District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

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

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

# I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

| [1] Operator name and Address | [2] OGRID Number 372417 |
|---|---|
| Advance Energy Partners Hat Mesa<br>11490 Westheimer Suite 950<br>Houston, Texas 77077 | [3] Reason for Filing Code/ Effective Date<br>NW |

| [4] API Number | [5] Pool Name | [6] Pool Code |
|---|---|---|
| 30-025-45935 | WC-025 G-10 S2133280; WOLF CAMP | 98033 |
| **[7] Property Code** | **[8] Property Name** | **[9] Well Number** |
| 319601 | Dagger State Com | 802H |

## II. [10] Surface Location

| Ul or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South Line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| G | 30 | 21S | 33E | | 2610 | NORTH | 1998 | EAST | LEA |

## [11] Bottom Hole Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| B | 19 | 21S | 33E | | 44 | NORTH | 2377 | EAST | LEA |

| [12] Lse Code | [13] Producing Method Code | [14] Gas Connection Date | [15] C-129 Permit Number | [16] C-129 Effective Date | [17] C-129 Expiration Date |
|---|---|---|---|---|---|
| S | | 08/01/2019 | | | |

## III. Oil and Gas Transporters

| [18] Transporter OGRID | [19] Transporter Name and Address | [20] O/G/W |
|---|---|---|
| 214984 | Plains Marketing, L.P.<br>10 Desta Dr., Suite 200E<br>Midland, Texas 77022 | O |
| 159160 | Versado Gas Processors, LLC<br>1000 Louisiana, Suite 4300<br>Houston, Texas 77022 | G |
| | | |
| | | |

## IV. Well Completion Data

| [21] Spud Date | [22] Ready Date | [23] TD | [24] PBTD | [25] Perforations | [26] DHC, MC |
|---|---|---|---|---|---|
| 05/20/2019 | 08/19/2019 | 19,915' | 19,832' | 12,455'-19,795' | |

| [27] Hole Size | [28] Casing & Tubing Size | [29] Depth Set | [30] Sacks Cement |
|---|---|---|---|
| 14.75" | 10.75" | 1,613' | 620 |
| 9.875" | 7.625" | 10,667' | 1465 |
| 6.75" | 5.5/5.0/4.5" | 19,902" | 1155 |
| | | | |
| | | | |

## V. Well Test Data

| [31] Date New Oil | [32] Gas Delivery Date | [33] Test Date | [34] Test Length | [35] Tbg. Pressure | [36] Csg. Pressure |
|---|---|---|---|---|---|
| 08/21/2019 | 08/27/2019 | 09/07/2019 | 24 Hrs | N/A | 1374 |
| **[37] Choke Size** | **[38] Oil** | **[39] Water** | **[40] Gas** | | **[41] Test Method** |
| 40 | 914 | 3377 | 2597 | | F |

[42] I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.
Signature: Eileen M Kosakowski

Printed name: Eileen M Kosakowski
Title: Sr. Eng. Tech.
E-mail Address: ekosakowski@advanceenergypartners.com
Date: 2/21/22
Phone: 832-672-4604

OIL CONSERVATION DIVISION

Approved by: PATRICIA MARTINEZ
Title: PETROLEUM SPECIALIST
Approval Date: 7/30/2024

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

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
As Drilled

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-025-45935 | 98033 | WC-025 G-10 S213328O;WOLFCAMP |

| Property Code | Property Name | Well Number |
|---|---|---|
| 319601 | DAGGER STATE COM | 802H |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 372417 | ADVANCE ENERGY PARTNERS HAT MESA | 3812' |

### Surface Location

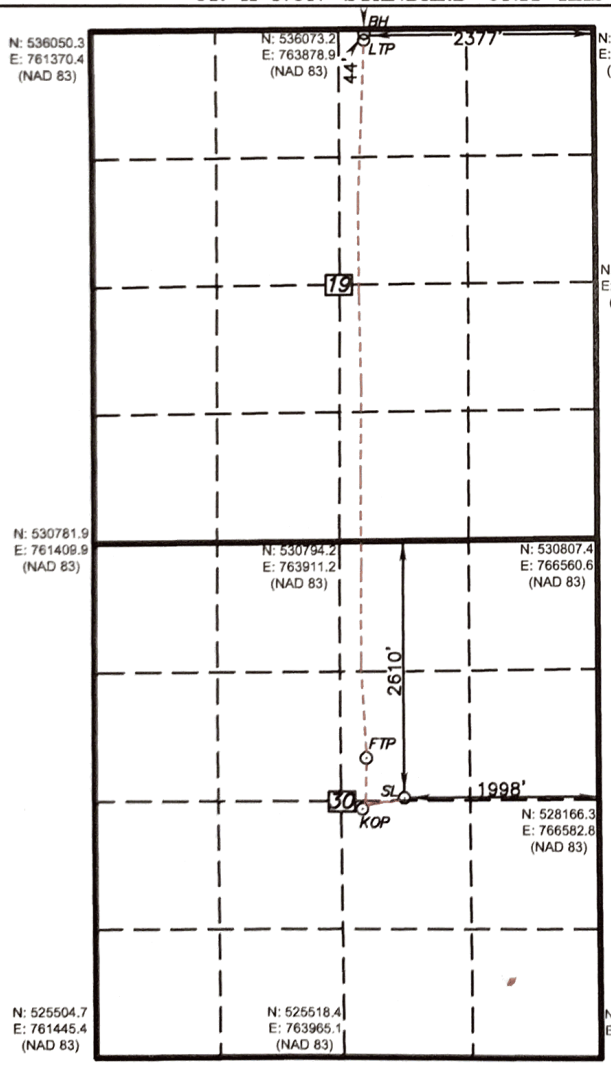
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | SOUTH/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| G | 30 | 21 S | 33 E | | 2610 | NORTH | 1998 | EAST | LEA |

### 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 |
|---|---|---|---|---|---|---|---|---|---|
| B | 19 | 21 S | 33 E | | 44 | NORTH | 2377 | 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




**BOTTOM HOLE LOCATION**
Lat – N 32.471537°
Long – W 103.610872°
NMSPCE– N 536030.3
E 764140.8
(NAD–83)

**LAST TAKE POINT**
114' FNL & 2380' FEL
Lat – N 32.471345°
Long – W 103.610884°
NMSPCE– N 535960.4
E 764137.6
(NAD–83)

**FIRST TAKE POINT**
2201' FNL & 2383' FEL
Lat – N 32.451098°
Long – W 103.610855°
NMSPCE– N 528594.4
E 764196.1
(NAD–83)

**KICK OFF POINT**
2555' FSL & 2428' FEL
Lat – N 32.449669°
Long – W 103.610999°
NMSPCE– N 528074.0
E 764155.3
(NAD–83)

**SURFACE LOCATION**
Lat – N 32.449972°
Long – W 103.609605°
NMSPCE– N 528187.9
E 764584.9
(NAD–83)

### OPERATOR CERTIFICATION

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

Signature 2/21/22 Date

Eileen M Kosakowski
Printed Name

ekosakowski@advanceenergypartners.com
Email Address

### SURVEYOR CERTIFICATION

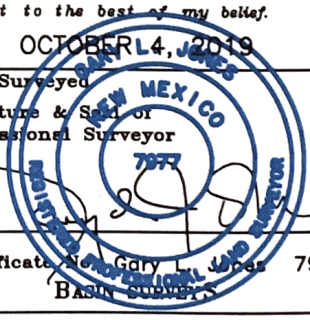
*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.*

OCTOBER 14, 2019
Date Surveyed

Signature & Seal of Professional Surveyor

Certificate Number Gary L. Jones 7977

BASIN SURVEYS




0' 1000' 2000' 3000' 4000' N
SCALE: 1" = 2000'
WO Num.: 34894

Aim Directional Services®

## End of Well Report

# Advance Energy Partners, LLC
# Dagger State Com, Well No. 802H
# Lea County, New Mexico
## Rig: H&P #389
### Job No.: WT-19-084

Start Date: 05/19/2019
End Date: 06/30/2019

Directional Drillers:
**Joel Johnson**

Office Support:
**Damien Tarpley**
Directional Coordinator
E-mail: Damien.Tarpley@aimdir.com
**Ivonne Gonzalez**
Well Planner
E-mail: Ivonne.Gonzalez@aimdir.com
**Allison Reinert**
Executive VP
E-mail: Allison.Reinert@aimdir.com
**Thomas Rinald**
President
E-mail: Thomas.Rinald@aimdir.com

P.O. Box 181015 • Corpus Christi, Texas 78480
Phone: 361-653-6500 • Fax: 361-653-6599
www.aimdir.com

RTOC Aim Directional Services®

Contender DOWNHOLE MOTORS

# Performance Overview

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

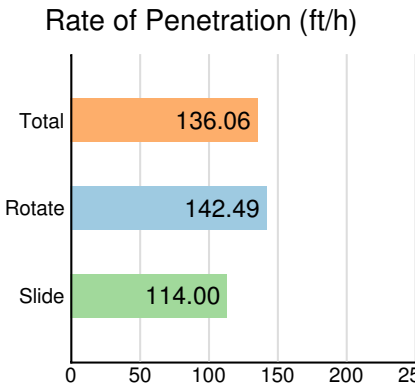
Lea, New Mexico, US (32.45, -103.61)

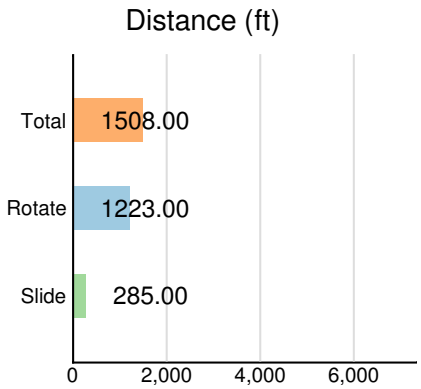
# BHA Performance

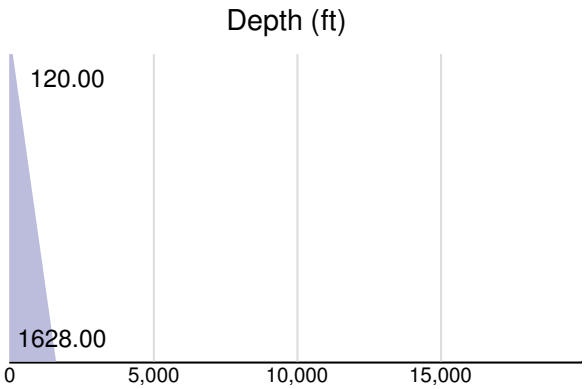
## BHA 1

Surface

In: **05/20/2019 11:00**
Out: **05/21/2019 14:00**



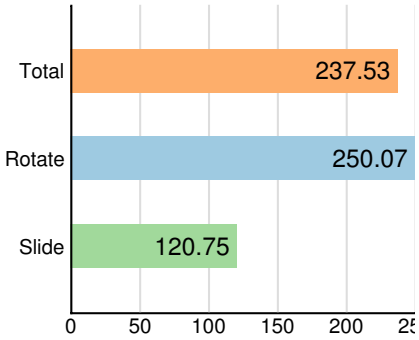



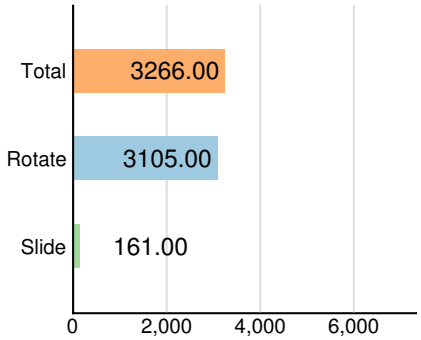



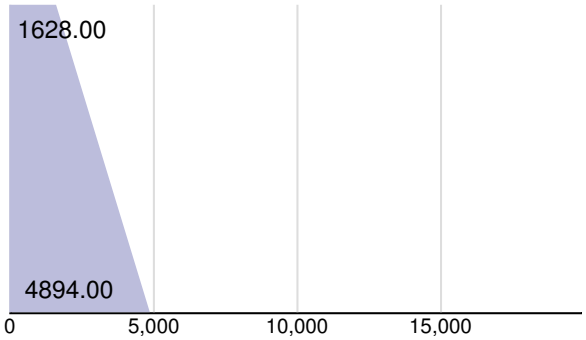

## BHA 2

Intermediate

In: **05/26/2019 14:15**
Out: **05/31/2019 16:00**



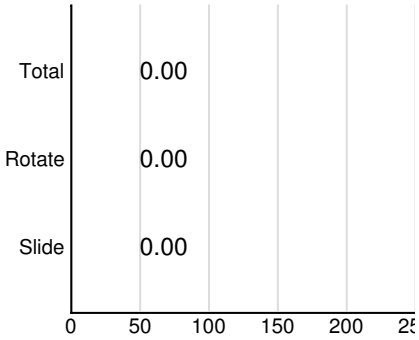



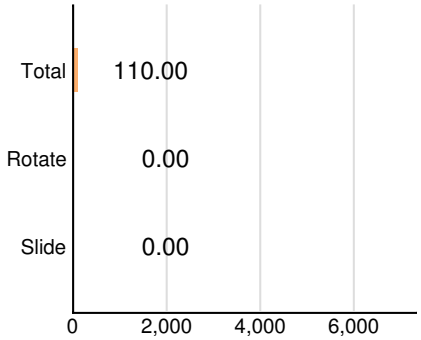



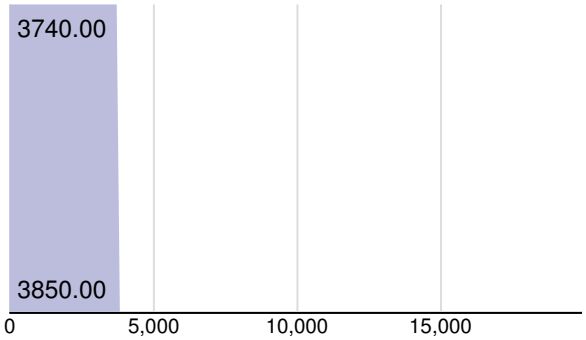

## BHA 3

Sidetrack 1

In: **06/01/2019 10:00**
Out: **06/03/2019 02:30**



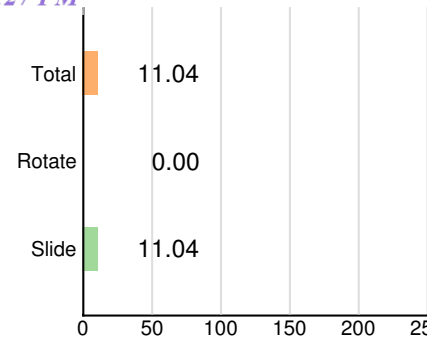



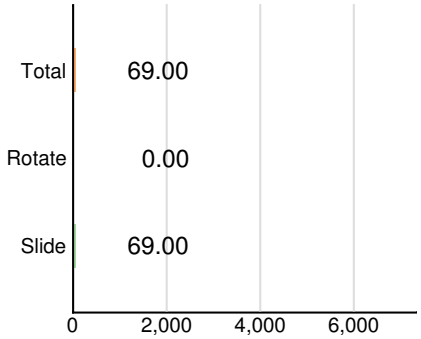



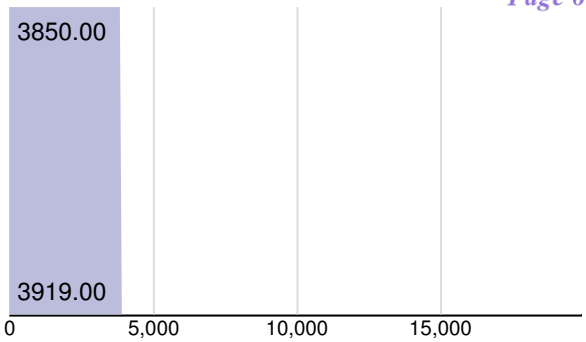
# BHA 4

Sidetrack 2

In: **06/03/2019 12:15**
Out: **06/03/2019 22:00**



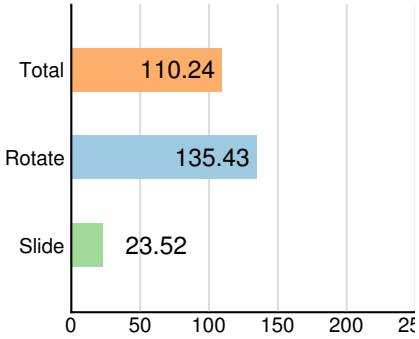



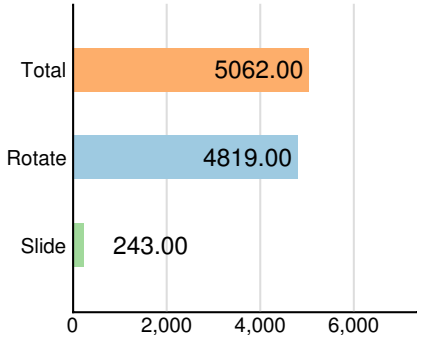



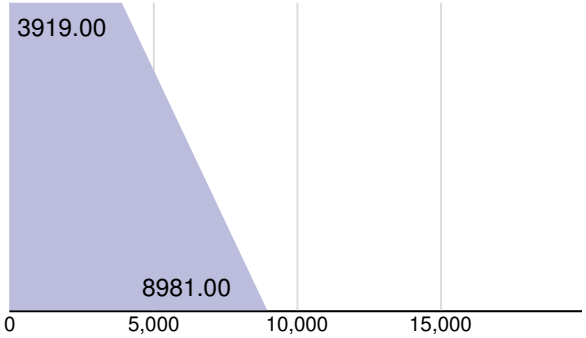

# BHA 5

INTERMEDIATE

In: **06/03/2019 23:30**
Out: **06/06/2019 15:30**



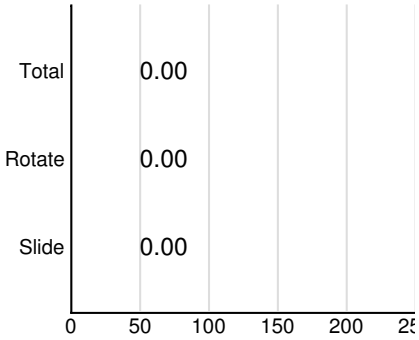



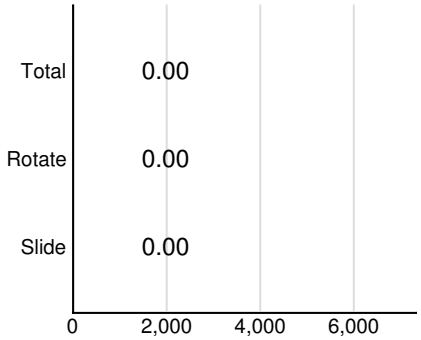



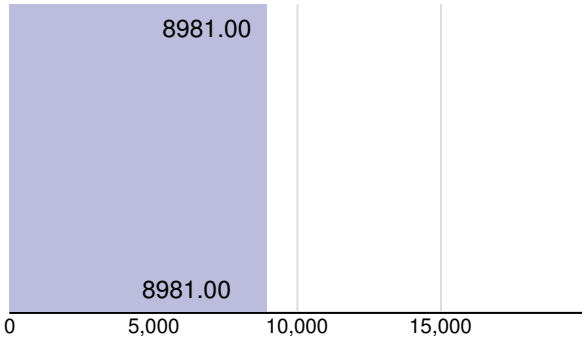

# BHA 6

INTERMEDIATE

In: **06/06/2019 15:30**
Out: **06/08/2019 01:00**



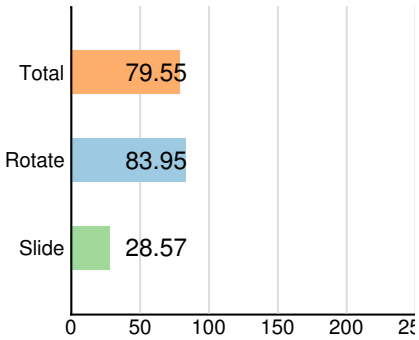



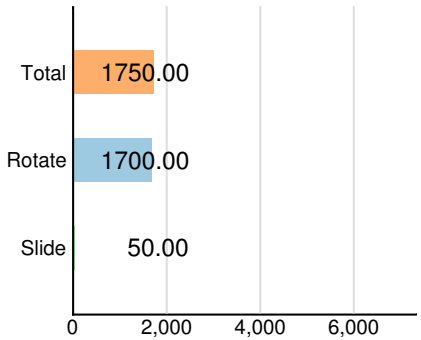



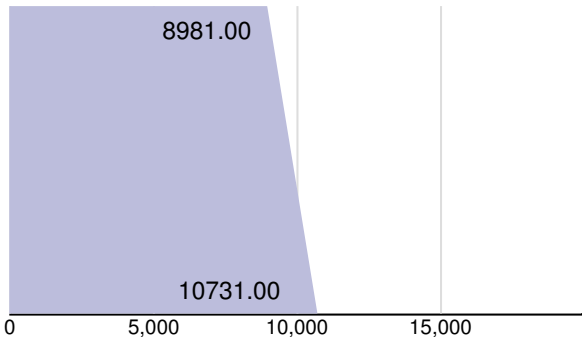

# BHA 7

INTERMEDIATE

In: **06/08/2019 01:00**
Out: **06/09/2019 18:00**



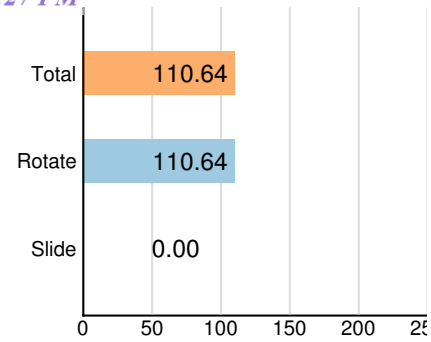



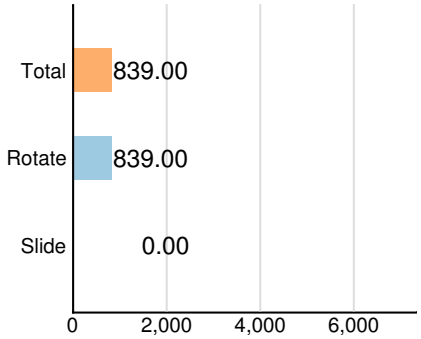



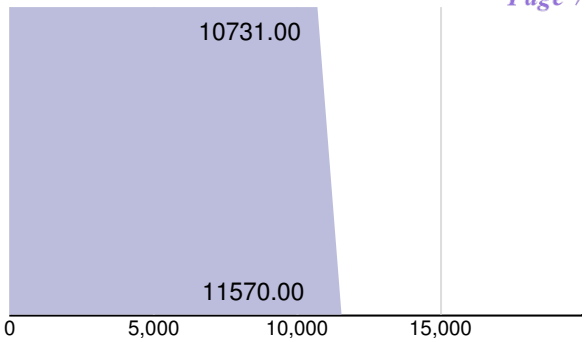
# BHA 8

Intermediate

In: **06/14/2019 08:15**
Out: **06/15/2019 12:00**



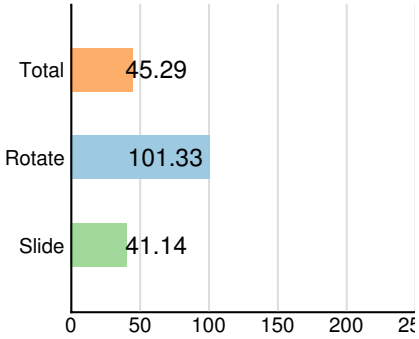



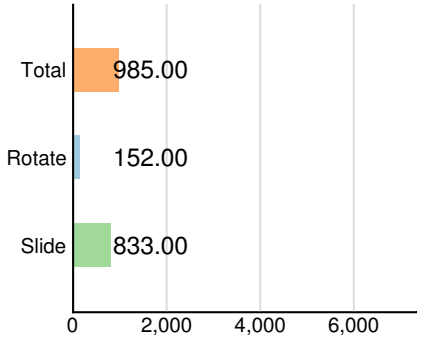



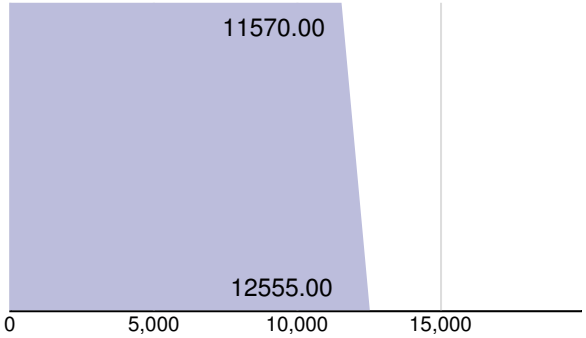

# BHA 9

Curve

In: **06/15/2019 12:00**
Out: **06/17/2019 01:00**



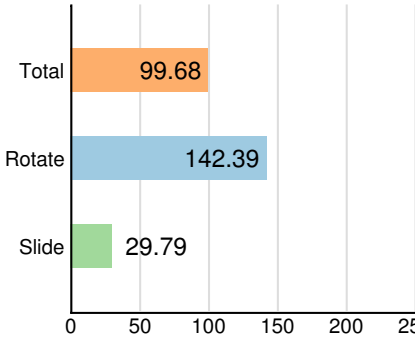



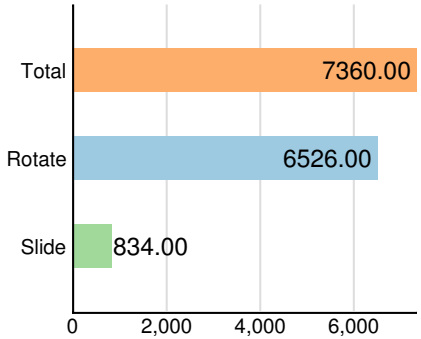



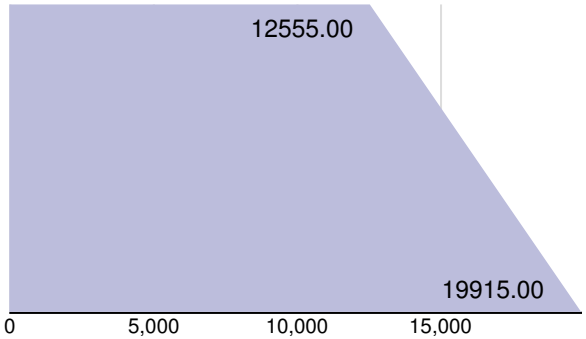

# BHA 10

Lateral

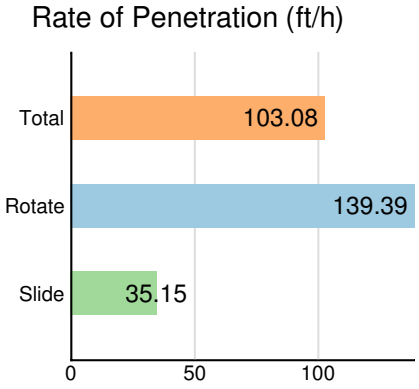
In: **06/18/2019 16:30**
Out: **06/23/2019 07:00**

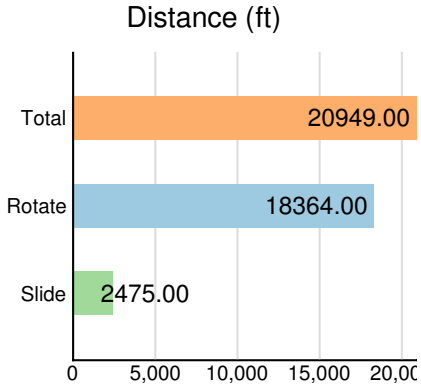


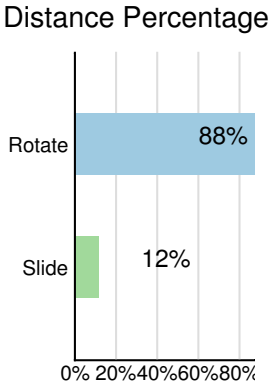



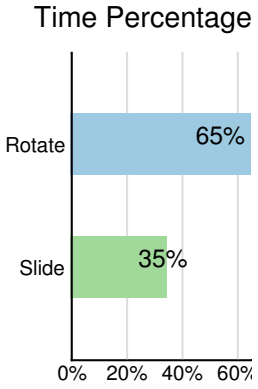



# Total

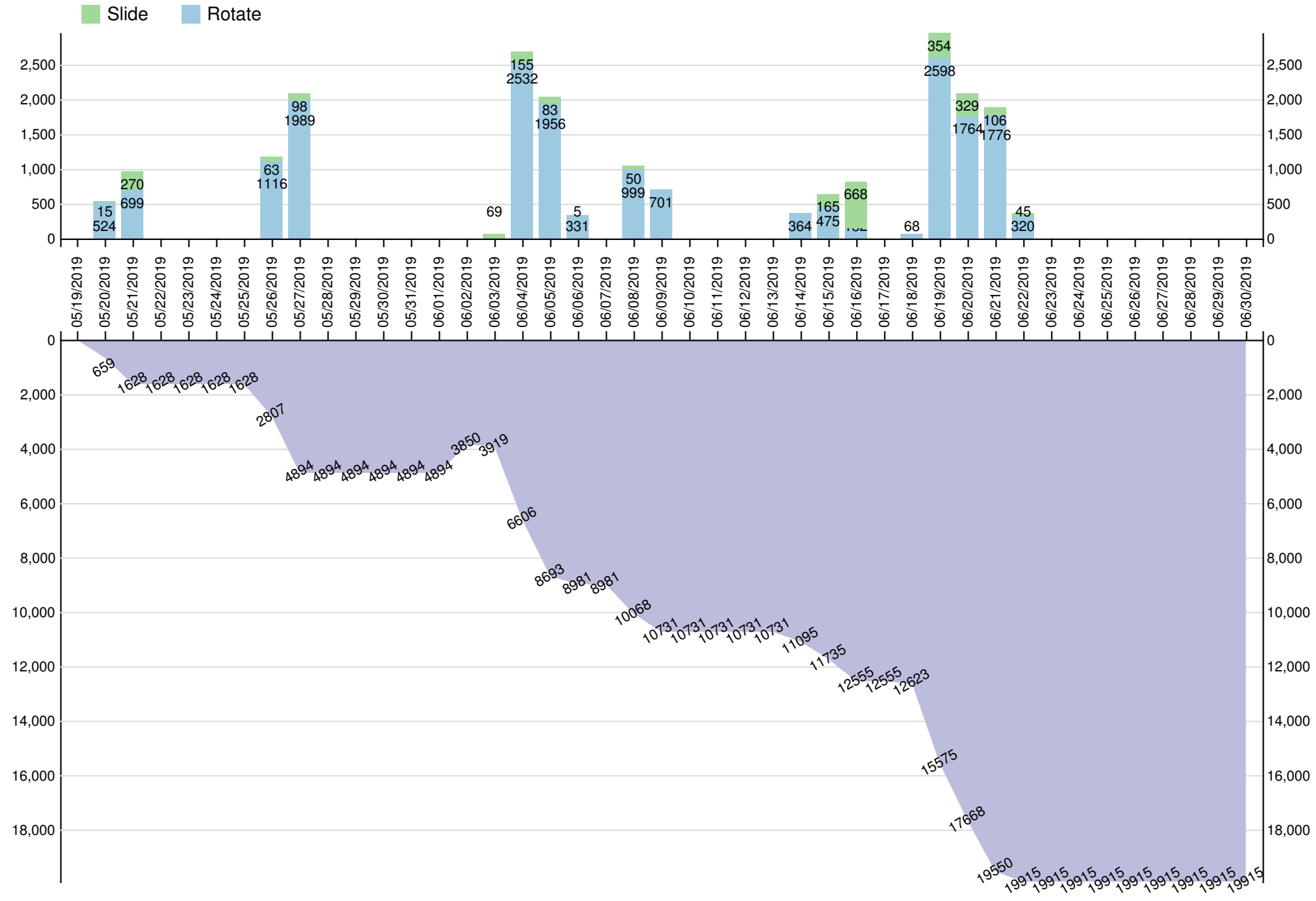

Rate of Penetration (ft/h)
Total
103.08
Rotate
139.39
Slide
35.15
0
50
100


Distance (ft)
Total
20949.00
Rotate
18364.00
Slide
2475.00
0
5,000
10,000
15,000
20,00

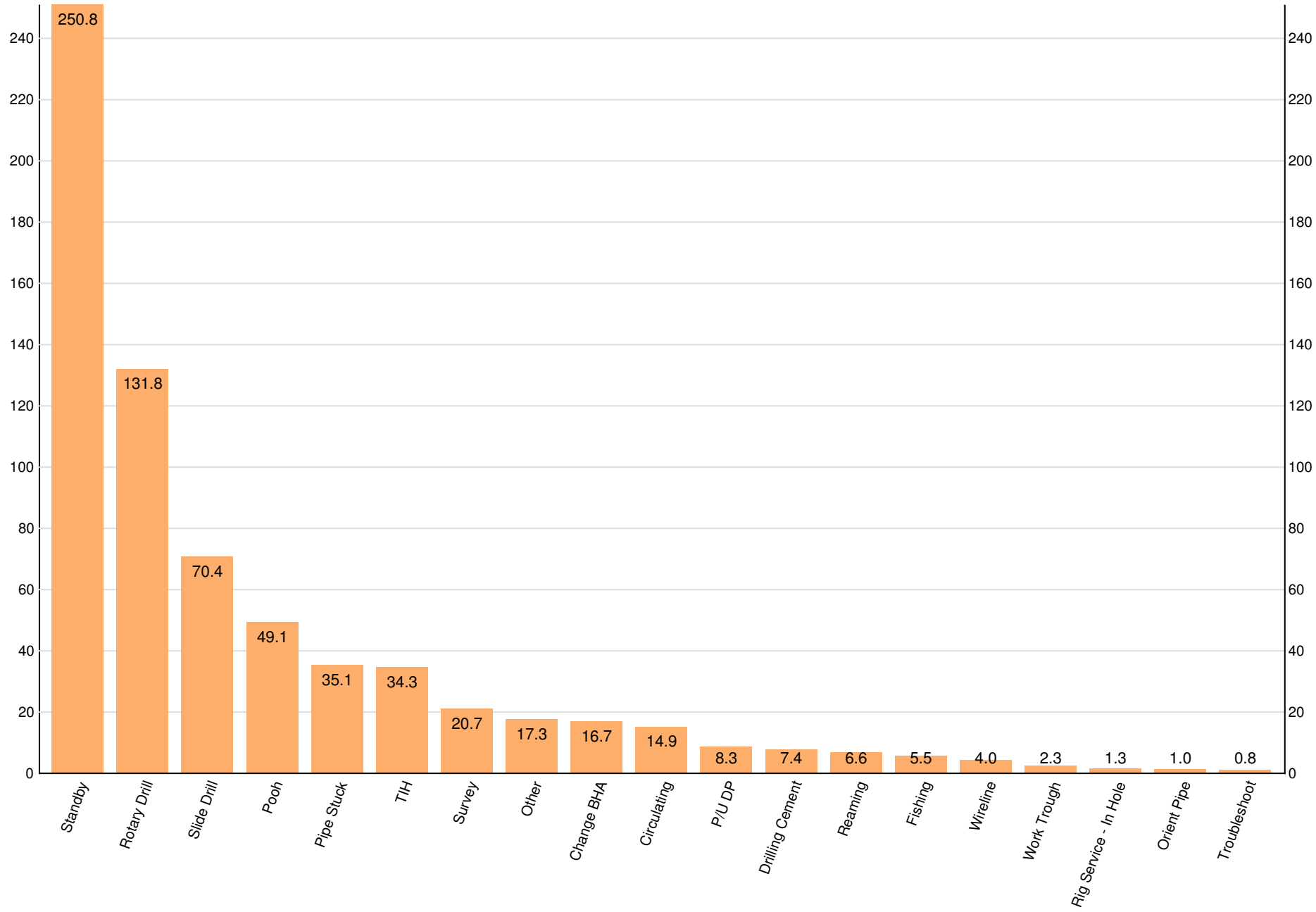

Distance Percentage
Rotate
88%
Slide
12%
0%
20%
40%
60%
80%


Time Percentage
Rotate
65%
Slide
35%
0%
20%
40%
60%

# Days vs. Depth



# Directional Activity Hours



Aim Directional Services

# Proposed vs. As Drilled
# Original Hole

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

# Advance Energy Partners, LLC

**Dagger State Com 802H**
**Lea County, New Mexico**
**Plan 0.1**

Aim Directional Services

| SITE DETAILS: Dagger State Com 802H | |
|---|---|
| Site Centre Northing: | 528187.50 |
| Easting: | 764584.50 |
| Positional Uncertainity: | 0.00 |
| Convergence: | 0.39 |
| Local North: | Grid |

T G M

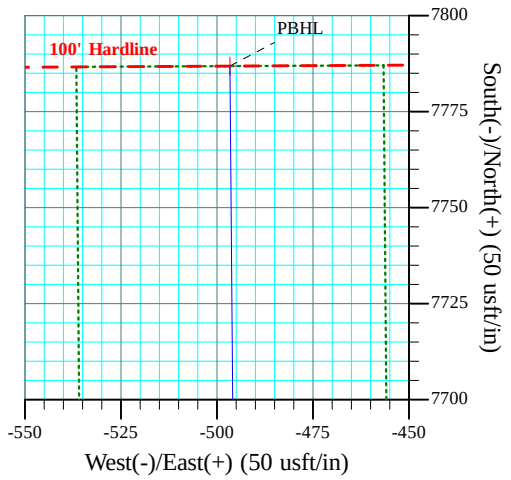
Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.28°

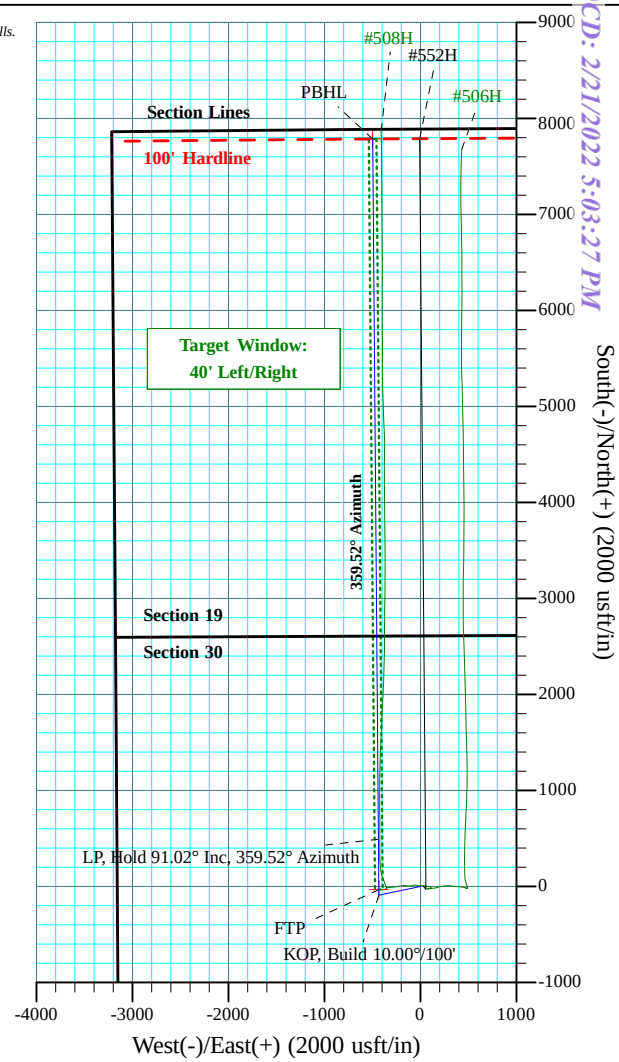
Magnetic Field
Strength: 48124.9nT
Dip Angle: 60.24°
Date: 5/8/2019
Model: MVHD

**Magnetic North: 6.28° to Grid North**

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

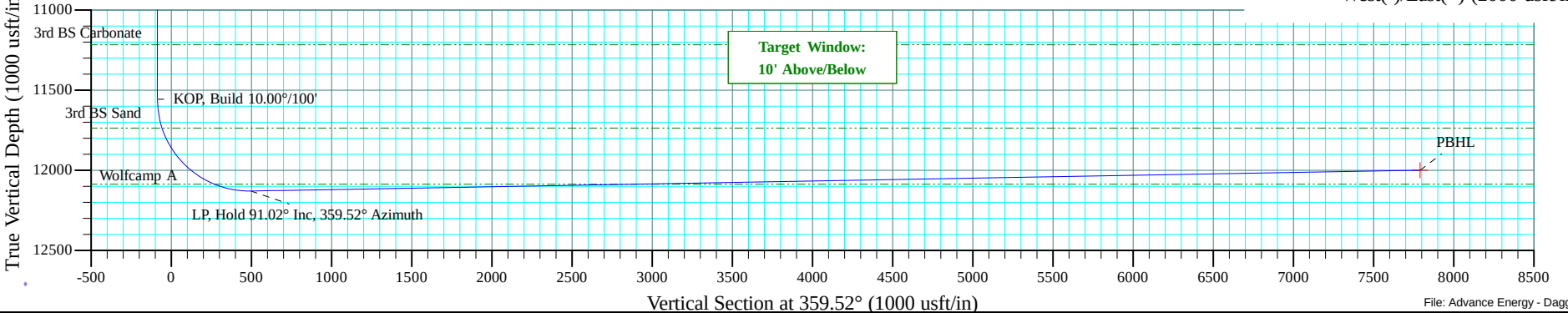
| PROJECT DETAILS: Lea County, New Mexico | |
|---|---|
| Geodetic System: | US State Plane 1983 |
| Datum: | North American Datum 1983 |
| Ellipsoid: | GRS 1980 |
| Zone: | New Mexico Eastern Zone |
| System Datum: | Mean Sea Level |
| Depth Reference: | 3812'GL+26.5'KB @ 3838.50usft |




| 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 | 1450.00 | 0.00 | 0.00 | 1450.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Build 1.00°/100' |
| 3 | 1950.00 | 5.00 | 258.21 | 1949.37 | -4.46 | -21.34 | 1.00 | 258.21 | -4.28 | Hold 5.0° Inc, 258.21° Azimuth |
| 4 | 6501.52 | 5.00 | 258.21 | 6483.56 | -85.54 | -409.66 | 0.00 | 0.00 | -82.11 | Drop 1.00°/100' |
| 5 | 7001.52 | 0.00 | 0.00 | 6982.93 | -90.00 | -431.00 | 1.00 | 180.00 | -86.39 | Hold Vertical |
| 6 | 11575.72 | 0.00 | 0.00 | 11557.13 | -90.00 | -431.00 | 0.00 | 0.00 | -86.39 | KOP, Build 10.00°/100' |
| 7 | 12485.93 | 91.02 | 359.52 | 12130.00 | 493.15 | -435.86 | 10.00 | 359.52 | 496.78 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 8 | 19781.09 | 91.02 | 359.52 | 12000.00 | 7786.90 | -496.60 | 0.00 | 0.00 | 7790.79 | PBHL |

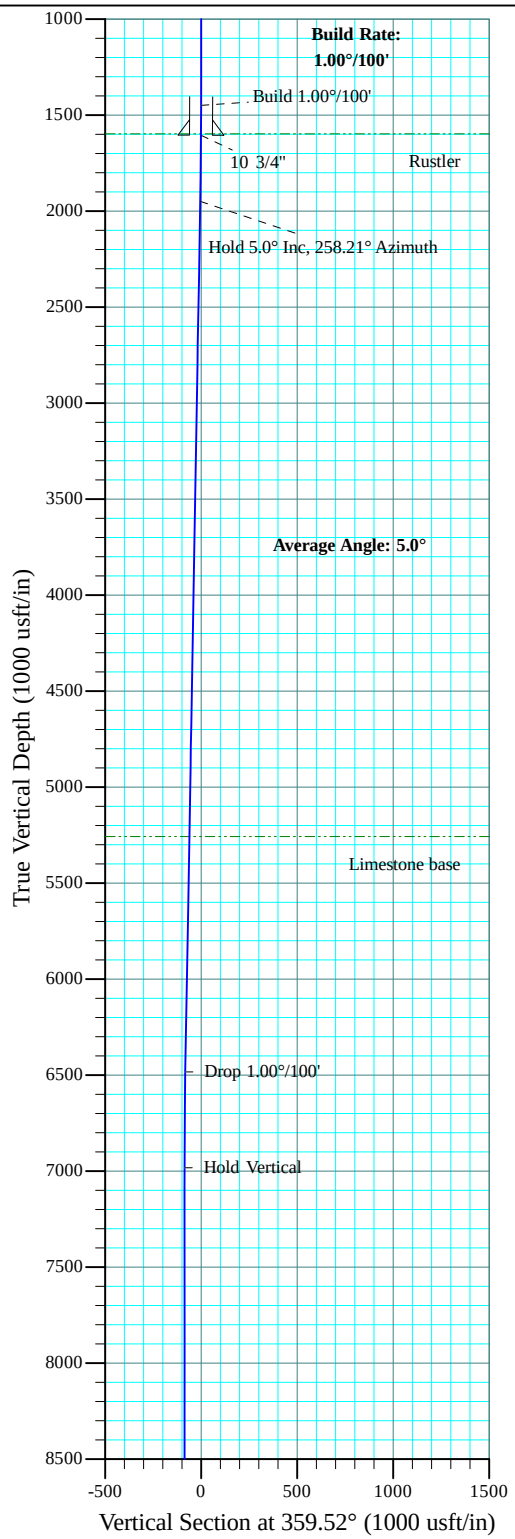
| DESIGN TARGET DETAILS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| FTP (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |

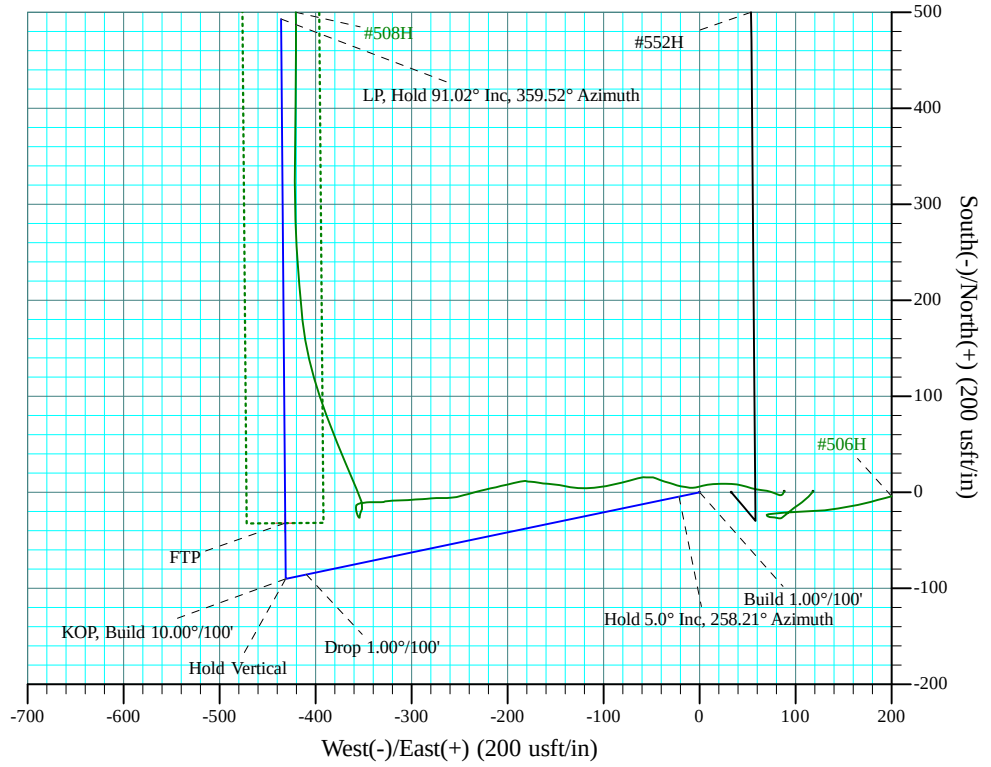



Drawn: IG
Date Created: 5/8/2018
Date Revised: 5/8/2018
File: Advance Energy - Dagger State Com #802H Plan 0.1.wpc

# Advance Energy Partners, LLC

**Dagger State Com 802H**
**Lea County, New Mexico**
**Plan 0.1**





Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.28°

Magnetic Field
Strength: 48124.9nT
Dip Angle: 60.24°
Date: 5/8/2019
Model: MVHD

**Magnetic North: 6.28° to Grid North**

| SITE DETAILS: Dagger State Com 802H | |
|---|---|
| Site Centre Northing: | 528187.50 |
| Easting: | 764584.50 |
| Positional Uncertainity: | 0.00 |
| Convergence: | 0.39 |
| Local North: | Grid |
| Depth Reference: | 3812'GL+26.5'KB @ 3838.50usft |

| CASING DETAILS | | |
|---|---|---|
| TVD | MD | Name |
| 1605.00 | 1605.02 | 10 3/4" |
| 10650.00 | 10668.59 | 7 5/8" |

| SLOTS | | |
|---|---|---|
| Slot Name | +N/-S | +E/-W |
| 506H | 1.20 | 118.30 |
| 508H | 1.00 | 88.30 |
| 552H | 0.20 | 33.00 |
| 802H | 0.00 | 0.00 |

| 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 |

**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 (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |

Drawn By: IG
Date Created: 5/8/2019
Date Revised: 5/8/2019
File: Advance Energy - Dagger State Com #802H Plan 0.1 Surface.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 | 1450.00 | 0.00 | 0.00 | 1450.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Build 1.00°/100' |
| 3 | 1950.00 | 5.00 | 258.21 | 1949.37 | -4.46 | -21.34 | 1.00 | 258.21 | -4.28 | Hold 5.0° Inc, 258.21° Azimuth |
| 4 | 6501.52 | 5.00 | 258.21 | 6483.56 | -85.54 | -409.66 | 0.00 | 0.00 | -82.11 | Drop 1.00°/100' |
| 5 | 7001.52 | 0.00 | 0.00 | 6982.93 | -90.00 | -431.00 | 1.00 | 180.00 | -86.39 | Hold Vertical |
| 6 | 11575.72 | 0.00 | 0.00 | 11557.13 | -90.00 | -431.00 | 0.00 | 0.00 | -86.39 | KOP, Build 10.00°/100' |
| 7 | 12248.09 | 91.02 | 359.52 | 12230.00 | 493.15 | -435.86 | 10.00 | 359.52 | 496.78 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 8 | 19781.09 | 91.02 | 359.52 | 12000.00 | 7786.90 | -496.60 | 0.00 | 0.00 | 7790.79 | PBHL |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**Project** Lea County, New Mexico

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

**Site** Dagger State Com 802H

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| **From:** | Map | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.39 ° |

**Well** #802H - Slot 802H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| | **+E/-W** | 0.00 usft | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,812.00 usft |

**Wellbore** Lateral 1r0

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | MVHD | 5/8/2019 | 6.67 | 60.24 | 48,124.86409409 |

**Design** Plan 0.1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PROTOTYPE | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 359.52 |

**Survey Tool Program** **Date** 5/8/2019

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.00 | 19,781.09 | Plan 0.1 (Lateral 1r0) | B001Mb_MWD+HRGM | OWSG MWD + HRGM |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **FTP (Dagger802H)** | | | | | | | | | |
| 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

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**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 |
| 1,450.00 | 0.00 | 0.00 | 1,450.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Build 1.00°/100'** | | | | | | | | | |
| 1,500.00 | 0.50 | 258.21 | 1,500.00 | -0.04 | -0.21 | -0.04 | 1.00 | 1.00 | 0.00 |
| 1,597.02 | 1.47 | 258.21 | 1,597.00 | -0.39 | -1.85 | -0.37 | 1.00 | 1.00 | 0.00 |
| **Rustler** | | | | | | | | | |
| 1,600.00 | 1.50 | 258.21 | 1,599.98 | -0.40 | -1.92 | -0.39 | 1.00 | 1.00 | 0.00 |
| 1,605.02 | 1.55 | 258.21 | 1,605.00 | -0.43 | -2.05 | -0.41 | 1.00 | 1.00 | 0.00 |
| **10 3/4"** | | | | | | | | | |
| 1,700.00 | 2.50 | 258.21 | 1,699.92 | -1.11 | -5.34 | -1.07 | 1.00 | 1.00 | 0.00 |
| 1,800.00 | 3.50 | 258.21 | 1,799.78 | -2.18 | -10.46 | -2.10 | 1.00 | 1.00 | 0.00 |
| 1,900.00 | 4.50 | 258.21 | 1,899.54 | -3.61 | -17.29 | -3.47 | 1.00 | 1.00 | 0.00 |
| 1,950.00 | 5.00 | 258.21 | 1,949.37 | -4.46 | -21.34 | -4.28 | 1.00 | 1.00 | 0.00 |
| **Hold 5.0° Inc, 258.21° Azimuth** | | | | | | | | | |
| 2,000.00 | 5.00 | 258.21 | 1,999.18 | -5.35 | -25.61 | -5.13 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 5.00 | 258.21 | 2,098.79 | -7.13 | -34.14 | -6.84 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 5.00 | 258.21 | 2,198.41 | -8.91 | -42.67 | -8.55 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 5.00 | 258.21 | 2,298.03 | -10.69 | -51.20 | -10.26 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 5.00 | 258.21 | 2,397.65 | -12.47 | -59.73 | -11.97 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 5.00 | 258.21 | 2,497.27 | -14.26 | -68.27 | -13.68 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 5.00 | 258.21 | 2,596.89 | -16.04 | -76.80 | -15.39 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 5.00 | 258.21 | 2,696.51 | -17.82 | -85.33 | -17.10 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 5.00 | 258.21 | 2,796.13 | -19.60 | -93.86 | -18.81 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 5.00 | 258.21 | 2,895.75 | -21.38 | -102.39 | -20.52 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 5.00 | 258.21 | 2,995.37 | -23.16 | -110.92 | -22.23 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 5.00 | 258.21 | 3,094.99 | -24.94 | -119.46 | -23.94 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 5.00 | 258.21 | 3,194.61 | -26.73 | -127.99 | -25.65 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 5.00 | 258.21 | 3,294.23 | -28.51 | -136.52 | -27.36 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 5.00 | 258.21 | 3,393.85 | -30.29 | -145.05 | -29.07 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 5.00 | 258.21 | 3,493.47 | -32.07 | -153.58 | -30.78 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 5.00 | 258.21 | 3,593.09 | -33.85 | -162.11 | -32.49 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 5.00 | 258.21 | 3,692.71 | -35.63 | -170.64 | -34.20 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 5.00 | 258.21 | 3,792.33 | -37.41 | -179.18 | -35.91 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 5.00 | 258.21 | 3,891.95 | -39.20 | -187.71 | -37.62 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 5.00 | 258.21 | 3,991.56 | -40.98 | -196.24 | -39.33 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 5.00 | 258.21 | 4,091.18 | -42.76 | -204.77 | -41.04 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 5.00 | 258.21 | 4,190.80 | -44.54 | -213.30 | -42.75 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 5.00 | 258.21 | 4,290.42 | -46.32 | -221.83 | -44.46 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 5.00 | 258.21 | 4,390.04 | -48.10 | -230.37 | -46.17 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 5.00 | 258.21 | 4,489.66 | -49.89 | -238.90 | -47.88 | 0.00 | 0.00 | 0.00 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 4,600.00 | 5.00 | 258.21 | 4,589.28 | -51.67 | -247.43 | -49.59 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 5.00 | 258.21 | 4,688.90 | -53.45 | -255.96 | -51.30 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 5.00 | 258.21 | 4,788.52 | -55.23 | -264.49 | -53.01 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 5.00 | 258.21 | 4,888.14 | -57.01 | -273.02 | -54.72 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 5.00 | 258.21 | 4,987.76 | -58.79 | -281.55 | -56.43 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 5.00 | 258.21 | 5,087.38 | -60.57 | -290.09 | -58.14 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 5.00 | 258.21 | 5,187.00 | -62.36 | -298.62 | -59.85 | 0.00 | 0.00 | 0.00 |
| 5,270.27 | 5.00 | 258.21 | 5,257.00 | -63.61 | -304.61 | -61.05 | 0.00 | 0.00 | 0.00 |
| **Limestone base** | | | | | | | | | |
| 5,300.00 | 5.00 | 258.21 | 5,286.62 | -64.14 | -307.15 | -61.56 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 5.00 | 258.21 | 5,386.24 | -65.92 | -315.68 | -63.27 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 5.00 | 258.21 | 5,485.86 | -67.70 | -324.21 | -64.98 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 5.00 | 258.21 | 5,585.48 | -69.48 | -332.74 | -66.69 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 5.00 | 258.21 | 5,685.10 | -71.26 | -341.28 | -68.40 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 5.00 | 258.21 | 5,784.72 | -73.05 | -349.81 | -70.11 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 5.00 | 258.21 | 5,884.33 | -74.83 | -358.34 | -71.82 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 5.00 | 258.21 | 5,983.95 | -76.61 | -366.87 | -73.53 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 5.00 | 258.21 | 6,083.57 | -78.39 | -375.40 | -75.24 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 5.00 | 258.21 | 6,183.19 | -80.17 | -383.93 | -76.95 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 5.00 | 258.21 | 6,282.81 | -81.95 | -392.46 | -78.66 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 5.00 | 258.21 | 6,382.43 | -83.73 | -401.00 | -80.37 | 0.00 | 0.00 | 0.00 |
| 6,501.52 | 5.00 | 258.21 | 6,483.56 | -85.54 | -409.66 | -82.11 | 0.00 | 0.00 | 0.00 |
| **Drop 1.00°/100'** | | | | | | | | | |
| 6,600.00 | 4.02 | 258.21 | 6,581.74 | -87.13 | -417.23 | -83.63 | 1.00 | -1.00 | 0.00 |
| 6,700.00 | 3.02 | 258.21 | 6,681.55 | -88.38 | -423.24 | -84.83 | 1.00 | -1.00 | 0.00 |
| 6,800.00 | 2.02 | 258.21 | 6,781.45 | -89.28 | -427.53 | -85.69 | 1.00 | -1.00 | 0.00 |
| 6,900.00 | 1.02 | 258.21 | 6,881.42 | -89.82 | -430.12 | -86.21 | 1.00 | -1.00 | 0.00 |
| 7,001.52 | 0.00 | 0.00 | 6,982.93 | -90.00 | -431.00 | -86.39 | 1.00 | -1.00 | 0.00 |
| **Hold Vertical** | | | | | | | | | |
| 7,100.00 | 0.00 | 0.00 | 7,081.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,181.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,281.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 7,381.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,481.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,581.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,681.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,781.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,881.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,981.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 8,081.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 8,181.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,281.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,381.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 8,500.00 | 0.00 | 0.00 | 8,481.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,575.59 | 0.00 | 0.00 | 8,557.00 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **Lower Brushy** | | | | | | | | | |
| 8,600.00 | 0.00 | 0.00 | 8,581.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 0.00 | 0.00 | 8,681.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 0.00 | 0.00 | 8,781.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 0.00 | 0.00 | 8,881.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 0.00 | 0.00 | 8,981.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,047.59 | 0.00 | 0.00 | 9,029.00 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **Avalon** | | | | | | | | | |
| 9,100.00 | 0.00 | 0.00 | 9,081.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 0.00 | 0.00 | 9,181.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 0.00 | 0.00 | 9,281.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 0.00 | 0.00 | 9,381.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 0.00 | 0.00 | 9,481.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 0.00 | 0.00 | 9,581.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 0.00 | 0.00 | 9,681.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 0.00 | 0.00 | 9,781.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 0.00 | 0.00 | 9,881.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 0.00 | 0.00 | 9,981.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,042.59 | 0.00 | 0.00 | 10,024.00 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **1st BS Sand** | | | | | | | | | |
| 10,100.00 | 0.00 | 0.00 | 10,081.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 0.00 | 0.00 | 10,181.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 0.00 | 0.00 | 10,281.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 0.00 | 0.00 | 10,381.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 0.00 | 0.00 | 10,481.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 0.00 | 0.00 | 10,581.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,603.59 | 0.00 | 0.00 | 10,585.00 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **2nd BS Sand** | | | | | | | | | |
| 10,668.59 | 0.00 | 0.00 | 10,650.00 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **7 5/8"** | | | | | | | | | |
| 10,700.00 | 0.00 | 0.00 | 10,681.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 0.00 | 0.00 | 10,781.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 0.00 | 0.00 | 10,881.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 0.00 | 0.00 | 10,981.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 0.00 | 0.00 | 11,081.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 0.00 | 0.00 | 11,181.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,235.59 | 0.00 | 0.00 | 11,217.00 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **3rd BS Carbonate** | | | | | | | | | |
| 11,300.00 | 0.00 | 0.00 | 11,281.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 0.00 | 0.00 | 11,381.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 0.00 | 0.00 | 11,481.41 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| 11,575.72 | 0.00 | 0.00 | 11,557.13 | -90.00 | -431.00 | -86.39 | 0.00 | 0.00 | 0.00 |
| **KOP, Build 10.00°/100'** | | | | | | | | | |

