

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

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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Advance Energy Partners, LLC 11490 Westheimer, Suite 950 Houston, Texas 77077		² OGRID Number 372417
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30-025-45703	⁵ Pool Name LEGG; BONE SPRING	⁶ Pool Code 37870
⁷ Property Code 319599	⁸ Property Name Dagger Lake 5 State Com	⁹ Well Number 503H

II. ¹⁰ Surface Location

UL or lot no. L	Section 5	Township 22S	Range 33E	Lot Idn	Feet from the 2140	North/South Line South	Feet from the 410	East/West line West	County Lea
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¹¹ Bottom Hole Location

UL or lot no. D	Section 32	Township 21S	Range 33E	Lot Idn	Feet from the 54	North/South line North	Feet from the 1002	East/West line West	County 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				

III. Oil and Gas Transporters

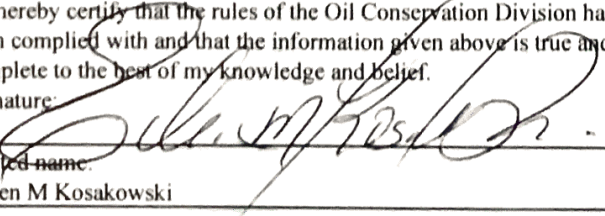
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
214984	Plains Marketing, L.P. 10 Desta Dr/. Sioe 200E Midland, Texas 79705	O
24650	Targa Midstream Services, LLC 811 Louisiana, Suite 21 Houston, Texas 77022	G

IV. Well Completion Data

²¹ Spud Date 03/15/2019	²² Ready Date 08/07/2019	²³ TD 19,149'	²⁴ PBTB 19,044'	²⁵ Perforations 11,180' – 19,029'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17.5	13.375	1,165'	635		
12.25	9.625	3,905'/4,825'	970		
8.5	5.5	19,127'	3125		

V. Well Test Data

³¹ Date New Oil 08/15/2019	³² Gas Delivery Date 08/17/2019	³³ Test Date 08/24/2019	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure 971	³⁶ Csg. Pressure 1100
³⁷ Choke Size 40	³⁸ Oil 897	³⁹ Water 4103	⁴⁰ Gas 872		⁴¹ Test Method Flowing

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: 		OIL CONSERVATION DIVISION	
Printed name: Eileen M Kosakowski		Approved by: PATRICIA MARTINEZ	
Title: Sr. Eng. Tech		Title: PETROLEUM SPECIALIST	
E-mail Address: ekosakowski@advanceenergypartners.com		Approval Date: 7/25/2024	
Date: 2/21/22	Phone: 832-672-4604		

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) 748-1263 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

Form C-102
Revised August 4, 2011

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT
As Drilled

API Number 30-025-45703	Pool Code 37870	Pool Name LEGG;BONE SPRING
Property Code 319599	Property Name DAGGER LAKE 5 STATE COM	Well Number 503H
OGRID No. 372417	Operator Name ADVANCE ENERGY PARTNERS HAT MESA	Elevation 3655'

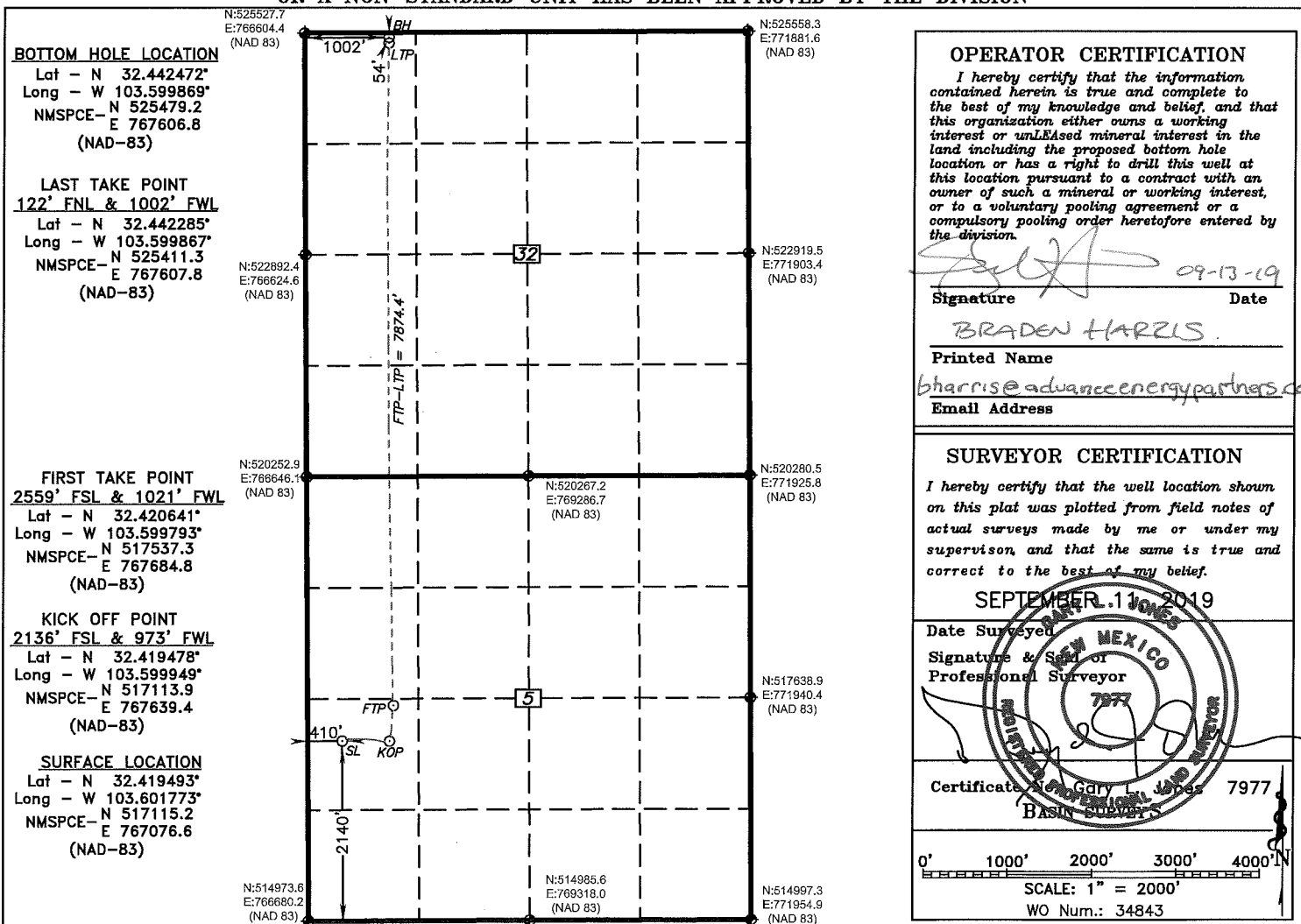
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	5	22 S	33 E		2140	SOUTH	410	WEST	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
D	32	21 S	33 E		54	NORTH	1002	WEST	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**





End of Well Report

Advance Energy Partners, LLC Dagger Lake 5 State, Well No. 503H Lea County, New Mexico

Rig: H&P #620

Job No.: WT-19-028

Start Date: 03/15/2019

End Date: 04/12/2019

Directional Drillers:

Josh Cockrell, Omar Alaniz, 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





Performance Overview

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)

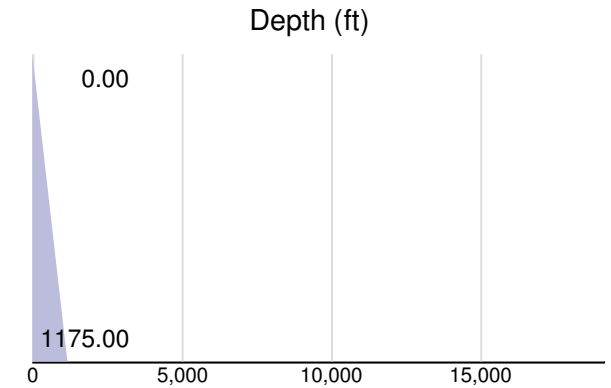
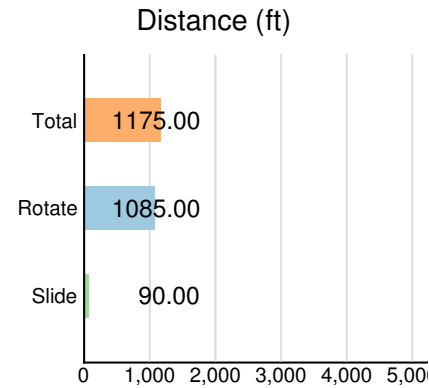
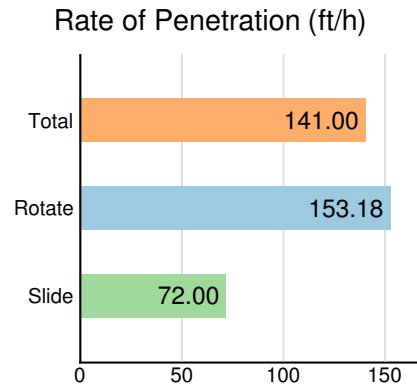
BHA Performance

BHA 1

BHA #1

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Out: 03/16/2019 11:00

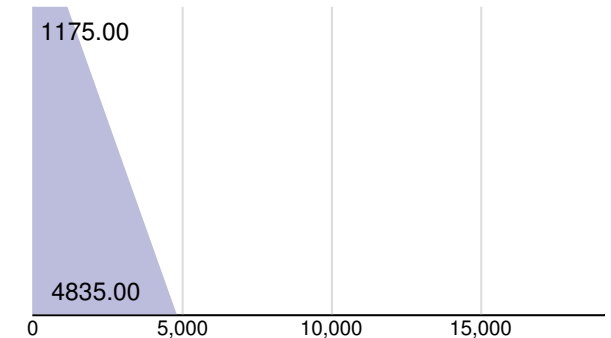
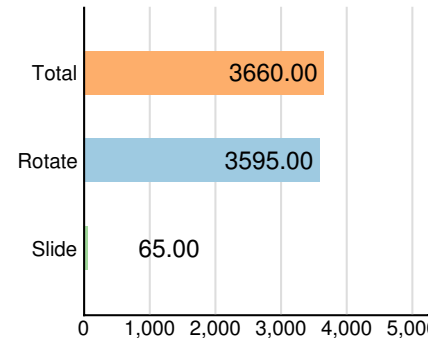
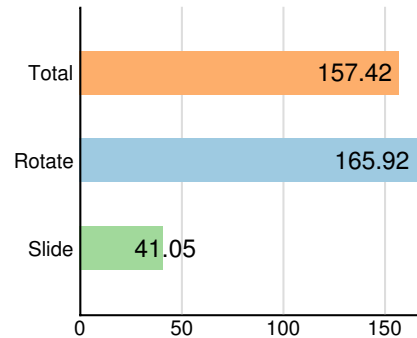


BHA 2

BHA #2

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Out: 03/19/2019 08:45

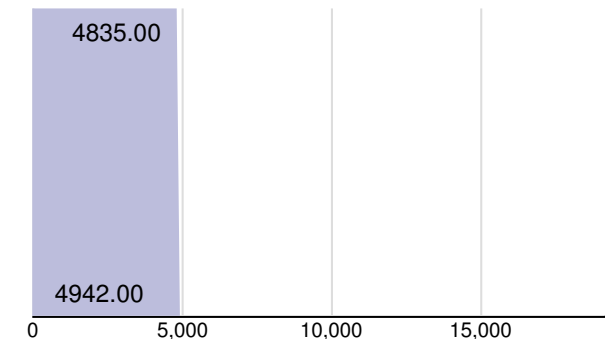
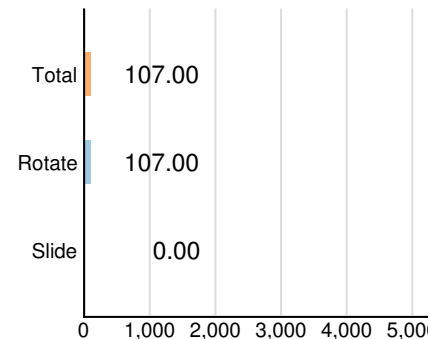
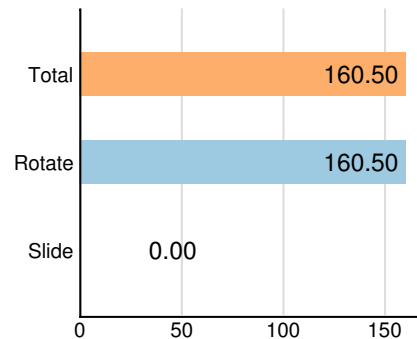


BHA 3

BHA #3 (2nd Intermediate)

In: 03/26/2019 21:00

Out: 03/27/2019 10:00

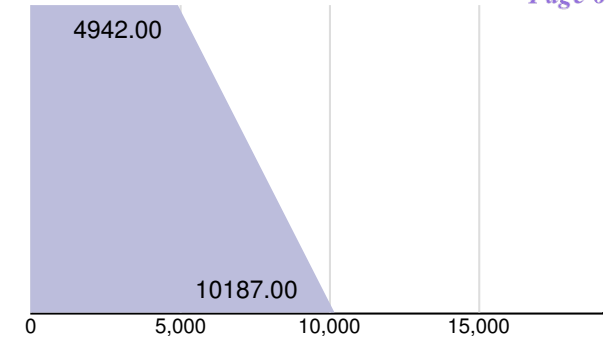
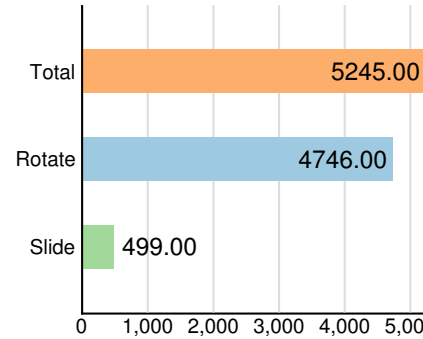
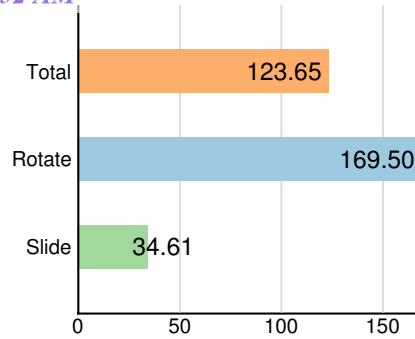


BHA 4

BHA #4

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Out: 03/29/2019 20:30

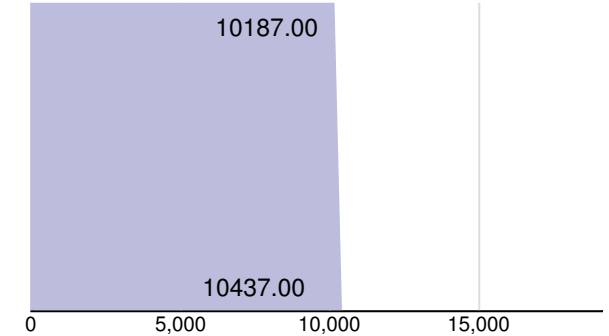
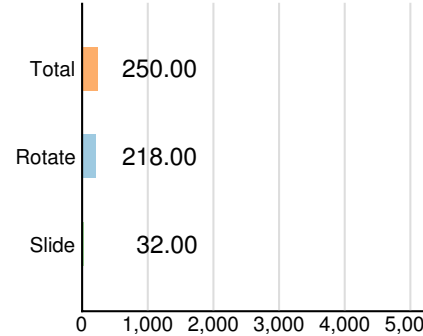
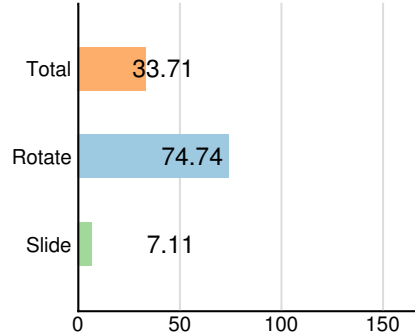


BHA 5

BHA #5

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Out: 03/30/2019 23:30

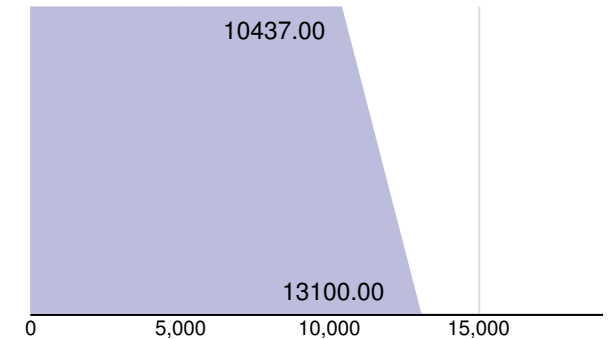
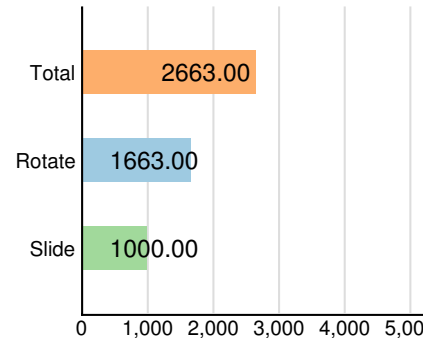
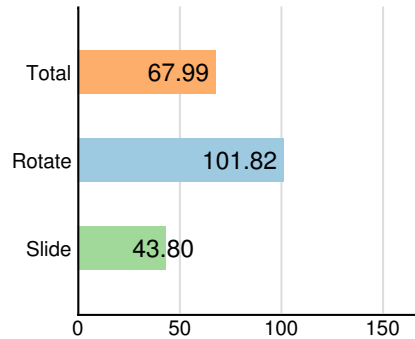


BHA 6

BHA #6

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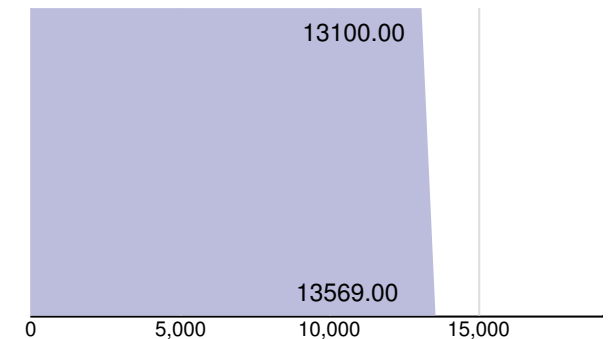
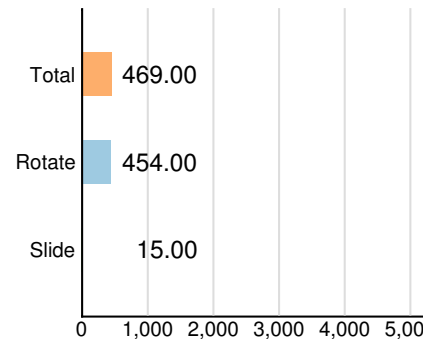
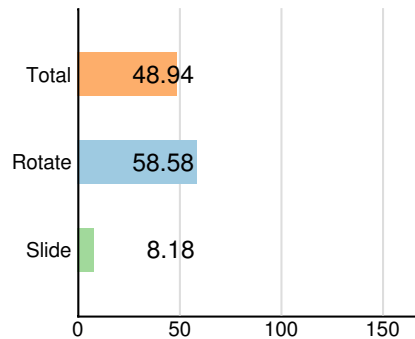


BHA 7

BHA #7

In: 04/02/2019 09:00

Out: 04/03/2019 18:00

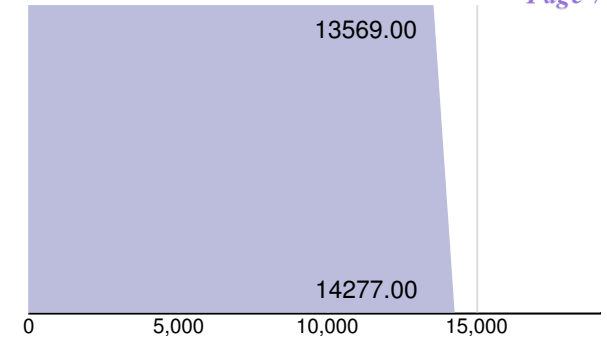
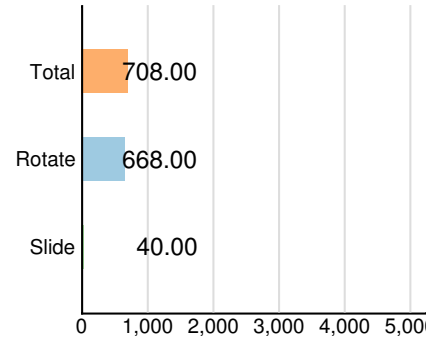
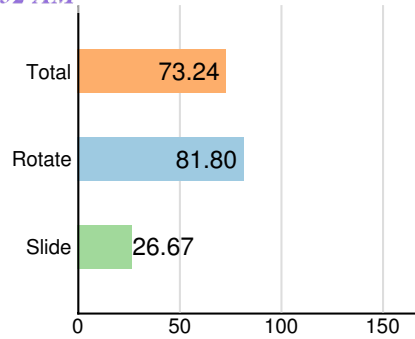


BHA 8

BHA #8

In: 04/03/2019 18:30

Out: 04/04/2019 23:00

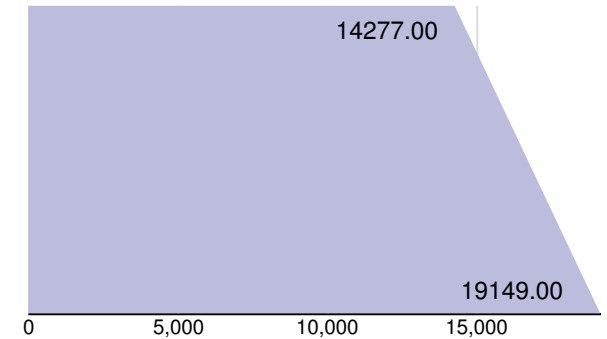
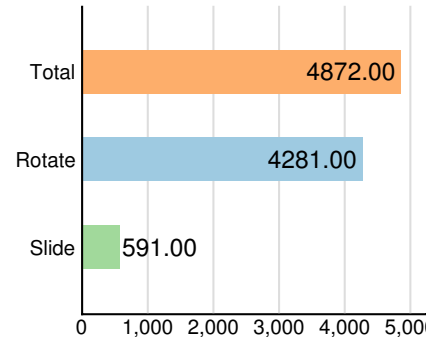
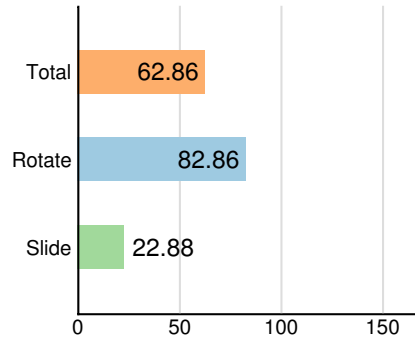


BHA 9

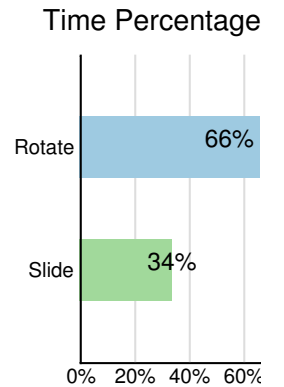
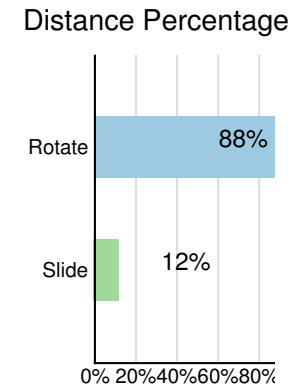
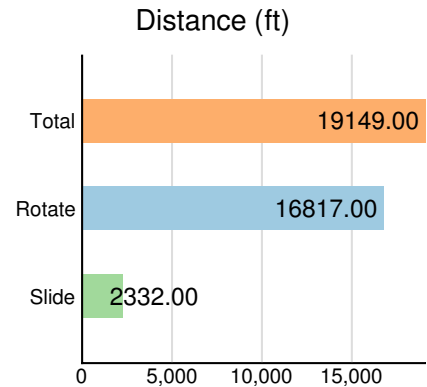
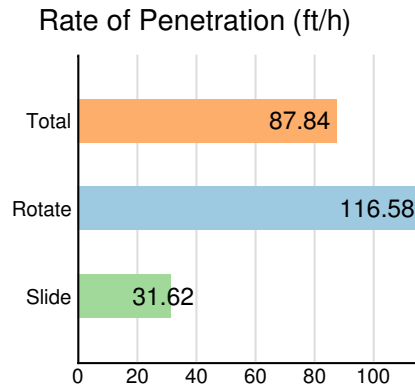
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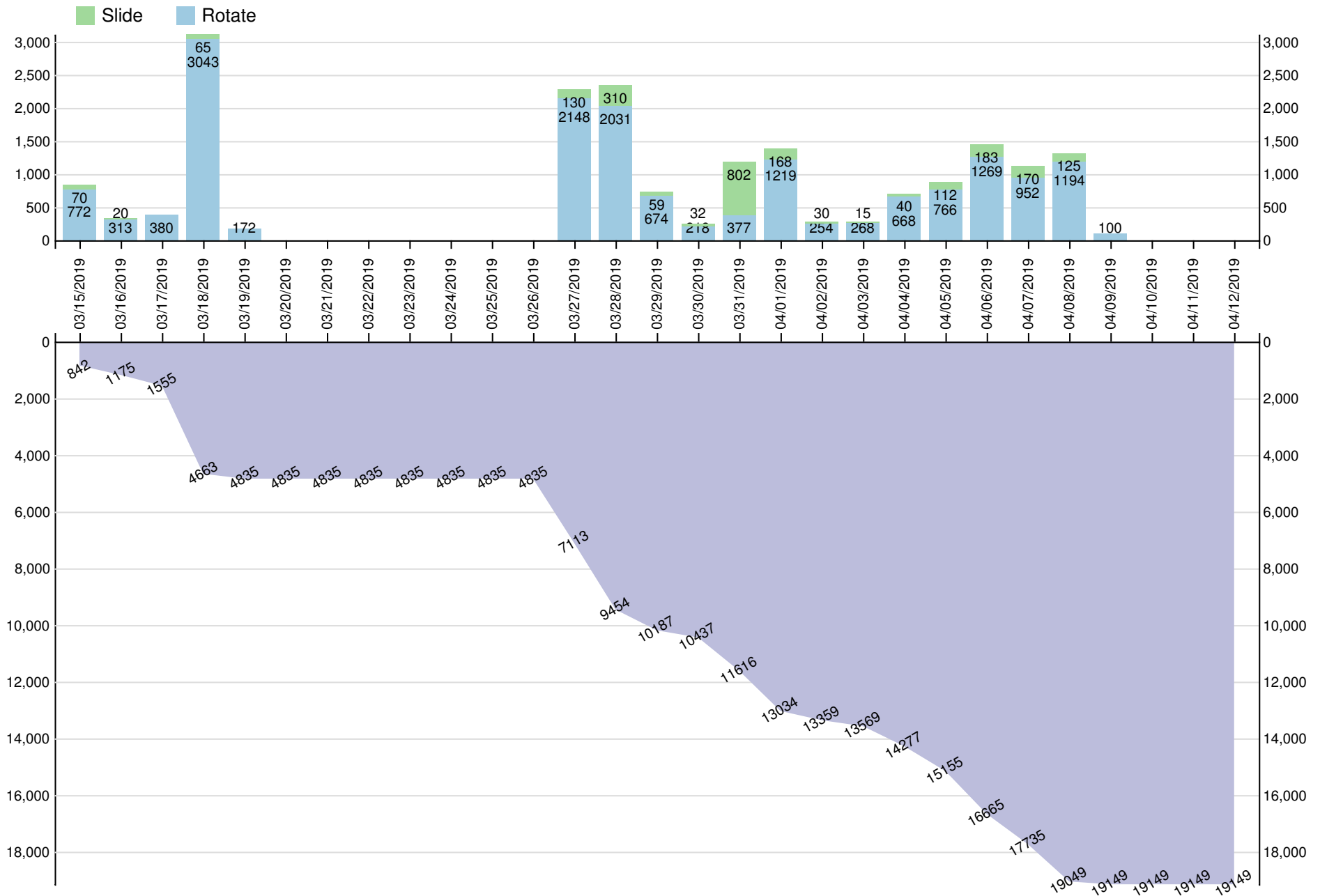
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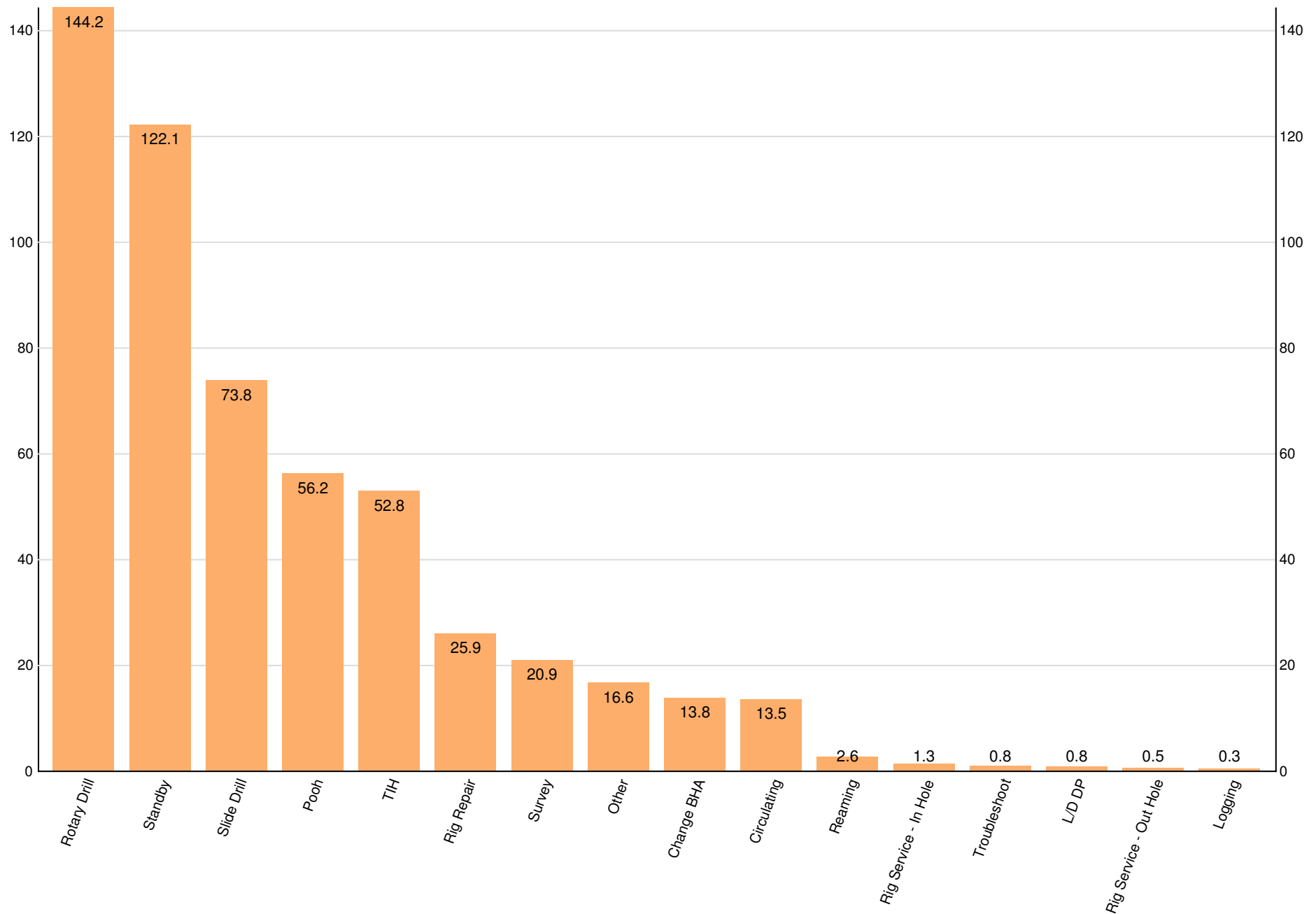
Total



Days vs. Depth



Directional Activity Hours





Proposed vs. As Dilled

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)

Advance Energy Partners, LLC

Dagger Lake 5 State 503H

Lea County, New Mexico

WT-19-028

H&P 620

Plan 1.0



Received by OCD: 2/21/2022 8:26:52 AM

South(-)/North(+) (2000 usft/in)

Page 11 of 11



SITE DETAILS: Dagger Lake 5 State 503H

Site Centre Northing: 517115.20
Easting: 767076.60

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.29°

Magnetic Field
Strength: 48107.4nT
Dip Angle: 60.19°
Date: 3/14/2019
Model: MVHD

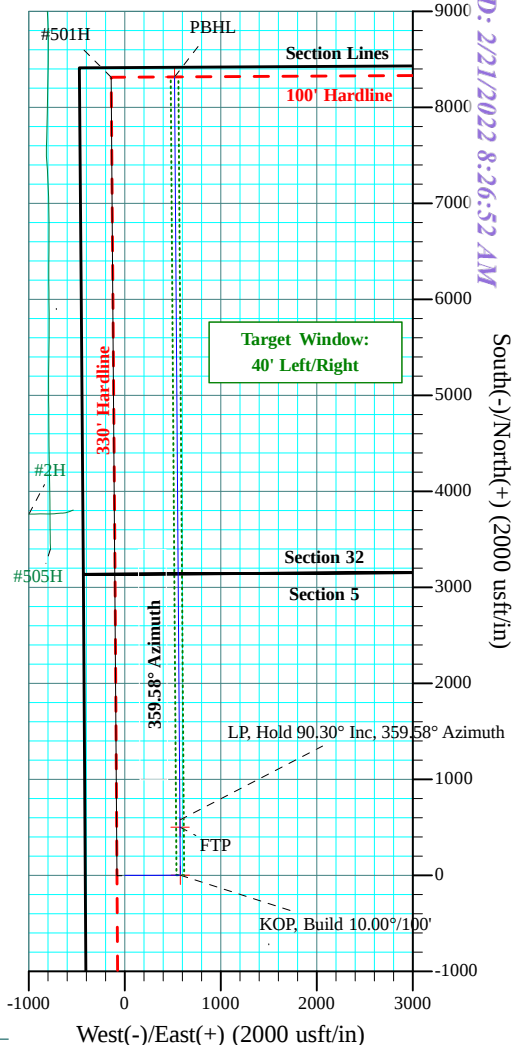
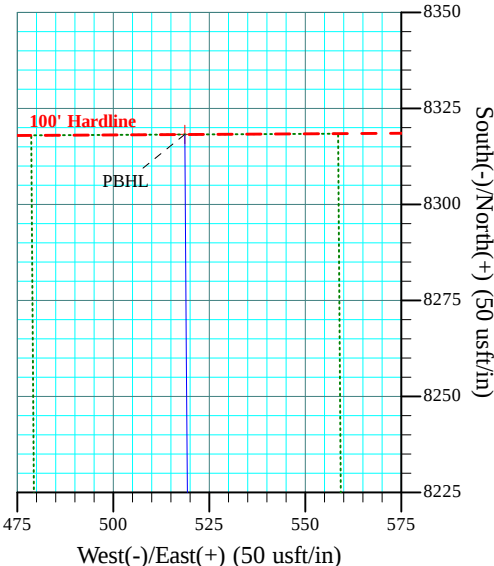
Magnetic North: 6.29° to Grid North

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:
3655'GL+26.5'KB @ 3681.50usft (H&P 620)



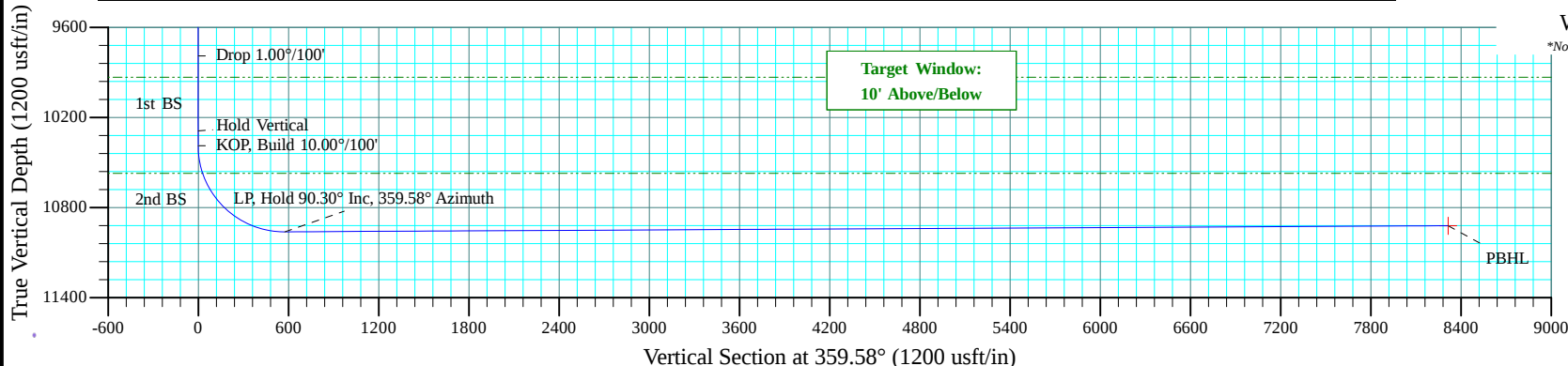
*Note - Aim is not responsible for any collision issues against unknown offset wells

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	3161.51	0.00	0.00	3161.51	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3661.51	5.00	89.71	3660.87	0.11	21.80	1.00	89.71	-0.05	Hold 5.0° Inc, 89.71° Azimuth
4	9813.73	5.00	89.71	9789.68	2.79	558.00	0.00	0.00	-1.30	Drop 1.00°/100'
5	10313.73	0.00	0.00	10289.05	2.90	579.80	1.00	180.00	-1.35	Hold Vertical
6	10413.73	0.00	0.00	10389.05	2.90	579.80	0.00	0.00	-1.35	KOP, Build 10.00°/100'
7	11316.69	90.30	359.58	10962.00	578.80	575.56	10.00	359.58	574.57	LP, Hold 90.30° Inc, 359.58° Azimuth
8	19056.50	90.30	359.58	10922.00	8318.30	518.60	0.00	0.00	8314.28	PBHL

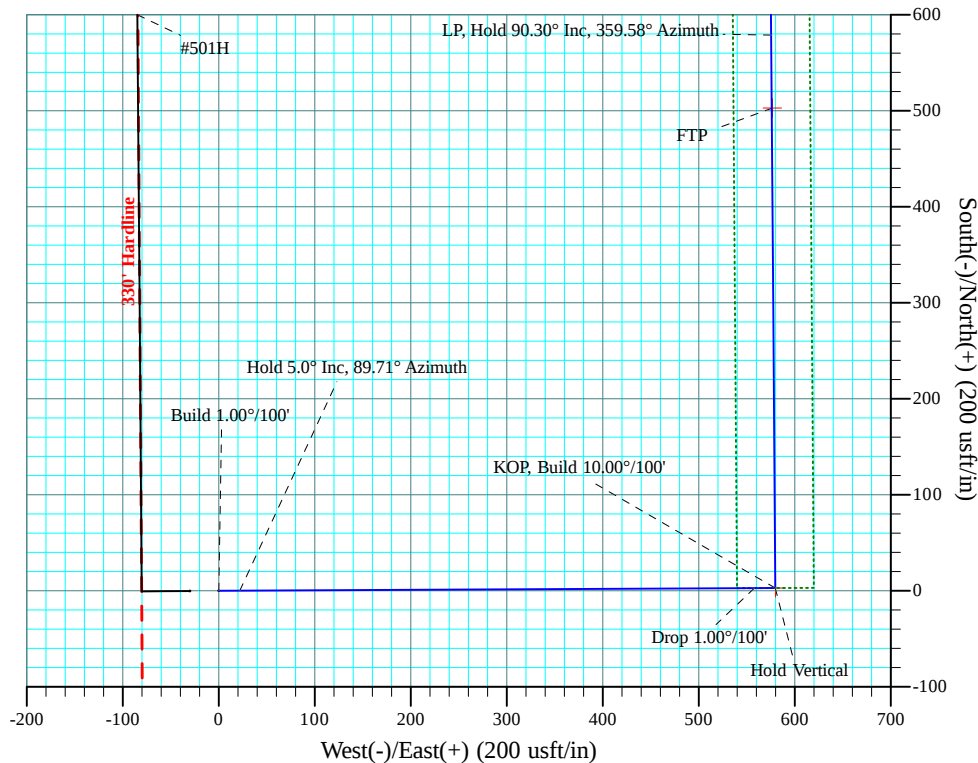
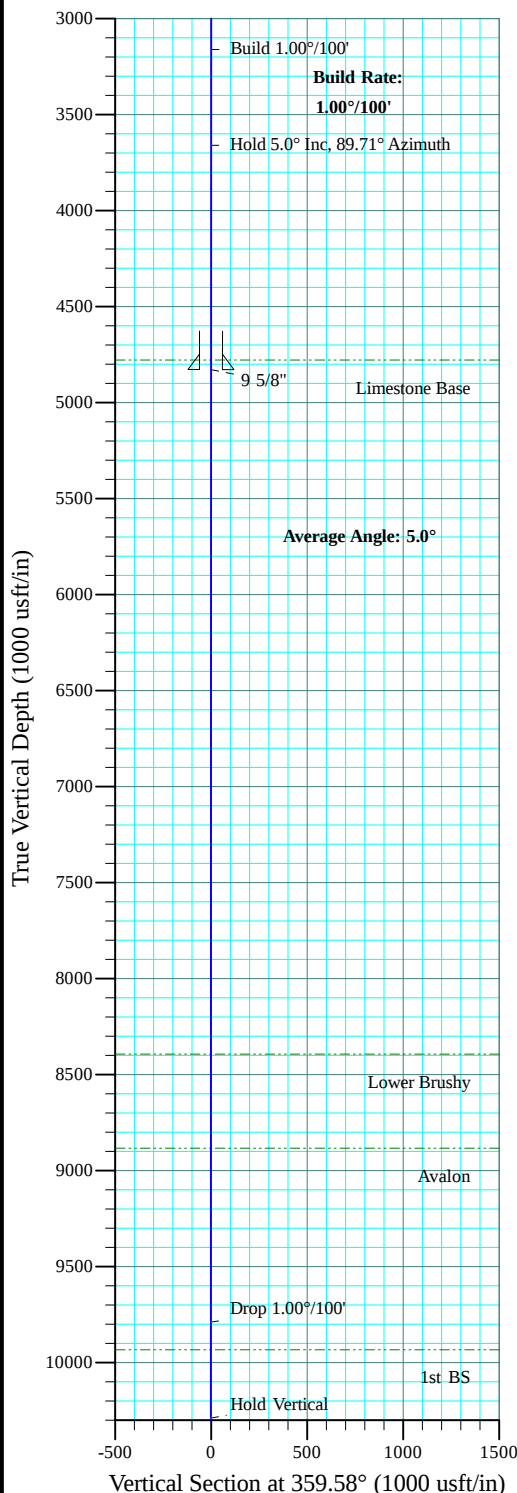
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (DaggerLake503H)	0.00	502.90	576.60	517618.10	767653.20	32° 25' 15.110 N	103° 35' 59.615 W
KOP (DaggerLake503H)	0.00	2.90	579.80	517118.10	767656.40	32° 25' 10.162 N	103° 35' 59.618 W
PBHL (DaggerLake503H)	10922.00	8318.30	518.60	525433.50	767595.20	32° 26' 32.447 N	103° 35' 59.666 W





Dagger Lake 5 State 503H
Lea County, New Mexico
WT-19-028
H&P 620
Plan 1.0



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.29°

Magnetic Field
Strength: 48107.4nT
Dip Angle: 60.19°
Date: 3/14/2019
Model: MVHD

Magnetic North: 6.29° to Grid North

CASING DETAILS

TVD	MD	Name
1160.00	1160.00	13 3/8"
4828.00	4833.09	9 5/8"

SLOTS

Slot Name	+N/-S	+E/-W
501H	-0.30	-29.90
503H	0.00	0.00

SITE DETAILS: Dagger Lake 5 State 503H

Site Centre Northing: 517115.20
Easting: 767076.60

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid

Depth Reference:
3655'GL+26.5'KB @ 3681.50usft (H&P 620)

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 (DaggerLake503H)	0.00	502.90	576.60	517618.10	767653.20	32° 25' 15.110 N	103° 35' 59.615 W
KOP (DaggerLake503H)	0.00	2.90	579.80	517118.10	767656.40	32° 25' 10.162 N	103° 35' 59.618 W
PBHL (DaggerLake503H)	10922.00	8318.30	518.60	525433.50	767595.20	32° 26' 32.447 N	103° 35' 59.666 W

