.00 | -10363.60 | -68.20  | 0.00  | 0.00   | 10362.77 | PBHL                                |

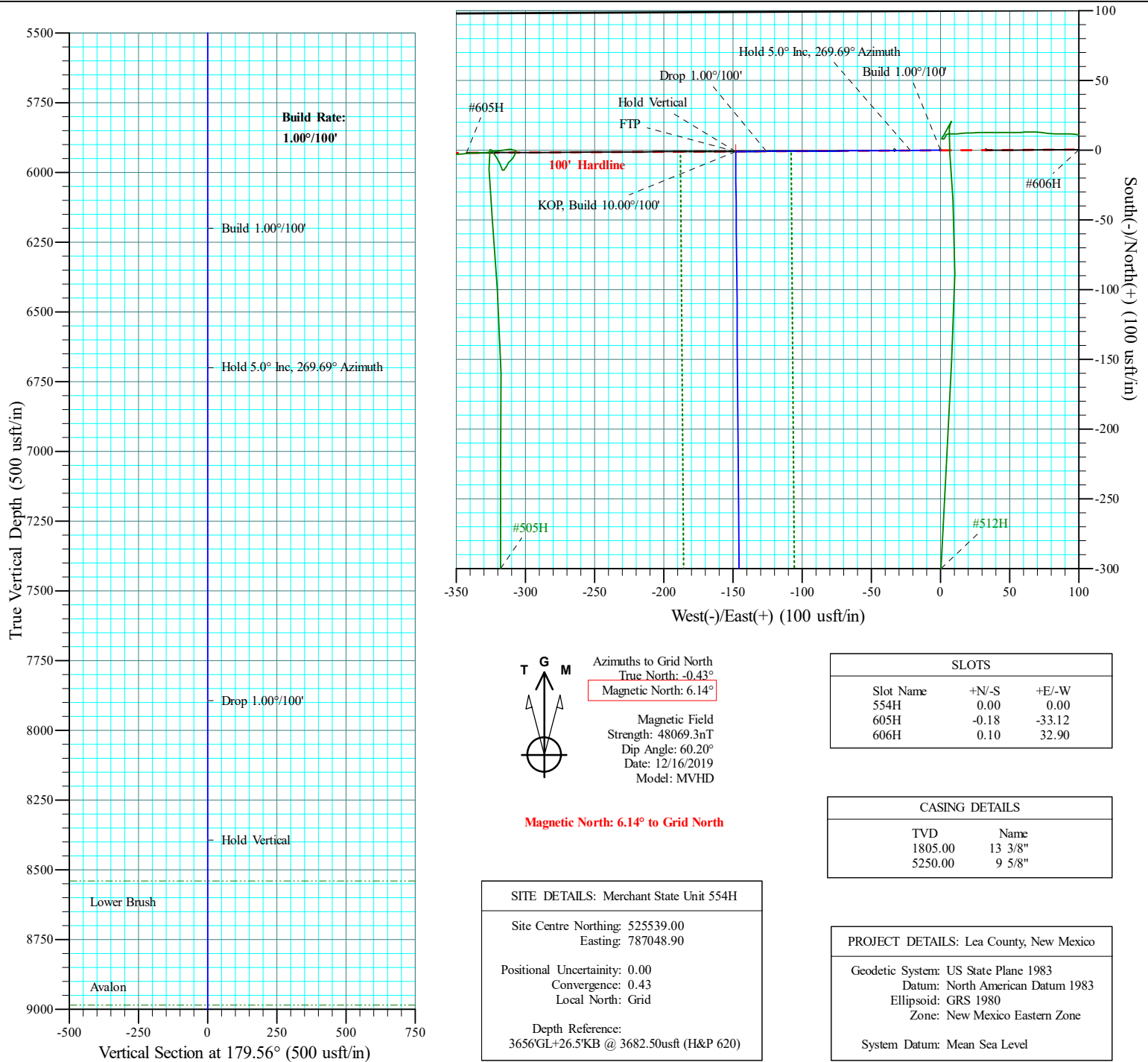
## DESIGN TARGET DETAILS

| Name                | TVD      | +N/-S     | +E/-W   | Northing  | Easting   | Latitude         | Longitude         |
|---------------------|----------|-----------|---------|-----------|-----------|------------------|-------------------|
| FTP (Merchant554H)  | 0.00     | -0.80     | -148.10 | 525538.20 | 786900.80 | 32° 26' 32.115 N | 103° 32' 14.386 W |
| PBHL (Merchant554H) | 11260.00 | -10363.60 | -68.20  | 515175.40 | 786980.70 | 32° 24' 49.571 N | 103° 32' 14.355 W |





