

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 Hat Mesa, LLC 11490 Westheimer RD, Suite 950 Houston, TX		² OGRID Number 372417
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30-025-46416	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 551H

II. ¹⁰ Surface Location

UL or lot no. L	Section 5	Township 22S	Range 33E	Lot Idn	Feet from the 2140	North/South Line S	Feet from the 530	East/West line W	County Lea
--------------------	--------------	-----------------	--------------	---------	-----------------------	-----------------------	----------------------	---------------------	---------------

¹¹ Bottom Hole Location

UL or lot no. D	Section 32	Township 21S	Range 33E	Lot Idn	Feet from the 77	North/South line N	Feet from the 686	East/West line W	County Lea
--------------------	---------------	-----------------	--------------	---------	---------------------	-----------------------	----------------------	---------------------	---------------

¹² Lse Code S	¹³ Producing Method Code F	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
-----------------------------	--	-----------------------------------	-----------------------------------	------------------------------------	-------------------------------------

III. Oil and Gas Transporters

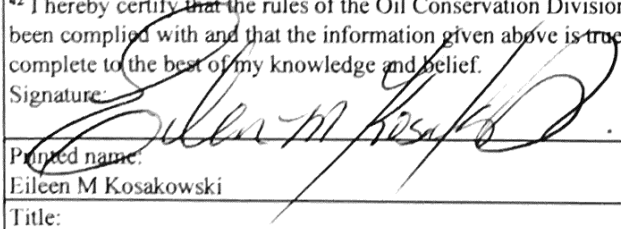
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
214984	Plains Marketing, L.P. 10 Desta Dr/Suite 200E Midland, TX 79705	O
24650	Targa Midstream Services, LLC 811 Louisiana, Suite 21 Houston, TX 77022	G

IV. Well Completion Data

²¹ Spud Date 10/10/2019	²² Ready Date 12/19/2019	²³ TD 18,903'	²⁴ PBTB 18,846'	²⁵ Perforations 11,853'-18,816'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17.5"	13.375"	1,212	565		
12.25"	9.625"	3,841'/4,815'	1305		
8.5"	5.5"	18,893'	2460		

V. Well Test Data

³¹ Date New Oil 12/22/2019	³² Gas Delivery Date 12/22/2019	³³ Test Date 1/16/2020	³⁴ Test Length 24	³⁵ Tbg. Pressure N/A	³⁶ Csg. Pressure 446
³⁷ Choke Size 64/64	³⁸ Oil 1314	³⁹ Water 2682	⁴⁰ Gas 1443		⁴¹ Test Method F

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: 	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: 7/26/2024
Date: 2/21/22	Phone: 832-672-4604

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 593-6161 Fax: (575) 593-0780

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9780

DISTRICT III
1000 Rio Brazos Rd., Artec, NM 87410
Phone (505) 834-6178 Fax: (505) 834-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3480 Fax: (505) 478-8482

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

API Number 30-025-46416	Pool Code 37870	Pool Name LEGG;BONE SPRING
Property Code 319599	Property Name DAGGER LAKE 5 STATE COM	Well Number 551H
OGRID No. 372417	Operator Name ADVANCE ENERGY PARTNERS HAT MESA	Elevation 3654'

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	530	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		77	NORTH	686	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

BOTTOM HOLE LOCATION
Lat - N 32.442412°
Long - W 103.600893°
NMSPCE - E 767290.8
(NAD-83)

LAST TAKE POINT
154' FNL & 684' FWL
Lat - N 32.442200°
Long - W 103.600900°
NMSPCE - N 525378.2
E 767289.2
(NAD-83)

FIRST TAKE POINT
1829' FNL & 710' FWL
Lat - N 32.423096°
Long - W 103.600800°
NMSPCE - N 518428.3
E 767367.8
(NAD-83)

KICK OFF POINT
2557' FNL & 628' FWL
Lat - N 32.421095°
Long - W 103.601068°
NMSPCE - N 517699.6
E 767290.2
(NAD-83)

SURFACE LOCATION
Lat - N 32.419492°
Long - W 103.601384°
NMSPCE - N 517116.0
E 767196.5
(NAD-83)

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

Signature: Eileen M Kosakowski Date: 2/21/22

Printed Name: Eileen M Kosakowski

Email Address: ekosakowski@advanceenergypartners.com

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

JANUARY 27 2022

Date Surveyed: JAN 27 2022

Signature & Seal of Professional Surveyor: [Signature]

Certificate No. 7977

Basin Surveyor's: [Signature]

Scale: 1" = 2000'

WO Num.: 35019



End of Well Report

Advance Energy Partners, LLC Dagger Lake 5 State Com, Well No. 551H Lea County, New Mexico

Rig: H&P #389

Job No.: WT-19-158

Start Date: 10/07/2019

End Date: 11/25/2019

Directional Drillers:

Advance Directional

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 Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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

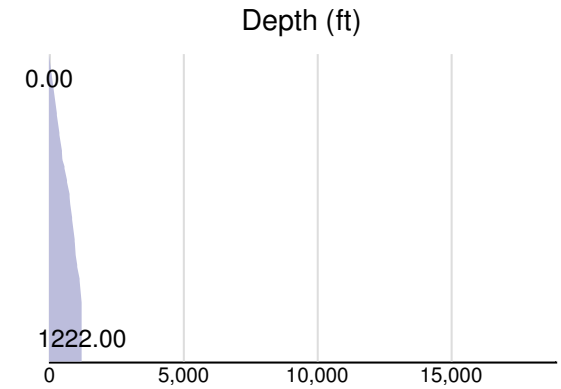
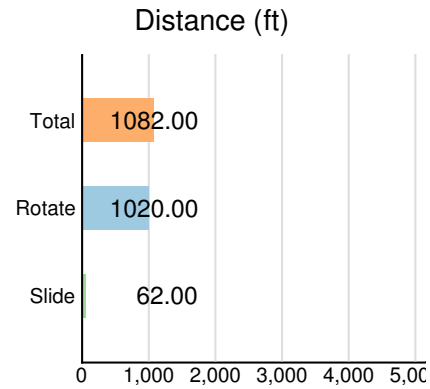
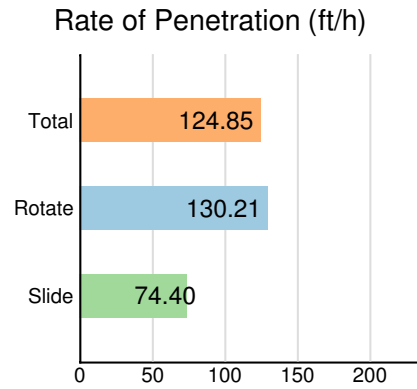
BHA Performance

BHA 1

BHA#1

In: 10/09/2019 23:00

Out: 10/10/2019 12:00

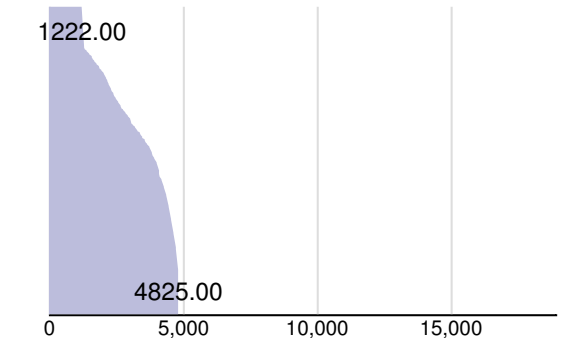
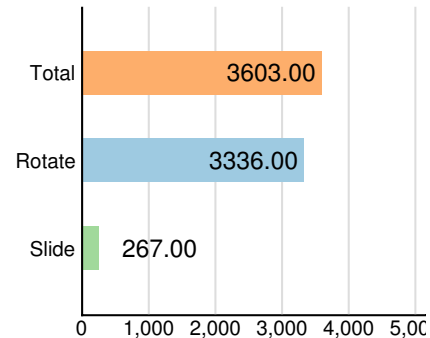
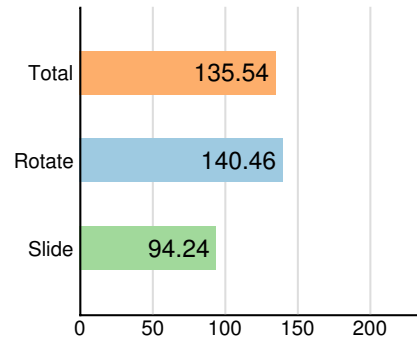


BHA 2

BHA #2 - 12.25"

In: 10/11/2019 06:30

Out: 10/12/2019 23:30

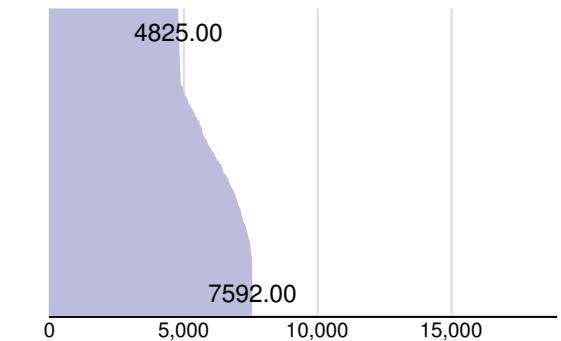
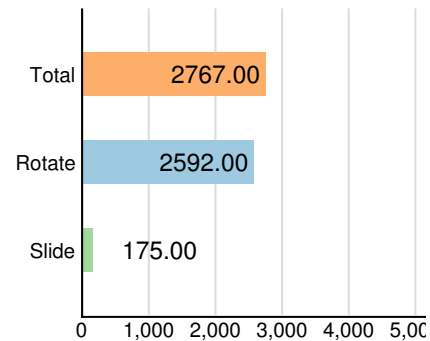
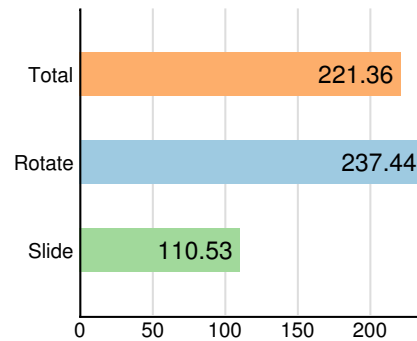


BHA 3

Intermediate 8.5"

In: 10/19/2019 19:45

Out: 10/20/2019 20:00

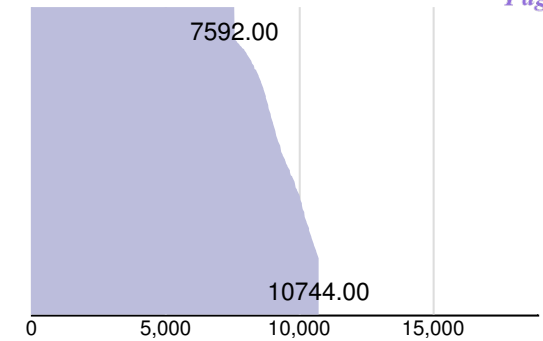
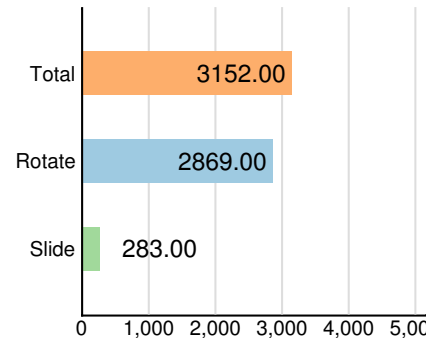
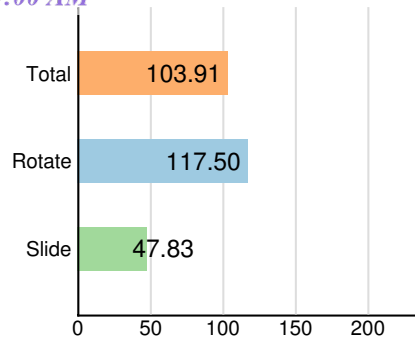


BHA 4

Intermediate 8.5"

In: 10/20/2019 20:00

Out: 10/22/2019 18:00

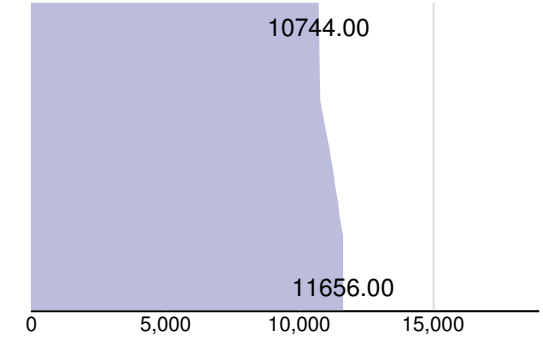
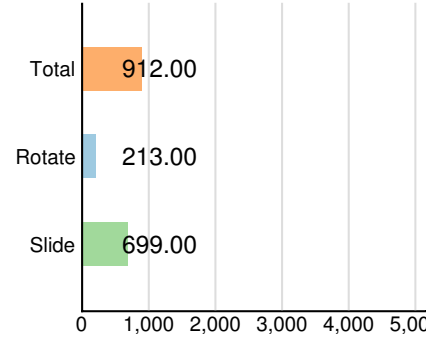
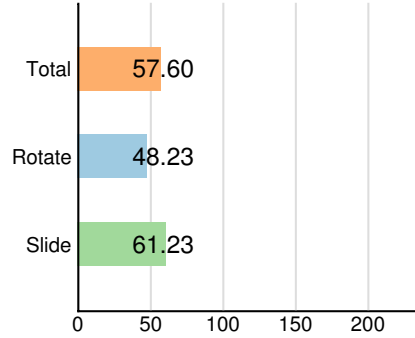


BHA 5

8.5" Curve

In: 11/05/2019 06:00

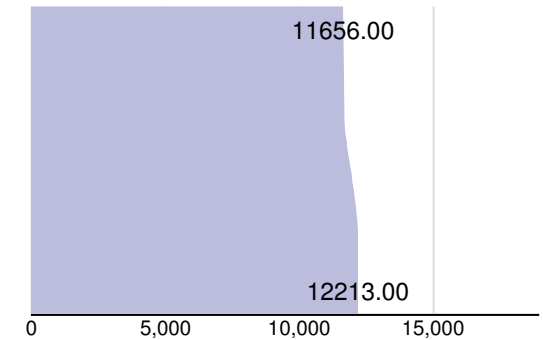
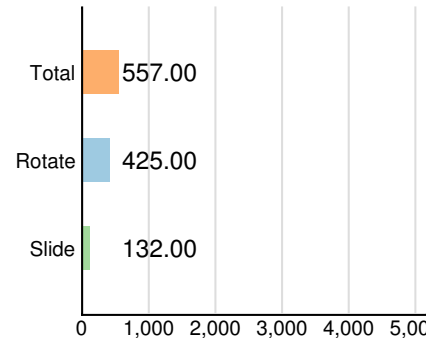
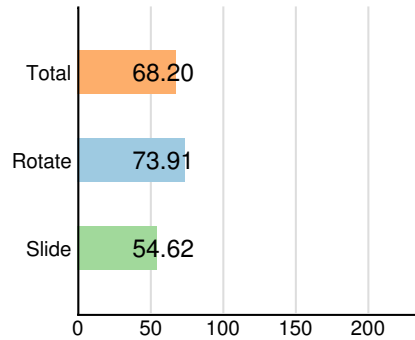
Out: 11/06/2019 21:30



BHA 6

In: 11/06/2019 21:30

Out: 11/07/2019 20:40

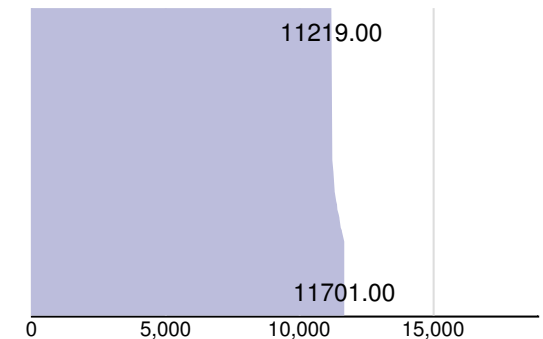
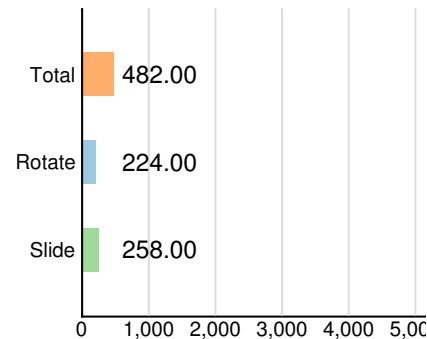
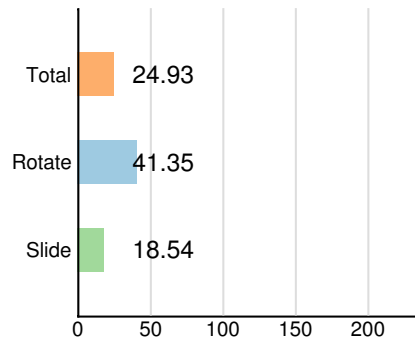


BHA 7

Sidetrack

In: 11/08/2019 01:45

Out: 11/09/2019 14:30

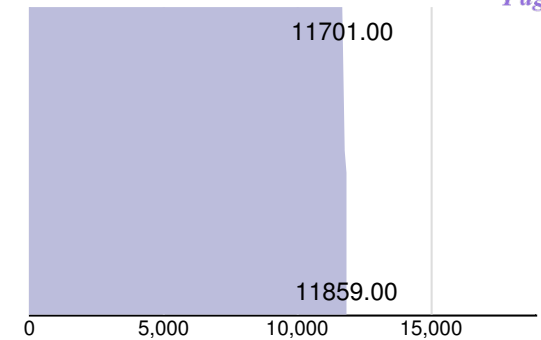
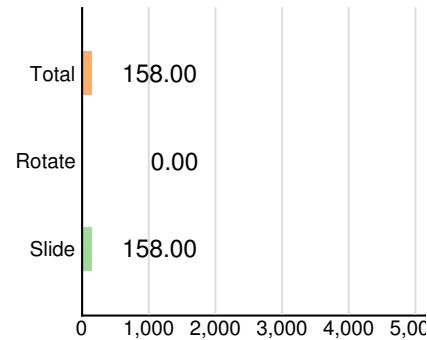
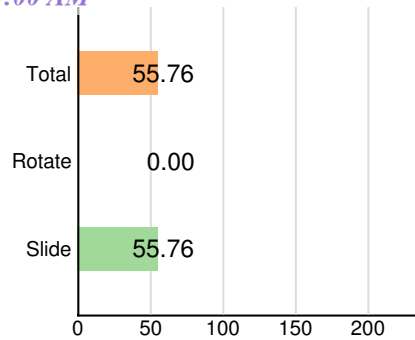


BHA 8

BHA #8

In: 11/09/2019 14:30

Out: 11/10/2019 07:30

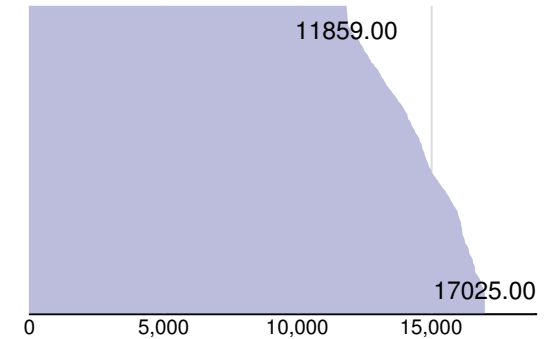
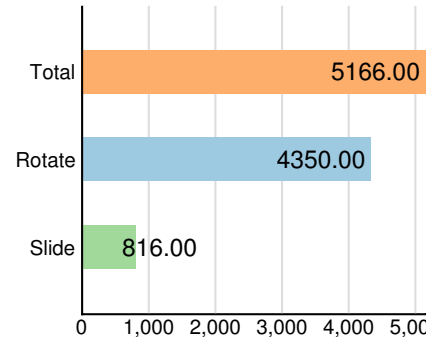
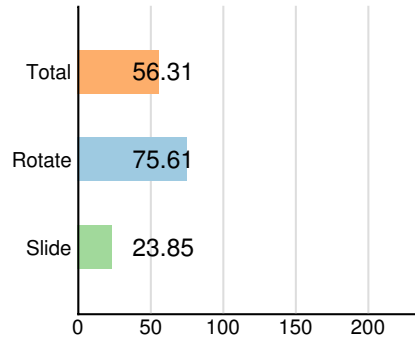


BHA 9

Lateral

In: 11/10/2019 07:30

Out: 11/15/2019 00:00

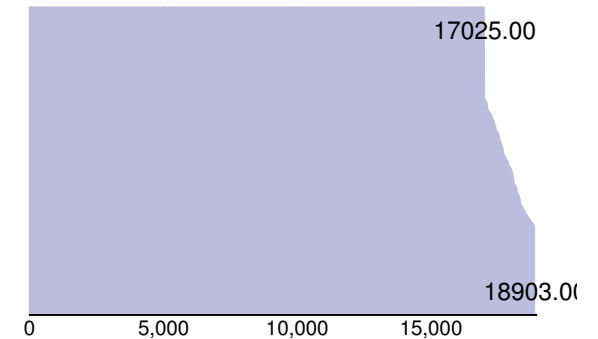
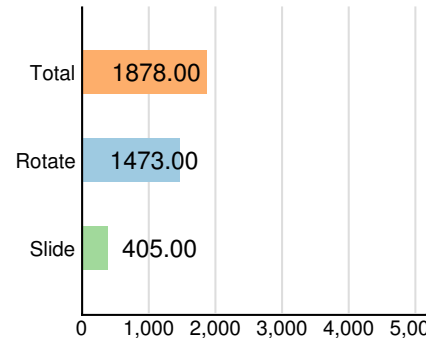
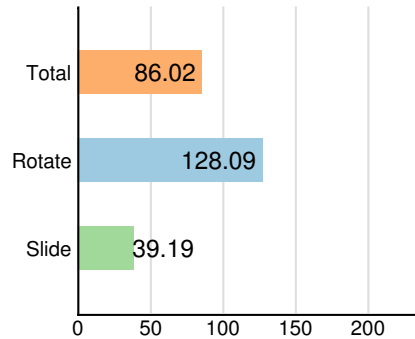


BHA 10

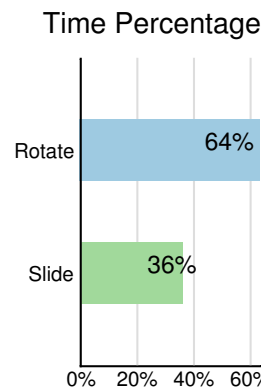
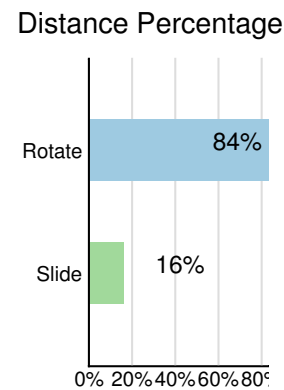
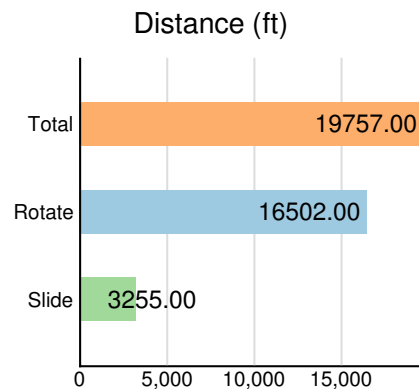
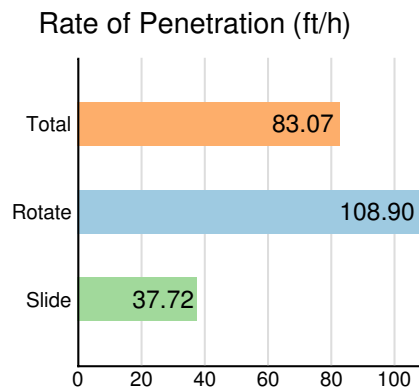
Lateral w/ Agitator