File: Advance Energy - Dagger Lake 5 State #503H Plan 1.0 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	3161.51	0.00	0.00	3161.51	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3661.51	5.00	89.71	3660.87	0.11	21.80	1.00	89.71	-0.05	Hold 5.0° Inc, 89.71° Azimuth
4	9813.73	5.00	89.71	9789.68	2.79	558.00	0.00	0.00	-1.30	Drop 1.00°/100'
5	10313.73	0.00	0.00	10289.05	2.90	579.80	1.00	180.00	-1.35	Hold Vertical
6	10413.73	0.00	0.00	10389.05	2.90	579.80	0.00	0.00	-1.35	KOP, Build 10.00°/100'
7	10513.73	0.00	0.00	10589.05	2.90	579.80	0.00	0.00	-1.35	LP, Hold 90.30° Inc, 359.58° Azimuth
8	19056.50	90.30	359.58	10922.00	8318.30	518.60	0.00	0.00	8314.28	PBHL

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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 Lake 5 State 503H			
Site Position:		Northing:	517,115.20 usft	Latitude:	32° 25' 10.173 N
From:	Map	Easting:	767,076.60 usft	Longitude:	103° 36' 6.382 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#503H - Slot 503H					
Well Position	+N/-S	0.00 usft	Northing:	517,115.20 usft	Latitude:	32° 25' 10.173 N
	+E/-W	0.00 usft	Easting:	767,076.60 usft	Longitude:	103° 36' 6.382 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,655.00 usft

Wellbore	Lateral 1r0				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	3/14/2019	6.69	60.19	48,107.42721189

Design	Plan 1.0				
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	359.58	

Survey Tool Program	Date	3/14/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	19,056.50	Plan 1.0 (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 (DaggerLake503H) - KOP (DaggerLake503H)									
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 Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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
1,108.00	0.00	0.00	1,108.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,160.00	0.00	0.00	1,160.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,161.51	0.00	0.00	3,161.51	0.00	0.00	0.00	0.00	0.00	0.00
Build 1.00°/100'									
3,200.00	0.38	89.71	3,200.00	0.00	0.13	0.00	1.00	1.00	0.00
3,300.00	1.38	89.71	3,299.99	0.01	1.67	0.00	1.00	1.00	0.00
3,400.00	2.38	89.71	3,399.93	0.02	4.96	-0.01	1.00	1.00	0.00
3,500.00	3.38	89.71	3,499.80	0.05	10.00	-0.02	1.00	1.00	0.00
3,600.00	4.38	89.71	3,599.57	0.08	16.77	-0.04	1.00	1.00	0.00
3,661.51	5.00	89.71	3,660.87	0.11	21.80	-0.05	1.00	1.00	0.00
Hold 5.0° Inc, 89.71° Azimuth									
3,700.00	5.00	89.71	3,699.22	0.13	25.16	-0.06	0.00	0.00	0.00
3,800.00	5.00	89.71	3,798.84	0.17	33.87	-0.08	0.00	0.00	0.00
3,900.00	5.00	89.71	3,898.46	0.21	42.59	-0.10	0.00	0.00	0.00
4,000.00	5.00	89.71	3,998.08	0.26	51.30	-0.12	0.00	0.00	0.00
4,100.00	5.00	89.71	4,097.70	0.30	60.02	-0.14	0.00	0.00	0.00
4,200.00	5.00	89.71	4,197.32	0.34	68.73	-0.16	0.00	0.00	0.00
4,300.00	5.00	89.71	4,296.94	0.39	77.45	-0.18	0.00	0.00	0.00
4,400.00	5.00	89.71	4,396.56	0.43	86.17	-0.20	0.00	0.00	0.00
4,500.00	5.00	89.71	4,496.17	0.47	94.88	-0.22	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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	89.71	4,595.79	0.52	103.60	-0.24	0.00	0.00	0.00
4,700.00	5.00	89.71	4,695.41	0.56	112.31	-0.26	0.00	0.00	0.00
4,782.90	5.00	89.71	4,778.00	0.60	119.54	-0.28	0.00	0.00	0.00
Limestone Base									
4,800.00	5.00	89.71	4,795.03	0.61	121.03	-0.28	0.00	0.00	0.00
4,833.09	5.00	89.71	4,828.00	0.62	123.91	-0.29	0.00	0.00	0.00
9 5/8"									
4,900.00	5.00	89.71	4,894.65	0.65	129.74	-0.30	0.00	0.00	0.00
5,000.00	5.00	89.71	4,994.27	0.69	138.46	-0.32	0.00	0.00	0.00
5,100.00	5.00	89.71	5,093.89	0.74	147.17	-0.34	0.00	0.00	0.00
5,200.00	5.00	89.71	5,193.51	0.78	155.89	-0.36	0.00	0.00	0.00
5,300.00	5.00	89.71	5,293.13	0.82	164.60	-0.38	0.00	0.00	0.00
5,400.00	5.00	89.71	5,392.75	0.87	173.32	-0.40	0.00	0.00	0.00
5,500.00	5.00	89.71	5,492.37	0.91	182.04	-0.42	0.00	0.00	0.00
5,600.00	5.00	89.71	5,591.99	0.95	190.75	-0.44	0.00	0.00	0.00
5,700.00	5.00	89.71	5,691.61	1.00	199.47	-0.46	0.00	0.00	0.00
5,800.00	5.00	89.71	5,791.23	1.04	208.18	-0.48	0.00	0.00	0.00
5,900.00	5.00	89.71	5,890.85	1.08	216.90	-0.51	0.00	0.00	0.00
6,000.00	5.00	89.71	5,990.47	1.13	225.61	-0.53	0.00	0.00	0.00
6,100.00	5.00	89.71	6,090.09	1.17	234.33	-0.55	0.00	0.00	0.00
6,200.00	5.00	89.71	6,189.71	1.22	243.04	-0.57	0.00	0.00	0.00
6,300.00	5.00	89.71	6,289.33	1.26	251.76	-0.59	0.00	0.00	0.00
6,400.00	5.00	89.71	6,388.94	1.30	260.48	-0.61	0.00	0.00	0.00
6,500.00	5.00	89.71	6,488.56	1.35	269.19	-0.63	0.00	0.00	0.00
6,600.00	5.00	89.71	6,588.18	1.39	277.91	-0.65	0.00	0.00	0.00
6,700.00	5.00	89.71	6,687.80	1.43	286.62	-0.67	0.00	0.00	0.00
6,800.00	5.00	89.71	6,787.42	1.48	295.34	-0.69	0.00	0.00	0.00
6,900.00	5.00	89.71	6,887.04	1.52	304.05	-0.71	0.00	0.00	0.00
7,000.00	5.00	89.71	6,986.66	1.56	312.77	-0.73	0.00	0.00	0.00
7,100.00	5.00	89.71	7,086.28	1.61	321.48	-0.75	0.00	0.00	0.00
7,200.00	5.00	89.71	7,185.90	1.65	330.20	-0.77	0.00	0.00	0.00
7,300.00	5.00	89.71	7,285.52	1.70	338.91	-0.79	0.00	0.00	0.00
7,400.00	5.00	89.71	7,385.14	1.74	347.63	-0.81	0.00	0.00	0.00
7,500.00	5.00	89.71	7,484.76	1.78	356.35	-0.83	0.00	0.00	0.00
7,600.00	5.00	89.71	7,584.38	1.83	365.06	-0.85	0.00	0.00	0.00
7,700.00	5.00	89.71	7,684.00	1.87	373.78	-0.87	0.00	0.00	0.00
7,800.00	5.00	89.71	7,783.62	1.91	382.49	-0.89	0.00	0.00	0.00
7,900.00	5.00	89.71	7,883.24	1.96	391.21	-0.91	0.00	0.00	0.00
8,000.00	5.00	89.71	7,982.86	2.00	399.92	-0.93	0.00	0.00	0.00
8,100.00	5.00	89.71	8,082.48	2.04	408.64	-0.95	0.00	0.00	0.00
8,200.00	5.00	89.71	8,182.10	2.09	417.35	-0.97	0.00	0.00	0.00
8,300.00	5.00	89.71	8,281.71	2.13	426.07	-0.99	0.00	0.00	0.00
8,400.00	5.00	89.71	8,381.33	2.17	434.78	-1.01	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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)
8,411.71	5.00	89.71	8,393.00	2.18	435.80	-1.01	0.00	0.00	0.00
Lower Brushy									
8,500.00	5.00	89.71	8,480.95	2.22	443.50	-1.03	0.00	0.00	0.00
8,600.00	5.00	89.71	8,580.57	2.26	452.22	-1.05	0.00	0.00	0.00
8,700.00	5.00	89.71	8,680.19	2.31	460.93	-1.07	0.00	0.00	0.00
8,800.00	5.00	89.71	8,779.81	2.35	469.65	-1.09	0.00	0.00	0.00
8,900.00	5.00	89.71	8,879.43	2.39	478.36	-1.11	0.00	0.00	0.00
8,903.58	5.00	89.71	8,883.00	2.39	478.67	-1.11	0.00	0.00	0.00
Avalon									
9,000.00	5.00	89.71	8,979.05	2.44	487.08	-1.13	0.00	0.00	0.00
9,100.00	5.00	89.71	9,078.67	2.48	495.79	-1.15	0.00	0.00	0.00
9,200.00	5.00	89.71	9,178.29	2.52	504.51	-1.17	0.00	0.00	0.00
9,300.00	5.00	89.71	9,277.91	2.57	513.22	-1.20	0.00	0.00	0.00
9,400.00	5.00	89.71	9,377.53	2.61	521.94	-1.22	0.00	0.00	0.00
9,500.00	5.00	89.71	9,477.15	2.65	530.65	-1.24	0.00	0.00	0.00
9,600.00	5.00	89.71	9,576.77	2.70	539.37	-1.26	0.00	0.00	0.00
9,700.00	5.00	89.71	9,676.39	2.74	548.09	-1.28	0.00	0.00	0.00
9,800.00	5.00	89.71	9,776.01	2.78	556.80	-1.30	0.00	0.00	0.00
9,813.73	5.00	89.71	9,789.68	2.79	558.00	-1.30	0.00	0.00	0.00
Drop 1.00°/100'									
9,900.00	4.14	89.71	9,875.68	2.83	564.87	-1.32	1.00	-1.00	0.00
9,957.45	3.56	89.71	9,933.00	2.84	568.73	-1.32	1.00	-1.00	0.00
1st BS									
10,000.00	3.14	89.71	9,975.48	2.86	571.21	-1.33	1.00	-1.00	0.00
10,100.00	2.14	89.71	10,075.37	2.88	575.81	-1.34	1.00	-1.00	0.00
10,200.00	1.14	89.71	10,175.33	2.89	578.67	-1.35	1.00	-1.00	0.00
10,300.00	0.14	89.71	10,275.32	2.90	579.78	-1.35	1.00	-1.00	0.00
10,313.73	0.00	0.00	10,289.05	2.90	579.80	-1.35	1.00	-1.00	0.00
Hold Vertical									
10,400.00	0.00	0.00	10,375.32	2.90	579.80	-1.35	0.00	0.00	0.00
10,413.73	0.00	0.00	10,389.05	2.90	579.80	-1.35	0.00	0.00	0.00
KOP, Build 10.00°/100'									
10,450.00	3.63	359.58	10,425.30	4.05	579.79	-0.20	10.00	10.00	0.00
10,500.00	8.63	359.58	10,474.99	9.38	579.75	5.13	10.00	10.00	0.00
10,550.00	13.63	359.58	10,524.04	19.03	579.68	14.78	10.00	10.00	0.00
10,600.00	18.63	359.58	10,572.06	32.91	579.58	28.66	10.00	10.00	0.00
10,601.00	18.73	359.58	10,573.00	33.23	579.58	28.98	10.00	10.00	0.00
2nd BS									
10,650.00	23.63	359.58	10,618.68	50.93	579.45	46.68	10.00	10.00	0.00
10,700.00	28.63	359.58	10,663.56	72.94	579.28	68.69	10.00	10.00	0.00
10,750.00	33.63	359.58	10,706.35	98.78	579.09	94.53	10.00	10.00	0.00
10,800.00	38.63	359.58	10,746.72	128.24	578.88	124.00	10.00	10.00	0.00
10,850.00	43.63	359.58	10,784.37	161.12	578.64	156.87	10.00	10.00	0.00
10,900.00	48.63	359.58	10,819.01	197.15	578.37	192.91	10.00	10.00	0.00
10,950.00	53.63	359.58	10,850.38	236.07	578.08	231.82	10.00	10.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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)	
11,000.00	58.63	359.58	10,878.24	277.56	577.78	273.32	10.00	10.00	0.00	
11,050.00	63.63	359.58	10,902.38	321.33	577.46	317.09	10.00	10.00	0.00	
11,100.00	68.63	359.58	10,922.60	367.04	577.12	362.80	10.00	10.00	0.00	
11,150.00	73.63	359.58	10,938.77	414.34	576.77	410.10	10.00	10.00	0.00	
11,200.00	78.63	359.58	10,950.76	462.86	576.41	458.62	10.00	10.00	0.00	
11,250.00	83.63	359.58	10,958.47	512.25	576.05	508.01	10.00	10.00	0.00	
11,300.00	88.63	359.58	10,961.84	562.11	575.68	557.88	10.00	10.00	0.00	
11,316.69	90.30	359.58	10,962.00	578.80	575.56	574.57	10.00	10.00	0.00	
LP, Hold 90.30° Inc, 359.58° Azimuth										
11,400.00	90.30	359.58	10,961.57	662.11	574.95	657.88	0.00	0.00	0.00	
11,500.00	90.30	359.58	10,961.05	762.10	574.21	757.88	0.00	0.00	0.00	
11,600.00	90.30	359.58	10,960.54	862.10	573.48	857.87	0.00	0.00	0.00	
11,700.00	90.30	359.58	10,960.02	962.10	572.74	957.87	0.00	0.00	0.00	
11,800.00	90.30	359.58	10,959.50	1,062.09	572.00	1,057.87	0.00	0.00	0.00	
11,900.00	90.30	359.58	10,958.99	1,162.09	571.27	1,157.87	0.00	0.00	0.00	
12,000.00	90.30	359.58	10,958.47	1,262.08	570.53	1,257.87	0.00	0.00	0.00	
12,100.00	90.30	359.58	10,957.95	1,362.08	569.80	1,357.87	0.00	0.00	0.00	
12,200.00	90.30	359.58	10,957.44	1,462.08	569.06	1,457.87	0.00	0.00	0.00	
12,300.00	90.30	359.58	10,956.92	1,562.07	568.32	1,557.86	0.00	0.00	0.00	
12,400.00	90.30	359.58	10,956.40	1,662.07	567.59	1,657.86	0.00	0.00	0.00	
12,500.00	90.30	359.58	10,955.88	1,762.06	566.85	1,757.86	0.00	0.00	0.00	
12,600.00	90.30	359.58	10,955.37	1,862.06	566.12	1,857.86	0.00	0.00	0.00	
12,700.00	90.30	359.58	10,954.85	1,962.06	565.38	1,957.86	0.00	0.00	0.00	
12,800.00	90.30	359.58	10,954.33	2,062.05	564.64	2,057.86	0.00	0.00	0.00	
12,900.00	90.30	359.58	10,953.82	2,162.05	563.91	2,157.86	0.00	0.00	0.00	
13,000.00	90.30	359.58	10,953.30	2,262.04	563.17	2,257.86	0.00	0.00	0.00	
13,100.00	90.30	359.58	10,952.78	2,362.04	562.44	2,357.85	0.00	0.00	0.00	
13,200.00	90.30	359.58	10,952.27	2,462.04	561.70	2,457.85	0.00	0.00	0.00	
13,300.00	90.30	359.58	10,951.75	2,562.03	560.97	2,557.85	0.00	0.00	0.00	
13,400.00	90.30	359.58	10,951.23	2,662.03	560.23	2,657.85	0.00	0.00	0.00	
13,500.00	90.30	359.58	10,950.72	2,762.02	559.49	2,757.85	0.00	0.00	0.00	
13,600.00	90.30	359.58	10,950.20	2,862.02	558.76	2,857.85	0.00	0.00	0.00	
13,700.00	90.30	359.58	10,949.68	2,962.02	558.02	2,957.85	0.00	0.00	0.00	
13,800.00	90.30	359.58	10,949.17	3,062.01	557.29	3,057.84	0.00	0.00	0.00	
13,900.00	90.30	359.58	10,948.65	3,162.01	556.55	3,157.84	0.00	0.00	0.00	
14,000.00	90.30	359.58	10,948.13	3,262.00	555.81	3,257.84	0.00	0.00	0.00	
14,100.00	90.30	359.58	10,947.62	3,362.00	555.08	3,357.84	0.00	0.00	0.00	
14,200.00	90.30	359.58	10,947.10	3,462.00	554.34	3,457.84	0.00	0.00	0.00	
14,300.00	90.30	359.58	10,946.58	3,561.99	553.61	3,557.84	0.00	0.00	0.00	
14,400.00	90.30	359.58	10,946.07	3,661.99	552.87	3,657.84	0.00	0.00	0.00	
14,500.00	90.30	359.58	10,945.55	3,761.98	552.13	3,757.84	0.00	0.00	0.00	
14,600.00	90.30	359.58	10,945.03	3,861.98	551.40	3,857.83	0.00	0.00	0.00	
14,700.00	90.30	359.58	10,944.52	3,961.98	550.66	3,957.83	0.00	0.00	0.00	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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)
14,800.00	90.30	359.58	10,944.00	4,061.97	549.93	4,057.83	0.00	0.00	0.00
14,900.00	90.30	359.58	10,943.48	4,161.97	549.19	4,157.83	0.00	0.00	0.00
15,000.00	90.30	359.58	10,942.96	4,261.96	548.45	4,257.83	0.00	0.00	0.00
15,100.00	90.30	359.58	10,942.45	4,361.96	547.72	4,357.83	0.00	0.00	0.00
15,200.00	90.30	359.58	10,941.93	4,461.96	546.98	4,457.83	0.00	0.00	0.00
15,300.00	90.30	359.58	10,941.41	4,561.95	546.25	4,557.82	0.00	0.00	0.00
15,400.00	90.30	359.58	10,940.90	4,661.95	545.51	4,657.82	0.00	0.00	0.00
15,500.00	90.30	359.58	10,940.38	4,761.94	544.77	4,757.82	0.00	0.00	0.00
15,600.00	90.30	359.58	10,939.86	4,861.94	544.04	4,857.82	0.00	0.00	0.00
15,700.00	90.30	359.58	10,939.35	4,961.94	543.30	4,957.82	0.00	0.00	0.00
15,800.00	90.30	359.58	10,938.83	5,061.93	542.57	5,057.82	0.00	0.00	0.00
15,900.00	90.30	359.58	10,938.31	5,161.93	541.83	5,157.82	0.00	0.00	0.00
16,000.00	90.30	359.58	10,937.80	5,261.92	541.09	5,257.82	0.00	0.00	0.00
16,100.00	90.30	359.58	10,937.28	5,361.92	540.36	5,357.81	0.00	0.00	0.00
16,200.00	90.30	359.58	10,936.76	5,461.92	539.62	5,457.81	0.00	0.00	0.00
16,300.00	90.30	359.58	10,936.25	5,561.91	538.89	5,557.81	0.00	0.00	0.00
16,400.00	90.30	359.58	10,935.73	5,661.91	538.15	5,657.81	0.00	0.00	0.00
16,500.00	90.30	359.58	10,935.21	5,761.90	537.41	5,757.81	0.00	0.00	0.00
16,600.00	90.30	359.58	10,934.70	5,861.90	536.68	5,857.81	0.00	0.00	0.00
16,700.00	90.30	359.58	10,934.18	5,961.89	535.94	5,957.81	0.00	0.00	0.00
16,800.00	90.30	359.58	10,933.66	6,061.89	535.21	6,057.80	0.00	0.00	0.00
16,900.00	90.30	359.58	10,933.15	6,161.89	534.47	6,157.80	0.00	0.00	0.00
17,000.00	90.30	359.58	10,932.63	6,261.88	533.73	6,257.80	0.00	0.00	0.00
17,100.00	90.30	359.58	10,932.11	6,361.88	533.00	6,357.80	0.00	0.00	0.00
17,200.00	90.30	359.58	10,931.59	6,461.87	532.26	6,457.80	0.00	0.00	0.00
17,300.00	90.30	359.58	10,931.08	6,561.87	531.53	6,557.80	0.00	0.00	0.00
17,400.00	90.30	359.58	10,930.56	6,661.87	530.79	6,657.80	0.00	0.00	0.00
17,500.00	90.30	359.58	10,930.04	6,761.86	530.06	6,757.80	0.00	0.00	0.00
17,600.00	90.30	359.58	10,929.53	6,861.86	529.32	6,857.79	0.00	0.00	0.00
17,700.00	90.30	359.58	10,929.01	6,961.85	528.58	6,957.79	0.00	0.00	0.00
17,800.00	90.30	359.58	10,928.49	7,061.85	527.85	7,057.79	0.00	0.00	0.00
17,900.00	90.30	359.58	10,927.98	7,161.85	527.11	7,157.79	0.00	0.00	0.00
18,000.00	90.30	359.58	10,927.46	7,261.84	526.38	7,257.79	0.00	0.00	0.00
18,100.00	90.30	359.58	10,926.94	7,361.84	525.64	7,357.79	0.00	0.00	0.00
18,200.00	90.30	359.58	10,926.43	7,461.83	524.90	7,457.79	0.00	0.00	0.00
18,300.00	90.30	359.58	10,925.91	7,561.83	524.17	7,557.78	0.00	0.00	0.00
18,400.00	90.30	359.58	10,925.39	7,661.83	523.43	7,657.78	0.00	0.00	0.00
18,500.00	90.30	359.58	10,924.88	7,761.82	522.70	7,757.78	0.00	0.00	0.00
18,600.00	90.30	359.58	10,924.36	7,861.82	521.96	7,857.78	0.00	0.00	0.00
18,700.00	90.30	359.58	10,923.84	7,961.81	521.22	7,957.78	0.00	0.00	0.00
18,800.00	90.30	359.58	10,923.33	8,061.81	520.49	8,057.78	0.00	0.00	0.00
18,900.00	90.30	359.58	10,922.81	8,161.81	519.75	8,157.78	0.00	0.00	0.00
19,000.00	90.30	359.58	10,922.29	8,261.80	519.02	8,257.78	0.00	0.00	0.00
19,056.50	90.30	359.58	10,922.00	8,318.30	518.60	8,314.28	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	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)
PBHL - PBHL (DaggerLake503H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (DaggerLake503H)	0.00	0.00	0.00	502.90	576.60	517,618.10	767,653.20	32° 25' 15.110 N	103° 35' 59.615 W
- hit/miss target									
- Shape									
- plan misses target center by 765.10usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
KOP (DaggerLake503H)	0.00	0.01	0.00	2.90	579.80	517,118.10	767,656.40	32° 25' 10.162 N	103° 35' 59.618 W
- plan misses target center by 579.81usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL (DaggerLake503H)	0.00	0.01	10,922.00	8,318.30	518.60	525,433.50	767,595.20	32° 26' 32.447 N	103° 35' 59.666 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,160.00	1,160.00	13 3/8"	13-3/8	17-1/2	
4,833.09	4,828.00	9 5/8"	9-5/8	12-1/4	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,108.00	1,108.00	Rustler		0.00	
4,782.90	4,778.00	Limestone Base		0.00	
8,411.71	8,393.00	Lower Brushy		0.00	
8,903.58	8,883.00	Avalon		0.00	
9,957.45	9,933.00	1st BS		0.00	
10,601.00	10,573.00	2nd BS		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3162	3162	0	0	Build 1.00°/100'	
3662	3661	0	22	Hold 5.0° Inc, 89.71° Azimuth	
9814	9790	3	558	Drop 1.00°/100'	
10,314	10,289	3	580	Hold Vertical	
10,414	10,389	3	580	KOP, Build 10.00°/100'	
11,317	10,962	579	576	LP, Hold 90.30° Inc, 359.58° Azimuth	
19,057	10,922	8318	519	PBHL	

Advance Energy Partners, LLC

Dagger Lake 5 State 503H

Lea County, New Mexico

WT-19-028

H&P 620

Plan 1.0 Final PVA



SITE DETAILS: Dagger Lake 5 State 503H

Site Centre Northing: 517115.20
Easting: 767076.60

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.29°

Magnetic Field
Strength: 48107.4nT
Dip Angle: 60.19°
Date: 3/14/2019
Model: MVHD

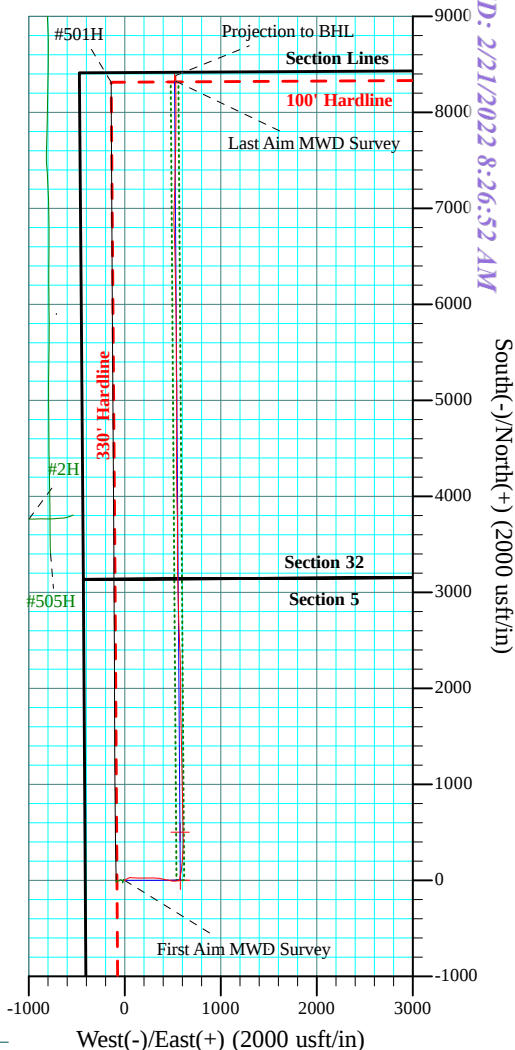
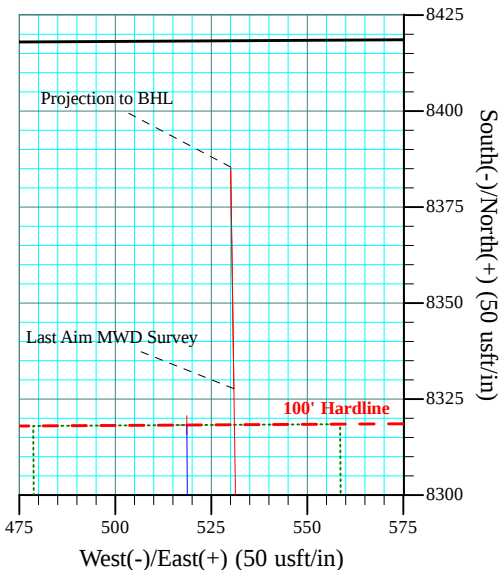
Magnetic North: 6.29° to Grid North

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:
3655'GL+26.5'KB @ 3681.50usft (H&P 620)

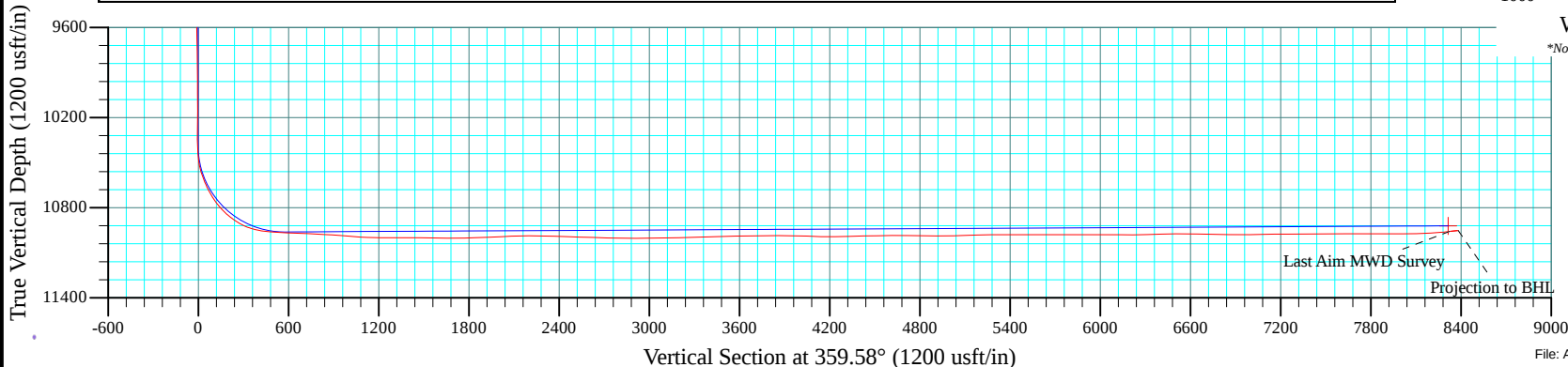


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	19091.00	96.00	359.18	10959.27	8327.73	530.88	0.00	0.00	8323.62	Last Aim MWD Survey
2	19149.00	96.00	359.18	10953.21	8385.41	530.06	0.00	0.00	8381.30	Projection to BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (DaggerLake503H)	0.00	502.90	576.60	517618.10	767653.20	$32^\circ 25' 15.110^\circ \text{ N}$	$103^\circ 35' 59.615^\circ \text{ W}$
KOP (DaggerLake503H)	0.00	2.90	579.80	517118.10	767656.40	$32^\circ 25' 10.162^\circ \text{ N}$	$103^\circ 35' 59.618^\circ \text{ W}$
PBHL (DaggerLake503H)	10922.00	8318.30	518.60	525433.50	767595.20	$32^\circ 26' 32.447^\circ \text{ N}$	$103^\circ 35' 59.666^\circ \text{ W}$



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



Survey Reports

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Aim MWD 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 Lake 5 State 503H		
Site Position:		Northing:	517,115.20 usft
From:	Map	Easting:	767,076.60 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 25' 10.173 N
		Longitude:	103° 36' 6.382 W
		Grid Convergence:	0.39 °

Well	#503H - Slot 503H		
Well Position	+N/-S	0.00 usft	Northing: 517,115.20 usft
	+E/-W	0.00 usft	Easting: 767,076.60 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 25' 10.173 N
		Longitude:	103° 36' 6.382 W
		Ground Level:	3,655.00 usft

Wellbore	Aim MWD Surveys				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	3/16/2019	6.68	60.19	48,106.79578433

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	359.58	

Survey Program	Date	4/9/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
230.00	19,149.00	Aim MWD Surveys (Aim MWD 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	
230.00	0.84	305.48	229.99	0.98	-1.37	0.99	0.37	0.37	0.00	
First Aim MWD Survey										
322.00	0.97	278.23	321.98	1.48	-2.69	1.50	0.48	0.14	-29.62	
505.00	0.66	213.55	504.97	0.82	-4.81	0.86	0.50	-0.17	-35.34	
597.00	0.84	199.22	596.96	-0.25	-5.32	-0.21	0.28	0.20	-15.58	
689.00	0.18	143.06	688.95	-1.01	-5.46	-0.97	0.82	-0.72	-61.04	
780.00	0.09	9.46	779.95	-1.05	-5.36	-1.01	0.28	-0.10	-146.81	
871.00	0.18	225.41	870.95	-1.08	-5.45	-1.04	0.28	0.10	-158.30	
962.00	0.18	274.45	961.95	-1.17	-5.70	-1.13	0.16	0.00	53.89	
1,056.00	0.31	328.95	1,055.95	-0.94	-5.97	-0.90	0.27	0.14	57.98	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Aim MWD 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)
1,113.00	0.22	311.98	1,112.95	-0.73	-6.13	-0.69	0.21	-0.16	-29.77
1,220.00	0.35	341.08	1,219.95	-0.29	-6.39	-0.24	0.18	0.12	27.20
1,311.00	0.09	26.87	1,310.95	0.04	-6.45	0.09	0.32	-0.29	50.32
1,493.00	0.31	67.74	1,492.95	0.35	-5.93	0.40	0.14	0.12	22.46
1,587.00	0.35	98.59	1,586.95	0.41	-5.41	0.45	0.19	0.04	32.82
1,682.00	0.44	67.47	1,681.94	0.50	-4.79	0.54	0.24	0.09	-32.76
1,776.00	0.66	61.06	1,775.94	0.90	-3.98	0.93	0.24	0.23	-6.82
1,870.00	0.70	65.27	1,869.93	1.41	-2.98	1.43	0.07	0.04	4.48
1,965.00	0.66	64.84	1,964.93	1.88	-1.96	1.90	0.04	-0.04	-0.45
2,059.00	0.66	60.79	2,058.92	2.38	-1.00	2.38	0.05	0.00	-4.31
2,153.00	0.66	64.31	2,152.91	2.87	-0.04	2.87	0.04	0.00	3.74
2,247.00	0.79	62.29	2,246.91	3.41	1.02	3.40	0.14	0.14	-2.15
2,341.00	0.66	59.56	2,340.90	3.99	2.06	3.97	0.14	-0.14	-2.90
2,435.00	0.97	55.78	2,434.89	4.71	3.19	4.68	0.33	0.33	-4.02
2,530.00	1.01	47.78	2,529.88	5.72	4.47	5.69	0.15	0.04	-8.42
2,623.00	1.49	53.23	2,622.85	7.00	6.05	6.95	0.53	0.52	5.86
2,812.00	2.86	61.14	2,811.71	10.74	12.15	10.65	0.74	0.72	4.19
2,906.00	3.08	62.64	2,905.59	13.04	16.44	12.92	0.25	0.23	1.60
3,000.00	3.08	60.00	2,999.45	15.46	20.87	15.31	0.15	0.00	-2.81
3,094.00	3.74	62.46	3,093.28	18.14	25.78	17.95	0.72	0.70	2.62
3,189.00	4.40	61.14	3,188.04	21.33	31.72	21.10	0.70	0.69	-1.39
3,283.00	4.84	63.78	3,281.74	24.82	38.43	24.54	0.52	0.47	2.81
3,377.00	5.89	68.09	3,375.33	28.38	46.46	28.03	1.20	1.12	4.59
3,470.00	6.33	82.68	3,467.80	30.81	55.98	30.40	1.73	0.47	15.69
3,658.00	5.85	103.33	3,654.76	29.92	75.58	29.37	1.19	-0.26	10.98
3,752.00	5.45	97.53	3,748.31	28.23	84.67	27.61	0.74	-0.43	-6.17
3,846.00	4.79	93.93	3,841.93	27.38	93.01	26.70	0.78	-0.70	-3.83
3,941.00	4.09	92.08	3,936.65	26.98	100.35	26.25	0.75	-0.74	-1.95
4,035.00	4.09	86.72	4,030.41	27.05	107.05	26.27	0.41	0.00	-5.70
4,129.00	3.52	86.90	4,124.20	27.40	113.28	26.57	0.61	-0.61	0.19
4,223.00	3.60	91.55	4,218.02	27.48	119.11	26.60	0.32	0.09	4.95
4,318.00	3.78	90.24	4,312.82	27.38	125.22	26.46	0.21	0.19	-1.38
4,412.00	3.25	92.17	4,406.65	27.27	130.98	26.31	0.58	-0.56	2.05
4,507.00	3.03	88.65	4,501.50	27.23	136.18	26.23	0.31	-0.23	-3.71
4,601.00	3.60	93.05	4,595.34	27.13	141.62	26.09	0.66	0.61	4.68
4,696.00	3.78	92.78	4,690.15	26.82	147.72	25.73	0.19	0.19	-0.28
4,773.00	3.34	91.91	4,767.00	26.62	152.50	25.50	0.58	-0.57	-1.13
4,878.00	3.03	91.82	4,871.84	26.43	158.33	25.27	0.30	-0.30	-0.09
4,972.00	4.09	92.08	4,965.65	26.23	164.16	25.02	1.13	1.13	0.28
5,067.00	4.62	93.40	5,060.38	25.88	171.37	24.62	0.57	0.56	1.39
5,161.00	4.53	92.78	5,154.08	25.47	178.85	24.16	0.11	-0.10	-0.66
5,255.00	4.35	89.36	5,247.80	25.33	186.13	23.97	0.34	-0.19	-3.64
5,350.00	4.75	91.55	5,342.50	25.27	193.66	23.85	0.46	0.42	2.31

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Aim MWD 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)	
5,444.00	5.01	90.76	5,436.16	25.11	201.66	23.63	0.29	0.28	-0.84	
5,538.00	4.92	91.91	5,529.81	24.92	209.79	23.38	0.14	-0.10	1.22	
5,633.00	4.75	91.11	5,624.47	24.71	217.79	23.11	0.19	-0.18	-0.84	
5,727.00	4.62	89.88	5,718.15	24.64	225.47	22.99	0.17	-0.14	-1.31	
5,821.00	4.70	87.34	5,811.84	24.83	233.10	23.12	0.24	0.09	-2.70	
5,916.00	5.63	88.65	5,906.46	25.12	241.65	23.35	0.99	0.98	1.38	
6,010.00	5.98	85.75	5,999.97	25.59	251.14	23.75	0.49	0.37	-3.09	
6,105.00	6.02	82.06	6,094.45	26.64	261.01	24.73	0.41	0.04	-3.88	
6,199.00	6.07	88.57	6,187.93	27.45	270.86	25.46	0.73	0.05	6.93	
6,293.00	6.37	89.53	6,281.38	27.62	281.04	25.55	0.34	0.32	1.02	
6,388.00	5.89	87.51	6,375.84	27.87	291.18	25.74	0.55	-0.51	-2.13	
6,482.00	6.37	92.08	6,469.30	27.89	301.21	25.68	0.73	0.51	4.86	
6,576.00	6.59	95.25	6,562.70	27.21	311.80	24.92	0.45	0.23	3.37	
6,670.00	6.73	94.72	6,656.06	26.26	322.66	23.90	0.16	0.15	-0.56	
6,765.00	6.90	92.87	6,750.39	25.52	333.90	23.07	0.29	0.18	-1.95	
6,860.00	7.03	91.38	6,844.69	25.09	345.41	22.56	0.23	0.14	-1.57	
6,954.00	7.08	100.87	6,937.98	23.86	356.85	21.24	1.24	0.05	10.10	
7,049.00	6.73	102.19	7,032.29	21.58	368.05	18.88	0.40	-0.37	1.39	
7,143.00	5.93	101.13	7,125.72	19.48	378.19	16.71	0.86	-0.85	-1.13	
7,237.00	6.20	104.03	7,219.19	17.31	387.88	14.47	0.43	0.29	3.09	
7,336.00	6.15	104.74	7,317.62	14.67	398.20	11.75	0.09	-0.05	0.72	
7,426.00	5.63	99.46	7,407.14	12.72	407.21	9.73	0.83	-0.58	-5.87	
7,520.00	5.10	101.66	7,500.73	11.11	415.85	8.06	0.60	-0.56	2.34	
7,615.00	4.31	103.33	7,595.41	9.44	423.46	6.33	0.84	-0.83	1.76	
7,709.00	3.56	103.07	7,689.19	7.96	429.74	4.81	0.80	-0.80	-0.28	
7,803.00	3.56	93.66	7,783.01	7.12	435.50	3.92	0.62	0.00	-10.01	
7,897.00	3.30	91.91	7,876.84	6.84	441.12	3.61	0.30	-0.28	-1.86	
7,992.00	3.91	100.61	7,971.65	6.15	447.03	2.87	0.86	0.64	9.16	
8,086.00	3.82	100.61	8,065.44	4.99	453.26	1.66	0.10	-0.10	0.00	
8,181.00	3.78	105.44	8,160.23	3.57	459.39	0.20	0.34	-0.04	5.08	
8,275.00	3.21	103.59	8,254.06	2.13	464.93	-1.28	0.62	-0.61	-1.97	
8,370.00	3.16	105.26	8,348.91	0.81	470.05	-2.63	0.11	-0.05	1.76	
8,464.00	2.59	107.81	8,442.79	-0.52	474.57	-4.00	0.62	-0.61	2.71	
8,558.00	3.08	105.18	8,536.67	-1.83	479.03	-5.34	0.54	0.52	-2.80	
8,653.00	2.81	105.53	8,631.55	-3.12	483.73	-6.67	0.28	-0.28	0.37	
8,747.00	3.12	100.69	8,725.42	-4.21	488.47	-7.79	0.42	0.33	-5.15	
8,841.00	2.95	112.03	8,819.29	-5.60	493.22	-9.21	0.66	-0.18	12.06	
8,936.00	3.21	101.05	8,914.16	-7.02	498.10	-10.67	0.68	0.27	-11.56	
9,030.00	2.86	87.25	9,008.02	-7.41	503.02	-11.10	0.86	-0.37	-14.68	
9,124.00	3.91	84.96	9,101.86	-7.02	508.56	-10.75	1.13	1.12	-2.44	
9,219.00	4.31	84.52	9,196.62	-6.40	515.34	-10.17	0.42	0.42	-0.46	
9,313.00	3.38	88.83	9,290.40	-6.00	521.63	-9.82	1.04	-0.99	4.59	
9,407.00	2.90	86.19	9,384.26	-5.79	526.77	-9.65	0.53	-0.51	-2.81	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Aim MWD 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)
9,501.00	2.59	94.10	9,478.15	-5.78	531.26	-9.67	0.52	-0.33	8.41
9,596.00	3.08	89.01	9,573.04	-5.89	535.95	-9.82	0.58	0.52	-5.36
9,690.00	2.37	68.61	9,666.93	-5.14	540.29	-9.10	1.27	-0.76	-21.70
9,784.00	2.29	65.27	9,760.85	-3.64	543.80	-7.63	0.17	-0.09	-3.55
9,878.00	2.29	72.48	9,854.78	-2.29	547.30	-6.30	0.31	0.00	7.67
9,972.00	2.02	81.80	9,948.71	-1.49	550.73	-5.53	0.47	-0.29	9.91
10,066.00	1.89	90.32	10,042.66	-1.26	553.92	-5.32	0.34	-0.14	9.06
10,142.00	1.67	92.43	10,118.62	-1.32	556.28	-5.39	0.30	-0.29	2.78
10,236.00	1.41	100.69	10,212.59	-1.59	558.79	-5.69	0.36	-0.28	8.79
10,330.00	1.63	87.60	10,306.56	-1.75	561.26	-5.86	0.44	0.23	-13.93
10,425.00	2.59	76.96	10,401.49	-1.21	564.70	-5.35	1.09	1.01	-11.20
10,519.00	10.46	23.09	10,494.86	7.14	570.13	2.96	9.76	8.37	-57.31
10,613.00	19.25	9.73	10,585.65	30.31	576.10	26.09	9.98	9.35	-14.21
10,708.00	27.12	12.45	10,672.92	66.95	583.43	62.67	8.36	8.28	2.86
10,802.00	34.07	5.16	10,753.81	114.17	590.43	109.84	8.37	7.39	-7.76
10,847.00	40.35	6.12	10,789.63	141.23	593.12	136.88	14.01	13.96	2.13
10,897.00	45.76	7.09	10,826.15	175.13	597.06	170.75	10.90	10.82	1.94
10,992.00	55.74	3.05	10,886.20	248.30	603.36	243.87	11.01	10.51	-4.25
11,086.00	68.70	1.47	10,929.92	331.23	606.57	326.77	13.87	13.79	-1.68
11,180.00	81.58	0.85	10,953.97	421.87	608.39	417.40	13.72	13.70	-0.66
11,275.00	86.90	0.24	10,963.51	516.36	609.29	511.88	5.64	5.60	-0.64
11,370.00	87.25	359.62	10,968.35	611.23	609.17	606.75	0.75	0.37	-0.65
11,464.00	87.87	358.48	10,972.36	705.13	607.61	700.66	1.38	0.66	-1.21
11,558.00	87.08	356.90	10,976.50	798.96	603.83	794.51	1.88	-0.84	-1.68
11,653.00	85.85	358.21	10,982.35	893.69	599.78	889.27	1.89	-1.29	1.38
11,748.00	85.71	358.92	10,989.35	988.40	597.41	983.99	0.76	-0.15	0.75
11,842.00	86.59	359.62	10,995.66	1,082.18	596.21	1,077.78	1.20	0.94	0.74
11,937.00	88.40	359.44	10,999.81	1,177.08	595.44	1,172.68	1.91	1.91	-0.19
12,031.00	90.68	359.01	11,000.56	1,271.06	594.16	1,266.67	2.47	2.43	-0.46
12,126.00	89.23	358.83	11,000.64	1,366.04	592.37	1,361.66	1.54	-1.53	-0.19
12,220.00	90.37	359.62	11,000.97	1,460.03	591.10	1,455.66	1.48	1.21	0.84
12,314.00	88.04	358.57	11,002.27	1,554.00	589.62	1,549.64	2.72	-2.48	-1.12
12,408.00	91.12	358.57	11,002.96	1,647.96	587.27	1,643.61	3.28	3.28	0.00
12,502.00	90.29	358.83	11,001.80	1,741.93	585.14	1,737.59	0.93	-0.88	0.28
12,597.00	91.03	359.36	11,000.71	1,836.91	583.64	1,832.58	0.96	0.78	0.56
12,692.00	92.66	359.80	10,997.65	1,931.85	582.94	1,927.53	1.78	1.72	0.46
12,786.00	91.87	0.15	10,993.93	2,025.78	582.90	2,021.45	0.92	-0.84	0.37
12,881.00	92.35	359.27	10,990.44	2,120.71	582.42	2,116.39	1.05	0.51	-0.93
12,976.00	90.68	358.65	10,987.93	2,215.66	580.70	2,211.34	1.88	-1.76	-0.65
13,110.00	87.16	357.42	10,990.45	2,349.53	576.11	2,345.25	2.78	-2.63	-0.92
13,205.00	88.31	357.77	10,994.21	2,444.37	572.12	2,440.11	1.27	1.21	0.37
13,299.00	89.32	357.77	10,996.15	2,538.28	568.47	2,534.05	1.07	1.07	0.00
13,394.00	88.00	358.92	10,998.37	2,633.21	565.72	2,628.99	1.84	-1.39	1.21
13,489.00	87.87	358.39	11,001.79	2,728.12	563.50	2,723.92	0.57	-0.14	-0.56