**Merchant State Unit 554H**  
**Lea County, New Mexico**  
**H&P 620**  
**Plan 0.1**



*\*Note - Aim is not responsible for collision issues against any unknown offset wells.*

| DESIGN TARGET DETAILS |          |           |         |           |           |                  |                   |
|-----------------------|----------|-----------|---------|-----------|-----------|------------------|-------------------|
| Name                  | TVD      | +N/-S     | +E/-W   | Northing  | Easting   | Latitude         | Longitude         |
| FTP (Merchant554H)    | 0.00     | -0.80     | -148.10 | 525538.20 | 786900.80 | 32° 26' 32.115 N | 103° 32' 14.386 W |
| PBHL (Merchant554H)   | 11260.00 | -10363.60 | -68.20  | 515175.40 | 786980.70 | 32° 24' 49.571 N | 103° 32' 14.355 W |

Drawn By: IG  
Date Created: 12/16/2019  
Date Revised: 12/16/2019  
File: Advance Energy - Merchant State Unit 554H Plan 0.1.wpc

| SECTION DETAILS |          |       |        |          |           |         |       |        |          |                                     |
|-----------------|----------|-------|--------|----------|-----------|---------|-------|--------|----------|-------------------------------------|
| Sec             | MD       | Inc   | Azi    | TVD      | +N/-S     | +E/-W   | Dleg  | TFace  | VSect    | Annotation                          |
| 1               | 0.00     | 0.00  | 0.00   | 0.00     | 0.00      | 0.00    | 0.00  | 0.00   | 0.00     |                                     |
| 2               | 6200.00  | 0.00  | 0.00   | 6200.00  | 0.00      | 0.00    | 0.00  | 0.00   | 0.00     | Build 1.00°/100'                    |
| 3               | 6700.00  | 5.00  | 269.69 | 6699.37  | -0.12     | -21.80  | 1.00  | 269.69 | -0.05    | Hold 5.0° Inc, 269.69° Azimuth      |
| 4               | 7898.96  | 5.00  | 269.69 | 7893.77  | -0.68     | -126.30 | 0.00  | 0.00   | -0.29    | Drop 1.00°/100'                     |
| 5               | 8398.96  | 0.00  | 0.00   | 8393.13  | -0.80     | -148.10 | 1.00  | 180.00 | -0.34    | Hold Vertical                       |
| 6               | 10692.87 | 0.00  | 0.00   | 10687.04 | -0.80     | -148.10 | 0.00  | 0.00   | -0.34    | KOP, Build 10.00°/100'              |
| 7               | 11592.87 | 90.00 | 179.56 | 11260.00 | -573.74   | -143.68 | 10.00 | 179.56 | 572.62   | LP, Hold 90.0° Inc, 179.56° Azimuth |
| 8               | 21383.02 | 90.00 | 179.56 | 11260.00 | -10363.60 | -68.20  | 0.00  | 0.00   | 10362.77 | PBHL                                |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

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

| Site                  |           | Merchant State Unit 554H |                 |                   |                   |
|-----------------------|-----------|--------------------------|-----------------|-------------------|-------------------|
| Site Position:        |           | Northing:                | 525,539.00 usft | Latitude:         | 32° 26' 32.112 N  |
| From:                 | Map       | Easting:                 | 787,048.90 usft | Longitude:        | 103° 32' 12.658 W |
| Position Uncertainty: | 0.00 usft | Slot Radius:             | 13-3/16 "       | Grid Convergence: | 0.43 °            |

| Well                 | #554H - Slot 554H |           |                     |                 |               |                   |
|----------------------|-------------------|-----------|---------------------|-----------------|---------------|-------------------|
| Well Position        | +N/-S             | 0.00 usft | Northing:           | 525,539.00 usft | Latitude:     | 32° 26' 32.112 N  |
|                      | +E/-W             | 0.00 usft | Easting:            | 787,048.90 usft | Longitude:    | 103° 32' 12.658 W |
| Position Uncertainty |                   | 0.00 usft | Wellhead Elevation: | usft            | Ground Level: | 3,656.00 usft     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Lateral 1r0       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | MVHD              | 12/16/2019         | 6.57                   | 60.20                | 48,069.30584377            |

|                          |                                |                     |                      |                      |  |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| <b>Design</b>            | Plan 0.1                       |                     |                      |                      |  |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |  |
| <b>Version:</b>          | <b>Phase:</b>                  | PROTOTYPE           | <b>Tie On Depth:</b> | 0.00                 |  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |  |
|                          | 0.00                           | 0.00                | 0.00                 | 179.56               |  |