# Aim Directional Services, LLC

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 11,600.00 | 2.43 | 359.52 | 11,581.40 | -89.49 | -431.00 | -85.87 | 10.00 | 10.00 | 0.00 |
| 11,650.00 | 7.43 | 359.52 | 11,631.20 | -85.19 | -431.04 | -81.58 | 10.00 | 10.00 | 0.00 |
| 11,700.00 | 12.43 | 359.52 | 11,680.44 | -76.57 | -431.11 | -72.96 | 10.00 | 10.00 | 0.00 |
| 11,750.00 | 17.43 | 359.52 | 11,728.74 | -63.70 | -431.22 | -60.08 | 10.00 | 10.00 | 0.00 |
| 11,758.68 | 18.30 | 359.52 | 11,737.00 | -61.04 | -431.24 | -57.42 | 10.00 | 10.00 | 0.00 |
| **3rd BS Sand** | | | | | | | | | |
| 11,800.00 | 22.43 | 359.52 | 11,775.73 | -46.66 | -431.36 | -43.05 | 10.00 | 10.00 | 0.00 |
| 11,850.00 | 27.43 | 359.52 | 11,821.06 | -25.60 | -431.54 | -21.98 | 10.00 | 10.00 | 0.00 |
| 11,900.00 | 32.43 | 359.52 | 11,864.37 | -0.66 | -431.74 | 2.96 | 10.00 | 10.00 | 0.00 |
| 11,950.00 | 37.43 | 359.52 | 11,905.35 | 27.96 | -431.98 | 31.58 | 10.00 | 10.00 | 0.00 |
| 12,000.00 | 42.43 | 359.52 | 11,943.68 | 60.04 | -432.25 | 63.66 | 10.00 | 10.00 | 0.00 |
| 12,050.00 | 47.43 | 359.52 | 11,979.07 | 95.34 | -432.54 | 98.96 | 10.00 | 10.00 | 0.00 |
| 12,100.00 | 52.43 | 359.52 | 12,011.25 | 133.59 | -432.86 | 137.21 | 10.00 | 10.00 | 0.00 |
| 12,150.00 | 57.43 | 359.52 | 12,039.97 | 174.49 | -433.20 | 178.12 | 10.00 | 10.00 | 0.00 |
| 12,200.00 | 62.43 | 359.52 | 12,065.02 | 217.75 | -433.56 | 221.37 | 10.00 | 10.00 | 0.00 |
| 12,250.00 | 67.43 | 359.52 | 12,086.20 | 263.02 | -433.94 | 266.65 | 10.00 | 10.00 | 0.00 |
| 12,252.10 | 67.64 | 359.52 | 12,087.00 | 264.96 | -433.96 | 268.58 | 10.00 | 10.00 | 0.00 |
| **Wolfcamp A** | | | | | | | | | |
| 12,300.00 | 72.43 | 359.52 | 12,103.35 | 309.97 | -434.33 | 313.59 | 10.00 | 10.00 | 0.00 |
| 12,350.00 | 77.43 | 359.52 | 12,116.35 | 358.23 | -434.73 | 361.86 | 10.00 | 10.00 | 0.00 |
| 12,400.00 | 82.43 | 359.52 | 12,125.09 | 407.44 | -435.14 | 411.07 | 10.00 | 10.00 | 0.00 |
| 12,450.00 | 87.43 | 359.52 | 12,129.51 | 457.23 | -435.56 | 460.86 | 10.00 | 10.00 | 0.00 |
| 12,485.93 | 91.02 | 359.52 | 12,130.00 | 493.15 | -435.86 | 496.78 | 10.00 | 10.00 | 0.00 |
| **LP, Hold 91.02° Inc, 359.52° Azimuth** | | | | | | | | | |
| 12,500.00 | 91.02 | 359.52 | 12,129.75 | 507.22 | -435.97 | 510.85 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 91.02 | 359.52 | 12,127.96 | 607.20 | -436.81 | 610.83 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 91.02 | 359.52 | 12,126.18 | 707.18 | -437.64 | 710.82 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 91.02 | 359.52 | 12,124.40 | 807.16 | -438.47 | 810.80 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 91.02 | 359.52 | 12,122.62 | 907.14 | -439.30 | 910.79 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 91.02 | 359.52 | 12,120.84 | 1,007.12 | -440.14 | 1,010.77 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 91.02 | 359.52 | 12,119.05 | 1,107.10 | -440.97 | 1,110.75 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 91.02 | 359.52 | 12,117.27 | 1,207.08 | -441.80 | 1,210.74 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 91.02 | 359.52 | 12,115.49 | 1,307.06 | -442.63 | 1,310.72 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 91.02 | 359.52 | 12,113.71 | 1,407.04 | -443.47 | 1,410.71 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 91.02 | 359.52 | 12,111.93 | 1,507.02 | -444.30 | 1,510.69 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 91.02 | 359.52 | 12,110.14 | 1,607.00 | -445.13 | 1,610.68 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 91.02 | 359.52 | 12,108.36 | 1,706.98 | -445.97 | 1,710.66 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 91.02 | 359.52 | 12,106.58 | 1,806.96 | -446.80 | 1,810.64 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 91.02 | 359.52 | 12,104.80 | 1,906.94 | -447.63 | 1,910.63 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 91.02 | 359.52 | 12,103.02 | 2,006.93 | -448.46 | 2,010.61 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 91.02 | 359.52 | 12,101.24 | 2,106.91 | -449.30 | 2,110.60 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 91.02 | 359.52 | 12,099.45 | 2,206.89 | -450.13 | 2,210.58 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 91.02 | 359.52 | 12,097.67 | 2,306.87 | -450.96 | 2,310.56 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 91.02 | 359.52 | 12,095.89 | 2,406.85 | -451.79 | 2,410.55 | 0.00 | 0.00 | 0.00 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 14,500.00 | 91.02 | 359.52 | 12,094.11 | 2,506.83 | -452.63 | 2,510.53 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 91.02 | 359.52 | 12,092.33 | 2,606.81 | -453.46 | 2,610.52 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 91.02 | 359.52 | 12,090.54 | 2,706.79 | -454.29 | 2,710.50 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 91.02 | 359.52 | 12,088.76 | 2,806.77 | -455.12 | 2,810.49 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 91.02 | 359.52 | 12,086.98 | 2,906.75 | -455.96 | 2,910.47 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 91.02 | 359.52 | 12,085.20 | 3,006.73 | -456.79 | 3,010.45 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 91.02 | 359.52 | 12,083.42 | 3,106.71 | -457.62 | 3,110.44 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 91.02 | 359.52 | 12,081.63 | 3,206.69 | -458.46 | 3,210.42 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 91.02 | 359.52 | 12,079.85 | 3,306.67 | -459.29 | 3,310.41 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 91.02 | 359.52 | 12,078.07 | 3,406.65 | -460.12 | 3,410.39 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 91.02 | 359.52 | 12,076.29 | 3,506.64 | -460.95 | 3,510.37 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 91.02 | 359.52 | 12,074.51 | 3,606.62 | -461.79 | 3,610.36 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 91.02 | 359.52 | 12,072.72 | 3,706.60 | -462.62 | 3,710.34 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 91.02 | 359.52 | 12,070.94 | 3,806.58 | -463.45 | 3,810.33 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 91.02 | 359.52 | 12,069.16 | 3,906.56 | -464.28 | 3,910.31 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 91.02 | 359.52 | 12,067.38 | 4,006.54 | -465.12 | 4,010.29 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 91.02 | 359.52 | 12,065.60 | 4,106.52 | -465.95 | 4,110.28 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 91.02 | 359.52 | 12,063.81 | 4,206.50 | -466.78 | 4,210.26 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 91.02 | 359.52 | 12,062.03 | 4,306.48 | -467.61 | 4,310.25 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 91.02 | 359.52 | 12,060.25 | 4,406.46 | -468.45 | 4,410.23 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 91.02 | 359.52 | 12,058.47 | 4,506.44 | -469.28 | 4,510.22 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 91.02 | 359.52 | 12,056.69 | 4,606.42 | -470.11 | 4,610.20 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 91.02 | 359.52 | 12,054.90 | 4,706.40 | -470.95 | 4,710.18 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 91.02 | 359.52 | 12,053.12 | 4,806.38 | -471.78 | 4,810.17 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 91.02 | 359.52 | 12,051.34 | 4,906.36 | -472.61 | 4,910.15 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 91.02 | 359.52 | 12,049.56 | 5,006.35 | -473.44 | 5,010.14 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 91.02 | 359.52 | 12,047.78 | 5,106.33 | -474.28 | 5,110.12 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 91.02 | 359.52 | 12,045.99 | 5,206.31 | -475.11 | 5,210.10 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 91.02 | 359.52 | 12,044.21 | 5,306.29 | -475.94 | 5,310.09 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 91.02 | 359.52 | 12,042.43 | 5,406.27 | -476.77 | 5,410.07 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 91.02 | 359.52 | 12,040.65 | 5,506.25 | -477.61 | 5,510.06 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 91.02 | 359.52 | 12,038.87 | 5,606.23 | -478.44 | 5,610.04 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 91.02 | 359.52 | 12,037.08 | 5,706.21 | -479.27 | 5,710.02 | 0.00 | 0.00 | 0.00 |
| 17,800.00 | 91.02 | 359.52 | 12,035.30 | 5,806.19 | -480.10 | 5,810.01 | 0.00 | 0.00 | 0.00 |
| 17,900.00 | 91.02 | 359.52 | 12,033.52 | 5,906.17 | -480.94 | 5,909.99 | 0.00 | 0.00 | 0.00 |
| 18,000.00 | 91.02 | 359.52 | 12,031.74 | 6,006.15 | -481.77 | 6,009.98 | 0.00 | 0.00 | 0.00 |
| 18,100.00 | 91.02 | 359.52 | 12,029.96 | 6,106.13 | -482.60 | 6,109.96 | 0.00 | 0.00 | 0.00 |
| 18,200.00 | 91.02 | 359.52 | 12,028.17 | 6,206.11 | -483.43 | 6,209.95 | 0.00 | 0.00 | 0.00 |
| 18,300.00 | 91.02 | 359.52 | 12,026.39 | 6,306.09 | -484.27 | 6,309.93 | 0.00 | 0.00 | 0.00 |
| 18,400.00 | 91.02 | 359.52 | 12,024.61 | 6,406.07 | -485.10 | 6,409.91 | 0.00 | 0.00 | 0.00 |
| 18,500.00 | 91.02 | 359.52 | 12,022.83 | 6,506.06 | -485.93 | 6,509.90 | 0.00 | 0.00 | 0.00 |
| 18,600.00 | 91.02 | 359.52 | 12,021.05 | 6,606.04 | -486.77 | 6,609.88 | 0.00 | 0.00 | 0.00 |
| 18,700.00 | 91.02 | 359.52 | 12,019.26 | 6,706.02 | -487.60 | 6,709.87 | 0.00 | 0.00 | 0.00 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 18,800.00 | 91.02 | 359.52 | 12,017.48 | 6,806.00 | -488.43 | 6,809.85 | 0.00 | 0.00 | 0.00 |
| 18,900.00 | 91.02 | 359.52 | 12,015.70 | 6,905.98 | -489.26 | 6,909.83 | 0.00 | 0.00 | 0.00 |
| 19,000.00 | 91.02 | 359.52 | 12,013.92 | 7,005.96 | -490.10 | 7,009.82 | 0.00 | 0.00 | 0.00 |
| 19,100.00 | 91.02 | 359.52 | 12,012.14 | 7,105.94 | -490.93 | 7,109.80 | 0.00 | 0.00 | 0.00 |
| 19,200.00 | 91.02 | 359.52 | 12,010.36 | 7,205.92 | -491.76 | 7,209.79 | 0.00 | 0.00 | 0.00 |
| 19,300.00 | 91.02 | 359.52 | 12,008.57 | 7,305.90 | -492.59 | 7,309.77 | 0.00 | 0.00 | 0.00 |
| 19,400.00 | 91.02 | 359.52 | 12,006.79 | 7,405.88 | -493.43 | 7,409.75 | 0.00 | 0.00 | 0.00 |
| 19,500.00 | 91.02 | 359.52 | 12,005.01 | 7,505.86 | -494.26 | 7,509.74 | 0.00 | 0.00 | 0.00 |
| 19,600.00 | 91.02 | 359.52 | 12,003.23 | 7,605.84 | -495.09 | 7,609.72 | 0.00 | 0.00 | 0.00 |
| 19,700.00 | 91.02 | 359.52 | 12,001.45 | 7,705.82 | -495.92 | 7,709.71 | 0.00 | 0.00 | 0.00 |
| 19,781.09 | 91.02 | 359.52 | 12,000.00 | 7,786.90 | -496.60 | 7,790.79 | 0.00 | 0.00 | 0.00 |
| **PBHL - PBHL (Dagger802H)** | | | | | | | | | |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| FTP (Dagger802H) | 0.00 | 0.00 | 0.00 | -32.10 | -431.70 | 528,155.40 | 764,152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| - plan misses target center by 432.89usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| PBHL (Dagger802H) | 0.00 | 0.00 | 12,000.00 | 7,786.90 | -496.60 | 535,974.40 | 764,087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

**Casing Points**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|---|---|---|---|---|
| 1,605.02 | 1,605.00 | 10 3/4" | 10-3/4 | 12-1/4 |
| 10,668.59 | 10,650.00 | 7 5/8" | 7-5/8 | 7-5/8 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 0.1 | **Database:** | EDM 5000.14 Single User Db |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,597.02 | 1,597.00 | Rustler | | 0.00 | |
| 5,270.27 | 5,257.00 | Limestone base | | 0.00 | |
| 8,575.59 | 8,557.00 | Lower Brushy | | 0.00 | |
| 9,047.59 | 9,029.00 | Avalon | | 0.00 | |
| 10,042.59 | 10,024.00 | 1st BS Sand | | 0.00 | |
| 10,603.59 | 10,585.00 | 2nd BS Sand | | 0.00 | |
| 11,235.59 | 11,217.00 | 3rd BS Carbonate | | 0.00 | |
| 11,758.68 | 11,737.00 | 3rd BS Sand | | 0.00 | |
| 12,252.10 | 12,087.00 | Wolfcamp A | | 0.00 | |

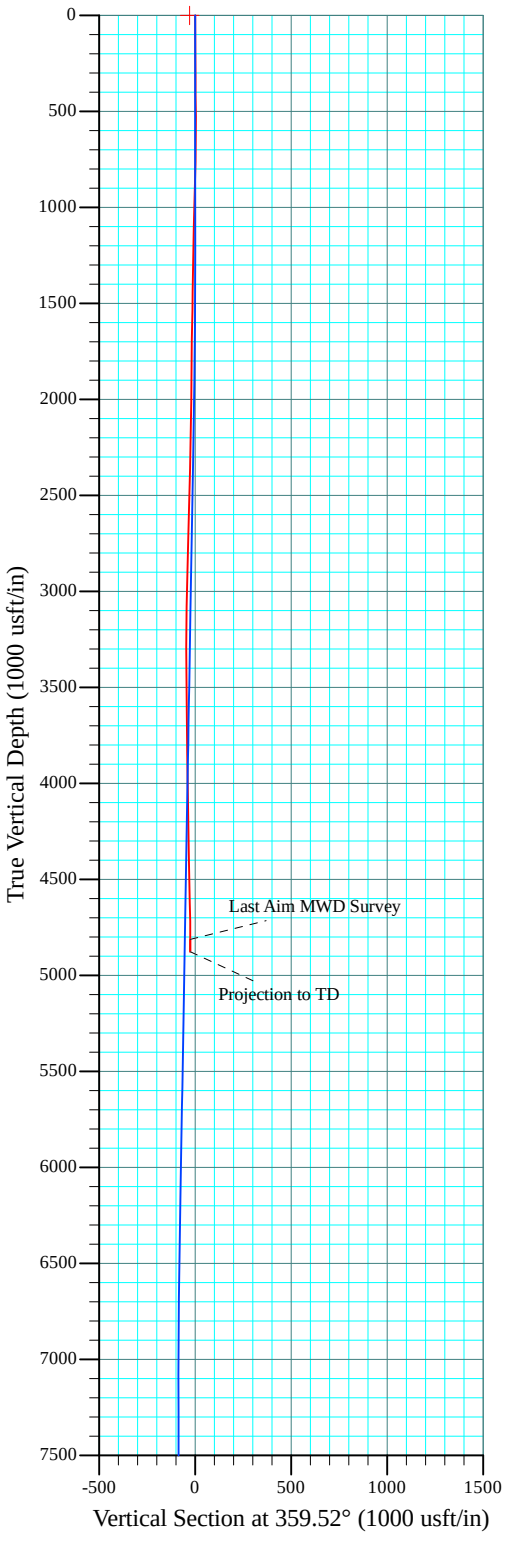
**Plan Annotations**

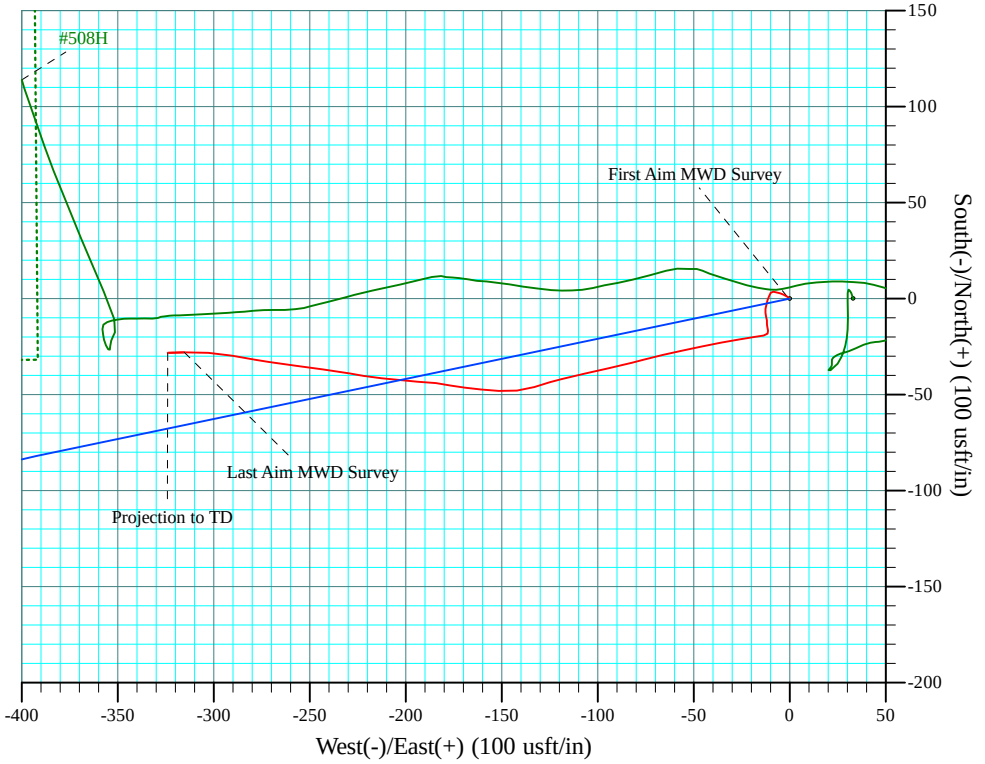
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 1450 | 1450 | 0 | 0 | Build 1.00°/100' |
| 1950 | 1949 | -4 | -21 | Hold 5.0° Inc, 258.21° Azimuth |
| 6502 | 6484 | -86 | -410 | Drop 1.00°/100' |
| 7002 | 6983 | -90 | -431 | Hold Vertical |
| 11,576 | 11,557 | -90 | -431 | KOP, Build 10.00°/100' |
| 12,486 | 12,130 | 493 | -436 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 19,781 | 12,000 | 7787 | -497 | PBHL |

# Advance Energy Partners, LLC



**Dagger State Com 802H**
**Lea County, New Mexico**
**Job No. WT-19-084**
**H&P 389**
**Plan 1.0 Final PVA**





Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.28°

Magnetic Field
Strength: 48123.1nT
Dip Angle: 60.24°
Date: 5/14/2019
Model: MVHD

**Magnetic North: 6.28° to Grid North**

| SITE DETAILS: Dagger State Com 802H | |
|---|---|
| Site Centre Northing: | 528187.50 |
| Easting: | 764584.50 |
| Positional Uncertainity: | 0.00 |
| Convergence: | 0.39 |
| Local North: | Grid |
| Depth Reference: | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |

| SLOTS | | |
|---|---|---|
| Slot Name | +N/-S | +E/-W |
| 506H | 1.20 | 118.30 |
| 508H | 1.00 | 88.30 |
| 552H | 0.20 | 33.00 |
| 802H | 0.00 | 0.00 |

| 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 |

**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 (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |

Drawn By: IG
Date Created: 5/8/2019
Date Revised: 6/26/2019
File: Advance Energy - Dagger State Com #802H Plan 1.0 Surface Final PVA.wpc

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4829.00 | 7.65 | 268.28 | 4812.14 | -27.90 | -315.29 | 0.00 | 0.00 | -25.26 | Last Aim MWD Survey |
| 2 | 4894.00 | 7.65 | 268.28 | 4876.57 | -28.16 | -323.94 | 0.00 | 0.00 | -25.45 | Projection to TD |

# Proposed vs. As Drilled Lateral

## **Dagger State Com #802H** (WT-19-084)

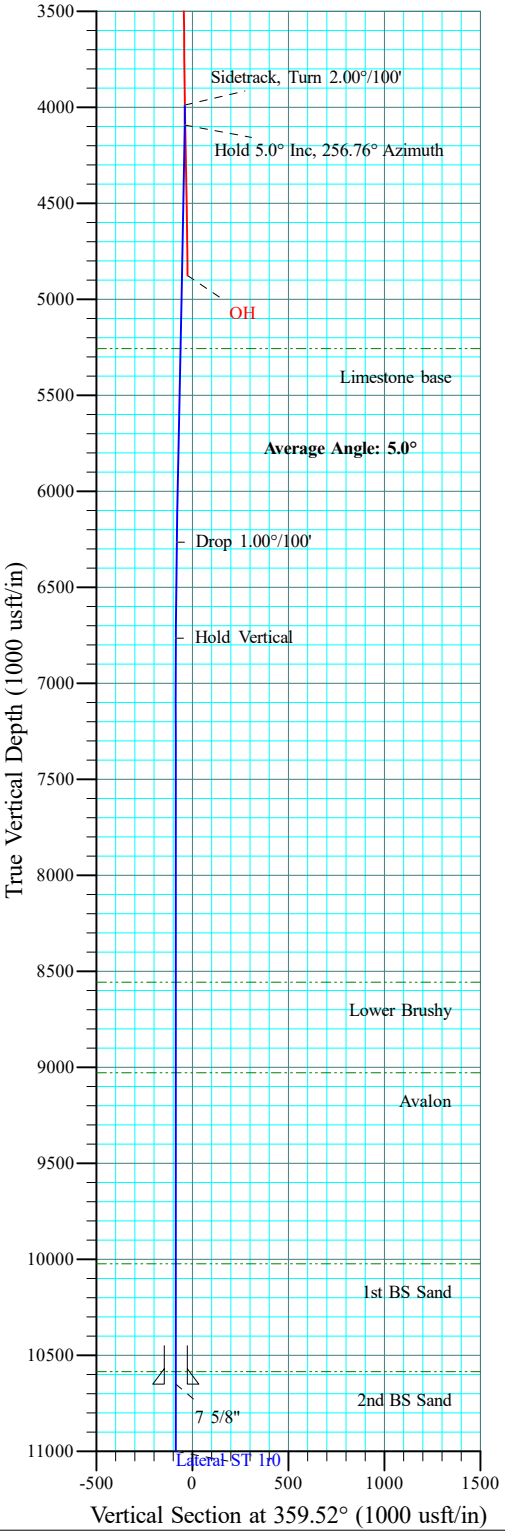
2019-05-19 to 2019-06-30

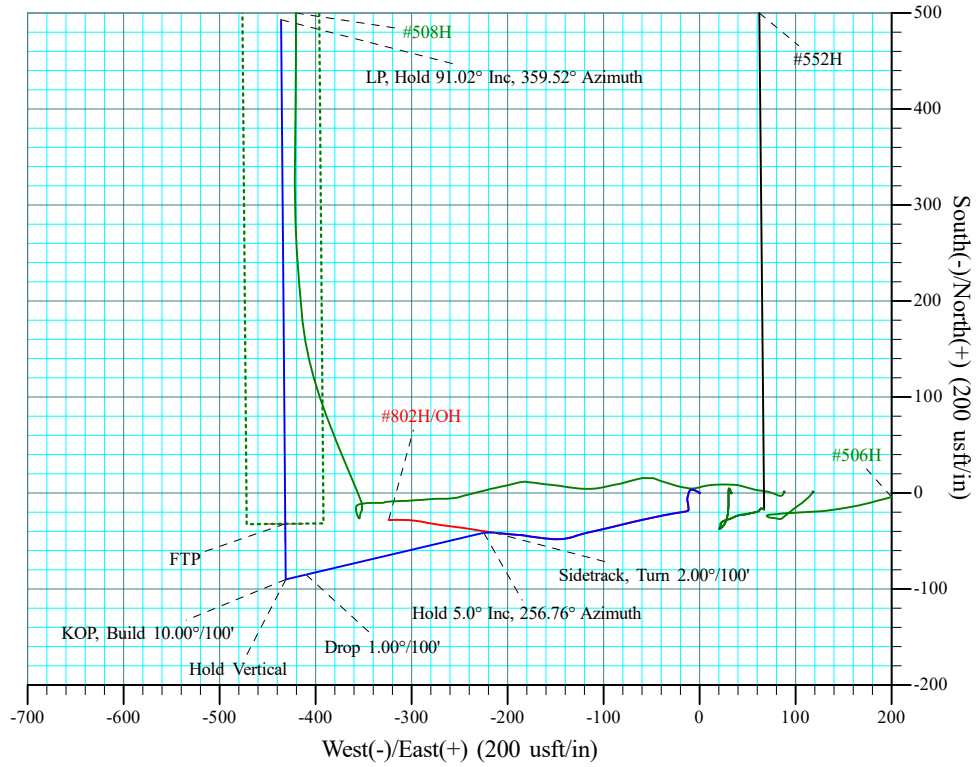
Lea, New Mexico, US (32.45, -103.61)

# Advance Energy Partners, LLC



**Dagger State Com 802H**
**Lea County, New Mexico**
**Job No. WT-19-084**
**H&P 389**
**Plan 2.0**





Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.28°

Magnetic Field
Strength: 48118.6nT
Dip Angle: 60.24°
Date: 5/29/2019
Model: MVHD

**Magnetic North: 6.28° to Grid North**

| SITE DETAILS: Dagger State Com 802H | |
|---|---|
| Site Centre Northing: | 528187.50 |
| Easting: | 764584.50 |
| Positional Uncertainity: | 0.00 |
| Convergence: | 0.39 |
| Local North: | Grid |
| Depth Reference: | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |

| CASING DETAILS | |
|---|---|
| TVD | Name |
| 10650.00 | 7 5/8" |

| SLOTS | | |
|---|---|---|
| Slot Name | +N/-S | +E/-W |
| 506H | 1.20 | 118.30 |
| 508H | 1.00 | 88.30 |
| 552H | 0.20 | 33.00 |
| 802H | 0.00 | 0.00 |

| 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 |

**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 (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |

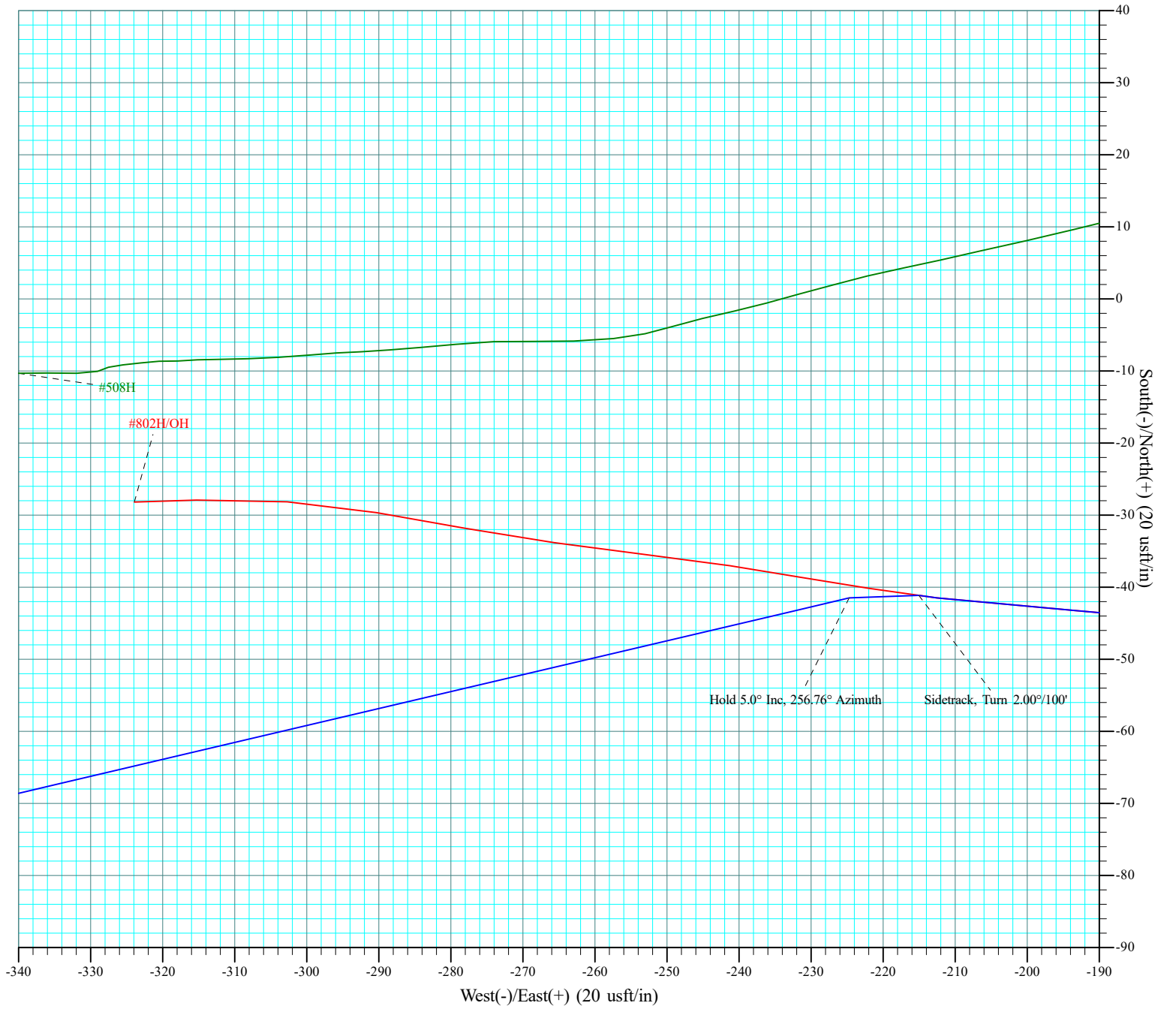
Drawn By: IG
Date Created: 5/8/2019
Date Revised: 5/29/2019
File: Advance Energy - Dagger State Com #802H Plan 2.0 Surface.wpc

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4000.00 | 5.77 | 277.68 | 3989.44 | -41.13 | -215.04 | 0.000 | 0.00 | -39.33 | Sidetrack, Turn 2.00°/100' |
| 2 | 4104.66 | 5.00 | 256.76 | 4093.65 | -41.48 | -224.70 | 2.000 | -121.55 | -39.59 | Hold 5.0° Inc, 256.76° Azimuth |
| 3 | 6284.70 | 5.00 | 256.76 | 6265.37 | -85.00 | -409.75 | 0.000 | 0.00 | -81.57 | Drop 1.00°/100' |
| 4 | 6784.96 | 0.00 | 0.00 | 6765.00 | -90.00 | -431.00 | 1.000 | 180.00 | -86.39 | Hold Vertical |
| 5 | 11577.09 | 0.00 | 0.00 | 11557.13 | -90.00 | -431.00 | 0.000 | 0.00 | -86.39 | KOP, Build 10.00°/100' |
| 6 | 12430.00 | 91.02 | 359.52 | 12130.00 | 493.15 | -435.86 | 10.000 | 359.52 | 496.78 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 7 | 19782.46 | 91.02 | 359.52 | 12000.00 | 7786.90 | -496.60 | 0.000 | 0.00 | 7790.79 | PBHL |

# Advance Energy Partners, LLC

**Dagger State Com 802H**
**Lea County, New Mexico**
**Job No. WT-19-084**
**H&P 389**
**Plan 2.0**




**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 (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |

Drawn By: IG
Date Created: 5/8/2019
Date Revised: 5/29/2019
File: Advance Energy - Dagger State Com #802H Plan 2.0 Spider.wpc

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4000.00 | 5.77 | 277.68 | 3989.44 | -41.13 | -215.04 | 0.000 | 0.00 | -39.33 | Sidetrack, Turn 2.00°/100' |
| 2 | 4104.66 | 5.00 | 256.76 | 4093.65 | -41.48 | -224.70 | 2.000 | -121.55 | -39.59 | Hold 5.0° Inc, 256.76° Azimuth |
| 3 | 6284.70 | 5.00 | 256.76 | 6265.37 | -85.00 | -409.75 | 0.000 | 0.00 | -81.57 | Drop 1.00°/100' |
| 4 | 6784.96 | 0.00 | 0.00 | 6765.00 | -90.00 | -431.00 | 1.000 | 180.00 | -86.39 | Hold Vertical |
| 5 | 11577.09 | 0.00 | 0.00 | 11557.13 | -90.00 | -431.00 | 0.000 | 0.00 | -86.39 | KOP, Build 10.00°/100' |
| 6 | 12430.00 | 91.02 | 359.52 | 12130.00 | 493.15 | -435.86 | 10.000 | 359.52 | 496.78 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 7 | 19782.46 | 91.02 | 359.52 | 12000.00 | 7786.90 | -496.60 | 0.000 | 0.00 | 7790.79 | PBHL |

# Advance Energy Partners, LLC

**Dagger State Com 802H**
**Lea County, New Mexico**
**Job No. WT-19-084**
**H&P 389**
**Plan 2.0**

| SITE DETAILS: Dagger State Com 802H | |
|---|---|
| Site Centre Northing: | 528187.50 |
| Easting: | 764584.50 |
| Positional Uncertainity: | 0.00 |
| Convergence: | 0.39 |
| Local North: | Grid |

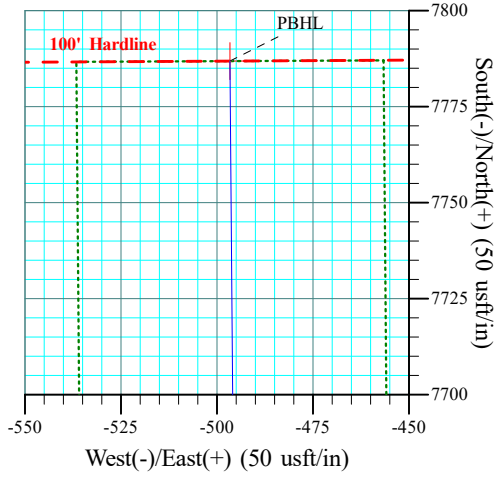

Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.28°

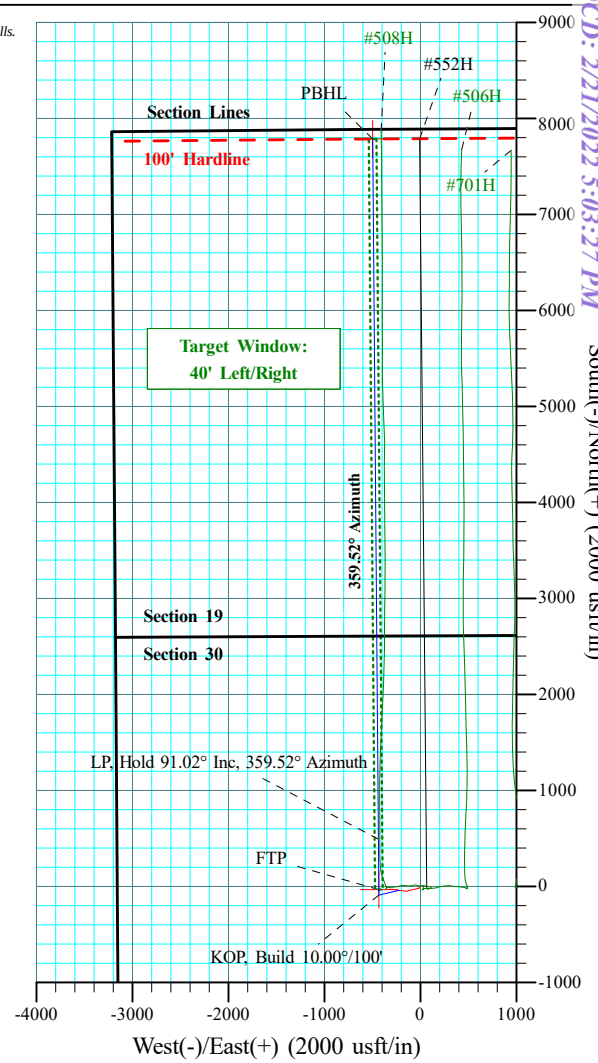
Magnetic Field
Strength: 48118.6nT
Dip Angle: 60.24°
Date: 5/29/2019
Model: MVHD

**Magnetic North: 6.28° to Grid North**

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

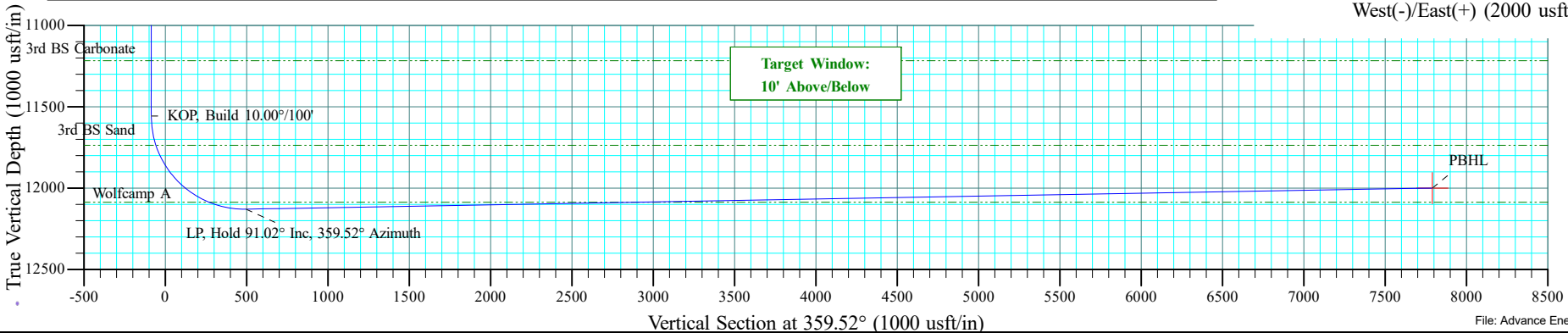
| PROJECT DETAILS: | Lea County, New Mexico |
|---|---|
| Geodetic System: | US State Plane 1983 |
| Datum: | North American Datum 1983 |
| Ellipsoid: | GRS 1980 |
| Zone: | New Mexico Eastern Zone |
| System Datum: | Mean Sea Level |
| Depth Reference: | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |




| SECTION DETAILS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
| 1 | 4000.00 | 5.77 | 277.68 | 3989.44 | -41.13 | -215.04 | 0.000 | 0.00 | -39.33 | Sidetrack, Turn 2.00°/100' |
| 2 | 4104.66 | 5.00 | 256.76 | 4093.65 | -41.48 | -224.70 | 2.000 | -121.55 | -39.59 | Hold 5.0° Inc, 256.76° Azimuth |
| 3 | 6284.70 | 5.00 | 256.76 | 6265.37 | -85.00 | -409.75 | 0.000 | 0.00 | -81.57 | Drop 1.00°/100' |
| 4 | 6784.96 | 0.00 | 0.00 | 6765.00 | -90.00 | -431.00 | 1.000 | 180.00 | -86.39 | Hold Vertical |
| 5 | 11577.09 | 0.00 | 0.00 | 11557.13 | -90.00 | -431.00 | 0.000 | 0.00 | -86.39 | KOP, Build 10.00°/100' |
| 6 | 12487.30 | 91.02 | 359.52 | 12130.00 | 493.15 | -435.86 | 10.000 | 359.52 | 496.78 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 7 | 19782.46 | 91.02 | 359.52 | 12000.00 | 7786.90 | -496.60 | 0.000 | 0.00 | 7790.79 | PBHL |

| DESIGN TARGET DETAILS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| FTP (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |




Drawn: JG
Date Created: 5/8/2018
Date Revised: 5/29/2018
File: Advance Energy - Dagger State Com #802H Plan 2.0

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Project** Lea County, New Mexico

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

**Site** Dagger State Com 802H

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| **From:** | Map | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.39 ° |

**Well** #802H - Slot 802H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| | **+E/-W** | 0.00 usft | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,812.00 usft |

**Wellbore** Lateral ST 1r0

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | MVHD | 5/29/2019 | 6.67 | 60.24 | 48,118.57772024 |

**Design** Plan 2.0

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PROTOTYPE | **Tie On Depth:** | 4,000.00 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 359.52 |

**Survey Tool Program** **Date** 6/1/2019

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 198.00 | 4,000.00 | Aim MWD Surveys (OH Surveys) | B001Mb_MWD+HRGM | OWSG MWD + HRGM |
| 4,000.00 | 19,782.46 | Plan 2.0 (Lateral ST 1r0) | B001Mb_MWD+HRGM | OWSG MWD + HRGM |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 |
| 2.51 | 0.01 | 309.59 | 2.51 | 0.00 | 0.00 | 0.00 | 0.465 | 0.465 | 0.000 |
| **FTP (Dagger802H)** | | | | | | | | | |
| 198.00 | 0.92 | 309.59 | 197.99 | 1.01 | -1.22 | 1.02 | 0.465 | 0.465 | 0.000 |
| 321.00 | 1.32 | 292.19 | 320.97 | 2.18 | -3.30 | 2.20 | 0.423 | 0.325 | -14.146 |
| 412.00 | 0.92 | 293.68 | 411.95 | 2.87 | -4.94 | 2.91 | 0.441 | -0.440 | 1.637 |
| 596.00 | 1.32 | 274.43 | 595.92 | 3.62 | -8.40 | 3.69 | 0.296 | 0.217 | -10.462 |
| 688.00 | 0.84 | 215.81 | 687.90 | 3.16 | -9.85 | 3.24 | 1.236 | -0.522 | -63.717 |
| 780.00 | 1.41 | 201.49 | 779.88 | 1.56 | -10.66 | 1.65 | 0.686 | 0.620 | -15.565 |
| 871.00 | 1.58 | 199.90 | 870.85 | -0.66 | -11.50 | -0.57 | 0.192 | 0.187 | -1.747 |

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 966.00 | 1.45 | 189.09 | 965.82 | -3.08 | -12.14 | -2.98 | 0.330 | -0.137 | -11.379 |
| 1,061.00 | 1.32 | 194.63 | 1,060.79 | -5.33 | -12.60 | -5.22 | 0.196 | -0.137 | 5.832 |
| 1,156.00 | 1.23 | 168.61 | 1,155.77 | -7.39 | -12.68 | -7.28 | 0.611 | -0.095 | -27.389 |
| 1,251.00 | 1.36 | 168.97 | 1,250.74 | -9.49 | -12.26 | -9.39 | 0.137 | 0.137 | 0.379 |
| 1,345.00 | 0.88 | 166.77 | 1,344.73 | -11.29 | -11.88 | -11.19 | 0.513 | -0.511 | -2.340 |
| 1,440.00 | 0.75 | 188.92 | 1,439.72 | -12.61 | -11.81 | -12.51 | 0.356 | -0.137 | 23.316 |
| 1,535.00 | 0.88 | 168.70 | 1,534.71 | -13.94 | -11.76 | -13.84 | 0.330 | 0.137 | -21.284 |
| 1,699.00 | 1.01 | 169.93 | 1,698.69 | -16.60 | -11.27 | -16.51 | 0.080 | 0.079 | 0.750 |
| 1,794.00 | 1.01 | 211.42 | 1,793.67 | -18.14 | -11.56 | -18.04 | 0.753 | 0.000 | 43.674 |
| 1,888.00 | 2.11 | 259.58 | 1,887.64 | -19.16 | -13.69 | -19.04 | 1.725 | 1.170 | 51.234 |
| 1,983.00 | 3.82 | 261.95 | 1,982.51 | -19.92 | -18.54 | -19.76 | 1.804 | 1.800 | 2.495 |
| 2,078.00 | 5.49 | 259.84 | 2,077.19 | -21.16 | -26.15 | -20.94 | 1.767 | 1.758 | -2.221 |
| 2,173.00 | 6.15 | 259.49 | 2,171.70 | -22.89 | -35.63 | -22.59 | 0.696 | 0.695 | -0.368 |
| 2,268.00 | 6.24 | 258.26 | 2,266.15 | -24.87 | -45.69 | -24.49 | 0.169 | 0.095 | -1.295 |
| 2,363.00 | 6.29 | 257.91 | 2,360.58 | -27.01 | -55.83 | -26.54 | 0.066 | 0.053 | -0.368 |
| 2,458.00 | 6.33 | 257.21 | 2,455.00 | -29.26 | -66.02 | -28.71 | 0.091 | 0.042 | -0.737 |
| 2,552.00 | 6.42 | 255.54 | 2,548.42 | -31.72 | -76.17 | -31.08 | 0.219 | 0.096 | -1.777 |
| 2,647.00 | 6.59 | 255.80 | 2,642.81 | -34.39 | -86.59 | -33.66 | 0.182 | 0.179 | 0.274 |
| 2,742.00 | 6.46 | 257.38 | 2,737.20 | -36.89 | -97.09 | -36.08 | 0.233 | -0.137 | 1.663 |
| 2,837.00 | 6.11 | 258.00 | 2,831.62 | -39.11 | -107.26 | -38.21 | 0.375 | -0.368 | 0.653 |
| 2,932.00 | 5.58 | 255.98 | 2,926.13 | -41.28 | -116.68 | -40.30 | 0.598 | -0.558 | -2.126 |
| 3,027.00 | 4.88 | 252.81 | 3,020.73 | -43.59 | -125.02 | -42.54 | 0.797 | -0.737 | -3.337 |
| 3,122.00 | 5.32 | 252.73 | 3,115.36 | -46.09 | -133.09 | -44.98 | 0.463 | 0.463 | -0.084 |
| 3,217.00 | 5.80 | 264.41 | 3,209.91 | -47.87 | -142.07 | -46.68 | 1.291 | 0.505 | 12.295 |
| 3,311.00 | 5.85 | 273.38 | 3,303.43 | -48.05 | -151.58 | -46.78 | 0.969 | 0.053 | 9.543 |
| 3,406.00 | 5.36 | 276.72 | 3,397.98 | -47.25 | -160.82 | -45.90 | 0.619 | -0.516 | 3.516 |
| 3,501.00 | 4.53 | 275.93 | 3,492.62 | -46.34 | -168.96 | -44.92 | 0.877 | -0.874 | -0.832 |
| 3,596.00 | 4.48 | 281.47 | 3,587.33 | -45.21 | -176.33 | -43.73 | 0.461 | -0.053 | 5.832 |
| 3,691.00 | 5.19 | 276.46 | 3,681.99 | -43.99 | -184.23 | -42.45 | 0.869 | 0.747 | -5.274 |
| 3,786.00 | 5.93 | 273.20 | 3,776.54 | -43.23 | -193.40 | -41.61 | 0.847 | 0.779 | -3.432 |
| 3,975.00 | 5.76 | 277.42 | 3,964.56 | -41.46 | -212.56 | -39.68 | 0.244 | -0.090 | 2.233 |
| 4,000.00 | 5.77 | 277.68 | 3,989.44 | -41.13 | -215.04 | -39.33 | 0.111 | 0.041 | 1.026 |
| **Sidetrack, Turn 2.00°/100'** | | | | | | | | | |
| 4,104.66 | 5.00 | 256.76 | 4,093.65 | -41.48 | -224.70 | -39.59 | 2.000 | -0.734 | -19.981 |
| **Hold 5.0° Inc, 256.76° Azimuth** | | | | | | | | | |
| 4,200.00 | 5.00 | 256.76 | 4,188.62 | -43.38 | -232.80 | -41.43 | 0.000 | 0.000 | 0.000 |
| 4,300.00 | 5.00 | 256.76 | 4,288.24 | -45.38 | -241.28 | -43.35 | 0.000 | 0.000 | 0.000 |
| 4,400.00 | 5.00 | 256.76 | 4,387.86 | -47.37 | -249.77 | -45.28 | 0.000 | 0.000 | 0.000 |
| 4,500.00 | 5.00 | 256.76 | 4,487.48 | -49.37 | -258.26 | -47.20 | 0.000 | 0.000 | 0.000 |
| 4,600.00 | 5.00 | 256.76 | 4,587.10 | -51.37 | -266.75 | -49.13 | 0.000 | 0.000 | 0.000 |
| 4,700.00 | 5.00 | 256.76 | 4,686.71 | -53.36 | -275.24 | -51.06 | 0.000 | 0.000 | 0.000 |
| 4,800.00 | 5.00 | 256.76 | 4,786.33 | -55.36 | -283.73 | -52.98 | 0.000 | 0.000 | 0.000 |
| 4,900.00 | 5.00 | 256.76 | 4,885.95 | -57.36 | -292.21 | -54.91 | 0.000 | 0.000 | 0.000 |

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 5.00 | 256.76 | 4,985.57 | -59.35 | -300.70 | -56.83 | 0.000 | 0.000 | 0.000 |
| 5,100.00 | 5.00 | 256.76 | 5,085.19 | -61.35 | -309.19 | -58.76 | 0.000 | 0.000 | 0.000 |
| 5,200.00 | 5.00 | 256.76 | 5,184.81 | -63.35 | -317.68 | -60.68 | 0.000 | 0.000 | 0.000 |
| 5,300.00 | 5.00 | 256.76 | 5,284.43 | -65.34 | -326.17 | -62.61 | 0.000 | 0.000 | 0.000 |
| 5,400.00 | 5.00 | 256.76 | 5,384.05 | -67.34 | -334.66 | -64.53 | 0.000 | 0.000 | 0.000 |
| 5,500.00 | 5.00 | 256.76 | 5,483.67 | -69.34 | -343.15 | -66.46 | 0.000 | 0.000 | 0.000 |
| 5,600.00 | 5.00 | 256.76 | 5,583.29 | -71.33 | -351.63 | -68.38 | 0.000 | 0.000 | 0.000 |
| 5,700.00 | 5.00 | 256.76 | 5,682.91 | -73.33 | -360.12 | -70.31 | 0.000 | 0.000 | 0.000 |
| 5,800.00 | 5.00 | 256.76 | 5,782.52 | -75.33 | -368.61 | -72.23 | 0.000 | 0.000 | 0.000 |
| 5,900.00 | 5.00 | 256.76 | 5,882.14 | -77.32 | -377.10 | -74.16 | 0.000 | 0.000 | 0.000 |
| 6,000.00 | 5.00 | 256.76 | 5,981.76 | -79.32 | -385.59 | -76.09 | 0.000 | 0.000 | 0.000 |
| 6,100.00 | 5.00 | 256.76 | 6,081.38 | -81.32 | -394.08 | -78.01 | 0.000 | 0.000 | 0.000 |
| 6,200.00 | 5.00 | 256.76 | 6,181.00 | -83.31 | -402.56 | -79.94 | 0.000 | 0.000 | 0.000 |
| 6,284.70 | 5.00 | 256.76 | 6,265.37 | -85.00 | -409.75 | -81.57 | 0.000 | 0.000 | 0.000 |
| **Drop 1.00°/100'** | | | | | | | | | |
| 6,300.00 | 4.85 | 256.76 | 6,280.62 | -85.30 | -411.03 | -81.86 | 1.000 | -1.000 | 0.000 |
| 6,400.00 | 3.85 | 256.76 | 6,380.33 | -87.04 | -418.42 | -83.53 | 1.000 | -1.000 | 0.000 |
| 6,500.00 | 2.85 | 256.76 | 6,480.16 | -88.38 | -424.10 | -84.82 | 1.000 | -1.000 | 0.000 |
| 6,600.00 | 1.85 | 256.76 | 6,580.07 | -89.32 | -428.09 | -85.73 | 1.000 | -1.000 | 0.000 |
| 6,700.00 | 0.85 | 256.76 | 6,680.05 | -89.86 | -430.39 | -86.25 | 1.000 | -1.000 | 0.000 |
| 6,784.96 | 0.00 | 0.00 | 6,765.00 | -90.00 | -431.00 | -86.39 | 1.000 | -1.000 | 0.000 |
| **Hold Vertical** | | | | | | | | | |
| 6,800.00 | 0.00 | 0.00 | 6,780.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 6,900.00 | 0.00 | 0.00 | 6,880.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,000.00 | 0.00 | 0.00 | 6,980.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,100.00 | 0.00 | 0.00 | 7,080.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,200.00 | 0.00 | 0.00 | 7,180.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,300.00 | 0.00 | 0.00 | 7,280.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,400.00 | 0.00 | 0.00 | 7,380.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,500.00 | 0.00 | 0.00 | 7,480.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,600.00 | 0.00 | 0.00 | 7,580.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,700.00 | 0.00 | 0.00 | 7,680.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,800.00 | 0.00 | 0.00 | 7,780.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 7,900.00 | 0.00 | 0.00 | 7,880.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,000.00 | 0.00 | 0.00 | 7,980.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,100.00 | 0.00 | 0.00 | 8,080.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,200.00 | 0.00 | 0.00 | 8,180.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,300.00 | 0.00 | 0.00 | 8,280.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,400.00 | 0.00 | 0.00 | 8,380.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,500.00 | 0.00 | 0.00 | 8,480.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,600.00 | 0.00 | 0.00 | 8,580.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,700.00 | 0.00 | 0.00 | 8,680.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,800.00 | 0.00 | 0.00 | 8,780.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 8,900.00 | 0.00 | 0.00 | 8,880.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 9,000.00 | 0.00 | 0.00 | 8,980.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,100.00 | 0.00 | 0.00 | 9,080.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,200.00 | 0.00 | 0.00 | 9,180.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,300.00 | 0.00 | 0.00 | 9,280.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,400.00 | 0.00 | 0.00 | 9,380.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,500.00 | 0.00 | 0.00 | 9,480.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,600.00 | 0.00 | 0.00 | 9,580.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,700.00 | 0.00 | 0.00 | 9,680.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,800.00 | 0.00 | 0.00 | 9,780.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 9,900.00 | 0.00 | 0.00 | 9,880.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,000.00 | 0.00 | 0.00 | 9,980.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,100.00 | 0.00 | 0.00 | 10,080.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,200.00 | 0.00 | 0.00 | 10,180.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,300.00 | 0.00 | 0.00 | 10,280.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,400.00 | 0.00 | 0.00 | 10,380.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,500.00 | 0.00 | 0.00 | 10,480.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,600.00 | 0.00 | 0.00 | 10,580.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,669.96 | 0.00 | 0.00 | 10,650.00 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| **7 5/8"** | | | | | | | | | |
| 10,700.00 | 0.00 | 0.00 | 10,680.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,800.00 | 0.00 | 0.00 | 10,780.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 10,900.00 | 0.00 | 0.00 | 10,880.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,000.00 | 0.00 | 0.00 | 10,980.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,100.00 | 0.00 | 0.00 | 11,080.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,200.00 | 0.00 | 0.00 | 11,180.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,300.00 | 0.00 | 0.00 | 11,280.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,400.00 | 0.00 | 0.00 | 11,380.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,500.00 | 0.00 | 0.00 | 11,480.04 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| 11,577.09 | 0.00 | 0.00 | 11,557.13 | -90.00 | -431.00 | -86.39 | 0.000 | 0.000 | 0.000 |
| **KOP, Build 10.00°/100'** | | | | | | | | | |
| 11,600.00 | 2.29 | 359.52 | 11,580.04 | -89.54 | -431.00 | -85.93 | 10.000 | 10.000 | 0.000 |
| 11,650.00 | 7.29 | 359.52 | 11,629.85 | -85.37 | -431.04 | -81.75 | 10.000 | 10.000 | 0.000 |
| 11,700.00 | 12.29 | 359.52 | 11,679.10 | -76.87 | -431.11 | -73.25 | 10.000 | 10.000 | 0.000 |
| 11,750.00 | 17.29 | 359.52 | 11,727.43 | -64.11 | -431.22 | -60.49 | 10.000 | 10.000 | 0.000 |
| 11,800.00 | 22.29 | 359.52 | 11,774.46 | -47.18 | -431.36 | -43.57 | 10.000 | 10.000 | 0.000 |
| 11,850.00 | 27.29 | 359.52 | 11,819.84 | -26.22 | -431.53 | -22.61 | 10.000 | 10.000 | 0.000 |
| 11,900.00 | 32.29 | 359.52 | 11,863.22 | -1.39 | -431.74 | 2.23 | 10.000 | 10.000 | 0.000 |
| 11,950.00 | 37.29 | 359.52 | 11,904.27 | 27.13 | -431.98 | 30.75 | 10.000 | 10.000 | 0.000 |
| 12,000.00 | 42.29 | 359.52 | 11,942.67 | 59.12 | -432.24 | 62.74 | 10.000 | 10.000 | 0.000 |
| 12,050.00 | 47.29 | 359.52 | 11,978.15 | 94.33 | -432.54 | 97.95 | 10.000 | 10.000 | 0.000 |
| 12,100.00 | 52.29 | 359.52 | 12,010.41 | 132.50 | -432.85 | 136.12 | 10.000 | 10.000 | 0.000 |
| 12,150.00 | 57.29 | 359.52 | 12,039.23 | 173.34 | -433.19 | 176.96 | 10.000 | 10.000 | 0.000 |
| 12,200.00 | 62.29 | 359.52 | 12,064.38 | 216.53 | -433.55 | 220.16 | 10.000 | 10.000 | 0.000 |
| 12,250.00 | 67.29 | 359.52 | 12,085.67 | 261.76 | -433.93 | 265.38 | 10.000 | 10.000 | 0.000 |

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 12,300.00 | 72.29 | 359.52 | 12,102.94 | 308.66 | -434.32 | 312.29 | 10.000 | 10.000 | 0.000 |
| 12,350.00 | 77.29 | 359.52 | 12,116.05 | 356.89 | -434.72 | 360.52 | 10.000 | 10.000 | 0.000 |
| 12,400.00 | 82.29 | 359.52 | 12,124.91 | 406.09 | -435.13 | 409.72 | 10.000 | 10.000 | 0.000 |
| 12,450.00 | 87.29 | 359.52 | 12,129.45 | 455.86 | -435.55 | 459.49 | 10.000 | 10.000 | 0.000 |
| 12,487.30 | 91.02 | 359.52 | 12,130.00 | 493.15 | -435.86 | 496.78 | 10.000 | 10.000 | 0.000 |
| **LP, Hold 91.02° Inc, 359.52° Azimuth** | | | | | | | | | |
| 12,500.00 | 91.02 | 359.52 | 12,129.77 | 505.85 | -435.96 | 509.48 | 0.000 | 0.000 | 0.000 |
| 12,600.00 | 91.02 | 359.52 | 12,127.99 | 605.83 | -436.79 | 609.47 | 0.000 | 0.000 | 0.000 |
| 12,700.00 | 91.02 | 359.52 | 12,126.21 | 705.81 | -437.63 | 709.45 | 0.000 | 0.000 | 0.000 |
| 12,800.00 | 91.02 | 359.52 | 12,124.42 | 805.79 | -438.46 | 809.43 | 0.000 | 0.000 | 0.000 |
| 12,900.00 | 91.02 | 359.52 | 12,122.64 | 905.77 | -439.29 | 909.42 | 0.000 | 0.000 | 0.000 |
| 13,000.00 | 91.02 | 359.52 | 12,120.86 | 1,005.75 | -440.13 | 1,009.40 | 0.000 | 0.000 | 0.000 |
| 13,100.00 | 91.02 | 359.52 | 12,119.08 | 1,105.73 | -440.96 | 1,109.39 | 0.000 | 0.000 | 0.000 |
| 13,200.00 | 91.02 | 359.52 | 12,117.30 | 1,205.71 | -441.79 | 1,209.37 | 0.000 | 0.000 | 0.000 |
| 13,300.00 | 91.02 | 359.52 | 12,115.52 | 1,305.69 | -442.62 | 1,309.35 | 0.000 | 0.000 | 0.000 |
| 13,400.00 | 91.02 | 359.52 | 12,113.73 | 1,405.67 | -443.46 | 1,409.34 | 0.000 | 0.000 | 0.000 |
| 13,500.00 | 91.02 | 359.52 | 12,111.95 | 1,505.65 | -444.29 | 1,509.32 | 0.000 | 0.000 | 0.000 |
| 13,600.00 | 91.02 | 359.52 | 12,110.17 | 1,605.63 | -445.12 | 1,609.31 | 0.000 | 0.000 | 0.000 |
| 13,700.00 | 91.02 | 359.52 | 12,108.39 | 1,705.61 | -445.95 | 1,709.29 | 0.000 | 0.000 | 0.000 |
| 13,800.00 | 91.02 | 359.52 | 12,106.61 | 1,805.60 | -446.79 | 1,809.28 | 0.000 | 0.000 | 0.000 |
| 13,900.00 | 91.02 | 359.52 | 12,104.82 | 1,905.58 | -447.62 | 1,909.26 | 0.000 | 0.000 | 0.000 |
| 14,000.00 | 91.02 | 359.52 | 12,103.04 | 2,005.56 | -448.45 | 2,009.24 | 0.000 | 0.000 | 0.000 |
| 14,100.00 | 91.02 | 359.52 | 12,101.26 | 2,105.54 | -449.28 | 2,109.23 | 0.000 | 0.000 | 0.000 |
| 14,200.00 | 91.02 | 359.52 | 12,099.48 | 2,205.52 | -450.12 | 2,209.21 | 0.000 | 0.000 | 0.000 |
| 14,300.00 | 91.02 | 359.52 | 12,097.70 | 2,305.50 | -450.95 | 2,309.20 | 0.000 | 0.000 | 0.000 |
| 14,400.00 | 91.02 | 359.52 | 12,095.91 | 2,405.48 | -451.78 | 2,409.18 | 0.000 | 0.000 | 0.000 |
| 14,500.00 | 91.02 | 359.52 | 12,094.13 | 2,505.46 | -452.62 | 2,509.16 | 0.000 | 0.000 | 0.000 |
| 14,600.00 | 91.02 | 359.52 | 12,092.35 | 2,605.44 | -453.45 | 2,609.15 | 0.000 | 0.000 | 0.000 |
| 14,700.00 | 91.02 | 359.52 | 12,090.57 | 2,705.42 | -454.28 | 2,709.13 | 0.000 | 0.000 | 0.000 |
| 14,800.00 | 91.02 | 359.52 | 12,088.79 | 2,805.40 | -455.11 | 2,809.12 | 0.000 | 0.000 | 0.000 |
| 14,900.00 | 91.02 | 359.52 | 12,087.00 | 2,905.38 | -455.95 | 2,909.10 | 0.000 | 0.000 | 0.000 |
| 15,000.00 | 91.02 | 359.52 | 12,085.22 | 3,005.36 | -456.78 | 3,009.08 | 0.000 | 0.000 | 0.000 |
| 15,100.00 | 91.02 | 359.52 | 12,083.44 | 3,105.34 | -457.61 | 3,109.07 | 0.000 | 0.000 | 0.000 |
| 15,200.00 | 91.02 | 359.52 | 12,081.66 | 3,205.32 | -458.44 | 3,209.05 | 0.000 | 0.000 | 0.000 |
| 15,300.00 | 91.02 | 359.52 | 12,079.88 | 3,305.31 | -459.28 | 3,309.04 | 0.000 | 0.000 | 0.000 |
| 15,400.00 | 91.02 | 359.52 | 12,078.09 | 3,405.29 | -460.11 | 3,409.02 | 0.000 | 0.000 | 0.000 |
| 15,500.00 | 91.02 | 359.52 | 12,076.31 | 3,505.27 | -460.94 | 3,509.01 | 0.000 | 0.000 | 0.000 |
| 15,600.00 | 91.02 | 359.52 | 12,074.53 | 3,605.25 | -461.77 | 3,608.99 | 0.000 | 0.000 | 0.000 |
| 15,700.00 | 91.02 | 359.52 | 12,072.75 | 3,705.23 | -462.61 | 3,708.97 | 0.000 | 0.000 | 0.000 |
| 15,800.00 | 91.02 | 359.52 | 12,070.97 | 3,805.21 | -463.44 | 3,808.96 | 0.000 | 0.000 | 0.000 |
| 15,900.00 | 91.02 | 359.52 | 12,069.18 | 3,905.19 | -464.27 | 3,908.94 | 0.000 | 0.000 | 0.000 |
| 16,000.00 | 91.02 | 359.52 | 12,067.40 | 4,005.17 | -465.11 | 4,008.93 | 0.000 | 0.000 | 0.000 |
| 16,100.00 | 91.02 | 359.52 | 12,065.62 | 4,105.15 | -465.94 | 4,108.91 | 0.000 | 0.000 | 0.000 |