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Aim MWD 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)
13,584.00	89.58	358.13	11,003.91	2,823.05	560.61	2,818.87	1.82	1.80	-0.27
13,679.00	90.20	358.39	11,004.09	2,918.01	557.73	2,913.84	0.71	0.65	0.27
13,773.00	90.64	358.39	11,003.40	3,011.97	555.09	3,007.82	0.47	0.47	0.00
13,868.00	91.08	358.74	11,001.98	3,106.93	552.71	3,102.79	0.59	0.46	0.37
13,962.00	91.12	359.01	11,000.17	3,200.89	550.86	3,196.77	0.29	0.04	0.29
14,057.00	91.47	359.27	10,998.02	3,295.86	549.44	3,291.74	0.46	0.37	0.27
14,152.00	92.79	359.97	10,994.49	3,390.79	548.81	3,386.67	1.57	1.39	0.74
14,247.00	90.77	0.24	10,991.54	3,485.74	548.98	3,481.62	2.15	-2.13	0.28
14,342.00	90.20	359.97	10,990.74	3,580.73	549.15	3,576.61	0.66	-0.60	-0.28
14,436.00	91.38	359.71	10,989.44	3,674.72	548.89	3,670.60	1.29	1.26	-0.28
14,531.00	90.99	359.62	10,987.48	3,769.70	548.34	3,765.58	0.42	-0.41	-0.09
14,625.00	89.93	358.83	10,986.72	3,863.69	547.07	3,859.57	1.41	-1.13	-0.84
14,720.00	89.63	359.53	10,987.09	3,958.67	545.71	3,954.57	0.80	-0.32	0.74
14,814.00	86.46	358.65	10,990.29	4,052.59	544.21	4,048.50	3.50	-3.37	-0.94
14,908.00	88.66	359.18	10,994.30	4,146.49	542.44	4,142.40	2.41	2.34	0.56
15,003.00	91.69	358.04	10,994.01	4,241.45	540.13	4,237.37	3.41	3.19	-1.20
15,097.00	91.87	359.01	10,991.09	4,335.37	537.71	4,331.31	1.05	0.19	1.03
15,191.00	90.55	0.94	10,989.10	4,429.34	537.67	4,425.28	2.49	-1.40	2.05
15,285.00	91.38	0.94	10,987.52	4,523.31	539.22	4,519.24	0.88	0.88	0.00
15,380.00	91.34	0.59	10,985.26	4,618.28	540.48	4,614.19	0.37	-0.04	-0.37
15,474.00	88.18	0.94	10,985.66	4,712.26	541.74	4,708.16	3.38	-3.36	0.37
15,569.00	88.66	0.50	10,988.28	4,807.21	542.93	4,803.10	0.69	0.51	-0.46
15,663.00	90.15	359.71	10,989.25	4,901.20	543.10	4,897.09	1.79	1.59	-0.84
15,757.00	91.78	359.36	10,987.67	4,995.18	542.34	4,991.07	1.77	1.73	-0.37
15,852.00	91.52	359.44	10,984.93	5,090.14	541.35	5,086.03	0.29	-0.27	0.08
15,946.00	90.68	358.92	10,983.13	5,184.11	540.00	5,180.01	1.05	-0.89	-0.55
16,041.00	91.65	358.65	10,981.20	5,279.07	537.99	5,274.98	1.06	1.02	-0.28
16,135.00	90.51	359.53	10,979.43	5,373.04	536.50	5,368.96	1.53	-1.21	0.94
16,229.00	89.71	0.85	10,979.25	5,467.03	536.81	5,462.95	1.64	-0.85	1.40
16,324.00	89.19	0.06	10,980.16	5,562.03	537.56	5,557.94	1.00	-0.55	-0.83
16,418.00	90.33	359.18	10,980.55	5,656.02	536.94	5,651.93	1.53	1.21	-0.94
16,512.00	90.07	359.36	10,980.22	5,750.01	535.74	5,745.93	0.34	-0.28	0.19
16,607.00	89.19	359.88	10,980.84	5,845.01	535.11	5,840.93	1.08	-0.93	0.55
16,701.00	90.59	359.80	10,981.02	5,939.00	534.85	5,934.92	1.49	1.49	-0.09
16,796.00	90.02	359.27	10,980.51	6,034.00	534.08	6,029.92	0.82	-0.60	-0.56
16,890.00	89.27	359.09	10,981.09	6,127.99	532.73	6,123.92	0.82	-0.80	-0.19
16,984.00	90.15	358.83	10,981.57	6,221.97	531.03	6,217.91	0.98	0.94	-0.28
17,079.00	92.09	357.95	10,979.71	6,316.91	528.36	6,312.87	2.24	2.04	-0.93
17,173.00	91.82	358.39	10,976.51	6,410.81	525.36	6,406.78	0.55	-0.29	0.47
17,268.00	90.64	358.83	10,974.47	6,505.75	523.05	6,501.74	1.33	-1.24	0.46
17,362.00	89.05	358.13	10,974.72	6,599.72	520.56	6,595.72	1.85	-1.69	-0.74
17,456.00	88.00	358.92	10,977.14	6,693.65	518.14	6,689.67	1.40	-1.12	0.84
17,551.00	89.14	358.30	10,979.51	6,788.59	515.84	6,784.63	1.37	1.20	-0.65

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 503H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 503H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#503H	North Reference:	Grid
Wellbore:	Aim MWD 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)	
17,645.00	90.59	358.92	10,979.73	6,882.56	513.56	6,878.61	1.68	1.54	0.66	
17,739.00	90.07	2.08	10,979.19	6,976.54	514.38	6,972.59	3.41	-0.55	3.36	
17,833.00	90.99	1.91	10,978.32	7,070.48	517.65	7,066.50	1.00	0.98	-0.18	
17,928.00	89.89	1.29	10,977.59	7,165.44	520.30	7,161.43	1.33	-1.16	-0.65	
18,022.00	90.99	0.85	10,976.87	7,259.42	522.06	7,255.40	1.26	1.17	-0.47	
18,117.00	89.63	1.91	10,976.36	7,354.39	524.35	7,350.35	1.82	-1.43	1.12	
18,211.00	90.33	1.55	10,976.39	7,448.34	527.18	7,444.28	0.84	0.74	-0.38	
18,305.00	90.07	1.20	10,976.06	7,542.32	529.44	7,538.23	0.46	-0.28	-0.37	
18,399.00	91.03	0.85	10,975.16	7,636.30	531.12	7,632.20	1.09	1.02	-0.37	
18,494.00	89.85	0.41	10,974.43	7,731.28	532.16	7,727.18	1.33	-1.24	-0.46	
18,588.00	90.95	0.24	10,973.77	7,825.28	532.70	7,821.16	1.18	1.17	-0.18	
18,682.00	88.92	0.32	10,973.88	7,919.27	533.16	7,915.15	2.16	-2.16	0.09	
18,777.00	90.07	0.15	10,974.72	8,014.27	533.55	8,010.14	1.22	1.21	-0.18	
18,871.00	91.60	359.80	10,973.35	8,108.25	533.51	8,104.13	1.67	1.63	-0.37	
18,965.00	93.23	359.36	10,969.39	8,202.16	532.82	8,198.04	1.80	1.73	-0.47	
19,060.00	95.30	358.92	10,962.32	8,296.89	531.40	8,292.77	2.23	2.18	-0.46	
19,091.00	96.00	359.18	10,959.27	8,327.73	530.88	8,323.62	2.41	2.26	0.84	
Last Aim MWD Survey										
19,149.00	96.00	359.18	10,953.21	8,385.41	530.06	8,381.30	0.00	0.00	0.00	
Projection to BHL										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
230.00	229.99	0.98	-1.37	First Aim MWD Survey	
19,091.00	10,959.27	8,327.73	530.88	Last Aim MWD Survey	
19,149.00	10,953.21	8,385.41	530.06	Projection to BHL	



BHA Reports

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #1 - BHA #1 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	8.00	Date In	2019-03-15 13:45
Lobe/Stage	7/8, 4.0	Depth In (ft)	0.00
Bend Angle	1.50	Date Out	2019-03-16 11:00
Speed (rev/gal)	0.16	Depth Out (ft)	1175.00
Wear Pad OD (in)	8.375	Distance Slid (ft)	90.00
Incident	No	Distance Rotated (ft)	1085.00
Motor Results		% Distance Sliding	7.66%
Average Total ROP (ft/h)	141.00	% Distance Rotating	92.34%
Average Slide ROP (ft/h)	72.00		
Average Rotating ROP (ft/h)	153.18		

Bit Details		BHA Objective
OD (in)	17.500	Drill 17.5" Surface
Vendor	Baker	

S/N	5294732	POOH Reason/Notes
Nozzles	9 X 12	Total Depth/Casing Point: POOH for Casing
Total Flow Area (in²)	0.994	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional:
		MWD:

Bit Distances		Comments
Bit To Survey: 62.00 ft, Bend: 6.20 ft		Directional: Motor- 8" 7/8 4.0 FXD @ 1.50 W 17"NBS GPM=400-900 RPG=.15 Max Diff=900 Max Trq=14930 Bit - Baker DD606S Jets- 9 X 12's TFA=.994

Mud Properties		Parameters
Type	Water	Flow Rate (gpm)
WT	9.90	On Bottom Pressure (psi)
VIS	37.00	Off Bottom Pressure (psi)
PV	7.00	Stall Pressure (psi)
YP	7.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD606S, Style: PDC, Gauge Length (in): 4.00, Size (in): 17.50	Baker	5294732	6 5/8" Reg Pin			17.500		1.50	1.50
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	32.00
Stabilizer Description: 17" Stabilizer	DTI	DR35068`	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.56	39.56
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	42.89
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	73.94
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.29
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 IF Box), Type: Steel	DTI	DR35350	4 1/2" IF Box	6 5/8" Reg Pin	2.750	8.188		3.96	109.25
HWDP Description: 30 Jts 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.51	1024.76





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #2 - BHA #2 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	8.00	Date In	2019-03-17 13:00
Lobe/Stage	7/8, 4.0	Depth In (ft)	1175.00
Bend Angle	1.50	Date Out	2019-03-19 08:45
Speed (rev/gal)	0.16	Depth Out (ft)	4835.00
Wear Pad OD (in)	8.375	Distance Slid (ft)	65.00
Incident	No	Distance Rotated (ft)	3595.00
Motor Results		% Distance Sliding	1.78%
Average Total ROP (ft/h)	157.42	% Distance Rotating	98.22%
Average Slide ROP (ft/h)	41.05		
Average Rotating ROP (ft/h)	165.92		

BHA Objective
Drill 12.25" Intermediate Section

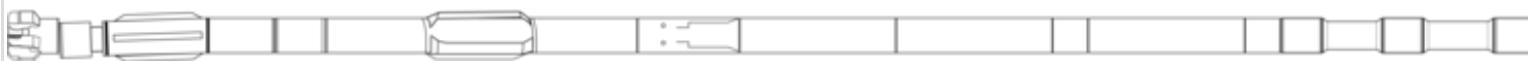
Bit Details		POOH Reason/Notes
OD (in)	12.250	
Vendor	Baker	
S/N	5289099	Total Depth/Casing Point: POOH For Casing
Nozzles	6 X 12	
Total Flow Area (in²)	0.660	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional:
		MWD:

Bit Distances		Comments
Bit To Survey: 62.00 ft, Bend: 6.20 ft		Directional: 8" 7/8 4.0 FXD @ 1.50 W 12" NBS GPM=400-900 RPG=.16 Max Diff=900 Max Trq=14930 Bit - Baker D606X Jets- 6 X 12's TFA=.66

Mud Properties		Parameters	
Type	Brine	Flow Rate (gpm)	599.00 - 900.00
WT	10.00	On Bottom Pressure (psi)	1300.00 - 4600.00
VIS	27.00	Off Bottom Pressure (psi)	1080.00 - 3425.00
PV	5.00	Stall Pressure (psi)	0.00
YP	5.00	Stalls	0
		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: D606X, Style: PDC, Gauge Length (in): 3.75, Size (in): 12.25	Baker	5289099	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	31.75
Stabilizer Description: 12" Stabilizer	DTI	DR38410	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.99	39.74
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	43.07
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	74.12
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.47
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 XH Box), Type: Steel	DTI	DR32566	4 1/2" XH Box	6 5/8" Reg Pin	2.750	8.188		3.06	108.53
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	635.93
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR38966	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		3.96	639.89
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1555.66





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #3 - BHA #3 (2nd Intermediate (Directional))

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-03-26 21:00
Lobe/Stage	7/8, 8.5	Depth In (ft)	4835.00
Bend Angle	1.50	Date Out	2019-03-27 10:00
Speed (rev/gal)	0.26	Depth Out (ft)	4942.00
Wear Pad OD (in)	7.250	Distance Slid (ft)	0.00
Incident	Yes	Distance Rotated (ft)	107.00
Motor Results		% Distance Sliding	0.00%
Average Total ROP (ft/h)	160.50	% Distance Rotating	100.00%
Average Slide ROP (ft/h)	0.00		
Average Rotating ROP (ft/h)	160.50		

BHA Objective
Drill Tangent Section to KOP

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	Halliburton	
S/N	13042663	
Nozzles	6 X 12	
Total Flow Area (in²)	0.660	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: After C/O MWD tool, Attempted to shallow test MWD (bad test), Pressure higher then normal 1000 PSI, Pick up to inspect bit & motor, broke off bit, bit had 4 out of 6 jets plugged with stator rubbers, C/O Motor MWD:

Bit Distances		Comments
Bit To Survey: 64.00 ft, Bend: 4.06 ft, Gamma: 50.00 ft		Directional: 7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS.Protracted Angle: 1.49°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm)
WT	8.90	On Bottom Pressure (psi)
VIS	28.00	Off Bottom Pressure (psi)
PV	1.00	Stall Pressure (psi)
YP	3.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GT65DM, Style: PDC, Gauge Length (in): 4.00, Size (in): 8.50	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Stabilizer Description: 8.25" Stabilizer	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.43
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.71
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.06
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.83
Crossover Sub Description: X-Over (4 1/2 IF Pin x 4 1/2 XH Box), Type: Steel	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.65
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.05
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.07
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.84





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #4 - BHA #4 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-03-27 10:00
Lobe/Stage	7/8, 8.5	Depth In (ft)	4942.00
Bend Angle	1.50	Date Out	2019-03-29 20:30
Speed (rev/gal)	0.26	Depth Out (ft)	10187.00
Wear Pad OD (in)	7.250	Distance Slid (ft)	499.00
Incident	Yes	Distance Rotated (ft)	4746.00
Motor Results		% Distance Sliding	9.51%
Average Total ROP (ft/h)	123.65	% Distance Rotating	90.49%
Average Slide ROP (ft/h)	34.61		
Average Rotating ROP (ft/h)	169.50		

Bit Details		BHA Objective
OD (in)	8.500	Drill Vertical Nudge

Vendor	Halliburton	POOH Reason/Notes
S/N	13042663	Penetration Rate: POOH do to ROP dropping to 0 while rotating
Nozzles	6 X 12	
Total Flow Area (in²)	0.660	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: On surface motor had 2" wash out on kick pad, 1" squat, Metal shavings inside bit
		MWD:

Bit Distances		Comments
Bit To Survey: 64.00 ft, Bend: 4.05 ft, Gamma: 50.00 ft		Directional: 7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS. Protracted Angle: 1.51 °, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm)
WT	8.90	On Bottom Pressure (psi)
VIS	26.00	Off Bottom Pressure (psi)
PV	1.00	Stall Pressure (psi)
YP	3.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GT65DM, Style: PDC, Gauge Length (in): 4.00, Size (in): 8.50	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5 ° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7027SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.20	35.20
Stabilizer Description: 8.25" Stabilizer	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.41
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.69
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.04
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.81
Crossover Sub Description: X-Over (4 1/2 IF Pin x 4 1/2 XH Box), Type: Steel	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.63
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.03
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.05
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.82





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #5 - BHA #5 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-03-29 22:30
Lobe/Stage	6/7, 8.4	Depth In (ft)	10187.00
Bend Angle	2.00	Date Out	2019-03-30 23:30
Speed (rev/gal)	0.30	Depth Out (ft)	10437.00
Wear Pad OD (in)	7.625	Distance Slid (ft)	32.00
Incident	No	Distance Rotated (ft)	218.00
Motor Results		% Distance Sliding	12.80%
Average Total ROP (ft/h)	33.71	% Distance Rotating	87.20%
Average Slide ROP (ft/h)	7.11		
Average Rotating ROP (ft/h)	74.74		

Bit Details		BHA Objective
OD (in)	8.500	Drill Curve

Vendor	Halliburton	POOH Reason/Notes
S/N	13192807	Change Bottom Hole Assembly: POOH do to BHA hanging up while slide & low ROP, C/O motor & inspect bit
Nozzles	5x22	
Total Flow Area (in²)	1.856	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: On surface motor drained, with visible damage, wear pad OD 7 5/8, On bit shoulder cutter worn down
		MWD:

Bit Distances		Comments
Bit To Survey: 59.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft		Directional: 7" Rubicon: 2.00 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1260 psi, Max Operating Torque: 10,560 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13192807, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.10	On Bottom Pressure (psi)
VIS	59.00	Off Bottom Pressure (psi)
PV	13.00	Stall Pressure (psi)
YP	9.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13192807	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 2.00° FBH 6/7 8.4 Stg Mtr w/ Slick, Size (in): 7.00, Bend Angle (°): 2.00, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Rubicon	7006	4 1/2" IF Box	4 1/2" Reg Box		7.000		32.71	33.71
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	35.99
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	66.34
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	95.11
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	108.31





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #6 - BHA #6 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	6.75	Date In	2019-03-30 23:30
Lobe/Stage	7/8, 5.7	Depth In (ft)	10437.00
Bend Angle	2.00	Date Out	2019-04-02 09:00
Speed (rev/gal)	0.24	Depth Out (ft)	13100.00
Wear Pad OD (in)	7.000	Distance Slid (ft)	1000.00
Incident	No	Distance Rotated (ft)	1663.00
Motor Results		% Distance Sliding	37.55%
Average Total ROP (ft/h)	67.99	% Distance Rotating	62.45%
Average Slide ROP (ft/h)	43.80		
Average Rotating ROP (ft/h)	101.82		

Bit Details		BHA Objective
OD (in)	8.500	Drill Curve
Vendor	Halliburton	

S/N	13070534	POOH Reason/Notes
Nozzles	5x22	Penetration Rate: Pooh due decrease in ROP / P/U Lateral motor and bit
Total Flow Area (in²)	1.856	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: Once on surface, Motor drained as expected with no rattling or knocking from transmission & Bearing housings. Motor Squat with less than 1/4". Bit was worn out on the shoulders and almost all gauge cutters were missing. Bit was in gauge and graded a 1-3. Pictures of bit are attached
		MWD:

Bit Distances		Comments
Bit To Survey: 58.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft		Directional: 6 3/4 Aim Contender : 2.00 ° FBH 7/8 5.7 Stg. Mtr. Slick Sleeve .Protracted Angle: 1.94°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .24 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13070534, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.10	On Bottom Pressure (psi)
VIS	56.00	Off Bottom Pressure (psi)
PV	15.00	Stall Pressure (psi)
YP	9.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13070534	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Contender 2.00° FBH 7/8 5.7 Stg Mtr w/ Slick Sleeve, Size (in): 6.75, Bend Angle (°): 2, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM 650-001	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.55	32.55
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	34.83
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	65.18
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	93.95
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	107.15





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #7 - BHA #7 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-04-02 09:00
Lobe/Stage	7/8, 8.5	Depth In (ft)	13100.00
Bend Angle	1.75	Date Out	2019-04-03 18:00
Speed (rev/gal)	0.26	Depth Out (ft)	13569.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	15.00
Incident	No	Distance Rotated (ft)	454.00
Motor Results		% Distance Sliding	3.20%
Average Total ROP (ft/h)	48.94	% Distance Rotating	96.80%
Average Slide ROP (ft/h)	8.18		
Average Rotating ROP (ft/h)	58.58		

BHA Objective
Drill Lateral

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	Baker	
S/N	5295487	Pump Pressure: POOH due to excessive stalling on motor
Nozzles	6x22	
Total Flow Area (in²)	2.227	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: On surface motor drained good, no visible damage
		MWD:

Bit Distances		Comments
Bit To Survey: 60.00 ft, Bend: 4.55 ft, Gamma: 45.00 ft		Directional: 7" Altitude : 1.75 ° FBH 7/8 8.5 Stg. Mtr. Slick .Protracted Angle: 1.73°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5295487, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1

Mud Properties		Parameters	
Type	Oil Based	Flow Rate (gpm)	720.00 - 722.00
WT	9.30	On Bottom Pressure (psi)	4950.00 - 6200.00
VIS	62.00	Off Bottom Pressure (psi)	4800.00 - 5100.00
PV	15.00	Stall Pressure (psi)	1449.94
YP	4.00	Stalls	30
		NPT	1.08
		Motor RPM	216.00 - 216.00
		Surface RPM	30.00 - 30.00
		Rotating WOB (klbs)	40.00 - 50.00
		Sliding WOB (klbs)	20.00 - 20.00
		Temp (°F)	160.40 - 164.40

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5295487	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Altitude 1.75° FBH 7/8 8.5 Stg Mtr w/ Slick , Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7053SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.23	35.23
UBHO Sub Description: Shock Miser UBHO Sub, Type: NM	Aim	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	38.21
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	68.56
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	97.33
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	110.53
Drill Pipe Description: 30 Stds 5" DP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2826.00	2936.53
Agitator Description: Agitator , Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2974.63





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #8 - BHA #8 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-04-03 18:30
Lobe/Stage	6/7, 8.4	Depth In (ft)	13569.00
Bend Angle	1.75	Date Out	2019-04-04 23:00
Speed (rev/gal)	0.30	Depth Out (ft)	14277.00
Wear Pad OD (in)	7.625	Distance Slid (ft)	40.00
Incident	No	Distance Rotated (ft)	668.00
Motor Results		% Distance Sliding	5.65%
Average Total ROP (ft/h)	73.24	% Distance Rotating	94.35%
Average Slide ROP (ft/h)	26.67		
Average Rotating ROP (ft/h)	81.80		

Bit Details		BHA Objective
OD (in)	8.500	Drill Lateral
Vendor	Baker	

POOH Reason/Notes
Penetration Rate: Pooh due to decrease in ROP. After putting in a slide @ 50/hr driller picked up and began rotating. Rotated the first 8-10' at 80/hr. Rop continued decreasing over the next 10' until ROP fell to 0. Diff psi and torque acted accordingly as weight was added, Diff and Torque increased ruling out Mud Motor Failure. Pooh to change out bit.
POOH Reason/Notes
Incident Notes
Max Downhole Temp (°F) N/A
Directional: Once on surface motor drained good and everything appeared to be in good condition with virtually no squat from the bearing stack. Bit was rung out and 1-8. DBR
MWD:

Bit Distances	Comments
Bit To Survey: 65.00 ft, Bend: 4.55 ft, Gamma: 50.00 ft	Directional: 7" Contender : 1.75 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 1.76°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5290343, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1
Mud Properties	Parameters
Type	Oil Based
WT	9.40
VIS	63.00
PV	17.00
YP	8.00
	NPT

Mud Properties		Parameters			
Type	Oil Based	Flow Rate (gpm)	685.00 - 700.00	Motor RPM	206.00 - 210.00
WT	9.40	On Bottom Pressure (psi)	5300.00 - 5800.00	Surface RPM	35.00 - 35.00
VIS	63.00	Off Bottom Pressure (psi)	4900.00 - 5200.00	Rotating WOB (klbs)	48.00 - 48.00
PV	17.00	Stall Pressure (psi)	0.00	Sliding WOB (klbs)	30.00 - 35.00
YP	8.00	Stalls	0	Temp (°F)	164.00 - 176.70
		NPT	1.0		





Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #9 - BHA #9 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-04-04 23:30
Lobe/Stage	7/8, 6.9	Depth In (ft)	14277.00
Bend Angle	1.75	Date Out	2019-04-09 18:15
Speed (rev/gal)	0.25	Depth Out (ft)	19149.00
Wear Pad OD (in)	7.250	Distance Slid (ft)	591.00
Incident	No	Distance Rotated (ft)	4281.00
Motor Results		% Distance Sliding	12.13%
Average Total ROP (ft/h)	62.86	% Distance Rotating	87.87%
Average Slide ROP (ft/h)	22.88		
Average Rotating ROP (ft/h)	82.86		

BHA Objective
Drill Lateral

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	Baker	
S/N	5293281	Total Depth/Casing Point: Total Depth
Nozzles	6x22	
Total Flow Area (in²)	2.227	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional:
		MWD:

Bit Distances		Comments
Bit To Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft		Directional: 7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77°, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.60	On Bottom Pressure (psi)
VIS	57.00	Off Bottom Pressure (psi)
PV	13.00	Stall Pressure (psi)
YP	8.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Crescent 1.75° FBH 7/8 6.9 Stg Mtr w/ True Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 6.9	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45





Mud Motor Reports

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 1 (BHA #1)

Motor Details		Date/Depth/Distances	Hours
S/N	800-40-002	Date In	2019-03-15 13:45
Size (in)	8.0	Depth In (ft)	0.00
Lobe/Stage	7/8, 4.00	Date Out	2019-03-16 11:00
Bend Angle	1.5	Depth Out (ft)	1175.00
Speed (rev/gal)	0.16	Total Drilled (ft)	1175.00
Wear Pad OD (in)	8.375	Distance Slid (ft)	90.00
Manufacturer	N/A	Distance Rotated (ft)	1085.00
Motor Results		% Distance Sliding	7.66%
Motor Incident	No	% Distance Rotating	92.34%
Average Total ROP (ft/h)	141.00		
Average Slide ROP (ft/h)	72.00		
Average Rotating ROP (ft/h)	153.18		
Bit Details			
OD (in)	17.500	Stall Pressure (psi)	0.00
Vendor	Baker	On Bottom Pressure (psi)	2100.00 - 3100.00
S/N	5294732	Off Bottom Pressure (psi)	1600.00 - 2500.00
Nozzles	9 X 12	NPT	0.0
Total Flow Area (in²)	0.994	BHA Objective	
Bit Type	PDC	Drill 17.5" Surface	
Bit Distances			
Survey: 62.00 ft, Bend: 6.20 ft			
Mud Properties			
Type	Water		
WT	9.90		
VIS	37.00		
PV	7.00		
YP	7.00		
POOH Reason/Notes			
Total Depth/Casing Point: POOH for Casing			
Incident Notes			
Directional:			
MWD:			
Comments			
Directional: Motor- 8" 7/8 4.0 FXD @ 1.50 W 17"NBS GPM=400-900 RPG=.15 Max Diff=900 Max Trq=14930 Bit - Baker DD606S Jets- 9 X 12's TFA=.994			
MWD:			



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 2 (BHA #2)

Motor Details		Date/Depth/Distances	Hours
S/N	800-40-002	Date In	2019-03-17 13:00
Size (in)	8.0	Depth In (ft)	1175.00
Lobe/Stage	7/8, 4.00	Date Out	2019-03-19 08:45
Bend Angle	1.5	Depth Out (ft)	4835.00
Speed (rev/gal)	0.16	Total Drilled (ft)	3660.00
Wear Pad OD (in)	8.375	Distance Slid (ft)	65.00
Manufacturer	N/A	Distance Rotated (ft)	3595.00
Motor Results		% Distance Sliding	1.78%
Motor Incident	No	% Distance Rotating	98.22%
Average Total ROP (ft/h)	157.42		
Average Slide ROP (ft/h)	41.05		
Average Rotating ROP (ft/h)	165.92		
Bit Details			
OD (in)	12.250	On Bottom Pressure (psi)	1300.00 - 4600.00
Vendor	Baker	Off Bottom Pressure (psi)	1080.00 - 3425.00
S/N	5289099	NPT	0.0
Nozzles	6 X 12		
Total Flow Area (in²)	0.660		
Bit Type	PDC		
Bit Distances			
Survey: 62.00 ft, Bend: 6.20 ft			
Mud Properties			
Type	Brine		
WT	10.00		
VIS	27.00		
PV	5.00		
YP	5.00		
POOH Reason/Notes			
Total Depth/Casing Point: POOH For Casing			
Incident Notes			
Directional:			
MWD:			
Comments			
Directional: 8" 7/8 4.0 FXD @ 1.50 W 12" NBS GPM=400-900 RPG=.16 Max Diff=900 Max Trq=14930 Bit - Baker D606X Jets- 6 X 12's TFA=.66			
MWD:			



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 3 (BHA #3 (2nd Intermediate))

Motor Details		Date/Depth/Distances	Hours
S/N	AEP7018	Date In	2019-03-26 21:00
Size (in)	7.0	Depth In (ft)	4835.00
Lobe/Stage	7/8, 8.50	Date Out	2019-03-27 10:00
Bend Angle	1.5	Depth Out (ft)	4942.00
Speed (rev/gal)	0.26	Total Drilled (ft)	107.00
Wear Pad OD (in)	7.250	Distance Slid (ft)	0.00
Manufacturer	N/A	Distance Rotated (ft)	107.00
Motor Results		% Distance Sliding	0.00%
Motor Incident	Yes	% Distance Rotating	100.00%
Average Total ROP (ft/h)	160.50		
Average Slide ROP (ft/h)	0.00		
Average Rotating ROP (ft/h)	160.50		
Bit Details			
OD (in)	8.500	On Bottom Pressure (psi)	3400.00 - 3400.00
Vendor	Halliburton	Off Bottom Pressure (psi)	2900.00 - 2900.00
S/N	13042663	NPT	1.83
Nozzles	6 X 12		
Total Flow Area (in²)	0.660		
Bit Type	PDC		
Bit Distances			
Survey: 64.00 ft, Bend: 4.06 ft, Gamma: 50.00 ft			
Mud Properties			
Type	Brine		
WT	8.90		
VIS	28.00		
PV	1.00		
YP	3.00		
POOH Reason/Notes			
MWD Incident: POOH for MWD, Stop pulsing			
Incident Notes			
Directional: After C/O MWD tool, Attempted to shallow test MWD (bad test), Pressure higher then normal 1000 PSI, Pick up to inspect bit & motor, broke off bit, bit had 4 out of 6 jets plugged with stator rubbers, C/O Motor			
MWD:			
Comments			
Directional: 7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS.Protracted Angle: 1.49°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1			
MWD:			



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 4 (BHA #4)

Motor Details		Date/Depth/Distances		Hours	
S/N	AEP7027SS	Date In	2019-03-27 10:00	Downhole Hours	58.50
Size (in)	7.0	Depth In (ft)	4942.00	Drilling/Circulating Hours	43.17
Lobe/Stage	7/8, 8.50	Date Out	2019-03-29 20:30		
Bend Angle	1.5	Depth Out (ft)	10187.00	Circulating Hours	0.75
Speed (rev/gal)	0.26	Total Drilled (ft)	5245.00	Drilling Hours	42.42
Wear Pad OD (in)	7.250	Distance Slid (ft)	499.00	Sliding Hours	14.42
Manufacturer	N/A	Distance Rotated (ft)	4746.00	Rotating Hours	28.00
Motor Results		% Distance Sliding	9.51%	% Hours Rotating	66.01%
Motor Incident	Yes	% Distance Rotating	90.49%	% Hours Sliding	33.99%
Average Total ROP (ft/h)	123.65	BHA Parameters			
Average Slide ROP (ft/h)	34.61	Flow Rate (gpm)	600.00 - 750.00	Motor RPM	156.00 - 195.00
Average Rotating ROP (ft/h)	169.50	Stalls	10	Surface RPM	25.00 - 70.00
Bit Details		Stall Pressure (psi)	1000.04	Rotating WOB (klbs)	24.00 - 54.00
OD (in)	8.500	On Bottom Pressure (psi)	2300.00 - 3700.00	Sliding WOB (klbs)	30.00 - 30.00
Vendor	Halliburton	Off Bottom Pressure (psi)	1900.00 - 2900.00	Temp (°F)	125.00 - 141.00
S/N	13042663	NPT	0.75		
Nozzles	6 X 12	BHA Objective			
Total Flow Area (in²)	0.660	Drill Vertical Nudge			
Bit Type	PDC				
Bit Distances					
Survey: 64.00 ft, Bend: 4.05 ft, Gamma: 50.00 ft					
Mud Properties					
Type	Brine				
WT	8.90				
VIS	26.00				
PV	1.00				
YP	3.00				
POOH Reason/Notes					
Penetration Rate: POOH do to ROP dropping to 0 while rotating					
Incident Notes					
Directional: On surface motor had 2" wash out on kick pad, 1" squat, Metal shavings inside bit					
MWD:					
Comments					
Directional: 7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS.Protracted Angle: 1.51°. Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1					
MWD:					



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 5 (BHA #5)

Motor Details		Date/Depth/Distances		Hours	
S/N	7006	Date In	2019-03-29 22:30	Downhole Hours	25.00
Size (in)	7.0	Depth In (ft)	10187.00	Drilling/Circulating Hours	9.50
Lobe/Stage	6/7, 8.40	Date Out	2019-03-30 23:30		
Bend Angle	2.0	Depth Out (ft)	10437.00	Circulating Hours	2.08
Speed (rev/gal)	0.30	Total Drilled (ft)	250.00	Drilling Hours	7.42
Wear Pad OD (in)	7.625	Distance Slid (ft)	32.00	Sliding Hours	4.50
Manufacturer	N/A	Distance Rotated (ft)	218.00	Rotating Hours	2.92
Motor Results		% Distance Sliding	12.80%	% Hours Rotating	39.33%
Motor Incident	No	% Distance Rotating	87.20%	% Hours Sliding	60.67%
Average Total ROP (ft/h)	33.71	BHA Parameters			
Average Slide ROP (ft/h)	7.11	Flow Rate (gpm)	700.00 - 735.00	Motor RPM	210.00 - 219.00
Average Rotating ROP (ft/h)	74.74	Stalls	0	Surface RPM	30.00 - 30.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	40.00 - 54.00
OD (in)	8.500	On Bottom Pressure (psi)	3200.00 - 3700.00	Sliding WOB (klbs)	35.00 - 35.00
Vendor	Halliburton	Off Bottom Pressure (psi)	2600.00 - 3500.00	Temp (°F)	129.00 - 138.00
S/N	13192807	NPT	2.08		
Nozzles	5x22	BHA Objective			
Total Flow Area (in²)	1.856	Drill Curve			
Bit Type	PDC				
Bit Distances					
Survey: 59.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft					
Mud Properties					
Type	Oil Based				
WT	9.10				
VIS	59.00				
PV	13.00				
YP	9.00				
POOH Reason/Notes					
Change Bottom Hole Assembly: POOH do to BHA hanging up while slide & low ROP, C/O motor & inspect bit					
Incident Notes					
Directional: On surface motor drained, with visible damage, wear pad OD 7 5/8, On bit shoulder cutter worn down					
MWD:					
Comments					
Directional: 7" Rubicon: 2.00 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1260 psi, Max Operating Torque: 10,560 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13192807, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1					
MWD:					



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 6 (BHA #6)

Motor Details		Date/Depth/Distances	Hours
S/N	CDM 650-001	Date In	2019-03-30 23:30
Size (in)	6.75	Depth In (ft)	10437.00
Lobe/Stage	7/8, 5.70	Date Out	2019-04-02 09:00
Bend Angle	2.0	Depth Out (ft)	13100.00
Speed (rev/gal)	0.24	Total Drilled (ft)	2663.00
Wear Pad OD (in)	7.000	Distance Slid (ft)	1000.00
Manufacturer	N/A	Distance Rotated (ft)	1663.00
Motor Results		% Distance Sliding	37.55%
Motor Incident	No	% Distance Rotating	62.45%
Average Total ROP (ft/h)	67.99	BHA Parameters	
Average Slide ROP (ft/h)	43.80	Flow Rate (gpm)	600.00 - 650.00
Average Rotating ROP (ft/h)	101.82	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	3300.00 - 3800.00
Vendor	Halliburton	Off Bottom Pressure (psi)	2800.00 - 3500.00
S/N	13070534	NPT	0.0
Nozzles	5x22	BHA Objective	
Total Flow Area (in²)	1.856	Drill Curve	
Bit Type	PDC		
Bit Distances			
Survey: 58.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.10		
VIS	56.00		
PV	15.00		
YP	9.00		

POOH Reason/Notes

Penetration Rate: Pooh due decrease in ROP / P/U Lateral motor and bit

Incident Notes

Directional: Once on surface, Motor drained as expected with no rattling or knocking from transmission & Bearing housings. Motor Squat with less than 1/4". Bit was worn out on the shoulders and almost all gauge cutters were missing. Bit was in gauge and graded a 1-3. Pictures of bit are attached

MWD:

Comments

Directional: 6 3/4 Aim Contender : 2.00 ° FBH 7/8 5.7 Stg. Mtr. Slick Sleeve .Protracted Angle: 1.94 °, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .24 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13070534, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1

MWD:



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 7 (BHA #7)

Motor Details		Date/Depth/Distances		Hours	
S/N	AEP7053SS	Date In	2019-04-02 09:00	Downhole Hours	33.00
Size (in)	7.0	Depth In (ft)	13100.00	Drilling/Circulating Hours	10.42
Lobe/Stage	7/8, 8.50	Date Out	2019-04-03 18:00		
Bend Angle	1.75	Depth Out (ft)	13569.00	Circulating Hours	0.83
Speed (rev/gal)	0.26	Total Drilled (ft)	469.00	Drilling Hours	9.58
Wear Pad OD (in)	7.125	Distance Slid (ft)	15.00	Sliding Hours	1.83
Manufacturer	N/A	Distance Rotated (ft)	454.00	Rotating Hours	7.75
Motor Results		% Distance Sliding	3.20%	% Hours Rotating	80.87%
Motor Incident	No	% Distance Rotating	96.80%	% Hours Sliding	19.13%
Average Total ROP (ft/h)	48.94	BHA Parameters			
Average Slide ROP (ft/h)	8.18	Flow Rate (gpm)	720.00 - 722.00	Motor RPM	216.00 - 216.00
Average Rotating ROP (ft/h)	58.58	Stalls	30	Surface RPM	30.00 - 30.00
Bit Details		Stall Pressure (psi)	1449.94	Rotating WOB (klbs)	40.00 - 50.00
OD (in)	8.500	On Bottom Pressure (psi)	4950.00 - 6200.00	Sliding WOB (klbs)	20.00 - 20.00
Vendor	Baker	Off Bottom Pressure (psi)	4800.00 - 5100.00	Temp (°F)	160.40 - 164.40
S/N	5295487	NPT	1.08		
Nozzles	6x22	BHA Objective			
Total Flow Area (in²)	2.227	Drill Lateral			
Bit Type	PDC				
Bit Distances					
Survey: 60.00 ft, Bend: 4.55 ft, Gamma: 45.00 ft					
Mud Properties					
Type	Oil Based				
WT	9.30				
VIS	62.00				
PV	15.00				
YP	4.00				
POOH Reason/Notes					
Pump Pressure: POOH due to excessive stalling on motor					
Incident Notes					
Directional: On surface motor drained good, no visible damage					
MWD:					
Comments					
Directional: 7" Altitude : 1.75 ° FBH 7/8 8.5 Stg. Mtr. Slick .Protracted Angle: 1.73°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5295487, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1					
MWD:					



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 8 (BHA #8)

Motor Details		Date/Depth/Distances	Hours
S/N	700-40-026	Date In	2019-04-03 18:30
Size (in)	7.0	Depth In (ft)	13569.00
Lobe/Stage	6/7, 8.40	Date Out	2019-04-04 23:00
Bend Angle	1.75	Depth Out (ft)	14277.00
Speed (rev/gal)	0.30	Total Drilled (ft)	708.00
Wear Pad OD (in)	7.625	Distance Slid (ft)	40.00
Manufacturer	N/A	Distance Rotated (ft)	668.00
Motor Results		% Distance Sliding	5.65%
Motor Incident		% Distance Rotating	94.35%
Average Total ROP (ft/h)	73.24	BHA Parameters	
Average Slide ROP (ft/h)	26.67	Flow Rate (gpm)	685.00 - 700.00
Average Rotating ROP (ft/h)	81.80	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	5300.00 - 5800.00
Vendor	Baker	Off Bottom Pressure (psi)	4900.00 - 5200.00
S/N	5290343	NPT	1.0
Nozzles	6x22	BHA Objective	
Total Flow Area (in ²)	2.227	Drill Lateral	
Bit Type	PDC		
Bit Distances			
Survey: 65.00 ft, Bend: 4.55 ft, Gamma: 50.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.40		
VIS	63.00		
PV	17.00		
YP	8.00		

POOH Reason/Notes

Penetration Rate: Pooh due to decrease in ROP. After putting in a slide @ 50'/hr driller picked up and began rotating. Rotated the first 8-10' at 80'/hr. Rop continued decreasing over the next 10' until ROP fell to 0. Diff psi and torque acted accordingly as weight was added, Diff and Torque increased ruling out Mud Motor Failure. Pooh to change out bit.