|                            |                  |                          |                  |                    |  |
|----------------------------|------------------|--------------------------|------------------|--------------------|--|
| <b>Survey Tool Program</b> | <b>Date</b>      | 12/16/2019               |                  |                    |  |
| <b>From (usft)</b>         | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| 0.00                       | 21,383.02        | Plan 0.1 (Lateral 1r0)   | B001Mb_MWD+HRGM  | OWSG MWD + HRGM    |  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Planned Survey</b>        |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| <b>FTP (Merchant554H)</b>    |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| 100.00                       | 0.00                   | 0.00               | 100.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 200.00                       | 0.00                   | 0.00               | 200.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 300.00                       | 0.00                   | 0.00               | 300.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 400.00                       | 0.00                   | 0.00               | 400.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 500.00                       | 0.00                   | 0.00               | 500.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 600.00                       | 0.00                   | 0.00               | 600.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 700.00                       | 0.00                   | 0.00               | 700.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 800.00                       | 0.00                   | 0.00               | 800.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 900.00                       | 0.00                   | 0.00               | 900.00                       | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 1,000.00              | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00              | 0.00            | 0.00        | 1,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00              | 0.00            | 0.00        | 1,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00              | 0.00            | 0.00        | 1,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 0.00            | 0.00        | 1,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00              | 0.00            | 0.00        | 1,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 0.00            | 0.00        | 1,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,677.00              | 0.00            | 0.00        | 1,677.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Rustler</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,700.00              | 0.00            | 0.00        | 1,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00              | 0.00            | 0.00        | 1,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,805.00              | 0.00            | 0.00        | 1,805.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>13 3/8"</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,900.00              | 0.00            | 0.00        | 1,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 0.00            | 0.00        | 2,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00              | 0.00            | 0.00        | 2,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00              | 0.00            | 0.00        | 2,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00              | 0.00            | 0.00        | 2,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00              | 0.00            | 0.00        | 2,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00              | 0.00            | 0.00        | 2,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 0.00            | 0.00        | 2,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 0.00            | 0.00        | 2,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 0.00            | 0.00        | 2,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 0.00            | 0.00        | 3,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 0.00            | 0.00        | 3,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 0.00            | 0.00        | 3,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 0.00            | 0.00        | 3,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 0.00            | 0.00        | 3,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 0.00            | 0.00        | 3,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 0.00            | 0.00        | 3,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 0.00            | 0.00        | 3,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 0.00            | 0.00        | 3,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 0.00            | 0.00        | 3,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00              | 0.00            | 0.00        | 4,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00              | 0.00            | 0.00        | 4,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00              | 0.00            | 0.00        | 4,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00              | 0.00            | 0.00        | 4,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00              | 0.00            | 0.00        | 4,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00              | 0.00            | 0.00        | 4,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00              | 0.00            | 0.00        | 4,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00              | 0.00            | 0.00        | 4,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00              | 0.00            | 0.00        | 4,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