In: 11/15/2019 00:00

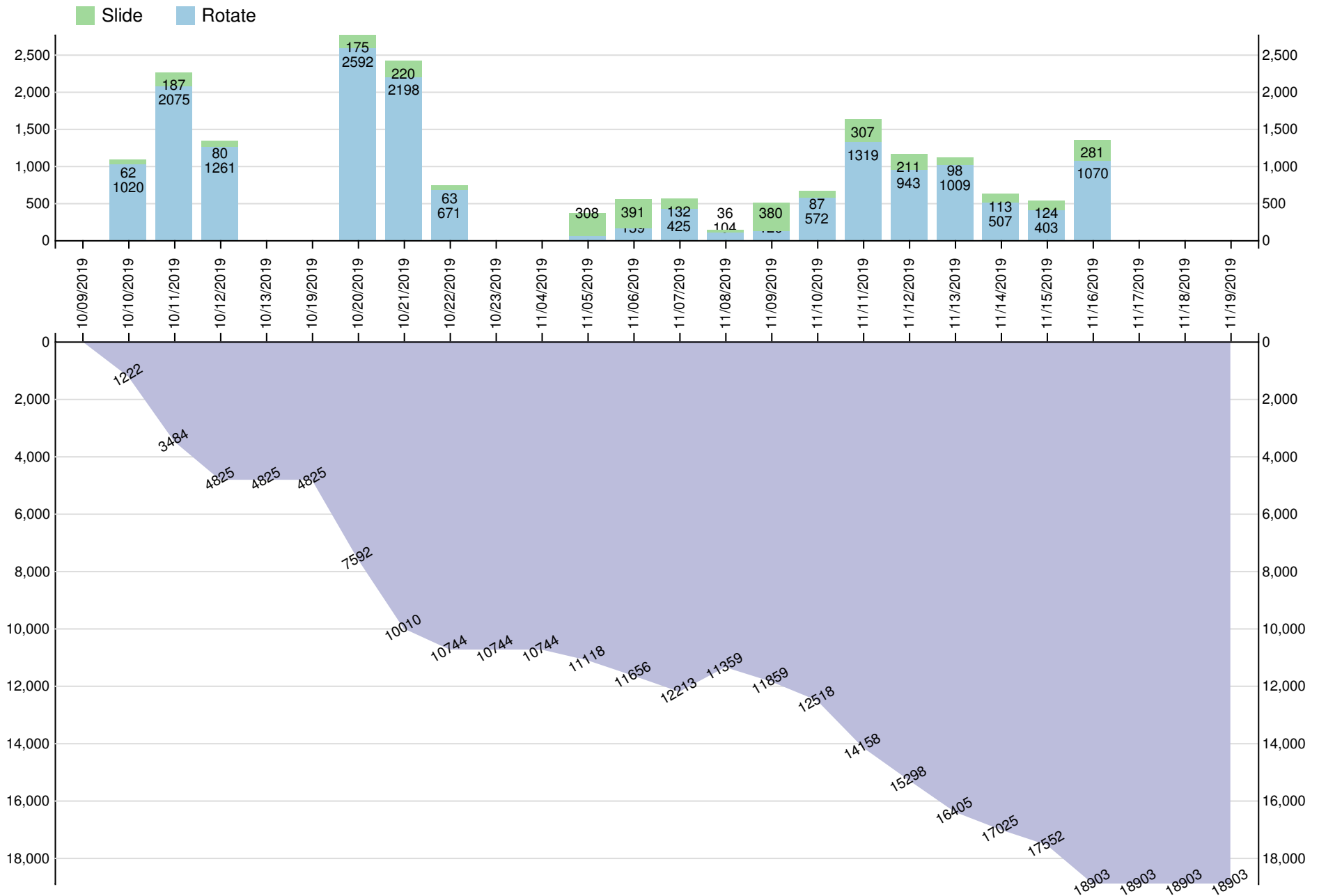
Out: 11/17/2019 10:30



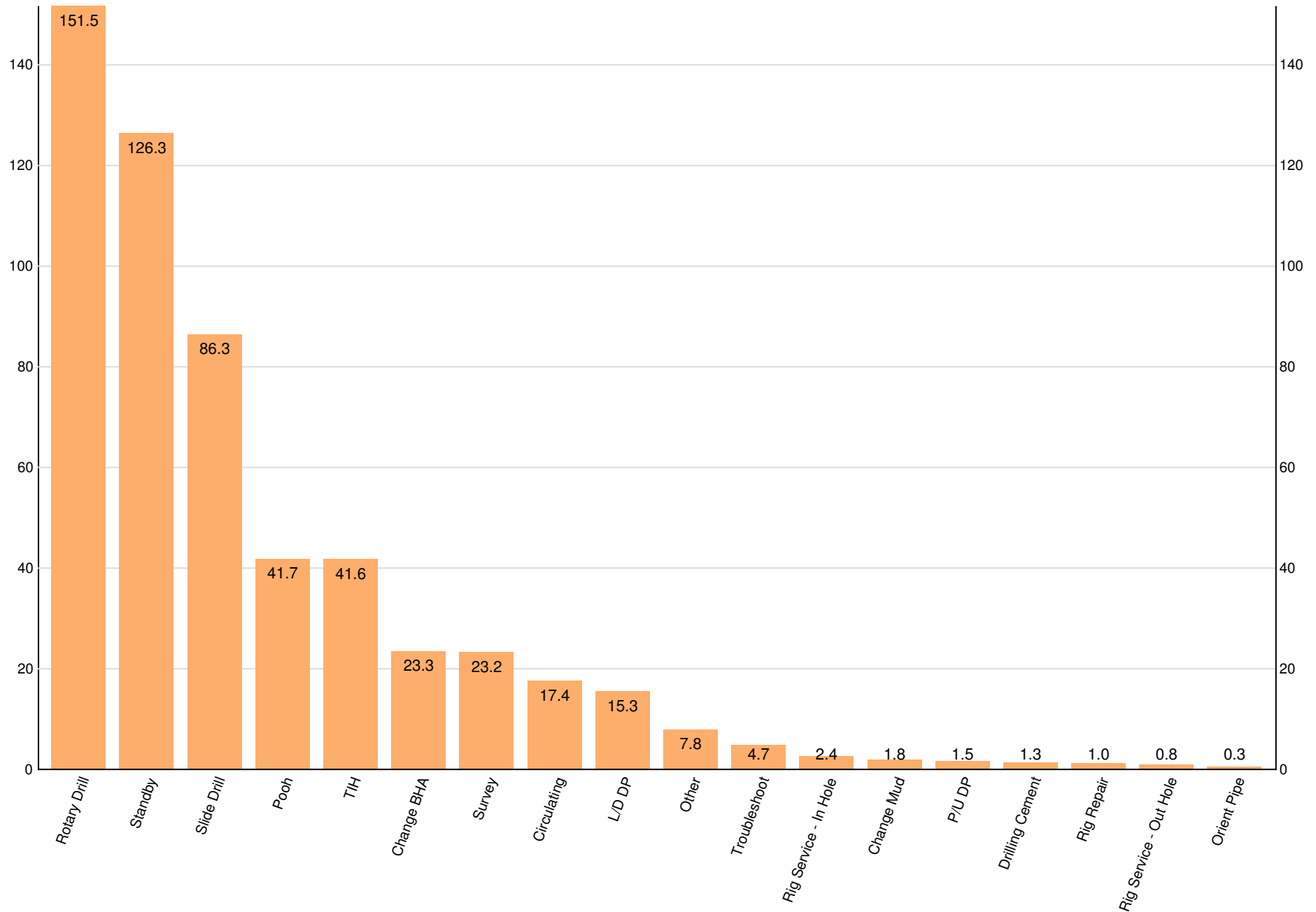
Total



Days vs. Depth



Directional Activity Hours





Proposed vs. As Drilled Lateral 1

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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

Advance Energy Partners, LLC

Dagger Lake 5 State Com 551H

Lea County, New Mexico

Job No. WT-19-158

H&P 389

Plan 1.0



Received to Imaging: 7/26/2024 2:27:31 PM

Received by OCD: 2/21/2022 10:09:00 AM

Page 12 of 12



SITE DETAILS: Dagger Lake 5 State Com 551H

Site Centre Northing: 517116.00
Easting: 767196.50

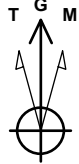
Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid

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

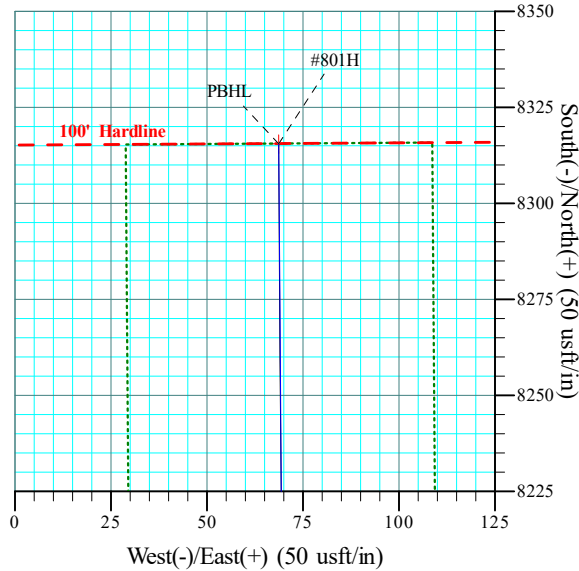
Depth Reference:
3654'GL+25.5 @ 3679.50usft (H&P 389)



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.22°

Magnetic Field
Strength: 48054. InT
Dip Angle: 60.16°
Date: 10/8/2019
Model: MVHD

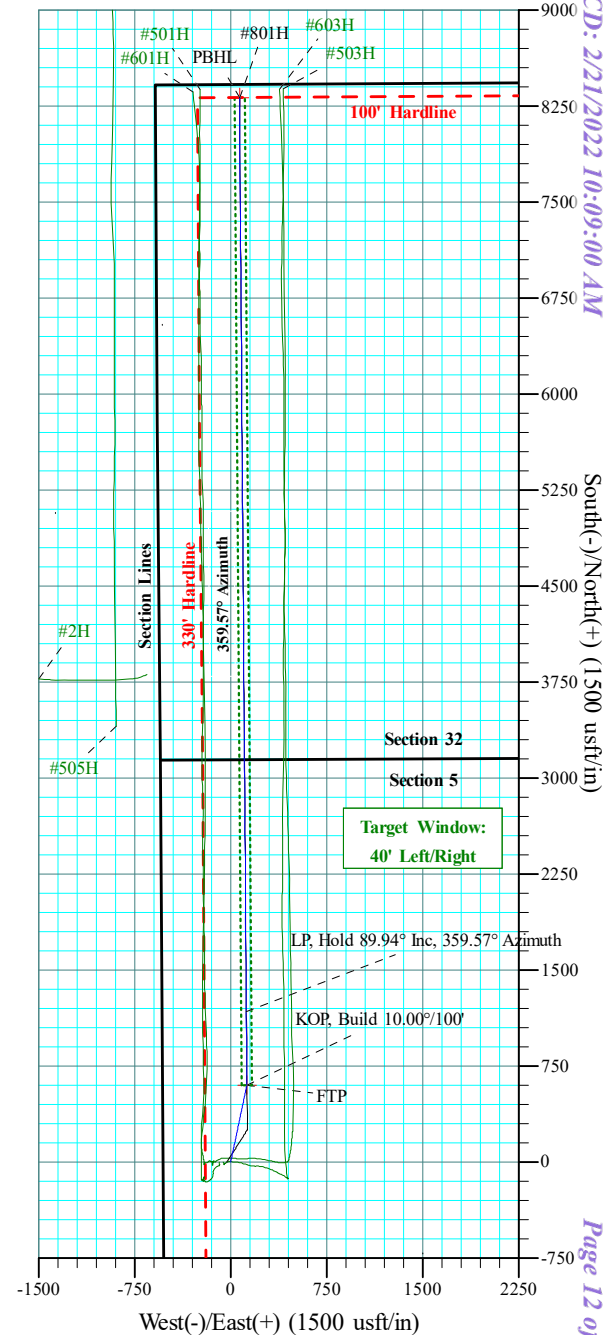
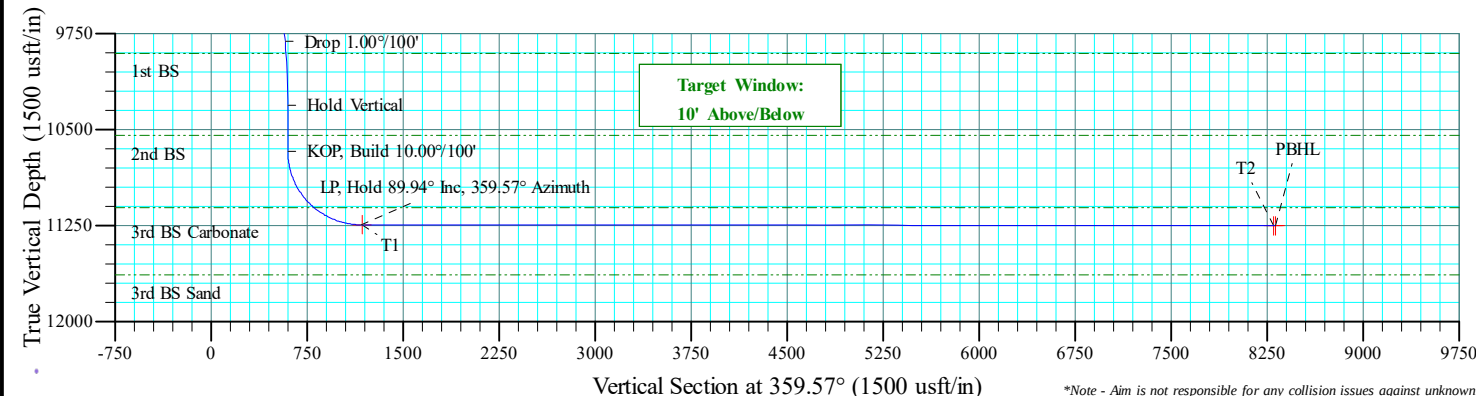
Magnetic North: 6.22° to Grid North



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3300.00	5.00	11.85	3299.37	21.34	4.48	1.00	11.85	21.30	Hold 5.0° Inc, 11.85° Azimuth
4	9839.68	5.00	11.85	9814.16	579.16	121.52	0.00	0.00	578.23	Drop 1.00°/100'
5	10339.68	0.00	0.00	10313.53	600.50	126.00	1.00	180.00	599.54	Hold Vertical
6	10698.76	0.00	0.00	10672.61	600.50	126.00	0.00	0.00	599.54	KOP, Build 10.00°/100'
7	11598.16	89.94	359.57	11245.57	1172.84	121.75	10.00	359.57	1171.90	LP, Hold 89.94° Inc, 359.57° Azimuth
8	18741.02	89.94	359.57	11253.05	8315.50	68.70	0.00	0.00	8314.75	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Dagger551H)	0.00	600.50	126.00	517716.50	767322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H)	11253.05	8315.50	68.70	525431.50	767265.20	32° 26' 32.449 N	103° 36' 3.517 W



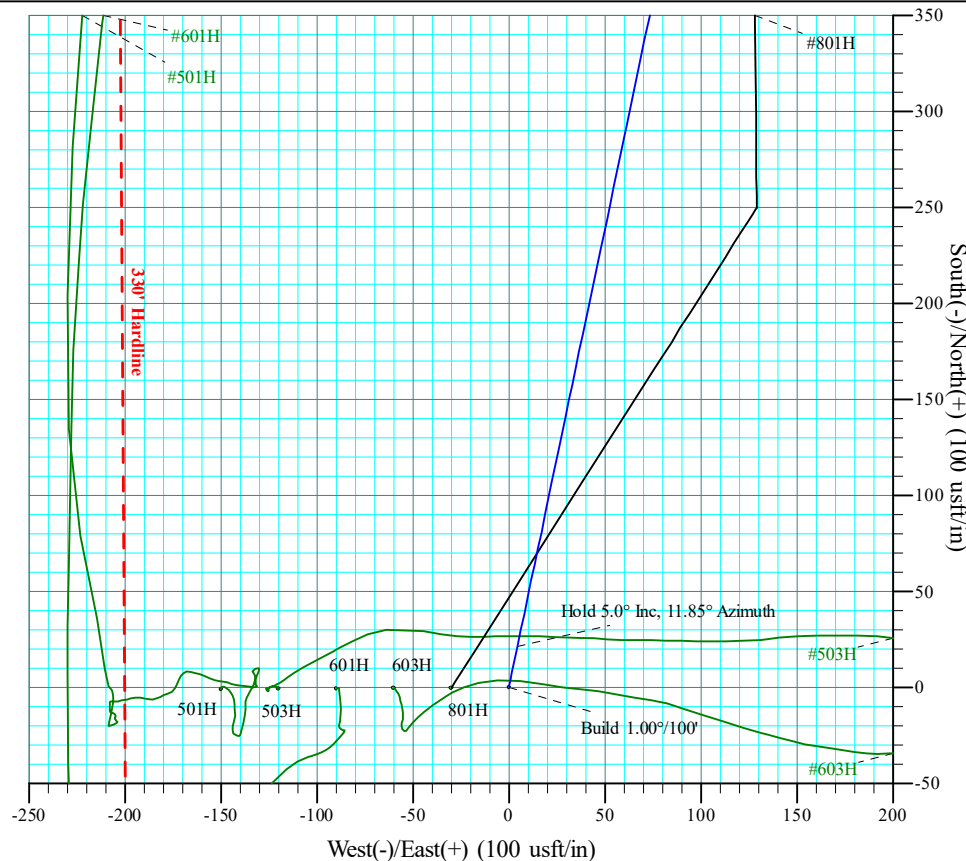
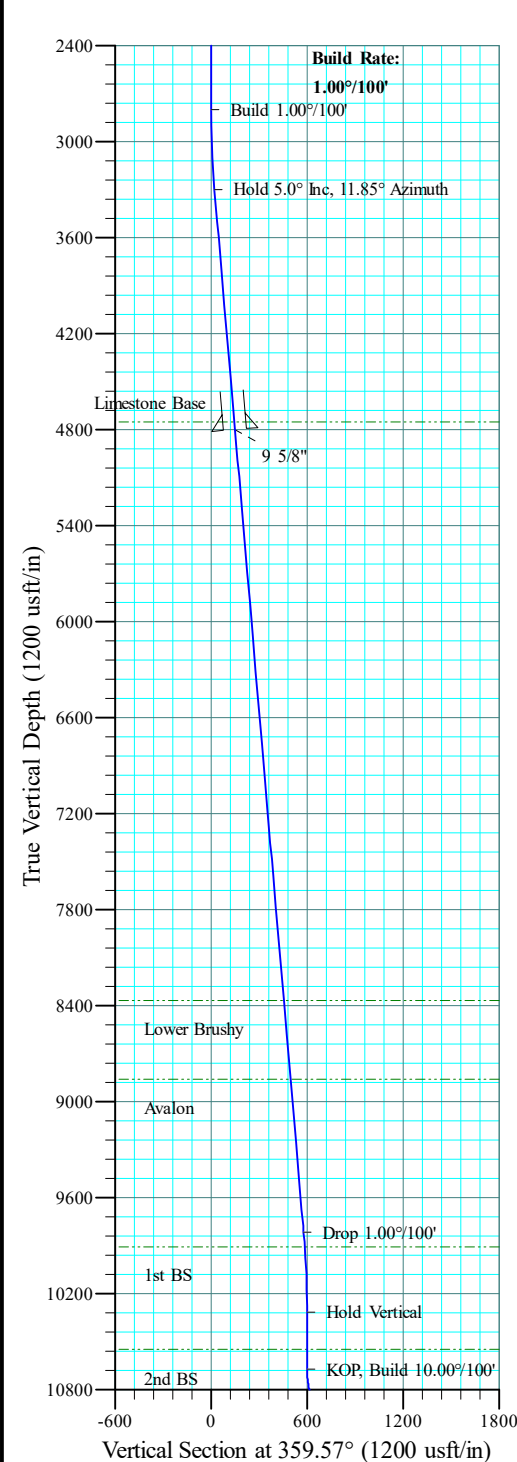
*Note - Aim is not responsible for any collision issues against unknown offset wells.

File: Advance Energy - Dagger Lake 5 State Com #551H Plan 1.0.wpd

Drawn: IG
Date Created: 9/2/2019
Date Revised: 10/8/2019



Dagger Lake 5 State Com 551H
Lea County, New Mexico
Job No. WT-19-158
H&P 389
Plan 1.0



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.22°

Magnetic Field
Strength: 48054.1nT
Dip Angle: 60.16°
Date: 10/8/2019
Model: MVHD

Magnetic North: 6.22° to Grid North

SITE DETAILS: Dagger Lake 5 State Com 551H

Site Centre Northing: 517116.00
Easting: 767196.50

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid

Depth Reference:
3654'GL+25.5 @ 3679.50usft (H&P 389)

SLOTS

Slot Name	+N/-S	+E/-W
2H	3796.84	-625.90
501H	-1.10	-149.80
503H	-0.80	-119.90
551H	0.00	0.00
601H	-0.70	-89.90
603H	-0.50	-59.90
801H	-0.40	-29.90

CASING DETAILS

TVD	MD	Name
1150.00	1150.00	13 3/8"
4800.00	4806.37	9 5/8"

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 (Dagger551H)	0.00	600.50	126.00	517716.50	767322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H)	11253.05	8315.50	68.70	525431.50	767265.20	32° 26' 32.449 N	103° 36' 3.517 W

Drawn By: IG

Date Created: 9/27/2019

Date Revised: 10/8/2019

File: Advance Energy - Dagger Lake 5 State Com #551H Plan 1.0 Surface.wpc

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3300.00	5.00	11.85	3299.37	21.34	4.48	1.00	11.85	21.30	Hold 5.0° Inc, 11.85° Azimuth
4	9839.68	5.00	11.85	9814.16	579.16	121.52	0.00	578.23	578.23	Drop 1.00°/100'
5	10339.68	0.00	0.00	10313.53	600.50	126.00	1.00	180.00	599.54	Hold Vertical
6	10698.76	0.00	0.00	10672.61	600.50	126.00	0.00	599.54	599.54	KOP, Build 10.00°/100'
7	11245.57	89.94	359.57	11245.57	1172.84	121.75	10.00	359.57	1171.90	LP, Hold 89.94° Inc, 359.57° Azimuth
8	18741.02	89.94	359.57	11253.05	8315.50	68.70	0.00	0.00	8314.75	PBHL

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

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 Com 551H											
Site Position:			Northing:			517,116.00 usft			Latitude:			32° 25' 10.173 N					
From:			Map			Easting:			767,196.50 usft			Longitude:			103° 36' 4.983 W		
Position Uncertainty:			0.00 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.39 °		

Well	#551H - Slot 551H					
Well Position	+N/-S	0.00 usft	Northing:	517,116.00 usft	Latitude:	32° 25' 10.173 N
	+E/-W	0.00 usft	Easting:	767,196.50 usft	Longitude:	103° 36' 4.983 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,654.00 usft

Wellbore	Lateral 1r1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	10/8/2019	6.61	60.16	48,054.06708968