Incident Notes

Directional: Once on surface motor drained good and everything appeared to be in good condition with virtually no squat from the bearing stack. Bit was rung out and 1-8. DBR

MWD:

Comments

Directional: 7" Contender : 1.75 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 1.76°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Baker 8.5", Type DD506TWW, SN: 5290343, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1

MWD:



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 9 (BHA #9)

Motor Details		Date/Depth/Distances		Hours	
S/N	CD70010	Date In	2019-04-04 23:30	Downhole Hours	114.75
Size (in)	7.0	Depth In (ft)	14277.00	Drilling/Circulating Hours	81.92
Lobe/Stage	7/8, 6.90	Date Out	2019-04-09 18:15		
Bend Angle	1.75	Depth Out (ft)	19149.00	Circulating Hours	4.42
Speed (rev/gal)	0.25	Total Drilled (ft)	4872.00	Drilling Hours	77.50
Wear Pad OD (in)	7.250	Distance Slid (ft)	591.00	Sliding Hours	25.83
Manufacturer	N/A	Distance Rotated (ft)	4281.00	Rotating Hours	51.67
Motor Results		% Distance Sliding	12.13%	% Hours Rotating	66.67%
Motor Incident	No	% Distance Rotating	87.87%	% Hours Sliding	33.33%
Average Total ROP (ft/h)	62.86	BHA Parameters			
Average Slide ROP (ft/h)	22.88	Flow Rate (gpm)	675.00 - 700.00	Motor RPM	150.00 - 175.00
Average Rotating ROP (ft/h)	82.86	Stalls	0	Surface RPM	35.00 - 35.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	48.00 - 54.00
OD (in)	8.500	On Bottom Pressure (psi)	5150.00 - 5800.00	Sliding WOB (klbs)	35.00 - 35.00
Vendor	Baker	Off Bottom Pressure (psi)	4900.00 - 5200.00	Temp (°F)	176.00 - 194.00
S/N	5293281	NPT	0.0		
Nozzles	6x22	BHA Objective			
Total Flow Area (in²)	2.227	Drill Lateral			
Bit Type	PDC				
Bit Distances					
Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft					
Mud Properties					
Type	Oil Based				
WT	9.60				
VIS	57.00				
PV	13.00				
YP	8.00				
POOH Reason/Notes					
Total Depth/Casing Point: Total Depth					
Incident Notes					
Directional:					
MWD:					
Comments					
Directional: 7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77°, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2					
MWD:					



Slide/Rotate Reports

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #1 (BHA #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
Rotate	03-15	14:45	16:25	03-15	1.67	0.00	292.00	292.00	175.20	N/A	870.00	75.0	15.00	2100.00	1600.00	
Rotate	03-15	16:40	17:00	03-15	0.33	292.00	384.00	92.00	276.00	N/A	870.00	75.0	15.00	2100.00	1600.00	
Rotate	03-15	17:05	17:35	03-15	0.5	384.00	476.00	92.00	184.00	N/A	870.00	75.0	15.00	2100.00	1600.00	
Slide	03-15	17:35	18:05	03-15	0.5	476.00	506.00	30.00	60.00	70.0	871.00	N/A	17.00	2200.00	1800.00	
Rotate	03-15	18:05	18:25	03-15	0.33	506.00	567.00	61.00	183.00	N/A	870.00	75.0	15.00	2100.00	1600.00	
Rotate	03-15	18:35	19:10	03-15	0.58	567.00	659.00	92.00	157.71	N/A	870.00	75.0	15.00	2100.00	1600.00	
Slide	03-15	19:20	19:45	03-15	0.42	659.00	699.00	40.00	96.00	19.0	871.00	N/A	23.00	2500.00	1800.00	
Rotate	03-15	19:45	20:00	03-15	0.25	699.00	751.00	52.00	208.00	N/A	870.00	80.0	21.00	2500.00	2000.00	
Rotate	03-15	20:10	20:55	03-15	0.75	751.00	820.00	69.00	92.00	N/A	870.00	80.0	21.00	2500.00	2000.00	
Rotate	03-15	21:45	22:25	03-15	0.67	820.00	842.00	22.00	33.00	N/A	795.00	80.0	21.00	2250.00	1800.00	
Rotate	03-16	04:45	05:35	03-16	0.83	842.00	933.00	91.00	109.20	N/A	795.00	80.0	21.00	2250.00	1800.00	
Slide	03-16	05:45	06:05	03-16	0.33	933.00	953.00	20.00	60.00	25.0	871.00	N/A	28.00	2500.00	1800.00	
Rotate	03-16	06:05	06:45	03-16	0.67	953.00	1024.00	71.00	106.50	N/A	895.00	80.0	28.00	3000.00	2300.00	
Rotate	03-16	06:50	07:20	03-16	0.5	1024.00	1175.00	151.00	302.00	N/A	900.00	90.0	40.00	3100.00	2500.00	



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #2 (BHA #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
Rotate	03-17	20:40	21:10	03-17	0.5	1175.00	1235.00	60.00	120.00	N/A	599.00	30.0	12.00	1300.00	1080.00	
Rotate	03-17	22:15	22:40	03-17	0.42	1235.00	1282.00	47.00	112.80	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-17	22:55	23:05	03-17	0.17	1282.00	1373.00	91.00	546.00	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-17	23:10	23:30	03-17	0.33	1373.00	1464.00	91.00	273.00	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-17	23:30	23:55	03-17	0.42	1464.00	1555.00	91.00	218.40	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-18	00:00	00:15	03-18	0.25	1555.00	1649.00	94.00	376.00	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-18	00:30	00:40	03-18	0.17	1649.00	1744.00	95.00	570.00	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-18	00:45	01:15	03-18	0.5	1744.00	1838.00	94.00	188.00	N/A	900.00	60.0	25.00	3300.00	2600.00	
Rotate	03-18	01:20	01:50	03-18	0.5	1838.00	1932.00	94.00	188.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	02:00	02:40	03-18	0.67	1932.00	2027.00	95.00	142.50	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	02:45	03:20	03-18	0.58	2027.00	2121.00	94.00	161.14	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	03:25	04:00	03-18	0.58	2121.00	2215.00	94.00	161.14	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	04:15	04:40	03-18	0.42	2215.00	2309.00	94.00	225.60	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	04:45	05:10	03-18	0.42	2309.00	2403.00	94.00	225.60	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	05:15	05:40	03-18	0.42	2403.00	2497.00	94.00	225.60	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	05:45	06:10	03-18	0.42	2497.00	2592.00	95.00	228.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	06:15	06:40	03-18	0.42	2592.00	2685.00	93.00	223.20	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	06:45	07:35	03-18	0.83	2685.00	2874.00	189.00	226.80	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	07:40	08:00	03-18	0.33	2874.00	2968.00	94.00	282.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	08:05	08:25	03-18	0.33	2968.00	3062.00	94.00	282.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	08:40	08:50	03-18	0.17	3062.00	3156.00	94.00	564.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	08:55	09:20	03-18	0.42	3156.00	3251.00	95.00	228.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	09:25	09:50	03-18	0.42	3251.00	3345.00	94.00	225.60	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	09:55	10:15	03-18	0.33	3345.00	3439.00	94.00	282.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Rotate	03-18	10:20	10:25	03-18	0.08	3439.00	3454.00	15.00	180.00	N/A	900.00	80.0	25.00	3700.00	3100.00	
Slide	03-18	10:25	10:35	03-18	0.17	3454.00	3469.00	15.00	90.00	180.0	900.00	N/A	20.00	4350.00	3425.00	
Rotate	03-18	10:35	10:55	03-18	0.33	3469.00	3532.00	63.00	189.00	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	11:00	11:05	03-18	0.08	3532.00	3547.00	15.00	180.00	N/A	900.00	90.0	40.00	4350.00	3425.00	
Slide	03-18	11:05	11:15	03-18	0.17	3547.00	3562.00	15.00	90.00	260.0	900.00	N/A	20.00	3900.00	3425.00	
Rotate	03-18	11:15	12:00	03-18	0.75	3562.00	3720.00	158.00	210.67	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	12:05	13:00	03-18	0.92	3720.00	3814.00	94.00	102.55	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	13:10	14:10	03-18	1.0	3814.00	3908.00	94.00	94.00	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	14:15	15:00	03-18	0.75	3908.00	4003.00	95.00	126.67	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	15:20	16:10	03-18	0.83	4003.00	4097.00	94.00	112.80	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	16:15	17:15	03-18	1.0	4097.00	4191.00	94.00	94.00	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	17:20	17:25	03-18	0.08	4191.00	4201.00	10.00	120.00	N/A	900.00	90.0	40.00	4350.00	3425.00	
Slide	03-18	17:25	18:10	03-18	0.75	4201.00	4216.00	15.00	20.00	110.0	900.00	N/A	20.00	3900.00	3425.00	
Rotate	03-18	18:10	19:05	03-18	0.92	4216.00	4285.00	69.00	75.27	N/A	900.00	90.0	40.00	4350.00	3425.00	
Rotate	03-18	19:10	20:20	03-18	1.17	4285.00	4380.00	95.00	81.43	N/A	733.00	90.0	40.00	3500.00	2600.00	
Rotate	03-18	20:35	21:30	03-18	0.92	4380.00	4474.00	94.00	102.55	N/A	900.00	80.0	50.00	4600.00	2900.00	
Rotate	03-18	21:35	22:25	03-18	0.83	4474.00	4569.00	95.00	114.00	N/A	900.00	80.0	50.00	4600.00	2900.00	
Rotate	03-18	22:40	22:45	03-18	0.08	4569.00	4580.00	11.00	132.00	N/A	900.00	80.0	50.00	4600.00	2900.00	
Slide	03-18	22:45	23:15	03-18	0.5	4580.00	4600.00	20.00	40.00	110.0	900.00	N/A	20.00	3900.00	3425.00	
Rotate	03-18	23:15	23:50	03-18	0.58	4600.00	4663.00	63.00	108.00	N/A	900.00	80.0	50.00	4600.00	2900.00	
Rotate	03-19	00:00	00:50	03-19	0.83	4663.00	4758.00	95.00	114.00	N/A	900.00	80.0	50.00	4600.00	2900.00	
Rotate	03-19	01:00	01:30	03-19	0.5	4758.00	4835.00	77.00	154.00	N/A	900.00	80.0	50.00	4600.00	2900.00	

	Job Number WT-19-028	Operator Advance Energy Partners		Rig Name H&P #620	
	Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H		Legal Well Name AFE Dagger Lake 5 State #503H	
	Play Delaware Basin	State/Province and Country New Mexico, US		County Lea	Company Man

Slide/Rotate Report - BHA #3 (BHA #3 (2nd 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	03-27	01:30	02:10	03-27	0.67	4835.00	4942.00	107.00	160.50	N/A	750.00	50.0	24.00	3400.00	2900.00	



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	03-27	13:20	13:35	03-27	0.25	4942.00	4962.00	20.00	80.00	90.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-27	13:35	14:00	03-27	0.42	4962.00	5036.00	74.00	177.60	N/A	750.00	50.0	24.00	3400.00	2900.00	
Rotate	03-27	14:05	14:30	03-27	0.42	5036.00	5131.00	95.00	228.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Rotate	03-27	14:35	14:55	03-27	0.33	5131.00	5225.00	94.00	282.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Rotate	03-27	15:00	15:30	03-27	0.5	5225.00	5319.00	94.00	188.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Rotate	03-27	15:35	15:40	03-27	0.08	5319.00	5329.00	10.00	120.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Slide	03-27	15:40	15:50	03-27	0.17	5329.00	5349.00	20.00	120.00	90.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-27	15:50	16:10	03-27	0.33	5349.00	5414.00	65.00	195.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Rotate	03-27	16:15	16:45	03-27	0.5	5414.00	5508.00	94.00	188.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Rotate	03-27	16:50	17:10	03-27	0.33	5508.00	5602.00	94.00	282.00	N/A	750.00	70.0	30.00	3400.00	2900.00	
Rotate	03-27	17:15	17:45	03-27	0.5	5602.00	5697.00	95.00	190.00	N/A	750.00	70.0	40.00	3400.00	2900.00	
Rotate	03-27	17:50	18:05	03-27	0.25	5697.00	5791.00	94.00	376.00	N/A	750.00	70.0	40.00	3400.00	2900.00	
Rotate	03-27	18:10	18:25	03-27	0.25	5791.00	5885.00	94.00	376.00	N/A	750.00	70.0	40.00	3400.00	2900.00	
Slide	03-27	18:30	18:35	03-27	0.08	5885.00	5905.00	20.00	240.00	90.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-27	18:35	18:50	03-27	0.25	5905.00	5980.00	75.00	300.00	N/A	750.00	30.0	45.00	3400.00	2900.00	
Rotate	03-27	18:55	19:10	03-27	0.25	5980.00	6074.00	94.00	376.00	N/A	750.00	30.0	45.00	3400.00	2900.00	
Rotate	03-27	19:15	19:30	03-27	0.25	6074.00	6169.00	95.00	380.00	N/A	750.00	30.0	45.00	3400.00	2900.00	
Slide	03-27	19:35	19:45	03-27	0.17	6169.00	6189.00	20.00	120.00	135.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-27	19:45	20:00	03-27	0.25	6189.00	6263.00	74.00	296.00	N/A	750.00	30.0	45.00	3400.00	2900.00	
Rotate	03-27	20:05	20:20	03-27	0.25	6263.00	6357.00	94.00	376.00	N/A	750.00	30.0	50.00	3500.00	2900.00	
Rotate	03-27	20:25	20:40	03-27	0.25	6357.00	6452.00	95.00	380.00	N/A	750.00	30.0	50.00	3500.00	2900.00	
Rotate	03-27	20:45	20:50	03-27	0.08	6452.00	6462.00	10.00	120.00	N/A	750.00	30.0	50.00	3500.00	2900.00	
Slide	03-27	20:50	21:05	03-27	0.25	6462.00	6492.00	30.00	120.00	135.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-27	21:05	21:20	03-27	0.25	6492.00	6546.00	54.00	216.00	N/A	750.00	30.0	50.00	3500.00	2900.00	
Rotate	03-27	21:25	21:40	03-27	0.25	6546.00	6640.00	94.00	376.00	N/A	750.00	30.0	50.00	3500.00	2900.00	
Rotate	03-27	21:45	22:00	03-27	0.25	6640.00	6734.00	94.00	376.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-27	22:05	22:20	03-27	0.25	6734.00	6829.00	95.00	380.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-27	22:25	22:40	03-27	0.25	6829.00	6924.00	95.00	380.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-27	22:45	23:05	03-27	0.33	6924.00	6944.00	20.00	60.00	170.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-27	23:05	23:30	03-27	0.42	6944.00	7018.00	74.00	177.60	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-27	23:35	23:55	03-27	0.33	7018.00	7113.00	95.00	285.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	00:00	00:20	03-28	0.33	7113.00	7207.00	94.00	282.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	00:25	00:40	03-28	0.25	7207.00	7301.00	94.00	376.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	00:45	01:05	03-28	0.33	7301.00	7396.00	95.00	285.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	01:10	01:20	03-28	0.17	7396.00	7411.00	15.00	90.00	0.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	01:20	01:40	03-28	0.33	7411.00	7490.00	79.00	237.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	01:45	02:10	03-28	0.42	7490.00	7584.00	94.00	225.60	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	02:15	02:35	03-28	0.33	7584.00	7679.00	95.00	285.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	02:40	03:10	03-28	0.5	7679.00	7699.00	20.00	40.00	10.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	03:10	03:30	03-28	0.33	7699.00	7773.00	74.00	222.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	03:35	03:40	03-28	0.08	7773.00	7779.00	6.00	72.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	03:40	04:05	03-28	0.42	7779.00	7809.00	30.00	72.00	45.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	04:05	04:20	03-28	0.25	7809.00	7867.00	58.00	232.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	04:25	04:45	03-28	0.33	7867.00	7961.00	94.00	282.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	04:50	05:25	03-28	0.58	7961.00	7986.00	25.00	42.86	90.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	05:25	05:45	03-28	0.33	7986.00	8056.00	70.00	210.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	05:50	06:15	03-28	0.42	8056.00	8150.00	94.00	225.60	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	06:20	06:45	03-28	0.42	8150.00	8245.00	95.00	228.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	06:50	06:55	03-28	0.08	8245.00	8255.00	10.00	120.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	06:55	07:25	03-28	0.5	8255.00	8275.00	20.00	40.00	15.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	07:25	07:40	03-28	0.25	8275.00	8339.00	64.00	256.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	07:45	08:10	03-28	0.42	8339.00	8434.00	95.00	228.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	08:15	08:40	03-28	0.42	8434.00	8528.00	94.00	225.60	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	08:45	08:50	03-28	0.08	8528.00	8538.00	10.00	120.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	08:50	09:30	03-28	0.67	8538.00	8563.00	25.00	37.50	70.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	09:30	10:10	03-28	0.67	8563.00	8622.00	59.00	88.50	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	10:15	10:45	03-28	0.5	8622.00	8717.00	95.00	190.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	10:50	11:00	03-28	0.17	8717.00	8727.00	10.00	60.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	11:00	11:50	03-28	0.83	8727.00	8757.00	30.00	36.00	75.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	11:50	12:20	03-28	0.5	8757.00	8811.00	54.00	108.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	12:25	13:05	03-28	0.67	8811.00	8905.00	94.00	141.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Rotate	03-28	13:10	13:20	03-28	0.17	8905.00	8915.00	10.00	60.00	N/A	750.00	30.0	50.00	3700.00	2900.00	
Slide	03-28	13:20	15:00	03-28	1.67	8915.00	8945.00	30.00	18.00	45.0	750.00	N/A	30.00	3240.00	2800.00	
Rotate	03-28	15:00	15:20	03-28	0.33	8945.00	9000.00	55.00	165.00	N/A	750.00	30.0	50.00	3700.00	2900.00	

Rotate	03-28	15:25	15:35	03-28	0.17	9000.00	9008.00	8.00	48.00	N/A	750.00	30.0	50.00	3700.00	2900.00
Slide	03-28	15:35	16:30	03-28	0.92	9008.00	9030.00	22.00	24.00	45.0	750.00	N/A	30.00	3240.00	2800.00
Rotate	03-28	16:30	17:00	03-28	0.5	9030.00	9094.00	64.00	128.00	N/A	750.00	30.0	50.00	3700.00	2900.00
Rotate	03-28	17:05	17:10	03-28	0.08	9094.00	9099.00	5.00	60.00	N/A	750.00	30.0	50.00	3700.00	2900.00
Slide	03-28	17:10	18:40	03-28	1.5	9099.00	9129.00	30.00	20.00	90.0	750.00	N/A	30.00	3240.00	2800.00
Rotate	03-28	18:40	19:40	03-28	1.0	9129.00	9188.00	59.00	59.00	N/A	750.00	30.0	50.00	3200.00	2700.00
Slide	03-28	19:45	20:15	03-28	0.5	9188.00	9218.00	30.00	60.00	100.0	750.00	N/A	30.00	3240.00	2800.00
Rotate	03-28	20:15	20:45	03-28	0.5	9218.00	9283.00	65.00	130.00	N/A	750.00	30.0	50.00	3200.00	2700.00
Rotate	03-28	20:50	21:35	03-28	0.75	9283.00	9377.00	94.00	125.33	N/A	750.00	30.0	50.00	3200.00	2700.00
Rotate	03-28	21:40	21:45	03-28	0.08	9377.00	9385.00	8.00	96.00	N/A	750.00	30.0	50.00	3200.00	2700.00
Slide	03-28	21:45	23:20	03-28	1.58	9385.00	9418.00	33.00	20.84	90.0	750.00	N/A	30.00	3240.00	2800.00
Rotate	03-28	23:20	00:00	03-29	0.67	9418.00	9454.00	36.00	54.00	N/A	600.00	25.0	30.00	2300.00	1900.00
Rotate	03-29	00:00	00:15	03-29	0.25	9454.00	9471.00	17.00	68.00	N/A	600.00	25.0	30.00	2300.00	1900.00
Rotate	03-29	00:20	02:05	03-29	1.75	9471.00	9565.00	94.00	53.71	N/A	600.00	25.0	30.00	2300.00	1900.00
Slide	03-29	02:10	04:25	03-29	2.25	9565.00	9604.00	39.00	17.33	90.0	750.00	N/A	30.00	3240.00	2800.00
Rotate	03-29	04:25	05:05	03-29	0.67	9604.00	9660.00	56.00	84.00	N/A	735.00	30.0	50.00	2900.00	2300.00
Rotate	03-29	05:10	05:50	03-29	0.67	9660.00	9754.00	94.00	141.00	N/A	735.00	30.0	54.00	3200.00	2600.00
Rotate	03-29	05:55	06:05	03-29	0.17	9754.00	9764.00	10.00	60.00	N/A	735.00	30.0	54.00	3200.00	2600.00
Slide	03-29	06:05	07:10	03-29	1.08	9764.00	9784.00	20.00	18.46	90.0	750.00	N/A	30.00	3240.00	2800.00
Rotate	03-29	07:10	08:00	03-29	0.83	9784.00	9848.00	64.00	76.80	N/A	735.00	30.0	54.00	3200.00	2600.00
Rotate	03-29	08:05	09:10	03-29	1.08	9848.00	9942.00	94.00	86.77	N/A	735.00	30.0	54.00	3200.00	2600.00
Rotate	03-29	09:15	10:10	03-29	0.92	9942.00	10036.00	94.00	102.55	N/A	735.00	30.0	54.00	3200.00	2600.00
Rotate	03-29	10:15	11:30	03-29	1.25	10036.00	10130.00	94.00	75.20	N/A	735.00	30.0	54.00	3200.00	2600.00
Rotate	03-29	12:05	12:50	03-29	0.75	10130.00	10187.00	57.00	76.00	N/A	735.00	30.0	54.00	3200.00	2600.00



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	03-30	09:30	09:40	03-30	0.17	10187.00	10201.00	14.00	84.00	N/A	735.00	30.0	54.00	3200.00	2600.00	
Rotate	03-30	09:45	11:05	03-30	1.33	10201.00	10295.00	94.00	70.50	N/A	735.00	30.0	54.00	3200.00	2600.00	
Rotate	03-30	11:10	11:55	03-30	0.75	10295.00	10389.00	94.00	125.33	N/A	735.00	30.0	40.00	3200.00	2600.00	
Slide	03-30	12:00	13:35	03-30	1.58	10389.00	10407.00	18.00	11.37	5.0	700.00	N/A	35.00	3700.00	3500.00	
Rotate	03-30	13:35	13:55	03-30	0.33	10407.00	10412.00	5.00	15.00	N/A	735.00	30.0	40.00	3200.00	2600.00	
Slide	03-30	13:55	15:45	03-30	1.83	10412.00	10420.00	8.00	4.36	5.0	700.00	N/A	35.00	3700.00	3500.00	
Rotate	03-30	15:45	16:05	03-30	0.33	10420.00	10431.00	11.00	33.00	N/A	735.00	30.0	40.00	3200.00	2600.00	
Slide	03-30	16:05	17:10	03-30	1.08	10431.00	10437.00	6.00	5.54	5.0	700.00	N/A	35.00	3700.00	3500.00	



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	03-31	07:15	08:05	03-31	0.83	10437.00	10482.00	45.00	54.00	355.0	600.00	N/A	35.00	3700.00	3500.00	
Slide	03-31	08:15	09:40	03-31	1.42	10482.00	10577.00	95.00	67.06	350.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	09:50	11:00	03-31	1.17	10577.00	10671.00	94.00	80.57	340.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	11:10	12:05	03-31	0.92	10671.00	10766.00	95.00	103.64	0.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	12:15	13:10	03-31	0.92	10766.00	10860.00	94.00	102.55	340.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	13:20	13:45	03-31	0.42	10860.00	10905.00	45.00	108.00	340.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	13:55	14:25	03-31	0.5	10905.00	10955.00	50.00	100.00	340.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	14:35	15:45	03-31	1.17	10955.00	11050.00	95.00	81.43	330.0	600.00	N/A	35.00	3300.00	2800.00	
Slide	03-31	15:55	16:50	03-31	0.92	11050.00	11144.00	94.00	102.55	330.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	03-31	17:00	17:10	03-31	0.17	11144.00	11164.00	20.00	120.00	N/A	600.00	20.0	35.00	3375.00	2950.00	
Slide	03-31	17:10	17:45	03-31	0.58	11164.00	11209.00	45.00	77.14	315.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	03-31	17:45	18:05	03-31	0.33	11209.00	11238.00	29.00	87.00	N/A	600.00	30.0	35.00	3375.00	2950.00	
Rotate	03-31	18:10	18:50	03-31	0.67	11238.00	11333.00	95.00	142.50	N/A	600.00	30.0	35.00	3375.00	2950.00	
Rotate	03-31	18:55	19:00	03-31	0.08	11333.00	11343.00	10.00	120.00	N/A	600.00	30.0	35.00	3375.00	2950.00	
Slide	03-31	19:00	20:00	03-31	1.0	11343.00	11363.00	20.00	20.00	240.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	03-31	20:00	20:35	03-31	0.58	11363.00	11428.00	65.00	111.43	N/A	600.00	30.0	35.00	3375.00	2950.00	
Rotate	03-31	20:40	20:50	03-31	0.17	11428.00	11439.00	11.00	66.00	N/A	600.00	30.0	35.00	3375.00	2950.00	
Slide	03-31	20:50	21:40	03-31	0.83	11439.00	11454.00	15.00	18.00	210.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	03-31	21:40	22:30	03-31	0.83	11454.00	11522.00	68.00	81.60	N/A	600.00	30.0	35.00	3375.00	2950.00	
Rotate	03-31	22:35	22:45	03-31	0.17	11522.00	11532.00	10.00	60.00	N/A	600.00	30.0	35.00	3375.00	2950.00	
Slide	03-31	22:45	23:25	03-31	0.67	11532.00	11547.00	15.00	22.50	210.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	03-31	23:25	23:55	03-31	0.5	11547.00	11616.00	69.00	138.00	N/A	600.00	30.0	35.00	3375.00	2950.00	
Rotate	04-01	00:05	00:25	04-01	0.33	11616.00	11641.00	25.00	75.00	N/A	600.00	30.0	35.00	3375.00	2950.00	
Slide	04-01	00:25	01:20	04-01	0.92	11641.00	11656.00	15.00	16.36	210.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	04-01	01:20	01:50	04-01	0.5	11656.00	11711.00	55.00	110.00	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	01:55	02:40	04-01	0.75	11711.00	11806.00	95.00	126.67	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	02:45	03:30	04-01	0.75	11806.00	11900.00	94.00	125.33	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	03:35	04:20	04-01	0.75	11900.00	11995.00	95.00	126.67	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	04:25	05:10	04-01	0.75	11995.00	12089.00	94.00	125.33	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	05:15	05:20	04-01	0.08	12089.00	12099.00	10.00	120.00	N/A	600.00	35.0	42.00	3700.00	2950.00	
Slide	04-01	05:20	06:05	04-01	0.75	12099.00	12119.00	20.00	26.67	200.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	04-01	06:05	07:05	04-01	1.0	12119.00	12184.00	65.00	65.00	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	07:10	08:00	04-01	0.83	12184.00	12278.00	94.00	112.80	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	08:05	08:15	04-01	0.17	12278.00	12288.00	10.00	60.00	N/A	600.00	35.0	42.00	3700.00	2950.00	
Slide	04-01	08:15	09:20	04-01	1.08	12288.00	12308.00	20.00	18.46	210.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	04-01	09:20	10:10	04-01	0.83	12308.00	12372.00	64.00	76.80	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	10:25	11:10	04-01	0.75	12372.00	12466.00	94.00	125.33	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	11:15	11:25	04-01	0.17	12466.00	12476.00	10.00	60.00	N/A	600.00	35.0	42.00	3700.00	2950.00	
Slide	04-01	11:25	12:25	04-01	1.0	12476.00	12496.00	20.00	20.00	210.0	600.00	N/A	35.00	3300.00	2800.00	
Rotate	04-01	12:25	13:15	04-01	0.83	12496.00	12560.00	64.00	76.80	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	13:20	14:25	04-01	1.08	12560.00	12655.00	95.00	87.69	N/A	600.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	14:30	14:40	04-01	0.17	12655.00	12665.00	10.00	60.00	N/A	650.00	60.0	50.00	3800.00	3300.00	
Slide	04-01	14:40	15:15	04-01	0.58	12665.00	12678.00	13.00	22.29	200.0	650.00	N/A	35.00	3800.00	3400.00	
Rotate	04-01	15:15	15:55	04-01	0.67	12678.00	12750.00	72.00	108.00	N/A	650.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	16:30	16:35	04-01	0.08	12750.00	12760.00	10.00	120.00	N/A	650.00	35.0	42.00	3700.00	2950.00	
Slide	04-01	16:35	18:15	04-01	1.67	12760.00	12785.00	25.00	15.00	210.0	650.00	N/A	35.00	3800.00	3400.00	
Rotate	04-01	18:15	18:45	04-01	0.5	12785.00	12844.00	59.00	118.00	N/A	650.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	18:50	19:00	04-01	0.17	12844.00	12854.00	10.00	60.00	N/A	650.00	35.0	42.00	3700.00	2950.00	
Slide	04-01	19:00	21:30	04-01	2.5	12854.00	12879.00	25.00	10.00	180.0	650.00	N/A	35.00	3800.00	3400.00	
Rotate	04-01	21:30	22:05	04-01	0.58	12879.00	12939.00	60.00	102.86	N/A	650.00	35.0	42.00	3700.00	2950.00	
Rotate	04-01	22:10	22:15	04-01	0.08	12939.00	12949.00	10.00	120.00	N/A	650.00	35.0	42.00	3700.00	2950.00	
Slide	04-01	22:15	23:45	04-01	1.5	12949.00	12979.00	30.00	20.00	210.0	650.00	N/A	35.00	3800.00	3400.00	
Rotate	04-01	23:45	00:20	04-02	0.58	12979.00	13034.00	55.00	94.29	N/A	650.00	35.0	42.00	3700.00	2950.00	
Rotate	04-02	00:25	00:30	04-02	0.08	13034.00	13044.00	10.00	120.00	N/A	650.00	35.0	52.00	3700.00	2950.00	
Slide	04-02	00:30	02:00	04-02	1.5	13044.00	13074.00	30.00	20.00	180.0	650.00	N/A	35.00	3800.00	3400.00	
Rotate	04-02	02:00	02:20	04-02	0.33	13074.00	13100.00	26.00	78.00	N/A	650.00	35.0	52.00	3700.00	2950.00	



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	04-02	20:55	21:40	04-02	0.75	13100.00	13170.00	70.00	93.33	N/A	722.00	30.0	50.00	6200.00	5100.00	
Rotate	04-02	21:45	21:55	04-02	0.17	13170.00	13209.00	39.00	234.00	N/A	722.00	30.0	50.00	6200.00	5100.00	
Rotate	04-02	22:50	23:30	04-02	0.67	13209.00	13265.00	56.00	84.00	N/A	722.00	30.0	45.00	6200.00	5100.00	
Rotate	04-02	23:35	01:25	04-03	1.83	13265.00	13359.00	94.00	51.27	N/A	722.00	30.0	40.00	5900.00	5100.00	
Rotate	04-03	01:30	01:40	04-03	0.17	13359.00	13369.00	10.00	60.00	N/A	722.00	30.0	40.00	5900.00	5100.00	
Slide	04-03	01:40	03:30	04-03	1.83	13369.00	13384.00	15.00	8.18	160.0	720.00	N/A	20.00	4950.00	4800.00	
Rotate	04-03	03:30	05:00	04-03	1.5	13384.00	13454.00	70.00	46.67	N/A	722.00	30.0	40.00	5900.00	5100.00	
Rotate	04-03	05:05	07:10	04-03	2.08	13454.00	13549.00	95.00	45.60	N/A	722.00	30.0	40.00	5900.00	5100.00	
Rotate	04-03	07:15	07:50	04-03	0.58	13549.00	13569.00	20.00	34.29	N/A	722.00	30.0	40.00	5900.00	5100.00	



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	04-04	05:00	06:00	04-04	1.0	13569.00	13584.00	15.00	15.00	30.0	700.00	N/A	30.00	5300.00	5000.00	
Rotate	04-04	06:00	07:15	04-04	1.25	13584.00	13649.00	65.00	52.00	N/A						
Rotate	04-04	07:20	08:25	04-04	1.08	13649.00	13744.00	95.00	87.69	N/A	700.00	35.0	48.00	5800.00	4900.00	
Rotate	04-04	08:30	09:20	04-04	0.83	13744.00	13838.00	94.00	112.80	N/A	700.00	35.0	48.00	5800.00	4900.00	
Rotate	04-04	09:25	10:15	04-04	0.83	13838.00	13933.00	95.00	114.00	N/A	700.00	35.0	48.00	5800.00	4900.00	
Rotate	04-04	10:20	10:55	04-04	0.58	13933.00	14027.00	94.00	161.14	N/A	700.00	35.0	48.00	5800.00	4900.00	
Rotate	04-04	11:05	11:40	04-04	0.58	14027.00	14122.00	95.00	162.86	N/A	700.00	35.0	48.00	5800.00	4900.00	
Rotate	04-04	11:45	12:50	04-04	1.08	14122.00	14217.00	95.00	87.69	N/A	700.00	35.0	48.00	5800.00	4900.00	
Rotate	04-04	13:05	13:10	04-04	0.08	14217.00	14232.00	15.00	180.00	N/A	700.00	35.0	48.00	5800.00	4900.00	
Slide	04-04	13:10	13:40	04-04	0.5	14232.00	14257.00	25.00	50.00	180.0	685.00	N/A	35.00	5400.00	5200.00	
Rotate	04-04	13:40	15:30	04-04	1.83	14257.00	14277.00	20.00	10.91	N/A	700.00	35.0	48.00	5800.00	4900.00	



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	04-05	10:45	11:05	04-05	0.33	14277.00	14305.00	28.00	84.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	11:10	12:00	04-05	0.83	14305.00	14400.00	95.00	114.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	12:05	12:45	04-05	0.67	14400.00	14494.00	94.00	141.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	12:50	13:00	04-05	0.17	14494.00	14504.00	10.00	60.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	13:00	13:30	04-05	0.5	14504.00	14519.00	15.00	30.00	180.0	685.00	N/A	35.00	5150.00	4900.00	
Rotate	04-05	13:30	14:15	04-05	0.75	14519.00	14589.00	70.00	93.33	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	14:20	14:25	04-05	0.08	14589.00	14599.00	10.00	120.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	14:25	15:00	04-05	0.58	14599.00	14614.00	15.00	25.71	180.0	685.00	N/A	35.00	5150.00	4900.00	
Rotate	04-05	15:00	15:30	04-05	0.5	14614.00	14683.00	69.00	138.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	15:35	15:55	04-05	0.33	14683.00	14707.00	24.00	72.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	15:55	16:25	04-05	0.5	14707.00	14725.00	18.00	36.00	180.0	685.00	N/A	35.00	5150.00	4900.00	
Rotate	04-05	16:25	16:50	04-05	0.42	14725.00	14778.00	53.00	127.20	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	17:00	17:15	04-05	0.25	14778.00	14788.00	10.00	40.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	17:15	17:45	04-05	0.5	14788.00	14808.00	20.00	40.00	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-05	17:45	18:25	04-05	0.67	14808.00	14872.00	64.00	96.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	18:30	18:40	04-05	0.17	14872.00	14877.00	5.00	30.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	18:40	19:30	04-05	0.83	14877.00	14894.00	17.00	20.40	30.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-05	19:30	20:20	04-05	0.83	14894.00	14966.00	72.00	86.40	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	20:25	20:35	04-05	0.17	14966.00	14977.00	11.00	66.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	20:35	21:10	04-05	0.58	14977.00	14992.00	15.00	25.71	0.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-05	21:10	21:55	04-05	0.75	14992.00	15061.00	69.00	92.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-05	22:00	22:10	04-05	0.17	15061.00	15071.00	10.00	60.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-05	22:10	22:40	04-05	0.5	15071.00	15083.00	12.00	24.00	140.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-05	22:40	23:55	04-05	1.25	15083.00	15155.00	72.00	57.60	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	00:00	00:10	04-06	0.17	15155.00	15165.00	10.00	60.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	00:10	01:00	04-06	0.83	15165.00	15185.00	20.00	24.00	170.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	01:00	01:35	04-06	0.58	15185.00	15249.00	64.00	109.71	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	01:40	02:35	04-06	0.92	15249.00	15343.00	94.00	102.55	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	02:40	02:55	04-06	0.25	15343.00	15374.00	31.00	124.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	02:55	03:15	04-06	0.33	15374.00	15384.00	10.00	30.00	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	03:15	03:50	04-06	0.58	15384.00	15438.00	54.00	92.57	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	03:55	04:00	04-06	0.08	15438.00	15448.00	10.00	120.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	04:00	05:00	04-06	1.0	15448.00	15468.00	20.00	20.00	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	05:00	05:40	04-06	0.67	15468.00	15532.00	64.00	96.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	05:45	07:10	04-06	1.42	15532.00	15627.00	95.00	67.06	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	07:15	07:30	04-06	0.25	15627.00	15648.00	21.00	84.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	07:30	07:50	04-06	0.33	15648.00	15655.00	7.00	21.00	350.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	07:50	08:35	04-06	0.75	15655.00	15721.00	66.00	88.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	08:40	09:55	04-06	1.25	15721.00	15815.00	94.00	75.20	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	10:00	10:10	04-06	0.17	15815.00	15830.00	15.00	90.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	10:50	11:35	04-06	0.75	15830.00	15850.00	20.00	26.67	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	11:35	12:20	04-06	0.75	15850.00	15910.00	60.00	80.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	12:25	12:35	04-06	0.17	15910.00	15920.00	10.00	60.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	12:35	13:25	04-06	0.83	15920.00	15937.00	17.00	20.40	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	13:25	14:10	04-06	0.75	15937.00	16004.00	67.00	89.33	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	14:25	15:15	04-06	0.83	16004.00	16099.00	95.00	114.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	15:20	15:25	04-06	0.08	16099.00	16109.00	10.00	120.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	15:25	16:30	04-06	1.08	16109.00	16134.00	25.00	23.08	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	16:30	17:05	04-06	0.58	16134.00	16193.00	59.00	101.14	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	17:10	17:20	04-06	0.17	16193.00	16204.00	11.00	66.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	17:20	18:00	04-06	0.67	16204.00	16218.00	14.00	21.00	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	18:00	18:35	04-06	0.58	16218.00	16287.00	69.00	118.29	N/A	675.00	35.0	48.00	5800.00	4900.00	
Rotate	04-06	18:40	18:50	04-06	0.17	16287.00	16300.00	13.00	78.00	N/A	675.00	35.0	48.00	5800.00	4900.00	
Slide	04-06	18:50	19:30	04-06	0.67	16300.00	16315.00	15.00	22.50	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	19:30	20:10	04-06	0.67	16315.00	16382.00	67.00	100.50	N/A	700.00	35.0	50.00	5800.00	5200.00	
Rotate	04-06	20:15	21:15	04-06	1.0	16382.00	16476.00	94.00	94.00	N/A	700.00	35.0	50.00	5800.00	5200.00	
Rotate	04-06	21:20	21:30	04-06	0.17	16476.00	16486.00	10.00	60.00	N/A	700.00	35.0	50.00	5800.00	5200.00	
Slide	04-06	21:30	22:05	04-06	0.58	16486.00	16501.00	15.00	25.71	180.0	685.00	N/A	35.00	5230.00	4900.00	
Rotate	04-06	22:05	22:55	04-06	0.83	16501.00	16570.00	69.00	82.80	N/A	700.00	35.0	50.00	5800.00	5200.00	
Rotate	04-06	23:00	23:10	04-06	0.17	16570.00	16581.00	11.00	66.00	N/A	700.00	35.0	50.00	5800.00	5200.00	
Slide	04-06	23:10	23:55	04-06	0.75	16581.00	16601.00	20.00	26.67	180.0	700.00	N/A	35.00	5400.00	5200.00	
Rotate	04-06	23:55	00:50	04-07	0.92	16601.00	16665.00	64.00	69.82	N/A	700.00	35.0	50.00	5800.00	5200.00	
Rotate	04-07	00:55	02:00	04-07	1.08	16665.00	16759.00	94.00	86.77	N/A	700.00	35.0	50.00	5800.00	5200.00	
Rotate	04-07	02:05	02:15	04-07	0.17	16759.00	16769.00	10.00	60.00	N/A	700.00	35.0	50.00	5800.00	5200.00	

Slide	04-07	02:15	03:10	04-07	0.92	16769.00	16789.00	20.00	21.82	180.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	03:10	03:55	04-07	0.75	16789.00	16854.00	65.00	86.67	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	04:00	04:10	04-07	0.17	16854.00	16864.00	10.00	60.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Slide	04-07	04:10	05:00	04-07	0.83	16864.00	16880.00	16.00	19.20	180.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	05:00	05:55	04-07	0.92	16880.00	16948.00	68.00	74.18	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	06:00	06:55	04-07	0.92	16948.00	17042.00	94.00	102.55	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	07:00	08:15	04-07	1.25	17042.00	17137.00	95.00	76.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	08:20	08:35	04-07	0.25	17137.00	17153.00	16.00	64.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Slide	04-07	08:35	09:45	04-07	1.17	17153.00	17178.00	25.00	21.43	150.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	09:45	10:30	04-07	0.75	17178.00	17231.00	53.00	70.67	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	10:35	10:45	04-07	0.17	17231.00	17241.00	10.00	60.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Slide	04-07	11:20	12:40	04-07	1.33	17241.00	17269.00	28.00	21.00	150.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	12:40	13:05	04-07	0.42	17269.00	17297.00	28.00	67.20	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	14:30	15:00	04-07	0.5	17297.00	17326.00	29.00	58.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	15:05	15:15	04-07	0.17	17326.00	17336.00	10.00	60.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Slide	04-07	15:15	16:20	04-07	1.08	17336.00	17366.00	30.00	27.69	160.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	16:20	16:35	04-07	0.25	17366.00	17379.00	13.00	52.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	16:45	17:20	04-07	0.58	17379.00	17420.00	41.00	70.29	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	17:25	17:40	04-07	0.25	17420.00	17432.00	12.00	48.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Slide	04-07	17:40	18:30	04-07	0.83	17432.00	17447.00	15.00	18.00	140.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	18:30	19:20	04-07	0.83	17447.00	17514.00	67.00	80.40	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	19:25	20:35	04-07	1.17	17514.00	17609.00	95.00	81.43	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	20:40	20:50	04-07	0.17	17609.00	17623.00	14.00	84.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Slide	04-07	20:50	22:00	04-07	1.17	17623.00	17643.00	20.00	17.14	90.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-07	22:00	23:00	04-07	1.0	17643.00	17703.00	60.00	60.00	N/A	700.00	35.0	50.00	5800.00	5200.00
Rotate	04-07	23:05	23:15	04-07	0.17	17703.00	17713.00	10.00	60.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Slide	04-07	23:15	00:15	04-08	1.0	17713.00	17735.00	22.00	22.00	135.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-08	00:15	00:55	04-08	0.67	17735.00	17797.00	62.00	93.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	01:00	02:10	04-08	1.17	17797.00	17891.00	94.00	80.57	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	02:15	02:25	04-08	0.17	17891.00	17901.00	10.00	60.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Slide	04-08	02:25	03:40	04-08	1.25	17901.00	17923.00	22.00	17.60	180.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-08	03:40	04:25	04-08	0.75	17923.00	17986.00	63.00	84.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	04:30	05:40	04-08	1.17	17986.00	18080.00	94.00	80.57	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	05:45	05:55	04-08	0.17	18080.00	18090.00	10.00	60.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Slide	04-08	05:55	07:15	04-08	1.33	18090.00	18117.00	27.00	20.25	150.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-08	07:15	07:55	04-08	0.67	18117.00	18175.00	58.00	87.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	09:35	10:40	04-08	1.08	18175.00	18269.00	94.00	86.77	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	10:45	10:55	04-08	0.17	18269.00	18280.00	11.00	66.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Slide	04-08	10:55	11:40	04-08	0.75	18280.00	18296.00	16.00	21.33	180.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-08	11:40	12:45	04-08	1.08	18296.00	18363.00	67.00	61.85	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	12:50	13:55	04-08	1.08	18363.00	18457.00	94.00	86.77	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	14:00	14:10	04-08	0.17	18457.00	18467.00	10.00	60.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Slide	04-08	14:10	15:10	04-08	1.0	18467.00	18492.00	25.00	25.00	180.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-08	15:10	16:10	04-08	1.0	18492.00	18552.00	60.00	60.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	16:25	17:15	04-08	0.83	18552.00	18646.00	94.00	112.80	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	17:20	17:35	04-08	0.25	18646.00	18655.00	9.00	36.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Slide	04-08	17:35	18:55	04-08	1.33	18655.00	18685.00	30.00	22.50	180.0	700.00	N/A	35.00	5400.00	5200.00
Rotate	04-08	18:55	19:35	04-08	0.67	18685.00	18740.00	55.00	82.50	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	19:40	20:40	04-08	1.0	18740.00	18835.00	95.00	95.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	20:45	22:00	04-08	1.25	18835.00	18929.00	94.00	75.20	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	22:10	23:20	04-08	1.17	18929.00	19023.00	94.00	80.57	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-08	23:30	00:00	04-09	0.5	19023.00	19049.00	26.00	52.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-09	00:00	01:00	04-09	1.0	19049.00	19118.00	69.00	69.00	N/A	700.00	35.0	54.00	5800.00	5200.00
Rotate	04-09	01:10	01:40	04-09	0.5	19118.00	19149.00	31.00	62.00	N/A	700.00	35.0	54.00	5800.00	5200.00



Daily Reports

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Friday, Mar 15 00:00 - 23:59 (Day 1 of 29)

Billing: \$17,587.50 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	0.00	Downhole Hours	10.25	Rotating WOB (klbs)	15.00 - 21.00
Bit Depth (ft)	842.00	Drilling Hours	6.00	Sliding WOB (klbs)	17.00 - 23.00
Bottom Hole Depth (ft)	842.00	Hours Circulating	0.00	Rotating SPM	246.00 - 270.00
Total Distance (ft)	842.00	Hours Sliding	0.92	Sliding SPM	270.00 - 270.00
Distance Rotated (ft)	772.00	Hours Rotating	5.08	Motor RPM	80.00 - 144.00
Distance Slid (ft)	70.00			Surface RPM	75.00 - 80.00
Inclination In	0.84			Flow Rate (gpm)	795.00 - 871.00
Inclination Out	0.18			On Bottom Pressure (psi)	2100.00 - 2500.00
Azimuth In	305.48	% Hours Rotating	85%	Off Bottom Pressure (psi)	1600.00 - 2000.00
Azimuth Out	143.06	% Hours Sliding	15%		
AVG Total ROP (ft/h)	140.33	% Distance Sliding	8%		
AVG Rotating ROP (ft/h)	151.87	% Distance Rotating	92%		
AVG Sliding ROP (ft/h)	76.36				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #1 - BHA #1

Date In: Mar 15, 2019, 13:45 Date Out: Mar 16, 2019, 11:00

Bit Details		Motor Details		Directional Comments
OD (in)	17.500	Size (in)	8.0	Motor- 8" 7/8 4.0 FXD @ 1.50 W 17"NBS GPM=400-900 RPG=.15 Max Diff=900 Max Trq=14930 Bit - Baker DD606S Jets- 9 X 12's TFA=.994
Vendor	Baker	Lobe/Stage	7/8, 4.0	
S/N	5294732	Bend Angle	1.5	
Nozzles	9 X 12	Speed (rev/gal)	0.16	
Total Flow Area (in²)	0.994	Wear Pad OD (in)	8.375	MWD Comments
Drilling Hours for Day	6.00	Bit Distances		
Total Drilled for Day (ft)	842.00	Survey: 62.00 ft, Bend: 6.20 ft		
Drilling Hours for BHA	8.33			
Total Drilled for BHA (ft)	1175.00			POOH Reason
				Total Depth/Casing Point: POOH for Casing

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD606S, Style: PDC, Gauge Length (in): 4.00, Size (in): 17.50	Baker	5294732	6 5/8" Reg Pin			17.500		1.50	1.50
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	32.00
Stabilizer Description: 17" Stabilizer	DTI	DR35068	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.56	39.56
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	42.89
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	73.94
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.29
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 IF Box), Type: Steel	DTI	DR35350	4 1/2" IF Box	6 5/8" Reg Pin	2.750	8.188		3.96	109.25
HWDP Description: 30 Jts 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.51	1024.76