| Planned Survey                 |                 |             |                       |              |              |                         |                         |                        |                       |
|--------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)          | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 4,900.00                       | 0.00            | 0.00        | 4,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                       | 0.00            | 0.00        | 5,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00                       | 0.00            | 0.00        | 5,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,175.00                       | 0.00            | 0.00        | 5,175.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| Limestone Base                 |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,200.00                       | 0.00            | 0.00        | 5,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,250.00                       | 0.00            | 0.00        | 5,250.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 9 5/8"                         |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,300.00                       | 0.00            | 0.00        | 5,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                       | 0.00            | 0.00        | 5,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                       | 0.00            | 0.00        | 5,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                       | 0.00            | 0.00        | 5,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00                       | 0.00            | 0.00        | 5,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00                       | 0.00            | 0.00        | 5,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00                       | 0.00            | 0.00        | 5,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00                       | 0.00            | 0.00        | 6,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                       | 0.00            | 0.00        | 6,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                       | 0.00            | 0.00        | 6,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| Build 1.00°/100'               |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,300.00                       | 1.00            | 269.69      | 6,300.00              | 0.00         | -0.87        | 0.00                    | 1.00                    | 1.00                   | 0.00                  |
| 6,400.00                       | 2.00            | 269.69      | 6,399.96              | -0.02        | -3.49        | -0.01                   | 1.00                    | 1.00                   | 0.00                  |
| 6,500.00                       | 3.00            | 269.69      | 6,499.86              | -0.04        | -7.85        | -0.02                   | 1.00                    | 1.00                   | 0.00                  |
| 6,600.00                       | 4.00            | 269.69      | 6,599.68              | -0.08        | -13.96       | -0.03                   | 1.00                    | 1.00                   | 0.00                  |
| 6,700.00                       | 5.00            | 269.69      | 6,699.37              | -0.12        | -21.80       | -0.05                   | 1.00                    | 1.00                   | 0.00                  |
| Hold 5.0° Inc, 269.69° Azimuth |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,800.00                       | 5.00            | 269.69      | 6,798.99              | -0.16        | -30.52       | -0.07                   | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00                       | 5.00            | 269.69      | 6,898.60              | -0.21        | -39.23       | -0.09                   | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00                       | 5.00            | 269.69      | 6,998.22              | -0.26        | -47.95       | -0.11                   | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00                       | 5.00            | 269.69      | 7,097.84              | -0.31        | -56.66       | -0.13                   | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00                       | 5.00            | 269.69      | 7,197.46              | -0.35        | -65.38       | -0.15                   | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00                       | 5.00            | 269.69      | 7,297.08              | -0.40        | -74.10       | -0.17                   | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00                       | 5.00            | 269.69      | 7,396.70              | -0.45        | -82.81       | -0.19                   | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00                       | 5.00            | 269.69      | 7,496.32              | -0.49        | -91.53       | -0.21                   | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00                       | 5.00            | 269.69      | 7,595.94              | -0.54        | -100.24      | -0.23                   | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00                       | 5.00            | 269.69      | 7,695.56              | -0.59        | -108.96      | -0.25                   | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00                       | 5.00            | 269.69      | 7,795.18              | -0.64        | -117.67      | -0.27                   | 0.00                    | 0.00                   | 0.00                  |
| 7,898.96                       | 5.00            | 269.69      | 7,893.77              | -0.68        | -126.30      | -0.29                   | 0.00                    | 0.00                   | 0.00                  |
| Drop 1.00°/100'                |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,900.00                       | 4.99            | 269.69      | 7,894.80              | -0.68        | -126.39      | -0.29                   | 1.00                    | -1.00                  | 0.00                  |
| 8,000.00                       | 3.99            | 269.69      | 7,994.49              | -0.72        | -134.22      | -0.31                   | 1.00                    | -1.00                  | 0.00                  |
| 8,100.00                       | 2.99            | 269.69      | 8,094.30              | -0.76        | -140.30      | -0.32                   | 1.00                    | -1.00                  | 0.00                  |
| 8,200.00                       | 1.99            | 269.69      | 8,194.21              | -0.78        | -144.65      | -0.33                   | 1.00                    | -1.00                  | 0.00                  |
| 8,300.00                       | 0.99            | 269.69      | 8,294.17              | -0.80        | -147.25      | -0.34                   | 1.00                    | -1.00                  | 0.00                  |
| 8,398.96                       | 0.00            | 0.00        | 8,393.13              | -0.80        | -148.10      | -0.34                   | 1.00                    | -1.00                  | 0.00                  |
| Hold Vertical                  |                 |             |                       |              |              |                         |                         |                        |                       |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

| Planned Survey                |                 |             |                       |              |              |                         |                         |                        |                       |
|-------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)         | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 8,400.00                      | 0.00            | 0.00        | 8,394.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00                      | 0.00            | 0.00        | 8,494.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,546.83                      | 0.00            | 0.00        | 8,541.00              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| <b>Lower Brush</b>            |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,600.00                      | 0.00            | 0.00        | 8,594.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00                      | 0.00            | 0.00        | 8,694.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00                      | 0.00            | 0.00        | 8,794.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00                      | 0.00            | 0.00        | 8,894.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,990.83                      | 0.00            | 0.00        | 8,985.00              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| <b>Avalon</b>                 |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,000.00                      | 0.00            | 0.00        | 8,994.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,100.00                      | 0.00            | 0.00        | 9,094.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00                      | 0.00            | 0.00        | 9,194.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,300.00                      | 0.00            | 0.00        | 9,294.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00                      | 0.00            | 0.00        | 9,394.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,500.00                      | 0.00            | 0.00        | 9,494.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,600.00                      | 0.00            | 0.00        | 9,594.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,700.00                      | 0.00            | 0.00        | 9,694.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,800.00                      | 0.00            | 0.00        | 9,794.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 9,900.00                      | 0.00            | 0.00        | 9,894.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,000.00                     | 0.00            | 0.00        | 9,994.17              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,001.83                     | 0.00            | 0.00        | 9,996.00              | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| <b>1st BS Sand</b>            |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,100.00                     | 0.00            | 0.00        | 10,094.17             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,200.00                     | 0.00            | 0.00        | 10,194.17             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,300.00                     | 0.00            | 0.00        | 10,294.17             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,400.00                     | 0.00            | 0.00        | 10,394.17             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,500.00                     | 0.00            | 0.00        | 10,494.17             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,557.83                     | 0.00            | 0.00        | 10,552.00             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd BS Sand</b>            |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,600.00                     | 0.00            | 0.00        | 10,594.17             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| 10,692.87                     | 0.00            | 0.00        | 10,687.04             | -0.80        | -148.10      | -0.34                   | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP, Build 10.00°/100'</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,700.00                     | 0.71            | 179.56      | 10,694.17             | -0.84        | -148.10      | -0.29                   | 10.00                   | 10.00                  | 0.00                  |
| 10,750.00                     | 5.71            | 179.56      | 10,744.07             | -3.65        | -148.08      | 2.51                    | 10.00                   | 10.00                  | 0.00                  |
| 10,800.00                     | 10.71           | 179.56      | 10,793.55             | -10.79       | -148.02      | 9.65                    | 10.00                   | 10.00                  | 0.00                  |
| 10,850.00                     | 15.71           | 179.56      | 10,842.21             | -22.21       | -147.93      | 21.07                   | 10.00                   | 10.00                  | 0.00                  |
| 10,900.00                     | 20.71           | 179.56      | 10,889.69             | -37.83       | -147.81      | 36.70                   | 10.00                   | 10.00                  | 0.00                  |
| 10,950.00                     | 25.71           | 179.56      | 10,935.62             | -57.53       | -147.66      | 56.40                   | 10.00                   | 10.00                  | 0.00                  |
| 11,000.00                     | 30.71           | 179.56      | 10,979.67             | -81.16       | -147.48      | 80.03                   | 10.00                   | 10.00                  | 0.00                  |
| 11,050.00                     | 35.71           | 179.56      | 11,021.49             | -108.54      | -147.27      | 107.41                  | 10.00                   | 10.00                  | 0.00                  |
| 11,061.80                     | 36.89           | 179.56      | 11,031.00             | -115.53      | -147.22      | 114.39                  | 10.00                   | 10.00                  | 0.00                  |
| <b>3rd BS Carbonate</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,100.00                     | 40.71           | 179.56      | 11,060.76             | -139.46      | -147.03      | 138.33                  | 10.00                   | 10.00                  | 0.00                  |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