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	359.57	

Survey Tool Program	Date	10/8/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,741.02	Plan 1.0 (Lateral 1r1)	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 (Dagger551H)										
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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,083.00	0.00	0.00	1,083.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,150.00	0.00	0.00	1,150.00	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
Build 1.00°/100'									
2,900.00	1.00	11.85	2,899.99	0.85	0.18	0.85	1.00	1.00	0.00
3,000.00	2.00	11.85	2,999.96	3.42	0.72	3.41	1.00	1.00	0.00
3,100.00	3.00	11.85	3,099.86	7.68	1.61	7.67	1.00	1.00	0.00
3,200.00	4.00	11.85	3,199.68	13.66	2.87	13.64	1.00	1.00	0.00
3,300.00	5.00	11.85	3,299.37	21.34	4.48	21.30	1.00	1.00	0.00
Hold 5.0° Inc, 11.85° Azimuth									
3,400.00	5.00	11.85	3,398.99	29.87	6.27	29.82	0.00	0.00	0.00
3,500.00	5.00	11.85	3,498.60	38.40	8.06	38.34	0.00	0.00	0.00
3,600.00	5.00	11.85	3,598.22	46.93	9.85	46.85	0.00	0.00	0.00
3,700.00	5.00	11.85	3,697.84	55.46	11.64	55.37	0.00	0.00	0.00
3,800.00	5.00	11.85	3,797.46	63.99	13.43	63.88	0.00	0.00	0.00
3,900.00	5.00	11.85	3,897.08	72.52	15.22	72.40	0.00	0.00	0.00
4,000.00	5.00	11.85	3,996.70	81.05	17.01	80.92	0.00	0.00	0.00
4,100.00	5.00	11.85	4,096.32	89.58	18.80	89.43	0.00	0.00	0.00
4,200.00	5.00	11.85	4,195.94	98.11	20.59	97.95	0.00	0.00	0.00
4,300.00	5.00	11.85	4,295.56	106.64	22.37	106.47	0.00	0.00	0.00
4,400.00	5.00	11.85	4,395.18	115.17	24.16	114.98	0.00	0.00	0.00
4,500.00	5.00	11.85	4,494.80	123.70	25.95	123.50	0.00	0.00	0.00
4,600.00	5.00	11.85	4,594.42	132.23	27.74	132.01	0.00	0.00	0.00
4,700.00	5.00	11.85	4,694.04	140.76	29.53	140.53	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,759.19	5.00	11.85	4,753.00	145.80	30.59	145.57	0.00	0.00	0.00
Limestone Base									
4,800.00	5.00	11.85	4,793.66	149.29	31.32	149.05	0.00	0.00	0.00
4,806.37	5.00	11.85	4,800.00	149.83	31.44	149.59	0.00	0.00	0.00
9 5/8"									
4,900.00	5.00	11.85	4,893.28	157.82	33.11	157.56	0.00	0.00	0.00
5,000.00	5.00	11.85	4,992.90	166.35	34.90	166.08	0.00	0.00	0.00
5,100.00	5.00	11.85	5,092.52	174.88	36.69	174.59	0.00	0.00	0.00
5,200.00	5.00	11.85	5,192.14	183.40	38.48	183.11	0.00	0.00	0.00
5,300.00	5.00	11.85	5,291.76	191.93	40.27	191.63	0.00	0.00	0.00
5,400.00	5.00	11.85	5,391.37	200.46	42.06	200.14	0.00	0.00	0.00
5,500.00	5.00	11.85	5,490.99	208.99	43.85	208.66	0.00	0.00	0.00
5,600.00	5.00	11.85	5,590.61	217.52	45.64	217.18	0.00	0.00	0.00
5,700.00	5.00	11.85	5,690.23	226.05	47.43	225.69	0.00	0.00	0.00
5,800.00	5.00	11.85	5,789.85	234.58	49.22	234.21	0.00	0.00	0.00
5,900.00	5.00	11.85	5,889.47	243.11	51.01	242.72	0.00	0.00	0.00
6,000.00	5.00	11.85	5,989.09	251.64	52.80	251.24	0.00	0.00	0.00
6,100.00	5.00	11.85	6,088.71	260.17	54.59	259.76	0.00	0.00	0.00
6,200.00	5.00	11.85	6,188.33	268.70	56.38	268.27	0.00	0.00	0.00
6,300.00	5.00	11.85	6,287.95	277.23	58.17	276.79	0.00	0.00	0.00
6,400.00	5.00	11.85	6,387.57	285.76	59.96	285.30	0.00	0.00	0.00
6,500.00	5.00	11.85	6,487.19	294.29	61.75	293.82	0.00	0.00	0.00
6,600.00	5.00	11.85	6,586.81	302.82	63.54	302.34	0.00	0.00	0.00
6,700.00	5.00	11.85	6,686.43	311.35	65.33	310.85	0.00	0.00	0.00
6,800.00	5.00	11.85	6,786.05	319.88	67.12	319.37	0.00	0.00	0.00
6,900.00	5.00	11.85	6,885.67	328.41	68.91	327.89	0.00	0.00	0.00
7,000.00	5.00	11.85	6,985.29	336.94	70.70	336.40	0.00	0.00	0.00
7,100.00	5.00	11.85	7,084.91	345.47	72.49	344.92	0.00	0.00	0.00
7,200.00	5.00	11.85	7,184.53	354.00	74.28	353.43	0.00	0.00	0.00
7,300.00	5.00	11.85	7,284.14	362.53	76.07	361.95	0.00	0.00	0.00
7,400.00	5.00	11.85	7,383.76	371.06	77.86	370.47	0.00	0.00	0.00
7,500.00	5.00	11.85	7,483.38	379.59	79.65	378.98	0.00	0.00	0.00
7,600.00	5.00	11.85	7,583.00	388.12	81.44	387.50	0.00	0.00	0.00
7,700.00	5.00	11.85	7,682.62	396.65	83.23	396.01	0.00	0.00	0.00
7,800.00	5.00	11.85	7,782.24	405.18	85.02	404.53	0.00	0.00	0.00
7,900.00	5.00	11.85	7,881.86	413.71	86.81	413.05	0.00	0.00	0.00
8,000.00	5.00	11.85	7,981.48	422.24	88.60	421.56	0.00	0.00	0.00
8,100.00	5.00	11.85	8,081.10	430.77	90.39	430.08	0.00	0.00	0.00
8,200.00	5.00	11.85	8,180.72	439.30	92.18	438.60	0.00	0.00	0.00
8,300.00	5.00	11.85	8,280.34	447.83	93.97	447.11	0.00	0.00	0.00
8,388.00	5.00	11.85	8,368.00	455.34	95.54	454.61	0.00	0.00	0.00
Lower Brushy									
8,400.00	5.00	11.85	8,379.96	456.36	95.76	455.63	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.00	5.00	11.85	8,479.58	464.89	97.55	464.14	0.00	0.00	0.00
8,600.00	5.00	11.85	8,579.20	473.42	99.34	472.66	0.00	0.00	0.00
8,700.00	5.00	11.85	8,678.82	481.95	101.12	481.18	0.00	0.00	0.00
8,800.00	5.00	11.85	8,778.44	490.48	102.91	489.69	0.00	0.00	0.00
8,879.87	5.00	11.85	8,858.00	497.29	104.34	496.49	0.00	0.00	0.00
Avalon									
8,900.00	5.00	11.85	8,878.06	499.01	104.70	498.21	0.00	0.00	0.00
9,000.00	5.00	11.85	8,977.68	507.54	106.49	506.72	0.00	0.00	0.00
9,100.00	5.00	11.85	9,077.30	516.07	108.28	515.24	0.00	0.00	0.00
9,200.00	5.00	11.85	9,176.91	524.60	110.07	523.76	0.00	0.00	0.00
9,300.00	5.00	11.85	9,276.53	533.13	111.86	532.27	0.00	0.00	0.00
9,400.00	5.00	11.85	9,376.15	541.66	113.65	540.79	0.00	0.00	0.00
9,500.00	5.00	11.85	9,475.77	550.19	115.44	549.31	0.00	0.00	0.00
9,600.00	5.00	11.85	9,575.39	558.72	117.23	557.82	0.00	0.00	0.00
9,700.00	5.00	11.85	9,675.01	567.25	119.02	566.34	0.00	0.00	0.00
9,800.00	5.00	11.85	9,774.63	575.78	120.81	574.85	0.00	0.00	0.00
9,839.68	5.00	11.85	9,814.16	579.16	121.52	578.23	0.00	0.00	0.00
Drop 1.00°/100'									
9,900.00	4.40	11.85	9,874.28	584.00	122.54	583.06	1.00	-1.00	0.00
9,933.82	4.06	11.85	9,908.00	586.44	123.05	585.50	1.00	-1.00	0.00
1st BS									
10,000.00	3.40	11.85	9,974.04	590.65	123.93	589.70	1.00	-1.00	0.00
10,100.00	2.40	11.85	10,073.92	595.59	124.97	594.64	1.00	-1.00	0.00
10,200.00	1.40	11.85	10,173.86	598.83	125.65	597.87	1.00	-1.00	0.00
10,300.00	0.40	11.85	10,273.85	600.37	125.97	599.40	1.00	-1.00	0.00
10,339.68	0.00	0.00	10,313.53	600.50	126.00	599.54	1.00	-1.00	0.00
Hold Vertical									
10,400.00	0.00	0.00	10,373.85	600.50	126.00	599.54	0.00	0.00	0.00
10,500.00	0.00	0.00	10,473.85	600.50	126.00	599.54	0.00	0.00	0.00
10,574.15	0.00	0.00	10,548.00	600.50	126.00	599.54	0.00	0.00	0.00
2nd BS									
10,600.00	0.00	0.00	10,573.85	600.50	126.00	599.54	0.00	0.00	0.00
10,698.76	0.00	0.00	10,672.61	600.50	126.00	599.54	0.00	0.00	0.00
KOP, Build 10.00°/100'									
10,700.00	0.12	359.57	10,673.85	600.50	126.00	599.54	10.00	10.00	0.00
10,750.00	5.12	359.57	10,723.78	602.79	125.98	601.83	10.00	10.00	0.00
10,800.00	10.12	359.57	10,773.32	609.42	125.93	608.46	10.00	10.00	0.00
10,850.00	15.12	359.57	10,822.10	620.34	125.85	619.38	10.00	10.00	0.00
10,900.00	20.12	359.57	10,869.73	635.48	125.74	634.51	10.00	10.00	0.00
10,950.00	25.12	359.57	10,915.87	654.70	125.60	653.74	10.00	10.00	0.00
11,000.00	30.12	359.57	10,960.16	677.88	125.43	676.92	10.00	10.00	0.00
11,050.00	35.12	359.57	11,002.26	704.83	125.23	703.87	10.00	10.00	0.00
11,100.00	40.12	359.57	11,041.85	735.34	125.00	734.38	10.00	10.00	0.00
11,150.00	45.12	359.57	11,078.63	769.19	124.75	768.23	10.00	10.00	0.00
11,200.00	50.12	359.57	11,112.31	806.11	124.47	805.15	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,202.64	50.39	359.57	11,114.00	808.14	124.46	807.18	10.00	10.00	0.00
3rd BS Carbonate									
11,250.00	55.12	359.57	11,142.66	845.83	124.18	844.87	10.00	10.00	0.00
11,300.00	60.12	359.57	11,169.42	888.04	123.86	887.09	10.00	10.00	0.00
11,350.00	65.12	359.57	11,192.41	932.43	123.53	931.47	10.00	10.00	0.00
11,400.00	70.12	359.57	11,211.44	978.65	123.19	977.69	10.00	10.00	0.00
11,450.00	75.12	359.57	11,226.36	1,026.35	122.84	1,025.40	10.00	10.00	0.00
11,500.00	80.12	359.57	11,237.08	1,075.17	122.47	1,074.22	10.00	10.00	0.00
11,550.00	85.12	359.57	11,243.49	1,124.74	122.11	1,123.79	10.00	10.00	0.00
11,598.16	89.94	359.57	11,245.57	1,172.84	121.75	1,171.90	10.00	10.00	0.00
LP, Hold 89.94° Inc, 359.57° Azimuth									
11,600.00	89.94	359.57	11,245.57	1,174.68	121.74	1,173.73	0.00	0.00	0.00
11,603.85	89.94	359.57	11,245.57	1,178.53	121.71	1,177.58	0.00	0.00	0.00
T1 (Dagger551H)									
11,700.00	89.94	359.57	11,245.67	1,274.67	120.99	1,273.73	0.00	0.00	0.00
11,800.00	89.94	359.57	11,245.78	1,374.67	120.25	1,373.73	0.00	0.00	0.00
11,900.00	89.94	359.57	11,245.88	1,474.67	119.51	1,473.73	0.00	0.00	0.00
12,000.00	89.94	359.57	11,245.99	1,574.67	118.76	1,573.73	0.00	0.00	0.00
12,100.00	89.94	359.57	11,246.09	1,674.66	118.02	1,673.73	0.00	0.00	0.00
12,200.00	89.94	359.57	11,246.20	1,774.66	117.28	1,773.73	0.00	0.00	0.00
12,300.00	89.94	359.57	11,246.30	1,874.66	116.54	1,873.73	0.00	0.00	0.00
12,400.00	89.94	359.57	11,246.41	1,974.66	115.79	1,973.73	0.00	0.00	0.00
12,500.00	89.94	359.57	11,246.51	2,074.65	115.05	2,073.73	0.00	0.00	0.00
12,600.00	89.94	359.57	11,246.62	2,174.65	114.31	2,173.73	0.00	0.00	0.00
12,700.00	89.94	359.57	11,246.72	2,274.65	113.57	2,273.73	0.00	0.00	0.00
12,800.00	89.94	359.57	11,246.83	2,374.64	112.82	2,373.73	0.00	0.00	0.00
12,900.00	89.94	359.57	11,246.93	2,474.64	112.08	2,473.73	0.00	0.00	0.00
13,000.00	89.94	359.57	11,247.04	2,574.64	111.34	2,573.73	0.00	0.00	0.00
13,100.00	89.94	359.57	11,247.14	2,674.64	110.60	2,673.73	0.00	0.00	0.00
13,200.00	89.94	359.57	11,247.25	2,774.63	109.85	2,773.73	0.00	0.00	0.00
13,300.00	89.94	359.57	11,247.35	2,874.63	109.11	2,873.73	0.00	0.00	0.00
13,400.00	89.94	359.57	11,247.46	2,974.63	108.37	2,973.73	0.00	0.00	0.00
13,500.00	89.94	359.57	11,247.56	3,074.62	107.62	3,073.73	0.00	0.00	0.00
13,600.00	89.94	359.57	11,247.66	3,174.62	106.88	3,173.73	0.00	0.00	0.00
13,700.00	89.94	359.57	11,247.77	3,274.62	106.14	3,273.73	0.00	0.00	0.00
13,800.00	89.94	359.57	11,247.87	3,374.62	105.40	3,373.73	0.00	0.00	0.00
13,900.00	89.94	359.57	11,247.98	3,474.61	104.65	3,473.73	0.00	0.00	0.00
14,000.00	89.94	359.57	11,248.08	3,574.61	103.91	3,573.73	0.00	0.00	0.00
14,100.00	89.94	359.57	11,248.19	3,674.61	103.17	3,673.73	0.00	0.00	0.00
14,200.00	89.94	359.57	11,248.29	3,774.60	102.43	3,773.73	0.00	0.00	0.00
14,300.00	89.94	359.57	11,248.40	3,874.60	101.68	3,873.73	0.00	0.00	0.00
14,400.00	89.94	359.57	11,248.50	3,974.60	100.94	3,973.73	0.00	0.00	0.00
14,500.00	89.94	359.57	11,248.61	4,074.60	100.20	4,073.73	0.00	0.00	0.00
14,600.00	89.94	359.57	11,248.71	4,174.59	99.45	4,173.73	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,700.00	89.94	359.57	11,248.82	4,274.59	98.71	4,273.73	0.00	0.00	0.00
14,800.00	89.94	359.57	11,248.92	4,374.59	97.97	4,373.73	0.00	0.00	0.00
14,900.00	89.94	359.57	11,249.03	4,474.59	97.23	4,473.73	0.00	0.00	0.00
15,000.00	89.94	359.57	11,249.13	4,574.58	96.48	4,573.73	0.00	0.00	0.00
15,100.00	89.94	359.57	11,249.24	4,674.58	95.74	4,673.73	0.00	0.00	0.00
15,200.00	89.94	359.57	11,249.34	4,774.58	95.00	4,773.73	0.00	0.00	0.00
15,300.00	89.94	359.57	11,249.45	4,874.57	94.26	4,873.73	0.00	0.00	0.00
15,400.00	89.94	359.57	11,249.55	4,974.57	93.51	4,973.73	0.00	0.00	0.00
15,500.00	89.94	359.57	11,249.66	5,074.57	92.77	5,073.73	0.00	0.00	0.00
15,600.00	89.94	359.57	11,249.76	5,174.57	92.03	5,173.73	0.00	0.00	0.00
15,700.00	89.94	359.57	11,249.86	5,274.56	91.29	5,273.73	0.00	0.00	0.00
15,800.00	89.94	359.57	11,249.97	5,374.56	90.54	5,373.73	0.00	0.00	0.00
15,900.00	89.94	359.57	11,250.07	5,474.56	89.80	5,473.73	0.00	0.00	0.00
16,000.00	89.94	359.57	11,250.18	5,574.55	89.06	5,573.73	0.00	0.00	0.00
16,100.00	89.94	359.57	11,250.28	5,674.55	88.31	5,673.73	0.00	0.00	0.00
16,200.00	89.94	359.57	11,250.39	5,774.55	87.57	5,773.73	0.00	0.00	0.00
16,300.00	89.94	359.57	11,250.49	5,874.55	86.83	5,873.73	0.00	0.00	0.00
16,400.00	89.94	359.57	11,250.60	5,974.54	86.09	5,973.73	0.00	0.00	0.00
16,500.00	89.94	359.57	11,250.70	6,074.54	85.34	6,073.73	0.00	0.00	0.00
16,600.00	89.94	359.57	11,250.81	6,174.54	84.60	6,173.73	0.00	0.00	0.00
16,700.00	89.94	359.57	11,250.91	6,274.53	83.86	6,273.73	0.00	0.00	0.00
16,800.00	89.94	359.57	11,251.02	6,374.53	83.12	6,373.73	0.00	0.00	0.00
16,900.00	89.94	359.57	11,251.12	6,474.53	82.37	6,473.73	0.00	0.00	0.00
17,000.00	89.94	359.57	11,251.23	6,574.53	81.63	6,573.73	0.00	0.00	0.00
17,100.00	89.94	359.57	11,251.33	6,674.52	80.89	6,673.73	0.00	0.00	0.00
17,200.00	89.94	359.57	11,251.44	6,774.52	80.14	6,773.73	0.00	0.00	0.00
17,300.00	89.94	359.57	11,251.54	6,874.52	79.40	6,873.73	0.00	0.00	0.00
17,400.00	89.94	359.57	11,251.65	6,974.51	78.66	6,973.73	0.00	0.00	0.00
17,500.00	89.94	359.57	11,251.75	7,074.51	77.92	7,073.73	0.00	0.00	0.00
17,600.00	89.94	359.57	11,251.85	7,174.51	77.17	7,173.73	0.00	0.00	0.00
17,700.00	89.94	359.57	11,251.96	7,274.51	76.43	7,273.73	0.00	0.00	0.00
17,800.00	89.94	359.57	11,252.06	7,374.50	75.69	7,373.73	0.00	0.00	0.00
17,900.00	89.94	359.57	11,252.17	7,474.50	74.95	7,473.73	0.00	0.00	0.00
18,000.00	89.94	359.57	11,252.27	7,574.50	74.20	7,573.73	0.00	0.00	0.00
18,100.00	89.94	359.57	11,252.38	7,674.50	73.46	7,673.73	0.00	0.00	0.00
18,200.00	89.94	359.57	11,252.48	7,774.49	72.72	7,773.73	0.00	0.00	0.00
18,300.00	89.94	359.57	11,252.59	7,874.49	71.98	7,873.73	0.00	0.00	0.00
18,400.00	89.94	359.57	11,252.69	7,974.49	71.23	7,973.73	0.00	0.00	0.00
18,500.00	89.94	359.57	11,252.80	8,074.48	70.49	8,073.73	0.00	0.00	0.00
18,600.00	89.94	359.57	11,252.90	8,174.48	69.75	8,173.73	0.00	0.00	0.00
18,700.00	89.94	359.57	11,253.01	8,274.48	69.00	8,273.73	0.00	0.00	0.00
18,725.35	89.94	359.57	11,253.03	8,299.83	68.82	8,299.08	0.00	0.00	0.00
T2 (Dagger551H)									

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,741.02	89.94	359.57	11,253.05	8,315.50	68.70	8,314.75	0.00	0.00	0.00
PBHL - PBHL r1 (Dagger551H)									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Dagger551H) - plan misses target center by 613.58usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	600.50	126.00	517,716.50	767,322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H) - plan hits target center - Point	0.00	0.00	11,253.05	8,315.50	68.70	525,431.50	767,265.20	32° 26' 32.449 N	103° 36' 3.517 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,150.00	1,150.00	13 3/8"	13-3/8	17-1/2	
4,806.37	4,800.00	9 5/8"	9-5/8	12-1/4	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,083.00	1,083.00	Rustler		0.00	
4,759.19	4,753.00	Limestone Base		0.00	
8,388.00	8,368.00	Lower Brushy		0.00	
8,879.87	8,858.00	Avalon		0.00	
9,933.82	9,908.00	1st BS		0.00	
10,574.15	10,548.00	2nd BS		0.00	
11,202.64	11,114.00	3rd BS Carbonate		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
2800	2800	0	0	Build 1.00°/100'
3300	3299	21	4	Hold 5.0° Inc, 11.85° Azimuth
9840	9814	579	122	Drop 1.00°/100'
10,340	10,314	600	126	Hold Vertical
10,699	10,673	600	126	KOP, Build 10.00°/100'
11,598	11,246	1173	122	LP, Hold 89.94° Inc, 359.57° Azimuth
18,741	11,253	8315	69	PBHL

SITE DETAILS: Dagger Lake 5 State Com 551H

Site Centre Northing: 517116.00
Easting: 767196.50

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid

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

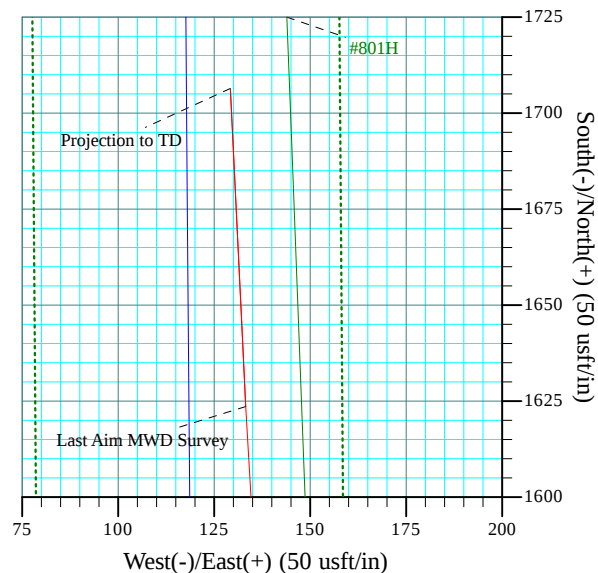
Depth Reference:
3654'GL+25.5 @ 3679.50usft (H&P 389)



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.22°

Magnetic Field
Strength: 48054.1nT
Dip Angle: 60.16°
Date: 10/8/2019
Model: MVHD

Magnetic North: 6.22° to Grid North

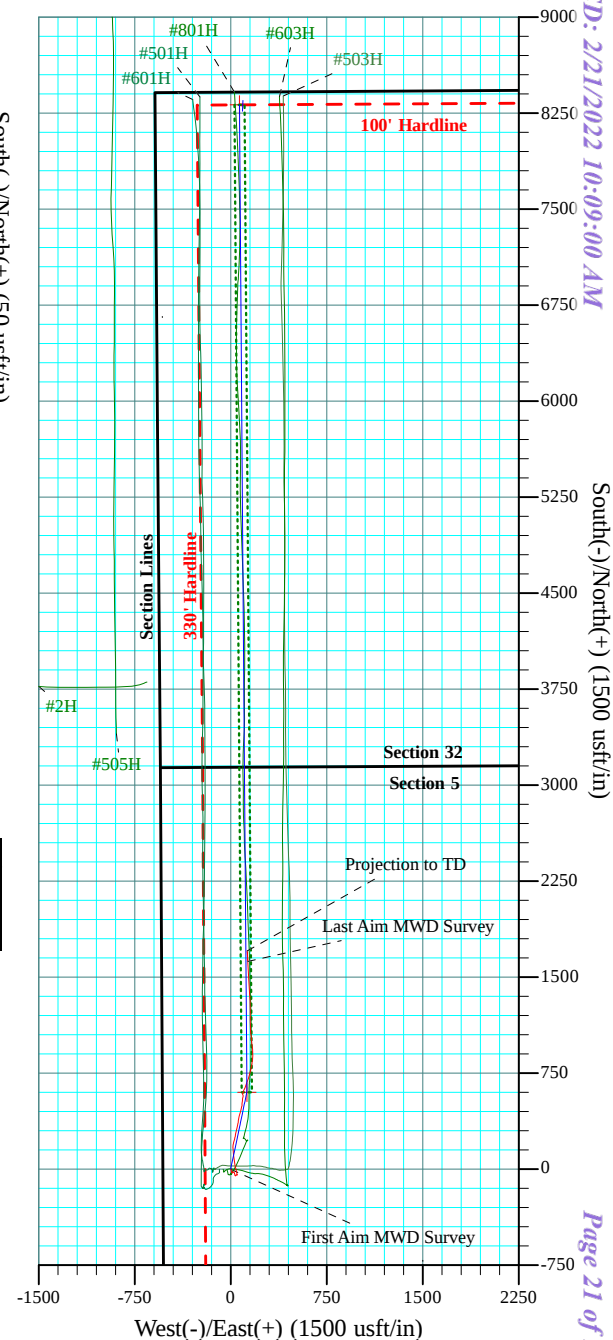
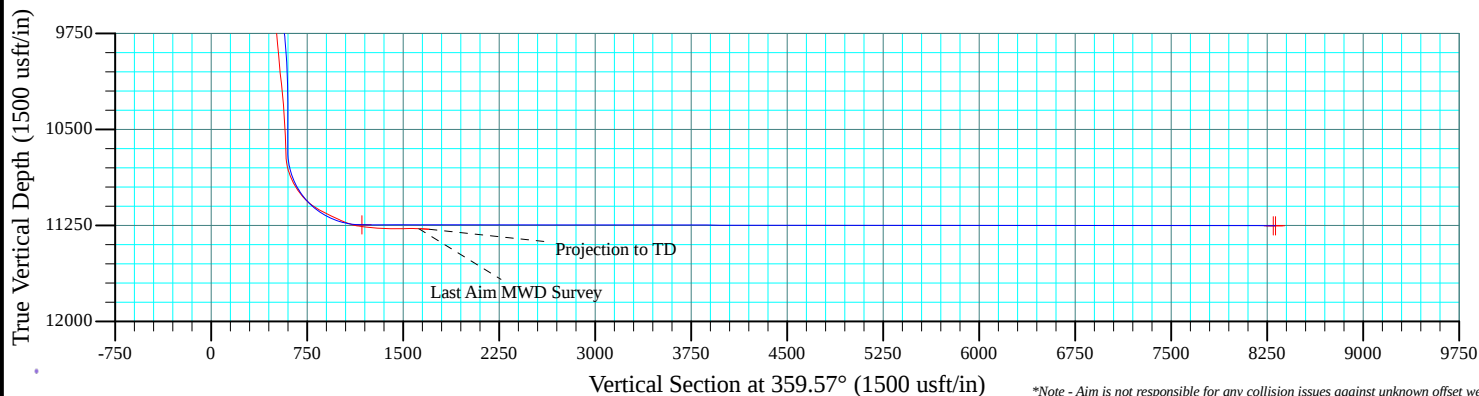


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	12077.00	87.09	357.26	11276.76	1623.63	133.20	0.00	0.00	1622.59	Last Aim MWD Survey
2	12160.00	87.09	357.26	11280.97	1706.43	129.24	0.00	0.00	1705.41	Projection to TD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Dagger551H)	0.00	600.50	126.00	517716.50	767322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H)	11253.05	8315.50	68.70	525431.50	767265.20	32° 26' 32.449 N	103° 36' 3.517 W



Received by OCD: 2/21/2022 10:09:00 AM

South(-)/North(+) (1500 usft/in,

Page 21 of 164

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

Drawn By: LM
Date Created: 9/27/2019
Date Revised: 11/14/2019
File: Advance Energy - Dagger Lake 5 State Com #551H L1 Plan 1.0 Final PVA.wpc



Proposed vs. As Drilled Lateral 2

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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

Advance Energy Partners, LLC

Dagger Lake 5 State Com 551H

Lea County, New Mexico

Job No. WT-19-158

H&P 389

Plan 1.0



Received to Imaging: 7/26/2024 2:27:31 PM

Received by OCD: 2/21/2022 10:09:00 AM

Page 23 of 27



SITE DETAILS: Dagger Lake 5 State Com 551H

Site Centre Northing: 517116.00
Easting: 767196.50

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid

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

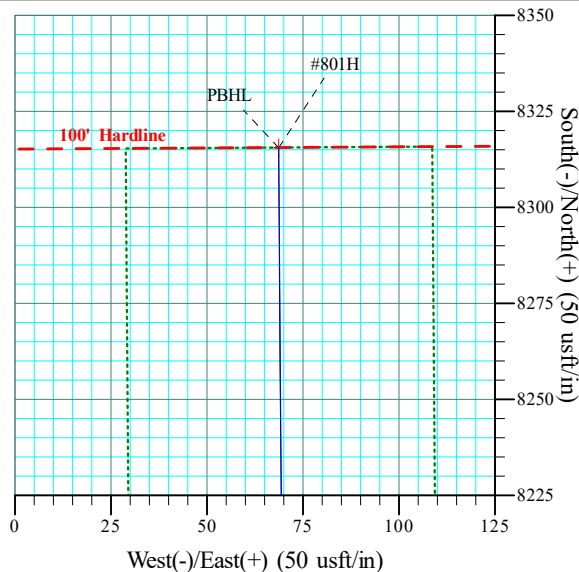
Depth Reference:
3654'GL+25.5 @ 3679.50usft (H&P 389)



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.22°

Magnetic Field
Strength: 48054. InT
Dip Angle: 60.16°
Date: 10/8/2019
Model: MVHD

Magnetic North: 6.22° to Grid North

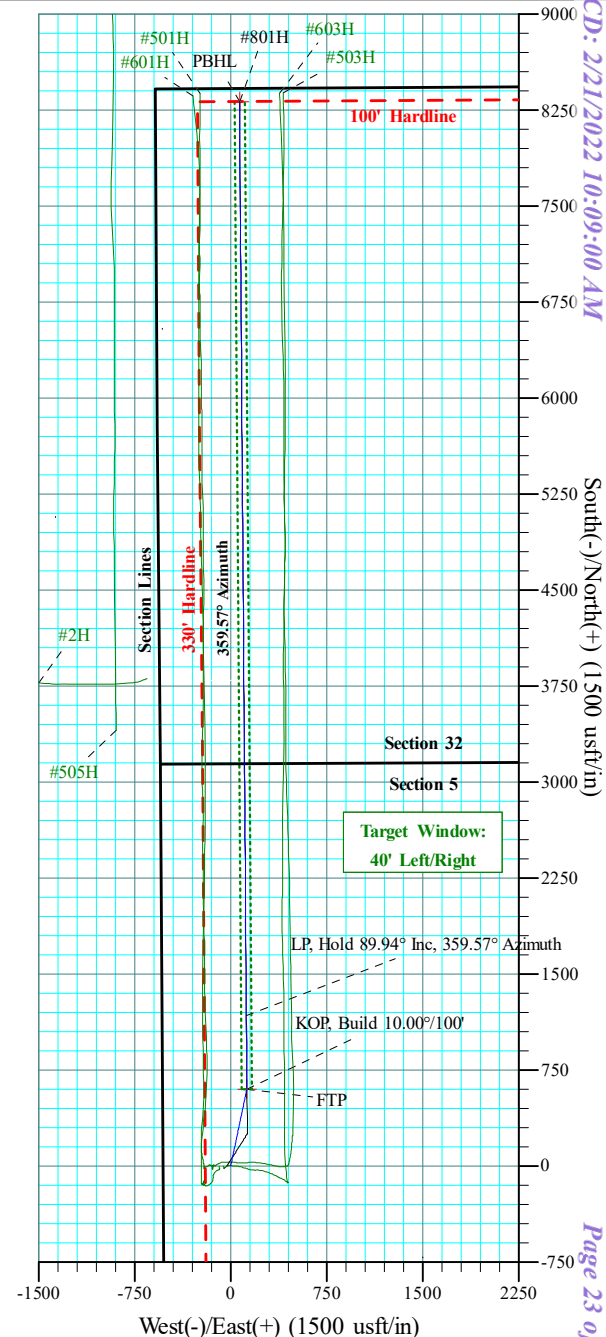
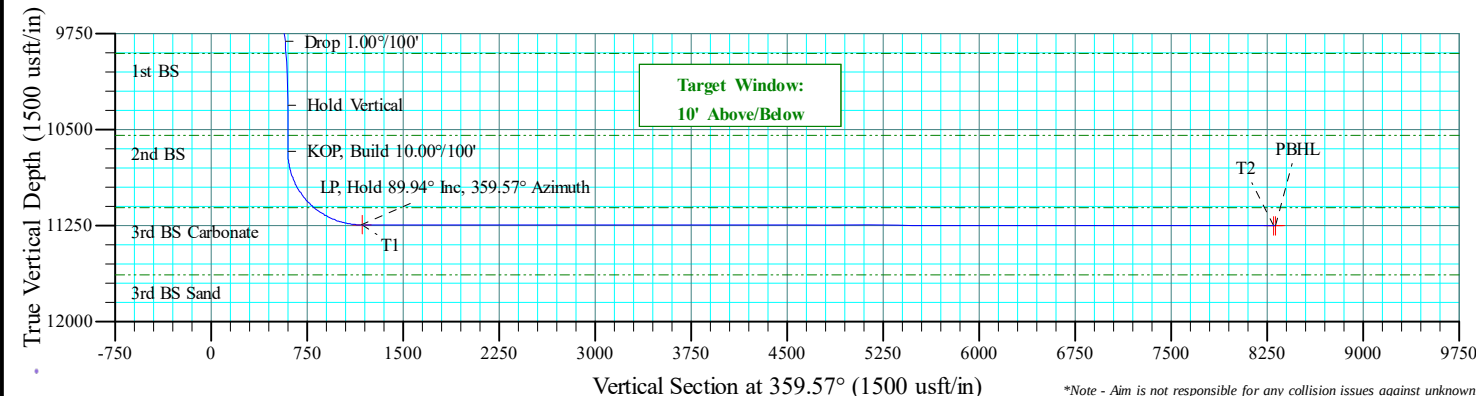