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Standby	15	03-15	00:00	11:00	03-15			Skid over to the 503H / Rig Up
Standby	15	03-15	11:00	13:45	03-15			Standby while Skidding Rig to the 503H
TIH	8	03-15	13:45	14:45	03-15			TIH W/ BHA #1
Rotary Drill	1	03-15	14:45	16:25	03-15	0.00	292.00	Pressure On (psi): 2100.00, Pressure Off (psi): 1600.00, Weight On Bit (klbs): 15.00, Surface RPM: 75, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Survey	46	03-15	16:25	16:40	03-15	292.00	292.00	Inclination (°): 0.840, Azimuth (°): 305.480, TVD (ft): 229.99, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 230.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-15	16:40	17:00	03-15	292.00	384.00	Pressure On (psi): 2100.00, Pressure Off (psi): 1600.00, Weight On Bit (klbs): 15.00, Surface RPM: 75, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Survey	46	03-15	17:00	17:05	03-15	384.00	384.00	Inclination (°): 0.970, Azimuth (°): 278.230, TVD (ft): 321.98, Dogleg (°/100 ft): 0.48, Sensor Depth (ft): 322.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-15	17:05	17:35	03-15	384.00	476.00	Pressure On (psi): 2100.00, Pressure Off (psi): 1600.00, Weight On Bit (klbs): 15.00, Surface RPM: 75, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Slide Drill	2	03-15	17:35	18:05	03-15	476.00	506.00	Pressure On (psi): 2200.00, Pressure Off (psi): 1800.00, Weight On Bit (klbs): 17.00, Flow Rate (gpm): 871.00, Strokes Per Minute: 270, Toolface: 70, Toolface Type: magnetic
Rotary Drill	1	03-15	18:05	18:25	03-15	506.00	567.00	Pressure On (psi): 2100.00, Pressure Off (psi): 1600.00, Weight On Bit (klbs): 15.00, Surface RPM: 75, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Survey	46	03-15	18:25	18:35	03-15	567.00	567.00	Inclination (°): 0.660, Azimuth (°): 213.550, TVD (ft): 504.97, Dogleg (°/100 ft): 0.50, Sensor Depth (ft): 505.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-15	18:35	19:10	03-15	567.00	659.00	Pressure On (psi): 2100.00, Pressure Off (psi): 1600.00, Weight On Bit (klbs): 15.00, Surface RPM: 75, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Survey	46	03-15	19:10	19:20	03-15	659.00	659.00	Inclination (°): 0.840, Azimuth (°): 199.220, TVD (ft): 596.96, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 597.00, Bit To Sensor (ft): 62.00
Slide Drill	2	03-15	19:20	19:45	03-15	659.00	699.00	Pressure On (psi): 2500.00, Pressure Off (psi): 1800.00, Weight On Bit (klbs): 23.00, Flow Rate (gpm): 871.00, Strokes Per Minute: 270, Toolface: 19, Toolface Type: magnetic
Rotary Drill	1	03-15	19:45	20:00	03-15	699.00	751.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2000.00, Weight On Bit (klbs): 21.00, Surface RPM: 80, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Survey	46	03-15	20:00	20:10	03-15	751.00	751.00	Inclination (°): 0.180, Azimuth (°): 143.060, TVD (ft): 688.95, Dogleg (°/100 ft): 0.82, Sensor Depth (ft): 689.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-15	20:10	20:55	03-15	751.00	820.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2000.00, Weight On Bit (klbs): 21.00, Surface RPM: 80, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 870.00, Strokes Per Minute: 270.00
Other	16	03-15	20:55	21:45	03-15			Work on Cellar Pump
Rotary Drill	1	03-15	21:45	22:25	03-15	820.00	842.00	Pressure On (psi): 2250.00, Pressure Off (psi): 1800.00, Weight On Bit (klbs): 21.00, Surface RPM: 80, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 795.00, Strokes Per Minute: 246.00
Other	16	03-15	22:25	00:00	03-16			Work on Cellar Pump

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Mar 16 00:00 - 23:59 (Day 2 of 29)

Billing: \$6,500.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	842.00	Downhole Hours	11.00	Rotating WOB (klbs)	21.00 - 40.00
Bit Depth (ft)	1175.00	Drilling Hours	2.33	Sliding WOB (klbs)	28.00 - 28.00
Bottom Hole Depth (ft)	1175.00	Hours Circulating	0.00	Rotating SPM	246.00 - 277.00
Total Distance (ft)	333.00	Hours Sliding	0.33	Sliding SPM	270.00 - 270.00
Distance Rotated (ft)	313.00	Hours Rotating	2.00	Motor RPM	80.00 - 144.00
Distance Slid (ft)	20.00			Surface RPM	80.00 - 90.00
Inclination In	0.09			Flow Rate (gpm)	795.00 - 900.00
Inclination Out	0.22			On Bottom Pressure (psi)	2250.00 - 3100.00
Azimuth In	9.46	% Hours Rotating	86%	Off Bottom Pressure (psi)	1800.00 - 2500.00
Azimuth Out	311.98	% Hours Sliding	14%		
AVG Total ROP (ft/h)	142.71	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	156.50	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	60.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #1 - BHA #1

Date In: Mar 15, 2019, 13:45 Date Out: Mar 16, 2019, 11:00

Bit Details		Motor Details		Directional Comments
OD (in)	17.500	Size (in)	8.0	Motor- 8" 7/8 4.0 FXD @ 1.50 W 17"NBS GPM=400-900 RPG=.15 Max Diff=900 Max Trq=14930 Bit - Baker DD606S Jets- 9 X 12's TFA=.994
Vendor	Baker	Lobe/Stage	7/8, 4.0	
S/N	5294732	Bend Angle	1.5	
Nozzles	9 X 12	Speed (rev/gal)	0.16	
Total Flow Area (in²)	0.994	Wear Pad OD (in)	8.375	MWD Comments
Drilling Hours for Day	2.33	Bit Distances		
Total Drilled for Day (ft)	333.00	Survey: 62.00 ft, Bend: 6.20 ft		
Drilling Hours for BHA	8.33			
Total Drilled for BHA (ft)	1175.00			POOH Reason
				Total Depth/Casing Point: POOH for Casing

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD606S, Style: PDC, Gauge Length (in): 4.00, Size (in): 17.50	Baker	5294732	6 5/8" Reg Pin			17.500		1.50	1.50
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	32.00
Stabilizer Description: 17" Stabilizer	DTI	DR35068	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.56	39.56
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	42.89
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	73.94
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.29
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 IF Box), Type: Steel	DTI	DR35350	4 1/2" IF Box	6 5/8" Reg Pin	2.750	8.188		3.96	109.25
HWDP Description: 30 Jts 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.51	1024.76

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Other	16	03-15	22:25	00:00	03-16			Work on Cellar Pump
Other	16	03-16	00:00	04:15	03-16			Work on Cellar Pump
Survey	46	03-16	04:15	04:45	03-16	842.00	842.00	Inclination (°): 0.090, Azimuth (°): 9.460, TVD (ft): 779.95, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 780.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-16	04:45	05:35	03-16	842.00	933.00	Pressure On (psi): 2250.00, Pressure Off (psi): 1800.00, Weight On Bit (klbs): 21.00, Surface RPM: 80, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 795.00, Strokes Per Minute: 246.00
Survey	46	03-16	05:35	05:45	03-16	933.00	933.00	Inclination (°): 0.180, Azimuth (°): 225.410, TVD (ft): 870.95, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 871.00, Bit To Sensor (ft): 62.00
Slide Drill	2	03-16	05:45	06:05	03-16	933.00	953.00	Pressure On (psi): 2500.00, Pressure Off (psi): 1800.00, Weight On Bit (klbs): 28.00, Flow Rate (gpm): 871.00, Strokes Per Minute: 270, Toolface: 25, Toolface Type: magnetic
Rotary Drill	1	03-16	06:05	06:45	03-16	953.00	1024.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 28.00, Surface RPM: 80, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 895.00, Strokes Per Minute: 246.00
Survey	46	03-16	06:45	06:50	03-16	1024.00	1024.00	Inclination (°): 0.180, Azimuth (°): 274.450, TVD (ft): 961.95, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 962.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-16	06:50	07:20	03-16	1024.00	1175.00	Pressure On (psi): 3100.00, Pressure Off (psi): 2500.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-16	07:20	07:25	03-16	1118.00	1118.00	Inclination (°): 0.310, Azimuth (°): 328.950, TVD (ft): 1055.95, Dogleg (°/100 ft): 0.27, Sensor Depth (ft): 1056.00, Bit To Sensor (ft): 62.00
Survey	46	03-16	07:25	07:30	03-16	1175.00	1175.00	Inclination (°): 0.220, Azimuth (°): 311.980, TVD (ft): 1112.95, Dogleg (°/100 ft): 0.21, Sensor Depth (ft): 1113.00, Bit To Sensor (ft): 62.00
Pooh	7	03-16	07:30	10:30	03-16			POOH for Casing
Change BHA	6	03-16	10:30	11:00	03-16			Rack Back BHA
Standby	15	03-16	11:00	00:00	03-17			Standby while Running Casing, Cement, Nipple up BOP's

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, Mar 17 00:00 - 23:59 (Day 3 of 29)

Billing: \$9,173.75 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	1175.00	Downhole Hours	11.00	Rotating WOB (klbs)	12.00 - 25.00
Bit Depth (ft)	1555.00	Drilling Hours	1.83	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	1555.00	Hours Circulating	1.92	Rotating SPM	156.00 - 277.00
Total Distance (ft)	380.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	380.00	Hours Rotating	1.83	Motor RPM	75.00 - 144.00
Distance Slid (ft)	0.00			Surface RPM	30.00 - 60.00
Inclination In	0.35			Flow Rate (gpm)	599.00 - 900.00
Inclination Out	0.31			On Bottom Pressure (psi)	1300.00 - 3300.00
Azimuth In	341.08	% Hours Rotating	100%	Off Bottom Pressure (psi)	1080.00 - 2600.00
Azimuth Out	67.74	% Hours Sliding	0%		
AVG Total ROP (ft/h)	207.27	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	207.27	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #2 - BHA #2

Date In: Mar 17, 2019, 13:00 Date Out: Mar 19, 2019, 8:45

Bit Details		Motor Details		Directional Comments
OD (in)	12.250	Size (in)	8.0	8" 7/8 4.0 FXD @ 1.50 W 12" NBS GPM=400-900 RPG=.16 Max Diff=900 Max Trq=14930 Bit - Baker D606X Jets- 6 X 12's TFA=.66
Vendor	Baker	Lobe/Stage	7/8, 4.0	
S/N	5289099	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.16	MWD Comments
Total Flow Area (in²)	0.660	Wear Pad OD (in)	8.375	
Drilling Hours for Day	1.83	Bit Distances		POOH Reason Total Depth/Casing Point: POOH For Casing
Total Drilled for Day (ft)	380.00	Survey: 62.00 ft, Bend: 6.20 ft		
Drilling Hours for BHA	23.25			
Total Drilled for BHA (ft)	3660.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: D606X, Style: PDC, Gauge Length (in): 3.75, Size (in): 12.25	Baker	5289099	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	31.75
Stabilizer Description: 12" Stabilizer	DTI	DR38410	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.99	39.74
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	43.07
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	74.12
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.47
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 XH Box), Type: Steel	DTI	DR32566	4 1/2" XH Box	6 5/8" Reg Pin	2.750	8.188		3.06	108.53
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	635.93
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR38966	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		3.96	639.89
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1555.66

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	03-16	11:00	00:00	03-17			Standby while Running Casing, Cement, Nipple up BOP's
Standby	15	03-17	00:00	06:00	03-17			Standby while Nipple Up BOP's
Standby	15	03-17	06:00	11:00	03-17			Standby while rig Nipples Up. Test Bop's and casing test
Change BHA	6	03-17	11:00	13:00	03-17			P/U BHA #2, 12.25" Bit, Scribe, Insert MWD tool
Circulating	3	03-17	13:00	13:15	03-17			Test MWD tool & Motor (Test Good)
TIH	8	03-17	13:15	16:25	03-17			TIH W/ BHA #2
Other	16	03-17	16:25	19:00	03-17			Change SaverSub
Reaming	4	03-17	19:00	20:40	03-17			Reaming F/ 1099' - T/ 1175' [GPM = 500, RPM = 30]
Rotary Drill	1	03-17	20:40	21:10	03-17	1175.00	1235.00	Pressure On (psi): 1300.00, Pressure Off (psi): 1080.00, Weight On Bit (klbs): 12.00, Surface RPM: 30, Surface Torque (ft lbf): 6000.00, Flow Rate (gpm): 599.00, Strokes Per Minute: 156.00
Other	16	03-17	21:10	22:15	03-17			Install Rot Head
Rotary Drill	1	03-17	22:15	22:40	03-17	1235.00	1282.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-17	22:40	22:55	03-17	1282.00	1282.00	Inclination (°): 0.350, Azimuth (°): 341.080, TVD (ft): 1219.95, Dogleg (°/100 ft): 0.18, Sensor Depth (ft): 1220.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-17	22:55	23:05	03-17	1282.00	1373.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-17	23:05	23:10	03-17	1373.00	1373.00	Inclination (°): 0.090, Azimuth (°): 26.870, TVD (ft): 1310.95, Dogleg (°/100 ft): 0.32, Sensor Depth (ft): 1311.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-17	23:10	23:30	03-17	1373.00	1464.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Rotary Drill	1	03-17	23:30	23:55	03-17	1464.00	1555.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-17	23:55	00:00	03-18	1555.00	1555.00	Inclination (°): 0.310, Azimuth (°): 67.740, TVD (ft): 1492.95, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 1493.00, Bit To Sensor (ft): 62.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Mar 18 00:00 - 23:59 (Day 4 of 29)

Billing: \$6,500.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	1555.00	Downhole Hours	24.00	Rotating WOB (klbs)	25.00 - 50.00
Bit Depth (ft)	4663.00	Drilling Hours	20.08	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	4663.00	Hours Circulating	0.00	Rotating SPM	227.00 - 277.00
Total Distance (ft)	3108.00	Hours Sliding	1.58	Sliding SPM	277.00 - 277.00
Distance Rotated (ft)	3043.00	Hours Rotating	18.50	Motor RPM	75.00 - 144.00
Distance Slid (ft)	65.00			Surface RPM	60.00 - 90.00
Inclination In	0.35			Flow Rate (gpm)	733.00 - 900.00
Inclination Out	3.60			On Bottom Pressure (psi)	3300.00 - 4600.00
Azimuth In	98.59	% Hours Rotating	92%	Off Bottom Pressure (psi)	2600.00 - 3425.00
Azimuth Out	93.05	% Hours Sliding	8%		
AVG Total ROP (ft/h)	154.76	% Distance Sliding	2%		
AVG Rotating ROP (ft/h)	164.49	% Distance Rotating	98%		
AVG Sliding ROP (ft/h)	41.05				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Joel Johnson	Directional Driller

BHA #2 - BHA #2

Date In: Mar 17, 2019, 13:00 Date Out: Mar 19, 2019, 8:45

Bit Details		Motor Details		Directional Comments
OD (in)	12.250	Size (in)	8.0	8" 7/8 4.0 FXD @ 1.50 W 12" NBS GPM=400-900 RPG=.16 Max Diff=900 Max Trq=14930 Bit - Baker D606X Jets- 6 X 12's TFA=.66
Vendor	Baker	Lobe/Stage	7/8, 4.0	
S/N	5289099	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.16	MWD Comments
Total Flow Area (in²)	0.660	Wear Pad OD (in)	8.375	POOH Reason Total Depth/Casing Point: POOH For Casing
Drilling Hours for Day	20.08	Bit Distances		
Total Drilled for Day (ft)	3108.00	Survey: 62.00 ft, Bend: 6.20 ft		
Drilling Hours for BHA	23.25			
Total Drilled for BHA (ft)	3660.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: D606X, Style: PDC, Gauge Length (in): 3.75, Size (in): 12.25	Baker	5289099	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	31.75
Stabilizer Description: 12" Stabilizer	DTI	DR38410	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.99	39.74
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	43.07
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	74.12
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.47
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 XH Box), Type: Steel	DTI	DR32566	4 1/2" XH Box	6 5/8" Reg Pin	2.750	8.188		3.06	108.53
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	635.93
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR38966	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		3.96	639.89
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1555.66

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	03-17	23:55	00:00	03-18	1555.00	1555.00	Inclination (°): 0.310, Azimuth (°): 67.740, TVD (ft): 1492.95, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 1493.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	00:00	00:15	03-18	1555.00	1649.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	00:15	00:30	03-18	1649.00	1649.00	Inclination (°): 0.350, Azimuth (°): 98.590, TVD (ft): 1586.95, Dogleg (°/100 ft): 0.19, Sensor Depth (ft): 1587.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	00:30	00:40	03-18	1649.00	1744.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	00:40	00:45	03-18	1744.00	1744.00	Inclination (°): 0.440, Azimuth (°): 67.470, TVD (ft): 1681.94, Dogleg (°/100 ft): 0.24, Sensor Depth (ft): 1682.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	00:45	01:15	03-18	1744.00	1838.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 7500.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	01:15	01:20	03-18	1838.00	1838.00	Inclination (°): 0.660, Azimuth (°): 61.060, TVD (ft): 1775.94, Dogleg (°/100 ft): 0.24, Sensor Depth (ft): 1776.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	01:20	01:50	03-18	1838.00	1932.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	01:50	02:00	03-18	1932.00	1932.00	Inclination (°): 0.700, Azimuth (°): 65.270, TVD (ft): 1869.93, Dogleg (°/100 ft): 0.07, Sensor Depth (ft): 1870.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	02:00	02:40	03-18	1932.00	2027.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	02:40	02:45	03-18	2027.00	2027.00	Inclination (°): 0.660, Azimuth (°): 64.840, TVD (ft): 1964.93, Dogleg (°/100 ft): 0.04, Sensor Depth (ft): 1965.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	02:45	03:20	03-18	2027.00	2121.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	03:20	03:25	03-18	2121.00	2121.00	Inclination (°): 0.660, Azimuth (°): 60.790, TVD (ft): 2058.92, Dogleg (°/100 ft): 0.05, Sensor Depth (ft): 2059.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	03:25	04:00	03-18	2121.00	2215.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	04:00	04:15	03-18	2215.00	2215.00	Inclination (°): 0.660, Azimuth (°): 64.310, TVD (ft): 2152.91, Dogleg (°/100 ft): 0.04, Sensor Depth (ft): 2153.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	04:15	04:40	03-18	2215.00	2309.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	04:40	04:45	03-18	2309.00	2309.00	Inclination (°): 0.790, Azimuth (°): 62.290, TVD (ft): 2246.91, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 2247.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	04:45	05:10	03-18	2309.00	2403.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	05:10	05:15	03-18	2403.00	2403.00	Inclination (°): 0.660, Azimuth (°): 59.560, TVD (ft): 2340.90, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 2341.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	05:15	05:40	03-18	2403.00	2497.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	05:40	05:45	03-18	2497.00	2497.00	Inclination (°): 0.970, Azimuth (°): 55.780, TVD (ft): 2434.89, Dogleg (°/100 ft): 0.33, Sensor Depth (ft): 2435.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	05:45	06:10	03-18	2497.00	2592.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	06:10	06:15	03-18	2592.00	2592.00	Inclination (°): 1.010, Azimuth (°): 47.780, TVD (ft): 2529.88, Dogleg (°/100 ft): 0.15, Sensor Depth (ft): 2530.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	06:15	06:40	03-18	2592.00	2685.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	06:40	06:45	03-18	2685.00	2685.00	Inclination (°): 1.490, Azimuth (°): 53.230, TVD (ft): 2622.85, Dogleg (°/100 ft): 0.53, Sensor Depth (ft): 2623.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	06:45	07:35	03-18	2685.00	2874.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	07:35	07:40	03-18	2874.00	2874.00	Inclination (°): 2.860, Azimuth (°): 61.140, TVD (ft): 2811.71, Dogleg (°/100 ft): 0.74, Sensor Depth (ft): 2812.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	07:40	08:00	03-18	2874.00	2968.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	08:00	08:05	03-18	2968.00	2968.00	Inclination (°): 3.080, Azimuth (°): 62.640, TVD (ft): 2905.59, Dogleg (°/100 ft): 0.25, Sensor Depth (ft): 2906.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	08:05	08:25	03-18	2968.00	3062.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	08:25	08:40	03-18	3062.00	3062.00	Inclination (°): 3.080, Azimuth (°): 60.000, TVD (ft): 2999.45, Dogleg (°/100 ft): 0.15, Sensor Depth (ft): 3000.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	08:40	08:50	03-18	3062.00	3156.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00

Survey	46	03-18	08:50	08:55	03-18	3156.00	3156.00	Inclination (°): 3.740, Azimuth (°): 62.460, TVD (ft): 3093.28, Dogleg (°/100 ft): 0.72, Sensor Depth (ft): 3094.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	08:55	09:20	03-18	3156.00	3251.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	09:20	09:25	03-18	3251.00	3251.00	Inclination (°): 4.400, Azimuth (°): 61.140, TVD (ft): 3188.04, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 3189.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	09:25	09:50	03-18	3251.00	3345.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	09:50	09:55	03-18	3345.00	3345.00	Inclination (°): 4.840, Azimuth (°): 63.780, TVD (ft): 3281.74, Dogleg (°/100 ft): 0.52, Sensor Depth (ft): 3283.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	09:55	10:15	03-18	3345.00	3439.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	10:15	10:20	03-18	3439.00	3439.00	Inclination (°): 5.890, Azimuth (°): 68.090, TVD (ft): 3375.33, Dogleg (°/100 ft): 1.20, Sensor Depth (ft): 3377.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	10:20	10:25	03-18	3439.00	3454.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 25.00, Surface RPM: 80, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Slide Drill	2	03-18	10:25	10:35	03-18	3454.00	3469.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277, Toolface: 180, Toolface Type: magnetic
Rotary Drill	1	03-18	10:35	10:55	03-18	3469.00	3532.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	10:55	11:00	03-18	3532.00	3532.00	Inclination (°): 6.330, Azimuth (°): 82.680, TVD (ft): 3467.80, Dogleg (°/100 ft): 1.73, Sensor Depth (ft): 3470.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	11:00	11:05	03-18	3532.00	3547.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Slide Drill	2	03-18	11:05	11:15	03-18	3547.00	3562.00	Pressure On (psi): 3900.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277, Toolface: 260, Toolface Type: magnetic
Rotary Drill	1	03-18	11:15	12:00	03-18	3562.00	3720.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	12:00	12:05	03-18	3720.00	3720.00	Inclination (°): 5.850, Azimuth (°): 103.330, TVD (ft): 3654.76, Dogleg (°/100 ft): 1.19, Sensor Depth (ft): 3658.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	12:05	13:00	03-18	3720.00	3814.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	13:00	13:10	03-18	3814.00	3814.00	Inclination (°): 5.450, Azimuth (°): 97.530, TVD (ft): 3748.31, Dogleg (°/100 ft): 0.74, Sensor Depth (ft): 3752.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	13:10	14:10	03-18	3814.00	3908.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	14:10	14:15	03-18	3908.00	3908.00	Inclination (°): 4.790, Azimuth (°): 93.930, TVD (ft): 3841.93, Dogleg (°/100 ft): 0.78, Sensor Depth (ft): 3846.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	14:15	15:00	03-18	3908.00	4003.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Rig Service - In Hole	19	03-18	15:00	15:15	03-18			Rig Service
Survey	46	03-18	15:15	15:20	03-18	4003.00	4003.00	Inclination (°): 4.090, Azimuth (°): 92.080, TVD (ft): 3936.65, Dogleg (°/100 ft): 0.75, Sensor Depth (ft): 3941.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	15:20	16:10	03-18	4003.00	4097.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	16:10	16:15	03-18	4097.00	4097.00	Inclination (°): 4.090, Azimuth (°): 86.720, TVD (ft): 4030.41, Dogleg (°/100 ft): 0.41, Sensor Depth (ft): 4035.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	16:15	17:15	03-18	4097.00	4191.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	17:15	17:20	03-18	4191.00	4191.00	Inclination (°): 3.520, Azimuth (°): 86.900, TVD (ft): 4124.20, Dogleg (°/100 ft): 0.61, Sensor Depth (ft): 4129.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	17:20	17:25	03-18	4191.00	4201.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Slide Drill	2	03-18	17:25	18:10	03-18	4201.00	4216.00	Pressure On (psi): 3900.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277, Toolface: 110, Toolface Type: magnetic
Rotary Drill	1	03-18	18:10	19:05	03-18	4216.00	4285.00	Pressure On (psi): 4350.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	19:05	19:10	03-18	4285.00	4285.00	Inclination (°): 3.600, Azimuth (°): 91.550, TVD (ft): 4218.02, Dogleg (°/100 ft): 0.32, Sensor Depth (ft): 4223.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	19:10	20:20	03-18	4285.00	4380.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 90, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 733.00, Strokes Per Minute: 227.00
Survey	46	03-18	20:20	20:35	03-18	4380.00	4380.00	Inclination (°): 3.780, Azimuth (°): 90.240, TVD (ft): 4312.82, Dogleg (°/100 ft): 0.21, Sensor Depth (ft): 4318.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	20:35	21:30	03-18	4380.00	4474.00	Pressure On (psi): 4600.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 80, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	21:30	21:35	03-18	4474.00	4474.00	Inclination (°): 3.250, Azimuth (°): 92.170, TVD (ft): 4406.64, Dogleg (°/100 ft): 0.58, Sensor Depth (ft): 4412.00, Bit To Sensor (ft): 62.00

Rotary Drill	1	03-18	21:35	22:25	03-18	4474.00	4569.00	Pressure On (psi): 4600.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 80, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	22:25	22:40	03-18	4569.00	4569.00	Inclination (°): 3.030, Azimuth (°): 88.650, TVD (ft): 4501.50, Dogleg (°/100 ft): 0.31, Sensor Depth (ft): 4507.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-18	22:40	22:45	03-18	4569.00	4580.00	Pressure On (psi): 4600.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 80, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Slide Drill	2	03-18	22:45	23:15	03-18	4580.00	4600.00	Pressure On (psi): 3900.00, Pressure Off (psi): 3425.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277, Toolface: 110, Toolface Type: magnetic
Rotary Drill	1	03-18	23:15	23:50	03-18	4600.00	4663.00	Pressure On (psi): 4600.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 80, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-18	23:50	00:00	03-19	4663.00	4663.00	Inclination (°): 3.600, Azimuth (°): 93.050, TVD (ft): 4595.34, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 4601.00, Bit To Sensor (ft): 62.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Mar 19 00:00 - 23:59 (Day 5 of 29)

Billing: \$6,500.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	4663.00	Downhole Hours	8.75	Rotating WOB (klbs)	50.00 - 50.00
Bit Depth (ft)	4835.00	Drilling Hours	1.33	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	4835.00	Hours Circulating	1.08	Rotating SPM	277.00 - 277.00
Total Distance (ft)	172.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	172.00	Hours Rotating	1.33	Motor RPM	75.00 - 144.00
Distance Slid (ft)	0.00			Surface RPM	80.00 - 80.00
Inclination In	3.78			Flow Rate (gpm)	900.00 - 900.00
Inclination Out	3.34			On Bottom Pressure (psi)	4600.00 - 4600.00
Azimuth In	92.78	% Hours Rotating	100%	Off Bottom Pressure (psi)	2900.00 - 2900.00
Azimuth Out	91.91	% Hours Sliding	0%		
AVG Total ROP (ft/h)	129.00	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	129.00	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #2 - BHA #2

Date In: Mar 17, 2019, 13:00 Date Out: Mar 19, 2019, 8:45

Bit Details		Motor Details		Directional Comments
OD (in)	12.250	Size (in)	8.0	8" 7/8 4.0 FXD @ 1.50 W 12" NBS GPM=400-900 RPG=.16 Max Diff=900 Max Trq=14930 Bit - Baker D606X Jets- 6 X 12's TFA=.66
Vendor	Baker	Lobe/Stage	7/8, 4.0	
S/N	5289099	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.16	MWD Comments
Total Flow Area (in²)	0.660	Wear Pad OD (in)	8.375	
Drilling Hours for Day	1.33	Bit Distances		POOH Reason Total Depth/Casing Point: POOH For Casing
Total Drilled for Day (ft)	172.00	Survey: 62.00 ft, Bend: 6.20 ft		
Drilling Hours for BHA	23.25			
Total Drilled for BHA (ft)	3660.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: D606X, Style: PDC, Gauge Length (in): 3.75, Size (in): 12.25	Baker	5289099	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 1.5° FBH 7/8 4.0 Stg Mtr w/ 12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4	Aim	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.50	31.75
Stabilizer Description: 12" Stabilizer	DTI	DR38410	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.250		7.99	39.74
UBHO Sub Description: UBHO Sub, Type: Steel	Aim	800-213	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		3.33	43.07
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR42380	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.05	74.12
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR42379	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.125		31.35	105.47
Crossover Sub Description: X-Over (6 5/8 Reg Pin x 4 1/2 XH Box), Type: Steel	DTI	DR32566	4 1/2" XH Box	6 5/8" Reg Pin	2.750	8.188		3.06	108.53
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	635.93
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR38966	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		3.96	639.89
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1555.66

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	03-18	23:50	00:00	03-19	4663.00	4663.00	Inclination (°): 3.600, Azimuth (°): 93.050, TVD (ft): 4595.34, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 4601.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-19	00:00	00:50	03-19	4663.00	4758.00	Pressure On (psi): 4600.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 80, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-19	00:50	01:00	03-19	4758.00	4758.00	Inclination (°): 3.780, Azimuth (°): 92.780, TVD (ft): 4690.15, Dogleg (°/100 ft): 0.19, Sensor Depth (ft): 4696.00, Bit To Sensor (ft): 62.00
Rotary Drill	1	03-19	01:00	01:30	03-19	4758.00	4835.00	Pressure On (psi): 4600.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 80, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 277.00
Survey	46	03-19	01:30	01:40	03-19	4835.00	4835.00	Inclination (°): 3.340, Azimuth (°): 91.910, TVD (ft): 4767.00, Dogleg (°/100 ft): 0.58, Sensor Depth (ft): 4773.00, Bit To Sensor (ft): 62.00
Circulating	3	03-19	01:40	02:45	03-19			Section TD, POOH For Casing
Pooh	7	03-19	02:45	07:00	03-19			POOH for Casing Run
Change BHA	6	03-19	07:00	08:45	03-19			Rack Back BHA #2, MWD was stuck in UBHO.
Standby	15	03-19	08:45	00:00	03-20			Standby while Run Casing, Cement, Nipple Down BOP's

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, Mar 20 00:00 - 23:59 (Day of 29)

Billing: N/A (\$255,147.58 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
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

No BHAs**Directional Activities**

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Standby	15	03-19	08:45	00:00	03-20			Standby while Run Casing, Cement, Nipple Down BOP's
Standby	15	03-20	00:00	06:00	03-20			Standby while Cement, Skid Rig

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Thursday, Mar 21 00:00 - 23:59 (Day 6 of 29)

Billing: N/A (\$255,147.58 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
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

No BHAs**Directional Activities**

No Activities

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, Mar 22 00:00 - 23:59 (Day 7 of 29)

Billing: N/A (\$255,147.58 total)

Drilling Summary			Drilling Parameters	
Start Depth (ft)			Downhole Hours	0.00
Bit Depth (ft)			Drilling Hours	
Bottom Hole Depth (ft)			Hours Circulating	
Total Distance (ft)			Hours Sliding	
Distance Rotated (ft)			Hours Rotating	
Distance Slid (ft)				
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			

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

No BHAs**Directional Activities**

No Activities

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Mar 23 00:00 - 23:59 (Day 8 of 29)

Billing: N/A (\$255,147.58 total)

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

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

No BHAs**Directional Activities**

No Activities

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Sunday, Mar 24 00:00 - 23:59 (Day 9 of 29)

Billing: N/A (\$255,147.58 total)

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

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

No BHAs**Directional Activities**

No Activities

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Monday, Mar 25 00:00 - 23:59 (Day 10 of 29)

Billing: N/A (\$255,147.58 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
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

No BHAs**Directional Activities**

No Activities

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Mar 26 00:00 - 23:59 (Day 11 of 29)

Billing: N/A (\$255,147.58 total)

Drilling Summary			Drilling Parameters	
Start Depth (ft)	Downhole Hours	3.00	Rotating WOB (klbs)	
Bit Depth (ft)	Drilling Hours	0.00	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	Hours Circulating	0.25	Rotating SPM	
Total Distance (ft)	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	Hours Rotating	0.00	Motor RPM	195.00 - 195.00
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)	% Distance Sliding			
AVG Rotating ROP (ft/h)	% Distance Rotating			
AVG Sliding ROP (ft/h)				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #3 - BHA #3 (2nd Intermediate)

Date In: Mar 26, 2019, 21:00 Date Out: Mar 27, 2019, 10:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS. Protracted Angle: 1.49°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13042663	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.660	Wear Pad OD (in)	7.250	
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Survey: 64.00 ft, Bend: 4.06 ft,		POOH Reason
Drilling Hours for BHA	0.67	Gamma: 50.00 ft		
Total Drilled for BHA (ft)	107.00			
				MWD Incident: POOH for MWD, Stop pulsing

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GT65DM, Style: PDC, Gauge Length (in): 4.00, Size (in): 8.50	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Stabilizer Description: 8.25" Stabilizer	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.43
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.71
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.06
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.83
Crossover Sub Description: X-Over (4 1/2 IF Pin x 4 1/2 XH Box), Type: Steel	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.65
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.05
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.07
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.84

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	03-26	00:00	19:30	03-26			Standby while Skid Rig
Change BHA	6	03-26	19:30	21:00	03-26			P/U BHA # 3
TIH	8	03-26	21:00	22:30	03-26			TIH W/ BHA #3
Reaming	4	03-26	22:30	22:45	03-26			Reaming F/2283 - T/ 2303 [GPM = 500, RPM = 30]
Other	16	03-26	22:45	23:35	03-26			Test Casing
TIH	8	03-26	23:35	00:00	03-27			TIH W/ BHA #3
MWD Activities								
No Activities								



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, Mar 27 00:00 - 23:59 (Day 12 of 29)

Billing: \$12,300.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	4835.00	Downhole Hours	24.00	Rotating WOB (klbs)	24.00 - 50.00
Bit Depth (ft)	7113.00	Drilling Hours	9.42	Sliding WOB (klbs)	30.00 - 30.00
Bottom Hole Depth (ft)	7113.00	Hours Circulating	2.83	Rotating SPM	234.00 - 234.00
Total Distance (ft)	2278.00	Hours Sliding	1.25	Sliding SPM	234.00 - 234.00
Distance Rotated (ft)	2148.00	Hours Rotating	8.17	Motor RPM	156.00 - 195.00
Distance Slid (ft)	130.00			Surface RPM	30.00 - 70.00
Inclination In	3.03			Flow Rate (gpm)	750.00 - 750.00
Inclination Out	6.73			On Bottom Pressure (psi)	3240.00 - 3700.00
Azimuth In	91.82	% Hours Rotating	87%	Off Bottom Pressure (psi)	2800.00 - 2900.00
Azimuth Out	102.19	% Hours Sliding	13%		
AVG Total ROP (ft/h)	241.91	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	263.02	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	104.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #3 - BHA #3 (2nd Intermediate)

Date In: Mar 26, 2019, 21:00 Date Out: Mar 27, 2019, 10:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS. Protracted Angle: 1.49°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13042663	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.660	Wear Pad OD (in)	7.250	
Drilling Hours for Day	0.67	Bit Distances		
Total Drilled for Day (ft)	107.00	Survey: 64.00 ft, Bend: 4.06 ft,		POOH Reason
Drilling Hours for BHA	0.67	Gamma: 50.00 ft		
Total Drilled for BHA (ft)	107.00			
				MWD Incident: POOH for MWD, Stop pulsing

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GT65DM, Style: PDC, Gauge Length (in): 4.00, Size (in): 8.50	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Stabilizer Description: 8.25" Stabilizer	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.43
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.71
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.06
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.83
Crossover Sub Description: X-Over (4 1/2 IF Pin x 4 1/2 XH Box), Type: Steel	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.65
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.05
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.07
HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.84

MWD Items		
No Items		
BHA #4 - BHA #4		Date In: Mar 27, 2019, 10:00 Date Out: Mar 29, 2019, 20:30
Bit Details		Motor Details
OD (in)	8.500	Size (in)
Vendor	Halliburton	Lobe/Stage
S/N	13042663	Bend Angle
Nozzles	6 X 12	Speed (rev/gal)
Total Flow Area (in²)	0.660	Wear Pad OD (in)
Drilling Hours for Day	8.75	Bit Distances
Total Drilled for Day (ft)	2171.00	Survey: 64.00 ft, Bend: 4.05 ft, Gamma: 50.00 ft
Drilling Hours for BHA	42.42	POOH Reason
Total Drilled for BHA (ft)	5245.00	
		Penetration Rate: POOH do to ROP dropping to 0 while rotating

Directional Items									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>Security GT65DM</i> , Style: <i>PDC</i> , Gauge Length (in): <i>4.00</i> , Size (in): <i>8.50</i>	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: <i>1.5° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS</i> , Size (in): <i>7.00</i> , Bend Angle (°): <i>1.5</i> , Rotor Lobe: <i>7</i> , Stator Lobe: <i>8</i> , Stator Stage: <i>8.5</i>	Altitude	AEP7027SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.20	35.20
Stabilizer Description: <i>8.25" Stabilizer</i>	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.41
UBHO Sub Description: <i>UBHO Sub</i> , Type: <i>NM</i>	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.69
Drill Collar Description: <i>NMDC (MWD Tool)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.04
Drill Collar Description: <i>NMDC (Spacer)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.81
Crossover Sub Description: <i>X-Over (4 1/2 IF Pin x 4 1/2 XH Box)</i> , Type: <i>Steel</i>	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.63
Drill Collar Description: <i>(18 Jts) 6.5" Drill Collars</i> , Style: <i>Spiral Drill</i> , Type: <i>Steel</i>	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.03
Crossover Sub Description: <i>X-Over (4 1/2 XH Pin x 4 1/2 IF Box)</i> , Type: <i>Steel</i>	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.05
HWDP Description: <i>(30 Jts) 5" HWDP</i> , Style: <i>Spiral</i>			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.82

MWD Items									
No Items									
Directional Activities									
Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details	
TIH	8	03-26	23:35	00:00	03-27			TIH W/ BHA #3	
TIH	8	03-27	00:00	00:50	03-27			TIH W/ BHA #3	
Reaming	4	03-27	00:50	01:30	03-27			Reaming F/ 4753 - T/ 4835 [GPM = 500, RPM = 30]	
Rotary Drill	1	03-27	01:30	02:10	03-27	4835.00	4942.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 24.00, Surface RPM: 50, Surface Torque (ft lbf): 7000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00	
Troubleshoot	34	03-27	02:10	03:00	03-27			Trouble Shoot MWD, No Pulses.	
Circulating	3	03-27	03:00	03:55	03-27			Circulate, Build Slug	
Pooh	7	03-27	03:55	07:30	03-27			POOH for MWD	
Other	16	03-27	07:30	08:15	03-27			C/O MWD Tool & UBHO Sleeve	
Circulating	3	03-27	08:15	09:00	03-27			Attempt to shallow test MWD (bad test), Pressure higher then normal 1000 PSI, Pick up to inspect bit & motor, break off bit, bit had 4 out of 6 jets plugged with stator rubbers	
Change BHA	6	03-27	09:00	10:00	03-27			C/O Motor, scribe same, install MWD tool	
Circulating	3	03-27	10:00	10:15	03-27			Shallow Test MWD (good test)	
TIH	8	03-27	10:15	13:00	03-27			TIH W/ BHA #4	
Circulating	3	03-27	13:00	13:15	03-27			Fill DP	
Survey	46	03-27	13:15	13:20	03-27	4942.00	4942.00	Inclination (°): 3.030, Azimuth (°): 91.820, TVD (ft): 4871.84, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 4878.00, Bit To Sensor (ft): 64.00	
Slide Drill	2	03-27	13:20	13:35	03-27	4942.00	4962.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic	

Rotary Drill	1	03-27	13:35	14:00	03-27	4962.00	5036.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 24.00, Surface RPM: 50, Surface Torque (ft lbf): 8500.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	14:00	14:05	03-27	5036.00	5036.00	Inclination (°): 4.090, Azimuth (°): 92.080, TVD (ft): 4965.65, Dogleg (°/100 ft): 1.13, Sensor Depth (ft): 4972.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	14:05	14:30	03-27	5036.00	5131.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	14:30	14:35	03-27	5131.00	5131.00	Inclination (°): 4.620, Azimuth (°): 93.400, TVD (ft): 5060.38, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 5067.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	14:35	14:55	03-27	5131.00	5225.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	14:55	15:00	03-27	5225.00	5225.00	Inclination (°): 4.530, Azimuth (°): 92.780, TVD (ft): 5154.08, Dogleg (°/100 ft): 0.11, Sensor Depth (ft): 5161.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	15:00	15:30	03-27	5225.00	5319.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	15:30	15:35	03-27	5319.00	5319.00	Inclination (°): 4.350, Azimuth (°): 89.360, TVD (ft): 5247.80, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 5255.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	15:35	15:40	03-27	5319.00	5329.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-27	15:40	15:50	03-27	5329.00	5349.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic
Rotary Drill	1	03-27	15:50	16:10	03-27	5349.00	5414.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	16:10	16:15	03-27	5414.00	5414.00	Inclination (°): 4.750, Azimuth (°): 91.550, TVD (ft): 5342.50, Dogleg (°/100 ft): 0.46, Sensor Depth (ft): 5350.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	16:15	16:45	03-27	5414.00	5508.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	16:45	16:50	03-27	5508.00	5508.00	Inclination (°): 5.010, Azimuth (°): 90.760, TVD (ft): 5436.16, Dogleg (°/100 ft): 0.29, Sensor Depth (ft): 5444.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	16:50	17:10	03-27	5508.00	5602.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	17:10	17:15	03-27	5602.00	5602.00	Inclination (°): 4.920, Azimuth (°): 91.910, TVD (ft): 5529.80, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 5538.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	17:15	17:45	03-27	5602.00	5697.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 40.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	17:45	17:50	03-27	5697.00	5697.00	Inclination (°): 4.750, Azimuth (°): 91.110, TVD (ft): 5624.47, Dogleg (°/100 ft): 0.19, Sensor Depth (ft): 5633.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	17:50	18:05	03-27	5697.00	5791.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 40.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	18:05	18:10	03-27	5791.00	5791.00	Inclination (°): 4.620, Azimuth (°): 89.880, TVD (ft): 5718.15, Dogleg (°/100 ft): 0.17, Sensor Depth (ft): 5727.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	18:10	18:25	03-27	5791.00	5885.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 40.00, Surface RPM: 70, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	18:25	18:30	03-27	5885.00	5885.00	Inclination (°): 4.700, Azimuth (°): 87.340, TVD (ft): 5811.84, Dogleg (°/100 ft): 0.24, Sensor Depth (ft): 5821.00, Bit To Sensor (ft): 64.00
Slide Drill	2	03-27	18:30	18:35	03-27	5885.00	5905.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic
Rotary Drill	1	03-27	18:35	18:50	03-27	5905.00	5980.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	18:50	18:55	03-27	5980.00	5980.00	Inclination (°): 5.630, Azimuth (°): 88.650, TVD (ft): 5906.46, Dogleg (°/100 ft): 0.99, Sensor Depth (ft): 5916.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	18:55	19:10	03-27	5980.00	6074.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	19:10	19:15	03-27	6074.00	6074.00	Inclination (°): 5.980, Azimuth (°): 85.750, TVD (ft): 5999.97, Dogleg (°/100 ft): 0.49, Sensor Depth (ft): 6010.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	19:15	19:30	03-27	6074.00	6169.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	19:30	19:35	03-27	6169.00	6169.00	Inclination (°): 6.020, Azimuth (°): 82.060, TVD (ft): 6094.45, Dogleg (°/100 ft): 0.41, Sensor Depth (ft): 6105.00, Bit To Sensor (ft): 64.00
Slide Drill	2	03-27	19:35	19:45	03-27	6169.00	6189.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 135, Toolface Type: magnetic
Rotary Drill	1	03-27	19:45	20:00	03-27	6189.00	6263.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	20:00	20:05	03-27	6263.00	6263.00	Inclination (°): 6.070, Azimuth (°): 88.570, TVD (ft): 6187.93, Dogleg (°/100 ft): 0.73, Sensor Depth (ft): 6199.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	20:05	20:20	03-27	6263.00	6357.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	20:20	20:25	03-27	6357.00	6357.00	Inclination (°): 6.370, Azimuth (°): 89.530, TVD (ft): 6281.38, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 6293.00, Bit To Sensor (ft): 64.00