| Planned Survey                      |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft)               | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 11,150.00                           | 45.71           | 179.56      | 11,097.19             | -173.68      | -146.77      | 172.55                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,200.00                           | 50.71           | 179.56      | 11,130.50             | -210.95      | -146.48      | 209.82                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,250.00                           | 55.71           | 179.56      | 11,160.43             | -250.98      | -146.17      | 249.85                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,300.00                           | 60.71           | 179.56      | 11,186.76             | -293.47      | -145.84      | 292.34                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,350.00                           | 65.71           | 179.56      | 11,209.29             | -338.08      | -145.50      | 336.96                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,400.00                           | 70.71           | 179.56      | 11,227.84             | -384.50      | -145.14      | 383.37                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,450.00                           | 75.71           | 179.56      | 11,242.28             | -432.35      | -144.77      | 431.23                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,500.00                           | 80.71           | 179.56      | 11,252.49             | -481.28      | -144.40      | 480.16                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,550.00                           | 85.71           | 179.56      | 11,258.39             | -530.91      | -144.01      | 529.79                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,592.87                           | 90.00           | 179.56      | 11,260.00             | -573.74      | -143.68      | 572.62                  | 10.00                   | 10.00                  | 0.00                  |  |
| LP, Hold 90.0° Inc, 179.56° Azimuth |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 11,600.00                           | 90.00           | 179.56      | 11,260.00             | -580.87      | -143.63      | 579.75                  | 0.00                    | 0.00                   | 0.00                  |  |
| 11,700.00                           | 90.00           | 179.56      | 11,260.00             | -680.87      | -142.86      | 679.75                  | 0.00                    | 0.00                   | 0.00                  |  |
| 11,800.00                           | 90.00           | 179.56      | 11,260.00             | -780.86      | -142.09      | 779.75                  | 0.00                    | 0.00                   | 0.00                  |  |
| 11,900.00                           | 90.00           | 179.56      | 11,260.00             | -880.86      | -141.31      | 879.75                  | 0.00                    | 0.00                   | 0.00                  |  |
| 12,000.00                           | 90.00           | 179.56      | 11,260.00             | -980.86      | -140.54      | 979.75                  | 0.00                    | 0.00                   | 0.00                  |  |
| 12,100.00                           | 90.00           | 179.56      | 11,260.00             | -1,080.85    | -139.77      | 1,079.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,200.00                           | 90.00           | 179.56      | 11,260.00             | -1,180.85    | -139.00      | 1,179.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,300.00                           | 90.00           | 179.56      | 11,260.00             | -1,280.85    | -138.23      | 1,279.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,400.00                           | 90.00           | 179.56      | 11,260.00             | -1,380.85    | -137.46      | 1,379.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,500.00                           | 90.00           | 179.56      | 11,260.00             | -1,480.84    | -136.69      | 1,479.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,600.00                           | 90.00           | 179.56      | 11,260.00             | -1,580.84    | -135.92      | 1,579.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,700.00                           | 90.00           | 179.56      | 11,260.00             | -1,680.84    | -135.15      | 1,679.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,800.00                           | 90.00           | 179.56      | 11,260.00             | -1,780.83    | -134.38      | 1,779.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,900.00                           | 90.00           | 179.56      | 11,260.00             | -1,880.83    | -133.60      | 1,879.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,000.00                           | 90.00           | 179.56      | 11,260.00             | -1,980.83    | -132.83      | 1,979.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,100.00                           | 90.00           | 179.56      | 11,260.00             | -2,080.82    | -132.06      | 2,079.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,200.00                           | 90.00           | 179.56      | 11,260.00             | -2,180.82    | -131.29      | 2,179.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,300.00                           | 90.00           | 179.56      | 11,260.00             | -2,280.82    | -130.52      | 2,279.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,400.00                           | 90.00           | 179.56      | 11,260.00             | -2,380.82    | -129.75      | 2,379.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,500.00                           | 90.00           | 179.56      | 11,260.00             | -2,480.81    | -128.98      | 2,479.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,600.00                           | 90.00           | 179.56      | 11,260.00             | -2,580.81    | -128.21      | 2,579.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,700.00                           | 90.00           | 179.56      | 11,260.00             | -2,680.81    | -127.44      | 2,679.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,800.00                           | 90.00           | 179.56      | 11,260.00             | -2,780.80    | -126.67      | 2,779.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,900.00                           | 90.00           | 179.56      | 11,260.00             | -2,880.80    | -125.89      | 2,879.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,000.00                           | 90.00           | 179.56      | 11,260.00             | -2,980.80    | -125.12      | 2,979.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,100.00                           | 90.00           | 179.56      | 11,260.00             | -3,080.80    | -124.35      | 3,079.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,200.00                           | 90.00           | 179.56      | 11,260.00             | -3,180.79    | -123.58      | 3,179.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,300.00                           | 90.00           | 179.56      | 11,260.00             | -3,280.79    | -122.81      | 3,279.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,400.00                           | 90.00           | 179.56      | 11,260.00             | -3,380.79    | -122.04      | 3,379.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,500.00                           | 90.00           | 179.56      | 11,260.00             | -3,480.78    | -121.27      | 3,479.