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 16,200.00 | 91.02 | 359.52 | 12,063.84 | 4,205.13 | -466.77 | 4,208.89 | 0.000 | 0.000 | 0.000 |
| 16,300.00 | 91.02 | 359.52 | 12,062.06 | 4,305.11 | -467.60 | 4,308.88 | 0.000 | 0.000 | 0.000 |
| 16,400.00 | 91.02 | 359.52 | 12,060.27 | 4,405.09 | -468.44 | 4,408.86 | 0.000 | 0.000 | 0.000 |
| 16,500.00 | 91.02 | 359.52 | 12,058.49 | 4,505.07 | -469.27 | 4,508.85 | 0.000 | 0.000 | 0.000 |
| 16,600.00 | 91.02 | 359.52 | 12,056.71 | 4,605.05 | -470.10 | 4,608.83 | 0.000 | 0.000 | 0.000 |
| 16,700.00 | 91.02 | 359.52 | 12,054.93 | 4,705.03 | -470.93 | 4,708.81 | 0.000 | 0.000 | 0.000 |
| 16,800.00 | 91.02 | 359.52 | 12,053.15 | 4,805.02 | -471.77 | 4,808.80 | 0.000 | 0.000 | 0.000 |
| 16,900.00 | 91.02 | 359.52 | 12,051.36 | 4,905.00 | -472.60 | 4,908.78 | 0.000 | 0.000 | 0.000 |
| 17,000.00 | 91.02 | 359.52 | 12,049.58 | 5,004.98 | -473.43 | 5,008.77 | 0.000 | 0.000 | 0.000 |
| 17,100.00 | 91.02 | 359.52 | 12,047.80 | 5,104.96 | -474.26 | 5,108.75 | 0.000 | 0.000 | 0.000 |
| 17,200.00 | 91.02 | 359.52 | 12,046.02 | 5,204.94 | -475.10 | 5,208.74 | 0.000 | 0.000 | 0.000 |
| 17,300.00 | 91.02 | 359.52 | 12,044.24 | 5,304.92 | -475.93 | 5,308.72 | 0.000 | 0.000 | 0.000 |
| 17,400.00 | 91.02 | 359.52 | 12,042.45 | 5,404.90 | -476.76 | 5,408.70 | 0.000 | 0.000 | 0.000 |
| 17,500.00 | 91.02 | 359.52 | 12,040.67 | 5,504.88 | -477.60 | 5,508.69 | 0.000 | 0.000 | 0.000 |
| 17,600.00 | 91.02 | 359.52 | 12,038.89 | 5,604.86 | -478.43 | 5,608.67 | 0.000 | 0.000 | 0.000 |
| 17,700.00 | 91.02 | 359.52 | 12,037.11 | 5,704.84 | -479.26 | 5,708.66 | 0.000 | 0.000 | 0.000 |
| 17,800.00 | 91.02 | 359.52 | 12,035.33 | 5,804.82 | -480.09 | 5,808.64 | 0.000 | 0.000 | 0.000 |
| 17,900.00 | 91.02 | 359.52 | 12,033.54 | 5,904.80 | -480.93 | 5,908.62 | 0.000 | 0.000 | 0.000 |
| 18,000.00 | 91.02 | 359.52 | 12,031.76 | 6,004.78 | -481.76 | 6,008.61 | 0.000 | 0.000 | 0.000 |
| 18,100.00 | 91.02 | 359.52 | 12,029.98 | 6,104.76 | -482.59 | 6,108.59 | 0.000 | 0.000 | 0.000 |
| 18,200.00 | 91.02 | 359.52 | 12,028.20 | 6,204.74 | -483.42 | 6,208.58 | 0.000 | 0.000 | 0.000 |
| 18,300.00 | 91.02 | 359.52 | 12,026.42 | 6,304.73 | -484.26 | 6,308.56 | 0.000 | 0.000 | 0.000 |
| 18,400.00 | 91.02 | 359.52 | 12,024.64 | 6,404.71 | -485.09 | 6,408.54 | 0.000 | 0.000 | 0.000 |
| 18,500.00 | 91.02 | 359.52 | 12,022.85 | 6,504.69 | -485.92 | 6,508.53 | 0.000 | 0.000 | 0.000 |
| 18,600.00 | 91.02 | 359.52 | 12,021.07 | 6,604.67 | -486.75 | 6,608.51 | 0.000 | 0.000 | 0.000 |
| 18,700.00 | 91.02 | 359.52 | 12,019.29 | 6,704.65 | -487.59 | 6,708.50 | 0.000 | 0.000 | 0.000 |
| 18,800.00 | 91.02 | 359.52 | 12,017.51 | 6,804.63 | -488.42 | 6,808.48 | 0.000 | 0.000 | 0.000 |
| 18,900.00 | 91.02 | 359.52 | 12,015.73 | 6,904.61 | -489.25 | 6,908.47 | 0.000 | 0.000 | 0.000 |
| 19,000.00 | 91.02 | 359.52 | 12,013.94 | 7,004.59 | -490.08 | 7,008.45 | 0.000 | 0.000 | 0.000 |
| 19,100.00 | 91.02 | 359.52 | 12,012.16 | 7,104.57 | -490.92 | 7,108.43 | 0.000 | 0.000 | 0.000 |
| 19,200.00 | 91.02 | 359.52 | 12,010.38 | 7,204.55 | -491.75 | 7,208.42 | 0.000 | 0.000 | 0.000 |
| 19,300.00 | 91.02 | 359.52 | 12,008.60 | 7,304.53 | -492.58 | 7,308.40 | 0.000 | 0.000 | 0.000 |
| 19,400.00 | 91.02 | 359.52 | 12,006.82 | 7,404.51 | -493.42 | 7,408.39 | 0.000 | 0.000 | 0.000 |
| 19,500.00 | 91.02 | 359.52 | 12,005.03 | 7,504.49 | -494.25 | 7,508.37 | 0.000 | 0.000 | 0.000 |
| 19,600.00 | 91.02 | 359.52 | 12,003.25 | 7,604.47 | -495.08 | 7,608.35 | 0.000 | 0.000 | 0.000 |
| 19,700.00 | 91.02 | 359.52 | 12,001.47 | 7,704.45 | -495.91 | 7,708.34 | 0.000 | 0.000 | 0.000 |
| 19,782.46 | 91.02 | 359.52 | 12,000.00 | 7,786.90 | -496.60 | 7,790.79 | 0.000 | 0.000 | 0.000 |
| **PBHL - PBHL (Dagger802H)** | | | | | | | | | |

ADVANCE ENERGY PARTNERS

# Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral ST 1r0 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Plan 2.0 | **Database:** | EDMRESTORED |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| FTP (Dagger802H) - plan misses target center by 432.89usft at 0.03usft MD (0.03 TVD, 0.00 N, 0.00 E) - Point | 0.00 | 0.00 | 0.00 | -32.10 | -431.70 | 528,155.40 | 764,152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) - plan hits target center - Point | 0.00 | 0.00 | 12,000.00 | 7,786.90 | -496.60 | 535,974.40 | 764,087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |

**Casing Points**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|---|---|---|---|---|
| 10,669.96 | 10,650.00 | 7 5/8" | 7-5/8 | 7-5/8 |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,597.30 | 1,597.00 | Rustler | | 0.00 | |
| 5,272.47 | 5,257.00 | Limestone base | | 0.00 | |
| 8,576.96 | 8,557.00 | Lower Brushy | | 0.00 | |
| 9,048.96 | 9,029.00 | Avalon | | 0.00 | |
| 10,043.96 | 10,024.00 | 1st BS Sand | | 0.00 | |
| 10,604.96 | 10,585.00 | 2nd BS Sand | | 0.00 | |
| 11,236.96 | 11,217.00 | 3rd BS Carbonate | | 0.00 | |
| 11,760.05 | 11,737.00 | 3rd BS Sand | | 0.00 | |
| 12,253.47 | 12,087.00 | Wolfcamp A | | 0.00 | |

**Plan Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 4000 | 3989 | -41 | -215 | Sidetrack, Turn 2.00°/100' |
| 4105 | 4094 | -41 | -225 | Hold 5.0° Inc, 256.76° Azimuth |
| 6285 | 6265 | -85 | -410 | Drop 1.00°/100' |
| 6785 | 6765 | -90 | -431 | Hold Vertical |
| 11,577 | 11,557 | -90 | -431 | KOP, Build 10.00°/100' |
| 12,487 | 12,130 | 493 | -436 | LP, Hold 91.02° Inc, 359.52° Azimuth |
| 19,782 | 12,000 | 7787 | -497 | PBHL |

Checked By: _____ Approved By: _____ Date: _____

# Advance Energy Partners, LLC

**Dagger State Com 802H**
**Lea County, New Mexico**
**Job No. WT-19-084**
**H&P 389**
**Plan 2.0 Final PVA**

| SITE DETAILS: Dagger State Com 802H | |
|---|---|
| Site Centre Northing: | 528187.50 |
| Easting: | 764584.50 |
| Positional Uncertainity: | 0.00 |
| Convergence: | 0.39 |
| Local North: | Grid |

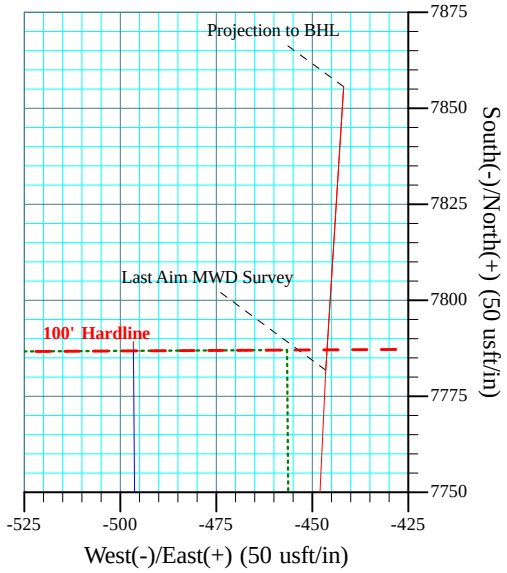
T G M

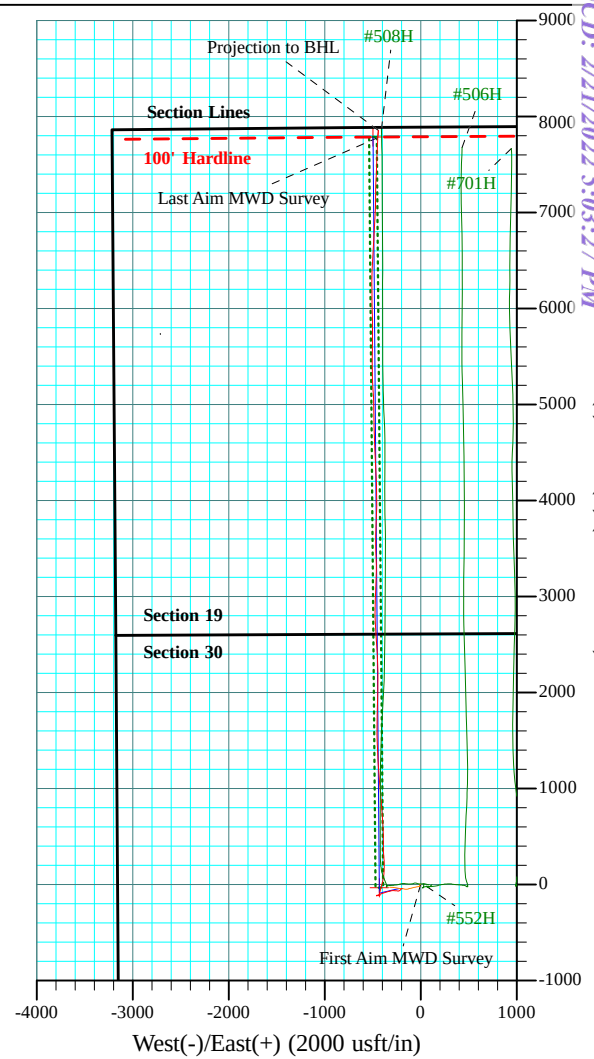
Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.28°

Magnetic Field
Strength: 48118.6nT
Dip Angle: 60.24°
Date: 5/29/2019
Model: MVHD

**Magnetic North: 6.28° 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: | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |



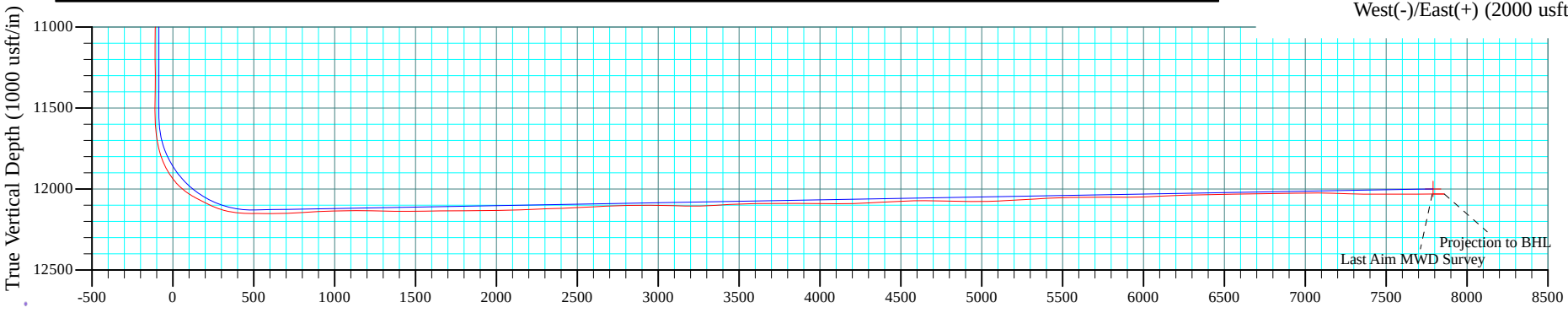




SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 19841.00 | 90.15 | 3.64 | 12031.78 | 7781.84 | -446.50 | 0.00 | 0.00 | 7785.31 | Last Aim MWD Survey |
| 2 | 19915.00 | 90.15 | 3.64 | 12031.58 | 7855.70 | -441.80 | 0.00 | 0.00 | 7859.12 | Projection to BHL |

DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|---|---|
| FTP (Dagger802H) | 0.00 | -32.10 | -431.70 | 528155.40 | 764152.80 | 32° 26' 59.612 N | 103° 36' 39.620 W |
| PBHL (Dagger802H) | 12000.00 | 7786.90 | -496.60 | 535974.40 | 764087.90 | 32° 28' 16.984 N | 103° 36' 39.760 W |




Drawn By: IG
Date Created: 5/3/2018
Date Revised: 6/26/2018
File: Advance Energy - Dagger State Com #802H Plan 2.0 Final PVA.wpc

# Survey Reports
## Original Hole

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | OH Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**Project** Lea County, New Mexico

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

**Site** Dagger State Com 802H

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| **From:** | Map | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.39 ° |

**Well** #802H - Slot 802H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| | **+E/-W** | 0.00 usft | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,812.00 usft |

**Wellbore** OH Surveys

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | MVHD | 5/21/2019 | 6.67 | 60.24 | 48,120.97291924 |

**Design** Aim MWD Surveys

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 359.52 |

**Survey Program** **Date** 5/29/2019

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 198.00 | 4,894.00 | Aim MWD Surveys (OH Surveys) | B001Mb_MWD+HRGM | OWSG MWD + HRGM |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 198.00 | 0.92 | 309.59 | 197.99 | 1.01 | -1.22 | 1.02 | 0.46 | 0.46 | 0.00 |
| **First Aim MWD Survey** | | | | | | | | | |
| 321.00 | 1.32 | 292.19 | 320.97 | 2.18 | -3.30 | 2.20 | 0.42 | 0.33 | -14.15 |
| 412.00 | 0.92 | 293.68 | 411.95 | 2.87 | -4.94 | 2.91 | 0.44 | -0.44 | 1.64 |
| 596.00 | 1.32 | 274.43 | 595.92 | 3.62 | -8.40 | 3.69 | 0.30 | 0.22 | -10.46 |
| 688.00 | 0.84 | 215.81 | 687.90 | 3.16 | -9.85 | 3.24 | 1.24 | -0.52 | -63.72 |
| 780.00 | 1.41 | 201.49 | 779.88 | 1.56 | -10.66 | 1.65 | 0.69 | 0.62 | -15.57 |
| 871.00 | 1.58 | 199.90 | 870.85 | -0.66 | -11.50 | -0.57 | 0.19 | 0.19 | -1.75 |
| 966.00 | 1.45 | 189.09 | 965.82 | -3.08 | -12.14 | -2.98 | 0.33 | -0.14 | -11.38 |
| 1,061.00 | 1.32 | 194.63 | 1,060.79 | -5.33 | -12.60 | -5.22 | 0.20 | -0.14 | 5.83 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | OH Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 1,156.00 | 1.23 | 168.61 | 1,155.77 | -7.39 | -12.68 | -7.28 | 0.61 | -0.09 | -27.39 |
| 1,251.00 | 1.36 | 168.97 | 1,250.74 | -9.49 | -12.26 | -9.39 | 0.14 | 0.14 | 0.38 |
| 1,345.00 | 0.88 | 166.77 | 1,344.73 | -11.29 | -11.88 | -11.19 | 0.51 | -0.51 | -2.34 |
| 1,440.00 | 0.75 | 188.92 | 1,439.72 | -12.61 | -11.81 | -12.51 | 0.36 | -0.14 | 23.32 |
| 1,535.00 | 0.88 | 168.70 | 1,534.71 | -13.94 | -11.76 | -13.84 | 0.33 | 0.14 | -21.28 |
| 1,699.00 | 1.01 | 169.93 | 1,698.69 | -16.60 | -11.27 | -16.51 | 0.08 | 0.08 | 0.75 |
| 1,794.00 | 1.01 | 211.42 | 1,793.67 | -18.14 | -11.56 | -18.04 | 0.75 | 0.00 | 43.67 |
| 1,888.00 | 2.11 | 259.58 | 1,887.64 | -19.16 | -13.69 | -19.04 | 1.72 | 1.17 | 51.23 |
| 1,983.00 | 3.82 | 261.95 | 1,982.51 | -19.92 | -18.54 | -19.76 | 1.80 | 1.80 | 2.49 |
| 2,078.00 | 5.49 | 259.84 | 2,077.19 | -21.16 | -26.15 | -20.94 | 1.77 | 1.76 | -2.22 |
| 2,173.00 | 6.15 | 259.49 | 2,171.70 | -22.89 | -35.63 | -22.59 | 0.70 | 0.69 | -0.37 |
| 2,268.00 | 6.24 | 258.26 | 2,266.15 | -24.87 | -45.69 | -24.49 | 0.17 | 0.09 | -1.29 |
| 2,363.00 | 6.29 | 257.91 | 2,360.58 | -27.01 | -55.83 | -26.54 | 0.07 | 0.05 | -0.37 |
| 2,458.00 | 6.33 | 257.21 | 2,455.00 | -29.26 | -66.02 | -28.71 | 0.09 | 0.04 | -0.74 |
| 2,552.00 | 6.42 | 255.54 | 2,548.42 | -31.72 | -76.17 | -31.08 | 0.22 | 0.10 | -1.78 |
| 2,647.00 | 6.59 | 255.80 | 2,642.81 | -34.39 | -86.59 | -33.66 | 0.18 | 0.18 | 0.27 |
| 2,742.00 | 6.46 | 257.38 | 2,737.20 | -36.89 | -97.09 | -36.08 | 0.23 | -0.14 | 1.66 |
| 2,837.00 | 6.11 | 258.00 | 2,831.62 | -39.11 | -107.26 | -38.21 | 0.38 | -0.37 | 0.65 |
| 2,932.00 | 5.58 | 255.98 | 2,926.13 | -41.28 | -116.68 | -40.30 | 0.60 | -0.56 | -2.13 |
| 3,027.00 | 4.88 | 252.81 | 3,020.73 | -43.59 | -125.02 | -42.54 | 0.80 | -0.74 | -3.34 |
| 3,122.00 | 5.32 | 252.73 | 3,115.36 | -46.09 | -133.09 | -44.98 | 0.46 | 0.46 | -0.08 |
| 3,217.00 | 5.80 | 264.41 | 3,209.91 | -47.87 | -142.07 | -46.68 | 1.29 | 0.51 | 12.29 |
| 3,311.00 | 5.85 | 273.38 | 3,303.43 | -48.05 | -151.58 | -46.78 | 0.97 | 0.05 | 9.54 |
| 3,406.00 | 5.36 | 276.72 | 3,397.98 | -47.25 | -160.82 | -45.90 | 0.62 | -0.52 | 3.52 |
| 3,501.00 | 4.53 | 275.93 | 3,492.62 | -46.34 | -168.96 | -44.92 | 0.88 | -0.87 | -0.83 |
| 3,596.00 | 4.48 | 281.47 | 3,587.33 | -45.21 | -176.33 | -43.73 | 0.46 | -0.05 | 5.83 |
| 3,691.00 | 5.19 | 276.46 | 3,681.99 | -43.99 | -184.23 | -42.45 | 0.87 | 0.75 | -5.27 |
| 3,786.00 | 5.93 | 273.20 | 3,776.54 | -43.23 | -193.40 | -41.61 | 0.85 | 0.78 | -3.43 |
| 3,975.00 | 5.76 | 277.42 | 3,964.56 | -41.46 | -212.56 | -39.68 | 0.24 | -0.09 | 2.23 |
| 4,070.00 | 5.80 | 278.39 | 4,059.08 | -40.15 | -222.03 | -38.29 | 0.11 | 0.04 | 1.02 |
| 4,165.00 | 5.80 | 280.06 | 4,153.59 | -38.61 | -231.51 | -36.67 | 0.18 | 0.00 | 1.76 |
| 4,260.00 | 6.15 | 278.57 | 4,248.08 | -37.01 | -241.26 | -34.99 | 0.40 | 0.37 | -1.57 |
| 4,355.00 | 7.91 | 276.72 | 4,342.36 | -35.49 | -252.79 | -33.37 | 1.87 | 1.85 | -1.95 |
| 4,450.00 | 7.82 | 278.21 | 4,436.46 | -33.80 | -265.68 | -31.57 | 0.23 | -0.09 | 1.57 |
| 4,544.00 | 7.52 | 280.15 | 4,529.62 | -31.80 | -278.06 | -29.47 | 0.42 | -0.32 | 2.06 |
| 4,639.00 | 7.56 | 279.71 | 4,623.80 | -29.65 | -290.34 | -27.22 | 0.07 | 0.04 | -0.46 |
| 4,734.00 | 7.56 | 274.08 | 4,717.98 | -28.16 | -302.73 | -25.62 | 0.78 | 0.00 | -5.93 |
| 4,829.00 | 7.65 | 268.28 | 4,812.14 | -27.90 | -315.29 | -25.26 | 0.81 | 0.09 | -6.11 |
| **Last Aim MWD Survey** | | | | | | | | | |
| 4,894.00 | 7.65 | 268.28 | 4,876.57 | -28.16 | -323.94 | -25.45 | 0.00 | 0.00 | 0.00 |
| **Projection to TD** | | | | | | | | | |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | OH Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**Design Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 198.00 | 197.99 | 1.01 | -1.22 | First Aim MWD Survey |
| 4,829.00 | 4,812.14 | -27.90 | -315.29 | Last Aim MWD Survey |
| 4,894.00 | 4,876.57 | -28.16 | -323.94 | Projection to TD |

# Survey Reports
## Lateral

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**Project** Lea County, New Mexico

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

**Site** Dagger State Com 802H

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| **From:** | Map | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.39 ° |

**Well** #802H - Slot 802H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 528,187.50 usft | **Latitude:** | 32° 26' 59.901 N |
| | **+E/-W** | 0.00 usft | **Easting:** | 764,584.50 usft | **Longitude:** | 103° 36' 34.579 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,812.00 usft |

**Wellbore** Lateral Surveys

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | MVHD | 6/5/2019 | 6.67 | 60.24 | 48,116.48194773 |

**Design** Aim MWD Surveys

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 3,786.00 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 359.52 |

**Survey Program** **Date** 6/26/2019

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 198.00 | 3,786.00 | Aim MWD Surveys (OH Surveys) | B001Mb_MWD+HRGM | OWSG MWD + HRGM |
| 3,850.00 | 19,915.00 | Aim MWD Surveys (Lateral Surveys) | B001Mb_MWD+HRGM | OWSG MWD + HRGM |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 198.00 | 0.92 | 309.59 | 197.99 | 1.01 | -1.22 | 1.02 | 0.46 | 0.46 | 0.00 |
| 321.00 | 1.32 | 292.19 | 320.97 | 2.18 | -3.30 | 2.20 | 0.42 | 0.33 | -14.15 |
| 412.00 | 0.92 | 293.68 | 411.95 | 2.87 | -4.94 | 2.91 | 0.44 | -0.44 | 1.64 |
| 596.00 | 1.32 | 274.43 | 595.92 | 3.62 | -8.40 | 3.69 | 0.30 | 0.22 | -10.46 |
| 688.00 | 0.84 | 215.81 | 687.90 | 3.16 | -9.85 | 3.24 | 1.24 | -0.52 | -63.72 |
| 780.00 | 1.41 | 201.49 | 779.88 | 1.56 | -10.66 | 1.65 | 0.69 | 0.62 | -15.57 |
| 871.00 | 1.58 | 199.90 | 870.85 | -0.66 | -11.50 | -0.57 | 0.19 | 0.19 | -1.75 |
| 966.00 | 1.45 | 189.09 | 965.82 | -3.08 | -12.14 | -2.98 | 0.33 | -0.14 | -11.38 |
| 1,061.00 | 1.32 | 194.63 | 1,060.79 | -5.33 | -12.60 | -5.22 | 0.20 | -0.14 | 5.83 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 1,156.00 | 1.23 | 168.61 | 1,155.77 | -7.39 | -12.68 | -7.28 | 0.61 | -0.09 | -27.39 |
| 1,251.00 | 1.36 | 168.97 | 1,250.74 | -9.49 | -12.26 | -9.39 | 0.14 | 0.14 | 0.38 |
| 1,345.00 | 0.88 | 166.77 | 1,344.73 | -11.29 | -11.88 | -11.19 | 0.51 | -0.51 | -2.34 |
| 1,440.00 | 0.75 | 188.92 | 1,439.72 | -12.61 | -11.81 | -12.51 | 0.36 | -0.14 | 23.32 |
| 1,535.00 | 0.88 | 168.70 | 1,534.71 | -13.94 | -11.76 | -13.84 | 0.33 | 0.14 | -21.28 |
| 1,699.00 | 1.01 | 169.93 | 1,698.69 | -16.60 | -11.27 | -16.51 | 0.08 | 0.08 | 0.75 |
| 1,794.00 | 1.01 | 211.42 | 1,793.67 | -18.14 | -11.56 | -18.04 | 0.75 | 0.00 | 43.67 |
| 1,888.00 | 2.11 | 259.58 | 1,887.64 | -19.16 | -13.69 | -19.04 | 1.72 | 1.17 | 51.23 |
| 1,983.00 | 3.82 | 261.95 | 1,982.51 | -19.92 | -18.54 | -19.76 | 1.80 | 1.80 | 2.49 |
| 2,078.00 | 5.49 | 259.84 | 2,077.19 | -21.16 | -26.15 | -20.94 | 1.77 | 1.76 | -2.22 |
| 2,173.00 | 6.15 | 259.49 | 2,171.70 | -22.89 | -35.63 | -22.59 | 0.70 | 0.69 | -0.37 |
| 2,268.00 | 6.24 | 258.26 | 2,266.15 | -24.87 | -45.69 | -24.49 | 0.17 | 0.09 | -1.29 |
| 2,363.00 | 6.29 | 257.91 | 2,360.58 | -27.01 | -55.83 | -26.54 | 0.07 | 0.05 | -0.37 |
| 2,458.00 | 6.33 | 257.21 | 2,455.00 | -29.26 | -66.02 | -28.71 | 0.09 | 0.04 | -0.74 |
| 2,552.00 | 6.42 | 255.54 | 2,548.42 | -31.72 | -76.17 | -31.08 | 0.22 | 0.10 | -1.78 |
| 2,647.00 | 6.59 | 255.80 | 2,642.81 | -34.39 | -86.59 | -33.66 | 0.18 | 0.18 | 0.27 |
| 2,742.00 | 6.46 | 257.38 | 2,737.20 | -36.89 | -97.09 | -36.08 | 0.23 | -0.14 | 1.66 |
| 2,837.00 | 6.11 | 258.00 | 2,831.62 | -39.11 | -107.26 | -38.21 | 0.38 | -0.37 | 0.65 |
| 2,932.00 | 5.58 | 255.98 | 2,926.13 | -41.28 | -116.68 | -40.30 | 0.60 | -0.56 | -2.13 |
| 3,027.00 | 4.88 | 252.81 | 3,020.73 | -43.59 | -125.02 | -42.54 | 0.80 | -0.74 | -3.34 |
| 3,122.00 | 5.32 | 252.73 | 3,115.36 | -46.09 | -133.09 | -44.98 | 0.46 | 0.46 | -0.08 |
| 3,217.00 | 5.80 | 264.41 | 3,209.91 | -47.87 | -142.07 | -46.68 | 1.29 | 0.51 | 12.29 |
| 3,311.00 | 5.85 | 273.38 | 3,303.43 | -48.05 | -151.58 | -46.78 | 0.97 | 0.05 | 9.54 |
| 3,406.00 | 5.36 | 276.72 | 3,397.98 | -47.25 | -160.82 | -45.90 | 0.62 | -0.52 | 3.52 |
| 3,501.00 | 4.53 | 275.93 | 3,492.62 | -46.34 | -168.96 | -44.92 | 0.88 | -0.87 | -0.83 |
| 3,596.00 | 4.48 | 281.47 | 3,587.33 | -45.21 | -176.33 | -43.73 | 0.46 | -0.05 | 5.83 |
| 3,691.00 | 5.19 | 276.46 | 3,681.99 | -43.99 | -184.23 | -42.45 | 0.87 | 0.75 | -5.27 |
| 3,786.00 | 5.93 | 273.20 | 3,776.54 | -43.23 | -193.40 | -41.61 | 0.85 | 0.78 | -3.43 |
| **Tie-on to OH Surveys** | | | | | | | | | |
| 3,850.00 | 4.80 | 265.60 | 3,840.26 | -43.26 | -199.37 | -41.58 | 2.08 | -1.77 | -11.88 |
| **First Lateral Survey** | | | | | | | | | |
| 3,862.00 | 4.10 | 256.70 | 3,852.23 | -43.39 | -200.29 | -41.71 | 8.18 | -5.83 | -74.17 |
| 3,880.00 | 3.60 | 227.41 | 3,870.19 | -43.92 | -201.33 | -42.23 | 11.14 | -2.78 | -162.72 |
| 4,006.00 | 8.04 | 220.56 | 3,995.51 | -53.30 | -209.98 | -51.54 | 3.56 | 3.52 | -5.44 |
| 4,164.00 | 5.19 | 248.16 | 4,152.48 | -64.36 | -223.80 | -62.48 | 2.65 | -1.80 | 17.47 |
| 4,259.00 | 4.40 | 264.85 | 4,247.15 | -66.28 | -231.42 | -64.34 | 1.68 | -0.83 | 17.57 |
| 4,354.00 | 4.53 | 274.43 | 4,341.86 | -66.32 | -238.79 | -64.32 | 0.80 | 0.14 | 10.08 |
| 4,449.00 | 4.48 | 274.79 | 4,436.57 | -65.72 | -246.23 | -63.66 | 0.06 | -0.05 | 0.38 |
| 4,544.00 | 4.35 | 275.05 | 4,531.29 | -65.09 | -253.52 | -62.97 | 0.14 | -0.14 | 0.27 |
| 4,638.00 | 4.53 | 273.73 | 4,625.00 | -64.54 | -260.77 | -62.35 | 0.22 | 0.19 | -1.40 |
| 4,733.00 | 4.35 | 273.12 | 4,719.72 | -64.10 | -268.11 | -61.85 | 0.20 | -0.19 | -0.64 |
| 4,828.00 | 4.35 | 274.35 | 4,814.45 | -63.63 | -275.30 | -61.32 | 0.10 | 0.00 | 1.29 |
| 4,923.00 | 4.35 | 274.61 | 4,909.17 | -63.07 | -282.49 | -60.70 | 0.02 | 0.00 | 0.27 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 5,018.00 | 4.13 | 265.73 | 5,003.91 | -63.03 | -289.49 | -60.60 | 0.73 | -0.23 | -9.35 |
| 5,112.00 | 3.96 | 262.04 | 5,097.68 | -63.73 | -296.08 | -61.25 | 0.33 | -0.18 | -3.93 |
| 5,207.00 | 3.78 | 261.69 | 5,192.46 | -64.64 | -302.43 | -62.10 | 0.19 | -0.19 | -0.37 |
| 5,302.00 | 3.69 | 259.67 | 5,287.26 | -65.64 | -308.53 | -63.05 | 0.17 | -0.09 | -2.13 |
| 5,397.00 | 3.78 | 256.42 | 5,382.06 | -66.92 | -314.58 | -64.29 | 0.24 | 0.09 | -3.42 |
| 5,491.00 | 4.00 | 254.75 | 5,475.84 | -68.51 | -320.76 | -65.82 | 0.26 | 0.23 | -1.78 |
| 5,586.00 | 3.74 | 254.04 | 5,570.63 | -70.24 | -326.93 | -67.50 | 0.28 | -0.27 | -0.75 |
| 5,681.00 | 3.34 | 254.75 | 5,665.44 | -71.82 | -332.58 | -69.03 | 0.42 | -0.42 | 0.75 |
| 5,776.00 | 4.18 | 256.68 | 5,760.24 | -73.34 | -338.62 | -70.50 | 0.89 | 0.88 | 2.03 |
| 5,871.00 | 4.66 | 253.78 | 5,854.96 | -75.22 | -345.70 | -72.32 | 0.56 | 0.51 | -3.05 |
| 5,965.00 | 4.62 | 253.60 | 5,948.65 | -77.35 | -353.00 | -74.39 | 0.05 | -0.04 | -0.19 |
| 6,060.00 | 4.44 | 253.87 | 6,043.35 | -79.46 | -360.20 | -76.43 | 0.19 | -0.19 | 0.28 |
| 6,155.00 | 4.22 | 252.11 | 6,138.08 | -81.55 | -367.06 | -78.47 | 0.27 | -0.23 | -1.85 |
| 6,250.00 | 4.04 | 252.55 | 6,232.83 | -83.63 | -373.58 | -80.50 | 0.19 | -0.19 | 0.46 |
| 6,345.00 | 3.91 | 252.64 | 6,327.61 | -85.60 | -379.86 | -82.41 | 0.14 | -0.14 | 0.09 |
| 6,440.00 | 3.78 | 250.88 | 6,422.39 | -87.59 | -385.91 | -84.35 | 0.18 | -0.14 | -1.85 |
| 6,534.00 | 3.74 | 252.11 | 6,516.19 | -89.55 | -391.76 | -86.26 | 0.10 | -0.04 | 1.31 |
| 6,629.00 | 3.65 | 249.74 | 6,610.99 | -91.55 | -397.54 | -88.21 | 0.19 | -0.09 | -2.49 |
| 6,724.00 | 3.38 | 252.11 | 6,705.81 | -93.45 | -403.04 | -90.07 | 0.32 | -0.28 | 2.49 |
| 6,819.00 | 3.38 | 252.29 | 6,800.65 | -95.17 | -408.38 | -91.74 | 0.01 | 0.00 | 0.19 |
| 6,913.00 | 3.25 | 249.91 | 6,894.49 | -96.92 | -413.52 | -93.46 | 0.20 | -0.14 | -2.53 |
| 7,008.00 | 3.08 | 250.26 | 6,989.35 | -98.71 | -418.45 | -95.20 | 0.18 | -0.18 | 0.37 |
| 7,103.00 | 3.03 | 247.72 | 7,084.21 | -100.52 | -423.17 | -96.98 | 0.15 | -0.05 | -2.67 |
| 7,198.00 | 3.16 | 244.02 | 7,179.07 | -102.62 | -427.85 | -99.04 | 0.25 | 0.14 | -3.89 |
| 7,293.00 | 2.95 | 243.76 | 7,273.94 | -104.85 | -432.40 | -101.22 | 0.22 | -0.22 | -0.27 |
| 7,388.00 | 2.86 | 243.15 | 7,368.81 | -107.00 | -436.71 | -103.34 | 0.10 | -0.09 | -0.64 |
| 7,482.00 | 2.64 | 239.19 | 7,462.71 | -109.17 | -440.66 | -105.47 | 0.31 | -0.23 | -4.21 |
| 7,577.00 | 2.51 | 239.01 | 7,557.61 | -111.36 | -444.32 | -107.64 | 0.14 | -0.14 | -0.19 |
| 7,672.00 | 2.33 | 243.67 | 7,652.53 | -113.29 | -447.83 | -109.53 | 0.28 | -0.19 | 4.91 |
| 7,767.00 | 1.67 | 246.40 | 7,747.47 | -114.70 | -450.83 | -110.92 | 0.70 | -0.69 | 2.87 |
| 7,861.00 | 1.45 | 252.81 | 7,841.43 | -115.60 | -453.22 | -111.80 | 0.30 | -0.23 | 6.82 |
| 7,956.00 | 1.49 | 247.63 | 7,936.40 | -116.43 | -455.51 | -112.61 | 0.15 | 0.04 | -5.45 |
| 8,052.00 | 0.84 | 246.13 | 8,032.38 | -117.19 | -457.31 | -113.35 | 0.68 | -0.68 | -1.56 |
| 8,146.00 | 0.44 | 281.11 | 8,126.38 | -117.39 | -458.30 | -113.55 | 0.58 | -0.43 | 37.21 |
| 8,241.00 | 0.40 | 298.96 | 8,221.37 | -117.16 | -458.94 | -113.31 | 0.14 | -0.04 | 18.79 |
| 8,336.00 | 0.22 | 287.88 | 8,316.37 | -116.95 | -459.41 | -113.09 | 0.20 | -0.19 | -11.66 |
| 8,431.00 | 0.26 | 297.20 | 8,411.37 | -116.79 | -459.77 | -112.94 | 0.06 | 0.04 | 9.81 |
| 8,526.00 | 0.18 | 318.29 | 8,506.37 | -116.58 | -460.06 | -112.72 | 0.12 | -0.08 | 22.20 |
| 8,621.00 | 0.26 | 255.80 | 8,601.37 | -116.52 | -460.37 | -112.66 | 0.25 | 0.08 | -65.78 |
| 8,715.00 | 0.22 | 250.97 | 8,695.37 | -116.64 | -460.75 | -112.77 | 0.05 | -0.04 | -5.14 |
| 8,810.00 | 0.22 | 259.93 | 8,790.37 | -116.73 | -461.10 | -112.86 | 0.04 | 0.00 | 9.43 |
| 8,905.00 | 0.44 | 269.78 | 8,885.37 | -116.76 | -461.65 | -112.89 | 0.24 | 0.23 | 10.37 |
| 8,962.00 | 0.26 | 295.00 | 8,942.37 | -116.71 | -461.98 | -112.83 | 0.41 | -0.32 | 44.25 |
| 9,057.00 | 0.57 | 44.69 | 9,037.36 | -116.28 | -461.85 | -112.41 | 0.74 | 0.33 | 115.46 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 9,152.00 | 1.14 | 51.28 | 9,132.35 | -115.35 | -460.78 | -111.49 | 0.61 | 0.60 | 6.94 |
| 9,247.00 | 1.19 | 47.24 | 9,227.33 | -114.09 | -459.31 | -110.24 | 0.10 | 0.05 | -4.25 |
| 9,342.00 | 1.32 | 37.48 | 9,322.31 | -112.55 | -457.92 | -108.71 | 0.26 | 0.14 | -10.27 |
| 9,437.00 | 1.05 | 35.46 | 9,417.29 | -110.98 | -456.75 | -107.15 | 0.29 | -0.28 | -2.13 |
| 9,531.00 | 0.84 | 84.50 | 9,511.28 | -110.21 | -455.57 | -106.39 | 0.86 | -0.22 | 52.17 |
| 9,626.00 | 1.67 | 115.88 | 9,606.26 | -110.75 | -453.63 | -106.94 | 1.10 | 0.87 | 33.03 |
| 9,721.00 | 2.24 | 121.33 | 9,701.20 | -112.32 | -450.80 | -108.53 | 0.63 | 0.60 | 5.74 |
| 9,816.00 | 2.37 | 110.69 | 9,796.12 | -113.97 | -447.37 | -110.22 | 0.47 | 0.14 | -11.20 |
| 9,911.00 | 2.59 | 99.88 | 9,891.04 | -115.04 | -443.42 | -111.32 | 0.54 | 0.23 | -11.38 |
| 10,006.00 | 2.07 | 72.37 | 9,985.96 | -114.89 | -439.67 | -111.20 | 1.28 | -0.55 | -28.96 |
| 10,101.00 | 2.07 | 63.85 | 10,080.90 | -113.61 | -436.50 | -109.95 | 0.32 | 0.00 | -8.97 |
| 10,196.00 | 1.98 | 69.74 | 10,175.84 | -112.29 | -433.42 | -108.65 | 0.24 | -0.09 | 6.20 |
| 10,290.00 | 1.71 | 79.84 | 10,269.79 | -111.48 | -430.51 | -107.87 | 0.45 | -0.29 | 10.74 |
| 10,385.00 | 1.36 | 78.79 | 10,364.76 | -111.01 | -428.01 | -107.42 | 0.37 | -0.37 | -1.11 |
| 10,480.00 | 1.19 | 72.29 | 10,459.73 | -110.49 | -425.97 | -106.91 | 0.23 | -0.18 | -6.84 |
| 10,575.00 | 0.57 | 21.05 | 10,554.72 | -109.75 | -424.86 | -106.18 | 0.99 | -0.65 | -53.94 |
| 10,669.00 | 0.31 | 1.62 | 10,648.72 | -109.06 | -424.68 | -105.49 | 0.32 | -0.28 | -20.67 |
| 10,744.00 | 0.09 | 256.94 | 10,723.72 | -108.87 | -424.73 | -105.30 | 0.46 | -0.29 | -139.57 |
| 10,840.00 | 0.44 | 133.28 | 10,819.72 | -109.14 | -424.54 | -105.58 | 0.52 | 0.36 | -128.81 |
| 10,935.00 | 1.27 | 166.68 | 10,914.71 | -110.41 | -424.03 | -106.85 | 0.98 | 0.87 | 35.16 |
| 11,031.00 | 0.84 | 218.18 | 11,010.69 | -112.00 | -424.22 | -108.44 | 1.04 | -0.45 | 53.65 |
| 11,126.00 | 0.62 | 257.65 | 11,105.68 | -112.66 | -425.15 | -109.09 | 0.56 | -0.23 | 41.55 |
| 11,221.00 | 0.88 | 283.49 | 11,200.68 | -112.60 | -426.36 | -109.02 | 0.44 | 0.27 | 27.20 |
| 11,315.00 | 1.45 | 320.66 | 11,294.66 | -111.51 | -427.82 | -107.92 | 0.98 | 0.61 | 39.54 |
| 11,412.00 | 1.01 | 159.65 | 11,391.65 | -111.36 | -428.30 | -107.77 | 2.50 | -0.45 | -165.99 |
| 11,506.00 | 1.89 | 194.10 | 11,485.62 | -113.64 | -428.39 | -110.05 | 1.28 | 0.94 | 36.65 |
| 11,602.00 | 2.73 | 325.94 | 11,581.58 | -113.28 | -430.06 | -109.67 | 4.41 | 0.88 | 137.33 |
| 11,650.00 | 6.77 | 358.90 | 11,629.42 | -109.50 | -430.75 | -105.89 | 9.83 | 8.42 | 68.67 |
| 11,698.00 | 7.30 | 1.45 | 11,677.05 | -103.63 | -430.73 | -100.01 | 1.28 | 1.10 | 5.31 |
| 11,761.00 | 12.97 | 10.06 | 11,739.05 | -92.65 | -429.39 | -89.05 | 9.29 | 9.00 | 13.67 |
| 11,793.00 | 15.56 | 12.26 | 11,770.06 | -84.92 | -427.85 | -81.34 | 8.27 | 8.09 | 6.88 |
| 11,841.00 | 21.14 | 12.43 | 11,815.60 | -70.17 | -424.62 | -66.61 | 11.63 | 11.63 | 0.35 |
| 11,887.00 | 26.55 | 14.72 | 11,857.66 | -52.11 | -420.22 | -48.59 | 11.93 | 11.76 | 4.98 |
| 11,935.00 | 32.84 | 17.00 | 11,899.34 | -29.26 | -413.68 | -25.80 | 13.31 | 13.10 | 4.75 |
| 11,981.00 | 38.07 | 17.79 | 11,936.79 | -3.81 | -405.70 | -0.42 | 11.41 | 11.37 | 1.72 |
| 12,029.00 | 44.62 | 13.84 | 11,972.82 | 26.68 | -397.13 | 30.01 | 14.68 | 13.65 | -8.23 |
| 12,076.00 | 51.16 | 10.67 | 12,004.32 | 60.74 | -389.79 | 64.00 | 14.78 | 13.91 | -6.74 |
| 12,124.00 | 57.23 | 6.19 | 12,032.40 | 99.22 | -384.14 | 102.44 | 14.73 | 12.65 | -9.33 |
| 12,171.00 | 61.58 | 2.68 | 12,056.32 | 139.54 | -381.04 | 142.73 | 11.27 | 9.26 | -7.47 |
| 12,219.00 | 64.18 | 0.04 | 12,078.20 | 182.24 | -380.04 | 185.42 | 7.30 | 5.42 | -5.50 |
| 12,267.00 | 64.09 | 358.11 | 12,099.14 | 225.43 | -380.74 | 228.61 | 3.62 | -0.19 | -4.02 |
| 12,314.00 | 68.70 | 356.70 | 12,117.96 | 268.44 | -382.69 | 271.63 | 10.19 | 9.81 | -3.00 |
| 12,361.00 | 75.38 | 355.91 | 12,132.44 | 313.03 | -385.58 | 316.25 | 14.30 | 14.21 | -1.68 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 12,408.00 | 80.70 | 358.11 | 12,142.18 | 358.92 | -387.97 | 362.16 | 12.21 | 11.32 | 4.68 |
| 12,456.00 | 84.44 | 0.22 | 12,148.39 | 406.50 | -388.66 | 409.75 | 8.93 | 7.79 | 4.40 |
| 12,496.00 | 89.27 | 359.42 | 12,150.58 | 446.43 | -388.78 | 449.67 | 12.24 | 12.08 | -2.00 |
| 12,566.00 | 88.84 | 358.72 | 12,151.74 | 516.41 | -389.92 | 519.66 | 1.17 | -0.61 | -1.00 |
| 12,661.00 | 89.98 | 357.40 | 12,152.71 | 611.35 | -393.14 | 614.62 | 1.84 | 1.20 | -1.39 |
| 12,756.00 | 92.66 | 356.70 | 12,150.53 | 706.19 | -398.02 | 709.50 | 2.92 | 2.82 | -0.74 |
| 12,850.00 | 93.85 | 354.50 | 12,145.19 | 799.75 | -405.22 | 803.12 | 2.66 | 1.27 | -2.34 |
| 12,945.00 | 92.66 | 354.24 | 12,139.79 | 894.14 | -414.53 | 897.58 | 1.28 | -1.25 | -0.27 |
| 13,039.00 | 91.16 | 354.85 | 12,136.66 | 987.66 | -423.46 | 991.17 | 1.72 | -1.60 | 0.65 |
| 13,134.00 | 90.86 | 355.82 | 12,134.99 | 1,082.33 | -431.18 | 1,085.90 | 1.07 | -0.32 | 1.02 |
| 13,228.00 | 89.85 | 356.79 | 12,134.40 | 1,176.13 | -437.24 | 1,179.75 | 1.49 | -1.07 | 1.03 |
| 13,323.00 | 88.40 | 357.49 | 12,135.86 | 1,271.00 | -441.98 | 1,274.66 | 1.69 | -1.53 | 0.74 |
| 13,418.00 | 88.70 | 355.91 | 12,138.26 | 1,365.81 | -447.45 | 1,369.51 | 1.69 | 0.32 | -1.66 |
| 13,513.00 | 90.42 | 358.28 | 12,138.99 | 1,460.67 | -452.26 | 1,464.41 | 3.08 | 1.81 | 2.49 |
| 13,607.00 | 91.47 | 358.99 | 12,137.44 | 1,554.63 | -454.50 | 1,558.38 | 1.35 | 1.12 | 0.76 |
| 13,702.00 | 90.46 | 359.42 | 12,135.84 | 1,649.61 | -455.82 | 1,653.37 | 1.16 | -1.06 | 0.45 |
| 13,797.00 | 90.46 | 1.97 | 12,135.08 | 1,744.59 | -454.66 | 1,748.34 | 2.68 | 0.00 | 2.68 |
| 13,892.00 | 90.77 | 1.89 | 12,134.06 | 1,839.53 | -451.47 | 1,843.25 | 0.34 | 0.33 | -0.08 |
| 13,986.00 | 90.46 | 3.73 | 12,133.05 | 1,933.41 | -446.86 | 1,937.08 | 1.98 | -0.33 | 1.96 |
| 14,081.00 | 90.15 | 359.69 | 12,132.54 | 2,028.34 | -444.02 | 2,031.99 | 4.27 | -0.33 | -4.25 |
| 14,176.00 | 92.35 | 358.37 | 12,130.47 | 2,123.30 | -445.63 | 2,126.96 | 2.70 | 2.32 | -1.39 |
| 14,272.00 | 92.88 | 359.78 | 12,126.09 | 2,219.18 | -447.18 | 2,222.85 | 1.57 | 0.55 | 1.47 |
| 14,367.00 | 91.47 | 357.67 | 12,122.48 | 2,314.08 | -449.29 | 2,317.77 | 2.67 | -1.48 | -2.22 |
| 14,462.00 | 92.22 | 356.88 | 12,119.42 | 2,408.93 | -453.81 | 2,412.64 | 1.15 | 0.79 | -0.83 |
| 14,556.00 | 93.23 | 356.08 | 12,114.96 | 2,502.64 | -459.57 | 2,506.40 | 1.37 | 1.07 | -0.85 |
| 14,650.00 | 92.04 | 357.49 | 12,110.63 | 2,596.39 | -464.84 | 2,600.19 | 1.96 | -1.27 | 1.50 |
| 14,745.00 | 92.75 | 356.08 | 12,106.66 | 2,691.15 | -470.16 | 2,695.00 | 1.66 | 0.75 | -1.48 |
| 14,839.00 | 92.35 | 358.63 | 12,102.48 | 2,784.95 | -474.49 | 2,788.83 | 2.74 | -0.43 | 2.71 |
| 14,934.00 | 89.71 | 1.18 | 12,100.77 | 2,879.92 | -474.65 | 2,883.80 | 3.86 | -2.78 | 2.68 |
| 15,028.00 | 89.23 | 1.53 | 12,101.64 | 2,973.89 | -472.42 | 2,977.74 | 0.63 | -0.51 | 0.37 |
| 15,122.00 | 88.75 | 2.50 | 12,103.30 | 3,067.82 | -469.12 | 3,071.64 | 1.15 | -0.51 | 1.03 |
| 15,216.00 | 88.09 | 1.45 | 12,105.89 | 3,161.72 | -465.88 | 3,165.51 | 1.32 | -0.70 | -1.12 |
| 15,312.00 | 91.91 | 0.92 | 12,105.89 | 3,257.68 | -463.90 | 3,261.46 | 4.02 | 3.98 | -0.55 |
| 15,406.00 | 92.92 | 358.99 | 12,101.93 | 3,351.59 | -463.97 | 3,355.36 | 2.32 | 1.07 | -2.05 |
| 15,500.00 | 93.36 | 357.93 | 12,096.78 | 3,445.42 | -466.49 | 3,449.21 | 1.22 | 0.47 | -1.13 |
| 15,594.00 | 92.92 | 359.25 | 12,091.63 | 3,539.25 | -468.80 | 3,543.05 | 1.48 | -0.47 | 1.40 |
| 15,689.00 | 90.20 | 1.45 | 12,089.05 | 3,634.19 | -468.22 | 3,637.99 | 3.68 | -2.86 | 2.32 |
| 15,783.00 | 89.54 | 1.45 | 12,089.26 | 3,728.16 | -465.84 | 3,731.94 | 0.70 | -0.70 | 0.00 |
| 15,876.00 | 89.93 | 2.32 | 12,089.69 | 3,821.11 | -462.78 | 3,824.85 | 1.03 | 0.42 | 0.94 |
| 15,971.00 | 89.89 | 3.03 | 12,089.84 | 3,916.01 | -458.35 | 3,919.71 | 0.75 | -0.04 | 0.75 |
| 16,066.00 | 89.58 | 359.07 | 12,090.28 | 4,010.97 | -456.61 | 4,014.66 | 4.18 | -0.33 | -4.17 |
| 16,160.00 | 89.19 | 357.49 | 12,091.29 | 4,104.92 | -459.43 | 4,108.62 | 1.73 | -0.41 | -1.68 |
| 16,255.00 | 92.22 | 357.58 | 12,090.12 | 4,199.81 | -463.51 | 4,203.55 | 3.19 | 3.19 | 0.09 |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**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) |
|---|---|---|---|---|---|---|---|---|---|
| 16,350.00 | 92.44 | 357.58 | 12,086.26 | 4,294.65 | -467.52 | 4,298.42 | 0.23 | 0.23 | 0.00 |
| 16,447.00 | 92.88 | 358.02 | 12,081.75 | 4,391.47 | -471.24 | 4,395.27 | 0.64 | 0.45 | 0.45 |
| 16,538.00 | 92.57 | 358.19 | 12,077.43 | 4,482.32 | -474.25 | 4,486.14 | 0.39 | -0.34 | 0.19 |
| 16,633.00 | 91.74 | 356.44 | 12,073.86 | 4,577.15 | -478.70 | 4,581.00 | 2.04 | -0.87 | -1.84 |
| 16,727.00 | 89.45 | 358.37 | 12,072.88 | 4,671.03 | -482.95 | 4,674.92 | 3.19 | -2.44 | 2.05 |
| 16,821.00 | 88.53 | 358.55 | 12,074.54 | 4,764.98 | -485.48 | 4,768.88 | 1.00 | -0.98 | 0.19 |
| 16,916.00 | 88.09 | 358.63 | 12,077.34 | 4,859.91 | -487.81 | 4,863.83 | 0.47 | -0.46 | 0.08 |
| 17,010.00 | 90.99 | 359.07 | 12,078.09 | 4,953.88 | -489.70 | 4,957.81 | 3.12 | 3.09 | 0.47 |
| 17,104.00 | 91.78 | 358.81 | 12,075.82 | 5,047.84 | -491.44 | 5,051.78 | 0.88 | 0.84 | -0.28 |
| 17,198.00 | 92.31 | 357.58 | 12,072.47 | 5,141.73 | -494.40 | 5,145.69 | 1.42 | 0.56 | -1.31 |
| 17,293.00 | 93.54 | 356.08 | 12,067.62 | 5,236.45 | -499.64 | 5,240.46 | 2.04 | 1.29 | -1.58 |
| 17,387.00 | 92.84 | 358.28 | 12,062.39 | 5,330.19 | -504.26 | 5,334.23 | 2.45 | -0.74 | 2.34 |
| 17,482.00 | 92.92 | 359.51 | 12,057.61 | 5,425.05 | -506.09 | 5,429.10 | 1.30 | 0.08 | 1.29 |
| 17,576.00 | 92.26 | 1.53 | 12,053.36 | 5,518.94 | -505.24 | 5,522.98 | 2.26 | -0.70 | 2.15 |
| 17,670.00 | 89.98 | 1.62 | 12,051.53 | 5,612.88 | -502.65 | 5,616.90 | 2.43 | -2.43 | 0.10 |
| 17,765.00 | 89.98 | 0.48 | 12,051.56 | 5,707.87 | -500.91 | 5,711.86 | 1.20 | 0.00 | -1.20 |
| 17,859.00 | 89.98 | 359.51 | 12,051.59 | 5,801.87 | -500.92 | 5,805.86 | 1.03 | 0.00 | -1.03 |
| 17,953.00 | 90.46 | 359.16 | 12,051.23 | 5,895.86 | -502.01 | 5,899.86 | 0.63 | 0.51 | -0.37 |
| 18,048.00 | 91.38 | 358.19 | 12,049.71 | 5,990.82 | -504.21 | 5,994.83 | 1.41 | 0.97 | -1.02 |
| 18,142.00 | 93.49 | 358.90 | 12,045.71 | 6,084.70 | -506.59 | 6,088.73 | 2.37 | 2.24 | 0.76 |
| 18,236.00 | 92.04 | 359.69 | 12,041.18 | 6,178.58 | -507.75 | 6,182.61 | 1.76 | -1.54 | 0.84 |
| 18,331.00 | 91.47 | 359.60 | 12,038.27 | 6,273.53 | -508.34 | 6,277.57 | 0.61 | -0.60 | -0.09 |
| 18,425.00 | 91.47 | 0.92 | 12,035.86 | 6,367.50 | -507.91 | 6,371.53 | 1.40 | 0.00 | 1.40 |
| 18,520.00 | 90.77 | 3.82 | 12,034.00 | 6,462.39 | -503.98 | 6,466.38 | 3.14 | -0.74 | 3.05 |
| 18,614.00 | 91.03 | 2.41 | 12,032.52 | 6,556.23 | -498.87 | 6,560.18 | 1.53 | 0.28 | -1.50 |
| 18,709.00 | 91.03 | 4.35 | 12,030.82 | 6,651.05 | -493.27 | 6,654.95 | 2.04 | 0.00 | 2.04 |
| 18,803.00 | 90.73 | 2.50 | 12,029.37 | 6,744.87 | -487.66 | 6,748.71 | 1.99 | -0.32 | -1.97 |
| 18,897.00 | 90.73 | 3.56 | 12,028.18 | 6,838.73 | -482.69 | 6,842.53 | 1.13 | 0.00 | 1.13 |
| 18,992.00 | 91.08 | 3.20 | 12,026.67 | 6,933.55 | -477.09 | 6,937.30 | 0.53 | 0.37 | -0.38 |
| 19,086.00 | 90.42 | 1.36 | 12,025.44 | 7,027.46 | -473.35 | 7,031.18 | 2.08 | -0.70 | -1.96 |
| 19,180.00 | 89.05 | 1.27 | 12,025.88 | 7,121.43 | -471.19 | 7,125.13 | 1.46 | -1.46 | -0.10 |
| 19,274.00 | 88.26 | 1.09 | 12,028.09 | 7,215.39 | -469.26 | 7,219.06 | 0.86 | -0.84 | -0.19 |
| 19,369.00 | 88.04 | 2.41 | 12,031.15 | 7,310.29 | -466.36 | 7,313.94 | 1.41 | -0.23 | 1.39 |
| 19,464.00 | 90.29 | 2.68 | 12,032.54 | 7,405.18 | -462.14 | 7,408.79 | 2.39 | 2.37 | 0.28 |
| 19,558.00 | 89.71 | 2.32 | 12,032.54 | 7,499.09 | -458.04 | 7,502.66 | 0.73 | -0.62 | -0.38 |
| 19,652.00 | 90.29 | 2.41 | 12,032.54 | 7,593.01 | -454.16 | 7,596.55 | 0.62 | 0.62 | 0.10 |
| 19,746.00 | 90.24 | 1.62 | 12,032.10 | 7,686.95 | -450.86 | 7,690.46 | 0.84 | -0.05 | -0.84 |
| 19,841.00 | 90.15 | 3.64 | 12,031.78 | 7,781.84 | -446.50 | 7,785.31 | 2.13 | -0.09 | 2.13 |
| **Last Aim MWD Survey** | | | | | | | | | |
| 19,915.00 | 90.15 | 3.64 | 12,031.58 | 7,855.70 | -441.80 | 7,859.12 | 0.00 | 0.00 | 0.00 |
| **Projection to BHL** | | | | | | | | | |

# Aim Directional Services, LLC

## Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Advance Energy Partners, LLC | **Local Co-ordinate Reference:** | Site Dagger State Com 802H |
| **Project:** | Lea County, New Mexico | **TVD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Site:** | Dagger State Com 802H | **MD Reference:** | 3812'GL+26.5'KB @ 3838.50usft (H&P 389) |
| **Well:** | #802H | **North Reference:** | Grid |
| **Wellbore:** | Lateral Surveys | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Aim MWD Surveys | **Database:** | EDM 5000.14 Single User Db |

**Design Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 3,786.00 | 3,776.54 | -43.23 | -193.40 | Tie-on to OH Surveys |
| 3,850.00 | 3,840.26 | -43.26 | -199.37 | First Lateral Survey |
| 19,841.00 | 12,031.78 | 7,781.84 | -446.50 | Last Aim MWD Survey |
| 19,915.00 | 12,031.58 | 7,855.70 | -441.80 | Projection to BHL |

# BHA Reports
## Original Hole

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #1 - Surface (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-05-20 11:00 | **Downhole Hours** | 27.00 |
| **Lobe/Stage** | 7/8, 4.0 | **Depth In (ft)** | 120.00 | **Drilling/Circulating Hours** | 12.08 |
| **Bend Angle** | 1.50 | **Date Out** | 2019-05-21 14:00 | **Drilling Hours** | 11.08 |
| **Speed (rev/gal)** | 0.15 | **Depth Out (ft)** | 1628.00 | **Circulating Hours** | 1.00 |
| **Wear Pad OD (in)** | 8.125 | **Distance Slid (ft)** | 285.00 | **Sliding Hours** | 2.50 |
| **Incident** | No | **Distance Rotated (ft)** | 1223.00 | **Rotating Hours** | 8.58 |
| **Motor Results** | | **% Distance Sliding** | 18.90% | **% Hours Sliding** | 22.56% |
| **Average Total ROP (ft/h)** | 136.06 | **% Distance Rotating** | 81.10% | **% Hours Rotating** | 77.44% |
| **Average Slide ROP (ft/h)** | 114.00 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 142.49 | Drill Surface to Casing Point | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 14.750 | | | | |
| **Vendor** | Baker | **POOH Reason/Notes** | | | |
| **S/N** | 7041931 | **Total Depth/Casing Point:** TD SURFACE | | | |
| **Nozzles** | 7x12, 2x11 | | | | |
| **Total Flow Area (in²)** | 0.959 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: BHA LOOKED GOOD RACKED BACK AND RERUN FOR NEXT SURFACE | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 63.00 ft | | Directional: Directional: 8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.15. Bit: 14 3/4" PDC, SN: 7041931. Jets: 7x12's, 2x11's. TFA: 0.959 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Water | **Flow Rate (gpm)** | 700.00 - 900.00 | **Motor RPM** | 105.00 - 135.00 |
| **WT** | 8.40 | **On Bottom Pressure (psi)** | 1400.00 - 3000.00 | **Surface RPM** | 50.00 - 60.00 |
| **VIS** | 27.00 | **Off Bottom Pressure (psi)** | 1050.00 - 2200.00 | **Rotating WOB (klbs)** | 18.00 - 25.00 |
| **PV** | 1.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 5.00 - 20.00 |
| **YP** | 2.00 | **Stalls** | 0 | **Temp (ºF)** | 78.00 - 105.00 |
| | | **NPT** | 1.0 | | |

### Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *14 3/4 T606S*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *14.75* | Baker | 7041931 | 6 5/8" Reg Pin | | | 14.750 | | 1.50 | 1.50 |
| **Mud Motor** Description: *8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | AIM | 80040010 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.54 |
| **Stabilizer** Description: *14.25" IBS* | DTI | DR27279 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.000 | | 8.04 | 39.58 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.50 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 74.27 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.87 |
| **Crossover Sub** Description: *XO- 4 1/2 IF-B x 6 5/8 REG-P*, Type: *Steel* | DTI | DR38948 | 4 1/2" IF Box | 6 5/8" Reg Pin | 3.000 | 7.500 | | 4.02 | 108.89 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 934.77 |

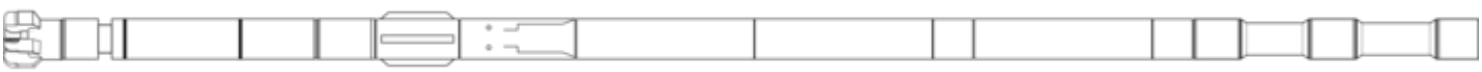
| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #2 - Intermediate (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-05-26 14:15 | **Downhole Hours** | 121.75 |
| **Lobe/Stage** | 7/8, 5.9 | **Depth In (ft)** | 1628.00 | **Drilling/Circulating Hours** | 17.75 |
| **Bend Angle** | 1.50 | **Date Out** | 2019-05-31 16:00 | **Drilling Hours** | 13.75 |
| **Speed (rev/gal)** | 0.17 | **Depth Out (ft)** | 4894.00 | **Circulating Hours** | 4.00 |
| **Wear Pad OD (in)** | 8.300 | **Distance Slid (ft)** | 161.00 | **Sliding Hours** | 1.33 |
| **Incident** | Yes | **Distance Rotated (ft)** | 3105.00 | **Rotating Hours** | 12.42 |
| **Motor Results** | | **% Distance Sliding** | 4.93% | **% Hours Sliding** | 9.70% |
| **Average Total ROP (ft/h)** | 237.53 | **% Distance Rotating** | 95.07% | **% Hours Rotating** | 90.30% |
| **Average Slide ROP (ft/h)** | 120.75 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 250.07 | Drill Intermediate to Casing Point 10668' +/- | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 9.875 | | | | |
| **Vendor** | Reed | **POOH Reason/Notes** | | | |
| **S/N** | A259091 | **Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point | | | |
| **Nozzles** | 6x14 | | | | |
| **Total Flow Area (in²)** | 0.902 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: Got stuck at 4891'. Ran Free Point, backed off at 3850'. L/D 2 Jts of HWDP. Going back in to screw in, and cont. drilling. Fishing was unsuccessful and BHA was deemed LIH | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft | | Directional: 8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Brine | **Flow Rate (gpm)** | 700.00 - 800.00 | **Motor RPM** | 0.00 - 0.00 |
| **WT** | 9.70 | **On Bottom Pressure (psi)** | 2700.00 - 3650.00 | **Surface RPM** | 80.00 - 80.00 |
| **VIS** | 1.00 | **Off Bottom Pressure (psi)** | 2200.00 - 3000.00 | **Rotating WOB (klbs)** | 35.00 - 38.00 |
| **PV** | 1.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 35.00 - 35.00 |
| **YP** | 3.00 | **Stalls** | 0 | **Temp (ºF)** | 98.00 - 98.00 |
| | | **NPT** | 0.0 | | |

### Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50 ° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P* , Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |



# BHA Reports
## Lateral

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #3 - Sidetrack 1 (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-06-01 10:00 | **Downhole Hours** | 40.50 |
| **Lobe/Stage** | 7/8, 4.0 | **Depth In (ft)** | 3740.00 | **Drilling/Circulating Hours** | 7.75 |
| **Bend Angle** | 2.12 | **Date Out** | 2019-06-03 02:30 | **Drilling Hours** | 0.00 |
| **Speed (rev/gal)** | 0.17 | **Depth Out (ft)** | 3850.00 | **Circulating Hours** | 7.75 |
| **Wear Pad OD (in)** | 8.300 | **Distance Slid (ft)** | 0.00 | **Sliding Hours** | 0.00 |
| **Incident** | No | **Distance Rotated (ft)** | 0.00 | **Rotating Hours** | 0.00 |
| **Motor Results** | | **% Distance Sliding** | 0.00% | **% Hours Sliding** | 0.00% |
| **Average Total ROP (ft/h)** | 0.00 | **% Distance Rotating** | 0.00% | **% Hours Rotating** | 0.00% |
| **Average Slide ROP (ft/h)** | 0.00 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 0.00 | Kick off cement plug to sidetrck well. | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 9.875 | | | | |
| **Vendor** | REED | **POOH Reason/Notes** | | | |
| **S/N** | E255656 | **Pressure Spike:** Motor stalling due to lost roller cone on bit. | | | |
| **Nozzles** | 3x20's | | | | |
| **Total Flow Area (in²)** | 0.920 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: lost roller cone on bit. | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft | | Directional: 8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Brine | **Flow Rate (gpm)** | 700.00 - 900.00 | **Motor RPM** | 25.00 - 25.00 |
| **WT** | 9.70 | **On Bottom Pressure (psi)** | 1400.00 - 3650.00 | **Surface RPM** | 50.00 - 80.00 |
| **VIS** | 1.00 | **Off Bottom Pressure (psi)** | 1050.00 - 3000.00 | **Rotating WOB (klbs)** | 18.00 - 38.00 |
| **PV** | 1.00 | **Stall Pressure (psi)** | 2100.00 | **Sliding WOB (klbs)** | 5.00 - 35.00 |
| **YP** | 3.00 | **Stalls** | 5 | **Temp (ºF)** | 78.00 - 105.00 |
| | | **NPT** | 16.5 | | |

### Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TCH11P*, Style: *Roller Cone*, Gauge Length (in): *0.00*, Size (in): *9.87* | REED | E255656 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 2.12° ADJ 7/8 4.0 w/ Slick Slv*, Size (in): *8.00*, Bend Angle (°): *2.12*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | Aim | 800-40-005 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 34.96 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 65.73 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 96.33 |
| **Crossover Sub** Description: *X-O 4 1/2 IF Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39834 | 4 1/2" IF Box | 6 5/8" Reg Pin | 2.750 | 8.140 | | 4.02 | 100.35 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 834.75 |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #4 - Sidetrack 2 (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-06-03 12:15 | **Downhole Hours** | 9.75 |
| **Lobe/Stage** | 7/8, 4.0 | **Depth In (ft)** | 3850.00 | **Drilling/Circulating Hours** | 6.25 |
| **Bend Angle** | 2.12 | **Date Out** | 2019-06-03 22:00 | **Drilling Hours** | 6.25 |
| **Speed (rev/gal)** | 0.17 | **Depth Out (ft)** | 3919.00 | **Circulating Hours** | 0.00 |
| **Wear Pad OD (in)** | 8.300 | **Distance Slid (ft)** | 69.00 | **Sliding Hours** | 6.25 |
| **Incident** | No | **Distance Rotated (ft)** | 0.00 | **Rotating Hours** | 0.00 |
| **Motor Results** | | **% Distance Sliding** | 100.00% | **% Hours Sliding** | 100.00% |
| **Average Total ROP (ft/h)** | 11.04 | **% Distance Rotating** | 0.00% | **% Hours Rotating** | 0.00% |
| **Average Slide ROP (ft/h)** | 11.04 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 0.00 | Kick off cement plug to sidetrack well. | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 9.875 | | | | |
| **Vendor** | HUGHES | **POOH Reason/Notes** | | | |
| **S/N** | 5285455 | Change Bottom Hole Assembly | | | |
| **Nozzles** | 3x20's | | | | |
| **Total Flow Area (in²)** | 0.920 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft | | Directional: Directional: 8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Brine | **Flow Rate (gpm)** | 500.00 - 500.00 | **Motor RPM** | 0.00 - 0.00 |
| **WT** | 9.00 | **On Bottom Pressure (psi)** | 1200.00 - 1200.00 | **Surface RPM** | 0.00 - 0.00 |
| **VIS** | 32.00 | **Off Bottom Pressure (psi)** | 1100.00 - 1100.00 | **Rotating WOB (klbs)** | 150.00 - 150.00 |
| **PV** | 0.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 20.00 - 20.00 |
| **YP** | 0.00 | **Stalls** | 0 | **Temp (ºF)** | 91.00 - 98.00 |
| | | **NPT** | 0.0 | | |

## Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" GX-38C*, Style: *Roller Cone*, Gauge Length (in): *0.00*, Size (in): *9.87* | HUGHES | 5285455 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 2.12° ADJ 7/8 4.0 w/ Slick Slv*, Size (in): *8.00*, Bend Angle (°): *2.12*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | Aim | 800-40-005 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 34.96 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 65.73 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 96.33 |
| **Crossover Sub** Description: *X-O 4 1/2 IF Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39834 | 4 1/2" IF Box | 6 5/8" Reg Pin | 2.750 | 8.140 | | 4.02 | 100.35 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 834.75 |

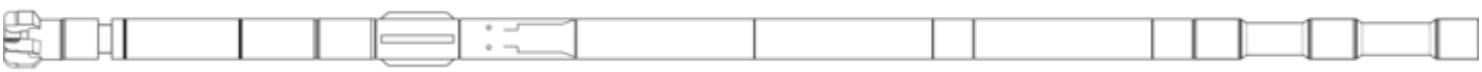
| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #5 - INTERMEDIATE (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-06-03 23:30 | **Downhole Hours** | 64.00 |
| **Lobe/Stage** | 7/8, 5.9 | **Depth In (ft)** | 3919.00 | **Drilling/Circulating Hours** | 48.67 |
| **Bend Angle** | 1.50 | **Date Out** | 2019-06-06 15:30 | **Drilling Hours** | 45.92 |
| **Speed (rev/gal)** | 0.17 | **Depth Out (ft)** | 8981.00 | **Circulating Hours** | 2.75 |
| **Wear Pad OD (in)** | 8.340 | **Distance Slid (ft)** | 243.00 | **Sliding Hours** | 10.33 |
| **Incident** | No | **Distance Rotated (ft)** | 4819.00 | **Rotating Hours** | 35.58 |
| **Motor Results** | | **% Distance Sliding** | 4.80% | **% Hours Sliding** | 22.50% |
| **Average Total ROP (ft/h)** | 110.24 | **% Distance Rotating** | 95.20% | **% Hours Rotating** | 77.50% |
| **Average Slide ROP (ft/h)** | 23.52 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 135.43 | Drill Intermediate. | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 9.875 | | | | |
| **Vendor** | Reed | **POOH Reason/Notes** | | | |
| **S/N** | A262114 | **Penetration Rate:** POOH for bit | | | |
| **Nozzles** | 5x12's, 4x11's | | | | |
| **Total Flow Area (in²)** | 0.923 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 72.00 ft | | Directional: Directional: 8" Motor 7/8 5.9 FXD 1.50 w/ 9 5/8" Stab. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Water Based | **Flow Rate (gpm)** | 900.00 - 900.00 | **Motor RPM** | 0.00 - 0.00 |
| **WT** | 10.50 | **On Bottom Pressure (psi)** | 4100.00 - 4400.00 | **Surface RPM** | 65.00 - 65.00 |
| **VIS** | 30.00 | **Off Bottom Pressure (psi)** | 3850.00 - 3850.00 | **Rotating WOB (klbs)** | 35.00 - 35.00 |
| **PV** | 0.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 15.00 - 20.00 |
| **YP** | 0.00 | **Stalls** | 0 | **Temp (ºF)** | 122.00 - 122.00 |
| | | **NPT** | 0.0 | | |

## Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262114 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 w/ 9 5/8" Stab*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **Stabilizer** Description: *9 5/8" Stab* | DTI | DR40319 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 7.19 | 46.05 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 49.97 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 80.74 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 111.34 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 114.92 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 559.41 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 561.72 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1296.12 |



| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #6 - INTERMEDIATE (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-06-06 15:30 | **Downhole Hours** | 33.50 |
| **Lobe/Stage** | 7/8, 5.9 | **Depth In (ft)** | 8981.00 | **Drilling/Circulating Hours** | 1.00 |
| **Bend Angle** | 1.50 | **Date Out** | 2019-06-08 01:00 | **Drilling Hours** | 0.00 |
| **Speed (rev/gal)** | 0.17 | **Depth Out (ft)** | 8981.00 | **Circulating Hours** | 1.00 |
| **Wear Pad OD (in)** | 8.340 | **Distance Slid (ft)** | 0.00 | **Sliding Hours** | 0.00 |
| **Incident** | No | **Distance Rotated (ft)** | 0.00 | **Rotating Hours** | 0.00 |
| **Motor Results** | | **% Distance Sliding** | 0% | **% Hours Sliding** | 0.00% |
| **Average Total ROP (ft/h)** | 0.00 | **% Distance Rotating** | 0% | **% Hours Rotating** | 0.00% |
| **Average Slide ROP (ft/h)** | 0.00 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 0.00 | Drill Intermediate | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 9.875 | | | | |
| **Vendor** | Reed | **POOH Reason/Notes** | | | |
| **S/N** | A262113 | Change Bottom Hole Assembly | | | |
| **Nozzles** | 5x12's, 4x11's | | | | |
| **Total Flow Area (in²)** | 0.923 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: Bit Damage | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft | | Directional: 8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Water Based | **Flow Rate (gpm)** | 0.00 - 0.00 | **Motor RPM** | 0.00 - 0.00 |
| **WT** | 10.50 | **On Bottom Pressure (psi)** | 0.00 - 0.00 | **Surface RPM** | 0.00 - 0.00 |
| **VIS** | 30.00 | **Off Bottom Pressure (psi)** | 0.00 - 0.00 | **Rotating WOB (klbs)** | 0.00 - 0.00 |
| **PV** | 0.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 0.00 - 0.00 |
| **YP** | 0.00 | **Stalls** | 0 | **Temp (ºF)** | -0.00 - -0.00 |
| | | **NPT** | 1.0 | | |

### Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 552.22 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 554.53 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1288.93 |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #7 - INTERMEDIATE (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 8.00 | **Date In** | 2019-06-08 01:00 | **Downhole Hours** | 41.00 |
| **Lobe/Stage** | 7/8, 5.9 | **Depth In (ft)** | 8981.00 | **Drilling/Circulating Hours** | 28.33 |
| **Bend Angle** | 1.50 | **Date Out** | 2019-06-09 18:00 | **Drilling Hours** | 22.00 |
| **Speed (rev/gal)** | 0.17 | **Depth Out (ft)** | 10731.00 | **Circulating Hours** | 6.33 |
| **Wear Pad OD (in)** | 8.340 | **Distance Slid (ft)** | 50.00 | **Sliding Hours** | 1.75 |
| **Incident** | No | **Distance Rotated (ft)** | 1700.00 | **Rotating Hours** | 20.25 |
| **Motor Results** | | **% Distance Sliding** | 2.86% | **% Hours Sliding** | 7.95% |
| **Average Total ROP (ft/h)** | 79.55 | **% Distance Rotating** | 97.14% | **% Hours Rotating** | 92.05% |
| **Average Slide ROP (ft/h)** | 28.57 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 83.95 | Drill intermediate. | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 9.875 | | | | |
| **Vendor** | Reed | **POOH Reason/Notes** | | | |
| **S/N** | A262113 | Total Depth/Casing Point | | | |
| **Nozzles** | 5x12's, 4x11's | | | | |
| **Total Flow Area (in²)** | 0.923 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft | | Directional: 8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166 | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Water Based | **Flow Rate (gpm)** | 900.00 - 900.00 | **Motor RPM** | 0.00 - 0.00 |
| **WT** | 10.50 | **On Bottom Pressure (psi)** | 4000.00 - 4000.00 | **Surface RPM** | 50.00 - 50.00 |
| **VIS** | 30.00 | **Off Bottom Pressure (psi)** | 3500.00 - 3500.00 | **Rotating WOB (klbs)** | 40.00 - 40.00 |
| **PV** | 0.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 20.00 - 20.00 |
| **YP** | 0.00 | **Stalls** | 0 | **Temp (ºF)** | 120.00 - 120.00 |
| | | **NPT** | 0.0 | | |

### Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 110.04 |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #8 - Intermediate (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 5.00 | **Date In** | 2019-06-14 08:15 | **Downhole Hours** | 27.75 |
| **Lobe/Stage** | 6/7, 8.0 | **Depth In (ft)** | 10731.00 | **Drilling/Circulating Hours** | 10.42 |
| **Bend Angle** | 1.50 | **Date Out** | 2019-06-15 12:00 | **Drilling Hours** | 7.58 |
| **Speed (rev/gal)** | 0.77 | **Depth Out (ft)** | 11570.00 | **Circulating Hours** | 2.83 |
| **Wear Pad OD (in)** | 5.300 | **Distance Slid (ft)** | 0.00 | **Sliding Hours** | 0.00 |
| **Incident** | No | **Distance Rotated (ft)** | 839.00 | **Rotating Hours** | 7.58 |
| **Motor Results** | | **% Distance Sliding** | 0.00% | **% Hours Sliding** | 0.00% |
| **Average Total ROP (ft/h)** | 110.64 | **% Distance Rotating** | 100.00% | **% Hours Rotating** | 100.00% |
| **Average Slide ROP (ft/h)** | 0.00 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 110.64 | Drill vertical to KOP | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 6.750 | | | | |
| **Vendor** | Halliburton | **POOH Reason/Notes** | | | |
| **S/N** | 13085986 | **Change Bottom Hole Assembly:** KOP | | | |
| **Nozzles** | 6x16 | | | | |
| **Total Flow Area (in²)** | 1.170 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: N/A | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 4.30 ft, **Survey (Bit to Survey):** 64.00 ft | | Directional: 5" Motor 6/7 8.0 FBH 1.50 w/ 6 1/2" NBS . Flow Rate: 150-350, RPG 0.77. Bit:(2 Runs) 6 3/4" Halliburton GTD64DM, 6x16's, 1.17 TFA. | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Brine | **Flow Rate (gpm)** | 250.00 - 275.00 | **Motor RPM** | 220.00 - 242.00 |
| **WT** | 9.40 | **On Bottom Pressure (psi)** | 2500.00 - 2500.00 | **Surface RPM** | 30.00 - 30.00 |
| **VIS** | 28.00 | **Off Bottom Pressure (psi)** | 1300.00 - 1300.00 | **Rotating WOB (klbs)** | 25.00 - 25.00 |
| **PV** | 2.00 | **Stall Pressure (psi)** | 0.00 | **Sliding WOB (klbs)** | 5.00 - 35.00 |
| **YP** | 3.00 | **Stalls** | 0 | **Temp (ºF)** | 152.00 - 152.00 |
| | | **NPT** | 2.83 | | |

### Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" Halliburton GTD64DM*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *6.75* | Halliburton | 13085986 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 1.5° FBH w/ 6 1/2" NBS*, Size (in): *5.00*, Bend Angle (°): *1.5*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | 500-36-084 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.24 | 30.24 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.19 |
| **Stabilizer** Description: *6 1/2" NM STAB* | DR | DR38471 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 4.46 | 37.65 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 40.87 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 71.46 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 102.07 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 105.65 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 1048.07 |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #9 - Curve (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 5.00 | **Date In** | 2019-06-15 12:00 | **Downhole Hours** | 37.00 |
| **Lobe/Stage** | 6/7, 8.0 | **Depth In (ft)** | 11570.00 | **Drilling/Circulating Hours** | 23.42 |
| **Bend Angle** | 2.12 | **Date Out** | 2019-06-17 01:00 | **Drilling Hours** | 21.75 |
| **Speed (rev/gal)** | 0.77 | **Depth Out (ft)** | 12555.00 | **Circulating Hours** | 1.67 |
| **Wear Pad OD (in)** | 5.300 | **Distance Slid (ft)** | 833.00 | **Sliding Hours** | 20.25 |
| **Incident** | No | **Distance Rotated (ft)** | 152.00 | **Rotating Hours** | 1.50 |
| **Motor Results** | | **% Distance Sliding** | 84.57% | **% Hours Sliding** | 93.10% |
| **Average Total ROP (ft/h)** | 45.29 | **% Distance Rotating** | 15.43% | **% Hours Rotating** | 6.90% |
| **Average Slide ROP (ft/h)** | 41.14 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 101.33 | DRILL CURVE | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 6.750 | | | | |
| **Vendor** | REED | **POOH Reason/Notes** | | | |
| **S/N** | A256535 | Total Depth/Casing Point | | | |
| **Nozzles** | 6x16 | | | | |
| **Total Flow Area (in²)** | 1.170 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 4.15 ft, **Survey (Bit to Survey):** 59.00 ft, **Gamma:** 43.00 ft | | Directional: 5" Motor 6/7 8.0 FBH 2.12 w/ SS . Flow Rate: 150-350, RPG 0.77. Bit:(3 Runs) 6 3/4" REED SK613MG1C, 6x16's, 1.17 TFA. | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Oil Based | **Flow Rate (gpm)** | 275.00 - 331.00 | **Motor RPM** | 25.00 - 25.00 |
| **WT** | 9.50 | **On Bottom Pressure (psi)** | 3400.00 - 4300.00 | **Surface RPM** | 25.00 - 25.00 |
| **VIS** | 71.00 | **Off Bottom Pressure (psi)** | 2580.00 - 3600.00 | **Rotating WOB (klbs)** | 15.00 - 15.00 |
| **PV** | 0.00 | **Stall Pressure (psi)** | 1299.97 | **Sliding WOB (klbs)** | 20.00 - 25.00 |
| **YP** | 0.00 | **Stalls** | 5 | **Temp (ºF)** | -0.00 - -0.00 |
| | | **NPT** | 0.0 | | |

## Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SK613MGIC*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A256535 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 2.12° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *2.12*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | MM360500-0096 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.23 | 30.23 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.18 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 36.40 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 66.99 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 97.60 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 101.18 |
| **Drill Pipe** Description: *12 STANDS DP*, Style: *Slick* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 4.500 | | 1131.32 | 1232.50 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 2174.92 |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## BHA #10 - Lateral (Directional)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **Size(in)** | 5.00 | **Date In** | 2019-06-18 16:30 | **Downhole Hours** | 110.50 |
| **Lobe/Stage** | 7/8, 10.6 | **Depth In (ft)** | 12555.00 | **Drilling/Circulating Hours** | 79.67 |
| **Bend Angle** | 1.75 | **Date Out** | 2019-06-23 07:00 | **Drilling Hours** | 73.83 |
| **Speed (rev/gal)** | 0.85 | **Depth Out (ft)** | 19915.00 | **Circulating Hours** | 5.83 |
| **Wear Pad OD (in)** | 5.125 | **Distance Slid (ft)** | 834.00 | **Sliding Hours** | 28.00 |
| **Incident** | No | **Distance Rotated (ft)** | 6526.00 | **Rotating Hours** | 45.83 |
| **Motor Results** | | **% Distance Sliding** | 11.33% | **% Hours Sliding** | 37.92% |
| **Average Total ROP (ft/h)** | 99.68 | **% Distance Rotating** | 88.67% | **% Hours Rotating** | 62.08% |
| **Average Slide ROP (ft/h)** | 29.79 | **BHA Objective** | | | |
| **Average Rotating ROP (ft/h)** | 142.39 | DRILL LATERAL | | | |
| **Bit Details** | | | | | |
| **OD (in)** | 6.750 | | | | |
| **Vendor** | REED | **POOH Reason/Notes** | | | |
| **S/N** | A257718 | **Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT | | | |
| **Nozzles** | 6x16 | | | | |
| **Total Flow Area (in²)** | 1.170 | | | | |
| **MWD** | | **Incident Notes** | | | |
| **Max Downhole Temp (ºF)** | N/A | Directional: | | | |
| | | MWD: | | | |
| **Bit Distances** | | **Comments** | | | |
| **Bit To Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft | | Directional: 5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit:(1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA. | | | |
| **Mud Properties** | | **Parameters** | | | |
| **Type** | Oil Based | **Flow Rate (gpm)** | 300.00 - 340.00 | **Motor RPM** | 40.00 - 75.00 |
| **WT** | 11.00 | **On Bottom Pressure (psi)** | 3600.00 - 4350.00 | **Surface RPM** | 60.00 - 75.00 |
| **VIS** | 72.00 | **Off Bottom Pressure (psi)** | 2950.00 - 4000.00 | **Rotating WOB (klbs)** | 23.00 - 28.00 |
| **PV** | 0.00 | **Stall Pressure (psi)** | 600.02 | **Sliding WOB (klbs)** | 20.00 - 28.00 |
| **YP** | 0.00 | **Stalls** | 10 | **Temp (ºF)** | 149.00 - 186.00 |
| | | **NPT** | 0.0 | | |

## Items (Directional)

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

# Mud Motor Reports
## Original Hole

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 1 (Surface)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 80040010 | **Date In** | 2019-05-20 11:00 | **Downhole Hours** | 27.00 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 120.00 | **Drilling/Circulating Hours** | 12.08 |
| **Lobe/Stage** | 7/8, 4.00 | **Date Out** | 2019-05-21 14:00 | | |
| **Bend Angle** | 1.5 | **Depth Out (ft)** | 1628.00 | **Circulating Hours** | 1.00 |
| **Speed (rev/gal)** | 0.15 | **Total Drilled (ft)** | 1508.00 | **Drilling Hours** | 11.08 |
| **Wear Pad OD (in)** | 8.125 | **Distance Slid (ft)** | 285.00 | **Sliding Hours** | 2.50 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 1223.00 | **Rotating Hours** | 8.58 |
| **Motor Results** | | **% Distance Sliding** | 18.90% | **% Hours Rotating** | 77.44% |
| **Motor Incident** | No | **% Distance Rotating** | 81.10% | **% Hours Sliding** | 22.56% |
| **Average Total ROP (ft/h)** | 136.06 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 114.00 | **Flow Rate (gpm)** | 700.00 - 900.00 | **Motor RPM** | 105.00 - 135.00 |
| **Average Rotating ROP (ft/h)** | 142.49 | **Stalls** | 0 | **Surface RPM** | 50.00 - 60.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 18.00 - 25.00 |
| **OD (in)** | 14.750 | **On Bottom Pressure (psi)** | 1400.00 - 3000.00 | **Sliding WOB (klbs)** | 5.00 - 20.00 |
| **Vendor** | Baker | **Off Bottom Pressure (psi)** | 1050.00 - 2200.00 | **Temp (ºF)** | 78.00 - 105.00 |
| **S/N** | 7041931 | **NPT** | 1.0 | | |
| **Nozzles** | 7x12, 2x11 | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.959 | Drill Surface to Casing Point | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 63.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Water | | | | |
| **WT** | 8.40 | | | | |
| **VIS** | 27.00 | | | | |
| **PV** | 1.00 | | | | |
| **YP** | 2.00 | | | | |

### POOH Reason/Notes

**Total Depth/Casing Point:** TD SURFACE

### Incident Notes

Directional: BHA LOOKED GOOD RACKED BACK AND RERUN FOR NEXT SURFACE

MWD:

### Comments

Directional: Directional: 8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.15. Bit: 14 3/4" PDC, SN: 7041931. Jets: 7x12's, 2x11's. TFA: 0.959

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 2 (Intermediate)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | BDT 800-014 | **Date In** | 2019-05-26 14:15 | **Downhole Hours** | 121.75 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 1628.00 | **Drilling/Circulating Hours** | 17.75 |
| **Lobe/Stage** | 7/8, 5.90 | **Date Out** | 2019-05-31 16:00 | | |
| **Bend Angle** | 1.5 | **Depth Out (ft)** | 4894.00 | **Circulating Hours** | 4.00 |
| **Speed (rev/gal)** | 0.17 | **Total Drilled (ft)** | 3266.00 | **Drilling Hours** | 13.75 |
| **Wear Pad OD (in)** | 8.300 | **Distance Slid (ft)** | 161.00 | **Sliding Hours** | 1.33 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 3105.00 | **Rotating Hours** | 12.42 |
| **Motor Results** | | **% Distance Sliding** | 4.93% | **% Hours Rotating** | 90.30% |
| **Motor Incident** | Yes | **% Distance Rotating** | 95.07% | **% Hours Sliding** | 9.70% |
| **Average Total ROP (ft/h)** | 237.53 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 120.75 | **Flow Rate (gpm)** | 700.00 - 800.00 | **Motor RPM** | 0.00 - 0.00 |
| **Average Rotating ROP (ft/h)** | 250.07 | **Stalls** | 0 | **Surface RPM** | 80.00 - 80.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 35.00 - 38.00 |
| **OD (in)** | 9.875 | **On Bottom Pressure (psi)** | 2700.00 - 3650.00 | **Sliding WOB (klbs)** | 35.00 - 35.00 |
| **Vendor** | Reed | **Off Bottom Pressure (psi)** | 2200.00 - 3000.00 | **Temp (ºF)** | 98.00 - 98.00 |
| **S/N** | A259091 | **NPT** | 0.0 | | |
| **Nozzles** | 6x14 | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.902 | Drill Intermediate to Casing Point 10668' +/- | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Brine | | | | |
| **WT** | 9.70 | | | | |
| **VIS** | 1.00 | | | | |
| **PV** | 1.00 | | | | |
| **YP** | 3.00 | | | | |

### POOH Reason/Notes

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Incident Notes

Directional: Got stuck at 4891'. Ran Free Point, backed off at 3850'. L/D 2 Jts of HWDP. Going back in to screw in, and cont. drilling. Fishing was unsuccessful and BHA was deemed LIH

MWD:

### Comments

Directional: 8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

MWD:

# Mud Motor Reports
## Lateral

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 3 (Sidetrack 1)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 800-40-005 | **Date In** | 2019-06-01 10:00 | **Downhole Hours** | 40.50 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 3740.00 | **Drilling/Circulating Hours** | 7.75 |
| **Lobe/Stage** | 7/8, 4.00 | **Date Out** | 2019-06-03 02:30 | | |
| **Bend Angle** | 2.12 | **Depth Out (ft)** | 3850.00 | **Circulating Hours** | 7.75 |
| **Speed (rev/gal)** | 0.17 | **Total Drilled (ft)** | 110.00 | **Drilling Hours** | 0.00 |
| **Wear Pad OD (in)** | 8.300 | **Distance Slid (ft)** | 0.00 | **Sliding Hours** | 0.00 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 0.00 | **Rotating Hours** | 0.00 |
| **Motor Results** | | **% Distance Sliding** | 0.00% | **% Hours Rotating** | 0% |
| **Motor Incident** | No | **% Distance Rotating** | 0.00% | **% Hours Sliding** | 0% |
| **Average Total ROP (ft/h)** | 0.00 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 0.00 | **Flow Rate (gpm)** | 700.00 - 900.00 | **Motor RPM** | 25.00 - 25.00 |
| **Average Rotating ROP (ft/h)** | 0.00 | **Stalls** | 5 | **Surface RPM** | 50.00 - 80.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 2100.00 | **Rotating WOB (klbs)** | 18.00 - 38.00 |
| **OD (in)** | 9.875 | **On Bottom Pressure (psi)** | 1400.00 - 3650.00 | **Sliding WOB (klbs)** | 5.00 - 35.00 |
| **Vendor** | REED | **Off Bottom Pressure (psi)** | 1050.00 - 3000.00 | **Temp (ºF)** | 78.00 - 105.00 |
| **S/N** | E255656 | **NPT** | 16.5 | | |
| **Nozzles** | 3x20's | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.920 | Kick off cement plug to sidetrck well. | | | |
| **Bit Type** | Roller Cone | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Brine | | | | |
| **WT** | 9.70 | | | | |
| **VIS** | 1.00 | | | | |
| **PV** | 1.00 | | | | |
| **YP** | 3.00 | | | | |

### POOH Reason/Notes

**Pressure Spike:** Motor stalling due to lost roller cone on bit.

### Incident Notes

Directional: lost roller cone on bit.

MWD:

### Comments

Directional: 8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 4 (Sidetrack 2)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 800-40-005 | **Date In** | 2019-06-03 12:15 | **Downhole Hours** | 9.75 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 3850.00 | **Drilling/Circulating Hours** | 6.25 |
| **Lobe/Stage** | 7/8, 4.00 | **Date Out** | 2019-06-03 22:00 | | |
| **Bend Angle** | 2.12 | **Depth Out (ft)** | 3919.00 | **Circulating Hours** | 0.00 |
| **Speed (rev/gal)** | 0.17 | **Total Drilled (ft)** | 69.00 | **Drilling Hours** | 6.25 |
| **Wear Pad OD (in)** | 8.300 | **Distance Slid (ft)** | 69.00 | **Sliding Hours** | 6.25 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 0.00 | **Rotating Hours** | 0.00 |
| **Motor Results** | | **% Distance Sliding** | 100.00% | **% Hours Rotating** | 0.00% |
| **Motor Incident** | No | **% Distance Rotating** | 0.00% | **% Hours Sliding** | 100.00% |
| **Average Total ROP (ft/h)** | 11.04 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 11.04 | **Flow Rate (gpm)** | 500.00 - 500.00 | **Motor RPM** | 0.00 - 0.00 |
| **Average Rotating ROP (ft/h)** | 0.00 | **Stalls** | 0 | **Surface RPM** | 0.00 - 0.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 150.00 - 150.00 |
| **OD (in)** | 9.875 | **On Bottom Pressure (psi)** | 1200.00 - 1200.00 | **Sliding WOB (klbs)** | 20.00 - 20.00 |
| **Vendor** | HUGHES | **Off Bottom Pressure (psi)** | 1100.00 - 1100.00 | **Temp (ºF)** | 91.00 - 98.00 |
| **S/N** | 5285455 | **NPT** | 0.0 | | |
| **Nozzles** | 3x20's | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.920 | Kick off cement plug to sidetrack well. | | | |
| **Bit Type** | Roller Cone | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Brine | | | | |
| **WT** | 9.00 | | | | |
| **VIS** | 32.00 | | | | |
| **PV** | 0.00 | | | | |
| **YP** | 0.00 | | | | |

### POOH Reason/Notes

Change Bottom Hole Assembly

### Incident Notes

Directional:

MWD:

### Comments

Directional: Directional: 8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 5 (INTERMEDIATE)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 800-40-009 | **Date In** | 2019-06-03 23:30 | **Downhole Hours** | 64.00 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 3919.00 | **Drilling/Circulating Hours** | 48.67 |
| **Lobe/Stage** | 7/8, 5.90 | **Date Out** | 2019-06-06 15:30 | | |
| **Bend Angle** | 1.5 | **Depth Out (ft)** | 8981.00 | **Circulating Hours** | 2.75 |
| **Speed (rev/gal)** | 0.17 | **Total Drilled (ft)** | 5062.00 | **Drilling Hours** | 45.92 |
| **Wear Pad OD (in)** | 8.340 | **Distance Slid (ft)** | 243.00 | **Sliding Hours** | 10.33 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 4819.00 | **Rotating Hours** | 35.58 |
| **Motor Results** | | **% Distance Sliding** | 4.80% | **% Hours Rotating** | 77.50% |
| **Motor Incident** | No | **% Distance Rotating** | 95.20% | **% Hours Sliding** | 22.50% |
| **Average Total ROP (ft/h)** | 110.24 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 23.52 | **Flow Rate (gpm)** | 900.00 - 900.00 | **Motor RPM** | 0.00 - 0.00 |
| **Average Rotating ROP (ft/h)** | 135.43 | **Stalls** | 0 | **Surface RPM** | 65.00 - 65.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 35.00 - 35.00 |
| **OD (in)** | 9.875 | **On Bottom Pressure (psi)** | 4100.00 - 4400.00 | **Sliding WOB (klbs)** | 15.00 - 20.00 |
| **Vendor** | Reed | **Off Bottom Pressure (psi)** | 3850.00 - 3850.00 | **Temp (ºF)** | 122.00 - 122.00 |
| **S/N** | A262114 | **NPT** | 0.0 | | |
| **Nozzles** | 5x12's, 4x11's | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.923 | Drill Intermediate. | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 72.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Water Based | | | | |
| **WT** | 10.50 | | | | |
| **VIS** | 30.00 | | | | |
| **PV** | 0.00 | | | | |
| **YP** | 0.00 | | | | |

### POOH Reason/Notes

**Penetration Rate:** POOH for bit

### Incident Notes

Directional:

MWD:

### Comments

Directional: Directional: 8" Motor 7/8 5.9 FXD 1.50 w/ 9 5/8" Stab. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 6 (INTERMEDIATE)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 800-40-009 | **Date In** | 2019-06-06 15:30 | **Downhole Hours** | 33.50 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 8981.00 | **Drilling/Circulating Hours** | 1.00 |
| **Lobe/Stage** | 7/8, 5.90 | **Date Out** | 2019-06-08 01:00 | | |
| **Bend Angle** | 1.5 | **Depth Out (ft)** | 8981.00 | **Circulating Hours** | 1.00 |
| **Speed (rev/gal)** | 0.17 | **Total Drilled (ft)** | 0.00 | **Drilling Hours** | 0.00 |
| **Wear Pad OD (in)** | 8.340 | **Distance Slid (ft)** | 0.00 | **Sliding Hours** | 0.00 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 0.00 | **Rotating Hours** | 0.00 |
| **Motor Results** | | **% Distance Sliding** | 0 | **% Hours Rotating** | 0% |
| **Motor Incident** | No | **% Distance Rotating** | 0 | **% Hours Sliding** | 0% |
| **Average Total ROP (ft/h)** | 0.00 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 0.00 | **Flow Rate (gpm)** | 0.00 - 0.00 | **Motor RPM** | 0.00 - 0.00 |
| **Average Rotating ROP (ft/h)** | 0.00 | **Stalls** | 0 | **Surface RPM** | 0.00 - 0.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 0.00 - 0.00 |
| **OD (in)** | 9.875 | **On Bottom Pressure (psi)** | 0.00 - 0.00 | **Sliding WOB (klbs)** | 0.00 - 0.00 |
| **Vendor** | Reed | **Off Bottom Pressure (psi)** | 0.00 - 0.00 | **Temp (ºF)** | -0.00 - -0.00 |
| **S/N** | A262113 | **NPT** | 1.0 | | |
| **Nozzles** | 5x12's, 4x11's | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.923 | Drill Intermediate | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Water Based | | | | |
| **WT** | 10.50 | | | | |
| **VIS** | 30.00 | | | | |
| **PV** | 0.00 | | | | |
| **YP** | 0.00 | | | | |

### POOH Reason/Notes

Change Bottom Hole Assembly

### Incident Notes

Directional: Bit Damage

MWD:

### Comments

Directional: 8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 7 (INTERMEDIATE)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 800-40-009 | **Date In** | 2019-06-08 01:00 | **Downhole Hours** | 41.00 |
| **Size (in)** | 8.0 | **Depth In (ft)** | 8981.00 | **Drilling/Circulating Hours** | 28.33 |
| **Lobe/Stage** | 7/8, 5.90 | **Date Out** | 2019-06-09 18:00 | | |
| **Bend Angle** | 1.5 | **Depth Out (ft)** | 10731.00 | **Circulating Hours** | 6.33 |
| **Speed (rev/gal)** | 0.17 | **Total Drilled (ft)** | 1750.00 | **Drilling Hours** | 22.00 |
| **Wear Pad OD (in)** | 8.340 | **Distance Slid (ft)** | 50.00 | **Sliding Hours** | 1.75 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 1700.00 | **Rotating Hours** | 20.25 |
| **Motor Results** | | **% Distance Sliding** | 2.86% | **% Hours Rotating** | 92.05% |
| **Motor Incident** | No | **% Distance Rotating** | 97.14% | **% Hours Sliding** | 7.95% |
| **Average Total ROP (ft/h)** | 79.55 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 28.57 | **Flow Rate (gpm)** | 900.00 - 900.00 | **Motor RPM** | 0.00 - 0.00 |
| **Average Rotating ROP (ft/h)** | 83.95 | **Stalls** | 0 | **Surface RPM** | 50.00 - 50.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 40.00 - 40.00 |
| **OD (in)** | 9.875 | **On Bottom Pressure (psi)** | 4000.00 - 4000.00 | **Sliding WOB (klbs)** | 20.00 - 20.00 |
| **Vendor** | Reed | **Off Bottom Pressure (psi)** | 3500.00 - 3500.00 | **Temp (ºF)** | 120.00 - 120.00 |
| **S/N** | A262113 | **NPT** | 0.0 | | |
| **Nozzles** | 5x12's, 4x11's | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 0.923 | Drill intermediate. | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Water Based | | | | |
| **WT** | 10.50 | | | | |
| **VIS** | 30.00 | | | | |
| **PV** | 0.00 | | | | |
| **YP** | 0.00 | | | | |

### POOH Reason/Notes

Total Depth/Casing Point

### Incident Notes

Directional:

MWD:

### Comments

Directional: 8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 8 (Intermediate)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 500-36-084 | **Date In** | 2019-06-14 08:15 | **Downhole Hours** | 27.75 |
| **Size (in)** | 5.0 | **Depth In (ft)** | 10731.00 | **Drilling/Circulating Hours** | 10.42 |
| **Lobe/Stage** | 6/7, 8.00 | **Date Out** | 2019-06-15 12:00 | | |
| **Bend Angle** | 1.5 | **Depth Out (ft)** | 11570.00 | **Circulating Hours** | 2.83 |
| **Speed (rev/gal)** | 0.77 | **Total Drilled (ft)** | 839.00 | **Drilling Hours** | 7.58 |
| **Wear Pad OD (in)** | 5.300 | **Distance Slid (ft)** | 0.00 | **Sliding Hours** | 0.00 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 839.00 | **Rotating Hours** | 7.58 |
| **Motor Results** | | **% Distance Sliding** | 0.00% | **% Hours Rotating** | 100.00% |
| **Motor Incident** | No | **% Distance Rotating** | 100.00% | **% Hours Sliding** | 0.00% |
| **Average Total ROP (ft/h)** | 110.64 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 0.00 | **Flow Rate (gpm)** | 250.00 - 275.00 | **Motor RPM** | 220.00 - 242.00 |
| **Average Rotating ROP (ft/h)** | 110.64 | **Stalls** | 0 | **Surface RPM** | 30.00 - 30.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 0.00 | **Rotating WOB (klbs)** | 25.00 - 25.00 |
| **OD (in)** | 6.750 | **On Bottom Pressure (psi)** | 2500.00 - 2500.00 | **Sliding WOB (klbs)** | 5.00 - 35.00 |
| **Vendor** | Halliburton | **Off Bottom Pressure (psi)** | 1300.00 - 1300.00 | **Temp (ºF)** | 152.00 - 152.00 |
| **S/N** | 13085986 | **NPT** | 2.83 | | |
| **Nozzles** | 6x16 | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 1.170 | Drill vertical to KOP | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 4.30 ft, **Survey (Bit to Survey):** 64.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Brine | | | | |
| **WT** | 9.40 | | | | |
| **VIS** | 28.00 | | | | |
| **PV** | 2.00 | | | | |
| **YP** | 3.00 | | | | |

### POOH Reason/Notes

**Change Bottom Hole Assembly:** KOP

### Incident Notes

Directional: N/A

MWD:

### Comments

Directional: 5" Motor 6/7 8.0 FBH 1.50 w/ 6 1/2" NBS . Flow Rate: 150-350, RPG 0.77. Bit:(2 Runs) 6 3/4" Halliburton GTD64DM, 6x16's, 1.17 TFA.

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 9 (Curve)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | MM360500-0096 | **Date In** | 2019-06-15 12:00 | **Downhole Hours** | 37.00 |
| **Size (in)** | 5.0 | **Depth In (ft)** | 11570.00 | **Drilling/Circulating Hours** | 23.42 |
| **Lobe/Stage** | 6/7, 8.00 | **Date Out** | 2019-06-17 01:00 | | |
| **Bend Angle** | 2.12 | **Depth Out (ft)** | 12555.00 | **Circulating Hours** | 1.67 |
| **Speed (rev/gal)** | 0.77 | **Total Drilled (ft)** | 985.00 | **Drilling Hours** | 21.75 |
| **Wear Pad OD (in)** | 5.300 | **Distance Slid (ft)** | 833.00 | **Sliding Hours** | 20.25 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 152.00 | **Rotating Hours** | 1.50 |
| **Motor Results** | | **% Distance Sliding** | 84.57% | **% Hours Rotating** | 6.90% |
| **Motor Incident** | No | **% Distance Rotating** | 15.43% | **% Hours Sliding** | 93.10% |
| **Average Total ROP (ft/h)** | 45.29 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 41.14 | **Flow Rate (gpm)** | 275.00 - 331.00 | **Motor RPM** | 25.00 - 25.00 |
| **Average Rotating ROP (ft/h)** | 101.33 | **Stalls** | 5 | **Surface RPM** | 25.00 - 25.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 1299.97 | **Rotating WOB (klbs)** | 15.00 - 15.00 |
| **OD (in)** | 6.750 | **On Bottom Pressure (psi)** | 3400.00 - 4300.00 | **Sliding WOB (klbs)** | 20.00 - 25.00 |
| **Vendor** | REED | **Off Bottom Pressure (psi)** | 2580.00 - 3600.00 | **Temp (ºF)** | -0.00 - -0.00 |
| **S/N** | A256535 | **NPT** | 0.0 | | |
| **Nozzles** | 6x16 | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 1.170 | DRILL CURVE | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 4.15 ft, **Survey (Bit to Survey):** 59.00 ft, **Gamma:** 43.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Oil Based | | | | |
| **WT** | 9.50 | | | | |
| **VIS** | 71.00 | | | | |
| **PV** | 0.00 | | | | |
| **YP** | 0.00 | | | | |

### POOH Reason/Notes

Total Depth/Casing Point

### Incident Notes

Directional:

MWD:

### Comments

Directional: 5" Motor 6/7 8.0 FBH 2.12 w/ SS . Flow Rate: 150-350, RPG 0.77. Bit:(3 Runs) 6 3/4" REED SK613MG1C, 6x16's, 1.17 TFA.

MWD:

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Mud Motor Report - BHA 10 (Lateral)

| Motor Details | | Date/Depth/Distances | | Hours | |
|---|---|---|---|---|---|
| **S/N** | 500DDS105 | **Date In** | 2019-06-18 16:30 | **Downhole Hours** | 110.50 |
| **Size (in)** | 5.0 | **Depth In (ft)** | 12555.00 | **Drilling/Circulating Hours** | 79.67 |
| **Lobe/Stage** | 7/8, 10.60 | **Date Out** | 2019-06-23 07:00 | | |
| **Bend Angle** | 1.75 | **Depth Out (ft)** | 19915.00 | **Circulating Hours** | 5.83 |
| **Speed (rev/gal)** | 0.85 | **Total Drilled (ft)** | 7360.00 | **Drilling Hours** | 73.83 |
| **Wear Pad OD (in)** | 5.125 | **Distance Slid (ft)** | 834.00 | **Sliding Hours** | 28.00 |
| **Manufacturer** | N/A | **Distance Rotated (ft)** | 6526.00 | **Rotating Hours** | 45.83 |
| **Motor Results** | | **% Distance Sliding** | 11.33% | **% Hours Rotating** | 62.08% |
| **Motor Incident** | No | **% Distance Rotating** | 88.67% | **% Hours Sliding** | 37.92% |
| **Average Total ROP (ft/h)** | 99.68 | **BHA Parameters** | | | |
| **Average Slide ROP (ft/h)** | 29.79 | **Flow Rate (gpm)** | 300.00 - 340.00 | **Motor RPM** | 40.00 - 75.00 |
| **Average Rotating ROP (ft/h)** | 142.39 | **Stalls** | 10 | **Surface RPM** | 60.00 - 75.00 |
| **Bit Details** | | **Stall Pressure (psi)** | 600.02 | **Rotating WOB (klbs)** | 23.00 - 28.00 |
| **OD (in)** | 6.750 | **On Bottom Pressure (psi)** | 3600.00 - 4350.00 | **Sliding WOB (klbs)** | 20.00 - 28.00 |
| **Vendor** | REED | **Off Bottom Pressure (psi)** | 2950.00 - 4000.00 | **Temp (ºF)** | 149.00 - 186.00 |
| **S/N** | A257718 | **NPT** | 0.0 | | |
| **Nozzles** | 6x16 | **BHA Objective** | | | |
| **Total Flow Area (in²)** | 1.170 | DRILL LATERAL | | | |
| **Bit Type** | PDC | | | | |
| **Bit Distances** | | | | | |
| **Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft | | | | | |
| **Mud Properties** | | | | | |
| **Type** | Oil Based | | | | |
| **WT** | 11.00 | | | | |
| **VIS** | 72.00 | | | | |
| **PV** | 0.00 | | | | |
| **YP** | 0.00 | | | | |

### POOH Reason/Notes

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Incident Notes

Directional:

MWD:

### Comments

Directional: 5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit:(1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

MWD:

# Slide/Rotate Reports

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #1 (Surface)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 05-20 | 21:30 | 22:35 | 05-20 | 1.08 | 120.00 | 261.00 | 141.00 | 130.15 | N/A | 700.00 | 50.0 | 18.00 | 1400.00 | 1050.00 | Surface |
| Rotate | 05-20 | 22:40 | 22:50 | 05-20 | 0.17 | 261.00 | 384.00 | 123.00 | 738.00 | N/A | 800.00 | 60.0 | 18.00 | 1750.00 | 1300.00 | Surface |
| Rotate | 05-20 | 22:55 | 23:00 | 05-20 | 0.08 | 384.00 | 395.00 | 11.00 | 132.00 | N/A | 800.00 | 60.0 | 18.00 | 1750.00 | 1300.00 | Surface |
| Slide | 05-20 | 23:00 | 23:05 | 05-20 | 0.08 | 395.00 | 410.00 | 15.00 | 180.00 | 100.0 | 900.00 | N/A | 5.00 | 1800.00 | 1650.00 | Surface |
| Rotate | 05-20 | 23:05 | 23:20 | 05-20 | 0.25 | 410.00 | 475.00 | 65.00 | 260.00 | N/A | 800.00 | 60.0 | 18.00 | 1750.00 | 1300.00 | Surface |
| Rotate | 05-20 | 23:25 | 23:55 | 05-20 | 0.5 | 475.00 | 659.00 | 184.00 | 368.00 | N/A | 900.00 | 60.0 | 18.00 | 2550.00 | 2000.00 | Surface |
| Rotate | 05-21 | 00:00 | 00:10 | 05-21 | 0.17 | 659.00 | 675.00 | 16.00 | 96.00 | N/A | 900.00 | 60.0 | 18.00 | 2550.00 | 2000.00 | Surface |
| Slide | 05-21 | 00:10 | 00:20 | 05-21 | 0.17 | 675.00 | 700.00 | 25.00 | 150.00 | 95.0 | 900.00 | N/A | 20.00 | 2500.00 | 2000.00 | Surface |
| Rotate | 05-21 | 00:20 | 00:40 | 05-21 | 0.33 | 700.00 | 751.00 | 51.00 | 153.00 | N/A | 900.00 | 60.0 | 18.00 | 2550.00 | 2000.00 | Surface |
| Rotate | 05-21 | 00:50 | 01:15 | 05-21 | 0.42 | 751.00 | 843.00 | 92.00 | 220.80 | N/A | 740.00 | 60.0 | 20.00 | 2125.00 | 1450.00 | Surface |
| Rotate | 05-21 | 01:20 | 01:25 | 05-21 | 0.08 | 843.00 | 852.00 | 9.00 | 108.00 | N/A | 740.00 | 60.0 | 20.00 | 2125.00 | 1450.00 | Surface |
| Slide | 05-21 | 01:25 | 01:40 | 05-21 | 0.25 | 852.00 | 882.00 | 30.00 | 120.00 | 20.0 | 900.00 | N/A | 20.00 | 2500.00 | 2000.00 | Surface |
| Rotate | 05-21 | 01:40 | 01:55 | 05-21 | 0.25 | 882.00 | 934.00 | 52.00 | 208.00 | N/A | 900.00 | 60.0 | 20.00 | 2785.00 | 2200.00 | Surface |
| Rotate | 05-21 | 02:00 | 02:05 | 05-21 | 0.08 | 934.00 | 940.00 | 6.00 | 72.00 | N/A | 900.00 | 60.0 | 20.00 | 2785.00 | 2200.00 | Surface |
| Slide | 05-21 | 02:05 | 02:25 | 05-21 | 0.33 | 940.00 | 985.00 | 45.00 | 135.00 | 20.0 | 900.00 | N/A | 20.00 | 2700.00 | 2200.00 | Surface |
| Rotate | 05-21 | 02:25 | 02:30 | 05-21 | 0.08 | 985.00 | 1029.00 | 44.00 | 528.00 | N/A | 900.00 | 60.0 | 20.00 | 3000.00 | 2200.00 | Surface |
| Rotate | 05-21 | 02:35 | 02:45 | 05-21 | 0.17 | 1029.00 | 1039.00 | 10.00 | 60.00 | N/A | 900.00 | 60.0 | 20.00 | 3000.00 | 2200.00 | Surface |
| Slide | 05-21 | 02:45 | 03:05 | 05-21 | 0.33 | 1039.00 | 1094.00 | 55.00 | 165.00 | 0.0 | 900.00 | N/A | 20.00 | 2800.00 | 2200.00 | Surface |
| Rotate | 05-21 | 03:05 | 03:15 | 05-21 | 0.17 | 1094.00 | 1124.00 | 30.00 | 180.00 | N/A | 900.00 | 60.0 | 20.00 | 3000.00 | 2200.00 | Surface |
| Rotate | 05-21 | 03:20 | 03:25 | 05-21 | 0.08 | 1124.00 | 1130.00 | 6.00 | 72.00 | N/A | 900.00 | 60.0 | 20.00 | 3000.00 | 2200.00 | Surface |
| Slide | 05-21 | 03:25 | 03:55 | 05-21 | 0.5 | 1130.00 | 1185.00 | 55.00 | 110.00 | 10.0 | 900.00 | N/A | 20.00 | 2800.00 | 2200.00 | Surface |
| Rotate | 05-21 | 03:55 | 04:10 | 05-21 | 0.25 | 1185.00 | 1219.00 | 34.00 | 136.00 | N/A | 700.00 | 60.0 | 25.00 | 2200.00 | 1600.00 | Surface |
| Rotate | 05-21 | 04:15 | 05:20 | 05-21 | 1.08 | 1219.00 | 1314.00 | 95.00 | 87.69 | N/A | 700.00 | 60.0 | 25.00 | 2200.00 | 1600.00 | Surface |
| Slide | 05-21 | 05:25 | 06:15 | 05-21 | 0.83 | 1314.00 | 1374.00 | 60.00 | 72.00 | 10.0 | 900.00 | N/A | 20.00 | 2800.00 | 2200.00 | Surface |
| Rotate | 05-21 | 06:15 | 06:35 | 05-21 | 0.33 | 1374.00 | 1408.00 | 34.00 | 102.00 | N/A | 700.00 | 60.0 | 25.00 | 2200.00 | 1600.00 | Surface |
| Rotate | 05-21 | 06:50 | 07:55 | 05-21 | 1.08 | 1408.00 | 1503.00 | 95.00 | 87.69 | N/A | 700.00 | 60.0 | 25.00 | 2200.00 | 1600.00 | Surface |
| Rotate | 05-21 | 08:00 | 09:15 | 05-21 | 1.25 | 1503.00 | 1598.00 | 95.00 | 76.00 | N/A | 700.00 | 60.0 | 25.00 | 2200.00 | 1600.00 | Surface |
| Rotate | 05-21 | 09:20 | 10:00 | 05-21 | 0.67 | 1598.00 | 1628.00 | 30.00 | 45.00 | N/A | 700.00 | 60.0 | 25.00 | 2200.00 | 1600.00 | Surface, Intermediate |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #2 (Intermediate)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 05-26 | 17:30 | 18:15 | 05-26 | 0.75 | 1628.00 | 1764.00 | 136.00 | 181.33 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 18:20 | 18:25 | 05-26 | 0.08 | 1764.00 | 1775.00 | 11.00 | 132.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-26 | 18:25 | 18:30 | 05-26 | 0.08 | 1775.00 | 1790.00 | 15.00 | 180.00 | 275.0 | 800.00 | N/A | 35.00 | 2800.00 | 2200.00 | Intermediate |
| Rotate | 05-26 | 18:30 | 18:50 | 05-26 | 0.33 | 1790.00 | 1859.00 | 69.00 | 207.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 18:55 | 19:00 | 05-26 | 0.08 | 1859.00 | 1865.00 | 6.00 | 72.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-26 | 19:00 | 19:10 | 05-26 | 0.17 | 1865.00 | 1883.00 | 18.00 | 108.00 | 275.0 | 800.00 | N/A | 35.00 | 2800.00 | 2200.00 | Intermediate |
| Rotate | 05-26 | 19:10 | 19:25 | 05-26 | 0.25 | 1883.00 | 1953.00 | 70.00 | 280.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 19:30 | 19:35 | 05-26 | 0.08 | 1953.00 | 1965.00 | 12.00 | 144.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-26 | 19:35 | 19:40 | 05-26 | 0.08 | 1965.00 | 1983.00 | 18.00 | 216.00 | 260.0 | 800.00 | N/A | 35.00 | 2800.00 | 2200.00 | Intermediate |
| Rotate | 05-26 | 19:40 | 19:55 | 05-26 | 0.25 | 1983.00 | 2048.00 | 65.00 | 260.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 20:00 | 20:05 | 05-26 | 0.08 | 2048.00 | 2055.00 | 7.00 | 84.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-26 | 20:05 | 20:10 | 05-26 | 0.08 | 2055.00 | 2067.00 | 12.00 | 144.00 | 265.0 | 800.00 | N/A | 35.00 | 2800.00 | 2200.00 | Intermediate |
| Rotate | 05-26 | 20:10 | 20:30 | 05-26 | 0.33 | 2067.00 | 2143.00 | 76.00 | 228.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 20:35 | 20:55 | 05-26 | 0.33 | 2143.00 | 2238.00 | 95.00 | 285.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 21:00 | 21:25 | 05-26 | 0.42 | 2238.00 | 2333.00 | 95.00 | 228.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 21:30 | 21:55 | 05-26 | 0.42 | 2333.00 | 2428.00 | 95.00 | 228.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 22:00 | 22:35 | 05-26 | 0.58 | 2428.00 | 2523.00 | 95.00 | 162.86 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 22:40 | 23:00 | 05-26 | 0.33 | 2523.00 | 2617.00 | 94.00 | 282.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 23:05 | 23:30 | 05-26 | 0.42 | 2617.00 | 2712.00 | 95.00 | 228.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-26 | 23:35 | 00:00 | 05-27 | 0.42 | 2712.00 | 2807.00 | 95.00 | 228.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 00:05 | 00:20 | 05-27 | 0.25 | 2807.00 | 2902.00 | 95.00 | 380.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 00:25 | 00:40 | 05-27 | 0.25 | 2902.00 | 2997.00 | 95.00 | 380.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 00:45 | 01:05 | 05-27 | 0.33 | 2997.00 | 3092.00 | 95.00 | 285.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 01:10 | 01:15 | 05-27 | 0.08 | 3092.00 | 3100.00 | 8.00 | 96.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-27 | 01:15 | 01:25 | 05-27 | 0.17 | 3100.00 | 3120.00 | 20.00 | 120.00 | 285.0 | 700.00 | N/A | 35.00 | 2900.00 | 2400.00 | Intermediate |
| Rotate | 05-27 | 01:25 | 01:35 | 05-27 | 0.17 | 3120.00 | 3187.00 | 67.00 | 402.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 01:40 | 01:45 | 05-27 | 0.08 | 3187.00 | 3195.00 | 8.00 | 96.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-27 | 01:45 | 01:50 | 05-27 | 0.08 | 3195.00 | 3210.00 | 15.00 | 180.00 | 295.0 | 700.00 | N/A | 35.00 | 2900.00 | 2400.00 | Intermediate |
| Rotate | 05-27 | 01:50 | 02:10 | 05-27 | 0.33 | 3210.00 | 3282.00 | 72.00 | 216.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 02:15 | 02:25 | 05-27 | 0.17 | 3282.00 | 3376.00 | 94.00 | 564.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 02:30 | 02:50 | 05-27 | 0.33 | 3376.00 | 3471.00 | 95.00 | 285.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 03:15 | 03:30 | 05-27 | 0.25 | 3471.00 | 3566.00 | 95.00 | 380.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 03:35 | 04:10 | 05-27 | 0.58 | 3566.00 | 3661.00 | 95.00 | 162.86 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Rotate | 05-27 | 04:15 | 04:20 | 05-27 | 0.08 | 3661.00 | 3670.00 | 9.00 | 108.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate |
| Slide | 05-27 | 04:20 | 04:30 | 05-27 | 0.17 | 3670.00 | 3688.00 | 18.00 | 108.00 | 260.0 | 700.00 | N/A | 35.00 | 2900.00 | 2400.00 | Intermediate |
| Rotate | 05-27 | 04:30 | 04:45 | 05-27 | 0.25 | 3688.00 | 3756.00 | 68.00 | 272.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Intermediate, Sidetrack |
| Rotate | 05-27 | 04:50 | 05:15 | 05-27 | 0.42 | 3756.00 | 3851.00 | 95.00 | 228.00 | N/A | 700.00 | 80.0 | 35.00 | 2700.00 | 2300.00 | Sidetrack |
| Rotate | 05-27 | 05:20 | 06:00 | 05-27 | 0.67 | 3851.00 | 4040.00 | 189.00 | 283.50 | N/A | 700.00 | 80.0 | 38.00 | 2900.00 | 2600.00 | Sidetrack |
| Rotate | 05-27 | 06:05 | 06:35 | 05-27 | 0.5 | 4040.00 | 4135.00 | 95.00 | 190.00 | N/A | 700.00 | 80.0 | 38.00 | 2900.00 | 2600.00 | Sidetrack |
| Rotate | 05-27 | 06:40 | 07:05 | 05-27 | 0.42 | 4135.00 | 4230.00 | 95.00 | 228.00 | N/A | 700.00 | 80.0 | 38.00 | 2900.00 | 2600.00 | Sidetrack |
| Rotate | 05-27 | 07:10 | 07:15 | 05-27 | 0.08 | 4230.00 | 4250.00 | 20.00 | 240.00 | N/A | 700.00 | 80.0 | 38.00 | 2900.00 | 2600.00 | Sidetrack |
| Slide | 05-27 | 07:15 | 07:30 | 05-27 | 0.25 | 4250.00 | 4270.00 | 20.00 | 80.00 | 230.0 | 700.00 | N/A | 35.00 | 2900.00 | 2400.00 | Sidetrack |
| Rotate | 05-27 | 07:30 | 07:45 | 05-27 | 0.25 | 4270.00 | 4325.00 | 55.00 | 220.00 | N/A | 700.00 | 80.0 | 38.00 | 2900.00 | 2600.00 | Sidetrack |
| Rotate | 05-27 | 07:50 | 08:10 | 05-27 | 0.33 | 4325.00 | 4420.00 | 95.00 | 285.00 | N/A | 700.00 | 80.0 | 38.00 | 2900.00 | 2600.00 | Sidetrack |
| Rotate | 05-27 | 08:15 | 08:30 | 05-27 | 0.25 | 4420.00 | 4515.00 | 95.00 | 380.00 | N/A | 800.00 | 80.0 | 38.00 | 3650.00 | 3000.00 | Sidetrack |
| Rotate | 05-27 | 08:35 | 08:50 | 05-27 | 0.25 | 4515.00 | 4609.00 | 94.00 | 376.00 | N/A | 800.00 | 80.0 | 38.00 | 3650.00 | 3000.00 | Sidetrack |
| Rotate | 05-27 | 08:55 | 09:15 | 05-27 | 0.33 | 4609.00 | 4704.00 | 95.00 | 285.00 | N/A | 800.00 | 80.0 | 38.00 | 3650.00 | 3000.00 | Sidetrack |
| Rotate | 05-27 | 09:20 | 09:25 | 05-27 | 0.08 | 4704.00 | 4714.00 | 10.00 | 120.00 | N/A | 800.00 | 80.0 | 38.00 | 3650.00 | 3000.00 | Sidetrack |
| Slide | 05-27 | 09:25 | 09:40 | 05-27 | 0.25 | 4714.00 | 4739.00 | 25.00 | 100.00 | 150.0 | 700.00 | N/A | 35.00 | 2900.00 | 2400.00 | Sidetrack |
| Rotate | 05-27 | 09:40 | 09:55 | 05-27 | 0.25 | 4739.00 | 4799.00 | 60.00 | 240.00 | N/A | 800.00 | 80.0 | 38.00 | 3650.00 | 3000.00 | Sidetrack |
| Rotate | 05-27 | 10:00 | 10:15 | 05-27 | 0.25 | 4799.00 | 4894.00 | 95.00 | 380.00 | N/A | 800.00 | 80.0 | 38.00 | 3650.00 | 3000.00 | Sidetrack |

| | | | | |
|---|---|---|---|---|
| | **Job Number**<br>WT-19-084 | **Operator**<br>Advance Energy Partners | | **Rig Name**<br>H&P #389 |
| | **Start Date**<br>2019-05-19 | **Well Name**<br>Dagger State Com #802H | | **Legal Well Name \| AFE**<br>Dagger State Com #802H |
| | **Play**<br>Delaware Basin | **State/Province and Country**<br>New Mexico, US | **County**<br>Lea | **Company Man** |

## Slide/Rotate Report - BHA #3 (Sidetrack 1)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | **Job Number**<br>WT-19-084 | **Operator**<br>Advance Energy Partners | | **Rig Name**<br>H&P #389 |
| | **Start Date**<br>2019-05-19 | **Well Name**<br>Dagger State Com #802H | | **Legal Well Name \| AFE**<br>Dagger State Com #802H |
| | **Play**<br>Delaware Basin | **State/Province and Country**<br>New Mexico, US | **County**<br>Lea | **Company Man** |