Rotary Drill	1	03-27	20:25	20:40	03-27	6357.00	6452.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	20:40	20:45	03-27	6452.00	6452.00	Inclination (°): 5.890, Azimuth (°): 87.510, TVD (ft): 6375.83, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 6388.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	20:45	20:50	03-27	6452.00	6462.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-27	20:50	21:05	03-27	6462.00	6492.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 135, Toolface Type: magnetic
Rotary Drill	1	03-27	21:05	21:20	03-27	6492.00	6546.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	21:20	21:25	03-27	6546.00	6546.00	Inclination (°): 6.370, Azimuth (°): 92.080, TVD (ft): 6469.30, Dogleg (°/100 ft): 0.73, Sensor Depth (ft): 6482.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	21:25	21:40	03-27	6546.00	6640.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	21:40	21:45	03-27	6640.00	6640.00	Inclination (°): 6.590, Azimuth (°): 95.250, TVD (ft): 6562.70, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 6576.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	21:45	22:00	03-27	6640.00	6734.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	22:00	22:05	03-27	6734.00	6734.00	Inclination (°): 6.730, Azimuth (°): 94.720, TVD (ft): 6656.06, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 6670.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	22:05	22:20	03-27	6734.00	6829.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	22:20	22:25	03-27	6829.00	6829.00	Inclination (°): 6.900, Azimuth (°): 92.870, TVD (ft): 6750.39, Dogleg (°/100 ft): 0.29, Sensor Depth (ft): 6765.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	22:25	22:40	03-27	6829.00	6924.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	22:40	22:45	03-27	6924.00	6924.00	Inclination (°): 7.030, Azimuth (°): 91.380, TVD (ft): 6844.69, Dogleg (°/100 ft): 0.23, Sensor Depth (ft): 6860.00, Bit To Sensor (ft): 64.00
Slide Drill	2	03-27	22:45	23:05	03-27	6924.00	6944.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 170, Toolface Type: magnetic
Rotary Drill	1	03-27	23:05	23:30	03-27	6944.00	7018.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	23:30	23:35	03-27	7018.00	7018.00	Inclination (°): 7.080, Azimuth (°): 100.870, TVD (ft): 6937.98, Dogleg (°/100 ft): 1.24, Sensor Depth (ft): 6954.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-27	23:35	23:55	03-27	7018.00	7113.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-27	23:55	00:00	03-28	7113.00	7113.00	Inclination (°): 6.730, Azimuth (°): 102.190, TVD (ft): 7032.29, Dogleg (°/100 ft): 0.40, Sensor Depth (ft): 7049.00, Bit To Sensor (ft): 64.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Thursday, Mar 28 00:00 - 23:59 (Day 13 of 29)

Billing: \$9,100.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	7113.00	Downhole Hours	24.00	Rotating WOB (klbs)	30.00 - 50.00
Bit Depth (ft)	9454.00	Drilling Hours	22.00	Sliding WOB (klbs)	30.00 - 30.00
Bottom Hole Depth (ft)	9454.00	Hours Circulating	0.00	Rotating SPM	186.00 - 234.00
Total Distance (ft)	2341.00	Hours Sliding	9.83	Sliding SPM	234.00 - 234.00
Distance Rotated (ft)	2031.00	Hours Rotating	12.17	Motor RPM	156.00 - 195.00
Distance Slid (ft)	310.00			Surface RPM	25.00 - 30.00
Inclination In	5.93			Flow Rate (gpm)	600.00 - 750.00
Inclination Out	3.38			On Bottom Pressure (psi)	2300.00 - 3700.00
Azimuth In	101.13	% Hours Rotating	55%	Off Bottom Pressure (psi)	1900.00 - 2900.00
Azimuth Out	88.83	% Hours Sliding	45%		
AVG Total ROP (ft/h)	106.41	% Distance Sliding	13%		
AVG Rotating ROP (ft/h)	166.93	% Distance Rotating	87%		
AVG Sliding ROP (ft/h)	31.53				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #4 - BHA #4

Date In: Mar 27, 2019, 10:00 Date Out: Mar 29, 2019, 20:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS.Protracted Angle: 1.51°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13042663	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.26	
Total Flow Area (in²)	0.660	Wear Pad OD (in)	7.250	MWD Comments
Drilling Hours for Day	22.00	Bit Distances		POOH Reason Penetration Rate: POOH do to ROP dropping to 0 while rotating
Total Drilled for Day (ft)	2341.00	Survey: 64.00 ft, Bend: 4.05 ft, Gamma: 50.00 ft		
Drilling Hours for BHA	42.42			
Total Drilled for BHA (ft)	5245.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GT65DM, Style: PDC, Gauge Length (in): 4.00, Size (in): 8.50	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7027SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.20	35.20
Stabilizer Description: 8.25" Stabilizer	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.41
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.69
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.04
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.81
Crossover Sub Description: X-Over (4 1/2 IF Pin x 4 1/2 XH Box), Type: Steel	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.63
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.03
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.05

HWDP Description: (30 Jts) 5" HWDP, Style: Spiral			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.82
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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	03-27	23:55	00:00	03-28	7113.00	7113.00	Inclination (°): 6.730, Azimuth (°): 102.190, TVD (ft): 7032.29, Dogleg (°/100 ft): 0.40, Sensor Depth (ft): 7049.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	00:00	00:20	03-28	7113.00	7207.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	00:20	00:25	03-28	7207.00	7207.00	Inclination (°): 5.930, Azimuth (°): 101.130, TVD (ft): 7125.72, Dogleg (°/100 ft): 0.86, Sensor Depth (ft): 7143.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	00:25	00:40	03-28	7207.00	7301.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	00:40	00:45	03-28	7301.00	7301.00	Inclination (°): 6.200, Azimuth (°): 104.030, TVD (ft): 7219.19, Dogleg (°/100 ft): 0.43, Sensor Depth (ft): 7237.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	00:45	01:05	03-28	7301.00	7396.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	01:05	01:10	03-28	7400.00	7400.00	Inclination (°): 6.150, Azimuth (°): 104.740, TVD (ft): 7317.62, Dogleg (°/100 ft): 0.09, Sensor Depth (ft): 7336.00, Bit To Sensor (ft): 64.00
Slide Drill	2	03-28	01:10	01:20	03-28	7396.00	7411.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 0, Toolface Type: magnetic
Rotary Drill	1	03-28	01:20	01:40	03-28	7411.00	7490.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	01:40	01:45	03-28	7490.00	7490.00	Inclination (°): 5.630, Azimuth (°): 99.460, TVD (ft): 7407.14, Dogleg (°/100 ft): 0.83, Sensor Depth (ft): 7426.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	01:45	02:10	03-28	7490.00	7584.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	02:10	02:15	03-28	7584.00	7584.00	Inclination (°): 5.100, Azimuth (°): 101.660, TVD (ft): 7500.73, Dogleg (°/100 ft): 0.60, Sensor Depth (ft): 7520.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	02:15	02:35	03-28	7584.00	7679.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	02:35	02:40	03-28	7679.00	7679.00	Inclination (°): 4.310, Azimuth (°): 103.330, TVD (ft): 7595.41, Dogleg (°/100 ft): 0.84, Sensor Depth (ft): 7615.00, Bit To Sensor (ft): 64.00
Slide Drill	2	03-28	02:40	03:10	03-28	7679.00	7699.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	03-28	03:10	03:30	03-28	7699.00	7773.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	03:30	03:35	03-28	7773.00	7773.00	Inclination (°): 3.560, Azimuth (°): 103.070, TVD (ft): 7689.19, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 7709.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	03:35	03:40	03-28	7773.00	7779.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	03:40	04:05	03-28	7779.00	7809.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 45, Toolface Type: magnetic
Rotary Drill	1	03-28	04:05	04:20	03-28	7809.00	7867.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	04:20	04:25	03-28	7867.00	7867.00	Inclination (°): 3.560, Azimuth (°): 93.660, TVD (ft): 7783.01, Dogleg (°/100 ft): 0.62, Sensor Depth (ft): 7803.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	04:25	04:45	03-28	7867.00	7961.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	04:45	04:50	03-28	7961.00	7961.00	Inclination (°): 3.300, Azimuth (°): 91.910, TVD (ft): 7876.84, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 7897.00, Bit To Sensor (ft): 64.00
Slide Drill	2	03-28	04:50	05:25	03-28	7961.00	7986.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic
Rotary Drill	1	03-28	05:25	05:45	03-28	7986.00	8056.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	05:45	05:50	03-28	8056.00	8056.00	Inclination (°): 3.910, Azimuth (°): 100.610, TVD (ft): 7971.65, Dogleg (°/100 ft): 0.86, Sensor Depth (ft): 7992.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	05:50	06:15	03-28	8056.00	8150.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	06:15	06:20	03-28	8150.00	8150.00	Inclination (°): 3.820, Azimuth (°): 100.610, TVD (ft): 8065.44, Dogleg (°/100 ft): 0.10, Sensor Depth (ft): 8086.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	06:20	06:45	03-28	8150.00	8245.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	06:45	06:50	03-28	8245.00	8245.00	Inclination (°): 3.780, Azimuth (°): 105.440, TVD (ft): 8160.23, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 8181.00, Bit To Sensor (ft): 64.00

Rotary Drill	1	03-28	06:50	06:55	03-28	8245.00	8255.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	06:55	07:25	03-28	8255.00	8275.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 15, Toolface Type: magnetic
Rotary Drill	1	03-28	07:25	07:40	03-28	8275.00	8339.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	07:40	07:45	03-28	8339.00	8339.00	Inclination (°): 3.210, Azimuth (°): 103.590, TVD (ft): 8254.05, Dogleg (°/100 ft): 0.62, Sensor Depth (ft): 8275.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	07:45	08:10	03-28	8339.00	8434.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	08:10	08:15	03-28	8434.00	8434.00	Inclination (°): 3.160, Azimuth (°): 105.260, TVD (ft): 8348.91, Dogleg (°/100 ft): 0.11, Sensor Depth (ft): 8370.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	08:15	08:40	03-28	8434.00	8528.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	08:40	08:45	03-28	8528.00	8528.00	Inclination (°): 2.590, Azimuth (°): 107.810, TVD (ft): 8442.79, Dogleg (°/100 ft): 0.62, Sensor Depth (ft): 8464.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	08:45	08:50	03-28	8528.00	8538.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	08:50	09:30	03-28	8538.00	8563.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 70, Toolface Type: magnetic
Rotary Drill	1	03-28	09:30	10:10	03-28	8563.00	8622.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	10:10	10:15	03-28	8622.00	8622.00	Inclination (°): 3.080, Azimuth (°): 105.180, TVD (ft): 8536.67, Dogleg (°/100 ft): 0.54, Sensor Depth (ft): 8558.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	10:15	10:45	03-28	8622.00	8717.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	10:45	10:50	03-28	8717.00	8717.00	Inclination (°): 2.810, Azimuth (°): 105.530, TVD (ft): 8631.55, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 8653.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	10:50	11:00	03-28	8717.00	8727.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	11:00	11:50	03-28	8727.00	8757.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 75, Toolface Type: magnetic
Rotary Drill	1	03-28	11:50	12:20	03-28	8757.00	8811.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	12:20	12:25	03-28	8811.00	8811.00	Inclination (°): 3.120, Azimuth (°): 100.690, TVD (ft): 8725.42, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 8747.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	12:25	13:05	03-28	8811.00	8905.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	13:05	13:10	03-28	8905.00	8905.00	Inclination (°): 2.950, Azimuth (°): 112.030, TVD (ft): 8819.29, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 8841.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	13:10	13:20	03-28	8905.00	8915.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	13:20	15:00	03-28	8915.00	8945.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 45, Toolface Type: magnetic
Rotary Drill	1	03-28	15:00	15:20	03-28	8945.00	9000.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	15:20	15:25	03-28	9000.00	9000.00	Inclination (°): 3.210, Azimuth (°): 101.050, TVD (ft): 8914.16, Dogleg (°/100 ft): 0.68, Sensor Depth (ft): 8936.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	15:25	15:35	03-28	9000.00	9008.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	15:35	16:30	03-28	9008.00	9030.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 45, Toolface Type: magnetic
Rotary Drill	1	03-28	16:30	17:00	03-28	9030.00	9094.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	17:00	17:05	03-28	9094.00	9094.00	Inclination (°): 2.860, Azimuth (°): 87.250, TVD (ft): 9008.02, Dogleg (°/100 ft): 0.86, Sensor Depth (ft): 9030.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	17:05	17:10	03-28	9094.00	9099.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 12000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	17:10	18:40	03-28	9099.00	9129.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic
Rotary Drill	1	03-28	18:40	19:40	03-28	9129.00	9188.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2700.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 14000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	19:40	19:45	03-28	9188.00	9188.00	Inclination (°): 3.910, Azimuth (°): 84.960, TVD (ft): 9101.86, Dogleg (°/100 ft): 1.13, Sensor Depth (ft): 9124.00, Bit To Sensor (ft): 64.00

Slide Drill	2	03-28	19:45	20:15	03-28	9188.00	9218.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 100, Toolface Type: magnetic
Rotary Drill	1	03-28	20:15	20:45	03-28	9218.00	9283.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2700.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 14000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	20:45	20:50	03-28	9283.00	9283.00	Inclination (°): 4.310, Azimuth (°): 84.520, TVD (ft): 9196.61, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 9219.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	20:50	21:35	03-28	9283.00	9377.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2700.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 14000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Survey	46	03-28	21:35	21:40	03-28	9377.00	9377.00	Inclination (°): 3.380, Azimuth (°): 88.830, TVD (ft): 9290.40, Dogleg (°/100 ft): 1.04, Sensor Depth (ft): 9313.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-28	21:40	21:45	03-28	9377.00	9385.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2700.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 14000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234.00
Slide Drill	2	03-28	21:45	23:20	03-28	9385.00	9418.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic
Rotary Drill	1	03-28	23:20	00:00	03-29	9418.00	9454.00	Pressure On (psi): 2300.00, Pressure Off (psi): 1900.00, Weight On Bit (klbs): 30.00, Surface RPM: 25, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, Mar 29 00:00 - 23:59 (Day 14 of 29)

Billing: \$10,652.50 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	9454.00	Downhole Hours	22.00	Rotating WOB (klbs)	30.00 - 54.00
Bit Depth (ft)	10187.00	Drilling Hours	11.67	Sliding WOB (klbs)	30.00 - 30.00
Bottom Hole Depth (ft)	10187.00	Hours Circulating	0.75	Rotating SPM	186.00 - 228.00
Total Distance (ft)	733.00	Hours Sliding	3.33	Sliding SPM	234.00 - 234.00
Distance Rotated (ft)	674.00	Hours Rotating	8.33	Motor RPM	156.00 - 219.00
Distance Slid (ft)	59.00			Surface RPM	25.00 - 30.00
Inclination In	2.90			Flow Rate (gpm)	600.00 - 750.00
Inclination Out	1.89			On Bottom Pressure (psi)	2300.00 - 3240.00
Azimuth In	86.19	% Hours Rotating	71%	Off Bottom Pressure (psi)	1900.00 - 2800.00
Azimuth Out	90.32	% Hours Sliding	29%		
AVG Total ROP (ft/h)	62.35	% Distance Sliding	8%		
AVG Rotating ROP (ft/h)	78.89	% Distance Rotating	92%		
AVG Sliding ROP (ft/h)	17.70				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #4 - BHA #4

Date In: Mar 27, 2019, 10:00 Date Out: Mar 29, 2019, 20:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Altitude: 1.5 ° FBH 7/8 8.5 Stg. Mtr. w/ 8.25 NBS.Protracted Angle: 1.51°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8.5", Type GT65DM, SN: 13042663, Jets: 6x12's, TFA: 0.663 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13042663	Bend Angle	1.5	
Nozzles	6 X 12	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.660	Wear Pad OD (in)	7.250	
Drilling Hours for Day	11.67	Bit Distances		
Total Drilled for Day (ft)	733.00	Survey: 64.00 ft, Bend: 4.05 ft, Gamma: 50.00 ft		POOH Reason
Drilling Hours for BHA	42.42			
Total Drilled for BHA (ft)	5245.00			
				Penetration Rate: POOH do to ROP dropping to 0 while rotating

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GT65DM, Style: PDC, Gauge Length (in): 4.00, Size (in): 8.50	Halliburton	13042663	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7027SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.20	35.20
Stabilizer Description: 8.25" Stabilizer	DTI	DR14156	4 1/2" IF Box	4 1/2" IF Pin	2.688	6.750		4.21	39.41
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	41.69
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	72.04
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	100.81
Crossover Sub Description: X-Over (4 1/2 IF Pin x 4 1/2 XH Box), Type: Steel	DTI	DR33920	4 1/2" XH Box	3 1/2" IF Pin	2.875	6.750		2.82	103.63
Drill Collar Description: (18 Jts) 6.5" Drill Collars, Style: Spiral Drill, Type: Steel	Rig	RIG	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		527.40	631.03
Crossover Sub Description: X-Over (4 1/2 XH Pin x 4 1/2 IF Box), Type: Steel	DTI	DR389967	4 1/2" IF Box	4 1/2" XH Pin	2.875	6.750		4.02	635.05

HWDP Description: (30 Jts) 5" HWDP, Style: Spiral		4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		915.77	1550.82
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MWD Items									
No Items									
BHA #5 - BHA #5					Date In: Mar 29, 2019, 22:30 Date Out: Mar 30, 2019, 23:30				
Bit Details			Motor Details			Directional Comments			
OD (in)	8.500		Size (in)	7.0		7" Rubicon: 2.00 ° FBH 6/7 8.4 Stg. Mtr. Slick . Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1260 psi, Max Operating Torque: 10,560 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13192807, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1			
Vendor	Halliburton		Lobe/Stage	6/7, 8.4					
S/N	13192807		Bend Angle	2.0					
Nozzles	5x22		Speed (rev/gal)	0.30		MWD Comments			
Total Flow Area (in²)	1.856		Wear Pad OD (in)	7.625		POOH Reason Change Bottom Hole Assembly: POOH do to BHA hanging up while slide & low ROP, C/O motor & inspect bit			
Drilling Hours for Day	0.00		Bit Distances						
Total Drilled for Day (ft)			Survey: 59.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft						
Drilling Hours for BHA	7.42								
Total Drilled for BHA (ft)	250.00								

Directional Items									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13192807	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 2.00 ° FBH 6/7 8.4 Stg Mtr w/ Slick, Size (in): 7.00, Bend Angle (°): 2.00, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Rubicon	7006	4 1/2" IF Box	4 1/2" Reg Box		7.000		32.71	33.71
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	35.99
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	66.34
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	95.11
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	108.31

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	03-28	23:20	00:00	03-29	9418.00	9454.00	Pressure On (psi): 2300.00, Pressure Off (psi): 1900.00, Weight On Bit (klbs): 30.00, Surface RPM: 25, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00	
Rotary Drill	1	03-29	00:00	00:15	03-29	9454.00	9471.00	Pressure On (psi): 2300.00, Pressure Off (psi): 1900.00, Weight On Bit (klbs): 30.00, Surface RPM: 25, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00	
Survey	46	03-29	00:15	00:20	03-29	9471.00	9471.00	Inclination (°): 2.900, Azimuth (°): 86.190, TVD (ft): 9384.26, Dogleg (°/100 ft): 0.53, Sensor Depth (ft): 9407.00, Bit To Sensor (ft): 64.00	
Rotary Drill	1	03-29	00:20	02:05	03-29	9471.00	9565.00	Pressure On (psi): 2300.00, Pressure Off (psi): 1900.00, Weight On Bit (klbs): 30.00, Surface RPM: 25, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00	
Survey	46	03-29	02:05	02:10	03-29	9565.00	9565.00	Inclination (°): 2.590, Azimuth (°): 94.100, TVD (ft): 9478.15, Dogleg (°/100 ft): 0.52, Sensor Depth (ft): 9501.00, Bit To Sensor (ft): 64.00	
Slide Drill	2	03-29	02:10	04:25	03-29	9565.00	9604.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic	
Rotary Drill	1	03-29	04:25	05:05	03-29	9604.00	9660.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 14000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00	
Survey	46	03-29	05:05	05:10	03-29	9660.00	9660.00	Inclination (°): 3.080, Azimuth (°): 89.010, TVD (ft): 9573.04, Dogleg (°/100 ft): 0.58, Sensor Depth (ft): 9596.00, Bit To Sensor (ft): 64.00	
Rotary Drill	1	03-29	05:10	05:50	03-29	9660.00	9754.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00	
Survey	46	03-29	05:50	05:55	03-29	9754.00	9754.00	Inclination (°): 2.370, Azimuth (°): 68.610, TVD (ft): 9666.93, Dogleg (°/100 ft): 1.27, Sensor Depth (ft): 9690.00, Bit To Sensor (ft): 64.00	
Rotary Drill	1	03-29	05:55	06:05	03-29	9754.00	9764.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00	
Slide Drill	2	03-29	06:05	07:10	03-29	9764.00	9784.00	Pressure On (psi): 3240.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 90, Toolface Type: magnetic	
Rotary Drill	1	03-29	07:10	08:00	03-29	9784.00	9848.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00	

Survey	46	03-29	08:00	08:05	03-29	9848.00	9848.00	Inclination (°): 2.290, Azimuth (°): 65.270, TVD (ft): 9760.85, Dogleg (°/100 ft): 0.17, Sensor Depth (ft): 9784.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-29	08:05	09:10	03-29	9848.00	9942.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Survey	46	03-29	09:10	09:15	03-29	9942.00	9942.00	Inclination (°): 2.290, Azimuth (°): 72.480, TVD (ft): 9854.78, Dogleg (°/100 ft): 0.31, Sensor Depth (ft): 9878.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-29	09:15	10:10	03-29	9942.00	10036.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Survey	46	03-29	10:10	10:15	03-29	10036.00	10036.00	Inclination (°): 2.020, Azimuth (°): 81.800, TVD (ft): 9948.71, Dogleg (°/100 ft): 0.47, Sensor Depth (ft): 9972.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-29	10:15	11:30	03-29	10036.00	10130.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Rig Service - In Hole	19	03-29	11:30	12:00	03-29			Rig Service
Survey	46	03-29	12:00	12:05	03-29	10130.00	10130.00	Inclination (°): 1.890, Azimuth (°): 90.320, TVD (ft): 10042.66, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 10066.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	03-29	12:05	12:50	03-29	10130.00	10187.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Circulating	3	03-29	12:50	13:05	03-29			Circ. BTU / POOH do to ROP dropping to 0, Inspect BHA / P/U Curve Assembly
Pooh	7	03-29	13:05	20:30	03-29			POOH for Curve Assembly, L/D Drill Collars
Change BHA	6	03-29	20:30	22:30	03-29			Attempt to pull MWD Tool, Tool stuck in sleeve, Break UBHO, Knock sleeve off of MWD tool, L/D MWD Tool, C/O Motors, Scribe, Install MWD Tool
Circulating	3	03-29	22:30	22:45	03-29			Shallow Test MWD (bad test, tool not pulsing)
Other	16	03-29	22:45	23:00	03-29			Tap test tool, Re-seat MWD tool
Circulating	3	03-29	23:00	23:15	03-29			Shallow Test MWD (bad test, tool still not pulsing)
Other	16	03-29	23:15	00:15	03-30			C/O MWD Tool

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Mar 30 00:00 - 23:59 (Day 15 of 29)

Billing: \$19,550.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	10187.00	Downhole Hours	24.00	Rotating WOB (klbs)	40.00 - 54.00
Bit Depth (ft)	10437.00	Drilling Hours	7.42	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	10437.00	Hours Circulating	1.58	Rotating SPM	228.00 - 228.00
Total Distance (ft)	250.00	Hours Sliding	4.50	Sliding SPM	217.00 - 217.00
Distance Rotated (ft)	218.00	Hours Rotating	2.92	Motor RPM	144.00 - 219.00
Distance Slid (ft)	32.00			Surface RPM	30.00 - 30.00
Inclination In	1.67			Flow Rate (gpm)	700.00 - 735.00
Inclination Out	1.63			On Bottom Pressure (psi)	3200.00 - 3700.00
Azimuth In	92.43	% Hours Rotating	39%	Off Bottom Pressure (psi)	2600.00 - 3500.00
Azimuth Out	87.60	% Hours Sliding	61%		
AVG Total ROP (ft/h)	33.71	% Distance Sliding	13%		
AVG Rotating ROP (ft/h)	74.74	% Distance Rotating	87%		
AVG Sliding ROP (ft/h)	7.11				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #5 - BHA #5

Date In: Mar 29, 2019, 22:30 Date Out: Mar 30, 2019, 23:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Rubicon: 2.00 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1260 psi, Max Operating Torque: 10,560 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13192807, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	6/7, 8.4	
S/N	13192807	Bend Angle	2.0	
Nozzles	5x22	Speed (rev/gal)	0.30	
Total Flow Area (in²)	1.856	Wear Pad OD (in)	7.625	MWD Comments
Drilling Hours for Day	7.42	Bit Distances		POOH Reason Change Bottom Hole Assembly: POOH do to BHA hanging up while slide & low ROP, C/O motor & inspect bit
Total Drilled for Day (ft)	250.00	Survey: 59.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft		
Drilling Hours for BHA	7.42			
Total Drilled for BHA (ft)	250.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13192807	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 2.00° FBH 6/7 8.4 Stg Mtr w/ Slick, Size (in): 7.00, Bend Angle (°): 2.00, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Rubicon	7006	4 1/2" IF Box	4 1/2" Reg Box		7.000		32.71	33.71
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	35.99
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	66.34
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	95.11
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	108.31

MWD Items

No Items

BHA #6 - BHA #6

Date In: Mar 30, 2019, 23:30 Date Out: Apr 2, 2019, 9:00

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	6.75	6 3/4 Aim Contender : 2.00 ° FBH 7/8 5.7 Stg. Mtr. Slick Sleeve .Protracted Angle: 1.94°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .24 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13070534, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1	
Vendor	Halliburton	Lobe/Stage	7/8, 5.7		
S/N	13070534	Bend Angle	2.0		
Nozzles	5x22	Speed (rev/gal)	0.24	MWD Comments	
Total Flow Area (in²)	1.856	Wear Pad OD (in)	7.000		
Drilling Hours for Day		Bit Distances			
Total Drilled for Day (ft)		Survey: 58.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft			
Drilling Hours for BHA	39.17				
Total Drilled for BHA (ft)	2663.00				
				POOH Reason	
				Penetration Rate: Pooh due decrease in ROP / P/U Lateral motor and bit	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>Security GTD55DM</i> , Style: <i>PDC</i> , Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13070534	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: <i>Contender 2.00° FBH 7/8 5.7 Stg Mtr w/ Slick Sleeve</i> , Size (in): 6.75, Bend Angle (°): 2, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM 650-001	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.55	32.55
UBHO Sub Description: <i>UBHO Sub</i> , Type: <i>NM</i>	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	34.83
Drill Collar Description: <i>NMDC (MWD Tool)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	65.18
Drill Collar Description: <i>NMDC (Spacer)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	93.95
Drill Collar Description: <i>NM Pony Collar</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	107.15

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	03-29	23:15	00:15	03-30			C/O MWD Tool
Circulating	3	03-30	00:15	00:30	03-30			Shallow Test MWD (Good Test)
TIH	8	03-30	00:30	01:00	03-30			M/U Bit & NM Pony
TIH	8	03-30	01:00	05:30	03-30			TIH W/ BHA #4
TIH	8	03-30	05:30	09:10	03-30			TIH to 10093' MD to Re-log gamma.
Logging	11	03-30	09:10	09:30	03-30			Re-Log Gamma
Rotary Drill	1	03-30	09:30	09:40	03-30	10187.00	10201.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Survey	46	03-30	09:40	09:45	03-30	10201.00	10201.00	Inclination (°): 1.670, Azimuth (°): 92.430, TVD (ft): 10118.62, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 10142.00, Bit To Sensor (ft): 59.00
Rotary Drill	1	03-30	09:45	11:05	03-30	10201.00	10295.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 54.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Survey	46	03-30	11:05	11:10	03-30	10295.00	10295.00	Inclination (°): 1.410, Azimuth (°): 100.690, TVD (ft): 10212.59, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 10236.00, Bit To Sensor (ft): 59.00
Rotary Drill	1	03-30	11:10	11:55	03-30	10295.00	10389.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Survey	46	03-30	11:55	12:00	03-30	10389.00	10389.00	Inclination (°): 1.630, Azimuth (°): 87.600, TVD (ft): 10306.56, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 10330.00, Bit To Sensor (ft): 59.00
Slide Drill	2	03-30	12:00	13:35	03-30	10389.00	10407.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 217, Toolface: 5, Toolface Type: <i>magnetic</i>
Rotary Drill	1	03-30	13:35	13:55	03-30	10407.00	10412.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Slide Drill	2	03-30	13:55	15:45	03-30	10412.00	10420.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 217, Toolface: 5, Toolface Type: <i>magnetic</i>
Rotary Drill	1	03-30	15:45	16:05	03-30	10420.00	10431.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 735.00, Strokes Per Minute: 228.00
Slide Drill	2	03-30	16:05	17:10	03-30	10431.00	10437.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 217, Toolface: 5, Toolface Type: <i>magnetic</i>
Circulating	3	03-30	17:10	18:30	03-30			Circ. BTU, POOH do to hanging up
Pooh	7	03-30	18:30	23:30	03-30			POOH to C/O Motor & Inspect Bit
Change BHA	6	03-30	23:30	01:00	03-31			C/O BHA, Motor & Bit

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, Mar 31 00:00 - 23:59 (Day 16 of 29)

Billing: \$17,800.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	10437.00	Downhole Hours	24.00	Rotating WOB (klbs)	35.00 - 35.00
Bit Depth (ft)	11616.00	Drilling Hours	14.83	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	11616.00	Hours Circulating	0.25	Rotating SPM	186.00 - 186.00
Total Distance (ft)	1179.00	Hours Sliding	11.33	Sliding SPM	185.00 - 185.00
Distance Rotated (ft)	377.00	Hours Rotating	3.50	Motor RPM	144.00 - 156.00
Distance Slid (ft)	802.00			Surface RPM	20.00 - 30.00
Inclination In	2.59			Flow Rate (gpm)	600.00 - 600.00
Inclination Out	87.87			On Bottom Pressure (psi)	3300.00 - 3700.00
Azimuth In	76.96	% Hours Rotating	24%	Off Bottom Pressure (psi)	2800.00 - 3500.00
Azimuth Out	358.48	% Hours Sliding	76%		
AVG Total ROP (ft/h)	79.48	% Distance Sliding	68%		
AVG Rotating ROP (ft/h)	107.71	% Distance Rotating	32%		
AVG Sliding ROP (ft/h)	70.76				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Shawn Flores	MWD Engineer
Chris Carroll	MWD Engineer
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer

BHA #6 - BHA #6

Date In: Mar 30, 2019, 23:30 Date Out: Apr 2, 2019, 9:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.75	6 3/4 Aim Contender : 2.00 ° FBH 7/8 5.7 Stg. Mtr. Slick Sleeve .Protracted Angle: 1.94°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .24 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13070534, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 5.7	
S/N	13070534	Bend Angle	2.0	
Nozzles	5x22	Speed (rev/gal)	0.24	MWD Comments
Total Flow Area (in²)	1.856	Wear Pad OD (in)	7.000	
Drilling Hours for Day	14.83	Bit Distances		
Total Drilled for Day (ft)	1179.00	Survey: 58.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft		
Drilling Hours for BHA	39.17			POOH Reason
Total Drilled for BHA (ft)	2663.00			Penetration Rate: Pooh due decrease in ROP / P/U Lateral motor and bit

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13070534	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Contender 2.00 ° FBH 7/8 5.7 Stg Mtr w/ Slick Sleeve, Size (in): 6.75, Bend Angle (°): 2, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM 650-001	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.55	32.55
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	34.83
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	65.18
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	93.95
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	107.15

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	03-30	23:30	01:00	03-31			C/O BHA, Motor & Bit
Circulating	3	03-31	01:00	01:15	03-31			Shallow Test MWD

TIH	8	03-31	01:15	01:30	03-31			M/U Bit & NM Pony
TIH	8	03-31	01:30	03:15	03-31			TIH W/ BHA #6 to 4979'
Other	16	03-31	03:15	04:15	03-31			Slip & Cut Drill Line
TIH	8	03-31	04:15	07:15	03-31			Cont' TIH W/ BHA #6
Slide Drill	2	03-31	07:15	08:05	03-31	10437.00	10482.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 355, Toolface Type: magnetic
Survey	46	03-31	08:05	08:15	03-31	10483.00	10483.00	Inclination (°): 2.590, Azimuth (°): 76.960, TVD (ft): 10401.49, Dogleg (°/100 ft): 1.09, Sensor Depth (ft): 10425.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	08:15	09:40	03-31	10482.00	10577.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 350, Toolface Type: magnetic
Survey	46	03-31	09:40	09:50	03-31	10577.00	10577.00	Inclination (°): 10.460, Azimuth (°): 23.090, TVD (ft): 10494.86, Dogleg (°/100 ft): 9.76, Sensor Depth (ft): 10519.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	09:50	11:00	03-31	10577.00	10671.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 340, Toolface Type: gravity
Survey	46	03-31	11:00	11:10	03-31	10671.00	10671.00	Inclination (°): 19.250, Azimuth (°): 9.730, TVD (ft): 10585.65, Dogleg (°/100 ft): 9.98, Sensor Depth (ft): 10613.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	11:10	12:05	03-31	10671.00	10766.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 0, Toolface Type: gravity
Survey	46	03-31	12:05	12:15	03-31	10766.00	10766.00	Inclination (°): 27.120, Azimuth (°): 12.450, TVD (ft): 10672.92, Dogleg (°/100 ft): 8.36, Sensor Depth (ft): 10708.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	12:15	13:10	03-31	10766.00	10860.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 340, Toolface Type: gravity
Survey	46	03-31	13:10	13:20	03-31	10860.00	10860.00	Inclination (°): 34.070, Azimuth (°): 5.160, TVD (ft): 10753.81, Dogleg (°/100 ft): 8.37, Sensor Depth (ft): 10802.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	13:20	13:45	03-31	10860.00	10905.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 340, Toolface Type: gravity
Survey	46	03-31	13:45	13:55	03-31	10905.00	10905.00	Inclination (°): 40.350, Azimuth (°): 6.120, TVD (ft): 10789.63, Dogleg (°/100 ft): 14.01, Sensor Depth (ft): 10847.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	13:55	14:25	03-31	10905.00	10955.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 340, Toolface Type: gravity
Survey	46	03-31	14:25	14:35	03-31	10955.00	10955.00	Inclination (°): 45.760, Azimuth (°): 7.090, TVD (ft): 10826.15, Dogleg (°/100 ft): 10.90, Sensor Depth (ft): 10897.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	14:35	15:45	03-31	10955.00	11050.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 330, Toolface Type: gravity
Survey	46	03-31	15:45	15:55	03-31	11050.00	11050.00	Inclination (°): 55.740, Azimuth (°): 3.050, TVD (ft): 10886.20, Dogleg (°/100 ft): 11.01, Sensor Depth (ft): 10992.00, Bit To Sensor (ft): 58.00
Slide Drill	2	03-31	15:55	16:50	03-31	11050.00	11144.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 330, Toolface Type: gravity
Survey	46	03-31	16:50	17:00	03-31	11144.00	11144.00	Inclination (°): 68.700, Azimuth (°): 1.470, TVD (ft): 10929.92, Dogleg (°/100 ft): 13.87, Sensor Depth (ft): 11086.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	03-31	17:00	17:10	03-31	11144.00	11164.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 20, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	03-31	17:10	17:45	03-31	11164.00	11209.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 315, Toolface Type: gravity
Rotary Drill	1	03-31	17:45	18:05	03-31	11209.00	11238.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	03-31	18:05	18:10	03-31	11238.00	11238.00	Inclination (°): 81.580, Azimuth (°): 0.850, TVD (ft): 10953.97, Dogleg (°/100 ft): 13.72, Sensor Depth (ft): 11180.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	03-31	18:10	18:50	03-31	11238.00	11333.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	03-31	18:50	18:55	03-31	11333.00	11333.00	Inclination (°): 86.900, Azimuth (°): 0.240, TVD (ft): 10963.51, Dogleg (°/100 ft): 5.64, Sensor Depth (ft): 11275.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	03-31	18:55	19:00	03-31	11333.00	11343.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	03-31	19:00	20:00	03-31	11343.00	11363.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 240, Toolface Type: gravity
Rotary Drill	1	03-31	20:00	20:35	03-31	11363.00	11428.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	03-31	20:35	20:40	03-31	11428.00	11428.00	Inclination (°): 87.250, Azimuth (°): 359.620, TVD (ft): 10968.35, Dogleg (°/100 ft): 0.75, Sensor Depth (ft): 11370.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	03-31	20:40	20:50	03-31	11428.00	11439.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	03-31	20:50	21:40	03-31	11439.00	11454.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 210, Toolface Type: gravity

Rotary Drill	1	03-31	21:40	22:30	03-31	11454.00	11522.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	03-31	22:30	22:35	03-31	11522.00	11522.00	Inclination (°): 87.870, Azimuth (°): 358.480, TVD (ft): 10972.36, Dogleg (°/100 ft): 1.38, Sensor Depth (ft): 11464.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	03-31	22:35	22:45	03-31	11522.00	11532.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	03-31	22:45	23:25	03-31	11532.00	11547.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	03-31	23:25	23:55	03-31	11547.00	11616.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	03-31	23:55	00:05	04-01	11616.00	11616.00	Inclination (°): 87.080, Azimuth (°): 356.900, TVD (ft): 10976.50, Dogleg (°/100 ft): 1.88, Sensor Depth (ft): 11558.00, Bit To Sensor (ft): 58.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Apr 01 00:00 - 23:59 (Day 17 of 29)

Billing: \$7,100.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11616.00	Downhole Hours	24.00	Rotating WOB (klbs)	35.00 - 50.00
Bit Depth (ft)	12979.00	Drilling Hours	21.83	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	12979.00	Hours Circulating	0.00	Rotating SPM	186.00 - 201.00
Total Distance (ft)	1363.00	Hours Sliding	10.00	Sliding SPM	185.00 - 201.00
Distance Rotated (ft)	1195.00	Hours Rotating	11.83	Motor RPM	144.00 - 156.00
Distance Slid (ft)	168.00			Surface RPM	30.00 - 60.00
Inclination In	87.08			Flow Rate (gpm)	600.00 - 650.00
Inclination Out	92.35			On Bottom Pressure (psi)	3300.00 - 3800.00
Azimuth In	356.90	% Hours Rotating	54%	Off Bottom Pressure (psi)	2800.00 - 3400.00
Azimuth Out	359.27	% Hours Sliding	46%		
AVG Total ROP (ft/h)	63.26	% Distance Sliding	12%		
AVG Rotating ROP (ft/h)	100.67	% Distance Rotating	88%		
AVG Sliding ROP (ft/h)	16.80				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #6 - BHA #6

Date In: Mar 30, 2019, 23:30 Date Out: Apr 2, 2019, 9:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.75	6 3/4 Aim Contender : 2.00 ° FBH 7/8 5.7 Stg. Mtr. Slick Sleeve .Protracted Angle: 1.94°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .24 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13070534, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 5.7	
S/N	13070534	Bend Angle	2.0	
Nozzles	5x22	Speed (rev/gal)	0.24	MWD Comments
Total Flow Area (in²)	1.856	Wear Pad OD (in)	7.000	
Drilling Hours for Day	21.83	Bit Distances		
Total Drilled for Day (ft)	1363.00	Survey: 58.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft		
Drilling Hours for BHA	39.17			
Total Drilled for BHA (ft)	2663.00			
				POOH Reason
				Penetration Rate: Pooh due decrease in ROP / P/U Lateral motor and bit

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13070534	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Contender 2.00° FBH 7/8 5.7 Stg Mtr w/ Slick Sleeve, Size (in): 6.75, Bend Angle (°): 2, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM 650-001	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.55	32.55
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	34.83
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	65.18
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	93.95
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	107.15

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	03-31	23:55	00:05	04-01	11616.00	11616.00	Inclination (°): 87.080, Azimuth (°): 356.900, TVD (ft): 10976.50, Dogleg (°/100 ft): 1.88, Sensor Depth (ft): 11558.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	00:05	00:25	04-01	11616.00	11641.00	Pressure On (psi): 3375.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 35.00, Surface RPM: 30, Surface Torque (ft lbf): 12500.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00

Slide Drill	2	04-01	00:25	01:20	04-01	11641.00	11656.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	04-01	01:20	01:50	04-01	11656.00	11711.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	01:50	01:55	04-01	11711.00	11711.00	Inclination (°): 85.850, Azimuth (°): 358.210, TVD (ft): 10982.35, Dogleg (°/100 ft): 1.89, Sensor Depth (ft): 11653.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	01:55	02:40	04-01	11711.00	11806.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	02:40	02:45	04-01	11806.00	11806.00	Inclination (°): 85.710, Azimuth (°): 358.920, TVD (ft): 10989.34, Dogleg (°/100 ft): 0.76, Sensor Depth (ft): 11748.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	02:45	03:30	04-01	11806.00	11900.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	03:30	03:35	04-01	11900.00	11900.00	Inclination (°): 86.590, Azimuth (°): 359.620, TVD (ft): 10995.66, Dogleg (°/100 ft): 1.20, Sensor Depth (ft): 11842.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	03:35	04:20	04-01	11900.00	11995.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	04:20	04:25	04-01	11995.00	11995.00	Inclination (°): 88.400, Azimuth (°): 359.440, TVD (ft): 10999.81, Dogleg (°/100 ft): 1.91, Sensor Depth (ft): 11937.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	04:25	05:10	04-01	11995.00	12089.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	05:10	05:15	04-01	12089.00	12089.00	Inclination (°): 90.680, Azimuth (°): 359.010, TVD (ft): 11000.56, Dogleg (°/100 ft): 2.47, Sensor Depth (ft): 12031.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	05:15	05:20	04-01	12089.00	12099.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	04-01	05:20	06:05	04-01	12099.00	12119.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 200, Toolface Type: gravity
Rotary Drill	1	04-01	06:05	07:05	04-01	12119.00	12184.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	07:05	07:10	04-01	12184.00	12184.00	Inclination (°): 89.230, Azimuth (°): 358.830, TVD (ft): 11000.64, Dogleg (°/100 ft): 1.54, Sensor Depth (ft): 12126.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	07:10	08:00	04-01	12184.00	12278.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	08:00	08:05	04-01	12278.00	12278.00	Inclination (°): 90.370, Azimuth (°): 359.620, TVD (ft): 11000.97, Dogleg (°/100 ft): 1.48, Sensor Depth (ft): 12220.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	08:05	08:15	04-01	12278.00	12288.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	04-01	08:15	09:20	04-01	12288.00	12308.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	04-01	09:20	10:10	04-01	12308.00	12372.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	10:10	10:25	04-01	12372.00	12372.00	Inclination (°): 88.040, Azimuth (°): 358.570, TVD (ft): 11002.27, Dogleg (°/100 ft): 2.72, Sensor Depth (ft): 12314.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	10:25	11:10	04-01	12372.00	12466.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	11:10	11:15	04-01	12466.00	12466.00	Inclination (°): 91.120, Azimuth (°): 358.570, TVD (ft): 11002.96, Dogleg (°/100 ft): 3.28, Sensor Depth (ft): 12408.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	11:15	11:25	04-01	12466.00	12476.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Slide Drill	2	04-01	11:25	12:25	04-01	12476.00	12496.00	Pressure On (psi): 3300.00, Pressure Off (psi): 2800.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 185, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	04-01	12:25	13:15	04-01	12496.00	12560.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	13:15	13:20	04-01	12560.00	12560.00	Inclination (°): 90.290, Azimuth (°): 358.830, TVD (ft): 11001.80, Dogleg (°/100 ft): 0.93, Sensor Depth (ft): 12502.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	13:20	14:25	04-01	12560.00	12655.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 186.00
Survey	46	04-01	14:25	14:30	04-01	12655.00	12655.00	Inclination (°): 91.030, Azimuth (°): 359.360, TVD (ft): 11000.71, Dogleg (°/100 ft): 0.96, Sensor Depth (ft): 12597.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	14:30	14:40	04-01	12655.00	12665.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 50.00, Surface RPM: 60, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Slide Drill	2	04-01	14:40	15:15	04-01	12665.00	12678.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201, Toolface: 200, Toolface Type: gravity
Rotary Drill	1	04-01	15:15	15:55	04-01	12678.00	12750.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Rig Service - In Hole	19	04-01	15:55	16:25	04-01			Rig Service

Survey	46	04-01	16:25	16:30	04-01	12750.00	12750.00	Inclination (°): 92.660, Azimuth (°): 359.800, TVD (ft): 10997.65, Dogleg (°/100 ft): 1.78, Sensor Depth (ft): 12692.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	16:30	16:35	04-01	12750.00	12760.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Slide Drill	2	04-01	16:35	18:15	04-01	12760.00	12785.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	04-01	18:15	18:45	04-01	12785.00	12844.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Survey	46	04-01	18:45	18:50	04-01	12844.00	12844.00	Inclination (°): 91.870, Azimuth (°): 0.150, TVD (ft): 10993.93, Dogleg (°/100 ft): 0.92, Sensor Depth (ft): 12786.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	18:50	19:00	04-01	12844.00	12854.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Slide Drill	2	04-01	19:00	21:30	04-01	12854.00	12879.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-01	21:30	22:05	04-01	12879.00	12939.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Survey	46	04-01	22:05	22:10	04-01	12939.00	12939.00	Inclination (°): 92.350, Azimuth (°): 359.270, TVD (ft): 10990.44, Dogleg (°/100 ft): 1.05, Sensor Depth (ft): 12881.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-01	22:10	22:15	04-01	12939.00	12949.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Slide Drill	2	04-01	22:15	23:45	04-01	12949.00	12979.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	04-01	23:45	00:20	04-02	12979.00	13034.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Apr 02 00:00 - 23:59 (Day 18 of 29)