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,600.00                           | 90.00           | 179.56      | 11,260.00             | -3,580.78    | -120.50      | 3,579.75                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,700.00                           | 90.00           | 179.56      | 11,260.00             | -3,680.78    | -119.73      | 3,679.75                | 0.00                    | 0.00                   | 0.00                  |  |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 14,800.00             | 90.00           | 179.56      | 11,260.00             | -3,780.77    | -118.96      | 3,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00             | 90.00           | 179.56      | 11,260.00             | -3,880.77    | -118.18      | 3,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00             | 90.00           | 179.56      | 11,260.00             | -3,980.77    | -117.41      | 3,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,100.00             | 90.00           | 179.56      | 11,260.00             | -4,080.77    | -116.64      | 4,079.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,200.00             | 90.00           | 179.56      | 11,260.00             | -4,180.76    | -115.87      | 4,179.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,300.00             | 90.00           | 179.56      | 11,260.00             | -4,280.76    | -115.10      | 4,279.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,400.00             | 90.00           | 179.56      | 11,260.00             | -4,380.76    | -114.33      | 4,379.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,500.00             | 90.00           | 179.56      | 11,260.00             | -4,480.75    | -113.56      | 4,479.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,600.00             | 90.00           | 179.56      | 11,260.00             | -4,580.75    | -112.79      | 4,579.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,700.00             | 90.00           | 179.56      | 11,260.00             | -4,680.75    | -112.02      | 4,679.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,800.00             | 90.00           | 179.56      | 11,260.00             | -4,780.74    | -111.25      | 4,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 15,900.00             | 90.00           | 179.56      | 11,260.00             | -4,880.74    | -110.47      | 4,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,000.00             | 90.00           | 179.56      | 11,260.00             | -4,980.74    | -109.70      | 4,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,100.00             | 90.00           | 179.56      | 11,260.00             | -5,080.74    | -108.93      | 5,079.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,200.00             | 90.00           | 179.56      | 11,260.00             | -5,180.73    | -108.16      | 5,179.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,300.00             | 90.00           | 179.56      | 11,260.00             | -5,280.73    | -107.39      | 5,279.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,400.00             | 90.00           | 179.56      | 11,260.00             | -5,380.73    | -106.62      | 5,379.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,500.00             | 90.00           | 179.56      | 11,260.00             | -5,480.72    | -105.85      | 5,479.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,600.00             | 90.00           | 179.56      | 11,260.00             | -5,580.72    | -105.08      | 5,579.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,700.00             | 90.00           | 179.56      | 11,260.00             | -5,680.72    | -104.31      | 5,679.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,800.00             | 90.00           | 179.56      | 11,260.00             | -5,780.71    | -103.54      | 5,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 16,900.00             | 90.00           | 179.56      | 11,260.00             | -5,880.71    | -102.76      | 5,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,000.00             | 90.00           | 179.56      | 11,260.00             | -5,980.71    | -101.99      | 5,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,100.00             | 90.00           | 179.56      | 11,260.00             | -6,080.71    | -101.22      | 6,079.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,200.00             | 90.00           | 179.56      | 11,260.00             | -6,180.70    | -100.45      | 6,179.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,300.00             | 90.00           | 179.56      | 11,260.00             | -6,280.70    | -99.68       | 6,279.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,400.00             | 90.00           | 179.56      | 11,260.00             | -6,380.70    | -98.91       | 6,379.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,500.00             | 90.00           | 179.56      | 11,260.00             | -6,480.69    | -98.14       | 6,479.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,600.00             | 90.00           | 179.56      | 11,260.00             | -6,580.69    | -97.37       | 6,579.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,700.00             | 90.00           | 179.56      | 11,260.00             | -6,680.69    | -96.60       | 6,679.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,800.00             | 90.00           | 179.56      | 11,260.00             | -6,780.69    | -95.83       | 6,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 17,900.00             | 90.00           | 179.56      | 11,260.00             | -6,880.68    | -95.05       | 6,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,000.00             | 90.00           | 179.56      | 11,260.00             | -6,980.68    | -94.28       | 6,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,100.00             | 90.00           | 179.56      | 11,260.00             | -7,080.68    | -93.51       | 7,079.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,200.00             | 90.00           | 179.56      | 11,260.00             | -7,180.67    | -92.74       | 7,179.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,300.00             | 90.00           | 179.56      | 11,260.00             | -7,280.67    | -91.97       | 7,279.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,400.00             | 90.00           | 179.56      | 11,260.00             | -7,380.67    | -91.20       | 7,379.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,500.00             | 90.00           | 179.56      | 11,260.00             | -7,480.66    | -90.43       | 7,479.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,600.00             | 90.00           | 179.56      | 11,260.00             | -7,580.66    | -89.66       | 7,579.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,700.00             | 90.00           | 179.56      | 11,260.00             | -7,680.66    | -88.89       | 7,679.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,800.00             | 90.00           | 179.56      | 11,260.00             | -7,780.66    | -88.12       | 7,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 18,900.00             | 90.00           | 179.56      | 11,260.00             | -7,880.65    | -87.34       | 7,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,000.00             | 90.00           | 179.56      | 11,260.00             | -7,980.65    | -86.57       | 7,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,100.00             | 90.00           | 179.56      | 11,260.00             | -8,080.65    | -85.80       | 8,079.75                | 0.00                    | 0.00                   | 0.00                  |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