## Slide/Rotate Report - BHA #4 (Sidetrack 2)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Slide | 06-03 | 13:30 | 19:45 | 06-03 | 6.25 | 3850.00 | 3919.00 | 69.00 | 11.04 | 130.0 | 500.00 | N/A | 20.00 | 1200.00 | 1100.00 | |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #5 (INTERMEDIATE)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Slide | 06-04 | 03:00 | 04:00 | 06-04 | 1.0 | 3919.00 | 3933.00 | 14.00 | 14.00 | 250.0 | | N/A | | | | |
| Rotate | 06-04 | 04:00 | 04:30 | 06-04 | 0.5 | 3933.00 | 3952.00 | 19.00 | 38.00 | N/A | | | | | | |
| Rotate | 06-04 | 04:35 | 04:55 | 06-04 | 0.33 | 3952.00 | 3988.00 | 36.00 | 108.00 | N/A | | | | | | |
| Slide | 06-04 | 04:55 | 05:20 | 06-04 | 0.42 | 3988.00 | 4006.00 | 18.00 | 43.20 | 20.0 | | N/A | | | | |
| Rotate | 06-04 | 05:20 | 05:50 | 06-04 | 0.5 | 4006.00 | 4075.00 | 69.00 | 138.00 | N/A | | | | | | |
| Slide | 06-04 | 05:50 | 06:30 | 06-04 | 0.67 | 4075.00 | 4110.00 | 35.00 | 52.50 | 160.0 | | N/A | | | | |
| Rotate | 06-04 | 06:35 | 06:50 | 06-04 | 0.25 | 4110.00 | 4142.00 | 32.00 | 128.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Slide | 06-04 | 06:50 | 07:30 | 06-04 | 0.67 | 4142.00 | 4162.00 | 20.00 | 30.00 | 130.0 | 900.00 | N/A | 20.00 | 4200.00 | 3850.00 | |
| Rotate | 06-04 | 07:30 | 07:45 | 06-04 | 0.25 | 4162.00 | 4240.00 | 78.00 | 312.00 | N/A | | | | | | |
| Slide | 06-04 | 07:50 | 08:15 | 06-04 | 0.42 | 4240.00 | 4260.00 | 20.00 | 48.00 | 350.0 | | N/A | | | | |
| Rotate | 06-04 | 08:15 | 08:40 | 06-04 | 0.42 | 4260.00 | 4331.00 | 71.00 | 170.40 | N/A | | | | | | |
| Rotate | 06-04 | 08:45 | 09:10 | 06-04 | 0.42 | 4331.00 | 4426.00 | 95.00 | 228.00 | N/A | | | | | | |
| Rotate | 06-04 | 09:15 | 09:30 | 06-04 | 0.25 | 4426.00 | 4521.00 | 95.00 | 380.00 | N/A | | | | | | |
| Rotate | 06-04 | 09:35 | 09:55 | 06-04 | 0.33 | 4521.00 | 4616.00 | 95.00 | 285.00 | N/A | | | | | | |
| Rotate | 06-04 | 10:00 | 10:15 | 06-04 | 0.25 | 4616.00 | 4710.00 | 94.00 | 376.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 10:20 | 10:40 | 06-04 | 0.33 | 4710.00 | 4805.00 | 95.00 | 285.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 10:45 | 11:15 | 06-04 | 0.5 | 4805.00 | 4900.00 | 95.00 | 190.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 11:20 | 11:45 | 06-04 | 0.42 | 4900.00 | 4995.00 | 95.00 | 228.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 11:50 | 11:55 | 06-04 | 0.08 | 4995.00 | 5000.00 | 5.00 | 60.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Slide | 06-04 | 11:55 | 12:25 | 06-04 | 0.5 | 5000.00 | 5012.00 | 12.00 | 24.00 | 205.0 | 900.00 | N/A | 15.00 | 4100.00 | 3850.00 | |
| Rotate | 06-04 | 12:25 | 13:00 | 06-04 | 0.58 | 5012.00 | 5090.00 | 78.00 | 133.71 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 13:05 | 13:50 | 06-04 | 0.75 | 5090.00 | 5184.00 | 94.00 | 125.33 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 13:55 | 14:30 | 06-04 | 0.58 | 5184.00 | 5279.00 | 95.00 | 162.86 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 14:35 | 15:05 | 06-04 | 0.5 | 5279.00 | 5374.00 | 95.00 | 190.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 15:10 | 15:15 | 06-04 | 0.08 | 5374.00 | 5380.00 | 6.00 | 72.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Slide | 06-04 | 15:15 | 15:35 | 06-04 | 0.33 | 5380.00 | 5390.00 | 10.00 | 30.00 | 256.0 | 900.00 | N/A | 15.00 | 4100.00 | 3850.00 | |
| Rotate | 06-04 | 15:35 | 16:00 | 06-04 | 0.42 | 5390.00 | 5469.00 | 79.00 | 189.60 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 16:05 | 16:30 | 06-04 | 0.42 | 5469.00 | 5563.00 | 94.00 | 225.60 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 16:35 | 17:00 | 06-04 | 0.42 | 5563.00 | 5658.00 | 95.00 | 228.00 | N/A | 900.00 | 65.0 | 35.00 | 4400.00 | 3850.00 | |
| Rotate | 06-04 | 17:05 | 17:35 | 06-04 | 0.5 | 5658.00 | 5753.00 | 95.00 | 190.00 | N/A | | | | | | |
| Rotate | 06-04 | 17:40 | 17:45 | 06-04 | 0.08 | 5753.00 | 5758.00 | 5.00 | 60.00 | N/A | | | | | | |
| Slide | 06-04 | 17:45 | 18:25 | 06-04 | 0.67 | 5758.00 | 5778.00 | 20.00 | 30.00 | 250.0 | | N/A | | | | |
| Rotate | 06-04 | 18:25 | 18:45 | 06-04 | 0.33 | 5778.00 | 5848.00 | 70.00 | 210.00 | N/A | | | | | | |
| Rotate | 06-04 | 18:50 | 19:00 | 06-04 | 0.17 | 5848.00 | 5855.00 | 7.00 | 42.00 | N/A | | | | | | |
| Slide | 06-04 | 19:00 | 19:15 | 06-04 | 0.25 | 5855.00 | 5861.00 | 6.00 | 24.00 | 250.0 | | N/A | | | | |
| Rotate | 06-04 | 19:15 | 19:55 | 06-04 | 0.67 | 5861.00 | 5943.00 | 82.00 | 123.00 | N/A | | | | | | |
| Rotate | 06-04 | 20:00 | 20:30 | 06-04 | 0.5 | 5943.00 | 6037.00 | 94.00 | 188.00 | N/A | | | | | | |
| Rotate | 06-04 | 20:35 | 21:30 | 06-04 | 0.92 | 6037.00 | 6132.00 | 95.00 | 103.64 | N/A | | | | | | |
| Rotate | 06-04 | 21:35 | 21:55 | 06-04 | 0.33 | 6132.00 | 6227.00 | 95.00 | 285.00 | N/A | | | | | | |
| Rotate | 06-04 | 22:00 | 22:20 | 06-04 | 0.33 | 6227.00 | 6322.00 | 95.00 | 285.00 | N/A | | | | | | |
| Rotate | 06-04 | 22:25 | 22:30 | 06-04 | 0.08 | 6322.00 | 6417.00 | 95.00 | 1140.00 | N/A | | | | | | |
| Rotate | 06-04 | 22:35 | 22:40 | 06-04 | 0.08 | 6417.00 | 6512.00 | 95.00 | 1140.00 | N/A | | | | | | |
| Rotate | 06-04 | 22:45 | 23:05 | 06-04 | 0.33 | 6512.00 | 6606.00 | 94.00 | 282.00 | N/A | | | | | | |
| Rotate | 06-05 | 00:05 | 00:25 | 06-05 | 0.33 | 6606.00 | 6701.00 | 95.00 | 285.00 | N/A | | | | | | |
| Rotate | 06-05 | 00:30 | 00:55 | 06-05 | 0.42 | 6701.00 | 6796.00 | 95.00 | 228.00 | N/A | | | | | | |
| Rotate | 06-05 | 01:00 | 01:25 | 06-05 | 0.42 | 6796.00 | 6891.00 | 95.00 | 228.00 | N/A | | | | | | |
| Rotate | 06-05 | 01:30 | 01:50 | 06-05 | 0.33 | 6891.00 | 6985.00 | 94.00 | 282.00 | N/A | | | | | | |
| Rotate | 06-05 | 01:55 | 02:30 | 06-05 | 0.58 | 6985.00 | 7080.00 | 95.00 | 162.86 | N/A | | | | | | |
| Rotate | 06-05 | 03:00 | 03:05 | 06-05 | 0.08 | 7080.00 | 7090.00 | 10.00 | 120.00 | N/A | | | | | | |
| Rotate | 06-05 | 03:30 | 04:05 | 06-05 | 0.58 | 7090.00 | 7175.00 | 85.00 | 145.71 | N/A | | | | | | |
| Rotate | 06-05 | 04:10 | 04:55 | 06-05 | 0.75 | 7175.00 | 7270.00 | 95.00 | 126.67 | N/A | | | | | | |
| Rotate | 06-05 | 05:00 | 05:35 | 06-05 | 0.58 | 7270.00 | 7365.00 | 95.00 | 162.86 | N/A | | | | | | |
| Rotate | 06-05 | 05:40 | 06:15 | 06-05 | 0.58 | 7365.00 | 7460.00 | 95.00 | 162.86 | N/A | | | | | | |
| Rotate | 06-05 | 06:20 | 06:55 | 06-05 | 0.58 | 7460.00 | 7554.00 | 94.00 | 161.14 | N/A | | | | | | |
| Rotate | 06-05 | 07:00 | 07:40 | 06-05 | 0.67 | 7554.00 | 7649.00 | 95.00 | 142.50 | N/A | | | | | | |
| Rotate | 06-05 | 07:45 | 08:00 | 06-05 | 0.25 | 7649.00 | 7656.00 | 7.00 | 28.00 | N/A | | | | | | |
| Slide | 06-05 | 08:00 | 09:00 | 06-05 | 1.0 | 7656.00 | 7669.00 | 13.00 | 13.00 | 60.0 | | N/A | | | | |
| Rotate | 06-05 | 09:00 | 09:40 | 06-05 | 0.67 | 7669.00 | 7744.00 | 75.00 | 112.50 | N/A | | | | | | |
| Rotate | 06-05 | 09:45 | 09:55 | 06-05 | 0.17 | 7744.00 | 7761.00 | 17.00 | 102.00 | N/A | | | | | | |
| Slide | 06-05 | 09:55 | 10:30 | 06-05 | 0.58 | 7761.00 | 7776.00 | 15.00 | 25.71 | 65.0 | | N/A | | | | |
| Rotate | 06-05 | 10:30 | 11:25 | 06-05 | 0.92 | 7776.00 | 7839.00 | 63.00 | 68.73 | N/A | | | | | | |
| Rotate | 06-05 | 11:30 | 12:20 | 06-05 | 0.83 | 7839.00 | 7933.00 | 94.00 | 112.80 | N/A | | | | | | |
| Rotate | 06-05 | 12:25 | 12:35 | 06-05 | 0.17 | 7933.00 | 7945.00 | 12.00 | 72.00 | N/A | | | | | | |
| Slide | 06-05 | 12:35 | 13:15 | 06-05 | 0.67 | 7945.00 | 7955.00 | 10.00 | 15.00 | 70.0 | | N/A | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 06-05 | 13:15 | 13:40 | 06-05 | 0.42 | 7955.00 | 7995.00 | 40.00 | 96.00 | N/A | | | | | | |
| Slide | 06-05 | 13:40 | 14:35 | 06-05 | 0.92 | 7995.00 | 8007.00 | 12.00 | 13.09 | 70.0 | | N/A | | | | |
| Rotate | 06-05 | 14:35 | 14:55 | 06-05 | 0.33 | 8007.00 | 8029.00 | 22.00 | 66.00 | N/A | | | | | | |
| Rotate | 06-05 | 15:00 | 15:45 | 06-05 | 0.75 | 8029.00 | 8124.00 | 95.00 | 126.67 | N/A | | | | | | |
| Rotate | 06-05 | 15:50 | 16:00 | 06-05 | 0.17 | 8124.00 | 8130.00 | 6.00 | 36.00 | N/A | | | | | | |
| Slide | 06-05 | 16:00 | 17:00 | 06-05 | 1.0 | 8130.00 | 8145.00 | 15.00 | 15.00 | 65.0 | | N/A | | | | |
| Rotate | 06-05 | 17:00 | 17:45 | 06-05 | 0.75 | 8145.00 | 8218.00 | 73.00 | 97.33 | N/A | | | | | | |
| Rotate | 06-05 | 17:50 | 18:40 | 06-05 | 0.83 | 8218.00 | 8313.00 | 95.00 | 114.00 | N/A | | | | | | |
| Rotate | 06-05 | 18:45 | 19:40 | 06-05 | 0.92 | 8313.00 | 8375.00 | 62.00 | 67.64 | N/A | | | | | | |
| Slide | 06-05 | 19:40 | 20:40 | 06-05 | 1.0 | 8375.00 | 8393.00 | 18.00 | 18.00 | 45.0 | | N/A | | | | |
| Rotate | 06-05 | 20:40 | 20:50 | 06-05 | 0.17 | 8393.00 | 8408.00 | 15.00 | 90.00 | N/A | | | | | | |
| Rotate | 06-05 | 20:55 | 21:50 | 06-05 | 0.92 | 8408.00 | 8503.00 | 95.00 | 103.64 | N/A | | | | | | |
| Rotate | 06-05 | 21:55 | 23:10 | 06-05 | 1.25 | 8503.00 | 8598.00 | 95.00 | 76.00 | N/A | | | | | | |
| Rotate | 06-05 | 23:15 | 00:45 | 06-06 | 1.5 | 8598.00 | 8693.00 | 95.00 | 63.33 | N/A | | | | | | |
| Rotate | 06-06 | 00:50 | 02:20 | 06-06 | 1.5 | 8693.00 | 8787.00 | 94.00 | 62.67 | N/A | | | | | | |
| Rotate | 06-06 | 02:25 | 03:05 | 06-06 | 0.67 | 8787.00 | 8815.00 | 28.00 | 42.00 | N/A | | | | | | |
| Slide | 06-06 | 03:05 | 03:20 | 06-06 | 0.25 | 8815.00 | 8820.00 | 5.00 | 20.00 | 45.0 | | N/A | | | | |
| Rotate | 06-06 | 05:00 | 06:05 | 06-06 | 1.08 | 8820.00 | 8882.00 | 62.00 | 57.23 | N/A | | | | | | |
| Rotate | 06-06 | 06:10 | 08:30 | 06-06 | 2.33 | 8882.00 | 8977.00 | 95.00 | 40.71 | N/A | | | | | | |
| Rotate | 06-06 | 08:35 | 08:45 | 06-06 | 0.17 | 8977.00 | 8981.00 | 4.00 | 24.00 | N/A | | | | | | |

| | | | | |
|---|---|---|---|---|
| | **Job Number**<br>WT-19-084 | **Operator**<br>Advance Energy Partners | | **Rig Name**<br>H&P #389 |
| | **Start Date**<br>2019-05-19 | **Well Name**<br>Dagger State Com #802H | | **Legal Well Name \| AFE**<br>Dagger State Com #802H |
| | **Play**<br>Delaware Basin | **State/Province and Country**<br>New Mexico, US | **County**<br>Lea | **Company Man** |

## Slide/Rotate Report - BHA #6 (INTERMEDIATE)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #7 (INTERMEDIATE)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 06-08 | 10:40 | 11:15 | 06-08 | 0.58 | 8981.00 | 9024.00 | 43.00 | 73.71 | N/A | | | | | | |
| Rotate | 06-08 | 11:20 | 11:25 | 06-08 | 0.08 | 9024.00 | 9030.00 | 6.00 | 72.00 | N/A | | | | | | |
| Slide | 06-08 | 11:25 | 12:00 | 06-08 | 0.58 | 9030.00 | 9045.00 | 15.00 | 25.71 | 50.0 | | N/A | | | | |
| Rotate | 06-08 | 12:00 | 12:55 | 06-08 | 0.92 | 9045.00 | 9119.00 | 74.00 | 80.73 | N/A | | | | | | |
| Rotate | 06-08 | 13:00 | 14:05 | 06-08 | 1.08 | 9119.00 | 9214.00 | 95.00 | 87.69 | N/A | 900.00 | 50.0 | 40.00 | 4000.00 | 3500.00 | |
| Rotate | 06-08 | 14:10 | 15:15 | 06-08 | 1.08 | 9214.00 | 9309.00 | 95.00 | 87.69 | N/A | 900.00 | 50.0 | 40.00 | 4000.00 | 3500.00 | |
| Rotate | 06-08 | 15:20 | 16:10 | 06-08 | 0.83 | 9309.00 | 9404.00 | 95.00 | 114.00 | N/A | | | | | | |
| Rotate | 06-08 | 16:15 | 17:10 | 06-08 | 0.92 | 9404.00 | 9499.00 | 95.00 | 103.64 | N/A | | | | | | |
| Rotate | 06-08 | 17:15 | 18:10 | 06-08 | 0.92 | 9499.00 | 9593.00 | 94.00 | 102.55 | N/A | | | | | | |
| Rotate | 06-08 | 18:15 | 19:05 | 06-08 | 0.83 | 9593.00 | 9688.00 | 95.00 | 114.00 | N/A | | | | | | |
| Rotate | 06-08 | 19:10 | 20:00 | 06-08 | 0.83 | 9688.00 | 9783.00 | 95.00 | 114.00 | N/A | | | | | | |
| Rotate | 06-08 | 20:05 | 20:15 | 06-08 | 0.17 | 9783.00 | 9790.00 | 7.00 | 42.00 | N/A | | | | | | |
| Slide | 06-08 | 20:15 | 20:40 | 06-08 | 0.42 | 9790.00 | 9805.00 | 15.00 | 36.00 | 0.0 | | N/A | | | | |
| Rotate | 06-08 | 20:40 | 21:35 | 06-08 | 0.92 | 9805.00 | 9878.00 | 73.00 | 79.64 | N/A | | | | | | |
| Rotate | 06-08 | 21:40 | 22:35 | 06-08 | 0.92 | 9878.00 | 9973.00 | 95.00 | 103.64 | N/A | | | | | | |
| Rotate | 06-08 | 22:40 | 22:55 | 06-08 | 0.25 | 9973.00 | 9980.00 | 7.00 | 28.00 | N/A | | | | | | |
| Slide | 06-08 | 22:55 | 23:40 | 06-08 | 0.75 | 9980.00 | 10000.00 | 20.00 | 26.67 | 330.0 | | N/A | | | | |
| Rotate | 06-08 | 23:40 | 00:25 | 06-09 | 0.75 | 10000.00 | 10068.00 | 68.00 | 90.67 | N/A | | | | | | |
| Rotate | 06-09 | 00:30 | 01:45 | 06-09 | 1.25 | 10068.00 | 10163.00 | 95.00 | 76.00 | N/A | | | | | | |
| Rotate | 06-09 | 01:50 | 03:05 | 06-09 | 1.25 | 10163.00 | 10258.00 | 95.00 | 76.00 | N/A | | | | | | |
| Rotate | 06-09 | 03:10 | 04:35 | 06-09 | 1.42 | 10258.00 | 10352.00 | 94.00 | 66.35 | N/A | | | | | | |
| Rotate | 06-09 | 04:40 | 05:55 | 06-09 | 1.25 | 10352.00 | 10447.00 | 95.00 | 76.00 | N/A | | | | | | |
| Rotate | 06-09 | 06:00 | 07:25 | 06-09 | 1.42 | 10447.00 | 10542.00 | 95.00 | 67.06 | N/A | | | | | | |
| Rotate | 06-09 | 07:30 | 08:45 | 06-09 | 1.25 | 10542.00 | 10637.00 | 95.00 | 76.00 | N/A | | | | | | |
| Rotate | 06-09 | 08:50 | 10:10 | 06-09 | 1.33 | 10637.00 | 10731.00 | 94.00 | 70.50 | N/A | | | | | | |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #8 (Intermediate)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 06-14 | 20:15 | 21:05 | 06-14 | 0.83 | 10731.00 | 10808.00 | 77.00 | 92.40 | N/A | 250.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-14 | 21:10 | 22:00 | 06-14 | 0.83 | 10808.00 | 10904.00 | 96.00 | 115.20 | N/A | 250.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-14 | 22:05 | 23:00 | 06-14 | 0.92 | 10904.00 | 10999.00 | 95.00 | 103.64 | N/A | 250.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-14 | 23:05 | 23:55 | 06-14 | 0.83 | 10999.00 | 11095.00 | 96.00 | 115.20 | N/A | 250.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-15 | 00:00 | 00:50 | 06-15 | 0.83 | 11095.00 | 11190.00 | 95.00 | 114.00 | N/A | 250.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-15 | 00:55 | 01:45 | 06-15 | 0.83 | 11190.00 | 11285.00 | 95.00 | 114.00 | N/A | 275.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-15 | 01:50 | 02:40 | 06-15 | 0.83 | 11285.00 | 11379.00 | 94.00 | 112.80 | N/A | 275.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-15 | 02:45 | 03:30 | 06-15 | 0.75 | 11379.00 | 11476.00 | 97.00 | 129.33 | N/A | 275.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |
| Rotate | 06-15 | 03:35 | 04:30 | 06-15 | 0.92 | 11476.00 | 11570.00 | 94.00 | 102.55 | N/A | 275.00 | 30.0 | 25.00 | 2500.00 | 1300.00 | |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #9 (Curve)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Slide | 06-15 | 17:45 | 19:50 | 06-15 | 2.08 | 11570.00 | 11661.00 | 91.00 | 43.68 | 0.0 | 275.00 | N/A | 25.00 | 3400.00 | 2580.00 | |
| Slide | 06-15 | 19:55 | 23:10 | 06-15 | 3.25 | 11661.00 | 11709.00 | 48.00 | 14.77 | 0.0 | 275.00 | N/A | 25.00 | 3400.00 | 2580.00 | |
| Slide | 06-15 | 23:15 | 00:00 | 06-16 | 0.75 | 11709.00 | 11735.00 | 26.00 | 34.67 | 0.0 | 275.00 | N/A | 25.00 | 3400.00 | 2580.00 | |
| Slide | 06-16 | 00:00 | 00:40 | 06-16 | 0.67 | 11735.00 | 11757.00 | 22.00 | 33.00 | 0.0 | 275.00 | N/A | 25.00 | 3400.00 | 2580.00 | |
| Slide | 06-16 | 00:45 | 01:45 | 06-16 | 1.0 | 11757.00 | 11820.00 | 63.00 | 63.00 | 0.0 | | N/A | | | | |
| Slide | 06-16 | 01:50 | 03:35 | 06-16 | 1.75 | 11820.00 | 11852.00 | 32.00 | 18.29 | 350.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 03:40 | 04:55 | 06-16 | 1.25 | 11852.00 | 11900.00 | 48.00 | 38.40 | 350.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 05:00 | 06:10 | 06-16 | 1.17 | 11900.00 | 11946.00 | 46.00 | 39.43 | 350.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 06:15 | 07:45 | 06-16 | 1.5 | 11946.00 | 11994.00 | 48.00 | 32.00 | 330.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 08:00 | 09:00 | 06-16 | 1.0 | 11994.00 | 12040.00 | 46.00 | 46.00 | 315.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 09:05 | 09:55 | 06-16 | 0.83 | 12040.00 | 12088.00 | 48.00 | 57.60 | 315.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 10:05 | 10:50 | 06-16 | 0.75 | 12088.00 | 12135.00 | 47.00 | 62.67 | 310.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 11:00 | 11:50 | 06-16 | 0.83 | 12135.00 | 12183.00 | 48.00 | 57.60 | 300.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Rotate | 06-16 | 12:05 | 12:15 | 06-16 | 0.17 | 12183.00 | 12200.00 | 17.00 | 102.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |
| Slide | 06-16 | 12:15 | 12:45 | 06-16 | 0.5 | 12200.00 | 12230.00 | 30.00 | 60.00 | 300.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Rotate | 06-16 | 12:55 | 13:15 | 06-16 | 0.33 | 12230.00 | 12278.00 | 48.00 | 144.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |
| Slide | 06-16 | 13:25 | 14:15 | 06-16 | 0.83 | 12278.00 | 12326.00 | 48.00 | 57.60 | 0.0 | 325.00 | N/A | 20.00 | 4000.00 | 3600.00 | |
| Slide | 06-16 | 14:25 | 15:00 | 06-16 | 0.58 | 12326.00 | 12366.00 | 40.00 | 68.57 | 0.0 | | N/A | | | | |
| Rotate | 06-16 | 15:00 | 15:05 | 06-16 | 0.08 | 12366.00 | 12373.00 | 7.00 | 84.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |
| Slide | 06-16 | 16:00 | 16:30 | 06-16 | 0.5 | 12373.00 | 12413.00 | 40.00 | 80.00 | 0.0 | 330.00 | N/A | 20.00 | 4300.00 | 3600.00 | |
| Rotate | 06-16 | 16:30 | 16:40 | 06-16 | 0.17 | 12413.00 | 12420.00 | 7.00 | 42.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |
| Rotate | 06-16 | 16:50 | 17:05 | 06-16 | 0.25 | 12420.00 | 12430.00 | 10.00 | 40.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |
| Slide | 06-16 | 17:05 | 17:40 | 06-16 | 0.58 | 12430.00 | 12467.00 | 37.00 | 63.43 | 0.0 | 330.00 | N/A | 20.00 | 4300.00 | 3600.00 | |
| Slide | 06-16 | 17:45 | 18:10 | 06-16 | 0.42 | 12467.00 | 12492.00 | 25.00 | 60.00 | 315.0 | 330.00 | N/A | 20.00 | 4300.00 | 3600.00 | |
| Rotate | 06-16 | 18:10 | 18:25 | 06-16 | 0.25 | 12492.00 | 12515.00 | 23.00 | 92.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |
| Rotate | 06-16 | 18:30 | 18:45 | 06-16 | 0.25 | 12515.00 | 12555.00 | 40.00 | 160.00 | N/A | 331.00 | 25.0 | 15.00 | 4300.00 | 3600.00 | |

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Slide/Rotate Report - BHA #10 (Lateral)

| Activity | Start Date | Start Time | End Time | End Date | Hours | Start Depth (ft) | End Depth (ft) | Distance (ft) | RoP (ft/h) | Toolface | Flow Rate (gpm) | Surface RPM | WOB (klbs) | Press On (psi) | Press Off (psi) | Hole Section Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 06-18 | 23:45 | 23:55 | 06-18 | 0.17 | 12555.00 | 12623.00 | 68.00 | 408.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 00:05 | 00:10 | 06-19 | 0.08 | 12623.00 | 12635.00 | 12.00 | 144.00 | N/A | 300.00 | 60.0 | 25.00 | 4250.00 | 2950.00 | |
| Slide | 06-19 | 00:10 | 00:30 | 06-19 | 0.33 | 12635.00 | 12650.00 | 15.00 | 45.00 | 315.0 | 300.00 | N/A | 20.00 | 3600.00 | 2950.00 | |
| Rotate | 06-19 | 00:30 | 00:45 | 06-19 | 0.25 | 12650.00 | 12718.00 | 68.00 | 272.00 | N/A | 300.00 | 60.0 | 25.00 | 4250.00 | 2950.00 | |
| Rotate | 06-19 | 00:50 | 01:00 | 06-19 | 0.17 | 12718.00 | 12730.00 | 12.00 | 72.00 | N/A | 300.00 | 60.0 | 25.00 | 4250.00 | 2950.00 | |
| Slide | 06-19 | 01:00 | 01:10 | 06-19 | 0.17 | 12730.00 | 12750.00 | 20.00 | 120.00 | 315.0 | 300.00 | N/A | 20.00 | 3600.00 | 2950.00 | |
| Rotate | 06-19 | 01:10 | 01:25 | 06-19 | 0.25 | 12750.00 | 12813.00 | 63.00 | 252.00 | N/A | 300.00 | 60.0 | 25.00 | 4250.00 | 2950.00 | |
| Rotate | 06-19 | 01:30 | 01:55 | 06-19 | 0.42 | 12813.00 | 12907.00 | 94.00 | 225.60 | N/A | 300.00 | 60.0 | 25.00 | 4250.00 | 2950.00 | |
| Rotate | 06-19 | 02:00 | 02:05 | 06-19 | 0.08 | 12907.00 | 12920.00 | 13.00 | 156.00 | N/A | 300.00 | 60.0 | 25.00 | 4250.00 | 2950.00 | |
| Slide | 06-19 | 02:05 | 02:20 | 06-19 | 0.25 | 12920.00 | 12940.00 | 20.00 | 80.00 | 135.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 02:20 | 02:35 | 06-19 | 0.25 | 12940.00 | 13002.00 | 62.00 | 248.00 | N/A | 300.00 | 70.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 02:40 | 02:50 | 06-19 | 0.17 | 13002.00 | 13025.00 | 23.00 | 138.00 | N/A | 300.00 | 70.0 | 28.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 02:50 | 03:00 | 06-19 | 0.17 | 13025.00 | 13045.00 | 20.00 | 120.00 | 135.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 03:00 | 03:10 | 06-19 | 0.17 | 13045.00 | 13096.00 | 51.00 | 306.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 03:15 | 03:25 | 06-19 | 0.17 | 13096.00 | 13106.00 | 10.00 | 60.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 03:25 | 03:45 | 06-19 | 0.33 | 13106.00 | 13136.00 | 30.00 | 90.00 | 120.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 03:45 | 04:00 | 06-19 | 0.25 | 13136.00 | 13191.00 | 55.00 | 220.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 04:05 | 04:45 | 06-19 | 0.67 | 13191.00 | 13285.00 | 94.00 | 141.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 04:50 | 05:10 | 06-19 | 0.33 | 13285.00 | 13380.00 | 95.00 | 285.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 05:15 | 05:40 | 06-19 | 0.42 | 13380.00 | 13475.00 | 95.00 | 228.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 05:45 | 05:50 | 06-19 | 0.08 | 13475.00 | 13485.00 | 10.00 | 120.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 05:50 | 06:05 | 06-19 | 0.25 | 13485.00 | 13520.00 | 35.00 | 140.00 | 90.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 06:05 | 06:20 | 06-19 | 0.25 | 13520.00 | 13570.00 | 50.00 | 200.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 06:25 | 06:45 | 06-19 | 0.33 | 13570.00 | 13664.00 | 94.00 | 282.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 06:50 | 06:55 | 06-19 | 0.08 | 13664.00 | 13680.00 | 16.00 | 192.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 06:55 | 07:05 | 06-19 | 0.17 | 13680.00 | 13705.00 | 25.00 | 150.00 | 150.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 07:05 | 07:25 | 06-19 | 0.33 | 13705.00 | 13759.00 | 54.00 | 162.00 | N/A | 300.00 | 60.0 | 28.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 07:30 | 07:50 | 06-19 | 0.33 | 13759.00 | 13854.00 | 95.00 | 285.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 07:55 | 08:25 | 06-19 | 0.5 | 13854.00 | 13949.00 | 95.00 | 190.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 08:30 | 08:55 | 06-19 | 0.42 | 13949.00 | 14043.00 | 94.00 | 225.60 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 09:05 | 09:10 | 06-19 | 0.08 | 14043.00 | 14062.00 | 19.00 | 228.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 09:10 | 09:25 | 06-19 | 0.25 | 14062.00 | 14092.00 | 30.00 | 120.00 | 295.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 09:25 | 09:40 | 06-19 | 0.25 | 14092.00 | 14138.00 | 46.00 | 184.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 09:45 | 10:00 | 06-19 | 0.25 | 14138.00 | 14160.00 | 22.00 | 88.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 10:00 | 10:15 | 06-19 | 0.25 | 14160.00 | 14178.00 | 18.00 | 72.00 | 0.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 10:15 | 10:30 | 06-19 | 0.25 | 14178.00 | 14233.00 | 55.00 | 220.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 10:35 | 11:05 | 06-19 | 0.5 | 14233.00 | 14329.00 | 96.00 | 192.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 11:10 | 11:45 | 06-19 | 0.58 | 14329.00 | 14424.00 | 95.00 | 162.86 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 11:50 | 12:20 | 06-19 | 0.5 | 14424.00 | 14519.00 | 95.00 | 190.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 12:25 | 12:45 | 06-19 | 0.33 | 14519.00 | 14538.00 | 19.00 | 57.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 12:45 | 13:15 | 06-19 | 0.5 | 14538.00 | 14558.00 | 20.00 | 40.00 | 90.0 | 300.00 | N/A | 28.00 | 4315.00 | 3300.00 | |
| Rotate | 06-19 | 13:15 | 13:30 | 06-19 | 0.25 | 14558.00 | 14613.00 | 55.00 | 220.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 13:35 | 13:45 | 06-19 | 0.17 | 14613.00 | 14620.00 | 7.00 | 42.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 13:45 | 14:30 | 06-19 | 0.75 | 14620.00 | 14645.00 | 25.00 | 33.33 | 140.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 | |
| Rotate | 06-19 | 14:30 | 15:00 | 06-19 | 0.5 | 14645.00 | 14707.00 | 62.00 | 124.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 15:05 | 15:45 | 06-19 | 0.67 | 14707.00 | 14802.00 | 95.00 | 142.50 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 15:50 | 16:00 | 06-19 | 0.17 | 14802.00 | 14811.00 | 9.00 | 54.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 16:00 | 17:00 | 06-19 | 1.0 | 14811.00 | 14846.00 | 35.00 | 35.00 | 140.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 | |
| Rotate | 06-19 | 17:00 | 17:35 | 06-19 | 0.58 | 14846.00 | 14896.00 | 50.00 | 85.71 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 17:40 | 17:45 | 06-19 | 0.08 | 14896.00 | 14905.00 | 9.00 | 108.00 | N/A | 300.00 | 70.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 17:45 | 18:15 | 06-19 | 0.5 | 14905.00 | 14926.00 | 21.00 | 42.00 | 135.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 | |
| Rotate | 06-19 | 18:15 | 18:40 | 06-19 | 0.42 | 14926.00 | 14991.00 | 65.00 | 156.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 18:45 | 19:20 | 06-19 | 0.58 | 14991.00 | 15085.00 | 94.00 | 161.14 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 19:25 | 20:00 | 06-19 | 0.58 | 15085.00 | 15179.00 | 94.00 | 161.14 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 20:05 | 20:15 | 06-19 | 0.17 | 15179.00 | 15190.00 | 11.00 | 66.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 20:15 | 20:30 | 06-19 | 0.25 | 15190.00 | 15205.00 | 15.00 | 60.00 | 315.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 | |
| Rotate | 06-19 | 20:30 | 21:15 | 06-19 | 0.75 | 15205.00 | 15273.00 | 68.00 | 90.67 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 21:20 | 21:25 | 06-19 | 0.08 | 15273.00 | 15280.00 | 7.00 | 84.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-19 | 21:25 | 22:00 | 06-19 | 0.58 | 15280.00 | 15305.00 | 25.00 | 42.86 | 0.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 | |
| Rotate | 06-19 | 22:00 | 22:15 | 06-19 | 0.25 | 15305.00 | 15369.00 | 64.00 | 256.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 22:20 | 23:00 | 06-19 | 0.67 | 15369.00 | 15463.00 | 94.00 | 141.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 23:05 | 23:45 | 06-19 | 0.67 | 15463.00 | 15557.00 | 94.00 | 141.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-19 | 23:50 | 00:00 | 06-20 | 0.17 | 15557.00 | 15575.00 | 18.00 | 108.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Slide | 06-20 | 00:00 | 01:00 | 06-20 | 1.0 | 15575.00 | 15651.00 | 76.00 | 76.00 | 120.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 | |

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| Rotate | 06-20 | 01:05 | 01:15 | 06-20 | 0.17 | 15651.00 | 15665.00 | 14.00 | 84.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 01:15 | 01:50 | 06-20 | 0.58 | 15665.00 | 15690.00 | 25.00 | 42.86 | 120.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 01:50 | 02:10 | 06-20 | 0.33 | 15690.00 | 15746.00 | 56.00 | 168.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 02:15 | 02:45 | 06-20 | 0.5 | 15746.00 | 15840.00 | 94.00 | 188.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 02:50 | 03:20 | 06-20 | 0.5 | 15840.00 | 15933.00 | 93.00 | 186.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 03:25 | 03:55 | 06-20 | 0.5 | 15933.00 | 16028.00 | 95.00 | 190.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 04:00 | 04:15 | 06-20 | 0.25 | 16028.00 | 16045.00 | 17.00 | 68.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 04:15 | 04:50 | 06-20 | 0.58 | 16045.00 | 16070.00 | 25.00 | 42.86 | 270.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 04:50 | 05:00 | 06-20 | 0.17 | 16070.00 | 16123.00 | 53.00 | 318.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 05:05 | 05:30 | 06-20 | 0.42 | 16123.00 | 16178.00 | 55.00 | 132.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 05:30 | 06:10 | 06-20 | 0.67 | 16178.00 | 16198.00 | 20.00 | 30.00 | 0.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 06:10 | 06:20 | 06-20 | 0.17 | 16198.00 | 16217.00 | 19.00 | 114.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 06:25 | 07:05 | 06-20 | 0.67 | 16217.00 | 16312.00 | 95.00 | 142.50 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 07:10 | 07:45 | 06-20 | 0.58 | 16312.00 | 16407.00 | 95.00 | 162.86 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 07:50 | 08:45 | 06-20 | 0.92 | 16407.00 | 16504.00 | 97.00 | 105.82 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 08:50 | 09:45 | 06-20 | 0.92 | 16504.00 | 16595.00 | 91.00 | 99.27 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 09:50 | 10:30 | 06-20 | 0.67 | 16595.00 | 16690.00 | 95.00 | 142.50 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 10:35 | 10:50 | 06-20 | 0.25 | 16690.00 | 16700.00 | 10.00 | 40.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 10:50 | 11:35 | 06-20 | 0.75 | 16700.00 | 16735.00 | 35.00 | 46.67 | 120.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 11:35 | 12:00 | 06-20 | 0.42 | 16735.00 | 16784.00 | 49.00 | 117.60 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 12:05 | 12:45 | 06-20 | 0.67 | 16784.00 | 16878.00 | 94.00 | 141.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 13:00 | 13:35 | 06-20 | 0.58 | 16878.00 | 16973.00 | 95.00 | 162.86 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 14:00 | 14:05 | 06-20 | 0.08 | 16973.00 | 16978.00 | 5.00 | 60.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 14:05 | 14:50 | 06-20 | 0.75 | 16978.00 | 17008.00 | 30.00 | 40.00 | 30.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 14:50 | 15:15 | 06-20 | 0.42 | 17008.00 | 17067.00 | 59.00 | 141.60 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 15:20 | 16:05 | 06-20 | 0.75 | 17067.00 | 17161.00 | 94.00 | 125.33 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 16:10 | 16:45 | 06-20 | 0.58 | 17161.00 | 17255.00 | 94.00 | 161.14 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 16:50 | 17:25 | 06-20 | 0.58 | 17255.00 | 17350.00 | 95.00 | 162.86 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 17:30 | 17:35 | 06-20 | 0.08 | 17350.00 | 17353.00 | 3.00 | 36.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 17:35 | 18:30 | 06-20 | 0.92 | 17353.00 | 17393.00 | 40.00 | 43.64 | 135.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 18:30 | 19:00 | 06-20 | 0.5 | 17393.00 | 17444.00 | 51.00 | 102.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 19:05 | 19:10 | 06-20 | 0.08 | 17444.00 | 17450.00 | 6.00 | 72.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 19:10 | 20:20 | 06-20 | 1.17 | 17450.00 | 17478.00 | 28.00 | 24.00 | 120.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 20:20 | 20:50 | 06-20 | 0.5 | 17478.00 | 17539.00 | 61.00 | 122.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 20:55 | 21:05 | 06-20 | 0.17 | 17539.00 | 17545.00 | 6.00 | 36.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 21:05 | 22:25 | 06-20 | 1.33 | 17545.00 | 17575.00 | 30.00 | 22.50 | 135.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 22:25 | 22:50 | 06-20 | 0.42 | 17575.00 | 17633.00 | 58.00 | 139.20 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-20 | 22:55 | 23:10 | 06-20 | 0.25 | 17633.00 | 17640.00 | 7.00 | 28.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-20 | 23:10 | 23:55 | 06-20 | 0.75 | 17640.00 | 17660.00 | 20.00 | 26.67 | 180.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-20 | 23:55 | 00:00 | 06-21 | 0.08 | 17660.00 | 17668.00 | 8.00 | 96.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 00:00 | 00:25 | 06-21 | 0.42 | 17668.00 | 17727.00 | 59.00 | 141.60 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 00:30 | 01:20 | 06-21 | 0.83 | 17727.00 | 17822.00 | 95.00 | 114.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 01:25 | 02:05 | 06-21 | 0.67 | 17822.00 | 17916.00 | 94.00 | 141.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 02:10 | 02:45 | 06-21 | 0.58 | 17916.00 | 18010.00 | 94.00 | 161.14 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 02:50 | 03:25 | 06-21 | 0.58 | 18010.00 | 18105.00 | 95.00 | 162.86 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 04:05 | 04:15 | 06-21 | 0.17 | 18105.00 | 18115.00 | 10.00 | 60.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-21 | 04:15 | 05:15 | 06-21 | 1.0 | 18115.00 | 18127.00 | 12.00 | 12.00 | 90.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-21 | 05:15 | 05:45 | 06-21 | 0.5 | 18127.00 | 18199.00 | 72.00 | 144.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 05:50 | 06:00 | 06-21 | 0.17 | 18199.00 | 18210.00 | 11.00 | 66.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-21 | 06:00 | 07:50 | 06-21 | 1.83 | 18210.00 | 18247.00 | 37.00 | 20.18 | 145.0 | 340.00 | N/A | 28.00 | 4215.00 | 3700.00 |
| Rotate | 06-21 | 07:50 | 08:20 | 06-21 | 0.5 | 18247.00 | 18293.00 | 46.00 | 92.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 08:25 | 09:15 | 06-21 | 0.83 | 18293.00 | 18388.00 | 95.00 | 114.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 09:30 | 10:05 | 06-21 | 0.58 | 18388.00 | 18482.00 | 94.00 | 161.14 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 10:10 | 10:50 | 06-21 | 0.67 | 18482.00 | 18577.00 | 95.00 | 142.50 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 10:55 | 11:40 | 06-21 | 0.75 | 18577.00 | 18671.00 | 94.00 | 125.33 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 11:45 | 12:35 | 06-21 | 0.83 | 18671.00 | 18766.00 | 95.00 | 114.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 12:40 | 13:15 | 06-21 | 0.58 | 18766.00 | 18860.00 | 94.00 | 161.14 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 13:20 | 14:10 | 06-21 | 0.83 | 18860.00 | 18954.00 | 94.00 | 112.80 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 14:15 | 15:05 | 06-21 | 0.83 | 18954.00 | 19049.00 | 95.00 | 114.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 15:10 | 16:05 | 06-21 | 0.92 | 19049.00 | 19143.00 | 94.00 | 102.55 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 16:10 | 17:00 | 06-21 | 0.83 | 19143.00 | 19237.00 | 94.00 | 112.80 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 17:05 | 17:50 | 06-21 | 0.75 | 19237.00 | 19331.00 | 94.00 | 125.33 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 17:55 | 18:05 | 06-21 | 0.17 | 19331.00 | 19404.00 | 73.00 | 438.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-21 | 18:05 | 19:45 | 06-21 | 1.67 | 19404.00 | 19426.00 | 22.00 | 13.20 | 0.0 | 330.00 | N/A | 28.00 | 4200.00 | 4000.00 |
| Rotate | 06-21 | 19:50 | 20:05 | 06-21 | 0.25 | 19426.00 | 19450.00 | 24.00 | 96.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-21 | 20:05 | 21:15 | 06-21 | 1.17 | 19450.00 | 19465.00 | 15.00 | 12.86 | 340.0 | 330.00 | N/A | 28.00 | 4200.00 | 4000.00 |
| Rotate | 06-21 | 21:15 | 21:40 | 06-21 | 0.42 | 19465.00 | 19521.00 | 56.00 | 134.40 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-21 | 21:45 | 22:00 | 06-21 | 0.25 | 19521.00 | 19530.00 | 9.00 | 36.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-21 | 22:00 | 00:00 | 06-22 | 2.0 | 19530.00 | 19550.00 | 20.00 | 10.00 | 270.0 | 330.00 | N/A | 28.00 | 4200.00 | 4000.00 |
| Rotate | 06-22 | 00:00 | 00:40 | 06-22 | 0.67 | 19550.00 | 19615.00 | 65.00 | 97.50 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Rotate | 06-22 | 00:45 | 00:50 | 06-22 | 0.08 | 19615.00 | 19618.00 | 3.00 | 36.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-22 | 00:50 | 03:40 | 06-22 | 2.83 | 19618.00 | 19641.00 | 23.00 | 8.12 | 325.0 | 330.00 | N/A | 28.00 | 4200.00 | 4000.00 |
| Rotate | 06-22 | 03:40 | 03:45 | 06-22 | 0.08 | 19641.00 | 19645.00 | 4.00 | 48.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |
| Slide | 06-22 | 03:45 | 07:00 | 06-22 | 3.25 | 19645.00 | 19667.00 | 22.00 | 6.77 | 285.0 | 330.00 | N/A | 28.00 | 4200.00 | 4000.00 |
| Rotate | 06-22 | 07:00 | 07:20 | 06-22 | 0.33 | 19667.00 | 19709.00 | 42.00 | 126.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate | 06-22 | 07:25 | 08:15 | 06-22 | 0.83 | 19709.00 | 19803.00 | 94.00 | 112.80 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-22 | 08:20 | 09:20 | 06-22 | 1.0 | 19803.00 | 19898.00 | 95.00 | 95.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |
| Rotate | 06-22 | 09:25 | 09:30 | 06-22 | 0.08 | 19898.00 | 19915.00 | 17.00 | 204.00 | N/A | 300.00 | 75.0 | 23.00 | 4350.00 | 3300.00 | |

# Daily Reports
## Original Hole

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, May 19 00:00 - 23:59 (Day 1 of 43)

**Billing:** $11,800.00 ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Monday, May 20 00:00 - 23:59 (Day 2 of 43)

**Billing:** $11,956.25 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 120.00 | **Downhole Hours** | 13.00 |
| **Bit Depth (ft)** | 659.00 | **Drilling Hours** | 2.17 |
| **Bottom Hole Depth (ft)** | 659.00 | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 539.00 | **Hours Sliding** | 0.08 |
| **Distance Rotated (ft)** | 524.00 | **Hours Rotating** | 2.08 |
| **Distance Slid (ft)** | 15.00 | | |
| **Inclination In** | 0.92 | | |
| **Inclination Out** | 1.32 | | |
| **Azimuth In** | 309.59 | **% Hours Rotating** | 96% |
| **Azimuth Out** | 274.43 | **% Hours Sliding** | 4% |
| **AVG Total ROP (ft/h)** | 248.77 | **% Distance Sliding** | 3% |
| **AVG Rotating ROP (ft/h)** | 251.52 | **% Distance Rotating** | 97% |
| **AVG Sliding ROP (ft/h)** | 180.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 18.00 - 18.00 |
| **Sliding WOB (klbs)** | 5.00 - 5.00 |
| **Rotating SPM** | 216.00 - 279.00 |
| **Sliding SPM** | 279.00 - 279.00 |
| **Motor RPM** | 105.00 - 135.00 |
| **Surface RPM** | 50.00 - 60.00 |
| **Flow Rate (gpm)** | 700.00 - 900.00 |
| **On Bottom Pressure (psi)** | 1400.00 - 2550.00 |
| **Off Bottom Pressure (psi)** | 1050.00 - 2000.00 |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## BHA #1 - Surface

**Date In: May 20, 2019, 11:00 Date Out: May 21, 2019, 14:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 14.750 |
| **Vendor** | Baker |
| **S/N** | 7041931 |
| **Nozzles** | 7x12, 2x11 |
| **Total Flow Area (in²)** | 0.959 |
| **Drilling Hours for Day** | 2.17 |
| **Total Drilled for Day (ft)** | 539.00 |
| **Drilling Hours for BHA** | 11.08 |
| **Total Drilled for BHA (ft)** | 1508.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 4.0 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.15 |
| **Wear Pad OD (in)** | 8.125 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 63.00 ft

### Directional Comments

Directional: 8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.15. Bit: 14 3/4" PDC, SN: 7041931. Jets: 7x12's, 2x11's. TFA: 0.959

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** TD SURFACE

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *14 3/4 T606S*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *14.75* | Baker | 7041931 | 6 5/8" Reg Pin | | | 14.750 | | 1.50 | 1.50 |
| **Mud Motor** Description: *8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | AIM | 80040010 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.54 |
| **Stabilizer** Description: *14.25" IBS* | DTI | DR27279 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.000 | | 8.04 | 39.58 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.50 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 74.27 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.87 |
| **Crossover Sub** Description: *XO- 4 1/2 IF-B x 6 5/8 REG-P*, Type: *Steel* | DTI | DR38948 | 4 1/2" IF Box | 6 5/8" Reg Pin | 3.000 | 7.500 | | 4.02 | 108.89 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 934.77 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-20 | 00:00 | 06:00 | 05-20 | | | Standby |
| Standby | 15 | 05-20 | 06:00 | 11:00 | 05-20 | | | Standby |
| Change BHA | 6 | 05-20 | 11:00 | 12:45 | 05-20 | | | P/U BHA # 1 |
| Standby | 15 | 05-20 | 12:45 | 18:00 | 05-20 | | | Standby while working on pumps |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-20 | 18:00 | 21:30 | 05-20 | | | Standby while working on pumps |
| Rotary Drill | 1 | 05-20 | 21:30 | 22:35 | 05-20 | 120.00 | 261.00 | Pressure On (psi): *1400.00*, Pressure Off (psi): *1050.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *50*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *216.00* |
| Survey | 46 | 05-20 | 22:35 | 22:40 | 05-20 | 261.00 | 261.00 | Inclination (°): *0.920*, Azimuth (°): *309.590*, TVD (ft): *197.99*, Dogleg (º/100 ft): *0.46*, Sensor Depth (ft): *198.00*, Bit To Sensor (ft): *63.00*, Temperature (ºF): *78.00* |
| Rotary Drill | 1 | 05-20 | 22:40 | 22:50 | 05-20 | 261.00 | 384.00 | Pressure On (psi): *1750.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *246.00* |
| Survey | 46 | 05-20 | 22:50 | 22:55 | 05-20 | 384.00 | 384.00 | Inclination (°): *1.320*, Azimuth (°): *292.190*, TVD (ft): *320.97*, Dogleg (º/100 ft): *0.42*, Sensor Depth (ft): *321.00*, Bit To Sensor (ft): *63.00*, Temperature (ºF): *78.00* |
| Rotary Drill | 1 | 05-20 | 22:55 | 23:00 | 05-20 | 384.00 | 395.00 | Pressure On (psi): *1750.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *246.00* |
| Slide Drill | 2 | 05-20 | 23:00 | 23:05 | 05-20 | 395.00 | 410.00 | Pressure On (psi): *1800.00*, Pressure Off (psi): *1650.00*, Weight On Bit (klbs): *5.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *100*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-20 | 23:05 | 23:20 | 05-20 | 410.00 | 475.00 | Pressure On (psi): *1750.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *246.00* |
| Survey | 46 | 05-20 | 23:20 | 23:25 | 05-20 | 475.00 | 475.00 | Inclination (°): *0.920*, Azimuth (°): *293.680*, TVD (ft): *411.95*, Dogleg (º/100 ft): *0.44*, Sensor Depth (ft): *412.00*, Bit To Sensor (ft): *63.00*, Temperature (ºF): *78.00* |
| Rotary Drill | 1 | 05-20 | 23:25 | 23:55 | 05-20 | 475.00 | 659.00 | Pressure On (psi): *2550.00*, Pressure Off (psi): *2000.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 05-20 | 23:55 | 00:00 | 05-21 | 659.00 | 659.00 | Inclination (°): *1.320*, Azimuth (°): *274.430*, TVD (ft): *595.92*, Dogleg (º/100 ft): *0.30*, Sensor Depth (ft): *596.00*, Bit To Sensor (ft): *63.00* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Tuesday, May 21 00:00 - 23:59 (Day 3 of 43)

**Billing:** $5,900.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 659.00 | **Downhole Hours** | 14.00 |
| **Bit Depth (ft)** | 1628.00 | **Drilling Hours** | 8.92 |
| **Bottom Hole Depth (ft)** | 1628.00 | **Hours Circulating** | 1.00 |
| **Total Distance (ft)** | 969.00 | **Hours Sliding** | 2.42 |
| **Distance Rotated (ft)** | 699.00 | **Hours Rotating** | 6.50 |
| **Distance Slid (ft)** | 270.00 | | |
| **Inclination In** | 0.84 | | |
| **Inclination Out** | 0.88 | | |
| **Azimuth In** | 215.81 | **% Hours Rotating** | 73% |
| **Azimuth Out** | 168.70 | **% Hours Sliding** | 27% |
| **AVG Total ROP (ft/h)** | 108.67 | **% Distance Sliding** | 28% |
| **AVG Rotating ROP (ft/h)** | 107.54 | **% Distance Rotating** | 72% |
| **AVG Sliding ROP (ft/h)** | 111.72 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 18.00 - 25.00 |
| **Sliding WOB (klbs)** | 20.00 - 20.00 |
| **Rotating SPM** | 220.00 - 279.00 |
| **Sliding SPM** | 279.00 - 279.00 |
| **Motor RPM** | 105.00 - 135.00 |
| **Surface RPM** | 60.00 - 60.00 |
| **Flow Rate (gpm)** | 700.00 - 900.00 |
| **On Bottom Pressure (psi)** | 2125.00 - 3000.00 |
| **Off Bottom Pressure (psi)** | 1450.00 - 2200.00 |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## BHA #1 - Surface

**Date In: May 20, 2019, 11:00 Date Out: May 21, 2019, 14:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 14.750 |
| **Vendor** | Baker |
| **S/N** | 7041931 |
| **Nozzles** | 7x12, 2x11 |
| **Total Flow Area (in²)** | 0.959 |
| **Drilling Hours for Day** | 8.92 |
| **Total Drilled for Day (ft)** | 969.00 |
| **Drilling Hours for BHA** | 11.08 |
| **Total Drilled for BHA (ft)** | 1508.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 4.0 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.15 |
| **Wear Pad OD (in)** | 8.125 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 63.00 ft

### Directional Comments

Directional: 8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.15. Bit: 14 3/4" PDC, SN: 7041931. Jets: 7x12's, 2x11's. TFA: 0.959

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** TD SURFACE

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *14 3/4 T606S*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *14.75* | Baker | 7041931 | 6 5/8" Reg Pin | | | 14.750 | | 1.50 | 1.50 |
| **Mud Motor** Description: *8" Contender: 1.50° FBH 7/8 4.0 w/ 12" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | AIM | 80040010 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.54 |
| **Stabilizer** Description: *14.25" IBS* | DTI | DR27279 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.000 | | 8.04 | 39.58 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.50 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 74.27 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.87 |
| **Crossover Sub** Description: *XO- 4 1/2 IF-B x 6 5/8 REG-P*, Type: *Steel* | DTI | DR38948 | 4 1/2" IF Box | 6 5/8" Reg Pin | 3.000 | 7.500 | | 4.02 | 108.89 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 934.77 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 05-20 | 23:55 | 00:00 | 05-21 | 659.00 | 659.00 | Inclination (°): *1.320*, Azimuth (°): *274.430*, TVD (ft): *595.92*, Dogleg (º/100 ft): *0.30*, Sensor Depth (ft): *596.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 00:00 | 00:10 | 05-21 | 659.00 | 675.00 | Pressure On (psi): *2550.00*, Pressure Off (psi): *2000.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Slide Drill | 2 | 05-21 | 00:10 | 00:20 | 05-21 | 675.00 | 700.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *2000.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *95*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-21 | 00:20 | 00:40 | 05-21 | 700.00 | 751.00 | Pressure On (psi): *2550.00*, Pressure Off (psi): *2000.00*, Weight On Bit (klbs): *18.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 05-21 | 00:40 | 00:50 | 05-21 | 751.00 | 751.00 | Inclination (°): *0.840*, Azimuth (°): *215.810*, TVD (ft): *687.90*, Dogleg (º/100 ft): *1.24*, Sensor Depth (ft): *688.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 00:50 | 01:15 | 05-21 | 751.00 | 843.00 | Pressure On (psi): *2125.00*, Pressure Off (psi): *1450.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *740.00*, Strokes Per Minute: *230.00* |
| Survey | 46 | 05-21 | 01:15 | 01:20 | 05-21 | 843.00 | 843.00 | Inclination (°): *1.410*, Azimuth (°): *201.490*, TVD (ft): *779.88*, Dogleg (º/100 ft): *0.69*, Sensor Depth (ft): *780.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 01:20 | 01:25 | 05-21 | 843.00 | 852.00 | Pressure On (psi): *2125.00*, Pressure Off (psi): *1450.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *740.00*, Strokes Per Minute: *230.00* |
| Slide Drill | 2 | 05-21 | 01:25 | 01:40 | 05-21 | 852.00 | 882.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *2000.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *20*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-21 | 01:40 | 01:55 | 05-21 | 882.00 | 934.00 | Pressure On (psi): *2785.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 05-21 | 01:55 | 02:00 | 05-21 | 934.00 | 934.00 | Inclination (°): *1.580*, Azimuth (°): *199.900*, TVD (ft): *870.85*, Dogleg (º/100 ft): *0.19*, Sensor Depth (ft): *871.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 02:00 | 02:05 | 05-21 | 934.00 | 940.00 | Pressure On (psi): *2785.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Slide Drill | 2 | 05-21 | 02:05 | 02:25 | 05-21 | 940.00 | 985.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *20*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-21 | 02:25 | 02:30 | 05-21 | 985.00 | 1029.00 | Pressure On (psi): *3000.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 05-21 | 02:30 | 02:35 | 05-21 | 1029.00 | 1029.00 | Inclination (°): *1.450*, Azimuth (°): *189.090*, TVD (ft): *965.82*, Dogleg (º/100 ft): *0.33*, Sensor Depth (ft): *966.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 02:35 | 02:45 | 05-21 | 1029.00 | 1039.00 | Pressure On (psi): *3000.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Slide Drill | 2 | 05-21 | 02:45 | 03:05 | 05-21 | 1039.00 | 1094.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *0*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-21 | 03:05 | 03:15 | 05-21 | 1094.00 | 1124.00 | Pressure On (psi): *3000.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 05-21 | 03:15 | 03:20 | 05-21 | 1124.00 | 1124.00 | Inclination (°): *1.320*, Azimuth (°): *194.630*, TVD (ft): *1060.79*, Dogleg (º/100 ft): *0.20*, Sensor Depth (ft): *1061.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 03:20 | 03:25 | 05-21 | 1124.00 | 1130.00 | Pressure On (psi): *3000.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Slide Drill | 2 | 05-21 | 03:25 | 03:55 | 05-21 | 1130.00 | 1185.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *10*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-21 | 03:55 | 04:10 | 05-21 | 1185.00 | 1219.00 | Pressure On (psi): *2200.00*, Pressure Off (psi): *1600.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *220.00* |
| Survey | 46 | 05-21 | 04:10 | 04:15 | 05-21 | 1219.00 | 1219.00 | Inclination (°): *1.230*, Azimuth (°): *168.610*, TVD (ft): *1155.77*, Dogleg (º/100 ft): *0.61*, Sensor Depth (ft): *1156.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 04:15 | 05:20 | 05-21 | 1219.00 | 1314.00 | Pressure On (psi): *2200.00*, Pressure Off (psi): *1600.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *220.00* |
| Survey | 46 | 05-21 | 05:20 | 05:25 | 05-21 | 1314.00 | 1314.00 | Inclination (°): *1.360*, Azimuth (°): *168.970*, TVD (ft): *1250.74*, Dogleg (º/100 ft): *0.14*, Sensor Depth (ft): *1251.00*, Bit To Sensor (ft): *63.00* |
| Slide Drill | 2 | 05-21 | 05:25 | 06:15 | 05-21 | 1314.00 | 1374.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *10*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-21 | 06:15 | 06:35 | 05-21 | 1374.00 | 1408.00 | Pressure On (psi): *2200.00*, Pressure Off (psi): *1600.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *220.00* |
| Survey | 46 | 05-21 | 06:35 | 06:50 | 05-21 | 1408.00 | 1408.00 | Inclination (°): *0.880*, Azimuth (°): *166.770*, TVD (ft): *1344.73*, Dogleg (º/100 ft): *0.51*, Sensor Depth (ft): *1345.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 06:50 | 07:55 | 05-21 | 1408.00 | 1503.00 | Pressure On (psi): *2200.00*, Pressure Off (psi): *1600.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *220.00* |
| Survey | 46 | 05-21 | 07:55 | 08:00 | 05-21 | 1503.00 | 1503.00 | Inclination (°): *0.750*, Azimuth (°): *188.920*, TVD (ft): *1439.72*, Dogleg (º/100 ft): *0.36*, Sensor Depth (ft): *1440.00*, Bit To Sensor (ft): *63.00* |
| Rotary Drill | 1 | 05-21 | 08:00 | 09:15 | 05-21 | 1503.00 | 1598.00 | Pressure On (psi): *2200.00*, Pressure Off (psi): *1600.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *220.00* |
| Survey | 46 | 05-21 | 09:15 | 09:20 | 05-21 | 1598.00 | 1598.00 | Inclination (°): *0.880*, Azimuth (°): *168.700*, TVD (ft): *1534.71*, Dogleg (º/100 ft): *0.33*, Sensor Depth (ft): *1535.00*, Bit To Sensor (ft): *63.00*, Temperature (ºF): *105.00* |
| Rotary Drill | 1 | 05-21 | 09:20 | 10:00 | 05-21 | 1598.00 | 1628.00 | Pressure On (psi): *2200.00*, Pressure Off (psi): *1600.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *220.00* |
| Circulating | 3 | 05-21 | 10:00 | 11:00 | 05-21 | | | Circ. TD SURFACE |
| Pooh | 7 | 05-21 | 11:00 | 13:20 | 05-21 | | | POOH for [ TO RUN CASING ] |
| Change BHA | 6 | 05-21 | 13:20 | 14:00 | 05-21 | | | BREAK BIT AND RACK BACK BHA |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-21 | 14:00 | 20:00 | 05-21 | | | Standby during casing ops |
| Standby | 15 | 05-21 | 20:00 | 00:00 | 05-22 | | | Skid rig to Dagger State 552H |

**MWD Activities**

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Wednesday, May 22 00:00 - 23:59 (Day of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## No BHAs

## Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-21 | 20:00 | 00:00 | 05-22 | | | Skid rig to Dagger State 552H |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Thursday, May 23 00:00 - 23:59 (Day 4 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Friday, May 24 00:00 - 23:59 (Day 5 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Saturday, May 25 00:00 - 23:59 (Day 6 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, May 26 00:00 - 23:59 (Day 7 of 43)

**Billing:** $10,337.50 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 1628.00 | **Downhole Hours** | 9.75 |
| **Bit Depth (ft)** | 2807.00 | **Drilling Hours** | 5.58 |
| **Bottom Hole Depth (ft)** | 2807.00 | **Hours Circulating** | 1.00 |
| **Total Distance (ft)** | 1179.00 | **Hours Sliding** | 0.42 |
| **Distance Rotated (ft)** | 1116.00 | **Hours Rotating** | 5.17 |
| **Distance Slid (ft)** | 63.00 | | |
| **Inclination In** | 1.01 | | |
| **Inclination Out** | 6.59 | | |
| **Azimuth In** | 169.93 | **% Hours Rotating** | 93% |
| **Azimuth Out** | 255.80 | **% Hours Sliding** | 7% |
| **AVG Total ROP (ft/h)** | 211.16 | **% Distance Sliding** | 5% |
| **AVG Rotating ROP (ft/h)** | 216.00 | **% Distance Rotating** | 95% |
| **AVG Sliding ROP (ft/h)** | 151.20 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 35.00 - 35.00 |
| **Sliding WOB (klbs)** | 35.00 - 35.00 |
| **Rotating SPM** | 219.00 - 219.00 |
| **Sliding SPM** | 219.00 - 219.00 |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | 80.00 - 80.00 |
| **Flow Rate (gpm)** | 700.00 - 800.00 |
| **On Bottom Pressure (psi)** | 2700.00 - 2800.00 |
| **Off Bottom Pressure (psi)** | 2200.00 - 2300.00 |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## BHA #2 - Intermediate

**Date In: May 26, 2019, 14:15 Date Out: May 31, 2019, 16:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A259091 |
| **Nozzles** | 6x14 |
| **Total Flow Area (in²)** | 0.902 |
| **Drilling Hours for Day** | 5.58 |
| **Total Drilled for Day (ft)** | 1179.00 |
| **Drilling Hours for BHA** | 13.75 |
| **Total Drilled for BHA (ft)** | 3266.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft

### Directional Comments

8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

### MWD Comments

### POOH Reason

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P*, Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-26 | 00:00 | 13:30 | 05-26 | | | Standby while skid rig and off line cement |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Change BHA | 6 | 05-26 | 13:30 | 14:15 | 05-26 | | | P/U BHA # 2 |
| TIH | 8 | 05-26 | 14:15 | 16:00 | 05-26 | | | TIH W/ BHA #2 |
| Other | 16 | 05-26 | 16:00 | 16:30 | 05-26 | | | Fill pipe. Test Casing to 1500 psi for 30 mins |
| Drilling Cement | 17 | 05-26 | 16:30 | 17:30 | 05-26 | 1535.00 | 1628.00 | Drilling Cement and Float Equipment |
| Rotary Drill | 1 | 05-26 | 17:30 | 18:15 | 05-26 | 1628.00 | 1764.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 18:15 | 18:20 | 05-26 | 1764.00 | 1764.00 | Inclination (°): *1.010*, Azimuth (°): *169.930*, TVD (ft): *1698.69*, Dogleg (º/100 ft): *0.08*, Sensor Depth (ft): *1699.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 18:20 | 18:25 | 05-26 | 1764.00 | 1775.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-26 | 18:25 | 18:30 | 05-26 | 1775.00 | 1790.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *219*, Toolface: *275*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-26 | 18:30 | 18:50 | 05-26 | 1790.00 | 1859.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 18:50 | 18:55 | 05-26 | 1859.00 | 1859.00 | Inclination (°): *1.010*, Azimuth (°): *211.420*, TVD (ft): *1793.67*, Dogleg (º/100 ft): *0.75*, Sensor Depth (ft): *1794.00*, Bit To Sensor (ft): *65.00*, Temperature (ºF): *98.00* |
| Rotary Drill | 1 | 05-26 | 18:55 | 19:00 | 05-26 | 1859.00 | 1865.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-26 | 19:00 | 19:10 | 05-26 | 1865.00 | 1883.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *219*, Toolface: *275*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-26 | 19:10 | 19:25 | 05-26 | 1883.00 | 1953.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 19:25 | 19:30 | 05-26 | 1953.00 | 1953.00 | Inclination (°): *2.110*, Azimuth (°): *259.580*, TVD (ft): *1887.64*, Dogleg (º/100 ft): *1.72*, Sensor Depth (ft): *1888.00*, Bit To Sensor (ft): *65.00*, Temperature (ºF): *98.00* |
| Rotary Drill | 1 | 05-26 | 19:30 | 19:35 | 05-26 | 1953.00 | 1965.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-26 | 19:35 | 19:40 | 05-26 | 1965.00 | 1983.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *219*, Toolface: *260*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-26 | 19:40 | 19:55 | 05-26 | 1983.00 | 2048.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 19:55 | 20:00 | 05-26 | 2048.00 | 2048.00 | Inclination (°): *3.820*, Azimuth (°): *261.950*, TVD (ft): *1982.51*, Dogleg (º/100 ft): *1.80*, Sensor Depth (ft): *1983.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 20:00 | 20:05 | 05-26 | 2048.00 | 2055.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-26 | 20:05 | 20:10 | 05-26 | 2055.00 | 2067.00 | Pressure On (psi): *2800.00*, Pressure Off (psi): *2200.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *219*, Toolface: *265*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-26 | 20:10 | 20:30 | 05-26 | 2067.00 | 2143.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 20:30 | 20:35 | 05-26 | 2143.00 | 2143.00 | Inclination (°): *5.490*, Azimuth (°): *259.840*, TVD (ft): *2077.19*, Dogleg (º/100 ft): *1.77*, Sensor Depth (ft): *2078.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 20:35 | 20:55 | 05-26 | 2143.00 | 2238.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 20:55 | 21:00 | 05-26 | 2238.00 | 2238.00 | Inclination (°): *6.150*, Azimuth (°): *259.490*, TVD (ft): *2171.70*, Dogleg (º/100 ft): *0.70*, Sensor Depth (ft): *2173.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 21:00 | 21:25 | 05-26 | 2238.00 | 2333.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 21:25 | 21:30 | 05-26 | 2333.00 | 2333.00 | Inclination (°): *6.240*, Azimuth (°): *258.260*, TVD (ft): *2266.15*, Dogleg (º/100 ft): *0.17*, Sensor Depth (ft): *2268.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 21:30 | 21:55 | 05-26 | 2333.00 | 2428.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 21:55 | 22:00 | 05-26 | 2428.00 | 2428.00 | Inclination (°): *6.290*, Azimuth (°): *257.910*, TVD (ft): *2360.58*, Dogleg (º/100 ft): *0.07*, Sensor Depth (ft): *2363.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 22:00 | 22:35 | 05-26 | 2428.00 | 2523.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 22:35 | 22:40 | 05-26 | 2523.00 | 2523.00 | Inclination (°): *6.330*, Azimuth (°): *257.210*, TVD (ft): *2455.00*, Dogleg (º/100 ft): *0.09*, Sensor Depth (ft): *2458.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 22:40 | 23:00 | 05-26 | 2523.00 | 2617.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 23:00 | 23:05 | 05-26 | 2617.00 | 2617.00 | Inclination (°): *6.420*, Azimuth (°): *255.540*, TVD (ft): *2548.42*, Dogleg (º/100 ft): *0.22*, Sensor Depth (ft): *2552.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-26 | 23:05 | 23:30 | 05-26 | 2617.00 | 2712.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-26 | 23:30 | 23:35 | 05-26 | 2712.00 | 2712.00 | Inclination (°): *6.590*, Azimuth (°): *255.800*, TVD (ft): *2642.81*, Dogleg (º/100 ft): *0.18*, Sensor Depth (ft): *2647.00*, Bit To Sensor (ft): *65.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 05-26 | 23:35 | 00:00 | 05-27 | 2712.00 | 2807.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |

**MWD Activities**

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Monday, May 27 00:00 - 23:59 (Day 8 of 43)

**Billing:** $6,500.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 2807.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 4894.00 | **Drilling Hours** | 8.17 |
| **Bottom Hole Depth (ft)** | 4894.00 | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 2087.00 | **Hours Sliding** | 0.92 |
| **Distance Rotated (ft)** | 1989.00 | **Hours Rotating** | 7.25 |
| **Distance Slid (ft)** | 98.00 | | |
| **Inclination In** | 6.46 | | |
| **Inclination Out** | 7.65 | | |
| **Azimuth In** | 257.38 | **% Hours Rotating** | 89% |
| **Azimuth Out** | 268.28 | **% Hours Sliding** | 11% |
| **AVG Total ROP (ft/h)** | 254.21 | **% Distance Sliding** | 5% |
| **AVG Rotating ROP (ft/h)** | 271.83 | **% Distance Rotating** | 95% |
| **AVG Sliding ROP (ft/h)** | 106.91 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 35.00 - 38.00 |
| **Sliding WOB (klbs)** | 35.00 - 35.00 |
| **Rotating SPM** | 219.00 - 250.00 |
| **Sliding SPM** | 219.00 - 219.00 |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | 80.00 - 80.00 |
| **Flow Rate (gpm)** | 700.00 - 800.00 |
| **On Bottom Pressure (psi)** | 2700.00 - 3650.00 |
| **Off Bottom Pressure (psi)** | 2300.00 - 3000.00 |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |

## BHA #2 - Intermediate

**Date In: May 26, 2019, 14:15 Date Out: May 31, 2019, 16:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A259091 |
| **Nozzles** | 6x14 |
| **Total Flow Area (in²)** | 0.902 |
| **Drilling Hours for Day** | 8.17 |
| **Total Drilled for Day (ft)** | 2087.00 |
| **Drilling Hours for BHA** | 13.75 |
| **Total Drilled for BHA (ft)** | 3266.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft

### Directional Comments

8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

### MWD Comments

### POOH Reason

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P*, Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 05-26 | 23:35 | 00:00 | 05-27 | 2712.00 | 2807.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 00:00 | 00:05 | 05-27 | 2807.00 | 2807.00 | Inclination (°): *6.460*, Azimuth (°): *257.380*, TVD (ft): *2737.20*, Dogleg (º/100 ft): *0.23*, Sensor Depth (ft): *2742.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 00:05 | 00:20 | 05-27 | 2807.00 | 2902.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 00:20 | 00:25 | 05-27 | 2902.00 | 2902.00 | Inclination (°): *6.110*, Azimuth (°): *258.000*, TVD (ft): *2831.62*, Dogleg (º/100 ft): *0.38*, Sensor Depth (ft): *2837.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 00:25 | 00:40 | 05-27 | 2902.00 | 2997.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 00:40 | 00:45 | 05-27 | 2997.00 | 2997.00 | Inclination (°): *5.580*, Azimuth (°): *255.980*, TVD (ft): *2926.13*, Dogleg (º/100 ft): *0.60*, Sensor Depth (ft): *2932.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 00:45 | 01:05 | 05-27 | 2997.00 | 3092.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 01:05 | 01:10 | 05-27 | 3092.00 | 3092.00 | Inclination (°): *4.880*, Azimuth (°): *252.810*, TVD (ft): *3020.73*, Dogleg (º/100 ft): *0.80*, Sensor Depth (ft): *3027.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 01:10 | 01:15 | 05-27 | 3092.00 | 3100.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-27 | 01:15 | 01:25 | 05-27 | 3100.00 | 3120.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2400.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219*, Toolface: *285*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-27 | 01:25 | 01:35 | 05-27 | 3120.00 | 3187.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 01:35 | 01:40 | 05-27 | 3187.00 | 3187.00 | Inclination (°): *5.320*, Azimuth (°): *252.730*, TVD (ft): *3115.36*, Dogleg (º/100 ft): *0.46*, Sensor Depth (ft): *3122.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 01:40 | 01:45 | 05-27 | 3187.00 | 3195.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-27 | 01:45 | 01:50 | 05-27 | 3195.00 | 3210.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2400.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219*, Toolface: *295*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-27 | 01:50 | 02:10 | 05-27 | 3210.00 | 3282.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 02:10 | 02:15 | 05-27 | 3282.00 | 3282.00 | Inclination (°): *5.800*, Azimuth (°): *264.410*, TVD (ft): *3209.91*, Dogleg (º/100 ft): *1.29*, Sensor Depth (ft): *3217.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 02:15 | 02:25 | 05-27 | 3282.00 | 3376.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 02:25 | 02:30 | 05-27 | 3376.00 | 3376.00 | Inclination (°): *5.850*, Azimuth (°): *273.380*, TVD (ft): *3303.43*, Dogleg (º/100 ft): *0.97*, Sensor Depth (ft): *3311.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 02:30 | 02:50 | 05-27 | 3376.00 | 3471.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Rig Service - In Hole | 19 | 05-27 | 02:50 | 03:10 | 05-27 | | | |
| Survey | 46 | 05-27 | 03:10 | 03:15 | 05-27 | 3471.00 | 3471.00 | Inclination (°): *5.360*, Azimuth (°): *276.720*, TVD (ft): *3397.98*, Dogleg (º/100 ft): *0.62*, Sensor Depth (ft): *3406.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 03:15 | 03:30 | 05-27 | 3471.00 | 3566.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 03:30 | 03:35 | 05-27 | 3566.00 | 3566.00 | Inclination (°): *4.530*, Azimuth (°): *275.930*, TVD (ft): *3492.62*, Dogleg (º/100 ft): *0.88*, Sensor Depth (ft): *3501.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 03:35 | 04:10 | 05-27 | 3566.00 | 3661.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 04:10 | 04:15 | 05-27 | 3661.00 | 3661.00 | Inclination (°): *4.480*, Azimuth (°): *281.470*, TVD (ft): *3587.33*, Dogleg (º/100 ft): *0.46*, Sensor Depth (ft): *3596.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 04:15 | 04:20 | 05-27 | 3661.00 | 3670.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-27 | 04:20 | 04:30 | 05-27 | 3670.00 | 3688.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2400.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219*, Toolface: *260*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-27 | 04:30 | 04:45 | 05-27 | 3688.00 | 3756.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 04:45 | 04:50 | 05-27 | 3756.00 | 3756.00 | Inclination (°): *5.190*, Azimuth (°): *276.460*, TVD (ft): *3681.99*, Dogleg (º/100 ft): *0.87*, Sensor Depth (ft): *3691.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 04:50 | 05:15 | 05-27 | 3756.00 | 3851.00 | Pressure On (psi): *2700.00*, Pressure Off (psi): *2300.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 05:15 | 05:20 | 05-27 | 3851.00 | 3851.00 | Inclination (°): *5.930*, Azimuth (°): *273.200*, TVD (ft): *3776.54*, Dogleg (º/100 ft): *0.85*, Sensor Depth (ft): *3786.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 05:20 | 06:00 | 05-27 | 3851.00 | 4040.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2600.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 06:00 | 06:05 | 05-27 | 4040.00 | 4040.00 | Inclination (°): *5.760*, Azimuth (°): *277.420*, TVD (ft): *3964.56*, Dogleg (º/100 ft): *0.24*, Sensor Depth (ft): *3975.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 06:05 | 06:35 | 05-27 | 4040.00 | 4135.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2600.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 05-27 | 06:35 | 06:40 | 05-27 | 4135.00 | 4135.00 | Inclination (°): *5.800*, Azimuth (°): *278.390*, TVD (ft): *4059.08*, Dogleg (º/100 ft): *0.11*, Sensor Depth (ft): *4070.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 06:40 | 07:05 | 05-27 | 4135.00 | 4230.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2600.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 07:05 | 07:10 | 05-27 | 4230.00 | 4230.00 | Inclination (°): *5.800*, Azimuth (°): *280.060*, TVD (ft): *4153.59*, Dogleg (º/100 ft): *0.18*, Sensor Depth (ft): *4165.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 07:10 | 07:15 | 05-27 | 4230.00 | 4250.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2600.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Slide Drill | 2 | 05-27 | 07:15 | 07:30 | 05-27 | 4250.00 | 4270.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2400.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219*, Toolface: *230*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-27 | 07:30 | 07:45 | 05-27 | 4270.00 | 4325.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2600.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 07:45 | 07:50 | 05-27 | 4325.00 | 4325.00 | Inclination (°): *6.150*, Azimuth (°): *278.570*, TVD (ft): *4248.08*, Dogleg (º/100 ft): *0.40*, Sensor Depth (ft): *4260.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 07:50 | 08:10 | 05-27 | 4325.00 | 4420.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2600.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219.00* |
| Survey | 46 | 05-27 | 08:10 | 08:15 | 05-27 | 4420.00 | 4420.00 | Inclination (°): *7.910*, Azimuth (°): *276.720*, TVD (ft): *4342.36*, Dogleg (º/100 ft): *1.87*, Sensor Depth (ft): *4355.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 08:15 | 08:30 | 05-27 | 4420.00 | 4515.00 | Pressure On (psi): *3650.00*, Pressure Off (psi): *3000.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *250.00* |
| Survey | 46 | 05-27 | 08:30 | 08:35 | 05-27 | 4515.00 | 4515.00 | Inclination (°): *7.820*, Azimuth (°): *278.210*, TVD (ft): *4436.46*, Dogleg (º/100 ft): *0.23*, Sensor Depth (ft): *4450.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 08:35 | 08:50 | 05-27 | 4515.00 | 4609.00 | Pressure On (psi): *3650.00*, Pressure Off (psi): *3000.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *250.00* |
| Survey | 46 | 05-27 | 08:50 | 08:55 | 05-27 | 4609.00 | 4609.00 | Inclination (°): *7.520*, Azimuth (°): *280.150*, TVD (ft): *4529.62*, Dogleg (º/100 ft): *0.42*, Sensor Depth (ft): *4544.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 08:55 | 09:15 | 05-27 | 4609.00 | 4704.00 | Pressure On (psi): *3650.00*, Pressure Off (psi): *3000.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *250.00* |
| Survey | 46 | 05-27 | 09:15 | 09:20 | 05-27 | 4704.00 | 4704.00 | Inclination (°): *7.560*, Azimuth (°): *279.710*, TVD (ft): *4623.80*, Dogleg (º/100 ft): *0.07*, Sensor Depth (ft): *4639.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 09:20 | 09:25 | 05-27 | 4704.00 | 4714.00 | Pressure On (psi): *3650.00*, Pressure Off (psi): *3000.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *250.00* |
| Slide Drill | 2 | 05-27 | 09:25 | 09:40 | 05-27 | 4714.00 | 4739.00 | Pressure On (psi): *2900.00*, Pressure Off (psi): *2400.00*, Weight On Bit (klbs): *35.00*, Flow Rate (gpm): *700.00*, Strokes Per Minute: *219*, Toolface: *150*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 05-27 | 09:40 | 09:55 | 05-27 | 4739.00 | 4799.00 | Pressure On (psi): *3650.00*, Pressure Off (psi): *3000.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *250.00* |
| Survey | 46 | 05-27 | 09:55 | 10:00 | 05-27 | 4799.00 | 4799.00 | Inclination (°): *7.560*, Azimuth (°): *274.080*, TVD (ft): *4717.98*, Dogleg (º/100 ft): *0.78*, Sensor Depth (ft): *4734.00*, Bit To Sensor (ft): *65.00* |
| Rotary Drill | 1 | 05-27 | 10:00 | 10:15 | 05-27 | 4799.00 | 4894.00 | Pressure On (psi): *3650.00*, Pressure Off (psi): *3000.00*, Weight On Bit (klbs): *38.00*, Surface RPM: *80*, Surface Torque (ft lbf): *20.00*, Flow Rate (gpm): *800.00*, Strokes Per Minute: *250.00* |
| Survey | 46 | 05-27 | 10:15 | 10:20 | 05-27 | 4894.00 | 4894.00 | Inclination (°): *7.650*, Azimuth (°): *268.280*, TVD (ft): *4812.14*, Dogleg (º/100 ft): *0.81*, Sensor Depth (ft): *4829.00*, Bit To Sensor (ft): *65.00* |
| Pipe Stuck | 12 | 05-27 | 10:20 | 14:15 | 05-27 | | | |
| Pipe Stuck | 12 | 05-27 | 14:15 | 19:45 | 05-27 | | | Attempt to Wireline MWD. Pulled 25k over and wouldn't release. Backed off Drill Pipe at 3850' MD |
| Pooh | 7 | 05-27 | 19:45 | 21:30 | 05-27 | | | POOH to P/U wash pipe. |
| Other | 16 | 05-27 | 21:30 | 22:30 | 05-27 | | | Wait for Wash Pipe to be delivered |
| Other | 16 | 05-27 | 22:30 | 00:15 | 05-28 | | | Strap Wash Pipe & Washover Shoe, P/U Same |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Tuesday, May 28 00:00 - 23:59 (Day 9 of 43)

**Billing:** $5,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 3.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #2 - Intermediate

**Date In: May 26, 2019, 14:15 Date Out: May 31, 2019, 16:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A259091 |
| **Nozzles** | 6x14 |
| **Total Flow Area (in²)** | 0.902 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 13.75 |
| **Total Drilled for BHA (ft)** | 3266.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft

### Directional Comments

8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

### MWD Comments

### POOH Reason

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P*, Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Other | 16 | 05-27 | 22:30 | 00:15 | 05-28 | | | Strap Wash Pipe & Washover Shoe, P/U Same |
| TIH | 8 | 05-28 | 00:15 | 02:05 | 05-28 | | | TIH W/ Overshot & Wash Pipe |
| Reaming | 4 | 05-28 | 02:05 | 02:20 | 05-28 | | | Wash Over HWDP F/ 3844 - T/ 4089 (Tagged ledge at 3875') |
| Pooh | 7 | 05-28 | 02:20 | 04:15 | 05-28 | | | POOH. |
| Change BHA | 6 | 05-28 | 04:15 | 05:00 | 05-28 | | | Rack back Wash Pipe |
| TIH | 8 | 05-28 | 05:00 | 08:00 | 05-28 | | | TIH W/ DP TO FISH |
| Wireline | 9 | 05-28 | 08:00 | 12:00 | 05-28 | | | WIRELINE WORK |
| Other | 16 | 05-28 | 12:00 | 16:30 | 05-28 | | | P/U WASH PIPE |
| TIH | 8 | 05-28 | 16:30 | 18:15 | 05-28 | | | TIH W/ Wash Pipe |
| Reaming | 4 | 05-28 | 18:15 | 20:15 | 05-28 | | | Wash & Reaming F/3844 T/4774 |
| Circulating | 3 | 05-28 | 20:15 | 21:00 | 05-28 | | | Circ. Bottoms Up |
| Pooh | 7 | 05-28 | 21:00 | 22:15 | 05-28 | | | POOH |
| Other | 16 | 05-28 | 22:15 | 00:00 | 05-29 | | | L/D 5 Stds of Wash Pipe. Rack Back 5 Stds of Wash Pipe |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Wednesday, May 29 00:00 - 23:59 (Day of 43)

**Billing:** $5,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #2 - Intermediate

**Date In: May 26, 2019, 14:15 Date Out: May 31, 2019, 16:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A259091 |
| **Nozzles** | 6x14 |
| **Total Flow Area (in²)** | 0.902 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 13.75 |
| **Total Drilled for BHA (ft)** | 3266.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft

### Directional Comments

8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

### MWD Comments

### POOH Reason

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P*, Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Other | 16 | 05-28 | 22:15 | 00:00 | 05-29 | | | L/D 5 Stds of Wash Pipe. Rack Back 5 Stds of Wash Pipe |
| Other | 16 | 05-29 | 00:00 | 00:45 | 05-29 | | | L/D 5 Stds of Wash Pipe. Rack Back 5 Stds of Wash Pipe |
| Other | 16 | 05-29 | 00:45 | 01:15 | 05-29 | | | P/U Jars and Screw In Sub |
| TIH | 8 | 05-29 | 01:15 | 02:45 | 05-29 | | | TIH W/ Jars and Screw in Sub |
| Other | 16 | 05-29 | 02:45 | 06:00 | 05-29 | | | Screw in, and jar on pipe. |
| Standby | 15 | 05-29 | 06:00 | 06:00 | 05-30 | | | Standby while ??? |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Thursday, May 30 00:00 - 23:59 (Day of 43)

**Billing:** $5,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #2 - Intermediate

**Date In: May 26, 2019, 14:15 Date Out: May 31, 2019, 16:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A259091 |
| **Nozzles** | 6x14 |
| **Total Flow Area (in²)** | 0.902 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 13.75 |
| **Total Drilled for BHA (ft)** | 3266.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft

### Directional Comments

8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

### MWD Comments

### POOH Reason

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P*, Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-29 | 06:00 | 06:00 | 05-30 | | | Standby while ??? |
| Standby | 15 | 05-30 | 06:00 | 06:00 | 05-31 | | | Standby while ??? |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Friday, May 31 00:00 - 23:59 (Day 10 of 43)

**Billing:** $4,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 16.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #2 - Intermediate

**Date In: May 26, 2019, 14:15 Date Out: May 31, 2019, 16:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A259091 |
| **Nozzles** | 6x14 |
| **Total Flow Area (in²)** | 0.902 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 13.75 |
| **Total Drilled for BHA (ft)** | 3266.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 6.50 ft, **Survey (Bit to Survey):** 65.00 ft

### Directional Comments

8" 1.50 FBH 7/8 5.9 w/ 9 5/8" NBS. Flow Rate : 400-900, Max Diff:1330 psi, Max TQ: 22020 ft/lbs. RPG 0.166. Bit 9 5/8" TKC66, SN A259091. Jets 6 x 14's, TFA: .902

### MWD Comments

### POOH Reason

**Lost in Hole:** POOH to L/D 2 Jts of HWDP. One was shot w/ Free Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *9.87* | Reed | A259091 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FBH 7/8 5.9 w/ 9 5/8" NBS*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Butch's | BDT 800-014 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **Stabilizer** Description: *9 5/8" NM IBS* | DTI | DR11909 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.500 | 8.000 | | 8.04 | 39.08 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800702 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.938 | 7.750 | | 3.92 | 43.00 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 80001013 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.875 | | 30.77 | 73.77 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | 8001019 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.250 | 7.938 | | 30.60 | 104.37 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39819 | 4 1/2" XH Box | 6 5/8" Reg Box | 2.785 | 5.000 | | 4.02 | 108.39 |
| **Drill Collar** Description: *5 Stds. 6.5" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | RIG | RIG | 4 1/2" XH Box | 4 1/2" XH Pin | 2.250 | 6.500 | | 448.34 | 556.73 |
| **Crossover Sub** Description: *X-O 4 1/2 IF B x 4 1/2 XH P*, Type: *Steel* | DTI | DR23523 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.875 | 6.250 | | 2.37 | 559.10 |
| **HWDP** Description: *9 Stds HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 825.88 | 1384.98 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 05-30 | 06:00 | 06:00 | 05-31 | | | Standby while ??? |
| Standby | 15 | 05-31 | 06:00 | 16:00 | 05-31 | | | Standby |
| Change BHA | 6 | 05-31 | 16:00 | 16:15 | 05-31 | | | BHA #2 LOST IN HOLE |

## MWD Activities

No Activities

# Daily Reports
## Lateral

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Saturday, Jun 01 00:00 - 23:59 (Day 11 of 43)

**Billing:** $5,500.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 14.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 25.00 - 25.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #3 - Sidetrack 1

**Date In: Jun 1, 2019, 10:00 Date Out: Jun 3, 2019, 2:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | REED |
| **S/N** | E255656 |
| **Nozzles** | 3x20's |
| **Total Flow Area (in²)** | 0.920 |
| **Drilling Hours for Day** | |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 0.00 |
| **Total Drilled for BHA (ft)** | |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 4.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft

### Directional Comments

8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17

### MWD Comments

### POOH Reason

**Pressure Spike:** Motor stalling due to lost roller cone on bit.

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TCH11P*, Style: *Roller Cone*, Gauge Length (in): *0.00*, Size (in): *9.87* | REED | E255656 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 2.12° ADJ 7/8 4.0 w/ Slick Slv*, Size (in): *8.00*, Bend Angle (°): *2.12*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | Aim | 800-40-005 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 34.96 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 65.73 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 96.33 |
| **Crossover Sub** Description: *X-O 4 1/2 IF Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39834 | 4 1/2" IF Box | 6 5/8" Reg Pin | 2.750 | 8.140 | | 4.02 | 100.35 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 834.75 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-01 | 00:00 | 06:00 | 06-01 | | | Standby |
| Standby | 15 | 06-01 | 06:00 | 08:45 | 06-01 | | | Standby |
| Change BHA | 6 | 06-01 | 08:45 | 10:00 | 06-01 | | | P/U BHA #3 - Sidetrack 1 |
| Standby | 15 | 06-01 | 10:00 | 06:00 | 06-02 | | | Standby while repair on top drive. |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, Jun 02 00:00 - 23:59 (Day 12 of 43)

**Billing:** $10,556.25 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 5.50 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 25.00 - 25.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #3 - Sidetrack 1

**Date In: Jun 1, 2019, 10:00 Date Out: Jun 3, 2019, 2:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | REED |
| **S/N** | E255656 |
| **Nozzles** | 3x20's |
| **Total Flow Area (in²)** | 0.920 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 0.00 |
| **Total Drilled for BHA (ft)** | |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 4.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft

### Directional Comments

8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17

### MWD Comments

### POOH Reason

**Pressure Spike:** Motor stalling due to lost roller cone on bit.

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TCH11P*, Style: *Roller Cone*, Gauge Length (in): *0.00*, Size (in): *9.87* | REED | E255656 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 2.12° ADJ 7/8 4.0 w/ Slick Slv*, Size (in): *8.00*, Bend Angle (°): *2.12*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | Aim | 800-40-005 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 34.96 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 65.73 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 96.33 |
| **Crossover Sub** Description: *X-O 4 1/2 IF Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39834 | 4 1/2" IF Box | 6 5/8" Reg Pin | 2.750 | 8.140 | | 4.02 | 100.35 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 834.75 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-01 | 10:00 | 06:00 | 06-02 | | | Standby while repair on top drive. |
| Standby | 15 | 06-02 | 06:00 | 15:30 | 06-02 | | | Standby while repairing topdrive. |
| TIH | 8 | 06-02 | 15:30 | 16:30 | 06-02 | | | TIH W/ BHA #3 |
| Drilling Cement | 17 | 06-02 | 16:30 | 22:00 | 06-02 | 3740.00 | 3850.00 | Drilling Cement and Float Equipment F/ 3740 - T/ 3850 [ GPM = 550, RPM = 0, WOB = 10, DIFF = 150 ] |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Work Trough | 37 | 06-02 | 22:00 | 00:15 | 06-03 | | | Work Trough F/ 3819- T/ 3850 |

**MWD Activities**

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Monday, Jun 03 00:00 - 23:59 (Day 13 of 43)

**Billing:** $6,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 3850.00 | **Downhole Hours** | 12.75 |
| **Bit Depth (ft)** | 3907.00 | **Drilling Hours** | 6.25 |
| **Bottom Hole Depth (ft)** | 3919.00 | **Hours Circulating** | 2.25 |
| **Total Distance (ft)** | 69.00 | **Hours Sliding** | 6.25 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 69.00 | | |
| **Inclination In** | 4.80 | | |
| **Inclination Out** | 4.80 | | |
| **Azimuth In** | 265.60 | **% Hours Rotating** | 0% |
| **Azimuth Out** | 265.60 | **% Hours Sliding** | 100% |
| **AVG Total ROP (ft/h)** | 11.04 | **% Distance Sliding** | 121% |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | 0% |
| **AVG Sliding ROP (ft/h)** | 11.04 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | 20.00 - 20.00 |
| **Rotating SPM** | |
| **Sliding SPM** | 154.00 - 154.00 |
| **Motor RPM** | 0.00 - 25.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | 500.00 - 500.00 |
| **On Bottom Pressure (psi)** | 1200.00 - 1200.00 |
| **Off Bottom Pressure (psi)** | 1100.00 - 1100.00 |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #3 - Sidetrack 1

**Date In: Jun 1, 2019, 10:00 Date Out: Jun 3, 2019, 2:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | REED |
| **S/N** | E255656 |
| **Nozzles** | 3x20's |
| **Total Flow Area (in²)** | 0.920 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 0.00 |
| **Total Drilled for BHA (ft)** | |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 4.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft

### Directional Comments

8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17

### MWD Comments

### POOH Reason

**Pressure Spike:** Motor stalling due to lost roller cone on bit.

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TCH11P*, Style: *Roller Cone*, Gauge Length (in): *0.00*, Size (in): *9.87* | REED | E255656 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 2.12° ADJ 7/8 4.0 w/ Slick Slv*, Size (in): *8.00*, Bend Angle (°): *2.12*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | Aim | 800-40-005 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 34.96 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 65.73 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 96.33 |
| **Crossover Sub** Description: *X-O 4 1/2 IF Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39834 | 4 1/2" IF Box | 6 5/8" Reg Pin | 2.750 | 8.140 | | 4.02 | 100.35 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 834.75 |

### MWD Items

No Items

## BHA #4 - Sidetrack 2

**Date In: Jun 3, 2019, 12:15 Date Out: Jun 3, 2019, 22:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | HUGHES |
| **S/N** | 5285455 |
| **Nozzles** | 3x20's |
| **Total Flow Area (in²)** | 0.920 |
| **Drilling Hours for Day** | 6.25 |
| **Total Drilled for Day (ft)** | 57.00 |
| **Drilling Hours for BHA** | 6.25 |
| **Total Drilled for BHA (ft)** | 57.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 4.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.300 |

### Bit Distances

**Bend (Bit to Bend):** 7.27 ft, **Survey (Bit to Survey):** 57.00 ft

### Directional Comments

Directional: 8" 2.12° ABH 7/8 4.0 w/ SS. Flow Rate: 400-900, Max Diff: 900psi, Max TQ: 14,930 ft/lbs. RPG: 0.17

### MWD Comments

### POOH Reason

Change Bottom Hole Assembly

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" GX-38C*, Style: *Roller Cone*, Gauge Length (in): *0.00*, Size (in): *9.87* | HUGHES | 5285455 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 2.12° ADJ 7/8 4.0 w/ Slick Slv*, Size (in): *8.00*, Bend Angle (°): *2.12*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *4* | Aim | 800-40-005 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 30.04 | 31.04 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 34.96 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 65.73 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 96.33 |
| **Crossover Sub** Description: *X-O 4 1/2 IF Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR39834 | 4 1/2" IF Box | 6 5/8" Reg Pin | 2.750 | 8.140 | | 4.02 | 100.35 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 834.75 |

### MWD Items

No Items

## BHA #5 - INTERMEDIATE

**Date In: Jun 3, 2019, 23:30 Date Out: Jun 6, 2019, 15:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262114 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 45.92 |
| **Total Drilled for BHA (ft)** | 5062.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 72.00 ft

### Directional Comments

Directional: 8" Motor 7/8 5.9 FXD 1.50 w/ 9 5/8" Stab. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

**Penetration Rate:** POOH for bit

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262114 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 w/ 9 5/8" Stab*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **Stabilizer** Description: *9 5/8" Stab* | DTI | DR40319 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 7.19 | 46.05 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 49.97 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 80.74 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 111.34 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 114.92 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 559.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 561.72 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1296.12 |

## MWD Items

No Items

## Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Work Trough | 37 | 06-02 | 22:00 | 00:15 | 06-03 | | | Work Trough F/ 3819- T/ 3850 |
| Pooh | 7 | 06-03 | 00:15 | 02:00 | 06-03 | | | POOH for [Bit ] |
| Change BHA | 6 | 06-03 | 02:00 | 02:30 | 06-03 | | | Rack back BHA #3 |
| Standby | 15 | 06-03 | 02:30 | 06:30 | 06-03 | | | Standby while waiting on fishing tools to retrieve a roller cone off bit. |
| Fishing | 13 | 06-03 | 06:30 | 12:00 | 06-03 | | | Fishing to retrieve a roller cone off bit. |
| Change BHA | 6 | 06-03 | 12:00 | 12:15 | 06-03 | | | P/U BHA # 4 |
| TIH | 8 | 06-03 | 12:15 | 13:30 | 06-03 | | | TIH W/ BHA #4 |
| Slide Drill | 2 | 06-03 | 13:30 | 19:45 | 06-03 | 3850.00 | 3919.00 | Pressure On (psi): *1200.00*, Pressure Off (psi): *1100.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *500.00*, Strokes Per Minute: *154*, Toolface: *130*, Toolface Type: *magnetic* |
| Survey | 46 | 06-03 | 19:45 | 19:50 | 06-03 | 3907.00 | 3907.00 | Inclination (°): *4.800*, Azimuth (°): *265.600*, TVD (ft): *3840.26*, Dogleg (º/100 ft): *2.08*, Sensor Depth (ft): *3850.00*, Bit To Sensor (ft): *57.00* |
| Other | 16 | 06-03 | 19:50 | 19:55 | 06-03 | | | Check flow |
| Pooh | 7 | 06-03 | 19:55 | 21:00 | 06-03 | | | POOH for [ to p/u bha #5 ] |
| Other | 16 | 06-03 | 21:00 | 21:15 | 06-03 | | | Break bit, laydown nmdc. |
| Other | 16 | 06-03 | 21:15 | 22:00 | 06-03 | | | Wait on weather |
| Other | 16 | 06-03 | 22:00 | 23:30 | 06-03 | | | Attempt to remove mwd tool, break nmdc and remove mwd tool with hoist in the mouse hole. |
| Change BHA | 6 | 06-03 | 23:30 | 00:30 | 06-04 | | | P/U BHA # 5 |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Tuesday, Jun 04 00:00 - 23:59 (Day 14 of 43)

**Billing:** $9,400.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 3919.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 6606.00 | **Drilling Hours** | 17.83 |
| **Bottom Hole Depth (ft)** | 6606.00 | **Hours Circulating** | 1.00 |
| **Total Distance (ft)** | 2687.00 | **Hours Sliding** | 4.92 |
| **Distance Rotated (ft)** | 2532.00 | **Hours Rotating** | 12.92 |
| **Distance Slid (ft)** | 155.00 | | |
| **Inclination In** | 4.10 | | |
| **Inclination Out** | 3.78 | | |
| **Azimuth In** | 256.70 | **% Hours Rotating** | 72% |
| **Azimuth Out** | 250.88 | **% Hours Sliding** | 28% |
| **AVG Total ROP (ft/h)** | 150.67 | **% Distance Sliding** | 6% |
| **AVG Rotating ROP (ft/h)** | 196.03 | **% Distance Rotating** | 94% |
| **AVG Sliding ROP (ft/h)** | 31.53 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 35.00 - 35.00 |
| **Sliding WOB (klbs)** | 15.00 - 20.00 |
| **Rotating SPM** | 279.00 - 279.00 |
| **Sliding SPM** | 279.00 - 279.00 |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | 65.00 - 65.00 |
| **Flow Rate (gpm)** | 900.00 - 900.00 |
| **On Bottom Pressure (psi)** | 4100.00 - 4400.00 |
| **Off Bottom Pressure (psi)** | 3850.00 - 3850.00 |

### Personnel

| Name | Position |
|---|---|
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |
| **Robert Olivarez** | MWD Engineer |

## BHA #5 - INTERMEDIATE

**Date In: Jun 3, 2019, 23:30 Date Out: Jun 6, 2019, 15:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262114 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 17.83 |
| **Total Drilled for Day (ft)** | 2687.00 |
| **Drilling Hours for BHA** | 45.92 |
| **Total Drilled for BHA (ft)** | 5062.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 72.00 ft

### Directional Comments

Directional: 8" Motor 7/8 5.9 FXD 1.50 w/ 9 5/8" Stab. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

**Penetration Rate:** POOH for bit

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262114 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 w/ 9 5/8" Stab*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **Stabilizer** Description: *9 5/8" Stab* | DTI | DR40319 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 7.19 | 46.05 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 49.97 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 80.74 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 111.34 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 114.92 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 559.41 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 561.72 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1296.12 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Change BHA | 6 | 06-03 | 23:30 | 00:30 | 06-04 | | | P/U BHA # 5 |
| TIH | 8 | 06-04 | 00:30 | 01:45 | 06-04 | | | TIH W/ BHA #5 |
| Survey | 46 | 06-04 | 01:45 | 02:00 | 06-04 | 3919.00 | 3919.00 | Inclination (°): *4.100*, Azimuth (°): *256.700*, TVD (ft): *3852.22*, Dogleg (º/100 ft): *8.18*, Sensor Depth (ft): *3862.00*, Bit To Sensor (ft): *57.00* |
| Orient Pipe | 36 | 06-04 | 02:00 | 03:00 | 06-04 | | | Orient toolface and wash down |
| Slide Drill | 2 | 06-04 | 03:00 | 04:00 | 06-04 | 3919.00 | 3933.00 | Toolface: *250*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 04:00 | 04:30 | 06-04 | 3933.00 | 3952.00 | |
| Survey | 46 | 06-04 | 04:30 | 04:35 | 06-04 | 3952.00 | 3952.00 | Inclination (°): *3.600*, Azimuth (°): *227.410*, TVD (ft): *3870.18*, Dogleg (º/100 ft): *11.14*, Sensor Depth (ft): *3880.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 04:35 | 04:55 | 06-04 | 3952.00 | 3988.00 | |
| Slide Drill | 2 | 06-04 | 04:55 | 05:20 | 06-04 | 3988.00 | 4006.00 | Toolface: *20*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 05:20 | 05:50 | 06-04 | 4006.00 | 4075.00 | |
| Slide Drill | 2 | 06-04 | 05:50 | 06:30 | 06-04 | 4075.00 | 4110.00 | Toolface: *160*, Toolface Type: *gravity* |
| Survey | 46 | 06-04 | 06:30 | 06:35 | 06-04 | 4078.00 | 4078.00 | Inclination (°): *8.040*, Azimuth (°): *220.560*, TVD (ft): *3995.50*, Dogleg (º/100 ft): *3.56*, Sensor Depth (ft): *4006.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 06:35 | 06:50 | 06-04 | 4110.00 | 4142.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Slide Drill | 2 | 06-04 | 06:50 | 07:30 | 06-04 | 4142.00 | 4162.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *130*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-04 | 07:30 | 07:45 | 06-04 | 4162.00 | 4240.00 | |
| Survey | 46 | 06-04 | 07:45 | 07:50 | 06-04 | 4236.00 | 4236.00 | Inclination (°): *5.190*, Azimuth (°): *248.160*, TVD (ft): *4152.47*, Dogleg (º/100 ft): *2.65*, Sensor Depth (ft): *4164.00*, Bit To Sensor (ft): *72.00* |
| Slide Drill | 2 | 06-04 | 07:50 | 08:15 | 06-04 | 4240.00 | 4260.00 | Toolface: *350*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 08:15 | 08:40 | 06-04 | 4260.00 | 4331.00 | |
| Survey | 46 | 06-04 | 08:40 | 08:45 | 06-04 | 4331.00 | 4331.00 | Inclination (°): *4.400*, Azimuth (°): *264.850*, TVD (ft): *4247.15*, Dogleg (º/100 ft): *1.68*, Sensor Depth (ft): *4259.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 08:45 | 09:10 | 06-04 | 4331.00 | 4426.00 | |
| Survey | 46 | 06-04 | 09:10 | 09:15 | 06-04 | 4426.00 | 4426.00 | Inclination (°): *4.530*, Azimuth (°): *274.430*, TVD (ft): *4341.86*, Dogleg (º/100 ft): *0.80*, Sensor Depth (ft): *4354.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 09:15 | 09:30 | 06-04 | 4426.00 | 4521.00 | |
| Survey | 46 | 06-04 | 09:30 | 09:35 | 06-04 | 4521.00 | 4521.00 | Inclination (°): *4.480*, Azimuth (°): *274.790*, TVD (ft): *4436.57*, Dogleg (º/100 ft): *0.06*, Sensor Depth (ft): *4449.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 09:35 | 09:55 | 06-04 | 4521.00 | 4616.00 | |
| Survey | 46 | 06-04 | 09:55 | 10:00 | 06-04 | 4616.00 | 4616.00 | Inclination (°): *4.350*, Azimuth (°): *275.050*, TVD (ft): *4531.28*, Dogleg (º/100 ft): *0.14*, Sensor Depth (ft): *4544.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 10:00 | 10:15 | 06-04 | 4616.00 | 4710.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 10:15 | 10:20 | 06-04 | 4710.00 | 4710.00 | Inclination (°): *4.530*, Azimuth (°): *273.730*, TVD (ft): *4625.00*, Dogleg (º/100 ft): *0.22*, Sensor Depth (ft): *4638.00*, Bit To Sensor (ft): *72.00*, Temperature (ºF): *122.00* |
| Rotary Drill | 1 | 06-04 | 10:20 | 10:40 | 06-04 | 4710.00 | 4805.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 10:40 | 10:45 | 06-04 | 4805.00 | 4805.00 | Inclination (°): *4.350*, Azimuth (°): *273.120*, TVD (ft): *4719.72*, Dogleg (º/100 ft): *0.20*, Sensor Depth (ft): *4733.00*, Bit To Sensor (ft): *72.00*, Temperature (ºF): *122.00* |
| Rotary Drill | 1 | 06-04 | 10:45 | 11:15 | 06-04 | 4805.00 | 4900.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 11:15 | 11:20 | 06-04 | 4900.00 | 4900.00 | Inclination (°): *4.350*, Azimuth (°): *274.350*, TVD (ft): *4814.44*, Dogleg (º/100 ft): *0.10*, Sensor Depth (ft): *4828.00*, Bit To Sensor (ft): *72.00*, Temperature (ºF): *122.00* |
| Rotary Drill | 1 | 06-04 | 11:20 | 11:45 | 06-04 | 4900.00 | 4995.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 11:45 | 11:50 | 06-04 | 4995.00 | 4995.00 | Inclination (°): *4.350*, Azimuth (°): *274.610*, TVD (ft): *4909.17*, Dogleg (º/100 ft): *0.02*, Sensor Depth (ft): *4923.00*, Bit To Sensor (ft): *72.00*, Temperature (ºF): *122.00* |
| Rotary Drill | 1 | 06-04 | 11:50 | 11:55 | 06-04 | 4995.00 | 5000.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Slide Drill | 2 | 06-04 | 11:55 | 12:25 | 06-04 | 5000.00 | 5012.00 | Pressure On (psi): *4100.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *15.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *205*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 12:25 | 13:00 | 06-04 | 5012.00 | 5090.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 13:00 | 13:05 | 06-04 | 5090.00 | 5090.00 | Inclination (°): *4.130*, Azimuth (°): *265.730*, TVD (ft): *5003.91*, Dogleg (º/100 ft): *0.73*, Sensor Depth (ft): *5018.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 13:05 | 13:50 | 06-04 | 5090.00 | 5184.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 13:50 | 13:55 | 06-04 | 5184.00 | 5184.00 | Inclination (°): *3.960*, Azimuth (°): *262.040*, TVD (ft): *5097.68*, Dogleg (º/100 ft): *0.33*, Sensor Depth (ft): *5112.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 13:55 | 14:30 | 06-04 | 5184.00 | 5279.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 06-04 | 14:30 | 14:35 | 06-04 | 5279.00 | 5279.00 | Inclination (°): *3.780*, Azimuth (°): *261.690*, TVD (ft): *5192.46*, Dogleg (º/100 ft): *0.19*, Sensor Depth (ft): *5207.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 14:35 | 15:05 | 06-04 | 5279.00 | 5374.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 15:05 | 15:10 | 06-04 | 5374.00 | 5374.00 | Inclination (°): *3.690*, Azimuth (°): *259.670*, TVD (ft): *5287.26*, Dogleg (º/100 ft): *0.17*, Sensor Depth (ft): *5302.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 15:10 | 15:15 | 06-04 | 5374.00 | 5380.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Slide Drill | 2 | 06-04 | 15:15 | 15:35 | 06-04 | 5380.00 | 5390.00 | Pressure On (psi): *4100.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *15.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279*, Toolface: *256*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 15:35 | 16:00 | 06-04 | 5390.00 | 5469.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 16:00 | 16:05 | 06-04 | 5469.00 | 5469.00 | Inclination (°): *3.780*, Azimuth (°): *256.420*, TVD (ft): *5382.06*, Dogleg (º/100 ft): *0.24*, Sensor Depth (ft): *5397.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 16:05 | 16:30 | 06-04 | 5469.00 | 5563.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 16:30 | 16:35 | 06-04 | 5563.00 | 5563.00 | Inclination (°): *4.000*, Azimuth (°): *254.750*, TVD (ft): *5475.84*, Dogleg (º/100 ft): *0.26*, Sensor Depth (ft): *5491.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 16:35 | 17:00 | 06-04 | 5563.00 | 5658.00 | Pressure On (psi): *4400.00*, Pressure Off (psi): *3850.00*, Weight On Bit (klbs): *35.00*, Surface RPM: *65*, Surface Torque (ft lbf): *12000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-04 | 17:00 | 17:05 | 06-04 | 5658.00 | 5658.00 | Inclination (°): *3.740*, Azimuth (°): *254.040*, TVD (ft): *5570.62*, Dogleg (º/100 ft): *0.28*, Sensor Depth (ft): *5586.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 17:05 | 17:35 | 06-04 | 5658.00 | 5753.00 | |
| Survey | 46 | 06-04 | 17:35 | 17:40 | 06-04 | 5753.00 | 5753.00 | Inclination (°): *3.340*, Azimuth (°): *254.750*, TVD (ft): *5665.44*, Dogleg (º/100 ft): *0.42*, Sensor Depth (ft): *5681.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 17:40 | 17:45 | 06-04 | 5753.00 | 5758.00 | |
| Slide Drill | 2 | 06-04 | 17:45 | 18:25 | 06-04 | 5758.00 | 5778.00 | Toolface: *250*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 18:25 | 18:45 | 06-04 | 5778.00 | 5848.00 | |
| Survey | 46 | 06-04 | 18:45 | 18:50 | 06-04 | 5848.00 | 5848.00 | Inclination (°): *4.180*, Azimuth (°): *256.680*, TVD (ft): *5760.24*, Dogleg (º/100 ft): *0.89*, Sensor Depth (ft): *5776.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 18:50 | 19:00 | 06-04 | 5848.00 | 5855.00 | |
| Slide Drill | 2 | 06-04 | 19:00 | 19:15 | 06-04 | 5855.00 | 5861.00 | Toolface: *250*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-04 | 19:15 | 19:55 | 06-04 | 5861.00 | 5943.00 | |
| Survey | 46 | 06-04 | 19:55 | 20:00 | 06-04 | 5943.00 | 5943.00 | Inclination (°): *4.660*, Azimuth (°): *253.780*, TVD (ft): *5854.95*, Dogleg (º/100 ft): *0.56*, Sensor Depth (ft): *5871.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 20:00 | 20:30 | 06-04 | 5943.00 | 6037.00 | |
| Survey | 46 | 06-04 | 20:30 | 20:35 | 06-04 | 6037.00 | 6037.00 | Inclination (°): *4.620*, Azimuth (°): *253.600*, TVD (ft): *5948.64*, Dogleg (º/100 ft): *0.05*, Sensor Depth (ft): *5965.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 20:35 | 21:30 | 06-04 | 6037.00 | 6132.00 | |
| Survey | 46 | 06-04 | 21:30 | 21:35 | 06-04 | 6132.00 | 6132.00 | Inclination (°): *4.440*, Azimuth (°): *253.870*, TVD (ft): *6043.35*, Dogleg (º/100 ft): *0.19*, Sensor Depth (ft): *6060.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 21:35 | 21:55 | 06-04 | 6132.00 | 6227.00 | |
| Survey | 46 | 06-04 | 21:55 | 22:00 | 06-04 | 6227.00 | 6227.00 | Inclination (°): *4.220*, Azimuth (°): *252.110*, TVD (ft): *6138.08*, Dogleg (º/100 ft): *0.27*, Sensor Depth (ft): *6155.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 22:00 | 22:20 | 06-04 | 6227.00 | 6322.00 | |
| Survey | 46 | 06-04 | 22:20 | 22:25 | 06-04 | 6322.00 | 6322.00 | Inclination (°): *4.040*, Azimuth (°): *252.550*, TVD (ft): *6232.83*, Dogleg (º/100 ft): *0.19*, Sensor Depth (ft): *6250.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 22:25 | 22:30 | 06-04 | 6322.00 | 6417.00 | |
| Survey | 46 | 06-04 | 22:30 | 22:35 | 06-04 | 6417.00 | 6417.00 | Inclination (°): *3.910*, Azimuth (°): *252.640*, TVD (ft): *6327.60*, Dogleg (º/100 ft): *0.14*, Sensor Depth (ft): *6345.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 22:35 | 22:40 | 06-04 | 6417.00 | 6512.00 | |
| Survey | 46 | 06-04 | 22:40 | 22:45 | 06-04 | 6512.00 | 6512.00 | Inclination (°): *3.780*, Azimuth (°): *250.880*, TVD (ft): *6422.39*, Dogleg (º/100 ft): *0.18*, Sensor Depth (ft): *6440.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-04 | 22:45 | 23:05 | 06-04 | 6512.00 | 6606.00 | |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Wednesday, Jun 05 00:00 - 23:59 (Day 15 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 6606.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 8598.00 | **Drilling Hours** | 20.58 |
| **Bottom Hole Depth (ft)** | 8598.00 | **Hours Circulating** | 0.42 |
| **Total Distance (ft)** | 1992.00 | **Hours Sliding** | 5.17 |
| **Distance Rotated (ft)** | 1909.00 | **Hours Rotating** | 15.42 |
| **Distance Slid (ft)** | 83.00 | | |
| **Inclination In** | 3.74 | | |
| **Inclination Out** | 0.18 | | |
| **Azimuth In** | 252.11 | **% Hours Rotating** | 75% |
| **Azimuth Out** | 318.29 | **% Hours Sliding** | 25% |
| **AVG Total ROP (ft/h)** | 94.51 | **% Distance Sliding** | 4% |
| **AVG Rotating ROP (ft/h)** | 118.46 | **% Distance Rotating** | 96% |
| **AVG Sliding ROP (ft/h)** | 16.06 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Shawn Flores** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #5 - INTERMEDIATE

**Date In: Jun 3, 2019, 23:30 Date Out: Jun 6, 2019, 15:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262114 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 20.58 |
| **Total Drilled for Day (ft)** | 1992.00 |
| **Drilling Hours for BHA** | 45.92 |
| **Total Drilled for BHA (ft)** | 5062.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 72.00 ft

### Directional Comments

Directional: 8" Motor 7/8 5.9 FXD 1.50 w/ 9 5/8" Stab. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

**Penetration Rate:** POOH for bit

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262114 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 w/ 9 5/8" Stab*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **Stabilizer** Description: *9 5/8" Stab* | DTI | DR40319 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 7.19 | 46.05 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 49.97 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 80.74 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 111.34 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 114.92 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 559.41 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 561.72 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1296.12 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 06-05 | 00:00 | 00:05 | 06-05 | 6606.00 | 6606.00 | Inclination (°): *3.740*, Azimuth (°): *252.110*, TVD (ft): *6516.19*, Dogleg (º/100 ft): *0.10*, Sensor Depth (ft): *6534.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 00:05 | 00:25 | 06-05 | 6606.00 | 6701.00 | |
| Survey | 46 | 06-05 | 00:25 | 00:30 | 06-05 | 6701.00 | 6701.00 | Inclination (°): *3.650*, Azimuth (°): *249.740*, TVD (ft): *6610.99*, Dogleg (º/100 ft): *0.19*, Sensor Depth (ft): *6629.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 00:30 | 00:55 | 06-05 | 6701.00 | 6796.00 | |
| Survey | 46 | 06-05 | 00:55 | 01:00 | 06-05 | 6796.00 | 6796.00 | Inclination (°): *3.380*, Azimuth (°): *252.110*, TVD (ft): *6705.81*, Dogleg (º/100 ft): *0.32*, Sensor Depth (ft): *6724.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 01:00 | 01:25 | 06-05 | 6796.00 | 6891.00 | |
| Survey | 46 | 06-05 | 01:25 | 01:30 | 06-05 | 6891.00 | 6891.00 | Inclination (°): *3.380*, Azimuth (°): *252.290*, TVD (ft): *6800.64*, Dogleg (º/100 ft): *0.01*, Sensor Depth (ft): *6819.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 01:30 | 01:50 | 06-05 | 6891.00 | 6985.00 | |
| Survey | 46 | 06-05 | 01:50 | 01:55 | 06-05 | 6985.00 | 6985.00 | Inclination (°): *3.250*, Azimuth (°): *249.910*, TVD (ft): *6894.49*, Dogleg (º/100 ft): *0.20*, Sensor Depth (ft): *6913.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 01:55 | 02:30 | 06-05 | 6985.00 | 7080.00 | |
| Survey | 46 | 06-05 | 02:30 | 02:35 | 06-05 | 7080.00 | 7080.00 | Inclination (°): *3.080*, Azimuth (°): *250.260*, TVD (ft): *6989.34*, Dogleg (º/100 ft): *0.18*, Sensor Depth (ft): *7008.00*, Bit To Sensor (ft): *72.00* |
| Rig Service - In Hole | 19 | 06-05 | 02:35 | 03:00 | 06-05 | | | |
| Rotary Drill | 1 | 06-05 | 03:00 | 03:05 | 06-05 | 7080.00 | 7090.00 | |
| Circulating | 3 | 06-05 | 03:05 | 03:30 | 06-05 | | | Circ. [ |
| Rotary Drill | 1 | 06-05 | 03:30 | 04:05 | 06-05 | 7090.00 | 7175.00 | |
| Survey | 46 | 06-05 | 04:05 | 04:10 | 06-05 | 7175.00 | 7175.00 | Inclination (°): *3.030*, Azimuth (°): *247.720*, TVD (ft): *7084.21*, Dogleg (º/100 ft): *0.15*, Sensor Depth (ft): *7103.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 04:10 | 04:55 | 06-05 | 7175.00 | 7270.00 | |
| Survey | 46 | 06-05 | 04:55 | 05:00 | 06-05 | 7270.00 | 7270.00 | Inclination (°): *3.160*, Azimuth (°): *244.020*, TVD (ft): *7179.07*, Dogleg (º/100 ft): *0.25*, Sensor Depth (ft): *7198.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 05:00 | 05:35 | 06-05 | 7270.00 | 7365.00 | |
| Survey | 46 | 06-05 | 05:35 | 05:40 | 06-05 | 7365.00 | 7365.00 | Inclination (°): *2.950*, Azimuth (°): *243.760*, TVD (ft): *7273.93*, Dogleg (º/100 ft): *0.22*, Sensor Depth (ft): *7293.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 05:40 | 06:15 | 06-05 | 7365.00 | 7460.00 | |
| Survey | 46 | 06-05 | 06:15 | 06:20 | 06-05 | 7460.00 | 7460.00 | Inclination (°): *2.860*, Azimuth (°): *243.150*, TVD (ft): *7368.81*, Dogleg (º/100 ft): *0.10*, Sensor Depth (ft): *7388.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 06:20 | 06:55 | 06-05 | 7460.00 | 7554.00 | |
| Survey | 46 | 06-05 | 06:55 | 07:00 | 06-05 | 7554.00 | 7554.00 | Inclination (°): *2.640*, Azimuth (°): *239.190*, TVD (ft): *7462.70*, Dogleg (º/100 ft): *0.31*, Sensor Depth (ft): *7482.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 07:00 | 07:40 | 06-05 | 7554.00 | 7649.00 | |
| Survey | 46 | 06-05 | 07:40 | 07:45 | 06-05 | 7649.00 | 7649.00 | Inclination (°): *2.510*, Azimuth (°): *239.010*, TVD (ft): *7557.61*, Dogleg (º/100 ft): *0.14*, Sensor Depth (ft): *7577.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 07:45 | 08:00 | 06-05 | 7649.00 | 7656.00 | |
| Slide Drill | 2 | 06-05 | 08:00 | 09:00 | 06-05 | 7656.00 | 7669.00 | Toolface: *60*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-05 | 09:00 | 09:40 | 06-05 | 7669.00 | 7744.00 | |
| Survey | 46 | 06-05 | 09:40 | 09:45 | 06-05 | 7744.00 | 7744.00 | Inclination (°): *2.330*, Azimuth (°): *243.670*, TVD (ft): *7652.52*, Dogleg (º/100 ft): *0.28*, Sensor Depth (ft): *7672.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 09:45 | 09:55 | 06-05 | 7744.00 | 7761.00 | |
| Slide Drill | 2 | 06-05 | 09:55 | 10:30 | 06-05 | 7761.00 | 7776.00 | Toolface: *65*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-05 | 10:30 | 11:25 | 06-05 | 7776.00 | 7839.00 | |
| Survey | 46 | 06-05 | 11:25 | 11:30 | 06-05 | 7839.00 | 7839.00 | Inclination (°): *1.670*, Azimuth (°): *246.400*, TVD (ft): *7747.46*, Dogleg (º/100 ft): *0.70*, Sensor Depth (ft): *7767.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 11:30 | 12:20 | 06-05 | 7839.00 | 7933.00 | |
| Survey | 46 | 06-05 | 12:20 | 12:25 | 06-05 | 7933.00 | 7933.00 | Inclination (°): *1.450*, Azimuth (°): *252.810*, TVD (ft): *7841.43*, Dogleg (º/100 ft): *0.30*, Sensor Depth (ft): *7861.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 12:25 | 12:35 | 06-05 | 7933.00 | 7945.00 | |
| Slide Drill | 2 | 06-05 | 12:35 | 13:15 | 06-05 | 7945.00 | 7955.00 | Toolface: *70*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-05 | 13:15 | 13:40 | 06-05 | 7955.00 | 7995.00 | |
| Slide Drill | 2 | 06-05 | 13:40 | 14:35 | 06-05 | 7995.00 | 8007.00 | Toolface: *70*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-05 | 14:35 | 14:55 | 06-05 | 8007.00 | 8029.00 | |
| Survey | 46 | 06-05 | 14:55 | 15:00 | 06-05 | 8028.00 | 8028.00 | Inclination (°): *1.490*, Azimuth (°): *247.630*, TVD (ft): *7936.40*, Dogleg (º/100 ft): *0.15*, Sensor Depth (ft): *7956.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 15:00 | 15:45 | 06-05 | 8029.00 | 8124.00 | |
| Survey | 46 | 06-05 | 15:45 | 15:50 | 06-05 | 8124.00 | 8124.00 | Inclination (°): *0.840*, Azimuth (°): *246.130*, TVD (ft): *8032.38*, Dogleg (º/100 ft): *0.68*, Sensor Depth (ft): *8052.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 15:50 | 16:00 | 06-05 | 8124.00 | 8130.00 | |
| Slide Drill | 2 | 06-05 | 16:00 | 17:00 | 06-05 | 8130.00 | 8145.00 | Toolface: *65*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-05 | 17:00 | 17:45 | 06-05 | 8145.00 | 8218.00 | |
| Survey | 46 | 06-05 | 17:45 | 17:50 | 06-05 | 8218.00 | 8218.00 | Inclination (°): *0.440*, Azimuth (°): *281.110*, TVD (ft): *8126.37*, Dogleg (º/100 ft): *0.58*, Sensor Depth (ft): *8146.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 17:50 | 18:40 | 06-05 | 8218.00 | 8313.00 | |
| Survey | 46 | 06-05 | 18:40 | 18:45 | 06-05 | 8313.00 | 8313.00 | Inclination (°): *0.400*, Azimuth (°): *298.960*, TVD (ft): *8221.37*, Dogleg (º/100 ft): *0.14*, Sensor Depth (ft): *8241.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 18:45 | 19:40 | 06-05 | 8313.00 | 8375.00 | |
| Slide Drill | 2 | 06-05 | 19:40 | 20:40 | 06-05 | 8375.00 | 8393.00 | Toolface: *45*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-05 | 20:40 | 20:50 | 06-05 | 8393.00 | 8408.00 | |
| Survey | 46 | 06-05 | 20:50 | 20:55 | 06-05 | 8408.00 | 8408.00 | Inclination (°): *0.220*, Azimuth (°): *287.880*, TVD (ft): *8316.37*, Dogleg (º/100 ft): *0.20*, Sensor Depth (ft): *8336.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 20:55 | 21:50 | 06-05 | 8408.00 | 8503.00 | |
| Survey | 46 | 06-05 | 21:50 | 21:55 | 06-05 | 8503.00 | 8503.00 | Inclination (°): *0.260*, Azimuth (°): *297.200*, TVD (ft): *8411.37*, Dogleg (º/100 ft): *0.06*, Sensor Depth (ft): *8431.00*, Bit To Sensor (ft): *72.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-05 | 21:55 | 23:10 | 06-05 | 8503.00 | 8598.00 | |
| Survey | 46 | 06-05 | 23:10 | 23:15 | 06-05 | 8598.00 | 8598.00 | Inclination (°): *0.180*, Azimuth (°): *318.290*, TVD (ft): *8506.37*, Dogleg (º/100 ft): *0.12*, Sensor Depth (ft): *8526.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-05 | 23:15 | 00:45 | 06-06 | 8598.00 | 8693.00 | |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Thursday, Jun 06 00:00 - 23:59 (Day 16 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 8598.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 8981.00 | **Drilling Hours** | 7.50 |
| **Bottom Hole Depth (ft)** | 8981.00 | **Hours Circulating** | 1.33 |
| **Total Distance (ft)** | 383.00 | **Hours Sliding** | 0.25 |
| **Distance Rotated (ft)** | 378.00 | **Hours Rotating** | 7.25 |
| **Distance Slid (ft)** | 5.00 | | |
| **Inclination In** | 0.26 | | |
| **Inclination Out** | 0.44 | | |
| **Azimuth In** | 255.80 | **% Hours Rotating** | 97% |
| **Azimuth Out** | 269.78 | **% Hours Sliding** | 3% |
| **AVG Total ROP (ft/h)** | 51.07 | **% Distance Sliding** | 1% |
| **AVG Rotating ROP (ft/h)** | 52.14 | **% Distance Rotating** | 99% |
| **AVG Sliding ROP (ft/h)** | 20.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #5 - INTERMEDIATE

**Date In: Jun 3, 2019, 23:30 Date Out: Jun 6, 2019, 15:30**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262114 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 7.50 |
| **Total Drilled for Day (ft)** | 383.00 |
| **Drilling Hours for BHA** | 45.92 |
| **Total Drilled for BHA (ft)** | 5062.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 72.00 ft

### Directional Comments

Directional: 8" Motor 7/8 5.9 FXD 1.50 w/ 9 5/8" Stab. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

**Penetration Rate:** POOH for bit

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262114 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 w/ 9 5/8" Stab*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **Stabilizer** Description: *9 5/8" Stab* | DTI | DR40319 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 7.19 | 46.05 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 49.97 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 80.74 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 111.34 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 114.92 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 559.41 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 561.72 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1296.12 |

### MWD Items

No Items

## BHA #6 - INTERMEDIATE

**Date In: Jun 6, 2019, 15:30 Date Out: Jun 8, 2019, 1:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262113 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 0.00 |
| **Total Drilled for BHA (ft)** | |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft

### Directional Comments

8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

Change Bottom Hole Assembly

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 552.22 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 554.53 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1288.93 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-05 | 23:15 | 00:45 | 06-06 | 8598.00 | 8693.00 | |
| Survey | 46 | 06-06 | 00:45 | 00:50 | 06-06 | 8693.00 | 8693.00 | Inclination (°): *0.260*, Azimuth (°): *255.800*, TVD (ft): *8601.37*, Dogleg (º/100 ft): *0.25*, Sensor Depth (ft): *8621.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-06 | 00:50 | 02:20 | 06-06 | 8693.00 | 8787.00 | |
| Survey | 46 | 06-06 | 02:20 | 02:25 | 06-06 | 8787.00 | 8787.00 | Inclination (°): *0.220*, Azimuth (°): *250.970*, TVD (ft): *8695.36*, Dogleg (º/100 ft): *0.05*, Sensor Depth (ft): *8715.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-06 | 02:25 | 03:05 | 06-06 | 8787.00 | 8815.00 | |
| Slide Drill | 2 | 06-06 | 03:05 | 03:20 | 06-06 | 8815.00 | 8820.00 | Toolface: *45*, Toolface Type: *magnetic* |
| Pipe Stuck | 12 | 06-06 | 03:20 | 05:00 | 06-06 | | | Work stuck pipe. |
| Rotary Drill | 1 | 06-06 | 05:00 | 06:05 | 06-06 | 8820.00 | 8882.00 | |
| Survey | 46 | 06-06 | 06:05 | 06:10 | 06-06 | 8882.00 | 8882.00 | Inclination (°): *0.220*, Azimuth (°): *259.930*, TVD (ft): *8790.36*, Dogleg (º/100 ft): *0.04*, Sensor Depth (ft): *8810.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-06 | 06:10 | 08:30 | 06-06 | 8882.00 | 8977.00 | |
| Survey | 46 | 06-06 | 08:30 | 08:35 | 06-06 | 8977.00 | 8977.00 | Inclination (°): *0.440*, Azimuth (°): *269.780*, TVD (ft): *8885.36*, Dogleg (º/100 ft): *0.24*, Sensor Depth (ft): *8905.00*, Bit To Sensor (ft): *72.00* |
| Rotary Drill | 1 | 06-06 | 08:35 | 08:45 | 06-06 | 8977.00 | 8981.00 | |
| Circulating | 3 | 06-06 | 08:45 | 10:05 | 06-06 | | | Circ. to POOH |
| Pooh | 7 | 06-06 | 10:05 | 14:15 | 06-06 | | | POOH for ROP |
| Change BHA | 6 | 06-06 | 14:15 | 15:30 | 06-06 | | | P/U BHA #6 |
| TIH | 8 | 06-06 | 15:30 | 18:00 | 06-06 | | | TIH W/ BHA #6 |
| Pipe Stuck | 12 | 06-06 | 18:00 | 06:00 | 06-07 | | | Trying to free stuck pipe. |

### MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Friday, Jun 07 00:00 - 23:59 (Day of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #6 - INTERMEDIATE

**Date In: Jun 6, 2019, 15:30 Date Out: Jun 8, 2019, 1:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262113 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 0.00 |
| **Total Drilled for BHA (ft)** | |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft

### Directional Comments

8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

Change Bottom Hole Assembly

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 552.22 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 554.53 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1288.93 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Pipe Stuck | 12 | 06-06 | 18:00 | 06:00 | 06-07 | | | Trying to free stuck pipe. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Pipe Stuck | 12 | 06-07 | 06:00 | 18:00 | 06-07 | | | Trying to free stuck pipe |
| Pooh | 7 | 06-07 | 18:00 | 01:00 | 06-08 | | | POOH and laydown hwdp and collars |

**MWD Activities**

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Saturday, Jun 08 00:00 - 23:59 (Day 17 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 8981.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 10000.00 | **Drilling Hours** | 12.08 |
| **Bottom Hole Depth (ft)** | 10000.00 | **Hours Circulating** | 4.67 |
| **Total Distance (ft)** | 1019.00 | **Hours Sliding** | 1.75 |
| **Distance Rotated (ft)** | 969.00 | **Hours Rotating** | 10.33 |
| **Distance Slid (ft)** | 50.00 | | |
| **Inclination In** | 0.26 | | |
| **Inclination Out** | 2.59 | | |
| **Azimuth In** | 295.00 | **% Hours Rotating** | 86% |
| **Azimuth Out** | 99.88 | **% Hours Sliding** | 14% |
| **AVG Total ROP (ft/h)** | 84.70 | **% Distance Sliding** | 5% |
| **AVG Rotating ROP (ft/h)** | 93.56 | **% Distance Rotating** | 95% |
| **AVG Sliding ROP (ft/h)** | 28.57 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 40.00 - 40.00 |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | 279.00 - 279.00 |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | 50.00 - 50.00 |
| **Flow Rate (gpm)** | 900.00 - 900.00 |
| **On Bottom Pressure (psi)** | 4000.00 - 4000.00 |
| **Off Bottom Pressure (psi)** | 3500.00 - 3500.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #6 - INTERMEDIATE

**Date In: Jun 6, 2019, 15:30 Date Out: Jun 8, 2019, 1:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262113 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 0.00 |
| **Total Drilled for BHA (ft)** | |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft

### Directional Comments

8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

Change Bottom Hole Assembly

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Drill Collar** Description: *5 stands - 6 1/2" Drill Collars*, Style: *Spiral Drill*, Type: *Steel* | Rig | Rig | 4 1/2" XH Box | 4 1/2" XH Pin | 2.875 | 6.500 | | 444.49 | 552.22 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 554.53 |
| **HWDP** Description: *8 Stands HWDP*, Style: *Spiral* | | | 4 1/2" IF Box | 4 1/2" IF Pin | 3.125 | 5.000 | | 734.40 | 1288.93 |

### MWD Items

No Items

## BHA #7 - INTERMEDIATE

**Date In: Jun 8, 2019, 1:00 Date Out: Jun 9, 2019, 18:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262113 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 12.08 |
| **Total Drilled for Day (ft)** | 1019.00 |
| **Drilling Hours for BHA** | 22.00 |
| **Total Drilled for BHA (ft)** | 1750.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft

### Directional Comments

8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

Total Depth/Casing Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 110.04 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Pooh | 7 | 06-07 | 18:00 | 01:00 | 06-08 | | | POOH and laydown hwdp and collars |
| Change BHA | 6 | 06-08 | 01:00 | 02:00 | 06-08 | | | P/U BHA #7 |
| TIH | 8 | 06-08 | 02:00 | 06:00 | 06-08 | | | TIH W/ BHA #7 |
| Reaming | 4 | 06-08 | 06:00 | 10:20 | 06-08 | | | Reaming F/ 3850 - T/ 8950' |
| Circulating | 3 | 06-08 | 10:20 | 10:40 | 06-08 | | | Circ. Relog 30' gamma |
| Rotary Drill | 1 | 06-08 | 10:40 | 11:15 | 06-08 | 8981.00 | 9024.00 | |
| Survey | 46 | 06-08 | 11:15 | 11:20 | 06-08 | 9024.00 | 9024.00 | Inclination (°): *0.260*, Azimuth (°): *295.000*, TVD (ft): *8942.36*, Dogleg (º/100 ft): *0.41*, Sensor Depth (ft): *8962.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 11:20 | 11:25 | 06-08 | 9024.00 | 9030.00 | |
| Slide Drill | 2 | 06-08 | 11:25 | 12:00 | 06-08 | 9030.00 | 9045.00 | Toolface: *50*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-08 | 12:00 | 12:55 | 06-08 | 9045.00 | 9119.00 | |
| Survey | 46 | 06-08 | 12:55 | 13:00 | 06-08 | 9119.00 | 9119.00 | Inclination (°): *0.570*, Azimuth (°): *44.690*, TVD (ft): *9037.36*, Dogleg (º/100 ft): *0.74*, Sensor Depth (ft): *9057.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 13:00 | 14:05 | 06-08 | 9119.00 | 9214.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3500.00*, Weight On Bit (klbs): *40.00*, Surface RPM: *50*, Surface Torque (ft lbf): *17000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-08 | 14:05 | 14:10 | 06-08 | 9214.00 | 9214.00 | Inclination (°): *1.140*, Azimuth (°): *51.280*, TVD (ft): *9132.35*, Dogleg (º/100 ft): *0.61*, Sensor Depth (ft): *9152.00*, Bit To Sensor (ft): *62.00*, Temperature (ºF): *120.00* |
| Rotary Drill | 1 | 06-08 | 14:10 | 15:15 | 06-08 | 9214.00 | 9309.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3500.00*, Weight On Bit (klbs): *40.00*, Surface RPM: *50*, Surface Torque (ft lbf): *17000.00*, Flow Rate (gpm): *900.00*, Strokes Per Minute: *279.00* |
| Survey | 46 | 06-08 | 15:15 | 15:20 | 06-08 | 9309.00 | 9309.00 | Inclination (°): *1.190*, Azimuth (°): *47.240*, TVD (ft): *9227.33*, Dogleg (º/100 ft): *0.10*, Sensor Depth (ft): *9247.00*, Bit To Sensor (ft): *62.00*, Temperature (ºF): *120.00* |
| Rotary Drill | 1 | 06-08 | 15:20 | 16:10 | 06-08 | 9309.00 | 9404.00 | |
| Survey | 46 | 06-08 | 16:10 | 16:15 | 06-08 | 9404.00 | 9404.00 | Inclination (°): *1.320*, Azimuth (°): *37.480*, TVD (ft): *9322.31*, Dogleg (º/100 ft): *0.26*, Sensor Depth (ft): *9342.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 16:15 | 17:10 | 06-08 | 9404.00 | 9499.00 | |
| Survey | 46 | 06-08 | 17:10 | 17:15 | 06-08 | 9499.00 | 9499.00 | Inclination (°): *1.050*, Azimuth (°): *35.460*, TVD (ft): *9417.29*, Dogleg (º/100 ft): *0.29*, Sensor Depth (ft): *9437.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 17:15 | 18:10 | 06-08 | 9499.00 | 9593.00 | |
| Survey | 46 | 06-08 | 18:10 | 18:15 | 06-08 | 9593.00 | 9593.00 | Inclination (°): *0.840*, Azimuth (°): *84.500*, TVD (ft): *9511.27*, Dogleg (º/100 ft): *0.86*, Sensor Depth (ft): *9531.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 18:15 | 19:05 | 06-08 | 9593.00 | 9688.00 | |
| Survey | 46 | 06-08 | 19:05 | 19:10 | 06-08 | 9688.00 | 9688.00 | Inclination (°): *1.670*, Azimuth (°): *115.880*, TVD (ft): *9606.25*, Dogleg (º/100 ft): *1.10*, Sensor Depth (ft): *9626.00*, Bit To Sensor (ft): *62.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-08 | 19:10 | 20:00 | 06-08 | 9688.00 | 9783.00 | |
| Survey | 46 | 06-08 | 20:00 | 20:05 | 06-08 | 9783.00 | 9783.00 | Inclination (°): *2.240*, Azimuth (°): *121.330*, TVD (ft): *9701.20*, Dogleg (º/100 ft): *0.63*, Sensor Depth (ft): *9721.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 20:05 | 20:15 | 06-08 | 9783.00 | 9790.00 | |
| Slide Drill | 2 | 06-08 | 20:15 | 20:40 | 06-08 | 9790.00 | 9805.00 | Toolface: *0*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-08 | 20:40 | 21:35 | 06-08 | 9805.00 | 9878.00 | |
| Survey | 46 | 06-08 | 21:35 | 21:40 | 06-08 | 9878.00 | 9878.00 | Inclination (°): *2.370*, Azimuth (°): *110.690*, TVD (ft): *9796.12*, Dogleg (º/100 ft): *0.47*, Sensor Depth (ft): *9816.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 21:40 | 22:35 | 06-08 | 9878.00 | 9973.00 | |
| Survey | 46 | 06-08 | 22:35 | 22:40 | 06-08 | 9973.00 | 9973.00 | Inclination (°): *2.590*, Azimuth (°): *99.880*, TVD (ft): *9891.03*, Dogleg (º/100 ft): *0.54*, Sensor Depth (ft): *9911.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-08 | 22:40 | 22:55 | 06-08 | 9973.00 | 9980.00 | |
| Slide Drill | 2 | 06-08 | 22:55 | 23:40 | 06-08 | 9980.00 | 10000.00 | Toolface: *330*, Toolface Type: *magnetic* |
| Rotary Drill | 1 | 06-08 | 23:40 | 00:25 | 06-09 | 10000.00 | 10068.00 | |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, Jun 09 00:00 - 23:59 (Day 18 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 10000.00 | **Downhole Hours** | 18.00 |
| **Bit Depth (ft)** | 10731.00 | **Drilling Hours** | 9.92 |
| **Bottom Hole Depth (ft)** | 10731.00 | **Hours Circulating** | 1.67 |
| **Total Distance (ft)** | 731.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 731.00 | **Hours Rotating** | 9.92 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | 2.07 | | |
| **Inclination Out** | 0.31 | | |
| **Azimuth In** | 72.37 | **% Hours Rotating** | 100% |
| **Azimuth Out** | 1.62 | **% Hours Sliding** | 0% |
| **AVG Total ROP (ft/h)** | 73.71 | **% Distance Sliding** | 0% |
| **AVG Rotating ROP (ft/h)** | 73.71 | **% Distance Rotating** | 100% |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 0.00 - 0.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #7 - INTERMEDIATE

**Date In: Jun 8, 2019, 1:00 Date Out: Jun 9, 2019, 18:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 9.875 |
| **Vendor** | Reed |
| **S/N** | A262113 |
| **Nozzles** | 5x12's, 4x11's |
| **Total Flow Area (in²)** | 0.923 |
| **Drilling Hours for Day** | 9.92 |
| **Total Drilled for Day (ft)** | 731.00 |
| **Drilling Hours for BHA** | 22.00 |
| **Total Drilled for BHA (ft)** | 1750.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 8.0 |
| **Lobe/Stage** | 7/8, 5.9 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.17 |
| **Wear Pad OD (in)** | 8.340 |

### Bit Distances

**Bend (Bit to Bend):** 6.11 ft, **Survey (Bit to Survey):** 62.00 ft

### Directional Comments

8" Motor 7/8 5.9 FXD 1.50 SLICK. Flow Rate: 400-900, Max Diff: 1330, Max Torq.: 22020 ft/lbs. RPG 0.166

### MWD Comments

### POOH Reason

Total Depth/Casing Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *9 7/8" TKC66*, Style: *PDC*, Gauge Length (in): *0.00*, Size (in): *9.87* | Reed | A262113 | 6 5/8" Reg Pin | | | 9.875 | | 1.00 | 1.00 |
| **Mud Motor** Description: *8" 1.50° FXD 7/8 5.9 SLICK*, Size (in): *8.00*, Bend Angle (°): *1.5*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *5.9* | Aim | 800-40-009 | 6 5/8" Reg Box | 6 5/8" Reg Box | | 8.000 | | 37.86 | 38.86 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | 800700AIM | 6 5/8" Reg Box | 6 5/8" Reg Pin | 2.875 | 8.030 | | 3.92 | 42.78 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001002 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.120 | | 30.77 | 73.55 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM80001014 | 6 5/8" Reg Box | 6 5/8" Reg Pin | 3.313 | 8.060 | | 30.60 | 104.15 |
| **Crossover Sub** Description: *X-O 4 1/2 XH Box X 6 5/8 Reg Pin*, Type: *Steel* | DTI | DR38953 | 4 1/2" XH Box | 6 5/8" Reg Pin | 2.875 | 8.040 | | 3.58 | 107.73 |
| **Float/Crossover Sub** Description: *XOver (4 1/2 IF Box x 4 1/2 XH Pin)*, Type: *Steel* | DTI | DR6719 | 4 1/2" IF Box | 4 1/2" XH Pin | 2.813 | 6.530 | | 2.31 | 110.04 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-08 | 23:40 | 00:25 | 06-09 | 10000.00 | 10068.00 | |
| Survey | 46 | 06-09 | 00:25 | 00:30 | 06-09 | 10068.00 | 10068.00 | Inclination (°): *2.070*, Azimuth (°): *72.370*, TVD (ft): *9985.96*, Dogleg (º/100 ft): *1.28*, Sensor Depth (ft): *10006.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-09 | 00:30 | 01:45 | 06-09 | 10068.00 | 10163.00 | |
| Survey | 46 | 06-09 | 01:45 | 01:50 | 06-09 | 10163.00 | 10163.00 | Inclination (°): *2.070*, Azimuth (°): *63.850*, TVD (ft): *10080.89*, Dogleg (º/100 ft): *0.32*, Sensor Depth (ft): *10101.00*, Bit To Sensor (ft): *62.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-09 | 01:50 | 03:05 | 06-09 | 10163.00 | 10258.00 | |
| Survey | 46 | 06-09 | 03:05 | 03:10 | 06-09 | 10258.00 | 10258.00 | Inclination (°): *1.980*, Azimuth (°): *69.740*, TVD (ft): *10175.83*, Dogleg (º/100 ft): *0.24*, Sensor Depth (ft): *10196.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-09 | 03:10 | 04:35 | 06-09 | 10258.00 | 10352.00 | |
| Survey | 46 | 06-09 | 04:35 | 04:40 | 06-09 | 10352.00 | 10352.00 | Inclination (°): *1.710*, Azimuth (°): *79.840*, TVD (ft): *10269.79*, Dogleg (º/100 ft): *0.45*, Sensor Depth (ft): *10290.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-09 | 04:40 | 05:55 | 06-09 | 10352.00 | 10447.00 | |
| Survey | 46 | 06-09 | 05:55 | 06:00 | 06-09 | 10447.00 | 10447.00 | Inclination (°): *1.360*, Azimuth (°): *78.790*, TVD (ft): *10364.75*, Dogleg (º/100 ft): *0.37*, Sensor Depth (ft): *10385.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-09 | 06:00 | 07:25 | 06-09 | 10447.00 | 10542.00 | |
| Survey | 46 | 06-09 | 07:25 | 07:30 | 06-09 | 10542.00 | 10542.00 | Inclination (°): *1.190*, Azimuth (°): *72.290*, TVD (ft): *10459.73*, Dogleg (º/100 ft): *0.23*, Sensor Depth (ft): *10480.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-09 | 07:30 | 08:45 | 06-09 | 10542.00 | 10637.00 | |
| Survey | 46 | 06-09 | 08:45 | 08:50 | 06-09 | 10637.00 | 10637.00 | Inclination (°): *0.570*, Azimuth (°): *21.050*, TVD (ft): *10554.72*, Dogleg (º/100 ft): *0.99*, Sensor Depth (ft): *10575.00*, Bit To Sensor (ft): *62.00* |
| Rotary Drill | 1 | 06-09 | 08:50 | 10:10 | 06-09 | 10637.00 | 10731.00 | |
| Survey | 46 | 06-09 | 10:10 | 10:15 | 06-09 | 10731.00 | 10731.00 | Inclination (°): *0.310*, Azimuth (°): *1.620*, TVD (ft): *10648.72*, Dogleg (º/100 ft): *0.32*, Sensor Depth (ft): *10669.00*, Bit To Sensor (ft): *62.00* |
| Circulating | 3 | 06-09 | 10:15 | 11:55 | 06-09 | | | Circ. to POOH @ Casing point. |
| Pooh | 7 | 06-09 | 11:55 | 17:00 | 06-09 | | | POOH |
| Change BHA | 6 | 06-09 | 17:00 | 18:00 | 06-09 | | | L/D BHA #7 |
| Standby | 15 | 06-09 | 18:00 | 06:00 | 06-10 | | | Standby while running casing |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Monday, Jun 10 00:00 - 23:59 (Day of 43)

**Billing:** $2,300.00 ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 | **Rotating SPM** | |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 | **Sliding SPM** | |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 | **Motor RPM** | - |
| **Distance Slid (ft)** | 0.00 | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-09 | 18:00 | 06:00 | 06-10 | | | Standby while running casing |
| Standby | 15 | 06-10 | 06:00 | 00:00 | 06-11 | | | Standby while cementing and prepping for rig skid. |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Tuesday, Jun 11 00:00 - 23:59 (Day of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-10 | 06:00 | 00:00 | 06-11 | | | Standby while cementing and prepping for rig skid. |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Wednesday, Jun 12 00:00 - 23:59 (Day 19 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Thursday, Jun 13 00:00 - 23:59 (Day 20 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Friday, Jun 14 00:00 - 23:59 (Day 21 of 43)

**Billing:** $17,466.25 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 10731.00 | **Downhole Hours** | 15.75 |
| **Bit Depth (ft)** | 11095.00 | **Drilling Hours** | 3.42 |
| **Bottom Hole Depth (ft)** | 11095.00 | **Hours Circulating** | 0.92 |
| **Total Distance (ft)** | 364.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 364.00 | **Hours Rotating** | 3.42 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | 0.09 | | |
| **Inclination Out** | 0.84 | | |
| **Azimuth In** | 256.94 | **% Hours Rotating** | 100% |
| **Azimuth Out** | 218.18 | **% Hours Sliding** | 0% |
| **AVG Total ROP (ft/h)** | 106.54 | **% Distance Sliding** | 0% |
| **AVG Rotating ROP (ft/h)** | 106.54 | **% Distance Rotating** | 100% |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 25.00 - 25.00 |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | 78.00 - 78.00 |
| **Sliding SPM** | |
| **Motor RPM** | 220.00 - 242.00 |
| **Surface RPM** | 30.00 - 30.00 |
| **Flow Rate (gpm)** | 250.00 - 250.00 |
| **On Bottom Pressure (psi)** | 2500.00 - 2500.00 |
| **Off Bottom Pressure (psi)** | 1300.00 - 1300.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #8 - Intermediate

**Date In: Jun 14, 2019, 8:15 Date Out: Jun 15, 2019, 12:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | Halliburton |
| **S/N** | 13085986 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 3.42 |
| **Total Drilled for Day (ft)** | 364.00 |
| **Drilling Hours for BHA** | 7.58 |
| **Total Drilled for BHA (ft)** | 839.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 6/7, 8.0 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.77 |
| **Wear Pad OD (in)** | 5.300 |

### Bit Distances

**Bend (Bit to Bend):** 4.30 ft, **Survey (Bit to Survey):** 64.00 ft

### Directional Comments

5" Motor 6/7 8.0 FBH 1.50 w/ 6 1/2" NBS . Flow Rate: 150-350, RPG 0.77. Bit:(2 Runs) 6 3/4" Halliburton GTD64DM, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Change Bottom Hole Assembly:** KOP

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" Halliburton GTD64DM*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *6.75* | Halliburton | 13085986 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 1.5° FBH w/ 6 1/2" NBS*, Size (in): *5.00*, Bend Angle (°): *1.5*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | 500-36-084 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.24 | 30.24 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.19 |
| **Stabilizer** Description: *6 1/2" NM STAB* | DR | DR38471 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 4.46 | 37.65 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 40.87 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 71.46 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 102.07 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 105.65 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 1048.07 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-14 | 00:00 | 06:00 | 06-14 | | | Standby. Skid rig from 552H. Nipple Up |
| Standby | 15 | 06-14 | 06:00 | 07:00 | 06-14 | | | Standby |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Change BHA | 6 | 06-14 | 07:00 | 08:15 | 06-14 | | | P/U BHA |
| TIH | 8 | 06-14 | 08:15 | 11:00 | 06-14 | | | |
| P/U DP | 29 | 06-14 | 11:00 | 19:20 | 06-14 | | | |
| Drilling Cement | 17 | 06-14 | 19:20 | 20:15 | 06-14 | 10620.00 | 10731.00 | Drilling Cement and Float Equipment |
| Rotary Drill | 1 | 06-14 | 20:15 | 21:05 | 06-14 | 10731.00 | 10808.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *250.00*, Strokes Per Minute: *78.00* |
| Survey | 46 | 06-14 | 21:05 | 21:10 | 06-14 | 10808.00 | 10808.00 | Inclination (°): *0.090*, Azimuth (°): *256.940*, TVD (ft): *10723.71*, Dogleg (º/100 ft): *0.46*, Sensor Depth (ft): *10744.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-14 | 21:10 | 22:00 | 06-14 | 10808.00 | 10904.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *250.00*, Strokes Per Minute: *78.00* |
| Survey | 46 | 06-14 | 22:00 | 22:05 | 06-14 | 10904.00 | 10904.00 | Inclination (°): *0.440*, Azimuth (°): *133.280*, TVD (ft): *10819.71*, Dogleg (º/100 ft): *0.52*, Sensor Depth (ft): *10840.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-14 | 22:05 | 23:00 | 06-14 | 10904.00 | 10999.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *250.00*, Strokes Per Minute: *78.00* |
| Survey | 46 | 06-14 | 23:00 | 23:05 | 06-14 | 10999.00 | 10999.00 | Inclination (°): *1.270*, Azimuth (°): *166.680*, TVD (ft): *10914.70*, Dogleg (º/100 ft): *0.98*, Sensor Depth (ft): *10935.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-14 | 23:05 | 23:55 | 06-14 | 10999.00 | 11095.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *250.00*, Strokes Per Minute: *78.00* |
| Survey | 46 | 06-14 | 23:55 | 00:00 | 06-15 | 11095.00 | 11095.00 | Inclination (°): *0.840*, Azimuth (°): *218.180*, TVD (ft): *11010.69*, Dogleg (º/100 ft): *1.04*, Sensor Depth (ft): *11031.00*, Bit To Sensor (ft): *64.00* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Saturday, Jun 15 00:00 - 23:59 (Day 22 of 43)

**Billing:** $14,800.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 11095.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 11735.00 | **Drilling Hours** | 10.25 |
| **Bottom Hole Depth (ft)** | 11735.00 | **Hours Circulating** | 1.92 |
| **Total Distance (ft)** | 640.00 | **Hours Sliding** | 6.08 |
| **Distance Rotated (ft)** | 475.00 | **Hours Rotating** | 4.17 |
| **Distance Slid (ft)** | 165.00 | | |
| **Inclination In** | 0.62 | | |
| **Inclination Out** | 6.77 | | |
| **Azimuth In** | 257.65 | **% Hours Rotating** | 41% |
| **Azimuth Out** | 358.90 | **% Hours Sliding** | 59% |
| **AVG Total ROP (ft/h)** | 62.44 | **% Distance Sliding** | 26% |
| **AVG Rotating ROP (ft/h)** | 114.00 | **% Distance Rotating** | 74% |
| **AVG Sliding ROP (ft/h)** | 27.12 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 25.00 - 25.00 |
| **Sliding WOB (klbs)** | 25.00 - 25.00 |
| **Rotating SPM** | 78.00 - 85.00 |
| **Sliding SPM** | 85.00 - 85.00 |
| **Motor RPM** | 25.00 - 242.00 |
| **Surface RPM** | 30.00 - 30.00 |
| **Flow Rate (gpm)** | 250.00 - 275.00 |
| **On Bottom Pressure (psi)** | 2500.00 - 3400.00 |
| **Off Bottom Pressure (psi)** | 1300.00 - 2580.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

### BHA #8 - Intermediate

**Date In: Jun 14, 2019, 8:15 Date Out: Jun 15, 2019, 12:00**

#### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | Halliburton |
| **S/N** | 13085986 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 4.17 |
| **Total Drilled for Day (ft)** | 475.00 |
| **Drilling Hours for BHA** | 7.58 |
| **Total Drilled for BHA (ft)** | 839.00 |

#### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 6/7, 8.0 |
| **Bend Angle** | 1.5 |
| **Speed (rev/gal)** | 0.77 |
| **Wear Pad OD (in)** | 5.300 |

#### Bit Distances

**Bend (Bit to Bend):** 4.30 ft, **Survey (Bit to Survey):** 64.00 ft

#### Directional Comments

5" Motor 6/7 8.0 FBH 1.50 w/ 6 1/2" NBS . Flow Rate: 150-350, RPG 0.77. Bit:(2 Runs) 6 3/4" Halliburton GTD64DM, 6x16's, 1.17 TFA.

#### MWD Comments

#### POOH Reason

**Change Bottom Hole Assembly:** KOP

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" Halliburton GTD64DM*, Style: *PDC*, Gauge Length (in): *4.00*, Size (in): *6.75* | Halliburton | 13085986 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 1.5° FBH w/ 6 1/2" NBS*, Size (in): *5.00*, Bend Angle (°): *1.5*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | 500-36-084 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.24 | 30.24 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.19 |
| **Stabilizer** Description: *6 1/2" NM STAB* | DR | DR38471 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 4.46 | 37.65 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 40.87 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 71.46 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 102.07 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 105.65 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 1048.07 |

### MWD Items

No Items

## BHA #9 - Curve

**Date In:** Jun 15, 2019, 12:00 **Date Out:** Jun 17, 2019, 1:00

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A256535 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 6.08 |
| **Total Drilled for Day (ft)** | 165.00 |
| **Drilling Hours for BHA** | 21.75 |
| **Total Drilled for BHA (ft)** | 985.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 6/7, 8.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.77 |
| **Wear Pad OD (in)** | 5.300 |

### Bit Distances

**Bend (Bit to Bend):** 4.15 ft, **Survey (Bit to Survey):** 59.00 ft, **Gamma:** 43.00 ft

### Directional Comments

5" Motor 6/7 8.0 FBH 2.12 w/ SS . Flow Rate: 150-350, RPG 0.77. Bit:(3 Runs) 6 3/4" REED SK613MG1C, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

Total Depth/Casing Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SK613MGIC*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A256535 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 2.12° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *2.12*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | MM360500-0096 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.23 | 30.23 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.18 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 36.40 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 66.99 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 97.60 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 101.18 |
| **Drill Pipe** Description: *12 STANDS DP*, Style: *Slick* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 4.500 | | 1131.32 | 1232.50 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 2174.92 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 06-14 | 23:55 | 00:00 | 06-15 | 11095.00 | 11095.00 | Inclination (°): *0.840*, Azimuth (°): *218.180*, TVD (ft): *11010.69*, Dogleg (º/100 ft): *1.04*, Sensor Depth (ft): *11031.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-15 | 00:00 | 00:50 | 06-15 | 11095.00 | 11190.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *250.00*, Strokes Per Minute: *78.00* |
| Survey | 46 | 06-15 | 00:50 | 00:55 | 06-15 | 11190.00 | 11190.00 | Inclination (°): *0.620*, Azimuth (°): *257.650*, TVD (ft): *11105.68*, Dogleg (º/100 ft): *0.56*, Sensor Depth (ft): *11126.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-15 | 00:55 | 01:45 | 06-15 | 11190.00 | 11285.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85.00* |
| Survey | 46 | 06-15 | 01:45 | 01:50 | 06-15 | 11285.00 | 11285.00 | Inclination (°): *0.880*, Azimuth (°): *283.490*, TVD (ft): *11200.67*, Dogleg (º/100 ft): *0.44*, Sensor Depth (ft): *11221.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-15 | 01:50 | 02:40 | 06-15 | 11285.00 | 11379.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85.00* |
| Survey | 46 | 06-15 | 02:40 | 02:45 | 06-15 | 11379.00 | 11379.00 | Inclination (°): *1.450*, Azimuth (°): *320.660*, TVD (ft): *11294.65*, Dogleg (º/100 ft): *0.98*, Sensor Depth (ft): *11315.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-15 | 02:45 | 03:30 | 06-15 | 11379.00 | 11476.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85.00* |
| Survey | 46 | 06-15 | 03:30 | 03:35 | 06-15 | 11476.00 | 11476.00 | Inclination (°): *1.010*, Azimuth (°): *159.650*, TVD (ft): *11391.65*, Dogleg (º/100 ft): *2.50*, Sensor Depth (ft): *11412.00*, Bit To Sensor (ft): *64.00* |
| Rotary Drill | 1 | 06-15 | 03:35 | 04:30 | 06-15 | 11476.00 | 11570.00 | Pressure On (psi): *2500.00*, Pressure Off (psi): *1300.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *30*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85.00* |
| Survey | 46 | 06-15 | 04:30 | 04:35 | 06-15 | 11570.00 | 11570.00 | Inclination (°): *1.890*, Azimuth (°): *194.100*, TVD (ft): *11485.62*, Dogleg (º/100 ft): *1.28*, Sensor Depth (ft): *11506.00*, Bit To Sensor (ft): *64.00*, Temperature (ºF): *152.00* |
| Circulating | 3 | 06-15 | 04:35 | 05:00 | 06-15 | | | Circ. B/U before POOH |
| Circulating | 3 | 06-15 | 05:00 | 06:30 | 06-15 | | | Circ. [ CHANGE BHA ] |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Poon | 7 | 06-15 | 06:30 | 10:15 | 06-15 | | | POOH for [ BHA ] |
| Change BHA | 6 | 06-15 | 10:15 | 12:00 | 06-15 | | | P/U BHA # 9 |
| TIH | 8 | 06-15 | 12:00 | 17:45 | 06-15 | | | TIH W/ BHA #9 |
| Slide Drill | 2 | 06-15 | 17:45 | 19:50 | 06-15 | 11570.00 | 11661.00 | Pressure On (psi): *3400.00*, Pressure Off (psi): *2580.00*, Weight On Bit (klbs): *25.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85*, Toolface: *0*, Toolface Type: *magnetic* |
| Survey | 46 | 06-15 | 19:50 | 19:55 | 06-15 | 11661.00 | 11661.00 | Inclination (°): *2.730*, Azimuth (°): *325.940*, TVD (ft): *11581.58*, Dogleg (º/100 ft): *4.41*, Sensor Depth (ft): *11602.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-15 | 19:55 | 23:10 | 06-15 | 11661.00 | 11709.00 | Pressure On (psi): *3400.00*, Pressure Off (psi): *2580.00*, Weight On Bit (klbs): *25.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85*, Toolface: *0*, Toolface Type: *magnetic* |
| Survey | 46 | 06-15 | 23:10 | 23:15 | 06-15 | 11709.00 | 11709.00 | Inclination (°): *6.770*, Azimuth (°): *358.900*, TVD (ft): *11629.41*, Dogleg (º/100 ft): *9.83*, Sensor Depth (ft): *11650.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-15 | 23:15 | 00:00 | 06-16 | 11709.00 | 11735.00 | Pressure On (psi): *3400.00*, Pressure Off (psi): *2580.00*, Weight On Bit (klbs): *25.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85*, Toolface: *0*, Toolface Type: *gravity* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, Jun 16 00:00 - 23:59 (Day 23 of 43)

**Billing:** $6,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 11735.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 12555.00 | **Drilling Hours** | 15.67 |
| **Bottom Hole Depth (ft)** | 12555.00 | **Hours Circulating** | 1.67 |
| **Total Distance (ft)** | 820.00 | **Hours Sliding** | 14.17 |
| **Distance Rotated (ft)** | 152.00 | **Hours Rotating** | 1.50 |
| **Distance Slid (ft)** | 668.00 | | |
| **Inclination In** | 7.30 | | |
| **Inclination Out** | 89.27 | | |
| **Azimuth In** | 1.45 | **% Hours Rotating** | 10% |
| **Azimuth Out** | 359.42 | **% Hours Sliding** | 90% |
| **AVG Total ROP (ft/h)** | 51.53 | **% Distance Sliding** | 81% |
| **AVG Rotating ROP (ft/h)** | 101.33 | **% Distance Rotating** | 19% |
| **AVG Sliding ROP (ft/h)** | 46.53 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 15.00 - 15.00 |
| **Sliding WOB (klbs)** | 20.00 - 25.00 |
| **Rotating SPM** | 109.00 - 109.00 |
| **Sliding SPM** | 85.00 - 103.00 |
| **Motor RPM** | 25.00 - 25.00 |
| **Surface RPM** | 25.00 - 25.00 |
| **Flow Rate (gpm)** | 275.00 - 331.00 |
| **On Bottom Pressure (psi)** | 3400.00 - 4300.00 |
| **Off Bottom Pressure (psi)** | 2580.00 - 3600.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #9 - Curve

**Date In: Jun 15, 2019, 12:00 Date Out: Jun 17, 2019, 1:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A256535 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 15.67 |
| **Total Drilled for Day (ft)** | 820.00 |
| **Drilling Hours for BHA** | 21.75 |
| **Total Drilled for BHA (ft)** | 985.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 6/7, 8.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.77 |
| **Wear Pad OD (in)** | 5.300 |

### Bit Distances

**Bend (Bit to Bend):** 4.15 ft, **Survey (Bit to Survey):** 59.00 ft, **Gamma:** 43.00 ft

### Directional Comments

5" Motor 6/7 8.0 FBH 2.12 w/ SS . Flow Rate: 150-350, RPG 0.77. Bit:(3 Runs) 6 3/4" REED SK613MG1C, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

Total Depth/Casing Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SK613MGIC*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A256535 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 2.12° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *2.12*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | MM360500-0096 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.23 | 30.23 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.18 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 36.40 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 66.99 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 97.60 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 101.18 |
| **Drill Pipe** Description: *12 STANDS DP*, Style: *Slick* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 4.500 | | 1131.32 | 1232.50 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 2174.92 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Slide Drill | 2 | 06-15 | 23:15 | 00:00 | 06-16 | 11709.00 | 11735.00 | Pressure On (psi): *3400.00*, Pressure Off (psi): *2580.00*, Weight On Bit (klbs): *25.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85*, Toolface: *0*, Toolface Type: *gravity* |
| Slide Drill | 2 | 06-16 | 00:00 | 00:40 | 06-16 | 11735.00 | 11757.00 | Pressure On (psi): *3400.00*, Pressure Off (psi): *2580.00*, Weight On Bit (klbs): *25.00*, Flow Rate (gpm): *275.00*, Strokes Per Minute: *85*, Toolface: *0*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 00:40 | 00:45 | 06-16 | 11757.00 | 11757.00 | Inclination (°): *7.300*, Azimuth (°): *1.450*, TVD (ft): *11677.05*, Dogleg (º/100 ft): *1.28*, Sensor Depth (ft): *11698.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 00:45 | 01:45 | 06-16 | 11757.00 | 11820.00 | Toolface: *0*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 01:45 | 01:50 | 06-16 | 11820.00 | 11820.00 | Inclination (°): *12.970*, Azimuth (°): *10.060*, TVD (ft): *11739.05*, Dogleg (º/100 ft): *9.29*, Sensor Depth (ft): *11761.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 01:50 | 03:35 | 06-16 | 11820.00 | 11852.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *350*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 03:35 | 03:40 | 06-16 | 11852.00 | 11852.00 | Inclination (°): *15.560*, Azimuth (°): *12.260*, TVD (ft): *11770.06*, Dogleg (º/100 ft): *8.27*, Sensor Depth (ft): *11793.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 03:40 | 04:55 | 06-16 | 11852.00 | 11900.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *350*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 04:55 | 05:00 | 06-16 | 11900.00 | 11900.00 | Inclination (°): *21.140*, Azimuth (°): *12.430*, TVD (ft): *11815.60*, Dogleg (º/100 ft): *11.63*, Sensor Depth (ft): *11841.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 05:00 | 06:10 | 06-16 | 11900.00 | 11946.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *350*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 06:10 | 06:15 | 06-16 | 11946.00 | 11946.00 | Inclination (°): *26.550*, Azimuth (°): *14.720*, TVD (ft): *11857.66*, Dogleg (º/100 ft): *11.93*, Sensor Depth (ft): *11887.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 06:15 | 07:45 | 06-16 | 11946.00 | 11994.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *330*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 07:45 | 08:00 | 06-16 | 11994.00 | 11994.00 | Inclination (°): *32.840*, Azimuth (°): *17.000*, TVD (ft): *11899.33*, Dogleg (º/100 ft): *13.31*, Sensor Depth (ft): *11935.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 08:00 | 09:00 | 06-16 | 11994.00 | 12040.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *315*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 09:00 | 09:05 | 06-16 | 12040.00 | 12040.00 | Inclination (°): *38.070*, Azimuth (°): *17.790*, TVD (ft): *11936.79*, Dogleg (º/100 ft): *11.41*, Sensor Depth (ft): *11981.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 09:05 | 09:55 | 06-16 | 12040.00 | 12088.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *315*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 09:55 | 10:05 | 06-16 | 12088.00 | 12088.00 | Inclination (°): *44.620*, Azimuth (°): *13.840*, TVD (ft): *11972.81*, Dogleg (º/100 ft): *14.68*, Sensor Depth (ft): *12029.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 10:05 | 10:50 | 06-16 | 12088.00 | 12135.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *310*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 10:50 | 11:00 | 06-16 | 12135.00 | 12135.00 | Inclination (°): *51.160*, Azimuth (°): *10.670*, TVD (ft): *12004.32*, Dogleg (º/100 ft): *14.78*, Sensor Depth (ft): *12076.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 11:00 | 11:50 | 06-16 | 12135.00 | 12183.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *300*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 11:50 | 12:05 | 06-16 | 12183.00 | 12183.00 | Inclination (°): *57.230*, Azimuth (°): *6.190*, TVD (ft): *12032.39*, Dogleg (º/100 ft): *14.73*, Sensor Depth (ft): *12124.00*, Bit To Sensor (ft): *59.00* |
| Rotary Drill | 1 | 06-16 | 12:05 | 12:15 | 06-16 | 12183.00 | 12200.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |
| Slide Drill | 2 | 06-16 | 12:15 | 12:45 | 06-16 | 12200.00 | 12230.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *300*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 12:45 | 12:55 | 06-16 | 12230.00 | 12230.00 | Inclination (°): *61.580*, Azimuth (°): *2.680*, TVD (ft): *12056.32*, Dogleg (º/100 ft): *11.27*, Sensor Depth (ft): *12171.00*, Bit To Sensor (ft): *59.00* |
| Rotary Drill | 1 | 06-16 | 12:55 | 13:15 | 06-16 | 12230.00 | 12278.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |
| Survey | 46 | 06-16 | 13:15 | 13:25 | 06-16 | 12278.00 | 12278.00 | Inclination (°): *64.180*, Azimuth (°): *0.040*, TVD (ft): *12078.20*, Dogleg (º/100 ft): *7.30*, Sensor Depth (ft): *12219.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 13:25 | 14:15 | 06-16 | 12278.00 | 12326.00 | Pressure On (psi): *4000.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *325.00*, Strokes Per Minute: *103*, Toolface: *0*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 14:15 | 14:25 | 06-16 | 12326.00 | 12326.00 | Inclination (°): *64.090*, Azimuth (°): *358.110*, TVD (ft): *12099.14*, Dogleg (º/100 ft): *3.62*, Sensor Depth (ft): *12267.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 14:25 | 15:00 | 06-16 | 12326.00 | 12366.00 | Toolface: *0*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-16 | 15:00 | 15:05 | 06-16 | 12366.00 | 12373.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 06-16 | 15:05 | 15:10 | 06-16 | 12373.00 | 12373.00 | Inclination (°): *68.700*, Azimuth (°): *356.700*, TVD (ft): *12117.96*, Dogleg (º/100 ft): *10.19*, Sensor Depth (ft): *12314.00*, Bit To Sensor (ft): *59.00* |
| Troubleshoot | 34 | 06-16 | 15:10 | 16:00 | 06-16 | | | due to loss f pressure |
| Slide Drill | 2 | 06-16 | 16:00 | 16:30 | 06-16 | 12373.00 | 12413.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *103*, Toolface: *0*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-16 | 16:30 | 16:40 | 06-16 | 12413.00 | 12420.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |
| Survey | 46 | 06-16 | 16:40 | 16:50 | 06-16 | 12420.00 | 12420.00 | Inclination (°): *75.380*, Azimuth (°): *355.910*, TVD (ft): *12132.44*, Dogleg (º/100 ft): *14.30*, Sensor Depth (ft): *12361.00*, Bit To Sensor (ft): *59.00* |
| Rotary Drill | 1 | 06-16 | 16:50 | 17:05 | 06-16 | 12420.00 | 12430.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |
| Slide Drill | 2 | 06-16 | 17:05 | 17:40 | 06-16 | 12430.00 | 12467.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *103*, Toolface: *0*, Toolface Type: *gravity* |
| Survey | 46 | 06-16 | 17:40 | 17:45 | 06-16 | 12467.00 | 12467.00 | Inclination (°): *80.700*, Azimuth (°): *358.110*, TVD (ft): *12142.18*, Dogleg (º/100 ft): *12.21*, Sensor Depth (ft): *12408.00*, Bit To Sensor (ft): *59.00* |
| Slide Drill | 2 | 06-16 | 17:45 | 18:10 | 06-16 | 12467.00 | 12492.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *103*, Toolface: *315*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-16 | 18:10 | 18:25 | 06-16 | 12492.00 | 12515.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |
| Survey | 46 | 06-16 | 18:25 | 18:30 | 06-16 | 12515.00 | 12515.00 | Inclination (°): *84.440*, Azimuth (°): *0.220*, TVD (ft): *12148.38*, Dogleg (º/100 ft): *8.93*, Sensor Depth (ft): *12456.00*, Bit To Sensor (ft): *59.00* |
| Rotary Drill | 1 | 06-16 | 18:30 | 18:45 | 06-16 | 12515.00 | 12555.00 | Pressure On (psi): *4300.00*, Pressure Off (psi): *3600.00*, Weight On Bit (klbs): *15.00*, Surface RPM: *25*, Surface Torque (ft lbf): *10000.00*, Flow Rate (gpm): *331.00*, Strokes Per Minute: *109.00* |
| Survey | 46 | 06-16 | 18:45 | 18:50 | 06-16 | 12555.00 | 12555.00 | Inclination (°): *89.270*, Azimuth (°): *359.420*, TVD (ft): *12150.58*, Dogleg (º/100 ft): *12.24*, Sensor Depth (ft): *12496.00*, Bit To Sensor (ft): *59.00* |
| Circulating | 3 | 06-16 | 18:50 | 20:30 | 06-16 | | | Circ. 2 B/U before POOH |
| Pooh | 7 | 06-16 | 20:30 | 00:00 | 06-17 | | | POOH. |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Monday, Jun 17 00:00 - 23:59 (Day 24 of 43)

**Billing:** $2,300.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 1.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 25.00 - 25.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

### BHA #9 - Curve

**Date In: Jun 15, 2019, 12:00 Date Out: Jun 17, 2019, 1:00**

#### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A256535 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 21.75 |
| **Total Drilled for BHA (ft)** | 985.00 |

#### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 6/7, 8.0 |
| **Bend Angle** | 2.12 |
| **Speed (rev/gal)** | 0.77 |
| **Wear Pad OD (in)** | 5.300 |

#### Bit Distances

**Bend (Bit to Bend):** 4.15 ft, **Survey (Bit to Survey):** 59.00 ft, **Gamma:** 43.00 ft

#### Directional Comments

5" Motor 6/7 8.0 FBH 2.12 w/ SS . Flow Rate: 150-350, RPG 0.77. Bit:(3 Runs) 6 3/4" REED SK613MG1C, 6x16's, 1.17 TFA.

#### MWD Comments

#### POOH Reason

Total Depth/Casing Point

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SK613MGIC*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A256535 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 6/7 8.0 - 2.12° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *2.12*, Rotor Lobe: *6*, Stator Lobe: *7*, Stator Stage: *8* | NOV | MM360500-0096 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 29.23 | 30.23 |
| **Float Sub** Description: *FLOAT SUB*, Type: *Steel* | DR | DR37003 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 2.95 | 33.18 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 36.40 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 66.99 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 97.60 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 101.18 |
| **Drill Pipe** Description: *12 STANDS DP*, Style: *Slick* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 4.500 | | 1131.32 | 1232.50 |
| **HWDP** Description: *10 Stds HWDP*, Style: *Spiral* | | | GPDS42 Box | GPDS42 Pin | 2.750 | 5.250 | | 942.42 | 2174.92 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Pooh | 7 | 06-16 | 20:30 | 00:00 | 06-17 | | | POOH. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Change BHA | 6 | 06-17 | 00:00 | 01:00 | 06-17 | | | Pull MWD, Drain Motor, Break Bit, Rack Back BHA |
| Standby | 15 | 06-17 | 01:00 | 00:00 | 06-18 | | | Standby during Wireline Logging Operations |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Tuesday, Jun 18 00:00 - 23:59 (Day 25 of 43)

**Billing:** $20,500.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 12555.00 | **Downhole Hours** | 7.50 |
| **Bit Depth (ft)** | 12623.00 | **Drilling Hours** | 0.17 |
| **Bottom Hole Depth (ft)** | 12623.00 | **Hours Circulating** | 0.50 |
| **Total Distance (ft)** | 68.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 68.00 | **Hours Rotating** | 0.17 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | 100% |
| **Azimuth Out** | | **% Hours Sliding** | 0% |
| **AVG Total ROP (ft/h)** | 408.00 | **% Distance Sliding** | 0% |
| **AVG Rotating ROP (ft/h)** | 408.00 | **% Distance Rotating** | 100% |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 28.00 - 28.00 |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | 93.00 - 93.00 |
| **Sliding SPM** | |
| **Motor RPM** | 40.00 - 75.00 |
| **Surface RPM** | 60.00 - 60.00 |
| **Flow Rate (gpm)** | 300.00 - 300.00 |
| **On Bottom Pressure (psi)** | 4350.00 - 4350.00 |
| **Off Bottom Pressure (psi)** | 3300.00 - 3300.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #10 - Lateral

**Date In: Jun 18, 2019, 16:30 Date Out: Jun 23, 2019, 7:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A257718 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 0.17 |
| **Total Drilled for Day (ft)** | 68.00 |
| **Drilling Hours for BHA** | 73.83 |
| **Total Drilled for BHA (ft)** | 7360.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 7/8, 10.6 |
| **Bend Angle** | 1.75 |
| **Speed (rev/gal)** | 0.85 |
| **Wear Pad OD (in)** | 5.125 |

### Bit Distances

**Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft

### Directional Comments

5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit: (1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-17 | 01:00 | 00:00 | 06-18 | | | Standby during Wireline Logging Operations |
| Standby | 15 | 06-18 | 00:00 | 15:15 | 06-18 | | | Standby during Wireline Logging Operations |
| Change BHA | 6 | 06-18 | 15:15 | 16:30 | 06-18 | | | P/U BHA # 10 |
| TIH | 8 | 06-18 | 16:30 | 22:30 | 06-18 | | | TIH W/ BHA #10 |
| Other | 16 | 06-18 | 22:30 | 23:15 | 06-18 | | | Relog GR f/12520 t/12555 |
| Circulating | 3 | 06-18 | 23:15 | 23:45 | 06-18 | | | Circ. B/U |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-18 | 23:45 | 23:55 | 06-18 | 12555.00 | 12623.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-18 | 23:55 | 00:05 | 06-19 | 12623.00 | 12623.00 | Inclination (°): *88.840*, Azimuth (°): *358.720*, TVD (ft): *12151.73*, Dogleg (º/100 ft): *1.17*, Sensor Depth (ft): *12566.00*, Bit To Sensor (ft): *57.00*, Temperature (ºF): *149.00* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Wednesday, Jun 19 00:00 - 23:59 (Day 26 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 12623.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 15575.00 | **Drilling Hours** | 21.25 |
| **Bottom Hole Depth (ft)** | 15575.00 | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 2952.00 | **Hours Sliding** | 5.75 |
| **Distance Rotated (ft)** | 2598.00 | **Hours Rotating** | 15.50 |
| **Distance Slid (ft)** | 354.00 | | |
| **Inclination In** | 88.84 | | |
| **Inclination Out** | 93.36 | | |
| **Azimuth In** | 358.72 | **% Hours Rotating** | 73% |
| **Azimuth Out** | 357.93 | **% Hours Sliding** | 27% |
| **AVG Total ROP (ft/h)** | 138.92 | **% Distance Sliding** | 12% |
| **AVG Rotating ROP (ft/h)** | 167.61 | **% Distance Rotating** | 88% |
| **AVG Sliding ROP (ft/h)** | 61.57 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 23.00 - 28.00 |
| **Sliding WOB (klbs)** | 20.00 - 28.00 |
| **Rotating SPM** | 93.00 - 93.00 |
| **Sliding SPM** | 93.00 - 103.00 |
| **Motor RPM** | 40.00 - 75.00 |
| **Surface RPM** | 60.00 - 75.00 |
| **Flow Rate (gpm)** | 300.00 - 340.00 |
| **On Bottom Pressure (psi)** | 3600.00 - 4350.00 |
| **Off Bottom Pressure (psi)** | 2950.00 - 3700.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #10 - Lateral

**Date In: Jun 18, 2019, 16:30 Date Out: Jun 23, 2019, 7:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A257718 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 21.25 |
| **Total Drilled for Day (ft)** | 2952.00 |
| **Drilling Hours for BHA** | 73.83 |
| **Total Drilled for BHA (ft)** | 7360.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 7/8, 10.6 |
| **Bend Angle** | 1.75 |
| **Speed (rev/gal)** | 0.85 |
| **Wear Pad OD (in)** | 5.125 |

### Bit Distances

**Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft

### Directional Comments

5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit: (1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 06-18 | 23:55 | 00:05 | 06-19 | 12623.00 | 12623.00 | Inclination (°): *88.840*, Azimuth (°): *358.720*, TVD (ft): *12151.73*, Dogleg (º/100 ft): *1.17*, Sensor Depth (ft): *12566.00*, Bit To Sensor (ft): *57.00*, Temperature (ºF): *149.00* |
| Rotary Drill | 1 | 06-19 | 00:05 | 00:10 | 06-19 | 12623.00 | 12635.00 | Pressure On (psi): *4250.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 00:10 | 00:30 | 06-19 | 12635.00 | 12650.00 | Pressure On (psi): *3600.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *315*, Toolface Type: *gravity* |

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|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-19 | 00:30 | 00:45 | 06-19 | 12650.00 | 12718.00 | Pressure On (psi): *4250.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 00:45 | 00:50 | 06-19 | 12718.00 | 12718.00 | Inclination (°): *89.980*, Azimuth (°): *357.400*, TVD (ft): *12152.71*, Dogleg (º/100 ft): *1.84*, Sensor Depth (ft): *12661.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 00:50 | 01:00 | 06-19 | 12718.00 | 12730.00 | Pressure On (psi): *4250.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 01:00 | 01:10 | 06-19 | 12730.00 | 12750.00 | Pressure On (psi): *3600.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *20.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *315*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 01:10 | 01:25 | 06-19 | 12750.00 | 12813.00 | Pressure On (psi): *4250.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 01:25 | 01:30 | 06-19 | 12813.00 | 12813.00 | Inclination (°): *92.660*, Azimuth (°): *356.700*, TVD (ft): *12150.52*, Dogleg (º/100 ft): *2.92*, Sensor Depth (ft): *12756.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 01:30 | 01:55 | 06-19 | 12813.00 | 12907.00 | Pressure On (psi): *4250.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 01:55 | 02:00 | 06-19 | 12907.00 | 12907.00 | Inclination (°): *93.850*, Azimuth (°): *354.500*, TVD (ft): *12145.18*, Dogleg (º/100 ft): *2.66*, Sensor Depth (ft): *12850.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 02:00 | 02:05 | 06-19 | 12907.00 | 12920.00 | Pressure On (psi): *4250.00*, Pressure Off (psi): *2950.00*, Weight On Bit (klbs): *25.00*, Surface RPM: *60*, Surface Torque (ft lbf): *12.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 02:05 | 02:20 | 06-19 | 12920.00 | 12940.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *135*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 02:20 | 02:35 | 06-19 | 12940.00 | 13002.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 02:35 | 02:40 | 06-19 | 13002.00 | 13002.00 | Inclination (°): *92.660*, Azimuth (°): *354.240*, TVD (ft): *12139.79*, Dogleg (º/100 ft): *1.28*, Sensor Depth (ft): *12945.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 02:40 | 02:50 | 06-19 | 13002.00 | 13025.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 02:50 | 03:00 | 06-19 | 13025.00 | 13045.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *135*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 03:00 | 03:10 | 06-19 | 13045.00 | 13096.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 03:10 | 03:15 | 06-19 | 13096.00 | 13096.00 | Inclination (°): *91.160*, Azimuth (°): *354.850*, TVD (ft): *12136.66*, Dogleg (º/100 ft): *1.72*, Sensor Depth (ft): *13039.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 03:15 | 03:25 | 06-19 | 13096.00 | 13106.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 03:25 | 03:45 | 06-19 | 13106.00 | 13136.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *120*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 03:45 | 04:00 | 06-19 | 13136.00 | 13191.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 04:00 | 04:05 | 06-19 | 13191.00 | 13191.00 | Inclination (°): *90.860*, Azimuth (°): *355.820*, TVD (ft): *12134.98*, Dogleg (º/100 ft): *1.07*, Sensor Depth (ft): *13134.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 04:05 | 04:45 | 06-19 | 13191.00 | 13285.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 04:45 | 04:50 | 06-19 | 13285.00 | 13285.00 | Inclination (°): *89.850*, Azimuth (°): *356.790*, TVD (ft): *12134.40*, Dogleg (º/100 ft): *1.49*, Sensor Depth (ft): *13228.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 04:50 | 05:10 | 06-19 | 13285.00 | 13380.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 05:10 | 05:15 | 06-19 | 13380.00 | 13380.00 | Inclination (°): *88.400*, Azimuth (°): *357.490*, TVD (ft): *12135.85*, Dogleg (º/100 ft): *1.69*, Sensor Depth (ft): *13323.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 05:15 | 05:40 | 06-19 | 13380.00 | 13475.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 05:40 | 05:45 | 06-19 | 13475.00 | 13475.00 | Inclination (°): *88.700*, Azimuth (°): *355.910*, TVD (ft): *12138.26*, Dogleg (º/100 ft): *1.69*, Sensor Depth (ft): *13418.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 05:45 | 05:50 | 06-19 | 13475.00 | 13485.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 05:50 | 06:05 | 06-19 | 13485.00 | 13520.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *90*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 06:05 | 06:20 | 06-19 | 13520.00 | 13570.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 06:20 | 06:25 | 06-19 | 13570.00 | 13570.00 | Inclination (°): *90.420*, Azimuth (°): *358.280*, TVD (ft): *12138.99*, Dogleg (º/100 ft): *3.08*, Sensor Depth (ft): *13513.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 06:25 | 06:45 | 06-19 | 13570.00 | 13664.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 06:45 | 06:50 | 06-19 | 13664.00 | 13664.00 | Inclination (°): *91.470*, Azimuth (°): *358.990*, TVD (ft): *12137.43*, Dogleg (º/100 ft): *1.35*, Sensor Depth (ft): *13607.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 06:50 | 06:55 | 06-19 | 13664.00 | 13680.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |

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|---|---|---|---|---|---|---|---|---|
| Slide Drill | 2 | 06-19 | 06:55 | 07:05 | 06-19 | 13680.00 | 13705.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *150*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 07:05 | 07:25 | 06-19 | 13705.00 | 13759.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Surface RPM: *60*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 07:25 | 07:30 | 06-19 | 13759.00 | 13759.00 | Inclination (°): *90.460*, Azimuth (°): *359.420*, TVD (ft): *12135.84*, Dogleg (º/100 ft): *1.16*, Sensor Depth (ft): *13702.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 07:30 | 07:50 | 06-19 | 13759.00 | 13854.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 07:50 | 07:55 | 06-19 | 13854.00 | 13854.00 | Inclination (°): *90.460*, Azimuth (°): *1.970*, TVD (ft): *12135.07*, Dogleg (º/100 ft): *2.68*, Sensor Depth (ft): *13797.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 07:55 | 08:25 | 06-19 | 13854.00 | 13949.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 08:25 | 08:30 | 06-19 | 13949.00 | 13949.00 | Inclination (°): *90.770*, Azimuth (°): *1.890*, TVD (ft): *12134.05*, Dogleg (º/100 ft): *0.34*, Sensor Depth (ft): *13892.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 08:30 | 08:55 | 06-19 | 13949.00 | 14043.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 08:55 | 09:05 | 06-19 | 14043.00 | 14043.00 | Inclination (°): *90.460*, Azimuth (°): *3.730*, TVD (ft): *12133.04*, Dogleg (º/100 ft): *1.98*, Sensor Depth (ft): *13986.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 09:05 | 09:10 | 06-19 | 14043.00 | 14062.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 09:10 | 09:25 | 06-19 | 14062.00 | 14092.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *295*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 09:25 | 09:40 | 06-19 | 14092.00 | 14138.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 09:40 | 09:45 | 06-19 | 14138.00 | 14138.00 | Inclination (°): *90.150*, Azimuth (°): *359.690*, TVD (ft): *12132.54*, Dogleg (º/100 ft): *4.27*, Sensor Depth (ft): *14081.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 09:45 | 10:00 | 06-19 | 14138.00 | 14160.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 10:00 | 10:15 | 06-19 | 14160.00 | 14178.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *0*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 10:15 | 10:30 | 06-19 | 14178.00 | 14233.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 10:30 | 10:35 | 06-19 | 14233.00 | 14233.00 | Inclination (°): *92.350*, Azimuth (°): *358.370*, TVD (ft): *12130.47*, Dogleg (º/100 ft): *2.70*, Sensor Depth (ft): *14176.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 10:35 | 11:05 | 06-19 | 14233.00 | 14329.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 11:05 | 11:10 | 06-19 | 14329.00 | 14329.00 | Inclination (°): *92.880*, Azimuth (°): *359.780*, TVD (ft): *12126.09*, Dogleg (º/100 ft): *1.57*, Sensor Depth (ft): *14272.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 11:10 | 11:45 | 06-19 | 14329.00 | 14424.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 11:45 | 11:50 | 06-19 | 14424.00 | 14424.00 | Inclination (°): *91.470*, Azimuth (°): *357.670*, TVD (ft): *12122.48*, Dogleg (º/100 ft): *2.67*, Sensor Depth (ft): *14367.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 11:50 | 12:20 | 06-19 | 14424.00 | 14519.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 12:20 | 12:25 | 06-19 | 14519.00 | 14519.00 | Inclination (°): *92.220*, Azimuth (°): *356.880*, TVD (ft): *12119.42*, Dogleg (º/100 ft): *1.15*, Sensor Depth (ft): *14462.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 12:25 | 12:45 | 06-19 | 14519.00 | 14538.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 12:45 | 13:15 | 06-19 | 14538.00 | 14558.00 | Pressure On (psi): *4315.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93*, Toolface: *90*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 13:15 | 13:30 | 06-19 | 14558.00 | 14613.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 13:30 | 13:35 | 06-19 | 14613.00 | 14613.00 | Inclination (°): *93.230*, Azimuth (°): *356.080*, TVD (ft): *12114.95*, Dogleg (º/100 ft): *1.37*, Sensor Depth (ft): *14556.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 13:35 | 13:45 | 06-19 | 14613.00 | 14620.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 13:45 | 14:30 | 06-19 | 14620.00 | 14645.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *140*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 14:30 | 15:00 | 06-19 | 14645.00 | 14707.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 15:00 | 15:05 | 06-19 | 14707.00 | 14707.00 | Inclination (°): *92.040*, Azimuth (°): *357.490*, TVD (ft): *12110.63*, Dogleg (º/100 ft): *1.96*, Sensor Depth (ft): *14650.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 15:05 | 15:45 | 06-19 | 14707.00 | 14802.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 15:45 | 15:50 | 06-19 | 14802.00 | 14802.00 | Inclination (°): *92.750*, Azimuth (°): *356.080*, TVD (ft): *12106.66*, Dogleg (º/100 ft): *1.66*, Sensor Depth (ft): *14745.00*, Bit To Sensor (ft): *57.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-19 | 15:50 | 16:00 | 06-19 | 14802.00 | 14811.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 16:00 | 17:00 | 06-19 | 14811.00 | 14846.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *140*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 17:00 | 17:35 | 06-19 | 14846.00 | 14896.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 17:35 | 17:40 | 06-19 | 14896.00 | 14896.00 | Inclination (°): *92.350*, Azimuth (°): *358.630*, TVD (ft): *12102.48*, Dogleg (º/100 ft): *2.74*, Sensor Depth (ft): *14839.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 17:40 | 17:45 | 06-19 | 14896.00 | 14905.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *70*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 17:45 | 18:15 | 06-19 | 14905.00 | 14926.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *135*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 18:15 | 18:40 | 06-19 | 14926.00 | 14991.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 18:40 | 18:45 | 06-19 | 14991.00 | 14991.00 | Inclination (°): *89.710*, Azimuth (°): *1.180*, TVD (ft): *12100.77*, Dogleg (º/100 ft): *3.86*, Sensor Depth (ft): *14934.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 18:45 | 19:20 | 06-19 | 14991.00 | 15085.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 19:20 | 19:25 | 06-19 | 15085.00 | 15085.00 | Inclination (°): *89.230*, Azimuth (°): *1.530*, TVD (ft): *12101.64*, Dogleg (º/100 ft): *0.63*, Sensor Depth (ft): *15028.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 19:25 | 20:00 | 06-19 | 15085.00 | 15179.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 20:00 | 20:05 | 06-19 | 15179.00 | 15179.00 | Inclination (°): *88.750*, Azimuth (°): *2.500*, TVD (ft): *12103.30*, Dogleg (º/100 ft): *1.15*, Sensor Depth (ft): *15122.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 20:05 | 20:15 | 06-19 | 15179.00 | 15190.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 20:15 | 20:30 | 06-19 | 15190.00 | 15205.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *315*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 20:30 | 21:15 | 06-19 | 15205.00 | 15273.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 21:15 | 21:20 | 06-19 | 15273.00 | 15273.00 | Inclination (°): *88.090*, Azimuth (°): *1.450*, TVD (ft): *12105.89*, Dogleg (º/100 ft): *1.32*, Sensor Depth (ft): *15216.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 21:20 | 21:25 | 06-19 | 15273.00 | 15280.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-19 | 21:25 | 22:00 | 06-19 | 15280.00 | 15305.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *0*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-19 | 22:00 | 22:15 | 06-19 | 15305.00 | 15369.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 22:15 | 22:20 | 06-19 | 15369.00 | 15369.00 | Inclination (°): *91.910*, Azimuth (°): *0.920*, TVD (ft): *12105.89*, Dogleg (º/100 ft): *4.02*, Sensor Depth (ft): *15312.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 22:20 | 23:00 | 06-19 | 15369.00 | 15463.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 23:00 | 23:05 | 06-19 | 15463.00 | 15463.00 | Inclination (°): *92.920*, Azimuth (°): *358.990*, TVD (ft): *12101.93*, Dogleg (º/100 ft): *2.32*, Sensor Depth (ft): *15406.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 23:05 | 23:45 | 06-19 | 15463.00 | 15557.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-19 | 23:45 | 23:50 | 06-19 | 15557.00 | 15557.00 | Inclination (°): *93.360*, Azimuth (°): *357.930*, TVD (ft): *12096.78*, Dogleg (º/100 ft): *1.22*, Sensor Depth (ft): *15500.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-19 | 23:50 | 00:00 | 06-20 | 15557.00 | 15575.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Thursday, Jun 20 00:00 - 23:59 (Day 27 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 15575.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 17668.00 | **Drilling Hours** | 21.67 |
| **Bottom Hole Depth (ft)** | 17668.00 | **Hours Circulating** | 0.33 |
| **Total Distance (ft)** | 2093.00 | **Hours Sliding** | 8.50 |
| **Distance Rotated (ft)** | 1764.00 | **Hours Rotating** | 13.17 |
| **Distance Slid (ft)** | 329.00 | | |
| **Inclination In** | 92.92 | | |
| **Inclination Out** | 92.26 | | |
| **Azimuth In** | 359.25 | **% Hours Rotating** | 61% |
| **Azimuth Out** | 1.53 | **% Hours Sliding** | 39% |
| **AVG Total ROP (ft/h)** | 96.69 | **% Distance Sliding** | 16% |
| **AVG Rotating ROP (ft/h)** | 133.65 | **% Distance Rotating** | 84% |
| **AVG Sliding ROP (ft/h)** | 38.71 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 23.00 - 23.00 |
| **Sliding WOB (klbs)** | 28.00 - 28.00 |
| **Rotating SPM** | 93.00 - 93.00 |
| **Sliding SPM** | 103.00 - 103.00 |
| **Motor RPM** | 40.00 - 75.00 |
| **Surface RPM** | 75.00 - 75.00 |
| **Flow Rate (gpm)** | 300.00 - 340.00 |
| **On Bottom Pressure (psi)** | 4215.00 - 4350.00 |
| **Off Bottom Pressure (psi)** | 3300.00 - 3700.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #10 - Lateral