Billing: \$22,645.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	12979.00	Downhole Hours	24.00	Rotating WOB (klbs)	42.00 - 52.00
Bit Depth (ft)	13265.00	Drilling Hours	4.08	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	13265.00	Hours Circulating	1.83	Rotating SPM	201.00 - 226.00
Total Distance (ft)	286.00	Hours Sliding	1.50	Sliding SPM	201.00 - 201.00
Distance Rotated (ft)	256.00	Hours Rotating	2.58	Motor RPM	144.00 - 216.00
Distance Slid (ft)	30.00			Surface RPM	30.00 - 35.00
Inclination In	90.68			Flow Rate (gpm)	650.00 - 722.00
Inclination Out	88.31			On Bottom Pressure (psi)	3700.00 - 6200.00
Azimuth In	358.65	% Hours Rotating	63%	Off Bottom Pressure (psi)	2950.00 - 5100.00
Azimuth Out	357.77	% Hours Sliding	37%		
AVG Total ROP (ft/h)	64.23	% Distance Sliding	10%		
AVG Rotating ROP (ft/h)	79.25	% Distance Rotating	90%		
AVG Sliding ROP (ft/h)	20.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #6 - BHA #6

Date In: Mar 30, 2019, 23:30 Date Out: Apr 2, 2019, 9:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.75	6 3/4 Aim Contender : 2.00 ° FBH 7/8 5.7 Stg. Mtr. Slick Sleeve .Protracted Angle: 1.94°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .24 / Bit Data: Halliburton 8.5", Type GTD55DM, SN: 13070534, Jets: 5x22's, TFA: 1.856 Runs on Bit: 1
Vendor	Halliburton	Lobe/Stage	7/8, 5.7	
S/N	13070534	Bend Angle	2.0	
Nozzles	5x22	Speed (rev/gal)	0.24	MWD Comments
Total Flow Area (in²)	1.856	Wear Pad OD (in)	7.000	
Drilling Hours for Day	2.50	Bit Distances		
Total Drilled for Day (ft)	121.00	Survey: 58.00 ft, Bend: 4.30 ft, Gamma: 44.00 ft		
Drilling Hours for BHA	39.17			
Total Drilled for BHA (ft)	2663.00			
				POOH Reason
				Penetration Rate: Pooh due decrease in ROP / P/U Lateral motor and bit

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Security GTD55DM, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	Halliburton	13070534	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Contender 2.00° FBH 7/8 5.7 Stg Mtr w/ Slick Sleeve, Size (in): 6.75, Bend Angle (°): 2, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM 650-001	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.55	32.55
UBHO Sub Description: UBHO Sub, Type: NM	Aim	675-124NM	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.750		2.28	34.83
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	65.18
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	93.95
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	107.15

MWD Items

No Items

BHA #7 - BHA #7

Date In: Apr 2, 2019, 9:00 Date Out: Apr 3, 2019, 18:00

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Altitude : 1.75 ° FBH 7/8 8.5 Stg. Mtr. Slick .Protracted Angle: 1.73°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5295487, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1	
Vendor	Baker	Lobe/Stage	7/8, 8.5		
S/N	5295487	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.26		
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.125	MWD Comments	
Drilling Hours for Day	1.58	Bit Distances		POOH Reason Pump Pressure: POOH due to excessive stalling on motor	
Total Drilled for Day (ft)	165.00	Survey: 60.00 ft, Bend: 4.55 ft, Gamma: 45.00 ft			
Drilling Hours for BHA	9.58				
Total Drilled for BHA (ft)	469.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>Baker 8.5 DD506TWX</i> , Style: <i>PDC</i> , Gauge Length (in): <i>6.00</i> , Size (in): <i>8.50</i>	Baker	5295487	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: <i>Altitude 1.75° FBH 7/8 8.5</i> <i>Stg Mtr w/ Slick</i> , Size (in): <i>7.00</i> , Bend Angle (°): <i>1.75</i> , Rotor Lobe: <i>7</i> , Stator Lobe: <i>8</i> , Stator Stage: <i>8.5</i>	Altitude	AEP7053SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.23	35.23
UBHO Sub Description: <i>Shock Miser UBHO Sub</i> , Type: <i>NM</i>	Aim	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	38.21
Drill Collar Description: <i>NMDC (MWD Tool)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	68.56
Drill Collar Description: <i>NMDC (Spacer)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	97.33
Drill Collar Description: <i>NM Pony Collar</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	110.53
Drill Pipe Description: <i>30 Stds 5" DP</i> , Style: <i>Slick</i>			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2826.00	2936.53
Agitator Description: <i>Agitator</i> , Size (in): <i>6.50</i>	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2974.63

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	04-01	23:45	00:20	04-02	12979.00	13034.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 42.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Survey	46	04-02	00:20	00:25	04-02	13034.00	13034.00	Inclination (°): 90.680, Azimuth (°): 358.650, TVD (ft): 10987.93, Dogleg (°/100 ft): 1.88, Sensor Depth (ft): 12976.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-02	00:25	00:30	04-02	13034.00	13044.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 52.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Slide Drill	2	04-02	00:30	02:00	04-02	13044.00	13074.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-02	02:00	02:20	04-02	13074.00	13100.00	Pressure On (psi): 3700.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 52.00, Surface RPM: 35, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 201.00
Circulating	3	04-02	02:20	03:30	04-02			Circ. BTU , POOH Low ROP
Pooh	7	04-02	03:30	09:00	04-02			POOH do to low ROP, L/D Motor, Bit & UBHO sub
Change BHA	6	04-02	09:00	10:00	04-02			P/U BHA #7, M/U Bit, Scribe and Insert MWD tool
Circulating	3	04-02	10:00	10:15	04-02			Test MWD tool and Motor (Test Good)
TIH	8	04-02	10:15	20:30	04-02			TIH W/ BHA #7
Circulating	3	04-02	20:30	20:55	04-02			Relog f/13069 t/13100
Rotary Drill	1	04-02	20:55	21:40	04-02	13100.00	13170.00	Pressure On (psi): 6200.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Survey	46	04-02	21:40	21:45	04-02	13168.00	13168.00	Inclination (°): 87.160, Azimuth (°): 357.420, TVD (ft): 10990.45, Dogleg (°/100 ft): 2.78, Sensor Depth (ft): 13110.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-02	21:45	21:55	04-02	13170.00	13209.00	Pressure On (psi): 6200.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Other	16	04-02	21:55	22:50	04-02			C/O 2" Pop off on pump
Rotary Drill	1	04-02	22:50	23:30	04-02	13209.00	13265.00	Pressure On (psi): 6200.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00

Survey	46	04-02	23:30	23:35	04-02	13265.00	13265.00	Inclination (°): 88.310, Azimuth (°): 357.770, TVD (ft): 10994.21, Dogleg (°/100 ft): 1.27, Sensor Depth (ft): 13205.00, Bit To Sensor (ft): 60.00
Rotary Drill	1	04-02	23:35	01:25	04-03	13265.00	13359.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, Apr 03 00:00 - 23:59 (Day 19 of 29)

Billing: \$20,050.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	13265.00	Downhole Hours	23.50	Rotating WOB (klbs)	40.00 - 40.00
Bit Depth (ft)	13569.00	Drilling Hours	8.00	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	13569.00	Hours Circulating	0.67	Rotating SPM	226.00 - 226.00
Total Distance (ft)	304.00	Hours Sliding	1.83	Sliding SPM	224.00 - 224.00
Distance Rotated (ft)	289.00	Hours Rotating	6.17	Motor RPM	206.00 - 216.00
Distance Slid (ft)	15.00			Surface RPM	30.00 - 30.00
Inclination In	89.32			Flow Rate (gpm)	720.00 - 722.00
Inclination Out	87.87			On Bottom Pressure (psi)	4950.00 - 5900.00
Azimuth In	357.77	% Hours Rotating	77%	Off Bottom Pressure (psi)	4800.00 - 5100.00
Azimuth Out	358.39	% Hours Sliding	23%		
AVG Total ROP (ft/h)	38.00	% Distance Sliding	5%		
AVG Rotating ROP (ft/h)	46.86	% Distance Rotating	95%		
AVG Sliding ROP (ft/h)	8.18				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #7 - BHA #7

Date In: Apr 2, 2019, 9:00 Date Out: Apr 3, 2019, 18:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Altitude : 1.75 ° FBH 7/8 8.5 Stg. Mtr. Slick .Protracted Angle: 1.73°, Flow Rate 500-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5295487, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1
Vendor	Baker	Lobe/Stage	7/8, 8.5	
S/N	5295487	Bend Angle	1.75	
Nozzles	6x22	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.125	
Drilling Hours for Day	8.00	Bit Distances		
Total Drilled for Day (ft)	304.00	Survey: 60.00 ft, Bend: 4.55 ft, Gamma: 45.00 ft		
Drilling Hours for BHA	9.58			
Total Drilled for BHA (ft)	469.00			
				POOH Reason
				Pump Pressure: POOH due to excessive stalling on motor

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5295487	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Altitude 1.75 ° FBH 7/8 8.5 Stg Mtr w/ Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Altitude	AEP7053SS	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.23	35.23
UBHO Sub Description: Shock Miser UBHO Sub, Type: NM	Aim	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	38.21
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	68.56
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	97.33
Drill Collar Description: NM Pony Collar, Style: Slick Drill, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	110.53
Drill Pipe Description: 30 Stds 5" DP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2826.00	2936.53
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2974.63

MWD Items

No Items

BHA #8 - BHA #8

Date In: Apr 3, 2019, 18:30 Date Out: Apr 4, 2019, 23:00

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Contender : 1.75 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 1.76°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5290343, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1	
Vendor	Baker	Lobe/Stage	6/7, 8.4		
S/N	5290343	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.30	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.625		
Drilling Hours for Day	0.00	Bit Distances		POOH Reason Penetration Rate: Pooh due to decrease in ROP. After putting in a slide @ 50'/hr driller picked up and began rotating. Rotated the first 8-10' at 80'/hr. Rop continued decreasing over the next 10' until ROP fell to 0. Diff psi and torque acted accordingly as weight was added, Diff and Torque increased ruling out Mud Motor Failure. Pooh to change out bit.	
Total Drilled for Day (ft)		Survey: 65.00 ft, Bend: 4.55 ft, Gamma: 50.00 ft			
Drilling Hours for BHA	9.67				
Total Drilled for BHA (ft)	708.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5290343	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Contender 1.75° FBH 6/7 8.4 Stg Mtr w/ Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	700-40-026	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.00	35.00
Stabilizer Description: 8 1/4" Stabilizer	DTI	DR37942	4 1/2" IF Box	4 1/2" IF Pin	2.825	6.750		5.78	40.78
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	43.76
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	74.11
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	102.88
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	116.08
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2942.08
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2980.18

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	04-02	23:35	01:25	04-03	13265.00	13359.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Survey	46	04-03	01:25	01:30	04-03	13359.00	13359.00	Inclination (°): 89.320, Azimuth (°): 357.770, TVD (ft): 10996.15, Dogleg (°/100 ft): 1.07, Sensor Depth (ft): 13299.00, Bit To Sensor (ft): 60.00
Rotary Drill	1	04-03	01:30	01:40	04-03	13359.00	13369.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Slide Drill	2	04-03	01:40	03:30	04-03	13369.00	13384.00	Pressure On (psi): 4950.00, Pressure Off (psi): 4800.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 720.00, Strokes Per Minute: 224, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	04-03	03:30	05:00	04-03	13384.00	13454.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Survey	46	04-03	05:00	05:05	04-03	13454.00	13454.00	Inclination (°): 88.000, Azimuth (°): 358.920, TVD (ft): 10998.37, Dogleg (°/100 ft): 1.84, Sensor Depth (ft): 13394.00, Bit To Sensor (ft): 60.00
Rotary Drill	1	04-03	05:05	07:10	04-03	13454.00	13549.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Survey	46	04-03	07:10	07:15	04-03	13549.00	13549.00	Inclination (°): 87.870, Azimuth (°): 358.390, TVD (ft): 11001.79, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 13489.00, Bit To Sensor (ft): 60.00
Rotary Drill	1	04-03	07:15	07:50	04-03	13549.00	13569.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 722.00, Strokes Per Minute: 226.00
Circulating	3	04-03	07:50	08:00	04-03			Circulating waiting on call to POOH due to excessive stalling
Pooh	7	04-03	08:00	17:00	04-03			POOH due to excessive stalling on Motor
Change BHA	6	04-03	17:00	18:30	04-03			C/O BHA, Bit & Motor add 8 1/4 Stabilizer

Circulating	3	04-03	18:30	18:45	04-03			Shallow Test Tool (Good)
Other	16	04-03	18:45	19:45	04-03			W/O ST80
TIH	8	04-03	19:45	21:15	04-03			TIH W/ BHA #8 to 3100'
Circulating	3	04-03	21:15	21:30	04-03			P/U & Test Agitator
TIH	8	04-03	21:30	05:00	04-04			TIH W/ BHA #8 , Wash & Ream as needed f/10937 t/13569

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Thursday, Apr 04 00:00 - 23:59 (Day 20 of 29)

Billing: \$24,350.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	13569.00	Downhole Hours	23.50	Rotating WOB (klbs)	48.00 - 48.00
Bit Depth (ft)	14277.00	Drilling Hours	9.67	Sliding WOB (klbs)	30.00 - 35.00
Bottom Hole Depth (ft)	14277.00	Hours Circulating	0.50	Rotating SPM	215.00 - 215.00
Total Distance (ft)	708.00	Hours Sliding	1.50	Sliding SPM	212.00 - 216.00
Distance Rotated (ft)	668.00	Hours Rotating	8.17	Motor RPM	150.00 - 210.00
Distance Slid (ft)	40.00			Surface RPM	35.00 - 35.00
Inclination In	89.58			Flow Rate (gpm)	685.00 - 700.00
Inclination Out	92.79			On Bottom Pressure (psi)	5300.00 - 5800.00
Azimuth In	358.13	% Hours Rotating	84%	Off Bottom Pressure (psi)	4900.00 - 5200.00
Azimuth Out	359.97	% Hours Sliding	16%		
AVG Total ROP (ft/h)	73.24	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	81.80	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	26.67				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #8 - BHA #8

Date In: Apr 3, 2019, 18:30 Date Out: Apr 4, 2019, 23:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Contender : 1.75 ° FBH 6/7 8.4 Stg. Mtr. Slick .Protracted Angle: 1.76° , Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5290343, Jets: 6x22's, TFA: 2.227 Runs on Bit: 1
Vendor	Baker	Lobe/Stage	6/7, 8.4	
S/N	5290343	Bend Angle	1.75	
Nozzles	6x22	Speed (rev/gal)	0.30	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.625	MWD Comments
Drilling Hours for Day	9.67	Bit Distances		
Total Drilled for Day (ft)	708.00	Survey: 65.00 ft, Bend: 4.55 ft, Gamma: 50.00 ft		
Drilling Hours for BHA	9.67	POOH Reason		
Total Drilled for BHA (ft)	708.00	Penetration Rate: Pooh due to decrease in ROP. After putting in a slide @ 50'/hr driller picked up and began		

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5290343	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Contender 1.75 ° FBH 6/7 8.4 Stg Mtr w/ Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	700-40-026	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.00	35.00
Stabilizer Description: 8 1/4" Stabilizer	DTI	DR37942	4 1/2" IF Box	4 1/2" IF Pin	2.825	6.750		5.78	40.78
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	43.76
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	74.11
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	102.88
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	116.08
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2942.08
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2980.18

MWD Items

No Items

BHA #9 - BHA #9

Date In: Apr 4, 2019, 23:30 Date Out: Apr 9, 2019, 18:15

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77 °, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2	
Vendor	Baker	Lobe/Stage	7/8, 6.9		
S/N	5293281	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.25	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	POOH Reason Total Depth/Casing Point: Total Depth	
Drilling Hours for Day	0.00	Bit Distances			
Total Drilled for Day (ft)		Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft			
Drilling Hours for BHA	77.50				
Total Drilled for BHA (ft)	4872.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>Baker 8.5 DD506TWX</i> , Style: <i>PDC</i> , Gauge Length (in): <i>6.00</i> , Size (in): <i>8.50</i>	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: <i>Crescent 1.75 ° FBH 7/8</i> <i>6.9 Stg Mtr w/ True Slick</i> , Size (in): <i>7.00</i> , Bend Angle (°): <i>1.75</i> , Rotor Lobe: <i>7</i> , Stator Lobe: <i>8</i> , Stator Stage: <i>6.9</i>	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: <i>Gordan UBHO</i> , Type: <i>NM</i>	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: <i>NMDC (MWD Tool)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: <i>NMDC (Spacer)</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: <i>NM Pony</i> , Style: <i>Pony</i> , Type: <i>NM</i>	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: <i>(30 Stds)5" Drill Pipe</i> , Style: <i>Slick</i>			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: <i>Agitator</i> , Size (in): <i>6.50</i>	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
TIH	8	04-03	21:30	05:00	04-04			TIH W/ BHA #8 , Wash & Ream as needed f/10937 t/13569
Slide Drill	2	04-04	05:00	06:00	04-04	13569.00	13584.00	Pressure On (psi): <i>5300.00</i> , Pressure Off (psi): <i>5000.00</i> , Weight On Bit (klbs): <i>30.00</i> , Flow Rate (gpm): <i>700.00</i> , Strokes Per Minute: <i>216</i> , Toolface: <i>30</i> , Toolface Type: <i>gravity</i>
Rotary Drill	1	04-04	06:00	07:15	04-04	13584.00	13649.00	
Survey	46	04-04	07:15	07:20	04-04	13649.00	13649.00	Inclination (°): <i>89.580</i> , Azimuth (°): <i>358.130</i> , TVD (ft): <i>11003.91</i> , Dogleg (°/100 ft): <i>1.82</i> , Sensor Depth (ft): <i>13584.00</i> , Bit To Sensor (ft): <i>65.00</i>
Rotary Drill	1	04-04	07:20	08:25	04-04	13649.00	13744.00	Pressure On (psi): <i>5800.00</i> , Pressure Off (psi): <i>4900.00</i> , Weight On Bit (klbs): <i>48.00</i> , Surface RPM: <i>35</i> , Surface Torque (ft lbf): <i>25000.00</i> , Flow Rate (gpm): <i>700.00</i> , Strokes Per Minute: <i>215.00</i>
Survey	46	04-04	08:25	08:30	04-04	13744.00	13744.00	Inclination (°): <i>90.200</i> , Azimuth (°): <i>358.390</i> , TVD (ft): <i>11004.09</i> , Dogleg (°/100 ft): <i>0.71</i> , Sensor Depth (ft): <i>13679.00</i> , Bit To Sensor (ft): <i>65.00</i>
Rotary Drill	1	04-04	08:30	09:20	04-04	13744.00	13838.00	Pressure On (psi): <i>5800.00</i> , Pressure Off (psi): <i>4900.00</i> , Weight On Bit (klbs): <i>48.00</i> , Surface RPM: <i>35</i> , Surface Torque (ft lbf): <i>25000.00</i> , Flow Rate (gpm): <i>700.00</i> , Strokes Per Minute: <i>215.00</i>
Survey	46	04-04	09:20	09:25	04-04	13838.00	13838.00	Inclination (°): <i>90.640</i> , Azimuth (°): <i>358.390</i> , TVD (ft): <i>11003.40</i> , Dogleg (°/100 ft): <i>0.47</i> , Sensor Depth (ft): <i>13773.00</i> , Bit To Sensor (ft): <i>65.00</i>
Rotary Drill	1	04-04	09:25	10:15	04-04	13838.00	13933.00	Pressure On (psi): <i>5800.00</i> , Pressure Off (psi): <i>4900.00</i> , Weight On Bit (klbs): <i>48.00</i> , Surface RPM: <i>35</i> , Surface Torque (ft lbf): <i>25000.00</i> , Flow Rate (gpm): <i>700.00</i> , Strokes Per Minute: <i>215.00</i>
Survey	46	04-04	10:15	10:20	04-04	13933.00	13933.00	Inclination (°): <i>91.080</i> , Azimuth (°): <i>358.740</i> , TVD (ft): <i>11001.98</i> , Dogleg (°/100 ft): <i>0.59</i> , Sensor Depth (ft): <i>13868.00</i> , Bit To Sensor (ft): <i>65.00</i>
Rotary Drill	1	04-04	10:20	10:55	04-04	13933.00	14027.00	Pressure On (psi): <i>5800.00</i> , Pressure Off (psi): <i>4900.00</i> , Weight On Bit (klbs): <i>48.00</i> , Surface RPM: <i>35</i> , Surface Torque (ft lbf): <i>25000.00</i> , Flow Rate (gpm): <i>700.00</i> , Strokes Per Minute: <i>215.00</i>
Survey	46	04-04	10:55	11:05	04-04	14027.00	14027.00	Inclination (°): <i>91.120</i> , Azimuth (°): <i>359.010</i> , TVD (ft): <i>11000.17</i> , Dogleg (°/100 ft): <i>0.29</i> , Sensor Depth (ft): <i>13962.00</i> , Bit To Sensor (ft): <i>65.00</i>
Rotary Drill	1	04-04	11:05	11:40	04-04	14027.00	14122.00	Pressure On (psi): <i>5800.00</i> , Pressure Off (psi): <i>4900.00</i> , Weight On Bit (klbs): <i>48.00</i> , Surface RPM: <i>35</i> , Surface Torque (ft lbf): <i>25000.00</i> , Flow Rate (gpm): <i>700.00</i> , Strokes Per Minute: <i>215.00</i>

Survey	46	04-04	11:40	11:45	04-04	14122.00	14122.00	Inclination (°): 91.470, Azimuth (°): 359.270, TVD (ft): 10998.02, Dogleg (°/100 ft): 0.46, Sensor Depth (ft): 14057.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	04-04	11:45	12:50	04-04	14122.00	14217.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 215.00
Survey	46	04-04	12:50	13:05	04-04	14217.00	14217.00	Inclination (°): 92.790, Azimuth (°): 359.970, TVD (ft): 10994.49, Dogleg (°/100 ft): 1.57, Sensor Depth (ft): 14152.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	04-04	13:05	13:10	04-04	14217.00	14232.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 215.00
Slide Drill	2	04-04	13:10	13:40	04-04	14232.00	14257.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-04	13:40	15:30	04-04	14257.00	14277.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 215.00
Circulating	3	04-04	15:30	16:00	04-04			Circ. , Pump Slug
Pooh	7	04-04	16:00	22:30	04-04			POOH to C/O BHA do to Low ROP
Change BHA	6	04-04	22:30	23:30	04-04			C/O BHA , Motor & Bit , L/D Stab.
Other	16	04-04	23:30	00:00	04-05			Clean Rig Floor

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, Apr 05 00:00 - 23:59 (Day 21 of 29)

Billing: \$8,600.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	14277.00	Downhole Hours	24.00	Rotating WOB (klbs)	48.00 - 48.00
Bit Depth (ft)	15155.00	Drilling Hours	12.33	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	15155.00	Hours Circulating	0.00	Rotating SPM	210.00 - 210.00
Total Distance (ft)	878.00	Hours Sliding	4.00	Sliding SPM	212.00 - 212.00
Distance Rotated (ft)	766.00	Hours Rotating	8.33	Motor RPM	150.00 - 175.00
Distance Slid (ft)	112.00			Surface RPM	35.00 - 35.00
Inclination In	90.77			Flow Rate (gpm)	675.00 - 685.00
Inclination Out	91.87			On Bottom Pressure (psi)	5150.00 - 5800.00
Azimuth In	0.24	% Hours Rotating	68%	Off Bottom Pressure (psi)	4900.00 - 4900.00
Azimuth Out	359.01	% Hours Sliding	32%		
AVG Total ROP (ft/h)	71.19	% Distance Sliding	13%		
AVG Rotating ROP (ft/h)	91.92	% Distance Rotating	87%		
AVG Sliding ROP (ft/h)	28.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #9 - BHA #9

Date In: Apr 4, 2019, 23:30 Date Out: Apr 9, 2019, 18:15

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77°, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2	
Vendor	Baker	Lobe/Stage	7/8, 6.9		
S/N	5293281	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.25		
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	MWD Comments	
Drilling Hours for Day	12.33	Bit Distances		POOH Reason Total Depth/Casing Point: Total Depth	
Total Drilled for Day (ft)	878.00	Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft			
Drilling Hours for BHA	77.50				
Total Drilled for BHA (ft)	4872.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Crescent 1.75 ° FBH 7/8 6.9 Stg Mtr w/ True Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 6.9	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45

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	04-04	23:30	00:00	04-05			Clean Rig Floor

Rig Service - Out Hole	20	04-05	00:00	00:30	04-05			Rig Service
TIH	8	04-05	00:30	10:45	04-05			TIH W/ BHA #9
Rotary Drill	1	04-05	10:45	11:05	04-05	14277.00	14305.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	11:05	11:10	04-05	14305.00	14305.00	Inclination (°): 90.770, Azimuth (°): 0.240, TVD (ft): 10991.54, Dogleg (°/100 ft): 2.15, Sensor Depth (ft): 14247.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	11:10	12:00	04-05	14305.00	14400.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	12:00	12:05	04-05	14400.00	14400.00	Inclination (°): 90.200, Azimuth (°): 359.970, TVD (ft): 10990.74, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 14342.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	12:05	12:45	04-05	14400.00	14494.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	12:45	12:50	04-05	14494.00	14494.00	Inclination (°): 91.380, Azimuth (°): 359.710, TVD (ft): 10989.44, Dogleg (°/100 ft): 1.29, Sensor Depth (ft): 14436.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	12:50	13:00	04-05	14494.00	14504.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-05	13:00	13:30	04-05	14504.00	14519.00	Pressure On (psi): 5150.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-05	13:30	14:15	04-05	14519.00	14589.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	14:15	14:20	04-05	14589.00	14589.00	Inclination (°): 90.990, Azimuth (°): 359.620, TVD (ft): 10987.48, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 14531.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	14:20	14:25	04-05	14589.00	14599.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-05	14:25	15:00	04-05	14599.00	14614.00	Pressure On (psi): 5150.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-05	15:00	15:30	04-05	14614.00	14683.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	15:30	15:35	04-05	14683.00	14683.00	Inclination (°): 89.930, Azimuth (°): 358.830, TVD (ft): 10986.72, Dogleg (°/100 ft): 1.41, Sensor Depth (ft): 14625.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	15:35	15:55	04-05	14683.00	14707.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-05	15:55	16:25	04-05	14707.00	14725.00	Pressure On (psi): 5150.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-05	16:25	16:50	04-05	14725.00	14778.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	16:50	17:00	04-05	14778.00	14778.00	Inclination (°): 89.630, Azimuth (°): 359.530, TVD (ft): 10987.09, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 14720.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	17:00	17:15	04-05	14778.00	14788.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-05	17:15	17:45	04-05	14788.00	14808.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-05	17:45	18:25	04-05	14808.00	14872.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	18:25	18:30	04-05	14872.00	14872.00	Inclination (°): 86.460, Azimuth (°): 358.650, TVD (ft): 10990.29, Dogleg (°/100 ft): 3.50, Sensor Depth (ft): 14814.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	18:30	18:40	04-05	14872.00	14877.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-05	18:40	19:30	04-05	14877.00	14894.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 30, Toolface Type: gravity
Rotary Drill	1	04-05	19:30	20:20	04-05	14894.00	14966.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	20:20	20:25	04-05	14966.00	14966.00	Inclination (°): 88.660, Azimuth (°): 359.180, TVD (ft): 10994.30, Dogleg (°/100 ft): 2.41, Sensor Depth (ft): 14908.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	20:25	20:35	04-05	14966.00	14977.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-05	20:35	21:10	04-05	14977.00	14992.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	04-05	21:10	21:55	04-05	14992.00	15061.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	21:55	22:00	04-05	15061.00	15061.00	Inclination (°): 91.690, Azimuth (°): 358.040, TVD (ft): 10994.01, Dogleg (°/100 ft): 3.41, Sensor Depth (ft): 15003.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-05	22:00	22:10	04-05	15061.00	15071.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00

Slide Drill	2	04-05	22:10	22:40	04-05	15071.00	15083.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 140, Toolface Type: gravity
Rotary Drill	1	04-05	22:40	23:55	04-05	15083.00	15155.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-05	23:55	00:00	04-06	15155.00	15155.00	Inclination (°): 91.870, Azimuth (°): 359.010, TVD (ft): 10991.09, Dogleg (°/100 ft): 1.05, Sensor Depth (ft): 15097.00, Bit To Sensor (ft): 58.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Apr 06 00:00 - 23:59 (Day 22 of 29)

Billing: \$8,600.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	15155.00	Downhole Hours	24.00	Rotating WOB (klbs)	48.00 - 50.00
Bit Depth (ft)	16601.00	Drilling Hours	21.83	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	16601.00	Hours Circulating	0.67	Rotating SPM	210.00 - 216.00
Total Distance (ft)	1446.00	Hours Sliding	7.83	Sliding SPM	212.00 - 216.00
Distance Rotated (ft)	1263.00	Hours Rotating	14.00	Motor RPM	150.00 - 175.00
Distance Slid (ft)	183.00			Surface RPM	35.00 - 35.00
Inclination In	90.55			Flow Rate (gpm)	675.00 - 700.00
Inclination Out	90.07			On Bottom Pressure (psi)	5230.00 - 5800.00
Azimuth In	0.94	% Hours Rotating	64%	Off Bottom Pressure (psi)	4900.00 - 5200.00
Azimuth Out	359.36	% Hours Sliding	36%		
AVG Total ROP (ft/h)	66.37	% Distance Sliding	13%		
AVG Rotating ROP (ft/h)	88.96	% Distance Rotating	87%		
AVG Sliding ROP (ft/h)	23.36				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #9 - BHA #9

Date In: Apr 4, 2019, 23:30 Date Out: Apr 9, 2019, 18:15

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77 °, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19.010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2
Vendor	Baker	Lobe/Stage	7/8, 6.9	
S/N	5293281	Bend Angle	1.75	
Nozzles	6x22	Speed (rev/gal)	0.25	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	
Drilling Hours for Day	21.83	Bit Distances		
Total Drilled for Day (ft)	1446.00	Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft		
Drilling Hours for BHA	77.50	POOH Reason		
Total Drilled for BHA (ft)	4872.00			
				Total Depth/Casing Point: Total Depth

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Crescent 1.75 ° FBH 7/8 6.9 Stg Mtr w/ True Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 6.9	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Survey	46	04-05	23:55	00:00	04-06	15155.00	15155.00	Inclination (°): 91.870, Azimuth (°): 359.010, TVD (ft): 10991.09, Dogleg (°/100 ft): 1.05, Sensor Depth (ft): 15097.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	00:00	00:10	04-06	15155.00	15165.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	00:10	01:00	04-06	15165.00	15185.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 170, Toolface Type: gravity
Rotary Drill	1	04-06	01:00	01:35	04-06	15185.00	15249.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	01:35	01:40	04-06	15249.00	15249.00	Inclination (°): 90.550, Azimuth (°): 0.940, TVD (ft): 10989.10, Dogleg (°/100 ft): 2.49, Sensor Depth (ft): 15191.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	01:40	02:35	04-06	15249.00	15343.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	02:35	02:40	04-06	15343.00	15343.00	Inclination (°): 91.380, Azimuth (°): 0.940, TVD (ft): 10987.52, Dogleg (°/100 ft): 0.88, Sensor Depth (ft): 15285.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	02:40	02:55	04-06	15343.00	15374.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	02:55	03:15	04-06	15374.00	15384.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	03:15	03:50	04-06	15384.00	15438.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	03:50	03:55	04-06	15438.00	15438.00	Inclination (°): 91.340, Azimuth (°): 0.590, TVD (ft): 10985.26, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 15380.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	03:55	04:00	04-06	15438.00	15448.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	04:00	05:00	04-06	15448.00	15468.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	05:00	05:40	04-06	15468.00	15532.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	05:40	05:45	04-06	15532.00	15532.00	Inclination (°): 88.180, Azimuth (°): 0.940, TVD (ft): 10985.66, Dogleg (°/100 ft): 3.38, Sensor Depth (ft): 15474.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	05:45	07:10	04-06	15532.00	15627.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	07:10	07:15	04-06	15627.00	15627.00	Inclination (°): 88.660, Azimuth (°): 0.500, TVD (ft): 10988.28, Dogleg (°/100 ft): 0.69, Sensor Depth (ft): 15569.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	07:15	07:30	04-06	15627.00	15648.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	07:30	07:50	04-06	15648.00	15655.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 350, Toolface Type: gravity
Rotary Drill	1	04-06	07:50	08:35	04-06	15655.00	15721.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	08:35	08:40	04-06	15721.00	15721.00	Inclination (°): 90.150, Azimuth (°): 359.710, TVD (ft): 10989.25, Dogleg (°/100 ft): 1.79, Sensor Depth (ft): 15663.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	08:40	09:55	04-06	15721.00	15815.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	09:55	10:00	04-06	15815.00	15815.00	Inclination (°): 91.780, Azimuth (°): 359.360, TVD (ft): 10987.67, Dogleg (°/100 ft): 1.77, Sensor Depth (ft): 15757.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	10:00	10:10	04-06	15815.00	15830.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Circulating	3	04-06	10:10	10:50	04-06			Circulate on 1 pump while working on the other 2 pumps
Slide Drill	2	04-06	10:50	11:35	04-06	15830.00	15850.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	11:35	12:20	04-06	15850.00	15910.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	12:20	12:25	04-06	15910.00	15910.00	Inclination (°): 91.520, Azimuth (°): 359.440, TVD (ft): 10984.93, Dogleg (°/100 ft): 0.29, Sensor Depth (ft): 15852.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	12:25	12:35	04-06	15910.00	15920.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	12:35	13:25	04-06	15920.00	15937.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	13:25	14:10	04-06	15937.00	16004.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00

Survey	46	04-06	14:10	14:25	04-06	16004.00	16004.00	Inclination (°): 90.680, Azimuth (°): 358.920, TVD (ft): 10983.13, Dogleg (°/100 ft): 1.05, Sensor Depth (ft): 15946.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	14:25	15:15	04-06	16004.00	16099.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	15:15	15:20	04-06	16099.00	16099.00	Inclination (°): 91.650, Azimuth (°): 358.650, TVD (ft): 10981.20, Dogleg (°/100 ft): 1.06, Sensor Depth (ft): 16041.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	15:20	15:25	04-06	16099.00	16109.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	15:25	16:30	04-06	16109.00	16134.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	16:30	17:05	04-06	16134.00	16193.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	17:05	17:10	04-06	16193.00	16193.00	Inclination (°): 90.510, Azimuth (°): 359.530, TVD (ft): 10979.43, Dogleg (°/100 ft): 1.53, Sensor Depth (ft): 16135.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	17:10	17:20	04-06	16193.00	16204.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	17:20	18:00	04-06	16204.00	16218.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	18:00	18:35	04-06	16218.00	16287.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	04-06	18:35	18:40	04-06	16287.00	16287.00	Inclination (°): 89.710, Azimuth (°): 0.850, TVD (ft): 10979.24, Dogleg (°/100 ft): 1.64, Sensor Depth (ft): 16229.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	18:40	18:50	04-06	16287.00	16300.00	Pressure On (psi): 5800.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 48.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	04-06	18:50	19:30	04-06	16300.00	16315.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	19:30	20:10	04-06	16315.00	16382.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-06	20:10	20:15	04-06	16382.00	16382.00	Inclination (°): 89.190, Azimuth (°): 0.060, TVD (ft): 10980.16, Dogleg (°/100 ft): 1.00, Sensor Depth (ft): 16324.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	20:15	21:15	04-06	16382.00	16476.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-06	21:15	21:20	04-06	16476.00	16476.00	Inclination (°): 90.330, Azimuth (°): 359.180, TVD (ft): 10980.55, Dogleg (°/100 ft): 1.53, Sensor Depth (ft): 16418.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	21:20	21:30	04-06	16476.00	16486.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-06	21:30	22:05	04-06	16486.00	16501.00	Pressure On (psi): 5230.00, Pressure Off (psi): 4900.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 685.00, Strokes Per Minute: 212, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	22:05	22:55	04-06	16501.00	16570.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-06	22:55	23:00	04-06	16570.00	16570.00	Inclination (°): 90.070, Azimuth (°): 359.360, TVD (ft): 10980.22, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 16512.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-06	23:00	23:10	04-06	16570.00	16581.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-06	23:10	23:55	04-06	16581.00	16601.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-06	23:55	00:50	04-07	16601.00	16665.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, Apr 07 00:00 - 23:59 (Day 23 of 29)

Billing: \$8,600.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	16601.00	Downhole Hours	24.00	Rotating WOB (klbs)	50.00 - 54.00
Bit Depth (ft)	17713.00	Drilling Hours	20.17	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	17713.00	Hours Circulating	0.00	Rotating SPM	216.00 - 216.00
Total Distance (ft)	1112.00	Hours Sliding	7.33	Sliding SPM	216.00 - 216.00
Distance Rotated (ft)	958.00	Hours Rotating	12.83	Motor RPM	150.00 - 175.00
Distance Slid (ft)	154.00			Surface RPM	35.00 - 35.00
Inclination In	89.19			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	90.59			On Bottom Pressure (psi)	5400.00 - 5800.00
Azimuth In	359.88	% Hours Rotating	64%	Off Bottom Pressure (psi)	5200.00 - 5200.00
Azimuth Out	358.92	% Hours Sliding	36%		
AVG Total ROP (ft/h)	53.57	% Distance Sliding	14%		
AVG Rotating ROP (ft/h)	74.65	% Distance Rotating	86%		
AVG Sliding ROP (ft/h)	21.12				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #9 - BHA #9

Date In: Apr 4, 2019, 23:30 Date Out: Apr 9, 2019, 18:15

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77 °, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2	
Vendor	Baker	Lobe/Stage	7/8, 6.9		
S/N	5293281	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.25	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250		
Drilling Hours for Day	20.17	Bit Distances			
Total Drilled for Day (ft)	1112.00	Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft			
Drilling Hours for BHA	77.50				
Total Drilled for BHA (ft)	4872.00			POOH Reason	
				Total Depth/Casing Point: Total Depth	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Crescent 1.75 ° FBH 7/8 6.9 Stg Mtr w/ True Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 6.9	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Rotary Drill	1	04-06	23:55	00:50	04-07	16601.00	16665.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	00:50	00:55	04-07	16665.00	16665.00	Inclination (°): 89.190, Azimuth (°): 359.880, TVD (ft): 10980.84, Dogleg (°/100 ft): 1.08, Sensor Depth (ft): 16607.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	00:55	02:00	04-07	16665.00	16759.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	02:00	02:05	04-07	16759.00	16759.00	Inclination (°): 90.590, Azimuth (°): 359.800, TVD (ft): 10981.02, Dogleg (°/100 ft): 1.49, Sensor Depth (ft): 16701.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	02:05	02:15	04-07	16759.00	16769.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-07	02:15	03:10	04-07	16769.00	16789.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-07	03:10	03:55	04-07	16789.00	16854.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	03:55	04:00	04-07	16854.00	16854.00	Inclination (°): 90.020, Azimuth (°): 359.270, TVD (ft): 10980.51, Dogleg (°/100 ft): 0.82, Sensor Depth (ft): 16796.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	04:00	04:10	04-07	16854.00	16864.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-07	04:10	05:00	04-07	16864.00	16880.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-07	05:00	05:55	04-07	16880.00	16948.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	05:55	06:00	04-07	16948.00	16948.00	Inclination (°): 89.270, Azimuth (°): 359.090, TVD (ft): 10981.09, Dogleg (°/100 ft): 0.82, Sensor Depth (ft): 16890.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	06:00	06:55	04-07	16948.00	17042.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	06:55	07:00	04-07	17042.00	17042.00	Inclination (°): 90.150, Azimuth (°): 358.830, TVD (ft): 10981.57, Dogleg (°/100 ft): 0.98, Sensor Depth (ft): 16984.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	07:00	08:15	04-07	17042.00	17137.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	08:15	08:20	04-07	17137.00	17137.00	Inclination (°): 92.090, Azimuth (°): 357.950, TVD (ft): 10979.71, Dogleg (°/100 ft): 2.24, Sensor Depth (ft): 17079.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	08:20	08:35	04-07	17137.00	17153.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-07	08:35	09:45	04-07	17153.00	17178.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 150, Toolface Type: gravity
Rotary Drill	1	04-07	09:45	10:30	04-07	17178.00	17231.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	10:30	10:35	04-07	17231.00	17231.00	Inclination (°): 91.820, Azimuth (°): 358.390, TVD (ft): 10976.51, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 17173.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	10:35	10:45	04-07	17231.00	17241.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Rig Repair	14	04-07	10:45	11:20	04-07			Work on Generators
Slide Drill	2	04-07	11:20	12:40	04-07	17241.00	17269.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 150, Toolface Type: gravity
Rotary Drill	1	04-07	12:40	13:05	04-07	17269.00	17297.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Rig Repair	14	04-07	13:05	14:30	04-07			C/O Swivel Packing
Rotary Drill	1	04-07	14:30	15:00	04-07	17297.00	17326.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	15:00	15:05	04-07	17326.00	17326.00	Inclination (°): 90.640, Azimuth (°): 358.830, TVD (ft): 10974.47, Dogleg (°/100 ft): 1.33, Sensor Depth (ft): 17268.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	15:05	15:15	04-07	17326.00	17336.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-07	15:15	16:20	04-07	17336.00	17366.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	04-07	16:20	16:35	04-07	17366.00	17379.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Rig Repair	14	04-07	16:35	16:45	04-07			W/O Generators
Rotary Drill	1	04-07	16:45	17:20	04-07	17379.00	17420.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	17:20	17:25	04-07	17420.00	17420.00	Inclination (°): 89.050, Azimuth (°): 358.130, TVD (ft): 10974.72, Dogleg (°/100 ft): 1.85, Sensor Depth (ft): 17362.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	17:25	17:40	04-07	17420.00	17432.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00

Slide Drill	2	04-07	17:40	18:30	04-07	17432.00	17447.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 140, Toolface Type: gravity
Rotary Drill	1	04-07	18:30	19:20	04-07	17447.00	17514.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	19:20	19:25	04-07	17514.00	17514.00	Inclination (°): 88.000, Azimuth (°): 358.920, TVD (ft): 10977.14, Dogleg (°/100 ft): 1.40, Sensor Depth (ft): 17456.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	19:25	20:35	04-07	17514.00	17609.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	20:35	20:40	04-07	17609.00	17609.00	Inclination (°): 89.140, Azimuth (°): 358.300, TVD (ft): 10979.51, Dogleg (°/100 ft): 1.37, Sensor Depth (ft): 17551.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	20:40	20:50	04-07	17609.00	17623.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-07	20:50	22:00	04-07	17623.00	17643.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	04-07	22:00	23:00	04-07	17643.00	17703.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 50.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-07	23:00	23:05	04-07	17703.00	17703.00	Inclination (°): 90.590, Azimuth (°): 358.920, TVD (ft): 10979.73, Dogleg (°/100 ft): 1.68, Sensor Depth (ft): 17645.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-07	23:05	23:15	04-07	17703.00	17713.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-07	23:15	00:15	04-08	17713.00	17735.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 135, Toolface Type: gravity

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Apr 08 00:00 - 23:59 (Day 24 of 29)

Billing: \$8,600.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	17713.00	Downhole Hours	24.00	Rotating WOB (klbs)	54.00 - 54.00
Bit Depth (ft)	19049.00	Drilling Hours	21.67	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	19049.00	Hours Circulating	0.00	Rotating SPM	216.00 - 216.00
Total Distance (ft)	1336.00	Hours Sliding	6.67	Sliding SPM	216.00 - 216.00
Distance Rotated (ft)	1194.00	Hours Rotating	15.00	Motor RPM	150.00 - 175.00
Distance Slid (ft)	142.00			Surface RPM	35.00 - 35.00
Inclination In	90.07			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	93.23			On Bottom Pressure (psi)	5400.00 - 5800.00
Azimuth In	2.08	% Hours Rotating	69%	Off Bottom Pressure (psi)	5200.00 - 5200.00
Azimuth Out	359.36	% Hours Sliding	31%		
AVG Total ROP (ft/h)	61.66	% Distance Sliding	11%		
AVG Rotating ROP (ft/h)	79.60	% Distance Rotating	89%		
AVG Sliding ROP (ft/h)	21.30				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #9 - BHA #9