## Planned Survey

| Measured Depth (usft)      | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 19,200.00                  | 90.00           | 179.56      | 11,260.00             | -8,180.64    | -85.03       | 8,179.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,300.00                  | 90.00           | 179.56      | 11,260.00             | -8,280.64    | -84.26       | 8,279.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,400.00                  | 90.00           | 179.56      | 11,260.00             | -8,380.64    | -83.49       | 8,379.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,500.00                  | 90.00           | 179.56      | 11,260.00             | -8,480.63    | -82.72       | 8,479.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,600.00                  | 90.00           | 179.56      | 11,260.00             | -8,580.63    | -81.95       | 8,579.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,700.00                  | 90.00           | 179.56      | 11,260.00             | -8,680.63    | -81.18       | 8,679.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,800.00                  | 90.00           | 179.56      | 11,260.00             | -8,780.63    | -80.41       | 8,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 19,900.00                  | 90.00           | 179.56      | 11,260.00             | -8,880.62    | -79.63       | 8,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,000.00                  | 90.00           | 179.56      | 11,260.00             | -8,980.62    | -78.86       | 8,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,100.00                  | 90.00           | 179.56      | 11,260.00             | -9,080.62    | -78.09       | 9,079.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,200.00                  | 90.00           | 179.56      | 11,260.00             | -9,180.61    | -77.32       | 9,179.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,300.00                  | 90.00           | 179.56      | 11,260.00             | -9,280.61    | -76.55       | 9,279.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,400.00                  | 90.00           | 179.56      | 11,260.00             | -9,380.61    | -75.78       | 9,379.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,500.00                  | 90.00           | 179.56      | 11,260.00             | -9,480.61    | -75.01       | 9,479.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,600.00                  | 90.00           | 179.56      | 11,260.00             | -9,580.60    | -74.24       | 9,579.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,700.00                  | 90.00           | 179.56      | 11,260.00             | -9,680.60    | -73.47       | 9,679.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,800.00                  | 90.00           | 179.56      | 11,260.00             | -9,780.60    | -72.70       | 9,779.75                | 0.00                    | 0.00                   | 0.00                  |
| 20,900.00                  | 90.00           | 179.56      | 11,260.00             | -9,880.59    | -71.92       | 9,879.75                | 0.00                    | 0.00                   | 0.00                  |
| 21,000.00                  | 90.00           | 179.56      | 11,260.00             | -9,980.59    | -71.15       | 9,979.75                | 0.00                    | 0.00                   | 0.00                  |
| 21,100.00                  | 90.00           | 179.56      | 11,260.00             | -10,080.59   | -70.38       | 10,079.75               | 0.00                    | 0.00                   | 0.00                  |
| 21,200.00                  | 90.00           | 179.56      | 11,260.00             | -10,180.58   | -69.61       | 10,179.75               | 0.00                    | 0.00                   | 0.00                  |
| 21,300.00                  | 90.00           | 179.56      | 11,260.00             | -10,280.58   | -68.84       | 10,279.75               | 0.00                    | 0.00                   | 0.00                  |
| 21,383.02                  | 90.00           | 179.56      | 11,260.00             | -10,363.60   | -68.20       | 10,362.77               | 0.00                    | 0.00                   | 0.00                  |
| PBHL - PBHL (Merchant554H) |                 |             |                       |              |              |                         |                         |                        |                       |