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3300.00	5.00	11.85	3299.37	21.34	4.48	1.00	11.85	21.30	Hold 5.0° Inc, 11.85° Azimuth
4	9839.68	5.00	11.85	9814.16	579.16	121.52	0.00	0.00	578.23	Drop 1.00°/100'
5	10339.68	0.00	0.00	10313.53	600.50	126.00	1.00	180.00	599.54	Hold Vertical
6	10698.76	0.00	0.00	10672.61	600.50	126.00	0.00	0.00	599.54	KOP, Build 10.00°/100'
7	11598.16	89.94	359.57	11245.57	1172.84	121.75	10.00	359.57	1171.90	LP, Hold 89.94° Inc, 359.57° Azimuth
8	18741.02	89.94	359.57	11253.05	8315.50	68.70	0.00	0.00	8314.75	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Dagger551H)	0.00	600.50	126.00	517716.50	767322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H)	11253.05	8315.50	68.70	525431.50	767265.20	32° 26' 32.449 N	103° 36' 3.517 W



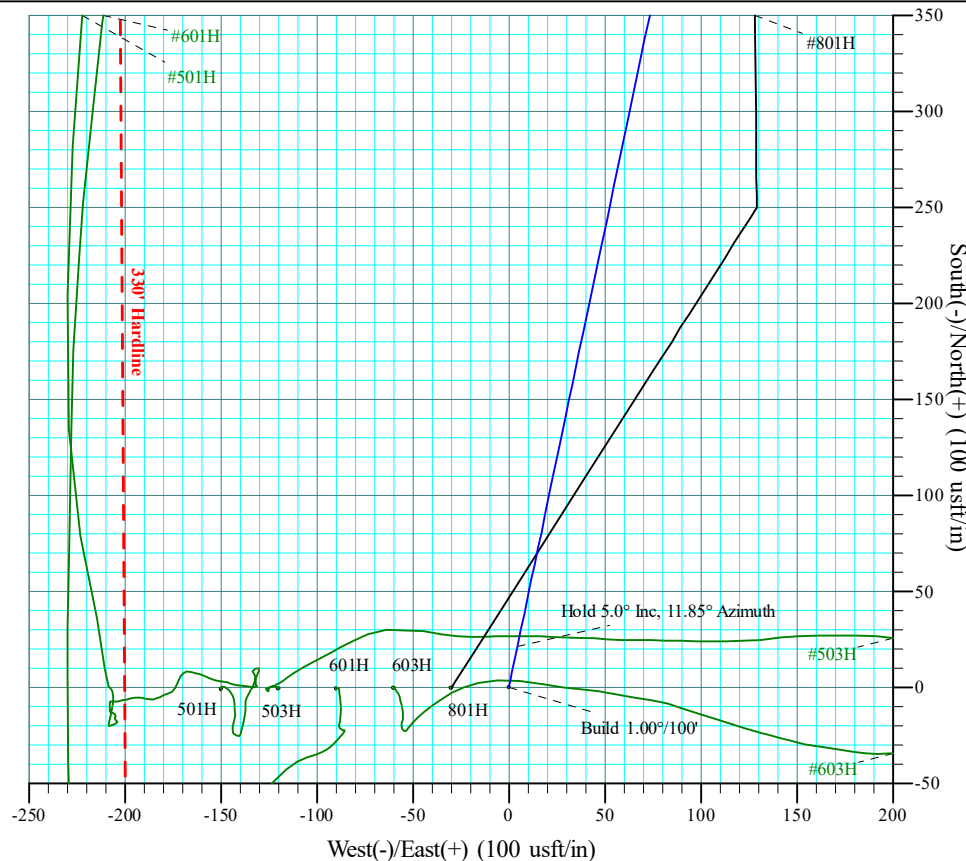
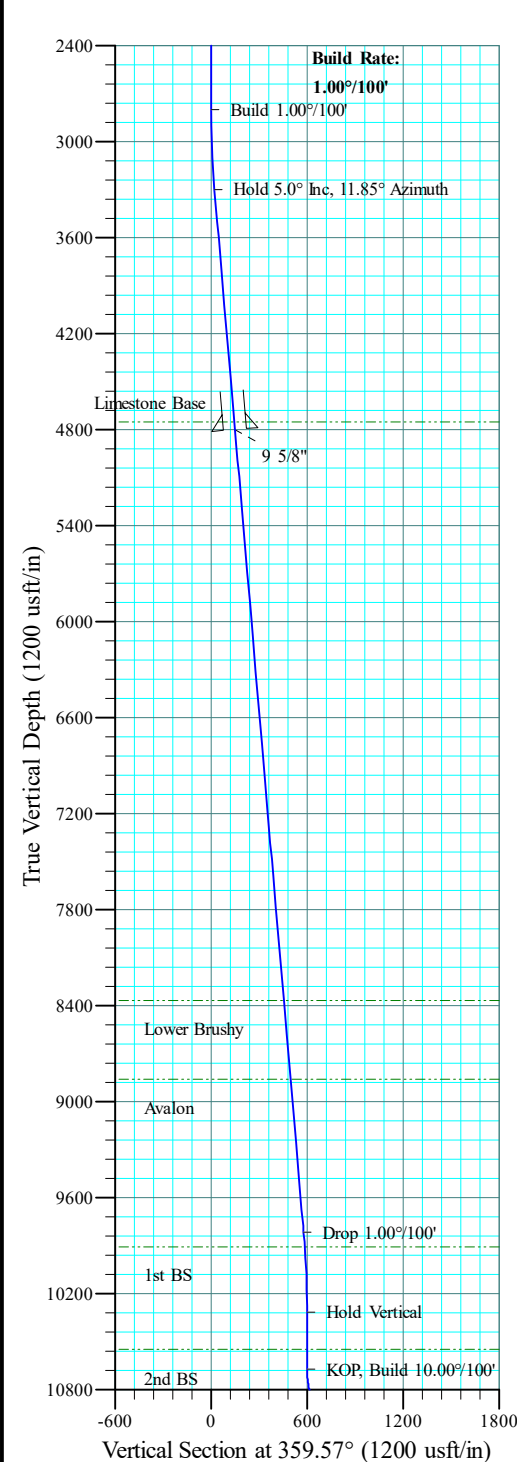
*Note - Aim is not responsible for any collision issues against unknown offset wells.

File: Advance Energy - Dagger Lake 5 State Com #551H Plan 1.0.wpd

Drawn: IG
Date Created: 9/2/2019
Date Revised: 10/8/2019



Dagger Lake 5 State Com 551H
Lea County, New Mexico
Job No. WT-19-158
H&P 389
Plan 1.0



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.22°

Magnetic Field
Strength: 48054.1nT
Dip Angle: 60.16°
Date: 10/8/2019
Model: MVHD

Magnetic North: 6.22° to Grid North

SITE DETAILS: Dagger Lake 5 State Com 551H

Site Centre Northing: 517116.00
Easting: 767196.50

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid

Depth Reference:
3654'GL+25.5 @ 3679.50usft (H&P 389)

SLOTS

Slot Name	+N/-S	+E/-W
2H	3796.84	-625.90
501H	-1.10	-149.80
503H	-0.80	-119.90
551H	0.00	0.00
601H	-0.70	-89.90
603H	-0.50	-59.90
801H	-0.40	-29.90

CASING DETAILS

TVD	MD	Name
1150.00	1150.00	13 3/8"
4800.00	4806.37	9 5/8"

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 (Dagger551H)	0.00	600.50	126.00	517716.50	767322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H)	11253.05	8315.50	68.70	525431.50	767265.20	32° 26' 32.449 N	103° 36' 3.517 W

Drawn By: IG

Date Created: 9/27/2019

Date Revised: 10/8/2019

File: Advance Energy - Dagger Lake 5 State Com #551H Plan 1.0 Surface.wpc

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3300.00	5.00	11.85	3299.37	21.34	4.48	1.00	11.85	21.30	Hold 5.0° Inc, 11.85° Azimuth
4	9839.68	5.00	11.85	9814.16	579.16	121.52	0.00	578.23	578.23	Drop 1.00°/100'
5	10339.68	0.00	0.00	10313.53	600.50	126.00	1.00	180.00	599.54	Hold Vertical
6	10698.76	0.00	0.00	10672.61	600.50	126.00	0.00	599.54	599.54	KOP, Build 10.00°/100'
7	11245.57	89.94	359.57	11245.57	1172.84	121.75	10.00	359.57	1171.90	LP, Hold 89.94° Inc, 359.57° Azimuth
8	18741.02	89.94	359.57	11253.05	8315.50	68.70	0.00	0.00	8314.75	PBHL

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

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 Com 551H											
Site Position:			Northing:			517,116.00 usft			Latitude:			32° 25' 10.173 N					
From:			Map			Easting:			767,196.50 usft			Longitude:			103° 36' 4.983 W		
Position Uncertainty:			0.00 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.39 °		

Well	#551H - Slot 551H					
Well Position	+N/-S	0.00 usft	Northing:	517,116.00 usft	Latitude:	32° 25' 10.173 N
	+E/-W	0.00 usft	Easting:	767,196.50 usft	Longitude:	103° 36' 4.983 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,654.00 usft

Wellbore	Lateral 1r1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	10/8/2019	6.61	60.16	48,054.06708968

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	359.57	

Survey Tool Program	Date	10/8/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,741.02	Plan 1.0 (Lateral 1r1)	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 (Dagger551H)										
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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,083.00	0.00	0.00	1,083.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,150.00	0.00	0.00	1,150.00	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
Build 1.00°/100'									
2,900.00	1.00	11.85	2,899.99	0.85	0.18	0.85	1.00	1.00	0.00
3,000.00	2.00	11.85	2,999.96	3.42	0.72	3.41	1.00	1.00	0.00
3,100.00	3.00	11.85	3,099.86	7.68	1.61	7.67	1.00	1.00	0.00
3,200.00	4.00	11.85	3,199.68	13.66	2.87	13.64	1.00	1.00	0.00
3,300.00	5.00	11.85	3,299.37	21.34	4.48	21.30	1.00	1.00	0.00
Hold 5.0° Inc, 11.85° Azimuth									
3,400.00	5.00	11.85	3,398.99	29.87	6.27	29.82	0.00	0.00	0.00
3,500.00	5.00	11.85	3,498.60	38.40	8.06	38.34	0.00	0.00	0.00
3,600.00	5.00	11.85	3,598.22	46.93	9.85	46.85	0.00	0.00	0.00
3,700.00	5.00	11.85	3,697.84	55.46	11.64	55.37	0.00	0.00	0.00
3,800.00	5.00	11.85	3,797.46	63.99	13.43	63.88	0.00	0.00	0.00
3,900.00	5.00	11.85	3,897.08	72.52	15.22	72.40	0.00	0.00	0.00
4,000.00	5.00	11.85	3,996.70	81.05	17.01	80.92	0.00	0.00	0.00
4,100.00	5.00	11.85	4,096.32	89.58	18.80	89.43	0.00	0.00	0.00
4,200.00	5.00	11.85	4,195.94	98.11	20.59	97.95	0.00	0.00	0.00
4,300.00	5.00	11.85	4,295.56	106.64	22.37	106.47	0.00	0.00	0.00
4,400.00	5.00	11.85	4,395.18	115.17	24.16	114.98	0.00	0.00	0.00
4,500.00	5.00	11.85	4,494.80	123.70	25.95	123.50	0.00	0.00	0.00
4,600.00	5.00	11.85	4,594.42	132.23	27.74	132.01	0.00	0.00	0.00
4,700.00	5.00	11.85	4,694.04	140.76	29.53	140.53	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,759.19	5.00	11.85	4,753.00	145.80	30.59	145.57	0.00	0.00	0.00
Limestone Base									
4,800.00	5.00	11.85	4,793.66	149.29	31.32	149.05	0.00	0.00	0.00
4,806.37	5.00	11.85	4,800.00	149.83	31.44	149.59	0.00	0.00	0.00
9 5/8"									
4,900.00	5.00	11.85	4,893.28	157.82	33.11	157.56	0.00	0.00	0.00
5,000.00	5.00	11.85	4,992.90	166.35	34.90	166.08	0.00	0.00	0.00
5,100.00	5.00	11.85	5,092.52	174.88	36.69	174.59	0.00	0.00	0.00
5,200.00	5.00	11.85	5,192.14	183.40	38.48	183.11	0.00	0.00	0.00
5,300.00	5.00	11.85	5,291.76	191.93	40.27	191.63	0.00	0.00	0.00
5,400.00	5.00	11.85	5,391.37	200.46	42.06	200.14	0.00	0.00	0.00
5,500.00	5.00	11.85	5,490.99	208.99	43.85	208.66	0.00	0.00	0.00
5,600.00	5.00	11.85	5,590.61	217.52	45.64	217.18	0.00	0.00	0.00
5,700.00	5.00	11.85	5,690.23	226.05	47.43	225.69	0.00	0.00	0.00
5,800.00	5.00	11.85	5,789.85	234.58	49.22	234.21	0.00	0.00	0.00
5,900.00	5.00	11.85	5,889.47	243.11	51.01	242.72	0.00	0.00	0.00
6,000.00	5.00	11.85	5,989.09	251.64	52.80	251.24	0.00	0.00	0.00
6,100.00	5.00	11.85	6,088.71	260.17	54.59	259.76	0.00	0.00	0.00
6,200.00	5.00	11.85	6,188.33	268.70	56.38	268.27	0.00	0.00	0.00
6,300.00	5.00	11.85	6,287.95	277.23	58.17	276.79	0.00	0.00	0.00
6,400.00	5.00	11.85	6,387.57	285.76	59.96	285.30	0.00	0.00	0.00
6,500.00	5.00	11.85	6,487.19	294.29	61.75	293.82	0.00	0.00	0.00
6,600.00	5.00	11.85	6,586.81	302.82	63.54	302.34	0.00	0.00	0.00
6,700.00	5.00	11.85	6,686.43	311.35	65.33	310.85	0.00	0.00	0.00
6,800.00	5.00	11.85	6,786.05	319.88	67.12	319.37	0.00	0.00	0.00
6,900.00	5.00	11.85	6,885.67	328.41	68.91	327.89	0.00	0.00	0.00
7,000.00	5.00	11.85	6,985.29	336.94	70.70	336.40	0.00	0.00	0.00
7,100.00	5.00	11.85	7,084.91	345.47	72.49	344.92	0.00	0.00	0.00
7,200.00	5.00	11.85	7,184.53	354.00	74.28	353.43	0.00	0.00	0.00
7,300.00	5.00	11.85	7,284.14	362.53	76.07	361.95	0.00	0.00	0.00
7,400.00	5.00	11.85	7,383.76	371.06	77.86	370.47	0.00	0.00	0.00
7,500.00	5.00	11.85	7,483.38	379.59	79.65	378.98	0.00	0.00	0.00
7,600.00	5.00	11.85	7,583.00	388.12	81.44	387.50	0.00	0.00	0.00
7,700.00	5.00	11.85	7,682.62	396.65	83.23	396.01	0.00	0.00	0.00
7,800.00	5.00	11.85	7,782.24	405.18	85.02	404.53	0.00	0.00	0.00
7,900.00	5.00	11.85	7,881.86	413.71	86.81	413.05	0.00	0.00	0.00
8,000.00	5.00	11.85	7,981.48	422.24	88.60	421.56	0.00	0.00	0.00
8,100.00	5.00	11.85	8,081.10	430.77	90.39	430.08	0.00	0.00	0.00
8,200.00	5.00	11.85	8,180.72	439.30	92.18	438.60	0.00	0.00	0.00
8,300.00	5.00	11.85	8,280.34	447.83	93.97	447.11	0.00	0.00	0.00
8,388.00	5.00	11.85	8,368.00	455.34	95.54	454.61	0.00	0.00	0.00
Lower Brushy									
8,400.00	5.00	11.85	8,379.96	456.36	95.76	455.63	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.00	5.00	11.85	8,479.58	464.89	97.55	464.14	0.00	0.00	0.00
8,600.00	5.00	11.85	8,579.20	473.42	99.34	472.66	0.00	0.00	0.00
8,700.00	5.00	11.85	8,678.82	481.95	101.12	481.18	0.00	0.00	0.00
8,800.00	5.00	11.85	8,778.44	490.48	102.91	489.69	0.00	0.00	0.00
8,879.87	5.00	11.85	8,858.00	497.29	104.34	496.49	0.00	0.00	0.00
Avalon									
8,900.00	5.00	11.85	8,878.06	499.01	104.70	498.21	0.00	0.00	0.00
9,000.00	5.00	11.85	8,977.68	507.54	106.49	506.72	0.00	0.00	0.00
9,100.00	5.00	11.85	9,077.30	516.07	108.28	515.24	0.00	0.00	0.00
9,200.00	5.00	11.85	9,176.91	524.60	110.07	523.76	0.00	0.00	0.00
9,300.00	5.00	11.85	9,276.53	533.13	111.86	532.27	0.00	0.00	0.00
9,400.00	5.00	11.85	9,376.15	541.66	113.65	540.79	0.00	0.00	0.00
9,500.00	5.00	11.85	9,475.77	550.19	115.44	549.31	0.00	0.00	0.00
9,600.00	5.00	11.85	9,575.39	558.72	117.23	557.82	0.00	0.00	0.00
9,700.00	5.00	11.85	9,675.01	567.25	119.02	566.34	0.00	0.00	0.00
9,800.00	5.00	11.85	9,774.63	575.78	120.81	574.85	0.00	0.00	0.00
9,839.68	5.00	11.85	9,814.16	579.16	121.52	578.23	0.00	0.00	0.00
Drop 1.00°/100'									
9,900.00	4.40	11.85	9,874.28	584.00	122.54	583.06	1.00	-1.00	0.00
9,933.82	4.06	11.85	9,908.00	586.44	123.05	585.50	1.00	-1.00	0.00
1st BS									
10,000.00	3.40	11.85	9,974.04	590.65	123.93	589.70	1.00	-1.00	0.00
10,100.00	2.40	11.85	10,073.92	595.59	124.97	594.64	1.00	-1.00	0.00
10,200.00	1.40	11.85	10,173.86	598.83	125.65	597.87	1.00	-1.00	0.00
10,300.00	0.40	11.85	10,273.85	600.37	125.97	599.40	1.00	-1.00	0.00
10,339.68	0.00	0.00	10,313.53	600.50	126.00	599.54	1.00	-1.00	0.00
Hold Vertical									
10,400.00	0.00	0.00	10,373.85	600.50	126.00	599.54	0.00	0.00	0.00
10,500.00	0.00	0.00	10,473.85	600.50	126.00	599.54	0.00	0.00	0.00
10,574.15	0.00	0.00	10,548.00	600.50	126.00	599.54	0.00	0.00	0.00
2nd BS									
10,600.00	0.00	0.00	10,573.85	600.50	126.00	599.54	0.00	0.00	0.00
10,698.76	0.00	0.00	10,672.61	600.50	126.00	599.54	0.00	0.00	0.00
KOP, Build 10.00°/100'									
10,700.00	0.12	359.57	10,673.85	600.50	126.00	599.54	10.00	10.00	0.00
10,750.00	5.12	359.57	10,723.78	602.79	125.98	601.83	10.00	10.00	0.00
10,800.00	10.12	359.57	10,773.32	609.42	125.93	608.46	10.00	10.00	0.00
10,850.00	15.12	359.57	10,822.10	620.34	125.85	619.38	10.00	10.00	0.00
10,900.00	20.12	359.57	10,869.73	635.48	125.74	634.51	10.00	10.00	0.00
10,950.00	25.12	359.57	10,915.87	654.70	125.60	653.74	10.00	10.00	0.00
11,000.00	30.12	359.57	10,960.16	677.88	125.43	676.92	10.00	10.00	0.00
11,050.00	35.12	359.57	11,002.26	704.83	125.23	703.87	10.00	10.00	0.00
11,100.00	40.12	359.57	11,041.85	735.34	125.00	734.38	10.00	10.00	0.00
11,150.00	45.12	359.57	11,078.63	769.19	124.75	768.23	10.00	10.00	0.00
11,200.00	50.12	359.57	11,112.31	806.11	124.47	805.15	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,202.64	50.39	359.57	11,114.00	808.14	124.46	807.18	10.00	10.00	0.00
3rd BS Carbonate									
11,250.00	55.12	359.57	11,142.66	845.83	124.18	844.87	10.00	10.00	0.00
11,300.00	60.12	359.57	11,169.42	888.04	123.86	887.09	10.00	10.00	0.00
11,350.00	65.12	359.57	11,192.41	932.43	123.53	931.47	10.00	10.00	0.00
11,400.00	70.12	359.57	11,211.44	978.65	123.19	977.69	10.00	10.00	0.00
11,450.00	75.12	359.57	11,226.36	1,026.35	122.84	1,025.40	10.00	10.00	0.00
11,500.00	80.12	359.57	11,237.08	1,075.17	122.47	1,074.22	10.00	10.00	0.00
11,550.00	85.12	359.57	11,243.49	1,124.74	122.11	1,123.79	10.00	10.00	0.00
11,598.16	89.94	359.57	11,245.57	1,172.84	121.75	1,171.90	10.00	10.00	0.00
LP, Hold 89.94° Inc, 359.57° Azimuth									
11,600.00	89.94	359.57	11,245.57	1,174.68	121.74	1,173.73	0.00	0.00	0.00
11,603.85	89.94	359.57	11,245.57	1,178.53	121.71	1,177.58	0.00	0.00	0.00
T1 (Dagger551H)									
11,700.00	89.94	359.57	11,245.67	1,274.67	120.99	1,273.73	0.00	0.00	0.00
11,800.00	89.94	359.57	11,245.78	1,374.67	120.25	1,373.73	0.00	0.00	0.00
11,900.00	89.94	359.57	11,245.88	1,474.67	119.51	1,473.73	0.00	0.00	0.00
12,000.00	89.94	359.57	11,245.99	1,574.67	118.76	1,573.73	0.00	0.00	0.00
12,100.00	89.94	359.57	11,246.09	1,674.66	118.02	1,673.73	0.00	0.00	0.00
12,200.00	89.94	359.57	11,246.20	1,774.66	117.28	1,773.73	0.00	0.00	0.00
12,300.00	89.94	359.57	11,246.30	1,874.66	116.54	1,873.73	0.00	0.00	0.00
12,400.00	89.94	359.57	11,246.41	1,974.66	115.79	1,973.73	0.00	0.00	0.00
12,500.00	89.94	359.57	11,246.51	2,074.65	115.05	2,073.73	0.00	0.00	0.00
12,600.00	89.94	359.57	11,246.62	2,174.65	114.31	2,173.73	0.00	0.00	0.00
12,700.00	89.94	359.57	11,246.72	2,274.65	113.57	2,273.73	0.00	0.00	0.00
12,800.00	89.94	359.57	11,246.83	2,374.64	112.82	2,373.73	0.00	0.00	0.00
12,900.00	89.94	359.57	11,246.93	2,474.64	112.08	2,473.73	0.00	0.00	0.00
13,000.00	89.94	359.57	11,247.04	2,574.64	111.34	2,573.73	0.00	0.00	0.00
13,100.00	89.94	359.57	11,247.14	2,674.64	110.60	2,673.73	0.00	0.00	0.00
13,200.00	89.94	359.57	11,247.25	2,774.63	109.85	2,773.73	0.00	0.00	0.00
13,300.00	89.94	359.57	11,247.35	2,874.63	109.11	2,873.73	0.00	0.00	0.00
13,400.00	89.94	359.57	11,247.46	2,974.63	108.37	2,973.73	0.00	0.00	0.00
13,500.00	89.94	359.57	11,247.56	3,074.62	107.62	3,073.73	0.00	0.00	0.00
13,600.00	89.94	359.57	11,247.66	3,174.62	106.88	3,173.73	0.00	0.00	0.00
13,700.00	89.94	359.57	11,247.77	3,274.62	106.14	3,273.73	0.00	0.00	0.00
13,800.00	89.94	359.57	11,247.87	3,374.62	105.40	3,373.73	0.00	0.00	0.00
13,900.00	89.94	359.57	11,247.98	3,474.61	104.65	3,473.73	0.00	0.00	0.00
14,000.00	89.94	359.57	11,248.08	3,574.61	103.91	3,573.73	0.00	0.00	0.00
14,100.00	89.94	359.57	11,248.19	3,674.61	103.17	3,673.73	0.00	0.00	0.00
14,200.00	89.94	359.57	11,248.29	3,774.60	102.43	3,773.73	0.00	0.00	0.00
14,300.00	89.94	359.57	11,248.40	3,874.60	101.68	3,873.73	0.00	0.00	0.00
14,400.00	89.94	359.57	11,248.50	3,974.60	100.94	3,973.73	0.00	0.00	0.00
14,500.00	89.94	359.57	11,248.61	4,074.60	100.20	4,073.73	0.00	0.00	0.00
14,600.00	89.94	359.57	11,248.71	4,174.59	99.45	4,173.73	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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,700.00	89.94	359.57	11,248.82	4,274.59	98.71	4,273.73	0.00	0.00	0.00
14,800.00	89.94	359.57	11,248.92	4,374.59	97.97	4,373.73	0.00	0.00	0.00
14,900.00	89.94	359.57	11,249.03	4,474.59	97.23	4,473.73	0.00	0.00	0.00
15,000.00	89.94	359.57	11,249.13	4,574.58	96.48	4,573.73	0.00	0.00	0.00
15,100.00	89.94	359.57	11,249.24	4,674.58	95.74	4,673.73	0.00	0.00	0.00
15,200.00	89.94	359.57	11,249.34	4,774.58	95.00	4,773.73	0.00	0.00	0.00
15,300.00	89.94	359.57	11,249.45	4,874.57	94.26	4,873.73	0.00	0.00	0.00
15,400.00	89.94	359.57	11,249.55	4,974.57	93.51	4,973.73	0.00	0.00	0.00
15,500.00	89.94	359.57	11,249.66	5,074.57	92.77	5,073.73	0.00	0.00	0.00
15,600.00	89.94	359.57	11,249.76	5,174.57	92.03	5,173.73	0.00	0.00	0.00
15,700.00	89.94	359.57	11,249.86	5,274.56	91.29	5,273.73	0.00	0.00	0.00
15,800.00	89.94	359.57	11,249.97	5,374.56	90.54	5,373.73	0.00	0.00	0.00
15,900.00	89.94	359.57	11,250.07	5,474.56	89.80	5,473.73	0.00	0.00	0.00
16,000.00	89.94	359.57	11,250.18	5,574.55	89.06	5,573.73	0.00	0.00	0.00
16,100.00	89.94	359.57	11,250.28	5,674.55	88.31	5,673.73	0.00	0.00	0.00
16,200.00	89.94	359.57	11,250.39	5,774.55	87.57	5,773.73	0.00	0.00	0.00
16,300.00	89.94	359.57	11,250.49	5,874.55	86.83	5,873.73	0.00	0.00	0.00
16,400.00	89.94	359.57	11,250.60	5,974.54	86.09	5,973.73	0.00	0.00	0.00
16,500.00	89.94	359.57	11,250.70	6,074.54	85.34	6,073.73	0.00	0.00	0.00
16,600.00	89.94	359.57	11,250.81	6,174.54	84.60	6,173.73	0.00	0.00	0.00
16,700.00	89.94	359.57	11,250.91	6,274.53	83.86	6,273.73	0.00	0.00	0.00
16,800.00	89.94	359.57	11,251.02	6,374.53	83.12	6,373.73	0.00	0.00	0.00
16,900.00	89.94	359.57	11,251.12	6,474.53	82.37	6,473.73	0.00	0.00	0.00
17,000.00	89.94	359.57	11,251.23	6,574.53	81.63	6,573.73	0.00	0.00	0.00
17,100.00	89.94	359.57	11,251.33	6,674.52	80.89	6,673.73	0.00	0.00	0.00
17,200.00	89.94	359.57	11,251.44	6,774.52	80.14	6,773.73	0.00	0.00	0.00
17,300.00	89.94	359.57	11,251.54	6,874.52	79.40	6,873.73	0.00	0.00	0.00
17,400.00	89.94	359.57	11,251.65	6,974.51	78.66	6,973.73	0.00	0.00	0.00
17,500.00	89.94	359.57	11,251.75	7,074.51	77.92	7,073.73	0.00	0.00	0.00
17,600.00	89.94	359.57	11,251.85	7,174.51	77.17	7,173.73	0.00	0.00	0.00
17,700.00	89.94	359.57	11,251.96	7,274.51	76.43	7,273.73	0.00	0.00	0.00
17,800.00	89.94	359.57	11,252.06	7,374.50	75.69	7,373.73	0.00	0.00	0.00
17,900.00	89.94	359.57	11,252.17	7,474.50	74.95	7,473.73	0.00	0.00	0.00
18,000.00	89.94	359.57	11,252.27	7,574.50	74.20	7,573.73	0.00	0.00	0.00
18,100.00	89.94	359.57	11,252.38	7,674.50	73.46	7,673.73	0.00	0.00	0.00
18,200.00	89.94	359.57	11,252.48	7,774.49	72.72	7,773.73	0.00	0.00	0.00
18,300.00	89.94	359.57	11,252.59	7,874.49	71.98	7,873.73	0.00	0.00	0.00
18,400.00	89.94	359.57	11,252.69	7,974.49	71.23	7,973.73	0.00	0.00	0.00
18,500.00	89.94	359.57	11,252.80	8,074.48	70.49	8,073.73	0.00	0.00	0.00
18,600.00	89.94	359.57	11,252.90	8,174.48	69.75	8,173.73	0.00	0.00	0.00
18,700.00	89.94	359.57	11,253.01	8,274.48	69.00	8,273.73	0.00	0.00	0.00
18,725.35	89.94	359.57	11,253.03	8,299.83	68.82	8,299.08	0.00	0.00	0.00
T2 (Dagger551H)									