Date In: Apr 4, 2019, 23:30 Date Out: Apr 9, 2019, 18:15

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77 °, Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2	
Vendor	Baker	Lobe/Stage	7/8, 6.9		
S/N	5293281	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.25	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250		
Drilling Hours for Day	21.67	Bit Distances			
Total Drilled for Day (ft)	1336.00	Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft			
Drilling Hours for BHA	77.50				
Total Drilled for BHA (ft)	4872.00			POOH Reason	
				Total Depth/Casing Point: Total Depth	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Crescent 1.75 ° FBH 7/8 6.9 Stg Mtr w/ True Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 6.9	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Slide Drill	2	04-07	23:15	00:15	04-08	17713.00	17735.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 135, Toolface Type: gravity
Rotary Drill	1	04-08	00:15	00:55	04-08	17735.00	17797.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	00:55	01:00	04-08	17797.00	17797.00	Inclination (°): 90.070, Azimuth (°): 2.080, TVD (ft): 10979.19, Dogleg (°/100 ft): 3.41, Sensor Depth (ft): 17739.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	01:00	02:10	04-08	17797.00	17891.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	02:10	02:15	04-08	17891.00	17891.00	Inclination (°): 90.990, Azimuth (°): 1.910, TVD (ft): 10978.32, Dogleg (°/100 ft): 1.00, Sensor Depth (ft): 17833.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	02:15	02:25	04-08	17891.00	17901.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-08	02:25	03:40	04-08	17901.00	17923.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-08	03:40	04:25	04-08	17923.00	17986.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	04:25	04:30	04-08	17986.00	17986.00	Inclination (°): 89.890, Azimuth (°): 1.290, TVD (ft): 10977.59, Dogleg (°/100 ft): 1.33, Sensor Depth (ft): 17928.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	04:30	05:40	04-08	17986.00	18080.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	05:40	05:45	04-08	18080.00	18080.00	Inclination (°): 90.990, Azimuth (°): 0.850, TVD (ft): 10976.87, Dogleg (°/100 ft): 1.26, Sensor Depth (ft): 18022.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	05:45	05:55	04-08	18080.00	18090.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-08	05:55	07:15	04-08	18090.00	18117.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 150, Toolface Type: gravity
Rotary Drill	1	04-08	07:15	07:55	04-08	18117.00	18175.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Rig Repair	14	04-08	07:55	09:30	04-08			Replace leaking seal at hammer union on surface pipe
Survey	46	04-08	09:30	09:35	04-08	18175.00	18175.00	Inclination (°): 89.630, Azimuth (°): 1.910, TVD (ft): 10976.36, Dogleg (°/100 ft): 1.82, Sensor Depth (ft): 18117.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	09:35	10:40	04-08	18175.00	18269.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	10:40	10:45	04-08	18269.00	18269.00	Inclination (°): 90.330, Azimuth (°): 1.550, TVD (ft): 10976.39, Dogleg (°/100 ft): 0.84, Sensor Depth (ft): 18211.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	10:45	10:55	04-08	18269.00	18280.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-08	10:55	11:40	04-08	18280.00	18296.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-08	11:40	12:45	04-08	18296.00	18363.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	12:45	12:50	04-08	18363.00	18363.00	Inclination (°): 90.070, Azimuth (°): 1.200, TVD (ft): 10976.06, Dogleg (°/100 ft): 0.46, Sensor Depth (ft): 18305.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	12:50	13:55	04-08	18363.00	18457.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	13:55	14:00	04-08	18457.00	18457.00	Inclination (°): 91.030, Azimuth (°): 0.850, TVD (ft): 10975.16, Dogleg (°/100 ft): 1.09, Sensor Depth (ft): 18399.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	14:00	14:10	04-08	18457.00	18467.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-08	14:10	15:10	04-08	18467.00	18492.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-08	15:10	16:10	04-08	18492.00	18552.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	16:10	16:25	04-08	18552.00	18552.00	Inclination (°): 89.850, Azimuth (°): 0.410, TVD (ft): 10974.43, Dogleg (°/100 ft): 1.33, Sensor Depth (ft): 18494.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	16:25	17:15	04-08	18552.00	18646.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	17:15	17:20	04-08	18646.00	18646.00	Inclination (°): 90.950, Azimuth (°): 0.240, TVD (ft): 10973.77, Dogleg (°/100 ft): 1.18, Sensor Depth (ft): 18588.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	17:20	17:35	04-08	18646.00	18655.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	04-08	17:35	18:55	04-08	18655.00	18685.00	Pressure On (psi): 5400.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	04-08	18:55	19:35	04-08	18685.00	18740.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00

Survey	46	04-08	19:35	19:40	04-08	18740.00	18740.00	Inclination (°): 88.920, Azimuth (°): 0.320, TVD (ft): 10973.88, Dogleg (°/100 ft): 2.16, Sensor Depth (ft): 18682.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	19:40	20:40	04-08	18740.00	18835.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	20:40	20:45	04-08	18835.00	18835.00	Inclination (°): 90.070, Azimuth (°): 0.150, TVD (ft): 10974.72, Dogleg (°/100 ft): 1.22, Sensor Depth (ft): 18777.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	20:45	22:00	04-08	18835.00	18929.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	22:00	22:10	04-08	18929.00	18929.00	Inclination (°): 91.600, Azimuth (°): 359.800, TVD (ft): 10973.35, Dogleg (°/100 ft): 1.67, Sensor Depth (ft): 18871.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	22:10	23:20	04-08	18929.00	19023.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-08	23:20	23:30	04-08	19023.00	19023.00	Inclination (°): 93.230, Azimuth (°): 359.360, TVD (ft): 10969.39, Dogleg (°/100 ft): 1.80, Sensor Depth (ft): 18965.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-08	23:30	00:00	04-09	19023.00	19049.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Apr 09 00:00 - 23:59 (Day 25 of 29)

Billing: \$8,600.00 (\$255,147.58 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	19049.00	Downhole Hours	18.25	Rotating WOB (klbs)	54.00 - 54.00
Bit Depth (ft)	19149.00	Drilling Hours	1.50	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	19149.00	Hours Circulating	3.75	Rotating SPM	216.00 - 216.00
Total Distance (ft)	100.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	100.00	Hours Rotating	1.50	Motor RPM	150.00 - 175.00
Distance Slid (ft)	0.00			Surface RPM	35.00 - 35.00
Inclination In	95.30			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	96.00			On Bottom Pressure (psi)	5800.00 - 5800.00
Azimuth In	358.92	% Hours Rotating	100%	Off Bottom Pressure (psi)	5200.00 - 5200.00
Azimuth Out	359.18	% Hours Sliding	0%		
AVG Total ROP (ft/h)	63.00	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	63.00	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

BHA #9 - BHA #9

Date In: Apr 4, 2019, 23:30 Date Out: Apr 9, 2019, 18:15

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Crescent : 1.75 ° FBH 7/8 6.9 Stg. Mtr.T Slick .Protracted Angle: 1.77 ° , Flow Rate 300-700, Max Diff 1960 psi, Max Operating Torque: 19,010 ft/lbs, Rev/Gal: .25 / Bit Data: Baker 8.5", Type DD506TWX, SN: 5293281, Jets: 6x22's, TFA: 2.227 Runs on Bit: 2	
Vendor	Baker	Lobe/Stage	7/8, 6.9		
S/N	5293281	Bend Angle	1.75		
Nozzles	6x22	Speed (rev/gal)	0.25	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250		
Drilling Hours for Day	1.50	Bit Distances			
Total Drilled for Day (ft)	100.00	Survey: 58.00 ft, Bend: 4.55 ft, Gamma: 44.00 ft			
Drilling Hours for BHA	77.50				
Total Drilled for BHA (ft)	4872.00			POOH Reason	
				Total Depth/Casing Point: Total Depth	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: Baker 8.5 DD506TWX, Style: PDC, Gauge Length (in): 6.00, Size (in): 8.50	Baker	5293281	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: Crescent 1.75 ° FBH 7/8 6.9 Stg Mtr w/ True Slick, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 6.9	Crescent	CD70010	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.05	34.05
UBHO Sub Description: Gordan UBHO, Type: NM	Gordan	GT650-230	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.500		2.98	37.03
Drill Collar Description: NMDC (MWD Tool), Style: Slick Drill, Type: NM	DTI	DR27268	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		30.35	67.38
Drill Collar Description: NMDC (Spacer), Style: Slick Drill, Type: NM	DTI	DR4574	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		28.77	96.15
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR27315	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		13.20	109.35
Drill Pipe Description: (30 Stds)5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.250	5.000		2826.00	2935.35
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX650-050	4 1/2" IF Box	4 1/2" IF Pin		6.500		38.10	2973.45

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Rotary Drill	1	04-08	23:30	00:00	04-09	19023.00	19049.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Rotary Drill	1	04-09	00:00	01:00	04-09	19049.00	19118.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-09	01:00	01:10	04-09	19118.00	19118.00	Inclination (°): 95.300, Azimuth (°): 358.920, TVD (ft): 10962.32, Dogleg (°/100 ft): 2.23, Sensor Depth (ft): 19060.00, Bit To Sensor (ft): 58.00
Rotary Drill	1	04-09	01:10	01:40	04-09	19118.00	19149.00	Pressure On (psi): 5800.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 54.00, Surface RPM: 35, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	04-09	01:40	01:50	04-09	19149.00	19149.00	Inclination (°): 96.000, Azimuth (°): 359.180, TVD (ft): 10959.62, Dogleg (°/100 ft): -0.14, Sensor Depth (ft): 19091.00, Bit To Sensor (ft): 58.00
Circulating	3	04-09	01:50	05:35	04-09			Circulate @ TD & Flow Check
Pooh	7	04-09	05:35	17:30	04-09			POOH to Run Production string
L/D DP	28	04-09	17:30	18:15	04-09			L/D BHA #9
Standby	15	04-09	18:15	03:50	04-10			Standby while Run Casing

MWD Activities

No Activities



Job Number WT-19-028	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H	Legal Well Name AFE Dagger Lake 5 State #503H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, Apr 10 00:00 - 23:59 (Day of 29)

Billing: \$3,300.00 (\$255,147.58 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
Omar Alaniz	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	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	04-09	18:15	03:50	04-10			Standby while Run Casing
Rig Repair	14	04-10	03:50	02:00	04-11			Work on draw works

MWD Activities

No Activities

	Job Number WT-19-028	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H		Legal Well Name AFE Dagger Lake 5 State #503H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Thursday, Apr 11 00:00 - 23:59 (Day of 29) Billing: \$3,300.00 (\$255,147.58 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
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	Directional Driller

No BHAs

Directional Activities								
Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Rig Repair	14	04-10	03:50	02:00	04-11			Work on draw works
Standby	15	04-11	02:00	00:00	04-12			Standby while running Casing And Cementing

MWD Activities								
No Activities								

	Job Number WT-19-028	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-03-15	Well Name Dagger Lake 5 State #503H		Legal Well Name AFE Dagger Lake 5 State #503H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Friday, Apr 12 00:00 - 23:59 (Day of 29) Billing: \$15,738.83 (\$255,147.58 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
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Josh Cockrell	Directional Driller
Omar Alaniz	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	04-11	02:00	00:00	04-12			Standby while running Casing And Cementing
Standby	15	04-12	00:00	06:00	04-12			Standby while Cementing
Standby	15	04-12	06:00	12:00	04-12			Standby, Nipple down, Skid Rig

MWD Activities
No Activities



Surface Plat

Dagger Lake 5 State #503H (WT-19-028)

2019-03-15 to 2019-04-12

Lea, New Mexico, US (32.42, -103.60)

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) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102

Revised August 4, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name	Well Number
	DAGGER LAKE 5 STATE	502H
OGRID No.	Operator Name	Elevation
	ADVANCE ENERGY PARTNERS HAT MESA	3655'

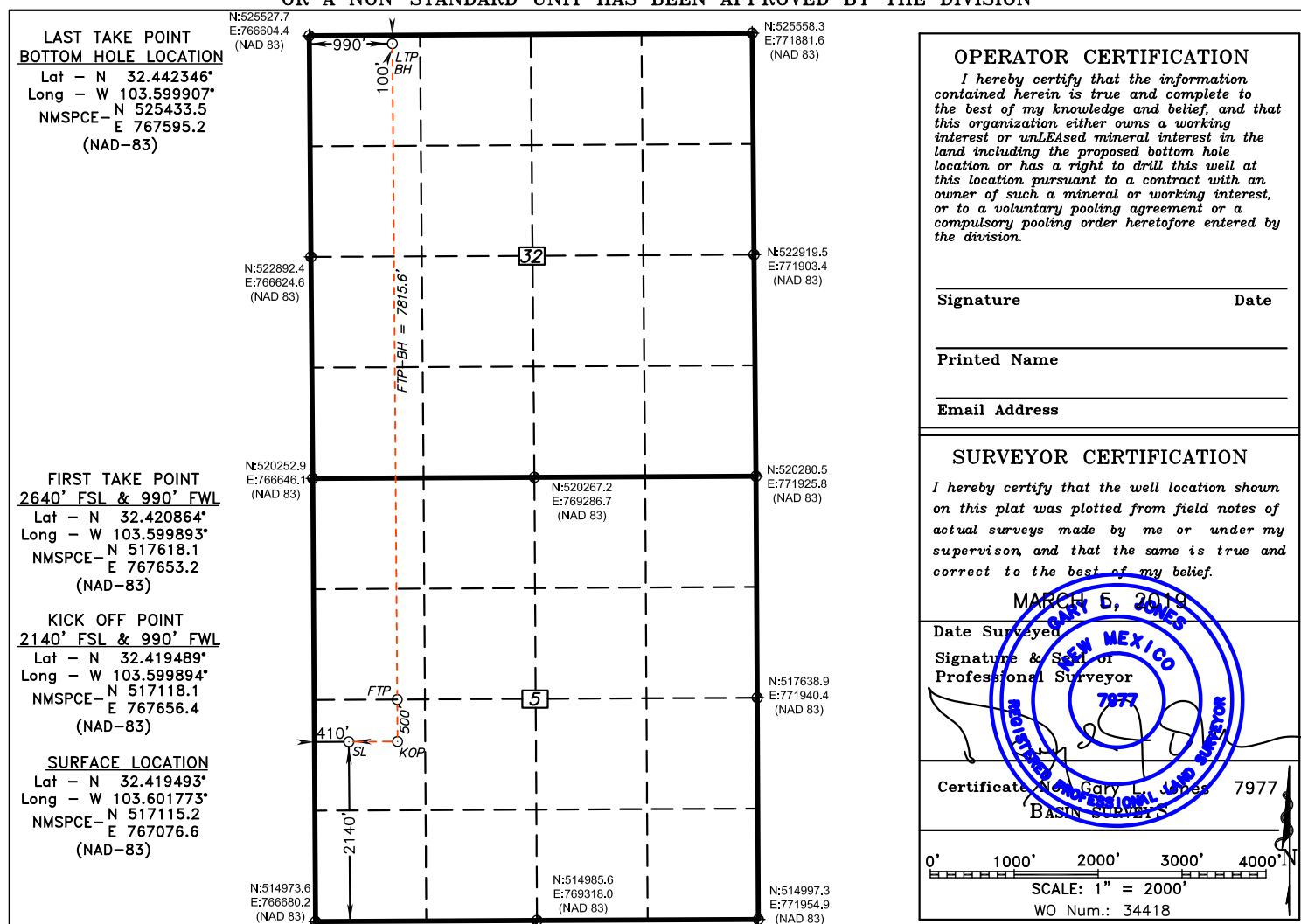
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	5	22 S	33 E		2140	SOUTH	410	WEST	LEA

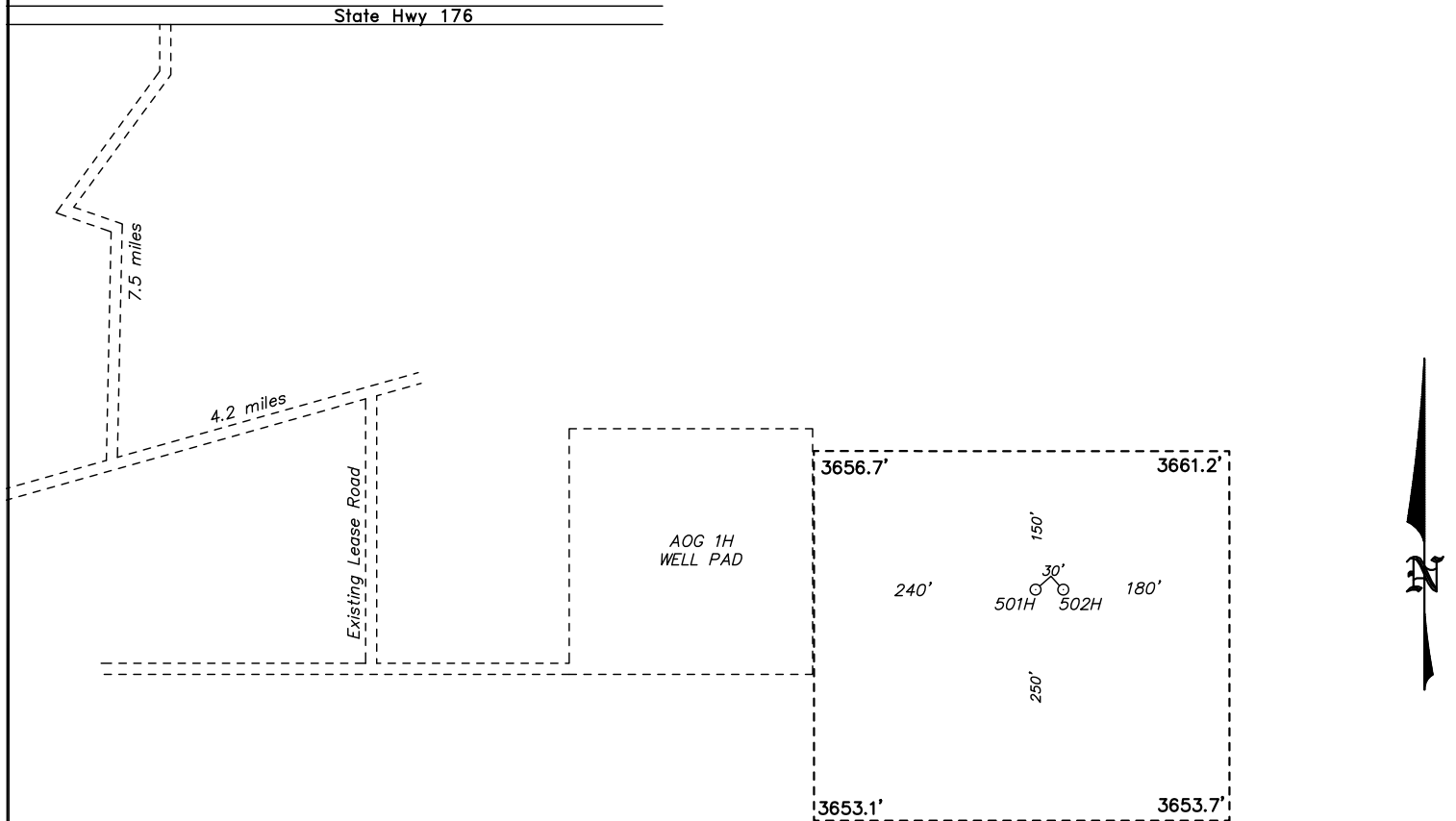
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
D	32	21 S	33 E		100	NORTH	990	WEST	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



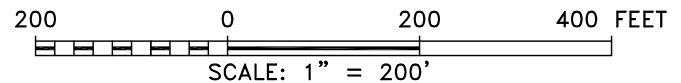
**SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



**ADVANCE ENERGY PARTNERS HAT MESA
DAGGER LAKE 5 STATE 502H
ELEV. - 3655'**

Lat - N 32.419493°
Long - W 103.601773°
NMSPCE - N 517115.2
 E 767076.6
(NAD-83)

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



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER LAKE 5 STATE 502H / WELL PAD TOPO

THE DAGGER LAKE 5 STATE 502H LOCATED 2140' FROM
THE SOUTH LINE AND 410' FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST.

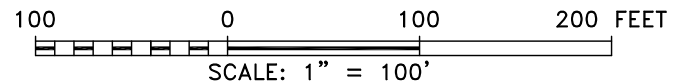
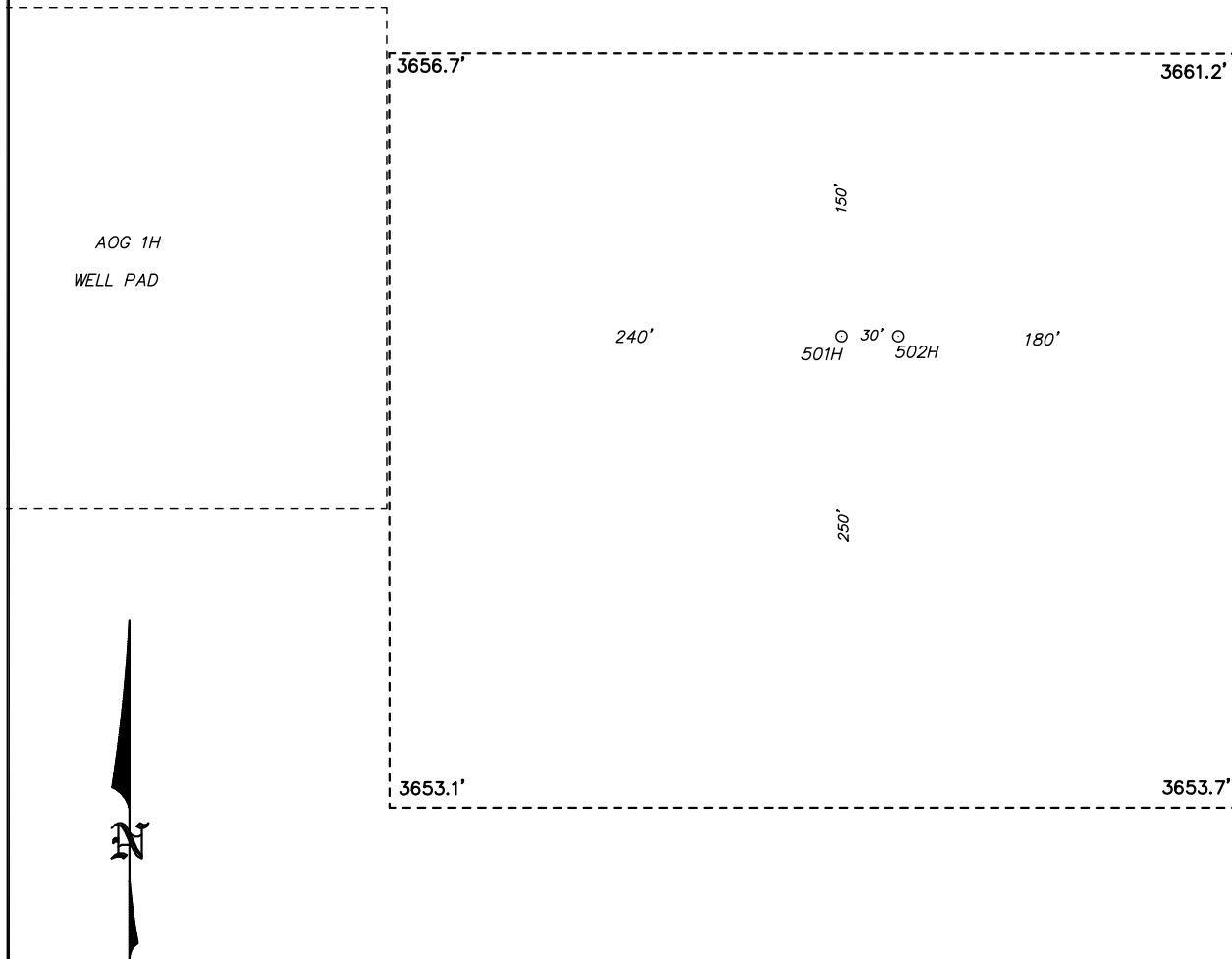
N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 34418	Drawn By: K. GOAD	Date: 03-06-2019	Survey Date: 03-05-2019	Sheet 1 of 1 Sheets
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**SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER LAKE 5 STATE 502H / WELL PAD TOPO

THE DAGGER LAKE 5 STATE 502H LOCATED 2140' FROM
THE SOUTH LINE AND 410' FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST.

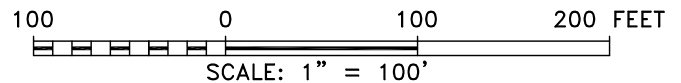
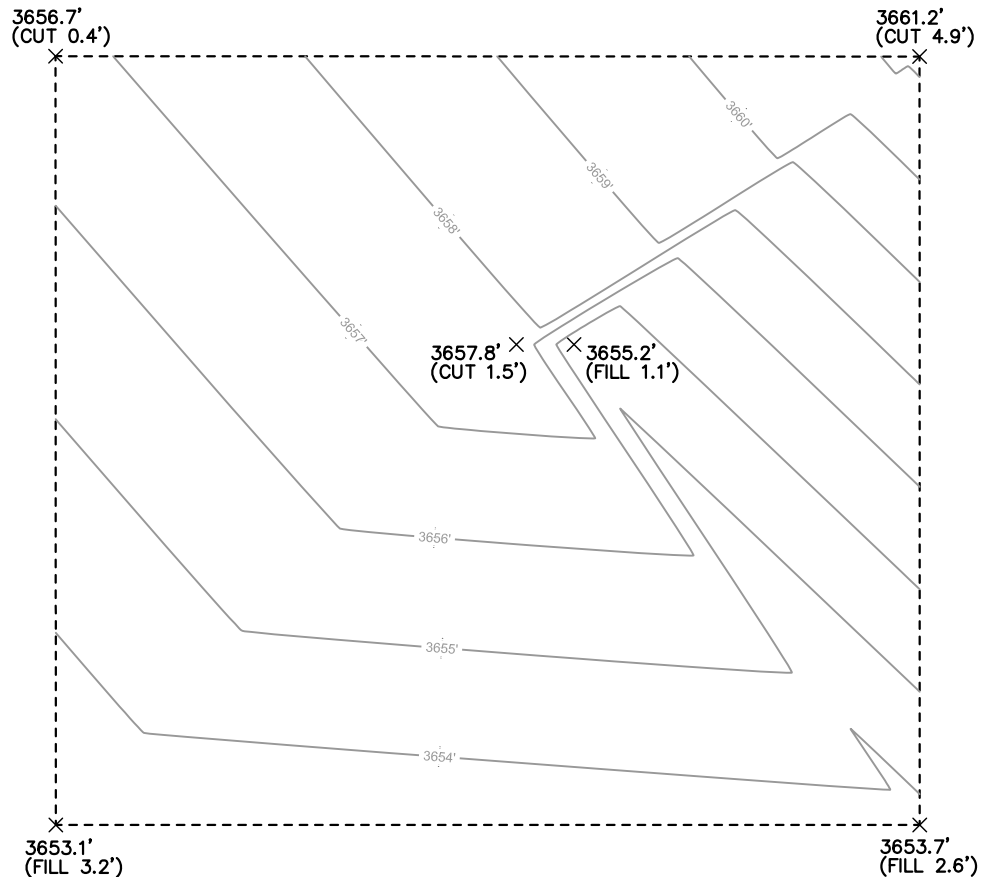
N.M.P.M., LEA COUNTY, NEW MEXICO.

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Hobbs, New Mexico 88241 basin-surveys.com

W.O. Number: 34418	Drawn By: K. GOAD	Date: 03-06-2019	Survey Date: 03-05-2019	Sheet 1 of 1 Sheets
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**SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER LAKE 5 STATE 502H / CUT & FILL

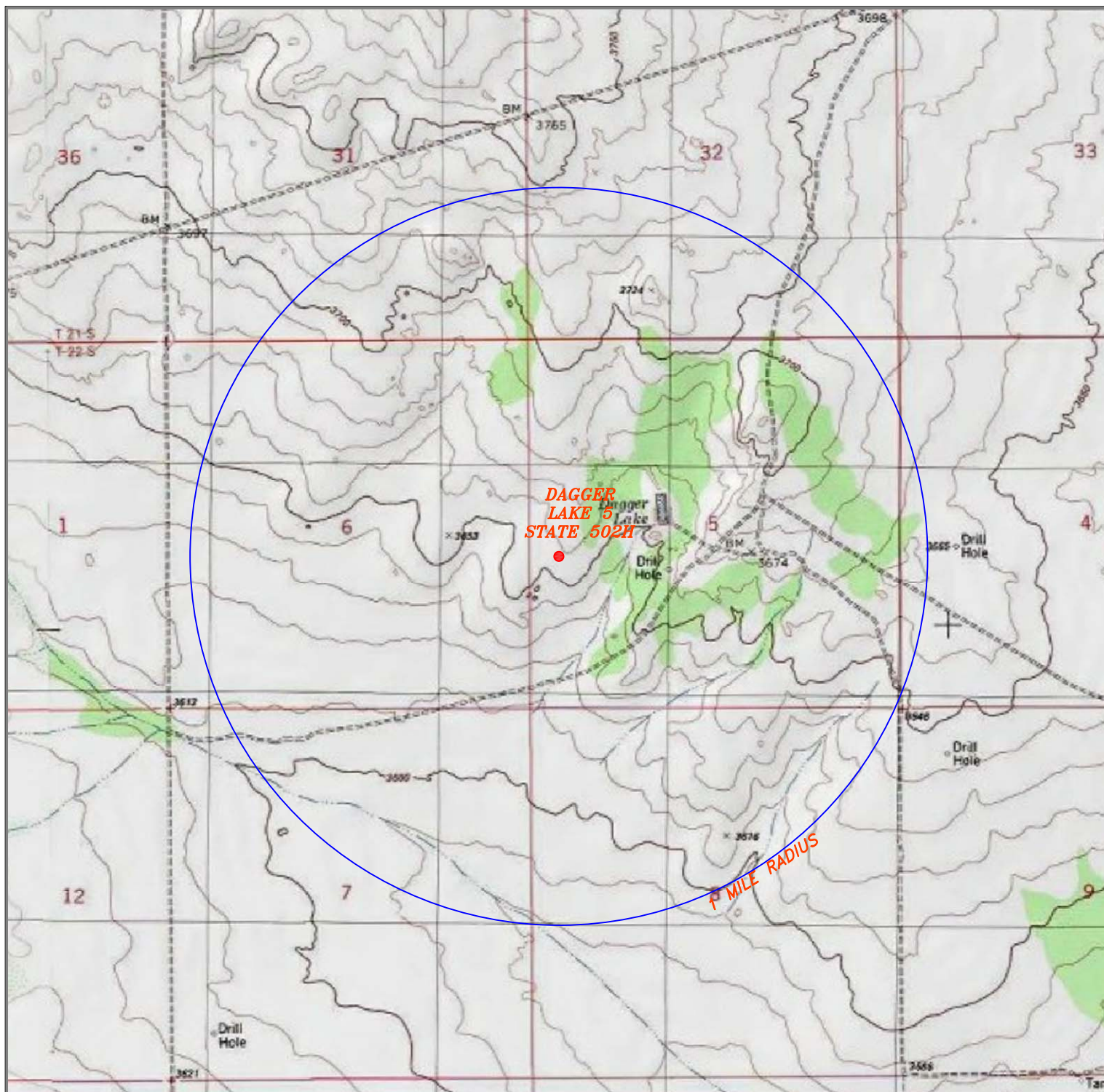
THE DAGGER LAKE 5 STATE 502H LOCATED 2140' FROM
THE SOUTH LINE AND 410' FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST.

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

basin
surveys
focused on excellence
in the oilfield

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

W.O. Number: 34418	Drawn By: K. GOAD	Date: 03-06-2019	Survey Date: 03-05-2019	Sheet 1 of 1 Sheets
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DAGGER LAKE 5 STATE 502H

Located 2140' FSL and 410' FWL
 Section 5, Township 22 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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 Hobbs, New Mexico 88241
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 basinsurveys.com

0' 1000' 2000' 3000' 1500'

SCALE: 1" = 2000'

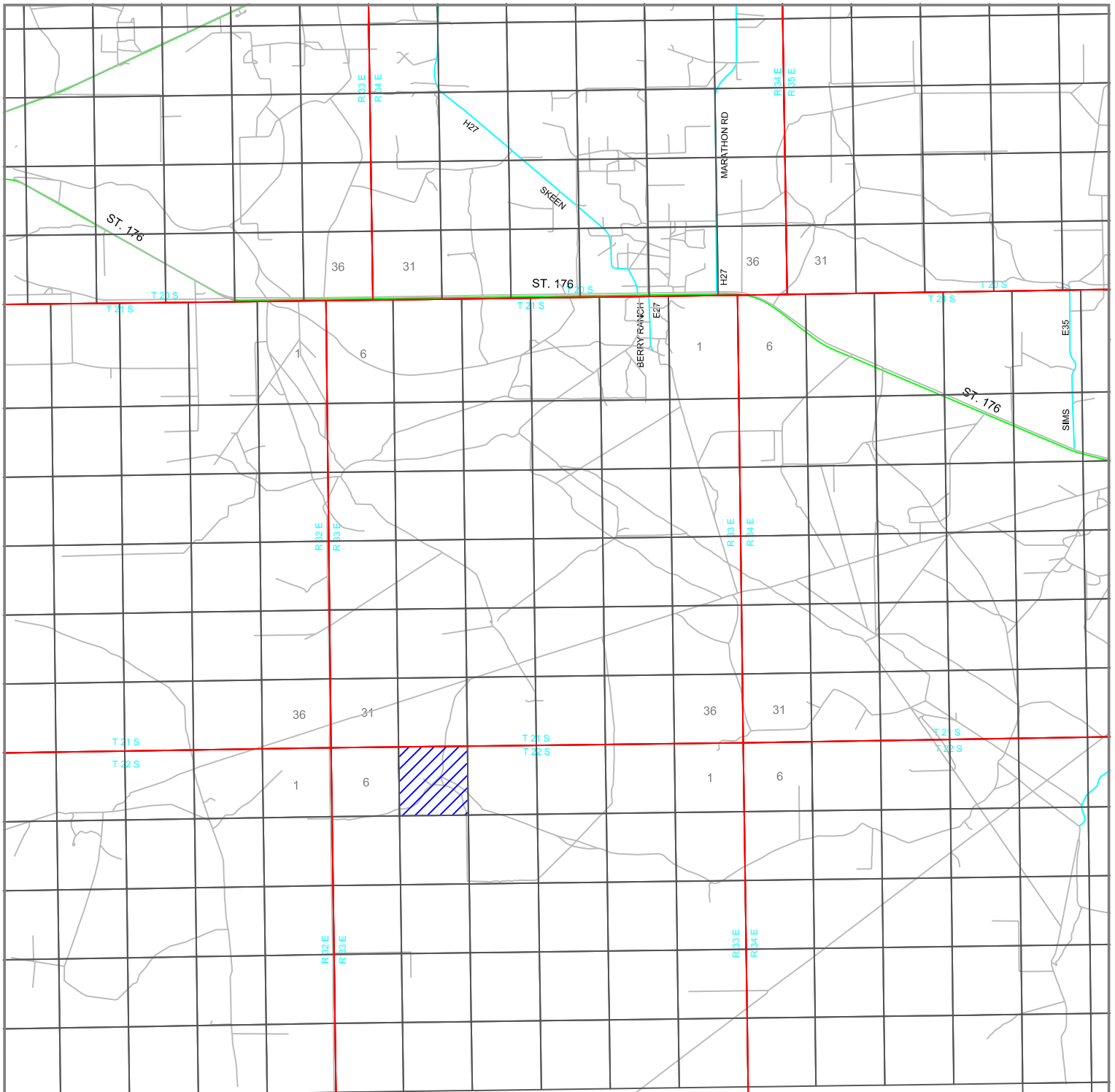
W.O. Number: KJG 34418

Survey Date: 03-06-2019

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



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Located 2140' FSL and 410' FWL
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0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

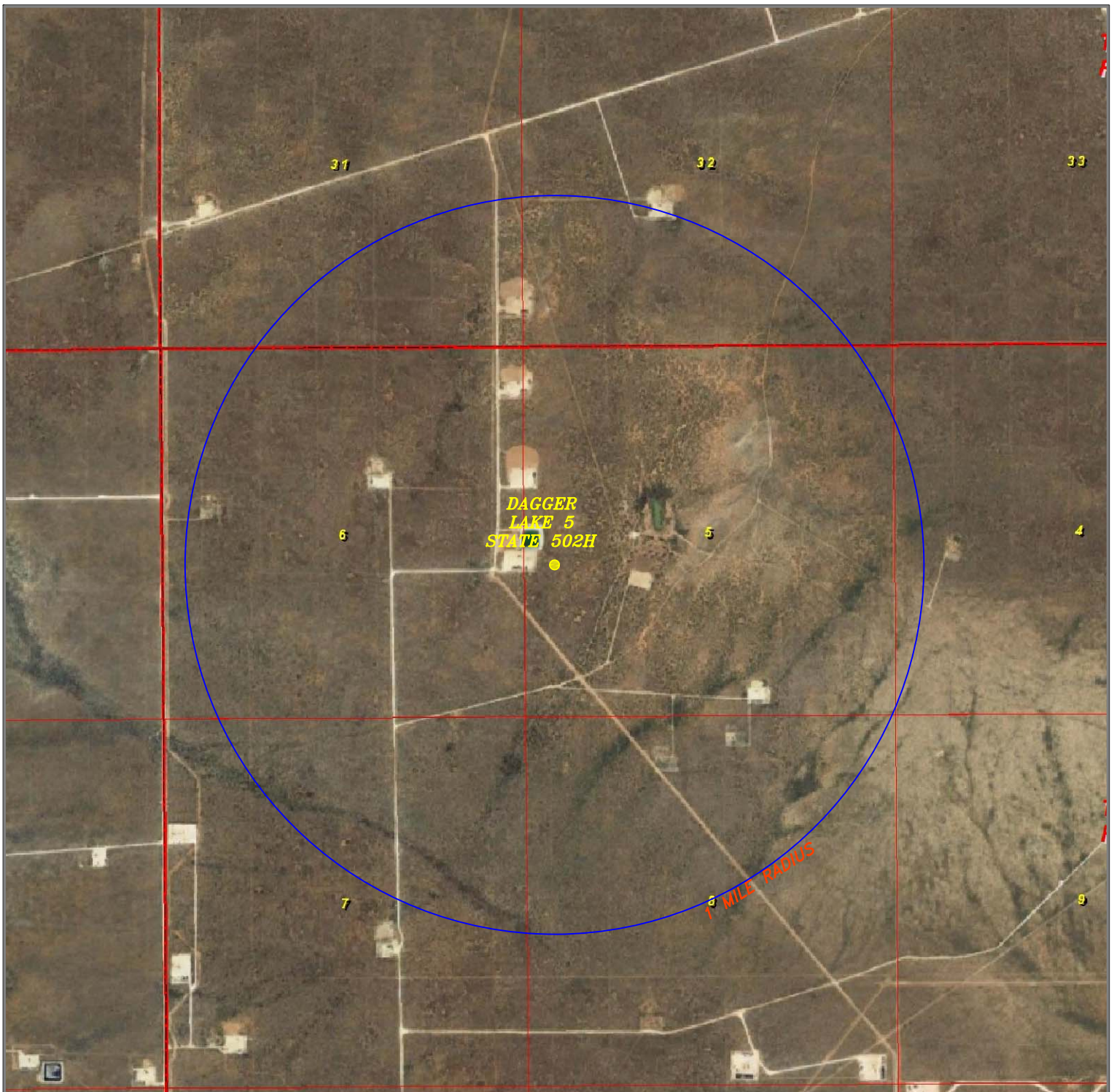
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0' 1000' 2000' 3000' 150'0"
SCALE: 1" = 2000'

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District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

Energy, Minerals and Natural Resources

Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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 ☐		WELL API NO. 30-025-45703
2. Name of Operator Advance Energy Partners Hat Mesa		5. Indicate Type of Lease STATE ☒ FEE ☐
3. Address of Operator 11490 Westheimer Rd, Houston, TX 77077		6. State Oil & Gas Lease No.
4. Well Location Unit Letter <u>L</u> : <u>2140</u> feet from the <u>S</u> line and <u>410</u> feet from the <u>W</u> line Section <u>5</u> Township <u>22S</u> Range <u>33E</u> NMPM County <u>LEA</u>		7. Lease Name or Unit Agreement Name Dagger Lake 5 State Com
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3655'		8. Well Number <u>503H</u>
		9. OGRID Number 372417
		10. Pool name or Wildcat LEGG;BONE SPRING

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.

- 6/11/19: Pressure test casing to 9800 psi for 30 minutes.
- 7/10/19 – 7/21/19: Perforate from 11,180' – 19,029' (2280). Frac with 19,189,025 lbs sand and 18,888,702 gal fluid.
- 7/27/19 – 7/29/19: Drill all plugs out and clean out to 19,044'.
- 8/4/19 – Set packer at 10,439'. Run 2-7/8" production tubing and gas lift valves. EOT @ 10,450'
- 8/7/19: Begin flowback – Ready to produce.
- 2/21/22 – **CORRECTION to Casing Depths filed on 4/30/19. CORRECT depths are as follows:**
 - 13.375" Surface Casing set at 1,165'
 - 9.625" Intermediate Casing set at 3,905'/4,825'
 - 5.5" Production Casing set at 19,127'

Spud Date:

03/15/2019

Rig Release Date:

04/12/2019

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE:

PRINT NAME: Eileen M Kosakowski

TITLE: Sr. Eng. Tech.

E-mail address: ekosakowski@advanceneergypartners.com

DATE:

PHONE: (832) 672-4604

For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):

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	Revised April 3, 2017 1. WELL API NO. 30-025-45703 2. Type of Lease ☒ STATE ☐ FEE ☐ FED/INDIAN 3. State Oil & Gas Lease No.
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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 Lake 5 State Com																																	
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER	6. Well Number: 503H																																	
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 LEGG;BONE SPRING																																	
<table border="1"> <tr> <th>12. Location</th> <th>Unit Ltr</th> <th>Section</th> <th>Township</th> <th>Range</th> <th>Lot</th> <th>Feet from the</th> <th>N/S Line</th> <th>Feet from the</th> <th>E/W Line</th> <th>County</th> </tr> <tr> <td>Surface:</td> <td>L</td> <td>5</td> <td>22S</td> <td>33E</td> <td></td> <td>2140</td> <td>S</td> <td>410</td> <td>W</td> <td>Lea</td> </tr> <tr> <td>BH:</td> <td>D</td> <td>32</td> <td>21S</td> <td>33E</td> <td></td> <td>54</td> <td>N</td> <td>1002</td> <td>W</td> <td>Lea</td> </tr> </table>	12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County	Surface:	L	5	22S	33E		2140	S	410	W	Lea	BH:	D	32	21S	33E		54	N	1002	W	Lea	
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BH:	D	32	21S	33E		54	N	1002	W	Lea																								
13. Date Spudded 03/15/2019	14. Date T.D. Reached 04/09/2019	15. Date Rig Released 04/12/2019	16. Date Completed (Ready to Produce) 08/07/2019	17. Elevations (DF and RKB, RT, GR, etc.) 3,655' GR																														
18. Total Measured Depth of Well 19,149'	19. Plug Back Measured Depth 19,044'	20. Was Directional Survey Made? YES	21. Type Electric and Other Logs Run Gamma Ray																															
22. Producing Interval(s), of this completion - Top, Bottom, Name 11,180' - 19,029' Bone Springs																																		

CASING RECORD (Report all strings set in well)

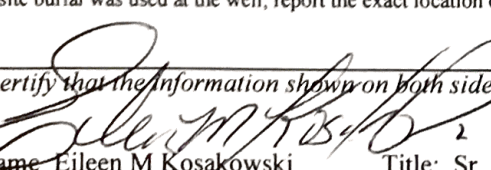
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13.375"	54.4#	1165	17.5"	635	
9.625"	40#	3905/4825	12.25"	970	
5.5"	20#	19,127	8.5"	3125	

24. LINER RECORD <table border="1"> <tr> <th>SIZE</th> <th>TOP</th> <th>BOTTOM</th> <th>SACKS CEMENT</th> <th>SCREEN</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN						25. TUBING RECORD <table border="1"> <tr> <th>SIZE</th> <th>DEPTH SET</th> <th>PACKER SET</th> </tr> <tr> <td>2 7/8</td> <td>10,450</td> <td>10,439</td> </tr> </table>	SIZE	DEPTH SET	PACKER SET	2 7/8	10,450	10,439
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN													
SIZE	DEPTH SET	PACKER SET															
2 7/8	10,450	10,439															
26. Perforation record (interval, size, and number) 11,180' - 19,029' -2280 holes	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. <table border="1"> <tr> <th>DEPTH INTERVAL</th> <th>AMOUNT AND KIND MATERIAL USED</th> </tr> <tr> <td>11,180' - 19,029'</td> <td>19,189,025 lbs sand, 18,888,702 bbls water</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED	11,180' - 19,029'	19,189,025 lbs sand, 18,888,702 bbls water												
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED																
11,180' - 19,029'	19,189,025 lbs sand, 18,888,702 bbls water																

PRODUCTION

28. Date First Production 8/15/2019	Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing	Well Status (Prod. or Shut-in) Prod				
Date of Test 08/24/2019	Hours Tested 24 Hrs	Choke Size 40	Prod'n For Test Period Oil - Bbl 897	Gas - MCF 872	Water - Bbl. 4103	Gas - Oil Ratio 982
Flow Tubing Press. 971	Casing Pressure 1100	Calculated 24-Hour Rate	Oil - Bbl. 897	Gas - MCF 872	Water - Bbl. 4103	Oil Gravity - API - (Corr.) 43.5
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold					30. Test Witnessed By Baron 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: 04/12/19
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 	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 8913	T. Todilto	
T. Abo	T.	T. Entrada	
T. Wolfcamp	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

Action 82900

ACKNOWLEDGMENTS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	OGRID: 372417
	Action Number: 82900
	Action Type: [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 82900

CONDITIONS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	OGRID: 372417
	Action Number: 82900
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	None	7/25/2024