## Design Targets

| Target Name<br>- hit/miss target<br>- Shape                                                                          | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|----------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| FTP (Merchant554H)<br>- plan misses target center by 148.10usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)<br>- Point | 0.00          | 0.00         | 0.00       | -0.80        | -148.10      | 525,538.20      | 786,900.80     | 32° 26' 32.115 N | 103° 32' 14.386 W |
| PBHL (Merchant554H)<br>- plan hits target center<br>- Point                                                          | 0.00          | 0.00         | 11,260.00  | -10,363.60   | -68.20       | 515,175.40      | 786,980.70     | 32° 24' 49.571 N | 103° 32' 14.355 W |

## Casing Points

| Measured Depth (usft) | Vertical Depth (usft) | Name    | Casing Diameter (") | Hole Diameter (") |
|-----------------------|-----------------------|---------|---------------------|-------------------|
| 1,805.00              | 1,805.00              | 13 3/8" | 13-3/8              | 17-1/2            |
| 5,250.00              | 5,250.00              | 9 5/8"  | 9-5/8               | 12-1/4            |

## Aim Directional Services, LLC

## Survey Report

|                  |                              |                                     |                                         |
|------------------|------------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | Advance Energy Partners, LLC | <b>Local Co-ordinate Reference:</b> | Site Merchant State Unit 554H           |
| <b>Project:</b>  | Lea County, New Mexico       | <b>TVD Reference:</b>               | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Site:</b>     | Merchant State Unit 554H     | <b>MD Reference:</b>                | 3656'GL+26.5'KB @ 3682.50usft (H&P 620) |
| <b>Well:</b>     | #554H                        | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | Lateral 1r0                  | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | Plan 0.1                     | <b>Database:</b>                    | EDM 5000.1 Aim Database                 |

| Formations            |                       |                  |           |         |                   |  |
|-----------------------|-----------------------|------------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name             | Lithology | Dip (°) | Dip Direction (°) |  |
| 1,677.00              | 1,677.00              | Rustler          |           | 0.00    |                   |  |
| 5,175.00              | 5,175.00              | Limestone Base   |           | 0.00    |                   |  |
| 8,546.83              | 8,541.00              | Lower Brush      |           | 0.00    |                   |  |
| 8,990.83              | 8,985.00              | Avalon           |           | 0.00    |                   |  |
| 10,001.83             | 9,996.00              | 1st BS Sand      |           | 0.00    |                   |  |
| 10,557.83             | 10,552.00             | 2nd BS Sand      |           | 0.00    |                   |  |
| 11,061.80             | 11,031.00             | 3rd BS Carbonate |           | 0.00    |                   |  |

| Plan Annotations      |                       |                   |              |                                     |  |
|-----------------------|-----------------------|-------------------|--------------|-------------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                                     |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment                             |  |
| 6200                  | 6200                  | 0                 | 0            | Build 1.00°/100'                    |  |
| 6700                  | 6699                  | 0                 | -22          | Hold 5.0° Inc, 269.69° Azimuth      |  |
| 7899                  | 7894                  | -1                | -126         | Drop 1.00°/100'                     |  |
| 8399                  | 8393                  | -1                | -148         | Hold Vertical                       |  |
| 10,693                | 10,687                | -1                | -148         | KOP, Build 10.00°/100'              |  |
| 11,593                | 11,260                | -574              | -144         | LP, Hold 90.0° Inc, 179.56° Azimuth |  |
| 21,383                | 11,260                | -10,364           | -68          | PBHL                                |  |