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.1 Aim Database

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,741.02	89.94	359.57	11,253.05	8,315.50	68.70	8,314.75	0.00	0.00	0.00
PBHL - PBHL r1 (Dagger551H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
FTP (Dagger551H)	0.00	0.00	0.00	600.50	126.00	517,716.50	767,322.50	32° 25' 16.106 N	103° 36' 3.465 W
- plan misses target center by 613.58usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL r1 (Dagger551H)	0.00	0.00	11,253.05	8,315.50	68.70	525,431.50	767,265.20	32° 26' 32.449 N	103° 36' 3.517 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,150.00	1,150.00	13 3/8"	13-3/8	17-1/2	
4,806.37	4,800.00	9 5/8"	9-5/8	12-1/4	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,083.00	1,083.00	Rustler		0.00	
4,759.19	4,753.00	Limestone Base		0.00	
8,388.00	8,368.00	Lower Brushy		0.00	
8,879.87	8,858.00	Avalon		0.00	
9,933.82	9,908.00	1st BS		0.00	
10,574.15	10,548.00	2nd BS		0.00	
11,202.64	11,114.00	3rd BS Carbonate		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
2800	2800	0	0	Build 1.00°/100'
3300	3299	21	4	Hold 5.0° Inc, 11.85° Azimuth
9840	9814	579	122	Drop 1.00°/100'
10,340	10,314	600	126	Hold Vertical
10,699	10,673	600	126	KOP, Build 10.00°/100'
11,598	11,246	1173	122	LP, Hold 89.94° Inc, 359.57° Azimuth
18,741	11,253	8315	69	PBHL

Advance Energy Partners, LLC

Dagger Lake 5 State Com 551H

Lea County, New Mexico

Job No. WT-19-158

H&P 389

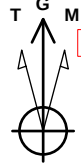
Plan 1.0 Final PVA



SITE DETAILS: Dagger Lake 5 State Com 551H

Site Centre Northing: 517116.00
Easting: 767196.50

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.22°

Magnetic Field
Strength: 48054.1nT
Dip Angle: 60.16°
Date: 10/8/2019
Model: MVHD

Magnetic North: 6.22° 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

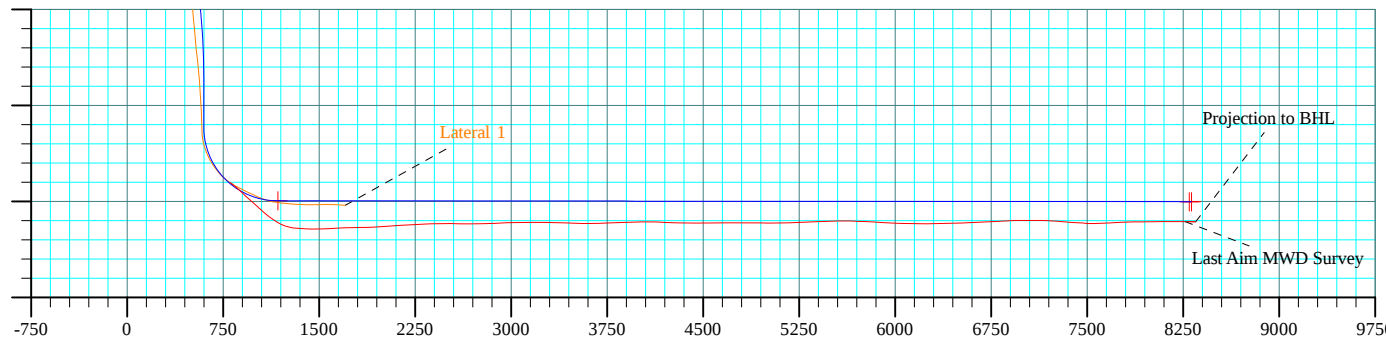
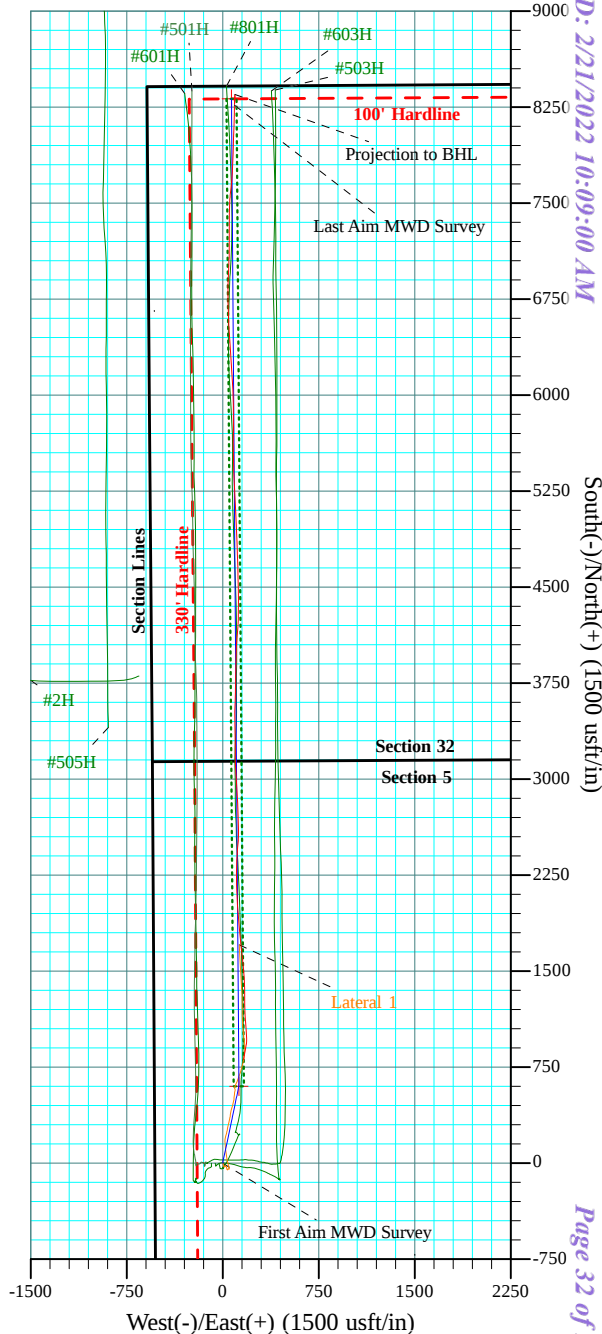
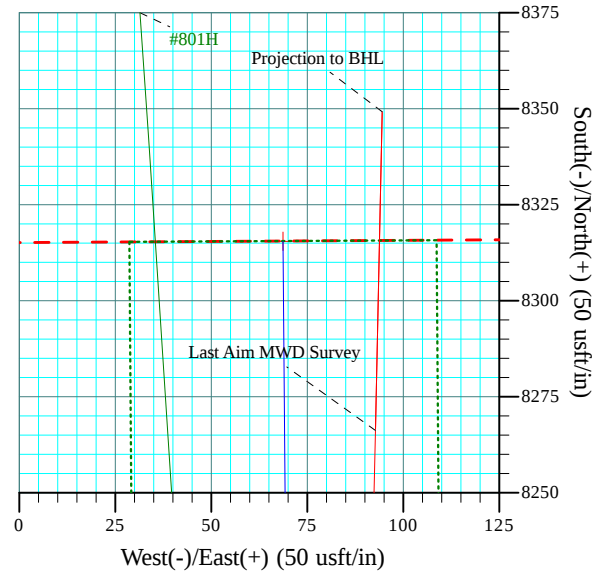
Depth Reference:
3654'GL+25.5 @ 3679.50usft (H&P 389)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	18820.00	89.70	1.21	11408.57	8266.24	92.79	0.00	0.00	8265.31	Last Aim MWD Survey
2	18903.00	89.70	1.21	11409.01	8349.22	94.54	0.00	0.00	8348.27	Projection to BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Dagger551H)	0.00	600.50	126.00	517716.50	767322.50	32° 25' 16.106 N	103° 36' 3.465 W
PBHL r1 (Dagger551H)	11253.05	8315.50	68.70	525431.50	767265.20	32° 26' 32.449 N	103° 36' 3.517 W





Survey Reports

Lateral 1

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1 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 Com 551H			
Site Position:		Northing:	517,116.00 usft	Latitude:	32° 25' 10.173 N
From:	Map	Easting:	767,196.50 usft	Longitude:	103° 36' 4.983 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#551H - Slot 551H					
Well Position	+N/-S	0.00 usft	Northing:	517,116.00 usft	Latitude:	32° 25' 10.173 N
	+E/-W	0.00 usft	Easting:	767,196.50 usft	Longitude:	103° 36' 4.983 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,654.00 usft

Wellbore	Lateral 1 Surveys				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	10/9/2019	6.61	60.16	48,053.76786081

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	359.57	

Survey Program	Date	11/9/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
232.00	12,160.00	Aim MWD Survey (Lateral 1 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	
232.00	0.70	144.91	231.99	-1.16	0.81	-1.17	0.30	0.30	0.00	
First Aim MWD Survey										
327.00	1.14	147.64	326.98	-2.43	1.65	-2.45	0.47	0.46	2.87	
422.00	1.49	158.53	421.96	-4.38	2.61	-4.40	0.45	0.37	11.46	
517.00	1.76	163.98	516.92	-6.93	3.47	-6.96	0.33	0.28	5.74	
612.00	1.63	156.51	611.88	-9.57	4.41	-9.61	0.27	-0.14	-7.86	
707.00	1.85	168.20	706.83	-12.31	5.26	-12.35	0.44	0.23	12.31	
802.00	1.63	168.73	801.79	-15.14	5.84	-15.18	0.23	-0.23	0.56	
897.00	1.76	173.83	896.75	-17.92	6.26	-17.96	0.21	0.14	5.37	
992.00	1.49	158.10	991.71	-20.51	6.88	-20.56	0.55	-0.28	-16.56	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1 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)
1,082.00	1.54	158.45	1,081.68	-22.72	7.76	-22.78	0.06	0.06	0.39
1,157.00	1.45	164.77	1,156.65	-24.58	8.38	-24.64	0.25	-0.12	8.43
1,244.00	1.76	173.83	1,243.62	-26.97	8.81	-27.03	0.46	0.36	10.41
1,339.00	1.10	117.75	1,338.59	-28.84	9.77	-28.91	1.54	-0.69	-59.03
1,435.00	1.58	75.65	1,434.57	-28.94	11.87	-29.03	1.11	0.50	-43.85
1,530.00	1.98	80.14	1,529.52	-28.34	14.76	-28.45	0.45	0.42	4.73
1,620.00	1.05	51.40	1,619.49	-27.56	16.93	-27.68	1.30	-1.03	-31.93
1,709.00	0.92	336.43	1,708.48	-26.39	17.28	-26.52	1.35	-0.15	-84.24
1,799.00	1.45	326.58	1,798.46	-24.78	16.37	-24.90	0.63	0.59	-10.94
1,888.00	0.92	9.74	1,887.44	-23.13	15.87	-23.25	1.13	-0.60	48.49
1,978.00	1.10	53.15	1,977.43	-21.90	16.68	-22.03	0.85	0.20	48.23
2,068.00	1.14	56.41	2,067.41	-20.89	18.12	-21.03	0.08	0.04	3.62
2,158.00	1.58	77.59	2,157.39	-20.13	20.08	-20.28	0.73	0.49	23.53
2,247.00	1.54	106.15	2,246.36	-20.20	22.42	-20.37	0.87	-0.04	32.09
2,337.00	1.80	128.21	2,336.32	-21.41	24.70	-21.59	0.76	0.29	24.51
2,427.00	1.45	156.69	2,426.29	-23.33	26.26	-23.53	0.96	-0.39	31.64
2,517.00	1.54	168.55	2,516.26	-25.56	26.95	-25.76	0.36	0.10	13.18
2,607.00	1.23	151.50	2,606.23	-27.59	27.65	-27.80	0.57	-0.34	-18.94
2,696.00	1.67	159.50	2,695.20	-29.65	28.56	-29.86	0.54	0.49	8.99
2,786.00	1.85	179.01	2,785.16	-32.33	29.04	-32.55	0.69	0.20	21.68
2,876.00	1.85	160.47	2,875.11	-35.15	29.55	-35.37	0.66	0.00	-20.60
2,965.00	1.49	139.29	2,964.08	-37.38	30.79	-37.61	0.80	-0.40	-23.80
3,055.00	1.71	160.47	3,054.04	-39.53	32.00	-39.77	0.70	0.24	23.53
3,145.00	2.20	176.11	3,143.99	-42.52	32.57	-42.77	0.80	0.54	17.38
3,235.00	2.11	162.49	3,233.93	-45.83	33.18	-46.08	0.58	-0.10	-15.13
3,325.00	1.76	148.43	3,323.88	-48.58	34.41	-48.84	0.65	-0.39	-15.62
3,415.00	1.32	108.70	3,413.85	-50.09	36.11	-50.36	1.25	-0.49	-44.14
3,505.00	1.45	100.00	3,503.82	-50.62	38.21	-50.91	0.27	0.14	-9.67
3,594.00	0.84	121.09	3,592.80	-51.16	39.88	-51.46	0.82	-0.69	23.70
3,684.00	1.27	281.67	3,682.79	-51.30	39.47	-51.59	2.31	0.48	178.42
3,774.00	1.41	266.64	3,772.77	-51.16	37.39	-51.44	0.42	0.16	-16.70
3,864.00	0.88	23.36	3,862.76	-50.59	36.56	-50.86	2.19	-0.59	129.69
3,953.00	1.98	52.36	3,951.73	-49.02	38.04	-49.31	1.44	1.24	32.58
4,043.00	2.77	68.18	4,041.66	-47.27	41.30	-47.57	1.13	0.88	17.58
4,133.00	1.14	74.16	4,131.60	-46.21	44.18	-46.54	1.82	-1.81	6.64
4,223.00	0.57	98.86	4,221.59	-46.04	45.48	-46.38	0.74	-0.63	27.44
4,312.00	0.62	98.07	4,310.59	-46.17	46.39	-46.52	0.06	0.06	-0.89
4,402.00	1.01	81.81	4,400.58	-46.13	47.66	-46.48	0.50	0.43	-18.07
4,492.00	0.62	81.45	4,490.57	-45.94	48.93	-46.31	0.43	-0.43	-0.40
4,582.00	0.88	50.34	4,580.56	-45.43	49.94	-45.80	0.53	0.29	-34.57
4,672.00	0.62	33.64	4,670.55	-44.58	50.74	-44.96	0.37	-0.29	-18.56
4,756.00	0.26	36.10	4,754.55	-44.05	51.11	-44.43	0.43	-0.43	2.93
4,850.00	0.44	347.76	4,848.55	-43.53	51.16	-43.91	0.35	0.19	-51.43

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1 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)	
4,940.00	1.36	348.64	4,938.54	-42.14	50.87	-42.52	1.02	1.02	0.98	
5,119.00	4.40	348.20	5,117.29	-33.33	49.05	-33.70	1.70	1.70	-0.25	
5,209.00	6.33	350.40	5,206.89	-25.06	47.52	-25.42	2.16	2.14	2.44	
5,299.00	7.21	346.36	5,296.26	-14.68	45.36	-15.02	1.11	0.98	-4.49	
5,388.00	7.43	347.50	5,384.54	-3.64	42.79	-3.96	0.30	0.25	1.28	
5,478.00	7.16	344.07	5,473.81	7.44	39.99	7.14	0.57	-0.30	-3.81	
5,568.00	6.68	342.05	5,563.15	17.81	36.84	17.53	0.60	-0.53	-2.24	
5,658.00	6.68	345.92	5,652.54	27.87	33.96	27.61	0.50	0.00	4.30	
5,748.00	7.52	349.43	5,741.85	38.74	31.60	38.50	1.05	0.93	3.90	
5,837.00	7.03	347.32	5,830.14	49.77	29.34	49.55	0.63	-0.55	-2.37	
5,927.00	8.92	352.25	5,919.26	62.06	27.19	61.86	2.23	2.10	5.48	
6,017.00	9.45	355.94	6,008.11	76.35	25.72	76.15	0.88	0.59	4.10	
6,106.00	9.67	354.71	6,095.87	91.08	24.52	90.89	0.34	0.25	-1.38	
6,196.00	9.36	355.85	6,184.63	105.90	23.29	105.73	0.40	-0.34	1.27	
6,285.00	8.88	352.51	6,272.51	119.93	21.87	119.77	0.80	-0.54	-3.75	
6,375.00	9.05	352.51	6,361.41	133.84	20.04	133.68	0.19	0.19	0.00	
6,465.00	8.75	355.15	6,450.33	147.68	18.54	147.53	0.56	-0.33	2.93	
6,554.00	8.22	0.42	6,538.35	160.78	18.02	160.64	1.06	-0.60	5.92	
6,644.00	8.31	359.19	6,627.42	173.72	17.97	173.58	0.22	0.10	-1.37	
6,734.00	7.52	6.66	6,716.56	186.07	18.56	185.93	1.44	-0.88	8.30	
6,823.00	6.95	12.90	6,804.86	197.11	20.44	196.95	1.09	-0.64	7.01	
6,913.00	6.73	13.69	6,894.21	207.54	22.90	207.36	0.27	-0.24	0.88	
7,002.00	6.37	15.89	6,982.63	217.36	25.49	217.16	0.49	-0.40	2.47	
7,092.00	5.89	17.56	7,072.12	226.56	28.25	226.34	0.57	-0.53	1.86	
7,182.00	6.33	14.39	7,161.61	235.77	30.88	235.53	0.62	0.49	-3.52	
7,272.00	6.64	9.56	7,251.03	245.71	32.97	245.45	0.70	0.34	-5.37	
7,362.00	6.55	8.77	7,340.44	255.91	34.62	255.64	0.14	-0.10	-0.88	
7,452.00	6.02	9.56	7,429.90	265.64	36.19	265.36	0.60	-0.59	0.88	
7,542.00	5.71	10.44	7,519.42	274.69	37.78	274.40	0.36	-0.34	0.98	
7,632.00	7.38	13.16	7,608.84	284.73	39.91	284.42	1.89	1.86	3.02	
7,722.00	7.74	13.87	7,698.05	296.24	42.68	295.91	0.41	0.40	0.79	
7,812.00	7.25	14.31	7,787.28	307.62	45.53	307.27	0.55	-0.54	0.49	
7,901.00	6.90	12.28	7,875.61	318.29	48.06	317.92	0.48	-0.39	-2.28	
7,991.00	6.55	13.08	7,964.99	328.57	50.37	328.19	0.40	-0.39	0.89	
8,170.00	5.85	12.64	8,142.94	347.42	54.68	347.00	0.39	-0.39	-0.25	
8,260.00	6.29	8.33	8,232.43	356.77	56.40	356.34	0.70	0.49	-4.79	
8,349.00	7.30	9.38	8,320.81	367.18	58.02	366.73	1.14	1.13	1.18	
8,439.00	7.69	11.05	8,410.04	378.73	60.11	378.26	0.50	0.43	1.86	
8,529.00	7.16	9.47	8,499.28	390.17	62.19	389.69	0.63	-0.59	-1.76	
8,618.00	6.77	10.18	8,587.63	400.80	64.03	400.31	0.45	-0.44	0.80	
8,708.00	6.46	9.47	8,677.03	411.02	65.80	410.51	0.36	-0.34	-0.79	
8,798.00	5.71	7.80	8,766.52	420.45	67.24	419.93	0.86	-0.83	-1.86	
8,888.00	5.58	16.77	8,856.09	429.07	69.11	428.54	0.99	-0.14	9.97	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1 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)	
8,977.00	5.80	21.60	8,944.65	437.40	72.01	436.85	0.59	0.25	5.43	
9,067.00	5.05	18.96	9,034.24	445.37	74.97	444.80	0.88	-0.83	-2.93	
9,156.00	5.85	14.57	9,122.84	453.47	77.39	452.87	1.01	0.90	-4.93	
9,246.00	5.19	16.15	9,212.42	461.82	79.67	461.21	0.75	-0.73	1.76	
9,336.00	5.71	14.31	9,302.02	470.06	81.91	469.44	0.61	0.58	-2.04	
9,425.00	5.27	15.89	9,390.61	478.29	84.13	477.64	0.52	-0.49	1.78	
9,515.00	5.23	13.16	9,480.23	486.26	86.19	485.59	0.28	-0.04	-3.03	
9,605.00	5.58	1.21	9,569.83	494.62	87.22	493.96	1.31	0.39	-13.28	
9,694.00	5.71	359.19	9,658.40	503.38	87.25	502.71	0.27	0.15	-2.27	
9,784.00	5.67	5.34	9,747.96	512.28	87.60	511.61	0.68	-0.04	6.83	
9,874.00	5.45	13.34	9,837.54	520.87	89.00	520.18	0.89	-0.24	8.89	
9,963.00	4.88	10.18	9,926.17	528.71	90.64	528.01	0.72	-0.64	-3.55	
10,053.00	4.88	6.22	10,015.85	536.28	91.73	535.57	0.37	0.00	-4.40	
10,143.00	5.98	4.73	10,105.44	544.76	92.53	544.05	1.23	1.22	-1.66	
10,232.00	6.77	10.26	10,193.89	554.54	93.85	553.82	1.12	0.89	6.21	
10,322.00	5.49	10.26	10,283.38	564.00	95.56	563.26	1.42	-1.42	0.00	
10,412.00	3.52	6.75	10,373.09	570.98	96.65	570.24	2.21	-2.19	-3.90	
10,501.00	2.55	351.45	10,461.97	575.65	96.68	574.91	1.41	-1.09	-17.19	
10,591.00	2.55	338.36	10,551.88	579.49	95.64	578.75	0.65	0.00	-14.54	
10,680.00	2.15	333.44	10,640.81	582.82	94.17	582.10	0.50	-0.45	-5.53	
10,730.00	2.07	329.04	10,690.77	584.44	93.28	583.72	0.36	-0.16	-8.80	
10,775.00	5.65	5.25	10,735.67	587.34	93.07	586.62	9.25	7.96	80.47	
10,819.00	11.67	16.42	10,779.15	593.77	94.53	593.05	14.14	13.68	25.39	
10,864.00	19.05	20.90	10,822.51	605.01	98.44	604.26	16.60	16.40	9.96	
10,909.00	22.70	22.30	10,864.55	619.91	104.35	619.11	8.19	8.11	3.11	
10,954.00	27.01	22.57	10,905.38	637.39	111.57	636.53	9.58	9.58	0.60	
10,999.00	32.19	21.95	10,944.49	657.96	119.98	657.04	11.53	11.51	-1.38	
11,044.00	37.42	18.70	10,981.43	682.04	128.85	681.06	12.33	11.62	-7.22	
11,089.00	41.80	17.65	11,016.09	709.30	137.79	708.25	9.85	9.73	-2.33	
11,134.00	45.73	16.06	11,048.58	739.09	146.80	737.96	9.07	8.73	-3.53	
11,179.00	50.68	13.95	11,078.57	771.48	155.46	770.29	11.54	11.00	-4.69	
11,224.00	57.18	10.35	11,105.05	807.02	163.06	805.78	15.82	14.44	-8.00	
11,268.00	60.28	6.92	11,127.89	844.19	168.68	842.90	9.70	7.05	-7.80	
11,313.00	62.89	2.97	11,149.31	883.61	172.08	882.30	9.65	5.80	-8.78	
11,358.00	64.32	355.23	11,169.34	923.87	171.43	922.56	15.73	3.18	-17.20	
11,403.00	64.78	354.44	11,188.68	964.34	167.77	963.05	1.89	1.02	-1.76	
11,448.00	65.51	353.21	11,207.59	1,004.93	163.38	1,003.68	2.96	1.62	-2.73	
11,493.00	68.56	353.74	11,225.15	1,046.09	158.67	1,044.87	6.86	6.78	1.18	
11,537.00	72.06	355.85	11,239.97	1,087.34	154.92	1,086.15	9.15	7.95	4.80	
11,582.00	77.33	358.13	11,251.85	1,130.67	152.66	1,129.49	12.69	11.71	5.07	
11,628.00	83.31	1.21	11,259.58	1,175.99	152.41	1,174.81	14.58	13.00	6.70	
11,718.00	85.35	358.22	11,268.48	1,265.53	151.96	1,264.35	4.01	2.27	-3.32	
11,808.00	85.81	355.85	11,275.41	1,355.13	147.31	1,353.99	2.67	0.51	-2.63	
11,897.00	91.97	358.22	11,277.14	1,443.95	142.72	1,442.84	7.42	6.92	2.66	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 1 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)
11,987.00	90.71	356.20	11,275.03	1,533.81	138.34	1,532.73	2.64	-1.40	-2.24
12,077.00	87.09	357.26	11,276.76	1,623.63	133.20	1,622.59	4.19	-4.02	1.18
Last Aim MWD Survey									
12,160.00	87.09	357.26	11,280.97	1,706.43	129.24	1,705.41	0.00	0.00	0.00
Projection to TD									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
232.00	231.99	-1.16	0.81	First Aim MWD Survey
12,077.00	11,276.76	1,623.63	133.20	Last Aim MWD Survey
12,160.00	11,280.97	1,706.43	129.24	Projection to TD