**Date In: Jun 18, 2019, 16:30 Date Out: Jun 23, 2019, 7:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A257718 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 21.67 |
| **Total Drilled for Day (ft)** | 2093.00 |
| **Drilling Hours for BHA** | 73.83 |
| **Total Drilled for BHA (ft)** | 7360.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 7/8, 10.6 |
| **Bend Angle** | 1.75 |
| **Speed (rev/gal)** | 0.85 |
| **Wear Pad OD (in)** | 5.125 |

### Bit Distances

**Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft

### Directional Comments

5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit: (1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-19 | 23:50 | 00:00 | 06-20 | 15557.00 | 15575.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 00:00 | 01:00 | 06-20 | 15575.00 | 15651.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *120*, Toolface Type: *gravity* |
| Survey | 46 | 06-20 | 01:00 | 01:05 | 06-20 | 15651.00 | 15651.00 | Inclination (°): *92.920*, Azimuth (°): *359.250*, TVD (ft): *12091.63*, Dogleg (º/100 ft): *1.48*, Sensor Depth (ft): *15594.00*, Bit To Sensor (ft): *57.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-20 | 01:05 | 01:15 | 06-20 | 15651.00 | 15665.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 01:15 | 01:50 | 06-20 | 15665.00 | 15690.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *120*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 01:50 | 02:10 | 06-20 | 15690.00 | 15746.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 02:10 | 02:15 | 06-20 | 15746.00 | 15746.00 | Inclination (°): *90.200*, Azimuth (°): *1.450*, TVD (ft): *12089.04*, Dogleg (º/100 ft): *3.68*, Sensor Depth (ft): *15689.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 02:15 | 02:45 | 06-20 | 15746.00 | 15840.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 02:45 | 02:50 | 06-20 | 15840.00 | 15840.00 | Inclination (°): *89.540*, Azimuth (°): *1.450*, TVD (ft): *12089.26*, Dogleg (º/100 ft): *0.70*, Sensor Depth (ft): *15783.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 02:50 | 03:20 | 06-20 | 15840.00 | 15933.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 03:20 | 03:25 | 06-20 | 15933.00 | 15933.00 | Inclination (°): *89.930*, Azimuth (°): *2.320*, TVD (ft): *12089.69*, Dogleg (º/100 ft): *1.03*, Sensor Depth (ft): *15876.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 03:25 | 03:55 | 06-20 | 15933.00 | 16028.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 03:55 | 04:00 | 06-20 | 16028.00 | 16028.00 | Inclination (°): *89.890*, Azimuth (°): *3.030*, TVD (ft): *12089.83*, Dogleg (º/100 ft): *0.75*, Sensor Depth (ft): *15971.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 04:00 | 04:15 | 06-20 | 16028.00 | 16045.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 04:15 | 04:50 | 06-20 | 16045.00 | 16070.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *270*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 04:50 | 05:00 | 06-20 | 16070.00 | 16123.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 05:00 | 05:05 | 06-20 | 16123.00 | 16123.00 | Inclination (°): *89.580*, Azimuth (°): *359.070*, TVD (ft): *12090.27*, Dogleg (º/100 ft): *4.18*, Sensor Depth (ft): *16066.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 05:05 | 05:30 | 06-20 | 16123.00 | 16178.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 05:30 | 06:10 | 06-20 | 16178.00 | 16198.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *0*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 06:10 | 06:20 | 06-20 | 16198.00 | 16217.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 06:20 | 06:25 | 06-20 | 16217.00 | 16217.00 | Inclination (°): *89.190*, Azimuth (°): *357.490*, TVD (ft): *12091.28*, Dogleg (º/100 ft): *1.73*, Sensor Depth (ft): *16160.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 06:25 | 07:05 | 06-20 | 16217.00 | 16312.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 07:05 | 07:10 | 06-20 | 16312.00 | 16312.00 | Inclination (°): *92.220*, Azimuth (°): *357.580*, TVD (ft): *12090.11*, Dogleg (º/100 ft): *3.19*, Sensor Depth (ft): *16255.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 07:10 | 07:45 | 06-20 | 16312.00 | 16407.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 07:45 | 07:50 | 06-20 | 16407.00 | 16407.00 | Inclination (°): *92.440*, Azimuth (°): *357.580*, TVD (ft): *12086.25*, Dogleg (º/100 ft): *0.23*, Sensor Depth (ft): *16350.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 07:50 | 08:45 | 06-20 | 16407.00 | 16504.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 08:45 | 08:50 | 06-20 | 16504.00 | 16504.00 | Inclination (°): *92.880*, Azimuth (°): *358.020*, TVD (ft): *12081.75*, Dogleg (º/100 ft): *0.64*, Sensor Depth (ft): *16447.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 08:50 | 09:45 | 06-20 | 16504.00 | 16595.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 09:45 | 09:50 | 06-20 | 16595.00 | 16595.00 | Inclination (°): *92.570*, Azimuth (°): *358.190*, TVD (ft): *12077.42*, Dogleg (º/100 ft): *0.39*, Sensor Depth (ft): *16538.00*, Bit To Sensor (ft): *57.00*, Temperature (ºF): *179.00* |
| Rotary Drill | 1 | 06-20 | 09:50 | 10:30 | 06-20 | 16595.00 | 16690.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 10:30 | 10:35 | 06-20 | 16690.00 | 16690.00 | Inclination (°): *91.740*, Azimuth (°): *356.440*, TVD (ft): *12073.85*, Dogleg (º/100 ft): *2.04*, Sensor Depth (ft): *16633.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 10:35 | 10:50 | 06-20 | 16690.00 | 16700.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 10:50 | 11:35 | 06-20 | 16700.00 | 16735.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *120*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 11:35 | 12:00 | 06-20 | 16735.00 | 16784.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow |

Rate (gpm): *300.00*, Strokes Per Minute: *93.00*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Survey | 46 | 06-20 | 12:00 | 12:05 | 06-20 | 16784.00 | 16784.00 | Inclination (°): *89.450*, Azimuth (°): *358.370*, TVD (ft): *12072.88*, Dogleg (º/100 ft): *3.19*, Sensor Depth (ft): *16727.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 12:05 | 12:45 | 06-20 | 16784.00 | 16878.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 12:45 | 13:00 | 06-20 | 16878.00 | 16878.00 | Inclination (°): *88.530*, Azimuth (°): *358.550*, TVD (ft): *12074.53*, Dogleg (º/100 ft): *1.00*, Sensor Depth (ft): *16821.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 13:00 | 13:35 | 06-20 | 16878.00 | 16973.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Circulating | 3 | 06-20 | 13:35 | 13:55 | 06-20 | | | Circ. [ RELOG ] |
| Survey | 46 | 06-20 | 13:55 | 14:00 | 06-20 | 16973.00 | 16973.00 | Inclination (°): *88.090*, Azimuth (°): *358.630*, TVD (ft): *12077.33*, Dogleg (º/100 ft): *0.47*, Sensor Depth (ft): *16916.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 14:00 | 14:05 | 06-20 | 16973.00 | 16978.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 14:05 | 14:50 | 06-20 | 16978.00 | 17008.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *30*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 14:50 | 15:15 | 06-20 | 17008.00 | 17067.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 15:15 | 15:20 | 06-20 | 17067.00 | 17067.00 | Inclination (°): *90.990*, Azimuth (°): *359.070*, TVD (ft): *12078.09*, Dogleg (º/100 ft): *3.12*, Sensor Depth (ft): *17010.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 15:20 | 16:05 | 06-20 | 17067.00 | 17161.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 16:05 | 16:10 | 06-20 | 17161.00 | 17161.00 | Inclination (°): *91.780*, Azimuth (°): *358.810*, TVD (ft): *12075.82*, Dogleg (º/100 ft): *0.88*, Sensor Depth (ft): *17104.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 16:10 | 16:45 | 06-20 | 17161.00 | 17255.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 16:45 | 16:50 | 06-20 | 17255.00 | 17255.00 | Inclination (°): *92.310*, Azimuth (°): *357.580*, TVD (ft): *12072.46*, Dogleg (º/100 ft): *1.42*, Sensor Depth (ft): *17198.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 16:50 | 17:25 | 06-20 | 17255.00 | 17350.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 17:25 | 17:30 | 06-20 | 17350.00 | 17350.00 | Inclination (°): *93.540*, Azimuth (°): *356.080*, TVD (ft): *12067.61*, Dogleg (º/100 ft): *2.04*, Sensor Depth (ft): *17293.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 17:30 | 17:35 | 06-20 | 17350.00 | 17353.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 17:35 | 18:30 | 06-20 | 17353.00 | 17393.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *135*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 18:30 | 19:00 | 06-20 | 17393.00 | 17444.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 19:00 | 19:05 | 06-20 | 17444.00 | 17444.00 | Inclination (°): *92.840*, Azimuth (°): *358.280*, TVD (ft): *12062.38*, Dogleg (º/100 ft): *2.45*, Sensor Depth (ft): *17387.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 19:05 | 19:10 | 06-20 | 17444.00 | 17450.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 19:10 | 20:20 | 06-20 | 17450.00 | 17478.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *120*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 20:20 | 20:50 | 06-20 | 17478.00 | 17539.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 20:50 | 20:55 | 06-20 | 17539.00 | 17539.00 | Inclination (°): *92.920*, Azimuth (°): *359.510*, TVD (ft): *12057.61*, Dogleg (º/100 ft): *1.30*, Sensor Depth (ft): *17482.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 20:55 | 21:05 | 06-20 | 17539.00 | 17545.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-20 | 21:05 | 22:25 | 06-20 | 17545.00 | 17575.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *135*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 22:25 | 22:50 | 06-20 | 17575.00 | 17633.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-20 | 22:50 | 22:55 | 06-20 | 17633.00 | 17633.00 | Inclination (°): *92.260*, Azimuth (°): *1.530*, TVD (ft): *12053.36*, Dogleg (º/100 ft): *2.26*, Sensor Depth (ft): *17576.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-20 | 22:55 | 23:10 | 06-20 | 17633.00 | 17640.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Slide Drill | 2 | 06-20 | 23:10 | 23:55 | 06-20 | 17640.00 | 17660.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *180*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-20 | 23:55 | 00:00 | 06-21 | 17660.00 | 17668.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Friday, Jun 21 00:00 - 23:59 (Day 28 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 17668.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 19550.00 | **Drilling Hours** | 21.58 |
| **Bottom Hole Depth (ft)** | 19550.00 | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 1882.00 | **Hours Sliding** | 7.67 |
| **Distance Rotated (ft)** | 1776.00 | **Hours Rotating** | 13.92 |
| **Distance Slid (ft)** | 106.00 | | |
| **Inclination In** | 89.98 | | |
| **Inclination Out** | 90.29 | | |
| **Azimuth In** | 1.62 | **% Hours Rotating** | 64% |
| **Azimuth Out** | 2.68 | **% Hours Sliding** | 36% |
| **AVG Total ROP (ft/h)** | 87.23 | **% Distance Sliding** | 6% |
| **AVG Rotating ROP (ft/h)** | 127.43 | **% Distance Rotating** | 94% |
| **AVG Sliding ROP (ft/h)** | 13.83 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 23.00 - 23.00 |
| **Sliding WOB (klbs)** | 28.00 - 28.00 |
| **Rotating SPM** | 93.00 - 93.00 |
| **Sliding SPM** | 103.00 - 105.00 |
| **Motor RPM** | 40.00 - 75.00 |
| **Surface RPM** | 75.00 - 75.00 |
| **Flow Rate (gpm)** | 300.00 - 340.00 |
| **On Bottom Pressure (psi)** | 4200.00 - 4350.00 |
| **Off Bottom Pressure (psi)** | 3300.00 - 4000.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #10 - Lateral

**Date In: Jun 18, 2019, 16:30 Date Out: Jun 23, 2019, 7:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A257718 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 21.58 |
| **Total Drilled for Day (ft)** | 1882.00 |
| **Drilling Hours for BHA** | 73.83 |
| **Total Drilled for BHA (ft)** | 7360.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 7/8, 10.6 |
| **Bend Angle** | 1.75 |
| **Speed (rev/gal)** | 0.85 |
| **Wear Pad OD (in)** | 5.125 |

### Bit Distances

**Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft

### Directional Comments

5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit: (1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-20 | 23:55 | 00:00 | 06-21 | 17660.00 | 17668.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Rotary Drill | 1 | 06-21 | 00:00 | 00:25 | 06-21 | 17668.00 | 17727.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 00:25 | 00:30 | 06-21 | 17727.00 | 17727.00 | Inclination (°): *89.980*, Azimuth (°): *1.620*, TVD (ft): *12051.52*, Dogleg (º/100 ft): *2.43*, Sensor Depth (ft): *17670.00*, Bit To Sensor (ft): *57.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-21 | 00:30 | 01:20 | 06-21 | 17727.00 | 17822.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 01:20 | 01:25 | 06-21 | 17822.00 | 17822.00 | Inclination (°): *89.980*, Azimuth (°): *0.480*, TVD (ft): *12051.56*, Dogleg (º/100 ft): *1.20*, Sensor Depth (ft): *17765.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 01:25 | 02:05 | 06-21 | 17822.00 | 17916.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 02:05 | 02:10 | 06-21 | 17916.00 | 17916.00 | Inclination (°): *89.980*, Azimuth (°): *359.510*, TVD (ft): *12051.59*, Dogleg (º/100 ft): *1.03*, Sensor Depth (ft): *17859.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 02:10 | 02:45 | 06-21 | 17916.00 | 18010.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 02:45 | 02:50 | 06-21 | 18010.00 | 18010.00 | Inclination (°): *90.460*, Azimuth (°): *359.160*, TVD (ft): *12051.23*, Dogleg (º/100 ft): *0.63*, Sensor Depth (ft): *17953.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 02:50 | 03:25 | 06-21 | 18010.00 | 18105.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Rig Service - In Hole | 19 | 06-21 | 03:25 | 04:00 | 06-21 | | | |
| Survey | 46 | 06-21 | 04:00 | 04:05 | 06-21 | 18105.00 | 18105.00 | Inclination (°): *91.380*, Azimuth (°): *358.190*, TVD (ft): *12049.70*, Dogleg (º/100 ft): *1.41*, Sensor Depth (ft): *18048.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 04:05 | 04:15 | 06-21 | 18105.00 | 18115.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-21 | 04:15 | 05:15 | 06-21 | 18115.00 | 18127.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *90*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-21 | 05:15 | 05:45 | 06-21 | 18127.00 | 18199.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 05:45 | 05:50 | 06-21 | 18199.00 | 18199.00 | Inclination (°): *93.490*, Azimuth (°): *358.900*, TVD (ft): *12045.71*, Dogleg (º/100 ft): *2.37*, Sensor Depth (ft): *18142.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 05:50 | 06:00 | 06-21 | 18199.00 | 18210.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-21 | 06:00 | 07:50 | 06-21 | 18210.00 | 18247.00 | Pressure On (psi): *4215.00*, Pressure Off (psi): *3700.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *340.00*, Strokes Per Minute: *103*, Toolface: *145*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-21 | 07:50 | 08:20 | 06-21 | 18247.00 | 18293.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 08:20 | 08:25 | 06-21 | 18293.00 | 18293.00 | Inclination (°): *92.040*, Azimuth (°): *359.690*, TVD (ft): *12041.18*, Dogleg (º/100 ft): *1.76*, Sensor Depth (ft): *18236.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 08:25 | 09:15 | 06-21 | 18293.00 | 18388.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 09:15 | 09:30 | 06-21 | 18388.00 | 18388.00 | Inclination (°): *91.470*, Azimuth (°): *359.600*, TVD (ft): *12038.27*, Dogleg (º/100 ft): *0.61*, Sensor Depth (ft): *18331.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 09:30 | 10:05 | 06-21 | 18388.00 | 18482.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 10:05 | 10:10 | 06-21 | 18482.00 | 18482.00 | Inclination (°): *91.470*, Azimuth (°): *0.920*, TVD (ft): *12035.85*, Dogleg (º/100 ft): *1.40*, Sensor Depth (ft): *18425.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 10:10 | 10:50 | 06-21 | 18482.00 | 18577.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 10:50 | 10:55 | 06-21 | 18577.00 | 18577.00 | Inclination (°): *90.770*, Azimuth (°): *3.820*, TVD (ft): *12034.00*, Dogleg (º/100 ft): *3.14*, Sensor Depth (ft): *18520.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 10:55 | 11:40 | 06-21 | 18577.00 | 18671.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 11:40 | 11:45 | 06-21 | 18671.00 | 18671.00 | Inclination (°): *91.030*, Azimuth (°): *2.410*, TVD (ft): *12032.52*, Dogleg (º/100 ft): *1.53*, Sensor Depth (ft): *18614.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 11:45 | 12:35 | 06-21 | 18671.00 | 18766.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 12:35 | 12:40 | 06-21 | 18766.00 | 18766.00 | Inclination (°): *91.030*, Azimuth (°): *4.350*, TVD (ft): *12030.81*, Dogleg (º/100 ft): *2.04*, Sensor Depth (ft): *18709.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 12:40 | 13:15 | 06-21 | 18766.00 | 18860.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 13:15 | 13:20 | 06-21 | 18860.00 | 18860.00 | Inclination (°): *90.730*, Azimuth (°): *2.500*, TVD (ft): *12029.37*, Dogleg (º/100 ft): *1.99*, Sensor Depth (ft): *18803.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 13:20 | 14:10 | 06-21 | 18860.00 | 18954.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 14:10 | 14:15 | 06-21 | 18954.00 | 18954.00 | Inclination (°): *90.730*, Azimuth (°): *3.560*, TVD (ft): *12028.17*, Dogleg (º/100 ft): *1.13*, Sensor Depth (ft): *18897.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 14:15 | 15:05 | 06-21 | 18954.00 | 19049.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 15:05 | 15:10 | 06-21 | 19049.00 | 19049.00 | Inclination (°): *91.080*, Azimuth (°): *3.200*, TVD (ft): *12026.67*, Dogleg (º/100 ft): *0.53*, Sensor Depth (ft): *18992.00*, Bit To Sensor (ft): *57.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-21 | 15:10 | 16:05 | 06-21 | 19049.00 | 19143.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 16:05 | 16:10 | 06-21 | 19143.00 | 19143.00 | Inclination (°): *90.420*, Azimuth (°): *1.360*, TVD (ft): *12025.44*, Dogleg (º/100 ft): *2.08*, Sensor Depth (ft): *19086.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 16:10 | 17:00 | 06-21 | 19143.00 | 19237.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 17:00 | 17:05 | 06-21 | 19237.00 | 19237.00 | Inclination (°): *89.050*, Azimuth (°): *1.270*, TVD (ft): *12025.88*, Dogleg (º/100 ft): *1.46*, Sensor Depth (ft): *19180.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 17:05 | 17:50 | 06-21 | 19237.00 | 19331.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 17:50 | 17:55 | 06-21 | 19331.00 | 19331.00 | Inclination (°): *88.260*, Azimuth (°): *1.090*, TVD (ft): *12028.08*, Dogleg (º/100 ft): *0.86*, Sensor Depth (ft): *19274.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 17:55 | 18:05 | 06-21 | 19331.00 | 19404.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-21 | 18:05 | 19:45 | 06-21 | 19404.00 | 19426.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *4000.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *105*, Toolface: *0*, Toolface Type: *gravity* |
| Survey | 46 | 06-21 | 19:45 | 19:50 | 06-21 | 19426.00 | 19426.00 | Inclination (°): *88.040*, Azimuth (°): *2.410*, TVD (ft): *12031.15*, Dogleg (º/100 ft): *1.41*, Sensor Depth (ft): *19369.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 19:50 | 20:05 | 06-21 | 19426.00 | 19450.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-21 | 20:05 | 21:15 | 06-21 | 19450.00 | 19465.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *4000.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *105*, Toolface: *340*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-21 | 21:15 | 21:40 | 06-21 | 19465.00 | 19521.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-21 | 21:40 | 21:45 | 06-21 | 19521.00 | 19521.00 | Inclination (°): *90.290*, Azimuth (°): *2.680*, TVD (ft): *12032.53*, Dogleg (º/100 ft): *2.39*, Sensor Depth (ft): *19464.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-21 | 21:45 | 22:00 | 06-21 | 19521.00 | 19530.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-21 | 22:00 | 00:00 | 06-22 | 19530.00 | 19550.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *4000.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *105*, Toolface: *270*, Toolface Type: *gravity* |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Saturday, Jun 22 00:00 - 23:59 (Day 29 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | 19550.00 | **Downhole Hours** | 24.00 |
| **Bit Depth (ft)** | 19915.00 | **Drilling Hours** | 9.17 |
| **Bottom Hole Depth (ft)** | 19915.00 | **Hours Circulating** | 5.00 |
| **Total Distance (ft)** | 365.00 | **Hours Sliding** | 6.08 |
| **Distance Rotated (ft)** | 320.00 | **Hours Rotating** | 3.08 |
| **Distance Slid (ft)** | 45.00 | | |
| **Inclination In** | 89.71 | | |
| **Inclination Out** | 90.15 | | |
| **Azimuth In** | 2.32 | **% Hours Rotating** | 34% |
| **Azimuth Out** | 3.64 | **% Hours Sliding** | 66% |
| **AVG Total ROP (ft/h)** | 34.48 | **% Distance Sliding** | 12% |
| **AVG Rotating ROP (ft/h)** | 103.78 | **% Distance Rotating** | 88% |
| **AVG Sliding ROP (ft/h)** | 8.04 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | 23.00 - 23.00 |
| **Sliding WOB (klbs)** | 28.00 - 28.00 |
| **Rotating SPM** | 93.00 - 93.00 |
| **Sliding SPM** | 105.00 - 105.00 |
| **Motor RPM** | 40.00 - 75.00 |
| **Surface RPM** | 75.00 - 75.00 |
| **Flow Rate (gpm)** | 300.00 - 330.00 |
| **On Bottom Pressure (psi)** | 4200.00 - 4350.00 |
| **Off Bottom Pressure (psi)** | 3300.00 - 4000.00 |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #10 - Lateral

**Date In: Jun 18, 2019, 16:30 Date Out: Jun 23, 2019, 7:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A257718 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 9.17 |
| **Total Drilled for Day (ft)** | 365.00 |
| **Drilling Hours for BHA** | 73.83 |
| **Total Drilled for BHA (ft)** | 7360.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 7/8, 10.6 |
| **Bend Angle** | 1.75 |
| **Speed (rev/gal)** | 0.85 |
| **Wear Pad OD (in)** | 5.125 |

### Bit Distances

**Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft

### Directional Comments

5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit: (1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Slide Drill | 2 | 06-21 | 22:00 | 00:00 | 06-22 | 19530.00 | 19550.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *4000.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *105*, Toolface: *270*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-22 | 00:00 | 00:40 | 06-22 | 19550.00 | 19615.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-22 | 00:40 | 00:45 | 06-22 | 19615.00 | 19615.00 | Inclination (°): *89.710*, Azimuth (°): *2.320*, TVD (ft): *12032.53*, Dogleg (º/100 ft): *0.73*, Sensor Depth (ft): *19558.00*, Bit To Sensor (ft): *57.00* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rotary Drill | 1 | 06-22 | 00:45 | 00:50 | 06-22 | 19615.00 | 19618.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-22 | 00:50 | 03:40 | 06-22 | 19618.00 | 19641.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *4000.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *105*, Toolface: *325*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-22 | 03:40 | 03:45 | 06-22 | 19641.00 | 19645.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Slide Drill | 2 | 06-22 | 03:45 | 07:00 | 06-22 | 19645.00 | 19667.00 | Pressure On (psi): *4200.00*, Pressure Off (psi): *4000.00*, Weight On Bit (klbs): *28.00*, Flow Rate (gpm): *330.00*, Strokes Per Minute: *105*, Toolface: *285*, Toolface Type: *gravity* |
| Rotary Drill | 1 | 06-22 | 07:00 | 07:20 | 06-22 | 19667.00 | 19709.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-22 | 07:20 | 07:25 | 06-22 | 19709.00 | 19709.00 | Inclination (°): *90.290*, Azimuth (°): *2.410*, TVD (ft): *12032.53*, Dogleg (º/100 ft): *0.62*, Sensor Depth (ft): *19652.00*, Bit To Sensor (ft): *57.00*, Temperature (ºF): *186.00* |
| Rotary Drill | 1 | 06-22 | 07:25 | 08:15 | 06-22 | 19709.00 | 19803.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-22 | 08:15 | 08:20 | 06-22 | 19803.00 | 19803.00 | Inclination (°): *90.240*, Azimuth (°): *1.620*, TVD (ft): *12032.10*, Dogleg (º/100 ft): *0.84*, Sensor Depth (ft): *19746.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-22 | 08:20 | 09:20 | 06-22 | 19803.00 | 19898.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Survey | 46 | 06-22 | 09:20 | 09:25 | 06-22 | 19898.00 | 19898.00 | Inclination (°): *90.150*, Azimuth (°): *3.640*, TVD (ft): *12031.77*, Dogleg (º/100 ft): *2.13*, Sensor Depth (ft): *19841.00*, Bit To Sensor (ft): *57.00* |
| Rotary Drill | 1 | 06-22 | 09:25 | 09:30 | 06-22 | 19898.00 | 19915.00 | Pressure On (psi): *4350.00*, Pressure Off (psi): *3300.00*, Weight On Bit (klbs): *23.00*, Surface RPM: *75*, Surface Torque (ft lbf): *13.00*, Flow Rate (gpm): *300.00*, Strokes Per Minute: *93.00* |
| Circulating | 3 | 06-22 | 09:30 | 14:30 | 06-22 | | | Circ. [ TD ] |
| Pooh | 7 | 06-22 | 14:30 | 00:00 | 06-23 | | | POOH.] |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, Jun 23 00:00 - 23:59 (Day 30 of 43)

**Billing:** $7,000.00 ($242,119.96 total)

### Drilling Summary

| | | | |
|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 7.00 |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 |
| **Distance Slid (ft)** | 0.00 | | |
| **Inclination In** | | | |
| **Inclination Out** | | | |
| **Azimuth In** | | **% Hours Rotating** | |
| **Azimuth Out** | | **% Hours Sliding** | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | |

### Drilling Parameters

| | |
|---|---|
| **Rotating WOB (klbs)** | |
| **Sliding WOB (klbs)** | |
| **Rotating SPM** | |
| **Sliding SPM** | |
| **Motor RPM** | 40.00 - 75.00 |
| **Surface RPM** | |
| **Flow Rate (gpm)** | |
| **On Bottom Pressure (psi)** | |
| **Off Bottom Pressure (psi)** | |

### Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## BHA #10 - Lateral

**Date In: Jun 18, 2019, 16:30 Date Out: Jun 23, 2019, 7:00**

### Bit Details

| | |
|---|---|
| **OD (in)** | 6.750 |
| **Vendor** | REED |
| **S/N** | A257718 |
| **Nozzles** | 6x16 |
| **Total Flow Area (in²)** | 1.170 |
| **Drilling Hours for Day** | 0.00 |
| **Total Drilled for Day (ft)** | |
| **Drilling Hours for BHA** | 73.83 |
| **Total Drilled for BHA (ft)** | 7360.00 |

### Motor Details

| | |
|---|---|
| **Size (in)** | 5.0 |
| **Lobe/Stage** | 7/8, 10.6 |
| **Bend Angle** | 1.75 |
| **Speed (rev/gal)** | 0.85 |
| **Wear Pad OD (in)** | 5.125 |

### Bit Distances

**Bend (Bit to Bend):** 4.28 ft, **Survey (Bit to Survey):** 57.00 ft, **Gamma (Bit to Gamma):** 40.00 ft

### Directional Comments

5" Motor 7/8 10.6 FBH 1.75 w/ SS . Flow Rate: 150-350, Max Diff: 2975, Max Torque.: 7100 ft/lbs RPG 0.855 Bit: (1 Runs) 6 3/4" REED SKC613M-G1F, 6x16's, 1.17 TFA.

### MWD Comments

### POOH Reason

**Total Depth/Casing Point:** BEARINGS WERE LOOSE WHEN BREAKING BIT

### Directional Items

| Description | Vendor | SN# | Top Conn | Btm Conn | ID (in) | OD (in) | Fn Len. (ft) | Len (ft) | Aggr. Len (ft) |
|---|---|---|---|---|---|---|---|---|---|
| **Bit** Description: *6 3/4" NOV SKC613M-G1F*, Style: *PDC*, Gauge Length (in): *3.00*, Size (in): *6.75* | REED | A257718 | 3 1/2" REG Pin | | | 6.750 | | 1.00 | 1.00 |
| **Mud Motor** Description: *5" 7/8 10.6 - 1.75° FBH w/ SS*, Size (in): *5.00*, Bend Angle (°): *1.75*, Rotor Lobe: *7*, Stator Lobe: *8*, Stator Stage: *10.6* | DDS | 500DDS105 | 3 1/2" IF Box | 3 1/2" REG Box | | 5.000 | | 30.03 | 31.03 |
| **UBHO Sub** Description: *NM UBHO*, Type: *NM* | AIM | DR41395 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 3.22 | 34.25 |
| **Drill Collar** Description: *NMDC (MWD Carrier)*, Style: *Slick Drill*, Type: *NM* | AIM | AIM 47501018 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.59 | 64.84 |
| **Drill Collar** Description: *NMDC*, Style: *Slick Drill*, Type: *NM* | AIM | AIM47501022 | 3 1/2" IF Box | 3 1/2" IF Pin | 2.750 | 4.750 | | 30.61 | 95.45 |
| **Crossover Sub** Description: *XO- (DS42-B x 3 1/2 IF-P)*, Type: *Steel* | BT Rentals | BT500147 | GPDS42 Box | 3 1/2" IF Pin | 2.750 | 5.000 | | 3.58 | 99.03 |

### MWD Items

No Items

### Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Pooh | 7 | 06-22 | 14:30 | 00:00 | 06-23 | | | POOH.] |
| Pooh | 7 | 06-23 | 00:00 | 06:00 | 06-23 | | | POOH |
| Change BHA | 6 | 06-23 | 06:00 | 07:00 | 06-23 | | | L/D BHA |
| Standby | 15 | 06-23 | 07:00 | 00:00 | 06-24 | | | Standby during Casing Ops |

### MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Monday, Jun 24 00:00 - 23:59 (Day of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | 0.00 | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | 0.00 | **Rotating SPM** | |
| **Total Distance (ft)** | 0.00 | **Hours Sliding** | 0.00 | **Sliding SPM** | |
| **Distance Rotated (ft)** | 0.00 | **Hours Rotating** | 0.00 | **Motor RPM** | - |
| **Distance Slid (ft)** | 0.00 | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

| Activity Type | Code | Start Date | Start Time | End Time | End Date | Start (ft) | End (ft) | Comments/Details |
|---|---|---|---|---|---|---|---|---|
| Standby | 15 | 06-23 | 07:00 | 00:00 | 06-24 | | | Standby during Casing Ops |
| Standby | 15 | 06-24 | 00:00 | 06:00 | 06-24 | | | Standby during Casing Ops |
| Standby | 15 | 06-24 | 06:00 | 15:00 | 06-24 | | | |

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Tuesday, Jun 25 00:00 - 23:59 (Day 31 of 43)

**Billing:** $11,803.71 ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Wednesday, Jun 26 00:00 - 23:59 (Day 32 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

**Thursday, Jun 27 00:00 - 23:59 (Day 33 of 43)** **Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Friday, Jun 28 00:00 - 23:59 (Day 34 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Saturday, Jun 29 00:00 - 23:59 (Day 35 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

| Job Number | Operator | | Rig Name |
|---|---|---|---|
| WT-19-084 | Advance Energy Partners | | H&P #389 |
| **Start Date** | **Well Name** | | **Legal Well Name \| AFE** |
| 2019-05-19 | Dagger State Com #802H | | Dagger State Com #802H |
| **Play** | **State/Province and Country** | **County** | **Company Man** |
| Delaware Basin | New Mexico, US | Lea | |

## Sunday, Jun 30 00:00 - 23:59 (Day 36 of 43)

**Billing:** N/A ($242,119.96 total)

| Drilling Summary | | | | Drilling Parameters | |
|---|---|---|---|---|---|
| **Start Depth (ft)** | | **Downhole Hours** | 0.00 | **Rotating WOB (klbs)** | |
| **Bit Depth (ft)** | | **Drilling Hours** | | **Sliding WOB (klbs)** | |
| **Bottom Hole Depth (ft)** | | **Hours Circulating** | | **Rotating SPM** | |
| **Total Distance (ft)** | | **Hours Sliding** | | **Sliding SPM** | |
| **Distance Rotated (ft)** | | **Hours Rotating** | | **Motor RPM** | - |
| **Distance Slid (ft)** | | | | **Surface RPM** | |
| **Inclination In** | | | | **Flow Rate (gpm)** | |
| **Inclination Out** | | | | **On Bottom Pressure (psi)** | |
| **Azimuth In** | | **% Hours Rotating** | | **Off Bottom Pressure (psi)** | |
| **Azimuth Out** | | **% Hours Sliding** | | | |
| **AVG Total ROP (ft/h)** | 0.00 | **% Distance Sliding** | | | |
| **AVG Rotating ROP (ft/h)** | 0.00 | **% Distance Rotating** | | | |
| **AVG Sliding ROP (ft/h)** | 0.00 | | | | |

## Personnel

| Name | Position |
|---|---|
| **Robert Olivarez** | MWD Engineer |
| **Advance Directional** | Directional Driller |
| **Nathan Woods** | Directional Driller |
| **Joel Johnson** | Directional Driller |

## No BHAs

## Directional Activities

No Activities

## MWD Activities

No Activities

# Surface Plat

## **Dagger State Com #802H** (WT-19-084)

2019-05-19 to 2019-06-30

Lea, New Mexico, US (32.45, -103.61)

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

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

| API Number | Pool Code | Pool Name |
|---|---|---|
| | | |

| Property Code | Property Name | Well Number |
|---|---|---|
| | DAGGER STATE COM | 802H |
| **OGRID No.** | **Operator Name** | **Elevation** |
| | ADVANCE ENERGY PARTNERS HAT MESA | 3812' |

### Surface Location

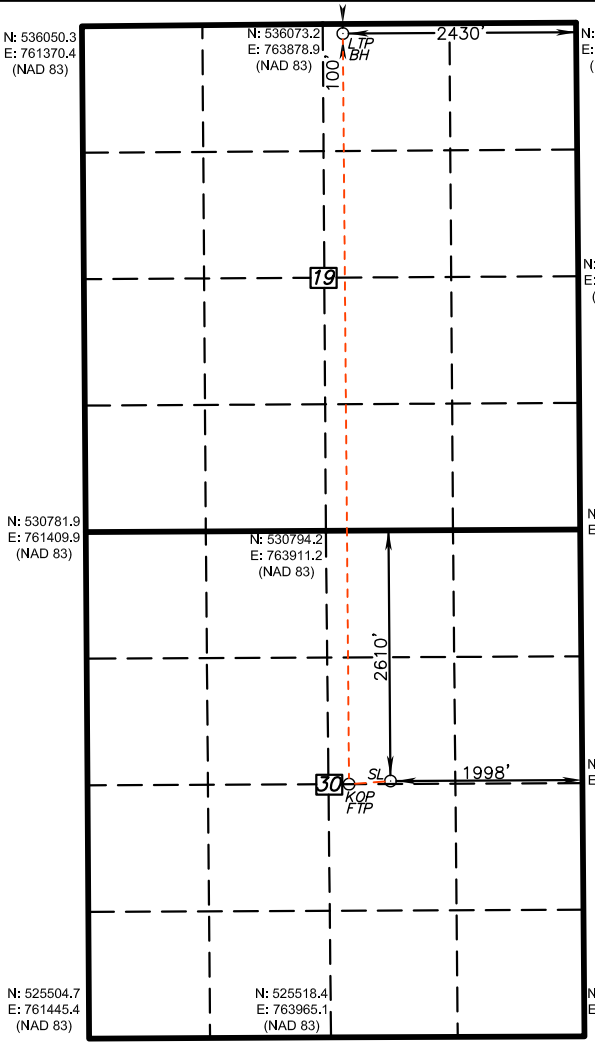
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | SOUTH/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| | 30 | 21 S | 33 E | | 2610 | NORTH | 1998 | EAST | LEA |

### 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 |
|---|---|---|---|---|---|---|---|---|---|
| | 19 | 21 S | 33 E | | 100 | NORTH | 2430 | 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




LAST TAKE POINT/
PROPOSED BOTTOM HOLE
Lat - N 32.471385°
Long - W 103.611044°
NMSPCE- N 535974.4
E 764087.9
(NAD-83)

KICK OFF POINT/
FIRST TAKE POINT
2640' FNL & 2430' FEL
Lat - N 32.449892°
Long - W 103.611006°
NMSPCE- N 528155.4
E 764152.8
(NAD-83)

SURFACE LOCATION
Lat - N 32.449972°
Long - W 103.609605°
NMSPCE- N 528187.5
E 764584.5
(NAD-83)

### OPERATOR CERTIFICATION

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

Signature Date

Printed Name

Email Address

### SURVEYOR CERTIFICATION

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

MAY 7, 2019
Date Surveyed

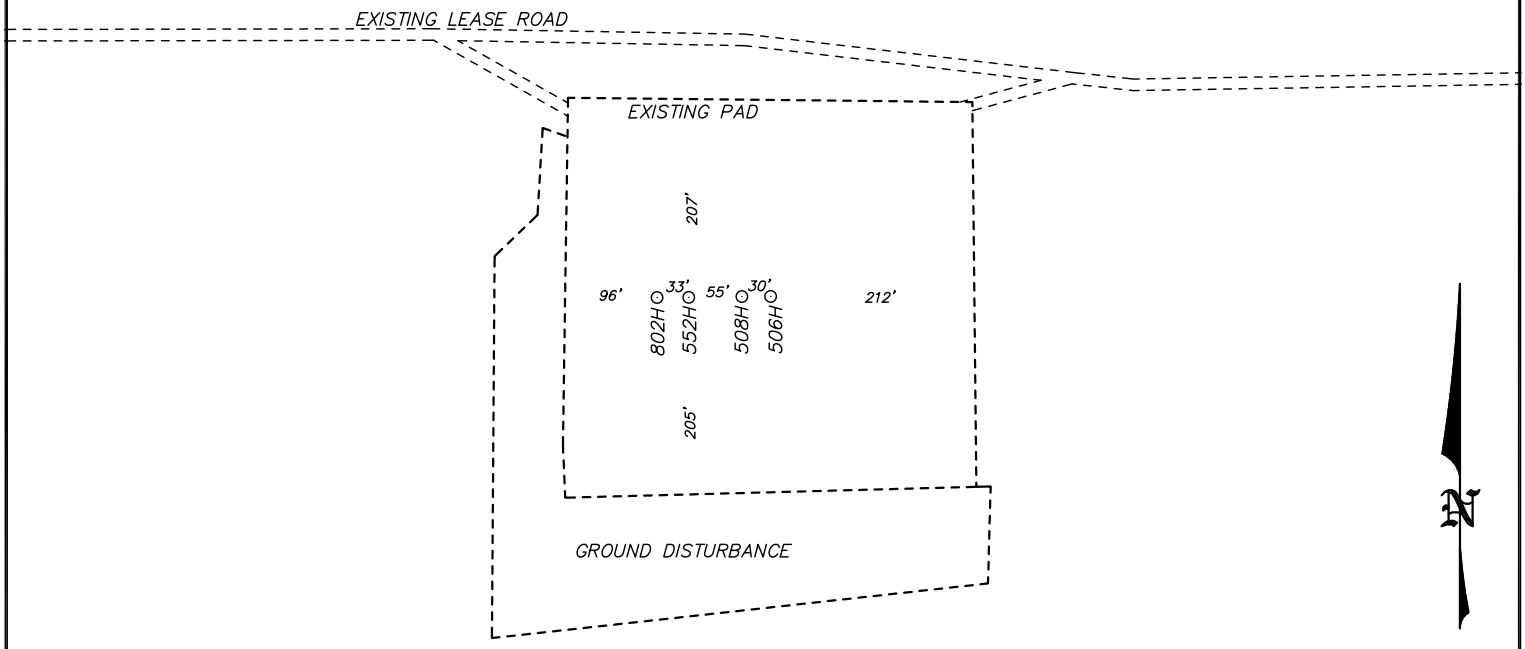
Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977
BASIN SURVEYS

0' 500' 1000' 1500' 2000'
SCALE: 1" = 1000'
WO Num.: 34555

# SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
## LEA COUNTY, NEW MEXICO.




ADVANCE ENERGY PARTNERS HAT MESA
DAGGER STATE COM #802H
ELEV. – 3812'

Lat – N 32.449972°
Long – W 103.609605°
NMSPCE– N 528187.5
E 764584.5
(NAD–83)

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

200 0 200 400 FEET

SCALE: 1" = 200'

## ADVANCE ENERGY PARTNERS HAT MESA

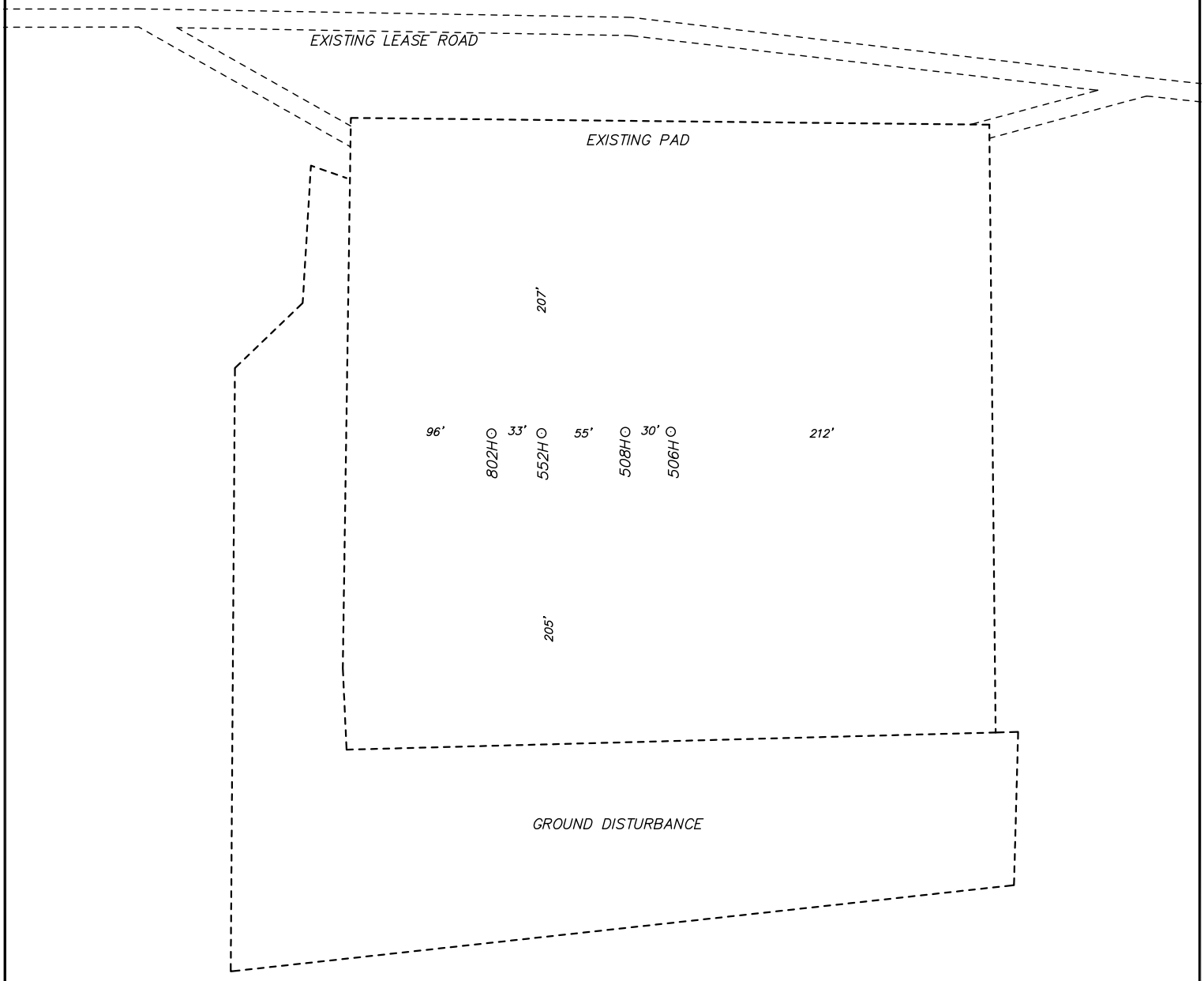
REF: DAGGER STATE COM #802H / WELL PAD TOPO

THE DAGGER STATE COM #802H LOCATED 2610' FROM THE NORTH LINE AND 1998' FROM THE EAST LINE OF SECTION 30, 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: 34555 | Drawn By: K. GOAD | Date: 05–07–2019 | Survey Date: 05–07–2019 | Sheet 1 of 1 Sheets |
|---|---|---|---|---|

# SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
## LEA COUNTY, NEW MEXICO.




100 0 100 200 FEET

SCALE: 1" = 100'

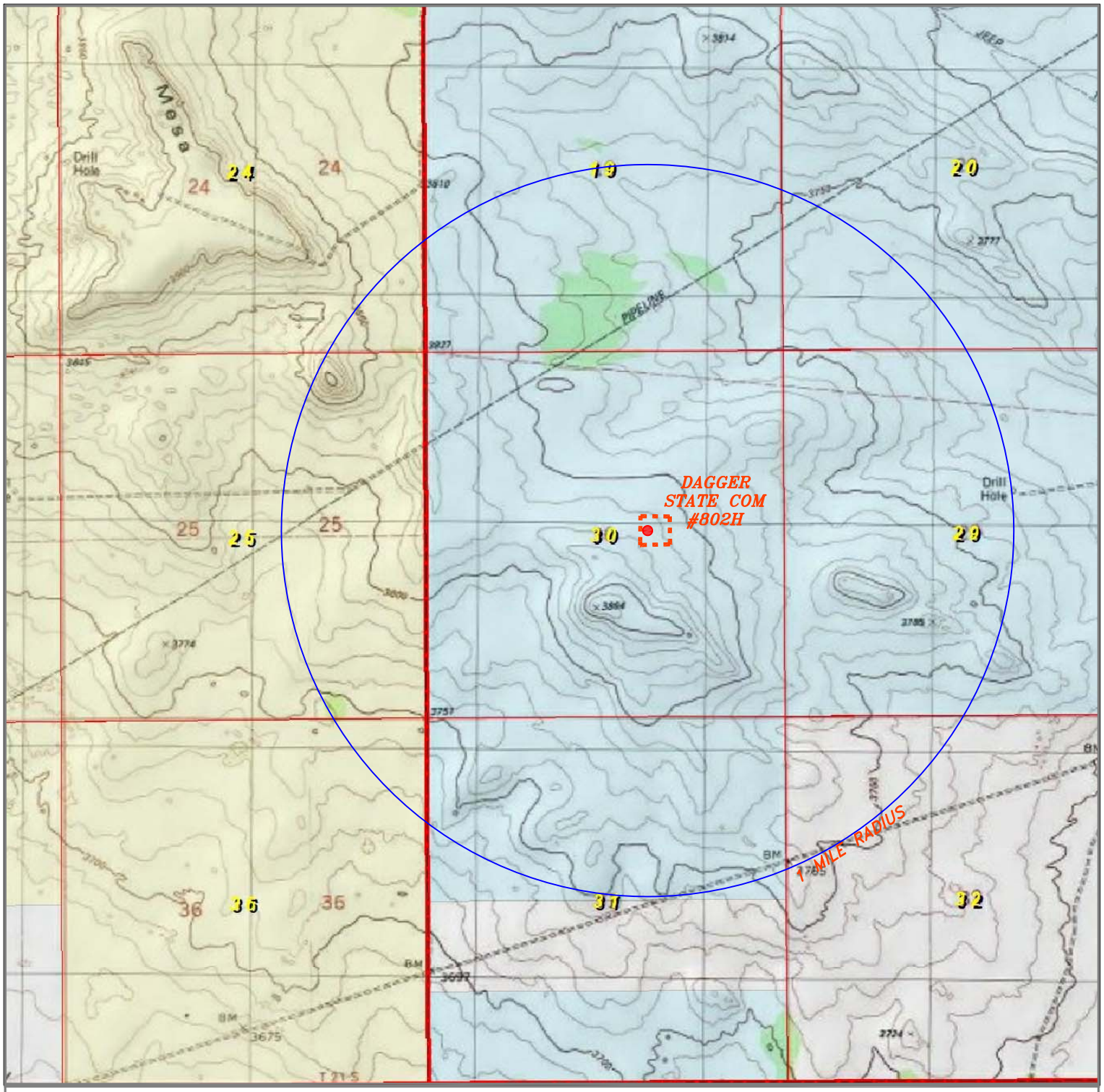
ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER STATE COM #802H / WELL PAD TOPO

THE DAGGER STATE COM #802H LOCATED 2610' FROM THE NORTH LINE AND 1998' FROM THE EAST LINE OF SECTION 30, 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: 34555 | Drawn By: K. GOAD | Date: 05-07-2019 | Survey Date: 05-07-2019 | Sheet 1 of 1 Sheets |
|---|---|---|---|---|




# DAGGER STATE COM #802H

Located 2610' FNL and 1998' FEL
Section 30, 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

0' 1000' 2000' 3000' 150'0'
SCALE: 1" = 2000'

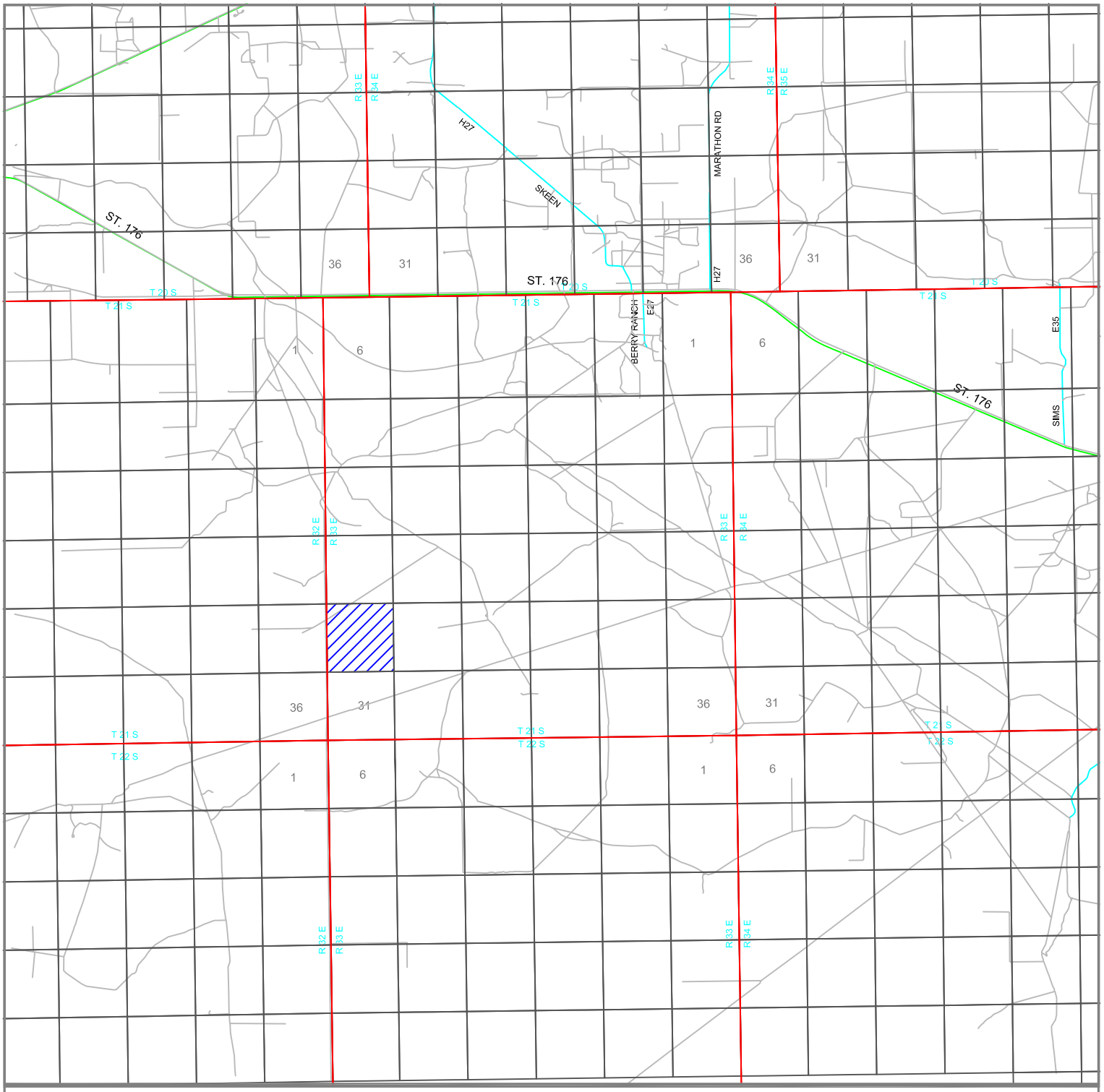
W.O. Number: KJG 34555

Survey Date: 05-07-2019

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

N

ADVANCE ENERGY PARTNERS HAT MESA




# DAGGER STATE COM #802H

Located 2610' FNL and 1998' FEL
Section 30, 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

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

W.O. Number: KJG 34555

Survey Date: 05-07-2019

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

N

ADVANCE ENERGY PARTNERS HAT MESA


# DAGGER STATE COM #802H

Located 2610' FNL and 1998' FEL
Section 30, 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

0' 1000' 2000' 3000' 150'0'
SCALE: 1" = 2000'

W.O. Number: KJG 34555

Survey Date: 05-07-2019

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

N

ADVANCE ENERGY PARTNERS HAT MESA

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

| | |
|---|---|
| WELL API NO. 30-025-45935 | |
| 5. Indicate Type of Lease STATE ☒ FEE ☐ | |
| 6. State Oil & Gas Lease No. | |

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

| | |
|---|---|
| 1. Type of Well: Oil Well ☒ Gas Well ☐ Other | 7. Lease Name or Unit Agreement Name: Dagger State Com |
| | 8. Well Number: 802H |
| 2. Name of Operator: Advance Energy Partners Hat Mesa | 9. OGRID Number: 372417 |
| 3. Address of Operator: 11490 Westheimer Rd, Houston, TX 77077 | 10. Pool name or Wildcat: WC-025 G-10 S213328O;WOLFCAMP |

4. Well Location
Unit Letter G : 2610 feet from the N line and 1998 fee from the E line
Section 30 Township 21S Range 33E NMPM County LEA

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3,812'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | ☐ | PLUG AND ABANDON | ☐ | REMEDIAL WORK | ☐ | ALTERING CASING | |
| TEMPORARILY ABANDON | ☐ | CHANGE PLANS | ☐ | COMMENCE DRILLING OPNS. | ☐ | P AND A | ☐ |
| PULL OR ALTER CASING | ☐ | MULTIPLE COMPL | ☐ | CASING/CEMENT JOB | ☐ | | |
| DOWNHOLE COMMINGLE | ☐ | | | | | | |
| CLOSED-LOOP SYSTEM | ☐ | | | | | | |
| OTHER: | ☐ | | | OTHER: | | | ☒ |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- 7/12/19: Pressure test casing to 9800 psi for 30 minutes.
- 7/26/19 – 8/9/19: Perforate from 12,455' – 19,795' (2160). Frac with 18,190,940 lbs sand and 23,558,934 gal fluid.
- 8/13/19 – 8/15/19: Drill all plugs out and clean out to PBTD of 19,832'.
- 8/19/19: Begin flowback
- 2/21/22 – CORRECTION to Casing Depths filed on 7/12/19. CORRECT depths are as follows:
  10.75" Surface Casing set at 1,613'
  7.626" Intermediate Casing set at 10,667'
  5.5/5.0/4.5" Production Casing set at 19,902'

Spud Date: 05-20-2019 Rig Release Date: 06/24/2019

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE: Eileen M Kosakowski TITLE: Sr. Engineering Tech DATE: 2/21/22

PRINT NAME: Eileen M Kosakowski E-mail address: ekosakowski@advanceenergypartners.com PHONE: 832-672-4604

**For State Use Only**

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any):

Submit to Appropriate District Office
Two Copies
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-105
Revised April 3, 2017

1. WELL API NO. 30-025-45935
2. Type of Lease ☒ STATE ☐ FEE ☐ FED/INDIAN
3. State Oil & Gas Lease No.

# WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

☒ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☐ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)

5. Lease Name or Unit Agreement Name: Dagger State Com
6. Well Number: 802H

7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER

8. Name of Operator: Advance Energy Partners Hat Mesa, LLC
9. OGRID: 372417
10. Address of Operator: 11490 Westheimer RD, Suite 950, Houston, TX 77077
11. Pool name or Wildcat: WC-025 G-10 S213328O;WOLFCAMP

| 12.Location | Unit Ltr | Section | Township | Range | Lot | Feet from the | N/S Line | Feet from the | E/W Line | County |
|---|---|---|---|---|---|---|---|---|---|---|
| **Surface:** | G | 30 | 21S | 33E | | 2610 | NORTH | 1998 | EAST | LEA |
| **BH:** | B | 19 | 21S | 33E | | 44 | NORTH | 2377 | EAST | LEA |

| 13. Date Spudded | 14. Date T.D. Reached | 15. Date Rig Released | 16. Date Completed (Ready to Produce) | 17. Elevations (DF and RKB, RT, GR, etc.) |
|---|---|---|---|---|
| 05/20/2019 | 06/22/2019 | 06/24/2019 | 08/19/2019 | 3,812' GR |

| 18. Total Measured Depth of Well | 19. Plug Back Measured Depth | 20. Was Directional Survey Made? | 21. Type Electric and Other Logs Run |
|---|---|---|---|
| 19,915' | 19,832' | YES | Gamma Ray |

22. Producing Interval(s), of this completion - Top, Bottom, Name
12,455-19,795' WOLFCAMP

23. **CASING RECORD** (Report all strings set in well)

| CASING SIZE | WEIGHT LB./FT. | DEPTH SET | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|---|---|---|---|---|---|
| 10.75 | 40.5# | 1,613' | 14.75 | 620 | |
| 7.625 | 29.7# | 10,667' | 9.875 | 1465 | |
| 5.5/5.0/4.5 | 20/18/13.5# | 19,902' | 6.75 | 1155 | |
| | | | | | |
| | | | | | |

24. LINER RECORD

| SIZE | TOP | BOTTOM | SACKS CEMENT | SCREEN |
|---|---|---|---|---|
| | | | | |
| | | | | |

25. TUBING RECORD

| SIZE | DEPTH SET | PACKER SET |
|---|---|---|
| | | |
| | | |

26. Perforation record (interval, size, and number)
12,455-19,795' (2160 Holes)

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

| DEPTH INTERVAL | AMOUNT AND KIND MATERIAL USED |
|---|---|
| 12,455-19,795 | 18,190,940 lbs sand, 23,558,934 bbls water |
| | |
| | |

28. **PRODUCTION**

| Date First Production | Production Method *(Flowing, gas lift, pumping - Size and type pump)* | Well Status *(Prod. or Shut-in)* |
|---|---|---|
| 08/21/2019 | Flowing | Prod |

| Date of Test | Hours Tested | Choke Size | Prod'n For Test Period 24 | Oil - Bbl | Gas - MCF | Water - Bbl. | Gas - Oil Ratio |
|---|---|---|---|---|---|---|---|
| 09/07/2019 | 24 Hrs | 40 | | 914 | 2597 | 3377 | 2880 |

| Flow Tubing Press. | Casing Pressure | Calculated 24-Hour Rate | Oil - Bbl. | Gas – MCF | Water - Bbl. | Oil Gravity - API - *(Corr.)* |
|---|---|---|---|---|---|---|
| N/A | 1374 | | 914 | 2597 | 3377 | 42.3 |

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*: Sold
30. Test Witnessed By: B.Chandler

31. List Attachments

32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.
33. Rig Release Date: 06/24/2019

34. If an on-site burial was used at the well, report the exact location of the on-site burial:
Latitude _____ Longitude _____ NAD83

*I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief*

Signature: Eileen M Kosakowski Date: 2/21/22

Printed Name: Eileen M Kosakowski Title: Sr. Eng. Tech. E-mail Address: ekosakowski@advanceenergypartners.com

# INSTRUCTIONS



This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

| Southeastern New Mexico | | Northwestern New Mexico | |
|---|---|---|---|
| T. Anhy | T. Canyon | T. Ojo Alamo | T. Penn A" |
| T. Salt | T. Strawn | T. Kirtland | T. Penn. "B" |
| B. Salt | T. Atoka | T. Fruitland | T. Penn. "C" |
| T. Yates | T. Miss | T. Pictured Cliffs | T. Penn. "D" |
| T. 7 Rivers | T. Devonian | T. Cliff House | T. Leadville |
| T. Queen | T. Silurian | T. Menefee | T. Madison |
| T. Grayburg | T. Montoya | T. Point Lookout | T. Elbert |
| T. San Andres | T. Simpson | T. Mancos | T. McCracken |
| T. Glorieta | T. McKee | T. Gallup | T. Ignacio Otzte |
| T. Paddock | T. Ellenburger | Base Greenhorn | T.Granite |
| T. Blinebry | T. Gr. Wash | T. Dakota | |
| T.Tubb | T. Delaware Sand | T. Morrison | |
| T. Drinkard | T. Bone Springs 9060 | T.Todilto | |
| T. Abo | T. | T. Entrada | |
| T. Wolfcamp 12060 | T. | T. Wingate | |
| T. Penn | T. | T. Chinle | |
| T. Cisco (Bough C) | T. | T. Permian | |

**OIL OR GAS SANDS OR ZONES**

No. 1, from.....to..... No. 3, from.....to.....
No. 2, from.....to..... No. 4, from.....to.....

**IMPORTANT WATER SANDS**

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
No. 2, from.....to.....feet.....
No. 3, from.....to.....feet.....

## LITHOLOGY RECORD (Attach additional sheet if necessary)

| From | To | Thickness In Feet | Lithology | From | To | Thickness In Feet | Lithology |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

**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



## ACKNOWLEDGMENTS

| | |
|---|---|
| Operator:<br>ADVANCE ENERGY PARTNERS HAT MESA, LLC<br>5400 LBJ Freeway, Suite 1500<br>Dallas, TX 75240 | OGRID:<br>372417 |
| | Action Number:<br>83045 |
| | Action Type:<br>[C-104] Completion Packet (C-104C) |

**ACKNOWLEDGMENTS**

| | |
|---|---|
| ☑ | I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion. |
| ☑ | I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion. |

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

CONDITIONS

Action 83045

## CONDITIONS

| | |
|---|---|
| Operator:<br>ADVANCE ENERGY PARTNERS HAT MESA, LLC<br>5400 LBJ Freeway, Suite 1500<br>Dallas, TX 75240 | OGRID:<br>372417 |
| | Action Number:<br>83045 |
| | Action Type:<br>[C-104] Completion Packet (C-104C) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| plmartinez | Going Forward, file a [C-103] NOI Change of Plans (C-103A) for changes made to drilling/casing depths prior to operations and submittal of C-104 Completion Packet. | 7/30/2024 |