Survey Reports

Lateral 2

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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 Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 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 Com 551H			
Site Position:		Northing:	517,116.00 usft	Latitude:	32° 25' 10.173 N
From:	Map	Easting:	767,196.50 usft	Longitude:	103° 36' 4.983 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#551H - Slot 551H					
Well Position	+N/-S	0.00 usft	Northing:	517,116.00 usft	Latitude:	32° 25' 10.173 N
	+E/-W	0.00 usft	Easting:	767,196.50 usft	Longitude:	103° 36' 4.983 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,654.00 usft

Wellbore	Lateral 2 Surveys				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	11/9/2019	6.61	60.16	48,044.49311051

Design	Aim MWD Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	11,224.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00		359.57

Survey Program	Date	11/18/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
232.00	11,224.00	Aim MWD Survey (Lateral 1 Surveys)	B001Mb_MWD+HRGM	OWSG MWD + HRGM	
11,269.00	18,903.00	Aim MWD Surveys (Lateral 2 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	
232.00	0.70	144.91	231.99	-1.16	0.81	-1.17	0.30	0.30	0.00	
327.00	1.14	147.64	326.98	-2.43	1.65	-2.45	0.47	0.46	2.87	
422.00	1.49	158.53	421.96	-4.38	2.61	-4.40	0.45	0.37	11.46	
517.00	1.76	163.98	516.92	-6.93	3.47	-6.96	0.33	0.28	5.74	
612.00	1.63	156.51	611.88	-9.57	4.41	-9.61	0.27	-0.14	-7.86	
707.00	1.85	168.20	706.83	-12.31	5.26	-12.35	0.44	0.23	12.31	
802.00	1.63	168.73	801.79	-15.14	5.84	-15.18	0.23	-0.23	0.56	
897.00	1.76	173.83	896.75	-17.92	6.26	-17.96	0.21	0.14	5.37	
992.00	1.49	158.10	991.71	-20.51	6.88	-20.56	0.55	-0.28	-16.56	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 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)
1,082.00	1.54	158.45	1,081.68	-22.72	7.76	-22.78	0.06	0.06	0.39
1,157.00	1.45	164.77	1,156.65	-24.58	8.38	-24.64	0.25	-0.12	8.43
1,244.00	1.76	173.83	1,243.62	-26.97	8.81	-27.03	0.46	0.36	10.41
1,339.00	1.10	117.75	1,338.59	-28.84	9.77	-28.91	1.54	-0.69	-59.03
1,435.00	1.58	75.65	1,434.57	-28.94	11.87	-29.03	1.11	0.50	-43.85
1,530.00	1.98	80.14	1,529.52	-28.34	14.76	-28.45	0.45	0.42	4.73
1,620.00	1.05	51.40	1,619.49	-27.56	16.93	-27.68	1.30	-1.03	-31.93
1,709.00	0.92	336.43	1,708.48	-26.39	17.28	-26.52	1.35	-0.15	-84.24
1,799.00	1.45	326.58	1,798.46	-24.78	16.37	-24.90	0.63	0.59	-10.94
1,888.00	0.92	9.74	1,887.44	-23.13	15.87	-23.25	1.13	-0.60	48.49
1,978.00	1.10	53.15	1,977.43	-21.90	16.68	-22.03	0.85	0.20	48.23
2,068.00	1.14	56.41	2,067.41	-20.89	18.12	-21.03	0.08	0.04	3.62
2,158.00	1.58	77.59	2,157.39	-20.13	20.08	-20.28	0.73	0.49	23.53
2,247.00	1.54	106.15	2,246.36	-20.20	22.42	-20.37	0.87	-0.04	32.09
2,337.00	1.80	128.21	2,336.32	-21.41	24.70	-21.59	0.76	0.29	24.51
2,427.00	1.45	156.69	2,426.29	-23.33	26.26	-23.53	0.96	-0.39	31.64
2,517.00	1.54	168.55	2,516.26	-25.56	26.95	-25.76	0.36	0.10	13.18
2,607.00	1.23	151.50	2,606.23	-27.59	27.65	-27.80	0.57	-0.34	-18.94
2,696.00	1.67	159.50	2,695.20	-29.65	28.56	-29.86	0.54	0.49	8.99
2,786.00	1.85	179.01	2,785.16	-32.33	29.04	-32.55	0.69	0.20	21.68
2,876.00	1.85	160.47	2,875.11	-35.15	29.55	-35.37	0.66	0.00	-20.60
2,965.00	1.49	139.29	2,964.08	-37.38	30.79	-37.61	0.80	-0.40	-23.80
3,055.00	1.71	160.47	3,054.04	-39.53	32.00	-39.77	0.70	0.24	23.53
3,145.00	2.20	176.11	3,143.99	-42.52	32.57	-42.77	0.80	0.54	17.38
3,235.00	2.11	162.49	3,233.93	-45.83	33.18	-46.08	0.58	-0.10	-15.13
3,325.00	1.76	148.43	3,323.88	-48.58	34.41	-48.84	0.65	-0.39	-15.62
3,415.00	1.32	108.70	3,413.85	-50.09	36.11	-50.36	1.25	-0.49	-44.14
3,505.00	1.45	100.00	3,503.82	-50.62	38.21	-50.91	0.27	0.14	-9.67
3,594.00	0.84	121.09	3,592.80	-51.16	39.88	-51.46	0.82	-0.69	23.70
3,684.00	1.27	281.67	3,682.79	-51.30	39.47	-51.59	2.31	0.48	178.42
3,774.00	1.41	266.64	3,772.77	-51.16	37.39	-51.44	0.42	0.16	-16.70
3,864.00	0.88	23.36	3,862.76	-50.59	36.56	-50.86	2.19	-0.59	129.69
3,953.00	1.98	52.36	3,951.73	-49.02	38.04	-49.31	1.44	1.24	32.58
4,043.00	2.77	68.18	4,041.66	-47.27	41.30	-47.57	1.13	0.88	17.58
4,133.00	1.14	74.16	4,131.60	-46.21	44.18	-46.54	1.82	-1.81	6.64
4,223.00	0.57	98.86	4,221.59	-46.04	45.48	-46.38	0.74	-0.63	27.44
4,312.00	0.62	98.07	4,310.59	-46.17	46.39	-46.52	0.06	0.06	-0.89
4,402.00	1.01	81.81	4,400.58	-46.13	47.66	-46.48	0.50	0.43	-18.07
4,492.00	0.62	81.45	4,490.57	-45.94	48.93	-46.31	0.43	-0.43	-0.40
4,582.00	0.88	50.34	4,580.56	-45.43	49.94	-45.80	0.53	0.29	-34.57
4,672.00	0.62	33.64	4,670.55	-44.58	50.74	-44.96	0.37	-0.29	-18.56
4,756.00	0.26	36.10	4,754.55	-44.05	51.11	-44.43	0.43	-0.43	2.93
4,850.00	0.44	347.76	4,848.55	-43.53	51.16	-43.91	0.35	0.19	-51.43

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 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)	
4,940.00	1.36	348.64	4,938.54	-42.14	50.87	-42.52	1.02	1.02	0.98	
5,119.00	4.40	348.20	5,117.29	-33.33	49.05	-33.70	1.70	1.70	-0.25	
5,209.00	6.33	350.40	5,206.89	-25.06	47.52	-25.42	2.16	2.14	2.44	
5,299.00	7.21	346.36	5,296.26	-14.68	45.36	-15.02	1.11	0.98	-4.49	
5,388.00	7.43	347.50	5,384.54	-3.64	42.79	-3.96	0.30	0.25	1.28	
5,478.00	7.16	344.07	5,473.81	7.44	39.99	7.14	0.57	-0.30	-3.81	
5,568.00	6.68	342.05	5,563.15	17.81	36.84	17.53	0.60	-0.53	-2.24	
5,658.00	6.68	345.92	5,652.54	27.87	33.96	27.61	0.50	0.00	4.30	
5,748.00	7.52	349.43	5,741.85	38.74	31.60	38.50	1.05	0.93	3.90	
5,837.00	7.03	347.32	5,830.14	49.77	29.34	49.55	0.63	-0.55	-2.37	
5,927.00	8.92	352.25	5,919.26	62.06	27.19	61.86	2.23	2.10	5.48	
6,017.00	9.45	355.94	6,008.11	76.35	25.72	76.15	0.88	0.59	4.10	
6,106.00	9.67	354.71	6,095.87	91.08	24.52	90.89	0.34	0.25	-1.38	
6,196.00	9.36	355.85	6,184.63	105.90	23.29	105.73	0.40	-0.34	1.27	
6,285.00	8.88	352.51	6,272.51	119.93	21.87	119.77	0.80	-0.54	-3.75	
6,375.00	9.05	352.51	6,361.41	133.84	20.04	133.68	0.19	0.19	0.00	
6,465.00	8.75	355.15	6,450.33	147.68	18.54	147.53	0.56	-0.33	2.93	
6,554.00	8.22	0.42	6,538.35	160.78	18.02	160.64	1.06	-0.60	5.92	
6,644.00	8.31	359.19	6,627.42	173.72	17.97	173.58	0.22	0.10	-1.37	
6,734.00	7.52	6.66	6,716.56	186.07	18.56	185.93	1.44	-0.88	8.30	
6,823.00	6.95	12.90	6,804.86	197.11	20.44	196.95	1.09	-0.64	7.01	
6,913.00	6.73	13.69	6,894.21	207.54	22.90	207.36	0.27	-0.24	0.88	
7,002.00	6.37	15.89	6,982.63	217.36	25.49	217.16	0.49	-0.40	2.47	
7,092.00	5.89	17.56	7,072.12	226.56	28.25	226.34	0.57	-0.53	1.86	
7,182.00	6.33	14.39	7,161.61	235.77	30.88	235.53	0.62	0.49	-3.52	
7,272.00	6.64	9.56	7,251.03	245.71	32.97	245.45	0.70	0.34	-5.37	
7,362.00	6.55	8.77	7,340.44	255.91	34.62	255.64	0.14	-0.10	-0.88	
7,452.00	6.02	9.56	7,429.90	265.64	36.19	265.36	0.60	-0.59	0.88	
7,542.00	5.71	10.44	7,519.42	274.69	37.78	274.40	0.36	-0.34	0.98	
7,632.00	7.38	13.16	7,608.84	284.73	39.91	284.42	1.89	1.86	3.02	
7,722.00	7.74	13.87	7,698.05	296.24	42.68	295.91	0.41	0.40	0.79	
7,812.00	7.25	14.31	7,787.28	307.62	45.53	307.27	0.55	-0.54	0.49	
7,901.00	6.90	12.28	7,875.61	318.29	48.06	317.92	0.48	-0.39	-2.28	
7,991.00	6.55	13.08	7,964.99	328.57	50.37	328.19	0.40	-0.39	0.89	
8,170.00	5.85	12.64	8,142.94	347.42	54.68	347.00	0.39	-0.39	-0.25	
8,260.00	6.29	8.33	8,232.43	356.77	56.40	356.34	0.70	0.49	-4.79	
8,349.00	7.30	9.38	8,320.81	367.18	58.02	366.73	1.14	1.13	1.18	
8,439.00	7.69	11.05	8,410.04	378.73	60.11	378.26	0.50	0.43	1.86	
8,529.00	7.16	9.47	8,499.28	390.17	62.19	389.69	0.63	-0.59	-1.76	
8,618.00	6.77	10.18	8,587.63	400.80	64.03	400.31	0.45	-0.44	0.80	
8,708.00	6.46	9.47	8,677.03	411.02	65.80	410.51	0.36	-0.34	-0.79	
8,798.00	5.71	7.80	8,766.52	420.45	67.24	419.93	0.86	-0.83	-1.86	
8,888.00	5.58	16.77	8,856.09	429.07	69.11	428.54	0.99	-0.14	9.97	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 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)	
8,977.00	5.80	21.60	8,944.65	437.40	72.01	436.85	0.59	0.25	5.43	
9,067.00	5.05	18.96	9,034.24	445.37	74.97	444.80	0.88	-0.83	-2.93	
9,156.00	5.85	14.57	9,122.84	453.47	77.39	452.87	1.01	0.90	-4.93	
9,246.00	5.19	16.15	9,212.42	461.82	79.67	461.21	0.75	-0.73	1.76	
9,336.00	5.71	14.31	9,302.02	470.06	81.91	469.44	0.61	0.58	-2.04	
9,425.00	5.27	15.89	9,390.61	478.29	84.13	477.64	0.52	-0.49	1.78	
9,515.00	5.23	13.16	9,480.23	486.26	86.19	485.59	0.28	-0.04	-3.03	
9,605.00	5.58	1.21	9,569.83	494.62	87.22	493.96	1.31	0.39	-13.28	
9,694.00	5.71	359.19	9,658.40	503.38	87.25	502.71	0.27	0.15	-2.27	
9,784.00	5.67	5.34	9,747.96	512.28	87.60	511.61	0.68	-0.04	6.83	
9,874.00	5.45	13.34	9,837.54	520.87	89.00	520.18	0.89	-0.24	8.89	
9,963.00	4.88	10.18	9,926.17	528.71	90.64	528.01	0.72	-0.64	-3.55	
10,053.00	4.88	6.22	10,015.85	536.28	91.73	535.57	0.37	0.00	-4.40	
10,143.00	5.98	4.73	10,105.44	544.76	92.53	544.05	1.23	1.22	-1.66	
10,232.00	6.77	10.26	10,193.89	554.54	93.85	553.82	1.12	0.89	6.21	
10,322.00	5.49	10.26	10,283.38	564.00	95.56	563.26	1.42	-1.42	0.00	
10,412.00	3.52	6.75	10,373.09	570.98	96.65	570.24	2.21	-2.19	-3.90	
10,501.00	2.55	351.45	10,461.97	575.65	96.68	574.91	1.41	-1.09	-17.19	
10,591.00	2.55	338.36	10,551.88	579.49	95.64	578.75	0.65	0.00	-14.54	
10,680.00	2.15	333.44	10,640.81	582.82	94.17	582.10	0.50	-0.45	-5.53	
10,730.00	2.07	329.04	10,690.77	584.44	93.28	583.72	0.36	-0.16	-8.80	
10,775.00	5.65	5.25	10,735.67	587.34	93.07	586.62	9.25	7.96	80.47	
10,819.00	11.67	16.42	10,779.15	593.77	94.53	593.05	14.14	13.68	25.39	
10,864.00	19.05	20.90	10,822.51	605.01	98.44	604.26	16.60	16.40	9.96	
10,909.00	22.70	22.30	10,864.55	619.91	104.35	619.11	8.19	8.11	3.11	
10,954.00	27.01	22.57	10,905.38	637.39	111.57	636.53	9.58	9.58	0.60	
10,999.00	32.19	21.95	10,944.49	657.96	119.98	657.04	11.53	11.51	-1.38	
11,044.00	37.42	18.70	10,981.43	682.04	128.85	681.06	12.33	11.62	-7.22	
11,089.00	41.80	17.65	11,016.09	709.30	137.79	708.25	9.85	9.73	-2.33	
11,134.00	45.73	16.06	11,048.58	739.09	146.80	737.96	9.07	8.73	-3.53	
11,179.00	50.68	13.95	11,078.57	771.48	155.46	770.29	11.54	11.00	-4.69	
11,224.00	57.18	10.35	11,105.05	807.02	163.06	805.78	15.82	14.44	-8.00	
Tie-on to OH										
11,269.00	49.40	9.74	11,131.93	842.52	169.36	841.22	17.32	-17.29	-1.36	
First Lateral 2 Survey										
11,359.00	47.64	10.18	11,191.54	908.92	181.01	907.54	1.99	-1.96	0.49	
11,449.00	48.72	0.33	11,251.63	975.56	187.09	974.13	8.24	1.20	-10.94	
11,538.00	47.44	353.48	11,311.13	1,041.61	183.56	1,040.21	5.90	-1.44	-7.70	
11,628.00	51.62	355.67	11,369.54	1,109.76	177.13	1,108.40	5.00	4.64	2.43	
11,718.00	61.07	357.34	11,419.36	1,184.45	172.63	1,183.12	10.61	10.50	1.86	
11,786.00	72.28	0.16	11,446.25	1,246.77	171.34	1,245.45	16.92	16.49	4.15	
11,853.00	85.24	359.72	11,459.28	1,312.34	171.26	1,311.02	19.35	19.34	-0.66	
11,897.00	85.75	359.45	11,462.73	1,356.21	170.94	1,354.88	1.31	1.16	-0.61	
11,987.00	89.86	357.26	11,466.18	1,446.08	168.36	1,444.77	5.17	4.57	-2.43	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,077.00	91.86	353.92	11,464.83	1,535.78	161.44	1,534.53	4.33	2.22	-3.71
12,166.00	92.43	353.56	11,461.50	1,624.19	151.74	1,623.01	0.76	0.64	-0.40
12,256.00	92.16	353.74	11,457.90	1,713.57	141.80	1,712.45	0.36	-0.30	0.20
12,346.00	91.29	354.36	11,455.19	1,803.04	132.47	1,801.99	1.19	-0.97	0.69
12,435.00	91.22	356.82	11,453.24	1,891.75	125.63	1,890.75	2.76	-0.08	2.76
12,525.00	93.72	355.41	11,449.36	1,981.45	119.54	1,980.50	3.19	2.78	-1.57
12,614.00	94.10	355.32	11,443.29	2,069.95	112.37	2,069.05	0.44	0.43	-0.10
12,704.00	94.60	358.13	11,436.46	2,159.54	107.24	2,158.67	3.16	0.56	3.12
12,794.00	92.45	0.95	11,430.93	2,249.35	106.52	2,248.49	3.94	-2.39	3.13
12,884.00	92.60	2.62	11,426.96	2,339.21	109.32	2,338.33	1.86	0.17	1.86
12,974.00	90.14	4.81	11,424.81	2,428.99	115.15	2,428.05	3.66	-2.73	2.43
13,063.00	89.31	3.41	11,425.24	2,517.75	121.53	2,516.77	1.83	-0.93	-1.57
13,153.00	89.26	359.28	11,426.36	2,607.70	123.64	2,606.70	4.59	-0.06	-4.59
13,243.00	90.08	357.78	11,426.88	2,697.67	121.33	2,696.68	1.90	0.91	-1.67
13,332.00	91.90	356.99	11,425.34	2,786.56	117.27	2,785.60	2.23	2.04	-0.89
13,422.00	93.09	358.05	11,421.42	2,876.39	113.38	2,875.45	1.77	1.32	1.18
13,512.00	92.32	355.59	11,417.18	2,966.14	108.40	2,965.24	2.86	-0.86	-2.73
13,602.00	89.86	356.38	11,415.46	3,055.89	102.10	3,055.04	2.87	-2.73	0.88
13,691.00	91.13	358.84	11,414.69	3,144.80	98.38	3,143.98	3.11	1.43	2.76
13,781.00	89.95	0.60	11,413.85	3,234.79	97.95	3,233.97	2.35	-1.31	1.96
13,871.00	87.66	358.66	11,415.72	3,324.76	97.36	3,323.94	3.33	-2.54	-2.16
13,960.00	88.06	358.84	11,419.05	3,413.68	95.42	3,412.87	0.49	0.45	0.20
14,050.00	88.56	359.89	11,421.70	3,503.63	94.43	3,502.83	1.29	0.56	1.17
14,139.00	89.97	2.35	11,422.84	3,592.60	96.17	3,591.78	3.19	1.58	2.76
14,229.00	90.89	2.00	11,422.17	3,682.53	99.58	3,681.68	1.09	1.02	-0.39
14,318.00	92.74	0.07	11,419.35	3,771.46	101.19	3,770.60	3.00	2.08	-2.17
14,408.00	92.76	1.21	11,415.03	3,861.35	102.19	3,860.48	1.27	0.02	1.27
14,498.00	90.87	0.86	11,412.18	3,951.29	103.82	3,950.40	2.14	-2.10	-0.39
14,588.00	90.82	4.02	11,410.85	4,041.19	107.65	4,040.26	3.51	-0.06	3.51
14,677.00	88.34	4.90	11,411.50	4,129.91	114.57	4,128.93	2.96	-2.79	0.99
14,767.00	87.07	2.62	11,415.11	4,219.63	120.47	4,218.61	2.90	-1.41	-2.53
14,856.00	87.46	0.16	11,419.36	4,308.50	122.62	4,307.46	2.80	0.44	-2.76
14,946.00	91.02	0.60	11,420.55	4,398.47	123.22	4,397.43	3.99	3.96	0.49
15,036.00	90.14	358.75	11,419.64	4,488.46	122.71	4,487.42	2.28	-0.98	-2.06
15,125.00	90.54	357.70	11,419.11	4,577.42	119.95	4,576.39	1.26	0.45	-1.18
15,215.00	90.14	358.84	11,418.58	4,667.37	117.24	4,666.36	1.34	-0.44	1.27
15,305.00	89.79	358.22	11,418.63	4,757.34	114.93	4,756.35	0.79	-0.39	-0.69
15,394.00	90.14	357.43	11,418.69	4,846.28	111.55	4,845.30	0.97	0.39	-0.89
15,484.00	88.96	358.75	11,419.39	4,936.22	108.55	4,935.27	1.97	-1.31	1.47
15,573.00	89.66	355.94	11,420.46	5,025.11	104.43	5,024.18	3.25	0.79	-3.16
15,663.00	91.09	358.22	11,419.88	5,114.98	99.84	5,114.09	2.99	1.59	2.53
15,752.00	92.56	357.08	11,417.04	5,203.86	96.20	5,202.99	2.09	1.65	-1.28
15,842.00	92.08	356.73	11,413.40	5,293.65	91.34	5,292.82	0.66	-0.53	-0.39

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 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)	
15,932.00	92.21	357.43	11,410.03	5,383.47	86.76	5,382.67	0.79	0.14	0.78	
16,021.00	92.16	359.10	11,406.64	5,472.36	84.07	5,471.58	1.88	-0.06	1.88	
16,111.00	90.85	358.92	11,404.27	5,562.32	82.51	5,561.54	1.47	-1.46	-0.20	
16,201.00	88.98	1.83	11,404.41	5,652.30	83.10	5,651.52	3.84	-2.08	3.23	
16,290.00	87.31	359.36	11,407.29	5,741.24	84.03	5,740.45	3.35	-1.88	-2.78	
16,380.00	86.76	359.72	11,411.94	5,831.12	83.30	5,830.33	0.73	-0.61	0.40	
16,469.00	87.86	359.72	11,416.12	5,920.02	82.87	5,919.23	1.24	1.24	0.00	
16,559.00	86.82	357.70	11,420.30	6,009.89	80.85	6,009.12	2.52	-1.16	-2.24	
16,649.00	88.32	356.82	11,424.11	6,099.70	76.55	6,098.96	1.93	1.67	-0.98	
16,738.00	89.88	356.99	11,425.51	6,188.56	71.74	6,187.85	1.76	1.75	0.19	
16,828.00	89.33	354.79	11,426.13	6,278.32	65.29	6,277.65	2.52	-0.61	-2.44	
16,917.00	91.33	356.46	11,425.62	6,367.05	58.51	6,366.43	2.93	2.25	1.88	
16,951.00	92.23	357.52	11,424.56	6,400.99	56.72	6,400.38	4.09	2.65	3.12	
17,041.00	92.43	355.15	11,420.90	6,490.72	50.97	6,490.16	2.64	0.22	-2.63	
17,131.00	92.85	357.34	11,416.76	6,580.43	45.09	6,579.91	2.48	0.47	2.43	
17,220.00	93.18	359.72	11,412.07	6,669.27	42.81	6,668.76	2.70	0.37	2.67	
17,310.00	93.20	359.45	11,407.07	6,759.13	42.15	6,758.62	0.30	0.02	-0.30	
17,399.00	92.80	359.80	11,402.41	6,848.00	41.57	6,847.50	0.60	-0.45	0.39	
17,488.00	90.56	2.88	11,399.80	6,936.93	43.65	6,936.40	4.28	-2.52	3.46	
17,578.00	90.45	2.79	11,399.01	7,026.81	48.11	7,026.25	0.16	-0.12	-0.10	
17,668.00	90.08	359.54	11,398.59	7,116.78	49.93	7,116.20	3.63	-0.41	-3.61	
17,757.00	86.03	0.77	11,401.61	7,205.71	50.17	7,205.13	4.76	-4.55	1.38	
17,847.00	85.53	0.68	11,408.23	7,295.46	51.31	7,294.87	0.56	-0.56	-0.10	
17,936.00	86.43	0.07	11,414.47	7,384.23	51.89	7,383.64	1.22	1.01	-0.69	
18,026.00	85.64	1.83	11,420.70	7,474.00	53.38	7,473.39	2.14	-0.88	1.96	
18,116.00	90.41	4.64	11,423.80	7,563.77	58.46	7,563.12	6.15	5.30	3.12	
18,205.00	93.33	7.71	11,420.89	7,652.19	68.02	7,651.46	4.76	3.28	3.45	
18,295.00	94.10	2.18	11,415.06	7,741.63	75.76	7,740.84	6.19	0.86	-6.14	
18,384.00	90.65	1.21	11,411.37	7,830.50	78.39	7,829.69	4.03	-3.88	-1.09	
18,474.00	90.43	2.62	11,410.52	7,920.44	81.40	7,919.61	1.59	-0.24	1.57	
18,563.00	90.63	2.09	11,409.70	8,009.36	85.05	8,008.50	0.64	0.22	-0.60	
18,653.00	90.38	2.00	11,408.90	8,099.30	88.26	8,098.41	0.30	-0.28	-0.10	
18,743.00	90.16	1.47	11,408.48	8,189.26	90.99	8,188.35	0.64	-0.24	-0.59	
18,820.00	89.70	1.21	11,408.57	8,266.24	92.79	8,265.31	0.69	-0.60	-0.34	
Last Aim MWD Survey										
18,903.00	89.70	1.21	11,409.01	8,349.22	94.54	8,348.27	0.00	0.00	0.00	
Projection to BHL										

Aim Directional Services, LLC
Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State Com 551H
Project:	Lea County, New Mexico	TVD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Site:	Dagger Lake 5 State Com 551H	MD Reference:	3654'GL+25.5 @ 3679.50usft (H&P 389)
Well:	#551H	North Reference:	Grid
Wellbore:	Lateral 2 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
11,224.00	11,105.05	807.02	163.06	Tie-on to OH	
11,269.00	11,131.93	842.52	169.36	First Lateral 2 Survey	
18,820.00	11,408.57	8,266.24	92.79	Last Aim MWD Survey	
18,903.00	11,409.01	8,349.22	94.54	Projection to BHL	



BHA Reports

Lateral 1

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
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	2019-10-09 23:00
Lobe/Stage	7/8, 4.0	Depth In (ft)	0.00
Bend Angle	1.50	Date Out	2019-10-10 12:00
Speed (rev/gal)	0.15	Depth Out (ft)	1222.00
Wear Pad OD (in)	8.250	Distance Slid (ft)	62.00
Incident	No	Distance Rotated (ft)	1020.00
Motor Results		% Distance Sliding	5.73%
Average Total ROP (ft/h)	124.85	% Distance Rotating	94.27%
Average Slide ROP (ft/h)	74.40		
Average Rotating ROP (ft/h)	130.21		

Bit Details		BHA Objective
OD (in)	17.500	DRILL SURFACE
Vendor	BAKER	
S/N	530910	
Nozzles	9 X 12'S	
Total Flow Area (in²)	0.994	

Bit Details		POOH Reason/Notes
OD (in)	17.500	
Vendor	BAKER	
S/N	530910	
Nozzles	9 X 12'S	
Total Flow Area (in²)	0.994	
		Total Depth/Casing Point: MTR. Drained good at surface

Motor RPM	115.00 - 128.00
Surface RPM	30.00 - 50.00
Rotating WOB (klbs)	15.00 - 25.00
Sliding WOB (klbs)	25.00 - 25.00
Temp (°F)	87.00 - 102.00

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 17.5 BIT, Style: PDC, Gauge Length (in): 4.00, Size (in): 17.50	BAKER	530910	6 5/8" Reg Pin			17.500		1.50	1.50
Mud Motor Description: 8 " 1.5 FIXED 7/8 4.0, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4.0	AIM	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		29.76	31.26
Stabilizer Description: 17" STAB	DR	DR39581	6 5/8" Reg Box	6 5/8" Reg Pin	3.937	8.250		8.63	39.89
UBHO Sub Description: 8" UBHO, Type: NM	DR	DR9685	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.063		3.97	43.86
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	AIM	8001008	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.12	73.98
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	DR	DR41120	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.57	104.55
Crossover Sub Description: X-O ED 54 B X 6 5/8 P , Type: Steel	BD	BD14813	EverDrlg54 Box	6 5/8" Reg Pin	2.875	6.750		3.06	107.61
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1057.60



	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

BHA #1 - BHA#1 (MWD)

Motor Details		Bit Details		Bit Distances
Size(in)	8.00	OD (in)	17.500	Bend: 6.10 ft, Survey: 65.00 ft
Lobe/Stage	7/8, 4.0	Vendor	BAKER	
Bend Angle	1.50	S/N	530910	
Speed (rev/gal)	0.15	Nozzles	9 X 12'S	
Wear Pad OD (in)	8.250	Total Flow Area (in²)	0.994	

BHA Objective

DRILL SURFACE

Comments

MWD: N/A

Items

No Items



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

BHA #2 - BHA #2 - 12.25" (Directional)

Motor Details		Date/Depth/Distances		Hours	
Size(in)	8.00	Date In	2019-10-11 06:30	Downhole Hours	41.00
Lobe/Stage	7/8, 5.9	Depth In (ft)	1222.00	Drilling/Circulating Hours	28.67
Bend Angle	1.50	Date Out	2019-10-12 23:30	Drilling Hours	26.58
Speed (rev/gal)	0.17	Depth Out (ft)	4825.00	Circulating Hours	2.08
Wear Pad OD (in)	8.400	Distance Slid (ft)	267.00	Sliding Hours	2.83
Incident	No	Distance Rotated (ft)	3336.00	Rotating Hours	23.75
Motor Results		% Distance Sliding	7.41%	% Hours Sliding	10.66%
Average Total ROP (ft/h)	135.54	% Distance Rotating	92.59%	% Hours Rotating	89.34%
Average Slide ROP (ft/h)	94.24	BHA Objective			
Average Rotating ROP (ft/h)	140.46	DRILL INTERMEDIATE			

Bit Details

OD (in)	12.250
Vendor	BAKER
S/N	5292881
Nozzles	6 X 12'S
Total Flow Area (in²)	0.663

POOH Reason/Notes

Total Depth/Casing Point

MWD

Max Downhole Temp (°F)	N/A
------------------------	-----

Incident Notes

Directional: RO

MWD:

Bit Distances

Bit To Bend: 6.45 ft, Survey: 69.00 ft

Comments

Directional: Flow Rate: 400-900, Max Diff: 1330 psi, Max Torque: 22,020 ft-lbs, BIT Runs: 5

Mud Properties

Type	Water
WT	10.40
VIS	0.00
PV	0.00
YP	0.00

Parameters

Flow Rate (gpm)	800.00 - 850.00	Motor RPM	136.00 - 144.00
On Bottom Pressure (psi)	2000.00 - 2900.00	Surface RPM	50.00 - 70.00
Off Bottom Pressure (psi)	1200.00 - 2300.00	Rotating WOB (klbs)	25.00 - 25.00
Stall Pressure (psi)	0.00	Sliding WOB (klbs)	25.00 - 25.00
Stalls	0	Temp (°F)	122.00 - 123.00
NPT	0.0		

Items (Directional)

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 12.25 BIT, Style: PDC, Gauge Length (in): 3.50, Size (in): 12.25	BAKER	5292881	6 5/8" Reg Pin			12.250		1.00	1.00
Mud Motor Description: 8 " 1.5 FIXED 7/8 5.9 W/ 12" STAB, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	AIM	800-40-009	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.94	38.94
Stabilizer Description: 12" STAB	GATOR	GT40283	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	7.875		5.63	44.57
UBHO Sub Description: 8" UBHO, Type: NM	DR	DR9685	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.063		3.97	48.54
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	AIM	8001008	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.12	78.66
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	DR	DR41120	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.57	109.23
Crossover Sub Description: X-O 4 1/2 XH B X 6 5/8 P , Type: Steel	GT	GT10364	4 1/2" XH Box	6 5/8" Reg Pin	2.875	6.000		4.15	113.38
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	645.58
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P , Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	649.20
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1599.19



	Job Number	Operator		Rig Name
	WT-19-158	Advance Energy Partners		H&P #389
	Start Date	Well Name		Legal Well Name AFE
	2019-10-07	Dagger Lake 5 State Com 551H		Dagger Lake 5 State Com 551H
	Play	State/Province and Country	County	Company Man
	Delaware Basin	New Mexico, US	Lea	

BHA #2 - BHA #2 - 12.25" (MWD)

Motor Details		Bit Details		Bit Distances
Size(in)	8.00	OD (in)	12.250	Bend: 6.45 ft, Survey: 69.00 ft
Lobe/Stage	7/8, 5.9	Vendor	BAKER	
Bend Angle	1.50	S/N	5292881	
Speed (rev/gal)	0.17	Nozzles	6 X 12'S	
Wear Pad OD (in)	8.400	Total Flow Area (in²)	0.663	

BHA Objective

DRILL INTERMEDIATE

Comments

MWD: N/A

Items

No Items



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

BHA #3 - Intermediate 8.5" (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-10-19 19:45
Lobe/Stage	7/8, 8.5	Depth In (ft)	4825.00
Bend Angle	1.50	Date Out	2019-10-20 20:00
Speed (rev/gal)	0.26	Depth Out (ft)	7592.00
Wear Pad OD (in)	7.230	Distance Slid (ft)	175.00
Incident	No	Distance Rotated (ft)	2592.00
Motor Results		% Distance Sliding	6.32%
Average Total ROP (ft/h)	221.36	% Distance Rotating	93.68%
Average Slide ROP (ft/h)	110.53		
Average Rotating ROP (ft/h)	237.44		

Bit Details		BHA Objective
OD (in)	8.500	DRILL TO KOP
Vendor	SECURITY	

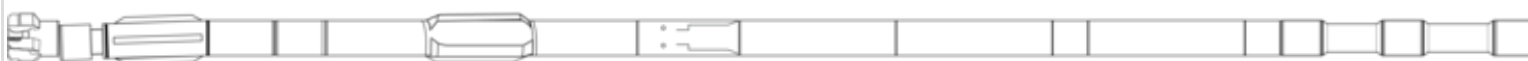
S/N	1324478	POOH Reason/Notes
Nozzles	6 X 12'S	Penetration Rate: LOW ROP
Total Flow Area (in²)	0.663	

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

Bit Distances		Comments
Bit To Bend: 5.37 ft, Survey: 66.00 ft		Directional: Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm)
WT	9.20	On Bottom Pressure (psi)
VIS	27.00	Off Bottom Pressure (psi)
PV	0.00	Stall Pressure (psi)
YP	0.00	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: 8.5 BIT, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	1324478	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-025	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.25	37.25
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.12
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	BT6751558	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.790		3.56	46.68
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	75.45
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	105.83
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	108.80
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	641.00
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	644.62
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1594.61



	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

BHA #3 - Intermediate 8.5" (MWD)

Motor Details		Bit Details		Bit Distances
Size(in)	7.00	OD (in)	8.500	Bend: 5.37 ft, Survey: 66.00 ft
Lobe/Stage	7/8, 8.5	Vendor	SECURITY	
Bend Angle	1.50	S/N	1324478	
Speed (rev/gal)	0.26	Nozzles	6 X 12'S	
Wear Pad OD (in)	7.230	Total Flow Area (in²)	0.663	

BHA Objective

DRILL TO KOP

Comments

MWD: N/A

Items

No Items



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

BHA #4 - Intermediate 8.5" (Directional)

Motor Details		Date/Depth/Distances		Hours	
Size(in)	7.00	Date In	2019-10-20 20:00	Downhole Hours	46.00
Lobe/Stage	7/8, 8.5	Depth In (ft)	7592.00	Drilling/Circulating Hours	31.42
Bend Angle	1.50	Date Out	2019-10-22 18:00	Drilling Hours	30.33
Speed (rev/gal)	0.26	Depth Out (ft)	10744.00	Circulating Hours	1.08
Wear Pad OD (in)	7.210	Distance Slid (ft)	283.00	Sliding Hours	5.92
Incident	No	Distance Rotated (ft)	2869.00	Rotating Hours	24.42
Motor Results		% Distance Sliding	8.98%	% Hours Sliding	19.51%
Average Total ROP (ft/h)	103.91	% Distance Rotating	91.02%	% Hours Rotating	80.49%
Average Slide ROP (ft/h)	47.83	BHA Objective			
Average Rotating ROP (ft/h)	117.50	DRILL 8.5" INTERMEDIATE TO KOP			

Bit Details

OD (in)	8.500
Vendor	SECURITY
S/N	13266539
Nozzles	6 X 12'S
Total Flow Area (in²)	0.663

POOH Reason/Notes

Total Depth/Casing Point

MWD

Max Downhole Temp (°F)	N/A
------------------------	-----

Incident Notes

Directional:

MWD:

Bit Distances

Bit To Bend: 5.32 ft, Survey: 64.00 ft

Comments

Directional: Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit:

Mud Properties

		Parameters	
Type	Brine	Flow Rate (gpm)	650.00 - 705.00
WT	9.20	On Bottom Pressure (psi)	3000.00 - 3500.00
VIS	0.00	Off Bottom Pressure (psi)	2600.00 - 2950.00
PV	0.00	Stall Pressure (psi)	0.00
YP	0.00	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: 8.5" MM65DRM, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13266539	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-031	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.21	37.21
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.08
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	675-180 NM	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.740		2.64	45.72
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	74.49
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	104.87
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	107.84
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	640.04
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	643.66
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1593.65





Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #5 - 8.5" Curve (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-11-05 06:00
Lobe/Stage	7/8, 5.0	Depth In (ft)	10744.00
Bend Angle	2.12	Date Out	2019-11-06 21:30
Speed (rev/gal)	0.26	Depth Out (ft)	11656.00
Wear Pad OD (in)	7.210	Distance Slid (ft)	699.00
Incident	No	Distance Rotated (ft)	213.00
Motor Results		% Distance Sliding	76.64%
Average Total ROP (ft/h)	57.60	% Distance Rotating	23.36%
Average Slide ROP (ft/h)	61.23		
Average Rotating ROP (ft/h)	48.23		

BHA Objective
Curve

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	SECURITY	
S/N	13291183	Change Bottom Hole Assembly: P/U BHA #6
Nozzles	6 X 18'S	
Total Flow Area (in²)	1.491	

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

Bit Distances		Comments
Bit To Bend: 4.10 ft, Other (Bit to RINC): 34.00 ft, Gamma (Bit to Gamma): 34.00 ft, Survey (Bit to Survey): 74.00 ft, Resistivity (Bit to Resistivity): 42.00 ft		Directional: Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 1

Mud Properties		Parameters	
Type	Oil Based	Flow Rate (gpm)	530.00 - 705.00
WT	9.20	On Bottom Pressure (psi)	2750.00 - 3500.00
VIS	60.00	Off Bottom Pressure (psi)	2350.00 - 2950.00
PV	14.00	Stall Pressure (psi)	0.00
YP	6.00	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: 8.5" GTD64C, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13291183	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 5.0 FXD 2.12 w/ SS, Size (in): 7.00, Bend Angle (°): 2.12, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.0	AIM	650-017CDM	4 1/2" IF Box	4 1/2" Reg Box		7.000		26.02	27.02
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.48
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	50.05
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.55
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.10
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.31
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.42
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.35





Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

BHA #6 - (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-11-06 21:30
Lobe/Stage	7/8, 8.5	Depth In (ft)	11656.00
Bend Angle	1.75	Date Out	2019-11-07 20:40
Speed (rev/gal)	0.26	Depth Out (ft)	12213.00
Wear Pad OD (in)	7.210	Distance Slid (ft)	132.00
Incident	No	Distance Rotated (ft)	425.00
Motor Results		% Distance Sliding	23.70%
Average Total ROP (ft/h)	68.20	% Distance Rotating	76.30%
Average Slide ROP (ft/h)	54.62		
Average Rotating ROP (ft/h)	73.91		

BHA Objective
DRILL LATERAL

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	SECURITY	
S/N	12884208	
Nozzles	6 X 22'S	
Total Flow Area (in²)	2.227	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: Bit pin broke inside motor bit box. Leaving bit in the hole
		MWD:

Bit Distances		Comments
Bit To Bend: 5.31 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft, Survey: 83.00 ft, Other (R - INC): 43.63 ft		Directional: Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.20	On Bottom Pressure (psi)
VIS	61.00	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: 8.5" GT65D, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	12884208	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/ SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-002	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.20
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.70
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.25
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.46
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.57
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.50





BHA Reports

Lateral 2

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

BHA #7 - Sidetrack (Directional)

Motor Details		Date/Depth/Distances		Hours	
Size(in)	6.50	Date In	2019-11-08 01:45	Downhole Hours	36.75
Lobe/Stage	7/8, 5.0	Depth In (ft)	11219.00	Drilling/Circulating Hours	21.92
Bend Angle	2.12	Date Out	2019-11-09 14:30	Drilling Hours	19.33
Speed (rev/gal)	0.26	Depth Out (ft)	11701.00	Circulating Hours	2.58
Wear Pad OD (in)	7.000	Distance Slid (ft)	258.00	Sliding Hours	13.92
Incident	No	Distance Rotated (ft)	224.00	Rotating Hours	5.42
Motor Results		% Distance Sliding	53.53%	% Hours Sliding	71.98%
Average Total ROP (ft/h)	24.93	% Distance Rotating	46.47%	% Hours Rotating	28.02%
Average Slide ROP (ft/h)	18.54	BHA Objective			
Average Rotating ROP (ft/h)	41.35	Sidetrack and finish building new curve.			

Bit Details

OD (in)	8.500
Vendor	Security
S/N	13184324
Nozzles	6x18
Total Flow Area (in²)	1.491

POOH Reason/Notes

Build Rate: POOH for 2.6°

MWD

Max Downhole Temp (°F)	N/A
------------------------	-----

Incident Notes

Directional:

MWD:

Bit Distances

Bit To Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft, Survey: 73.00 ft, Other (R - INC): 33.45 ft

Comments

Directional: Flow Rate: 300-600, Max Diff: 1130 psi, Max Torque: 10,480 ft-lbs Runs on bit: 3

Mud Properties

Type	Oil Based
WT	9.30
VIS	46.00
PV	0.00
YP	0.00

Parameters

Flow Rate (gpm)	170.00 - 550.00	Motor RPM	93.00 - 93.00
On Bottom Pressure (psi)	2400.00 - 3000.00	Surface RPM	35.00 - 35.00
Off Bottom Pressure (psi)	2100.00 - 2200.00	Rotating WOB (klbs)	25.00 - 30.00
Stall Pressure (psi)	0.00	Sliding WOB (klbs)	30.00 - 60.00
Stalls	0	Temp (°F)	-0.00 - -0.00
NPT	0.0		

Items (Directional)

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GTD64C, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	Security	13184324	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 6 1/2" 7/8 5.0 FXD 2.12 w/ SS, Size (in): 6.50, Bend Angle (°): 2.12, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.0	AIM	650-006	4 1/2" IF Box	4 1/2" Reg Box		6.500		25.99	26.99
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.45
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	50.02
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.52
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.07
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.28
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.39
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.32





Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
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)	6.50	Date In	2019-11-09 14:30
Lobe/Stage	7/8, 5.0	Depth In (ft)	11701.00
Bend Angle	2.60	Date Out	2019-11-10 07:30
Speed (rev/gal)	0.26	Depth Out (ft)	11859.00
Wear Pad OD (in)	7.000	Distance Slid (ft)	158.00
Incident	No	Distance Rotated (ft)	0.00
Motor Results		% Distance Sliding	100.00%
Average Total ROP (ft/h)	55.76	% Distance Rotating	0.00%
Average Slide ROP (ft/h)	55.76		
Average Rotating ROP (ft/h)	0.00		

BHA Objective
FINISH CURVE

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	BAKER	
S/N	5279702	Total Depth/Casing Point: POOH for lateral assembly
Nozzles	4 X 18'S	
Total Flow Area (in²)	0.994	

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

Bit Distances		Comments
Bit To Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft, Survey: 73.00 ft, Other (R - INC): 33.45 ft		Directional: Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit:

Mud Properties		Parameters	
Type	Oil Based	Flow Rate (gpm)	170.00 - 170.00
WT	9.20	On Bottom Pressure (psi)	3000.00 - 3000.00
VIS	0.00	Off Bottom Pressure (psi)	2200.00 - 2200.00
PV	0.00	Stall Pressure (psi)	0.00
YP	0.00	Stalls	0
		NPT	0.0
		Motor RPM	143.00 - 143.00
		Surface RPM	40.00 - 60.00
		Rotating WOB (klbs)	30.00 - 40.00
		Sliding WOB (klbs)	80.00 - 80.00
		Temp (°F)	137.00 - 137.00

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" KM624, Style: Other, Gauge Length (in): 2.50, Size (in): 8.50	BAKER	5279702	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 6 1/2" 7/8 5.0 FXD 2.60 8" STAB., Size (in): 6.50, Bend Angle (°): 2.60, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5	AIM	CDM650-001	4 1/2" IF Box	4 1/2" Reg Box		6.500		25.95	26.95
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.41
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	49.98
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.48
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.03
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.24
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.35
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.28





Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #9 - Lateral (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-11-10 07:30
Lobe/Stage	7/8, 8.5	Depth In (ft)	11859.00
Bend Angle	1.75	Date Out	2019-11-15 00:00
Speed (rev/gal)	0.26	Depth Out (ft)	17025.00
Wear Pad OD (in)	7.250	Distance Slid (ft)	816.00
Incident	Yes	Distance Rotated (ft)	4350.00
Motor Results		% Distance Sliding	15.80%
Average Total ROP (ft/h)	56.31	% Distance Rotating	84.20%
Average Slide ROP (ft/h)	23.85		
Average Rotating ROP (ft/h)	75.61		

BHA Objective
Drill lateral

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	SECURITY	
S/N	13293671	
Nozzles	6 x 22's	
Total Flow Area (in²)	2.227	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: Motor did not drain
		MWD:

Bit Distances		Comments
Bit To Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft, Survey: 83.00 ft, Other (R - INC): 43.00 ft		Directional: Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1

Mud Properties		Parameters	
Type	Oil Based	Flow Rate (gpm)	700.00 - 700.00
WT	9.20	On Bottom Pressure (psi)	3500.00 - 4200.00
VIS	0.00	Off Bottom Pressure (psi)	3100.00 - 3300.00
PV	0.00	Stall Pressure (psi)	1200.04
YP	0.00	Stalls	3
		NPT	0.0
		Motor RPM	182.00 - 182.00
		Surface RPM	30.00 - 60.00
		Rotating WOB (klbs)	30.00 - 60.00
		Sliding WOB (klbs)	20.00 - 20.00
		Temp (°F)	137.00 - 162.00

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49





Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #10 - Lateral w/ Agitator (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-11-15 00:00
Lobe/Stage	7/8, 8.5	Depth In (ft)	17025.00
Bend Angle	1.75	Date Out	2019-11-17 10:30
Speed (rev/gal)	0.26	Depth Out (ft)	18903.00
Wear Pad OD (in)	7.310	Distance Slid (ft)	405.00
Incident	No	Distance Rotated (ft)	1473.00
Motor Results		% Distance Sliding	21.57%
Average Total ROP (ft/h)	86.02	% Distance Rotating	78.43%
Average Slide ROP (ft/h)	39.19		
Average Rotating ROP (ft/h)	128.09		

Bit Details		BHA Objective
OD (in)	8.500	Drill Lateral to TD
Vendor	Hughes	
S/N	5293516	
Nozzles	6 x 22's	
Total Flow Area (in ²)	2.227	

POOH Reason/Notes
Total Depth/Casing Point: TD

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

Bit Distances		Comments
Bit To Bend: 5.30 ft, Resistivity: 50.83 ft, Gamma: 43.93 ft, Survey: 83.00 ft, Other (R - INC): 43.53 ft		Directional: Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.80	On Bottom Pressure (psi)
VIS	64.00	Off Bottom Pressure (psi)
PV	0.00	Stall Pressure (psi)
YP	0.00	Stalls
		NPT

		650.00 - 700.00	Motor RPM	0.00 - 0.00
		3800.00 - 5200.00	Surface RPM	40.00 - 40.00
		3200.00 - 4700.00	Rotating WOB (klbs)	40.00 - 40.00
		0.00	Sliding WOB (klbs)	20.00 - 50.00
		0	Temp (°F)	100.00 - 120.00
		0.0		

Mud Properties		Parameters			
Type	Oil Based	Flow Rate (gpm)	650.00 - 700.00	Motor RPM	0.00 - 0.00

Bit Description: 8 1/2" DD506TWX, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	Hughes	5293516	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-029	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17

Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
---	----	--------	---------------	---------------	-------	-------	--	------	-------

Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M699	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.70	60.33
---	--------------	---------	---------------	---------------	-------	-------	--	-------	-------

Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.83
--	--------------	---------	---------------	---------------	-------	-------	--	-------	-------

Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C767	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.18	104.01
---	--------------	---------	---------------	---------------	-------	-------	--	-------	--------

Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.22
---	----	---------	---------------	---------------	-------	-------	--	------	--------

Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.33
---	----	---------	---------------	---------------	-------	-------	--	-------	--------

Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.26
--	----	--------	-------------------	---------------	-------	-------	--	------	--------

Drill Pipe Description: 30 Stnds 5.5" Drill Pipe, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	4.000	5.500		2689.31	2829.57
---	--	--	-------------------	----------------	-------	-------	--	---------	---------

Crossover Sub Description: XO - 4 1/2IF-B x ED54- P, Type: Steel	Black Diamond	BD8069	4 1/2" IF Box	EverDrlg54 Pin	3.000	6.750		4.01	2833.58
---	---------------	--------	---------------	----------------	-------	-------	--	------	---------

Agitator Description: Agitator, Size (in): 6.75	NOV	AGHF0675- 0189	4 1/2" IF Box	4 1/2" IF Pin		6.750		25.45	2859.03
---	-----	-------------------	---------------	---------------	--	-------	--	-------	---------

Crossover Sub Description: XO - ED54-B x 4 1/2IF- P, Type: Steel	Black Diamond	BD15118	EverDrlg54 Box	4 1/2" IF Pin	3.000	6.750		4.64	2863.67
									



Mud Motor Reports Lateral 1

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
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	2019-10-09 23:00
Size (in)	8.0	Depth In (ft)	0.00
Lobe/Stage	7/8, 4.00	Date Out	2019-10-10 12:00
Bend Angle	1.5	Depth Out (ft)	1222.00
Speed (rev/gal)	0.15	Total Drilled (ft)	1082.00
Wear Pad OD (in)	8.250	Distance Slid (ft)	62.00
Manufacturer	N/A	Distance Rotated (ft)	1020.00
Motor Results		% Distance Sliding	5.73%
Motor Incident	No	% Distance Rotating	94.27%
Average Total ROP (ft/h)	124.85	BHA Parameters	
Average Slide ROP (ft/h)	74.40	Flow Rate (gpm)	450.00 - 850.00
Average Rotating ROP (ft/h)	130.21	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	17.500	On Bottom Pressure (psi)	1000.00 - 2200.00
Vendor	BAKER	Off Bottom Pressure (psi)	600.00 - 1300.00
S/N	530910	NPT	0.0
Nozzles	9 X 12'S	BHA Objective	
Total Flow Area (in²)	0.994	DRILL SURFACE	
Bit Type	PDC		
Bit Distances			
Bend: 6.10 ft, Survey: 65.00 ft			
Mud Properties			
Type	Water		
WT	9.00		
VIS	28.00		
PV	2.00		
YP	3.00		
POOH Reason/Notes			
Total Depth/Casing Point: MTR. Drained good at surface			
Incident Notes			
Directional: n/a			
MWD:			
Comments			
Directional: Flow Rate: 400-900, Max Diff: 900 psi, Max Torque: 14,930 ft-lbs, BIT Runs: 2			
MWD:			

	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Mud Motor Report - BHA 2 (BHA #2 - 12.25")

Motor Details		Date/Depth/Distances		Hours	
S/N	800-40-009	Date In	2019-10-11 06:30	Downhole Hours	41.00
Size (in)	8.0	Depth In (ft)	1222.00	Drilling/Circulating Hours	28.67
Lobe/Stage	7/8, 5.90	Date Out	2019-10-12 23:30		
Bend Angle	1.5	Depth Out (ft)	4825.00	Circulating Hours	2.08
Speed (rev/gal)	0.17	Total Drilled (ft)	3603.00	Drilling Hours	26.58
Wear Pad OD (in)	8.400	Distance Slid (ft)	267.00	Sliding Hours	2.83
Manufacturer	N/A	Distance Rotated (ft)	3336.00	Rotating Hours	23.75
Motor Results		% Distance Sliding	7.41%	% Hours Rotating	89.34%
Motor Incident	No	% Distance Rotating	92.59%	% Hours Sliding	10.66%
Average Total ROP (ft/h)	135.54	BHA Parameters			
Average Slide ROP (ft/h)	94.24	Flow Rate (gpm)	800.00 - 850.00	Motor RPM	136.00 - 144.00
Average Rotating ROP (ft/h)	140.46	Stalls	0	Surface RPM	50.00 - 70.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	25.00 - 25.00
OD (in)	12.250	On Bottom Pressure (psi)	2000.00 - 2900.00	Sliding WOB (klbs)	25.00 - 25.00
Vendor	BAKER	Off Bottom Pressure (psi)	1200.00 - 2300.00	Temp (°F)	122.00 - 123.00
S/N	5292881	NPT	0.0		
Nozzles	6 X 12'S	BHA Objective			
Total Flow Area (in²)	0.663	DRILL INTERMEDIATE			
Bit Type	PDC				
Bit Distances					
Bend: 6.45 ft, Survey: 69.00 ft					
Mud Properties					
Type	Water				
WT	10.40				
VIS	0.00				
PV	0.00				
YP	0.00				
POOH Reason/Notes					
Total Depth/Casing Point					
Incident Notes					
Directional: RO					
MWD:					
Comments					
Directional: Flow Rate: 400-900, Max Diff: 1330 psi, Max Torque: 22,020 ft-lbs, BIT Runs: 5					
MWD:					



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 3 (Intermediate 8.5")

Motor Details		Date/Depth/Distances	Hours
S/N	700-40-025	Date In	2019-10-19 19:45
Size (in)	7.0	Depth In (ft)	4825.00
Lobe/Stage	7/8, 8.50	Date Out	2019-10-20 20:00
Bend Angle	1.5	Depth Out (ft)	7592.00
Speed (rev/gal)	0.26	Total Drilled (ft)	2767.00
Wear Pad OD (in)	7.230	Distance Slid (ft)	175.00
Manufacturer	N/A	Distance Rotated (ft)	2592.00
Motor Results		% Distance Sliding	6.32%
Motor Incident	No	% Distance Rotating	93.68%
Average Total ROP (ft/h)	221.36	BHA Parameters	
Average Slide ROP (ft/h)	110.53	Flow Rate (gpm)	650.00 - 705.00
Average Rotating ROP (ft/h)	237.44	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	3000.00 - 3500.00
Vendor	SECURITY	Off Bottom Pressure (psi)	2600.00 - 2950.00
S/N	1324478	NPT	0.0
Nozzles	6 X 12'S	BHA Objective	
Total Flow Area (in²)	0.663	DRILL TO KOP	
Bit Type	PDC		
Bit Distances			
Bend: 5.37 ft, Survey: 66.00 ft			
Mud Properties			
Type	Brine		
WT	9.20		
VIS	27.00		
PV	0.00		
YP	0.00		
POOH Reason/Notes			
Penetration Rate: LOW ROP			
Incident Notes			
Directional: RO			
MWD:			
Comments			
Directional: Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2			
MWD:			



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 4 (Intermediate 8.5")

Motor Details		Date/Depth/Distances	Hours
S/N	700-40-031	Date In	2019-10-20 20:00
Size (in)	7.0	Depth In (ft)	7592.00
Lobe/Stage	7/8, 8.50	Date Out	2019-10-22 18:00
Bend Angle	1.5	Depth Out (ft)	10744.00
Speed (rev/gal)	0.26	Total Drilled (ft)	3152.00
Wear Pad OD (in)	7.210	Distance Slid (ft)	283.00
Manufacturer	N/A	Distance Rotated (ft)	2869.00
Motor Results		% Distance Sliding	8.98%
Motor Incident	No	% Distance Rotating	91.02%
Average Total ROP (ft/h)	103.91	BHA Parameters	
Average Slide ROP (ft/h)	47.83	Flow Rate (gpm)	650.00 - 705.00
Average Rotating ROP (ft/h)	117.50	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	3000.00 - 3500.00
Vendor	SECURITY	Off Bottom Pressure (psi)	2600.00 - 2950.00
S/N	13266539	NPT	0.0
Nozzles	6 X 12'S	BHA Objective	
Total Flow Area (in²)	0.663	DRILL 8.5" INTERMEDIATE TO KOP	
Bit Type	PDC		
Bit Distances			
Bend: 5.32 ft, Survey: 64.00 ft			
Mud Properties			
Type	Brine		
WT	9.20		
VIS	0.00		
PV	0.00		
YP	0.00		
POOH Reason/Notes			
Total Depth/Casing Point			
Incident Notes			
Directional:			
MWD:			
Comments			
Directional: Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit:			
MWD:			



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 5 (8.5" Curve)

Motor Details		Date/Depth/Distances	Hours
S/N	650-017CDM	Date In	2019-11-05 06:00
Size (in)	7.0	Depth In (ft)	10744.00
Lobe/Stage	7/8, 5.00	Date Out	2019-11-06 21:30
Bend Angle	2.12	Depth Out (ft)	11656.00
Speed (rev/gal)	0.26	Total Drilled (ft)	912.00
Wear Pad OD (in)	7.210	Distance Slid (ft)	699.00
Manufacturer	N/A	Distance Rotated (ft)	213.00
Motor Results		% Distance Sliding	76.64%
Motor Incident	No	% Distance Rotating	23.36%
Average Total ROP (ft/h)	57.60	BHA Parameters	
Average Slide ROP (ft/h)	61.23	Flow Rate (gpm)	530.00 - 705.00
Average Rotating ROP (ft/h)	48.23	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	2750.00 - 3500.00
Vendor	SECURITY	Off Bottom Pressure (psi)	2350.00 - 2950.00
S/N	13291183	NPT	0.0
Nozzles	6 X 18'S	BHA Objective	
Total Flow Area (in²)	1.491	Curve	
Bit Type	PDC		
Bit Distances			
Bend: 4.10 ft, Other (Bit to RINC): 34.00 ft, Gamma (Bit to Gamma): 34.00 ft, Survey (Bit to Survey): 74.00 ft, Resistivity (Bit to Resistivity): 42.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.20		
VIS	60.00		
PV	14.00		
YP	6.00		
POOH Reason/Notes			
Change Bottom Hole Assembly: P/U BHA #6			
Incident Notes			
Directional: NA			
MWD:			
Comments			
Directional: Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 1			
MWD:			



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 6

Motor Details		Date/Depth/Distances		Hours	
S/N	700-40-002	Date In	2019-11-06 21:30	Downhole Hours	23.17
Size (in)	7.0	Depth In (ft)	11656.00	Drilling/Circulating Hours	9.08
Lobe/Stage	7/8, 8.50	Date Out	2019-11-07 20:40		
Bend Angle	1.75	Depth Out (ft)	12213.00	Circulating Hours	0.92
Speed (rev/gal)	0.26	Total Drilled (ft)	557.00	Drilling Hours	8.17
Wear Pad OD (in)	7.210	Distance Slid (ft)	132.00	Sliding Hours	2.42
Manufacturer	N/A	Distance Rotated (ft)	425.00	Rotating Hours	5.75
Motor Results		% Distance Sliding	23.70%	% Hours Rotating	70.41%
Motor Incident	No	% Distance Rotating	76.30%	% Hours Sliding	29.59%
Average Total ROP (ft/h)	68.20	BHA Parameters			
Average Slide ROP (ft/h)	54.62	Flow Rate (gpm)	645.00 - 645.00	Motor RPM	136.00 - 144.00
Average Rotating ROP (ft/h)	73.91	Stalls	0	Surface RPM	50.00 - 60.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	30.00 - 30.00
OD (in)	8.500	On Bottom Pressure (psi)	3200.00 - 3400.00	Sliding WOB (klbs)	20.00 - 20.00
Vendor	SECURITY	Off Bottom Pressure (psi)	2750.00 - 2900.00	Temp (°F)	140.40 - 140.40
S/N	12884208	NPT	0.0		
Nozzles	6 X 22'S	BHA Objective			
Total Flow Area (in²)	2.227	DRILL LATERAL			
Bit Type	PDC				
Bit Distances					
Bend: 5.31 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,					
Survey: 83.00 ft, Other (R - INC): 43.63 ft					
Mud Properties					
Type	Oil Based				
WT	9.20				
VIS	61.00				
PV	13.00				
YP	8.00				
POOH Reason/Notes					
Penetration Rate: While ROT Diff and ROP fell off. Picked up and tried to drill again with same results.					
Incident Notes					
Directional: Bit pin broke inside motor bit box. Leaving bit in the hole					
MWD:					
Comments					
Directional: Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1					
MWD:					



Mud Motor Reports Lateral 2

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 7 (Sidetrack)

Motor Details		Date/Depth/Distances		Hours	
S/N	650-006	Date In	2019-11-08 01:45	Downhole Hours	36.75
Size (in)	6.5	Depth In (ft)	11219.00	Drilling/Circulating Hours	21.92
Lobe/Stage	7/8, 5.00	Date Out	2019-11-09 14:30		
Bend Angle	2.12	Depth Out (ft)	11701.00	Circulating Hours	2.58
Speed (rev/gal)	0.26	Total Drilled (ft)	482.00	Drilling Hours	19.33
Wear Pad OD (in)	7.000	Distance Slid (ft)	258.00	Sliding Hours	13.92
Manufacturer	N/A	Distance Rotated (ft)	224.00	Rotating Hours	5.42
Motor Results		% Distance Sliding	53.53%	% Hours Rotating	28.02%
Motor Incident	No	% Distance Rotating	46.47%	% Hours Sliding	71.98%
Average Total ROP (ft/h)	24.93	BHA Parameters			
Average Slide ROP (ft/h)	18.54	Flow Rate (gpm)	170.00 - 550.00	Motor RPM	93.00 - 93.00
Average Rotating ROP (ft/h)	41.35	Stalls	0	Surface RPM	35.00 - 35.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	25.00 - 30.00
OD (in)	8.500	On Bottom Pressure (psi)	2400.00 - 3000.00	Sliding WOB (klbs)	30.00 - 60.00
Vendor	Security	Off Bottom Pressure (psi)	2100.00 - 2200.00	Temp (°F)	-0.00 - -0.00
S/N	13184324	NPT	0.0		
Nozzles	6x18	BHA Objective			
Total Flow Area (in²)	1.491	Sidetrack and finish building new curve.			
Bit Type	PDC				
Bit Distances					
Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft, Survey: 73.00 ft, Other (R - INC): 33.45 ft					
Mud Properties					
Type	Oil Based				
WT	9.30				
VIS	46.00				
PV	0.00				
YP	0.00				
POOH Reason/Notes					
Build Rate: POOH for 2.6°					
Incident Notes					
Directional:					
MWD:					
Comments					
Directional: Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 3					
MWD:					



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
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	CDM650-001	Date In	2019-11-09 14:30
Size (in)	6.5	Depth In (ft)	11701.00
Lobe/Stage	7/8, 5.00	Date Out	2019-11-10 07:30
Bend Angle	2.6	Depth Out (ft)	11859.00
Speed (rev/gal)	0.26	Total Drilled (ft)	158.00
Wear Pad OD (in)	7.000	Distance Slid (ft)	158.00
Manufacturer	N/A	Distance Rotated (ft)	0.00
Motor Results		% Distance Sliding	100.00%
Motor Incident	No	% Distance Rotating	0.00%
Average Total ROP (ft/h)	55.76	BHA Parameters	
Average Slide ROP (ft/h)	55.76	Flow Rate (gpm)	170.00 - 170.00
Average Rotating ROP (ft/h)	0.00	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	3000.00 - 3000.00
Vendor	BAKER	Off Bottom Pressure (psi)	2200.00 - 2200.00
S/N	5279702	NPT	0.0
Nozzles	4 X 18'S	BHA Objective	
Total Flow Area (in²)	0.994	FINISH CURVE	
Bit Type	Other		
Bit Distances			
Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft, Survey: 73.00 ft, Other (R - INC): 33.45 ft			
Mud Properties			
Type	Oil Based		
WT	9.20		
VIS	0.00		
PV	0.00		
YP	0.00		
POOH Reason/Notes			
Total Depth/Casing Point: POOH for lateral assembly			
Incident Notes			
Directional:			
MWD:			
Comments			
Directional: Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit:			
MWD:			



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 9 (Lateral)

Motor Details		Date/Depth/Distances	Hours
S/N	700-40-033	Date In	2019-11-10 07:30
Size (in)	7.0	Depth In (ft)	11859.00
Lobe/Stage	7/8, 8.50	Date Out	2019-11-15 00:00
Bend Angle	1.75	Depth Out (ft)	17025.00
Speed (rev/gal)	0.26	Total Drilled (ft)	5166.00
Wear Pad OD (in)	7.250	Distance Slid (ft)	816.00
Manufacturer	N/A	Distance Rotated (ft)	4350.00
Motor Results		% Distance Sliding	15.80%
Motor Incident	Yes	% Distance Rotating	84.20%
Average Total ROP (ft/h)	56.31	BHA Parameters	
Average Slide ROP (ft/h)	23.85	Flow Rate (gpm)	700.00 - 700.00
Average Rotating ROP (ft/h)	75.61	Stalls	3
Bit Details		Stall Pressure (psi)	1200.04
OD (in)	8.500	On Bottom Pressure (psi)	3500.00 - 4200.00
Vendor	SECURITY	Off Bottom Pressure (psi)	3100.00 - 3300.00
S/N	13293671	NPT	0.0
Nozzles	6 x 22's	BHA Objective	
Total Flow Area (in²)	2.227	Drill lateral	
Bit Type	Other		
Bit Distances			
Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,			
Survey: 83.00 ft, Other (R - INC): 43.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.20		
VIS	0.00		
PV	0.00		
YP	0.00		
POOH Reason/Notes			
Downhole Motor Incident: No diff, Quit drilling			
Incident Notes			
Directional: Motor did not drain			
MWD:			
Comments			
Directional: Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1			
MWD:			



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 10 (Lateral w/ Agitator)

Motor Details		Date/Depth/Distances	Hours
S/N	700-40-029	Date In	2019-11-15 00:00
Size (in)	7.0	Depth In (ft)	17025.00
Lobe/Stage	7/8, 8.50	Date Out	2019-11-17 10:30
Bend Angle	1.75	Depth Out (ft)	18903.00
Speed (rev/gal)	0.26	Total Drilled (ft)	1878.00
Wear Pad OD (in)	7.310	Distance Slid (ft)	405.00
Manufacturer	N/A	Distance Rotated (ft)	1473.00
Motor Results		% Distance Sliding	21.57%
Motor Incident	No	% Distance Rotating	78.43%
Average Total ROP (ft/h)	86.02	BHA Parameters	
Average Slide ROP (ft/h)	39.19	Flow Rate (gpm)	650.00 - 700.00
Average Rotating ROP (ft/h)	128.09	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	3800.00 - 5200.00
Vendor	Hughes	Off Bottom Pressure (psi)	3200.00 - 4700.00
S/N	5293516	NPT	0.0
Nozzles	6 x 22's	BHA Objective	
Total Flow Area (in²)	2.227	Drill Lateral to TD	
Bit Type	Other		
Bit Distances			
Bend: 5.30 ft, Resistivity: 50.83 ft, Gamma: 43.93 ft,			
Survey: 83.00 ft, Other (R - INC): 43.53 ft			
Mud Properties			
Type	Oil Based		
WT	9.80		
VIS	64.00		
PV	0.00		
YP	0.00		
POOH Reason/Notes			
Total Depth/Casing Point: TD			
Incident Notes			
Directional: N/A			
MWD:			
Comments			
Directional: Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2			
MWD:			



Slide/Rotate Reports

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
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	10-10	00:00	01:30	10-10	1.5	140.00	297.00	157.00	104.67	N/A	450.00	30.0	15.00	1000.00	600.00	
Rotate	10-10	01:35	02:20	10-10	0.75	297.00	392.00	95.00	126.67	N/A	550.00	30.0	20.00	1400.00	700.00	
Rotate	10-10	02:25	03:05	10-10	0.67	392.00	487.00	95.00	142.50	N/A	550.00	30.0	20.00	1400.00	700.00	
Rotate	10-10	03:10	03:25	10-10	0.25	487.00	501.00	14.00	56.00	N/A	550.00	30.0	20.00	1400.00	700.00	
Slide	10-10	03:25	03:30	10-10	0.08	501.00	513.00	12.00	144.00	330.0	750.00	N/A	25.00	1800.00	1300.00	
Rotate	10-10	03:30	03:45	10-10	0.25	513.00	582.00	69.00	276.00	N/A	750.00	50.0	25.00	1800.00	1200.00	
Rotate	10-10	03:50	04:20	10-10	0.5	582.00	677.00	95.00	190.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-10	04:25	04:55	10-10	0.5	677.00	772.00	95.00	190.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-10	05:00	05:05	10-10	0.08	772.00	776.00	4.00	48.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Slide	10-10	05:05	05:20	10-10	0.25	776.00	796.00	20.00	80.00	350.0	850.00	N/A	25.00	2200.00	1300.00	
Rotate	10-10	05:20	05:55	10-10	0.58	796.00	867.00	71.00	121.71	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-10	06:00	06:50	10-10	0.83	867.00	962.00	95.00	114.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-10	06:55	07:00	10-10	0.08	962.00	970.00	8.00	96.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Slide	10-10	07:00	07:30	10-10	0.5	970.00	1000.00	30.00	60.00	0.0	850.00	N/A	25.00	2200.00	1300.00	
Rotate	10-10	07:30	07:55	10-10	0.42	1000.00	1057.00	57.00	136.80	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-10	08:00	08:30	10-10	0.5	1057.00	1147.00	90.00	180.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-10	08:35	09:30	10-10	0.92	1147.00	1222.00	75.00	81.82	N/A	850.00	50.0	25.00	2000.00	1200.00	



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #2 (BHA #2 - 12.25")

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	10-11	11:00	11:45	10-11	0.75	1222.00	1313.00	91.00	121.33	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	11:55	12:00	10-11	0.08	1313.00	1322.00	9.00	108.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Slide	10-11	12:00	12:10	10-11	0.17	1322.00	1337.00	15.00	90.00	0.0	850.00	N/A	25.00	2200.00	1300.00	
Rotate	10-11	12:10	12:20	10-11	0.17	1337.00	1408.00	71.00	426.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	12:25	12:45	10-11	0.33	1408.00	1504.00	96.00	288.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	12:50	13:05	10-11	0.25	1504.00	1599.00	95.00	380.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	13:15	13:20	10-11	0.08	1599.00	1618.00	19.00	228.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Slide	10-11	13:20	13:30	10-11	0.17	1618.00	1638.00	20.00	120.00	0.0	850.00	N/A	25.00	2200.00	1300.00	
Rotate	10-11	13:30	13:40	10-11	0.17	1638.00	1689.00	51.00	306.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	13:45	14:05	10-11	0.33	1689.00	1778.00	89.00	267.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	14:10	14:25	10-11	0.25	1778.00	1868.00	90.00	360.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	14:30	14:35	10-11	0.08	1868.00	1878.00	10.00	120.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Slide	10-11	14:35	14:45	10-11	0.17	1878.00	1893.00	15.00	90.00	115.0	850.00	N/A	25.00	2200.00	1300.00	
Rotate	10-11	14:45	14:55	10-11	0.17	1893.00	1957.00	64.00	384.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	15:00	15:20	10-11	0.33	1957.00	2047.00	90.00	270.00	N/A	850.00	50.0	25.00	2000.00	1200.00	
Rotate	10-11	15:25	16:00	10-11	0.58	2047.00	2137.00	90.00	154.29	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	16:05	16:15	10-11	0.17	2137.00	2173.00	36.00	216.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Slide	10-11	16:15	16:30	10-11	0.25	2173.00	2190.00	17.00	68.00	200.0	800.00	N/A	25.00	2600.00	2200.00	
Rotate	10-11	16:30	16:45	10-11	0.25	2190.00	2227.00	37.00	148.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	16:50	17:25	10-11	0.58	2227.00	2316.00	89.00	152.57	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	17:30	17:35	10-11	0.08	2316.00	2328.00	12.00	144.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Slide	10-11	17:35	17:45	10-11	0.17	2328.00	2343.00	15.00	90.00	230.0	800.00	N/A	25.00	2600.00	2200.00	
Rotate	10-11	17:45	18:00	10-11	0.25	2343.00	2406.00	63.00	252.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	18:05	18:15	10-11	0.17	2406.00	2420.00	14.00	84.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Slide	10-11	18:15	18:25	10-11	0.17	2420.00	2440.00	20.00	120.00	260.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-11	18:25	18:40	10-11	0.25	2440.00	2496.00	56.00	224.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	18:45	19:10	10-11	0.42	2496.00	2586.00	90.00	216.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	19:15	19:40	10-11	0.42	2586.00	2676.00	90.00	216.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	19:45	19:50	10-11	0.08	2676.00	2685.00	9.00	108.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Slide	10-11	19:50	20:05	10-11	0.25	2685.00	2715.00	30.00	120.00	240.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-11	20:05	20:10	10-11	0.08	2715.00	2765.00	50.00	600.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	20:15	20:35	10-11	0.33	2765.00	2855.00	90.00	270.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	20:40	21:00	10-11	0.33	2855.00	2945.00	90.00	270.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	21:05	21:25	10-11	0.33	2945.00	3034.00	89.00	267.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	21:30	21:35	10-11	0.08	3034.00	3046.00	12.00	144.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Slide	10-11	21:35	22:05	10-11	0.5	3046.00	3081.00	35.00	70.00	230.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-11	22:05	22:10	10-11	0.08	3081.00	3124.00	43.00	516.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	22:15	22:30	10-11	0.25	3124.00	3214.00	90.00	360.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	22:35	23:00	10-11	0.42	3214.00	3304.00	90.00	216.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	23:05	23:15	10-11	0.17	3304.00	3394.00	90.00	540.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Rotate	10-11	23:20	23:25	10-11	0.08	3394.00	3405.00	11.00	132.00	N/A	800.00	70.0	25.00	2900.00	2300.00	
Slide	10-11	23:25	23:35	10-11	0.17	3405.00	3425.00	20.00	120.00	320.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-11	23:35	23:50	10-11	0.25	3425.00	3484.00	59.00	236.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	00:00	00:10	10-12	0.17	3484.00	3574.00	90.00	540.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	00:15	00:25	10-12	0.17	3574.00	3587.00	13.00	78.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Slide	10-12	00:25	00:40	10-12	0.25	3587.00	3627.00	40.00	160.00	280.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-12	00:40	00:45	10-12	0.08	3627.00	3663.00	36.00	432.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	00:50	01:10	10-12	0.33	3663.00	3753.00	90.00	270.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	01:15	01:55	10-12	0.67	3753.00	3843.00	90.00	135.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	02:00	02:05	10-12	0.08	3843.00	3850.00	7.00	84.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Slide	10-12	02:05	02:20	10-12	0.25	3850.00	3870.00	20.00	80.00	85.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-12	02:20	02:40	10-12	0.33	3870.00	3933.00	63.00	189.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	02:45	03:15	10-12	0.5	3933.00	4022.00	89.00	178.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	03:20	04:20	10-12	1.0	4022.00	4112.00	90.00	90.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	04:45	04:50	10-12	0.08	4112.00	4115.00	3.00	36.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Slide	10-12	04:50	05:10	10-12	0.33	4115.00	4135.00	20.00	60.00	250.0	800.00	N/A	25.00	2900.00	2300.00	
Rotate	10-12	05:10	05:30	10-12	0.33	4135.00	4202.00	67.00	201.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	05:35	06:30	10-12	0.92	4202.00	4292.00	90.00	98.18	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	06:35	07:35	10-12	1.0	4292.00	4381.00	89.00	89.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	07:40	09:05	10-12	1.42	4381.00	4471.00	90.00	63.53	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	09:10	10:50	10-12	1.67	4471.00	4561.00	90.00	54.00	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	10:55	12:40	10-12	1.75	4561.00	4651.00	90.00	51.43	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	12:45	14:35	10-12	1.83	4651.00	4741.00	90.00	49.09	N/A	800.00	60.0	25.00	2900.00	2300.00	
Rotate	10-12	14:50	17:35	10-12	2.75	4741.00	4825.00	84.00	30.55	N/A	800.00	60.0	25.00	2900.00	2300.00	



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #3 (Intermediate 8.5")

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	10-20	00:45	01:25	10-20	0.67	4825.00	4916.00	91.00	136.50	N/A	650.00	40.0	35.00	3000.00	2600.00	
Rotate	10-20	01:30	01:40	10-20	0.17	4916.00	4925.00	9.00	54.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Slide	10-20	01:40	01:45	10-20	0.08	4925.00	4935.00	10.00	120.00	350.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	01:45	02:00	10-20	0.25	4935.00	5006.00	71.00	284.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Rotate	10-20	02:05	02:15	10-20	0.17	5006.00	5015.00	9.00	54.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Slide	10-20	02:15	02:20	10-20	0.08	5015.00	5030.00	15.00	180.00	350.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	02:20	02:40	10-20	0.33	5030.00	5105.00	75.00	225.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Slide	10-20	02:40	02:45	10-20	0.08	5105.00	5120.00	15.00	180.00	0.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	02:45	02:55	10-20	0.17	5120.00	5185.00	65.00	390.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Rotate	10-20	03:00	03:05	10-20	0.08	5185.00	5196.00	11.00	132.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Slide	10-20	03:05	03:15	10-20	0.17	5196.00	5211.00	15.00	90.00	0.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	03:15	03:20	10-20	0.08	5211.00	5275.00	64.00	768.00	N/A	650.00	40.0	40.00	3000.00	2600.00	
Rotate	10-20	03:25	03:40	10-20	0.25	5275.00	5365.00	90.00	360.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	03:45	04:05	10-20	0.33	5365.00	5454.00	89.00	267.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	04:10	04:25	10-20	0.25	5454.00	5544.00	90.00	360.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	04:30	04:45	10-20	0.25	5544.00	5634.00	90.00	360.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	04:50	04:55	10-20	0.08	5634.00	5645.00	11.00	132.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Slide	10-20	04:55	05:00	10-20	0.08	5645.00	5660.00	15.00	180.00	10.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	05:00	05:15	10-20	0.25	5660.00	5724.00	64.00	256.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	05:20	05:30	10-20	0.17	5724.00	5730.00	6.00	36.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Slide	10-20	05:30	05:40	10-20	0.17	5730.00	5750.00	20.00	120.00	10.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	05:40	05:50	10-20	0.17	5750.00	5814.00	64.00	384.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	05:55	06:10	10-20	0.25	5814.00	5903.00	89.00	356.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	06:15	06:20	10-20	0.08	5903.00	5925.00	22.00	264.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Slide	10-20	06:20	06:30	10-20	0.17	5925.00	5945.00	20.00	120.00	10.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	06:30	06:35	10-20	0.08	5945.00	5993.00	48.00	576.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	06:40	06:55	10-20	0.25	5993.00	6083.00	90.00	360.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	07:00	07:10	10-20	0.17	6083.00	6172.00	89.00	534.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	07:15	07:20	10-20	0.08	6172.00	6190.00	18.00	216.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Slide	10-20	07:20	07:25	10-20	0.08	6190.00	6200.00	10.00	120.00	160.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	07:25	07:35	10-20	0.17	6200.00	6262.00	62.00	372.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	07:40	07:50	10-20	0.17	6262.00	6351.00	89.00	534.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	07:55	08:05	10-20	0.17	6351.00	6441.00	90.00	540.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	08:10	08:15	10-20	0.08	6441.00	6460.00	19.00	228.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Slide	10-20	08:15	08:30	10-20	0.25	6460.00	6480.00	20.00	80.00	120.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	08:30	08:40	10-20	0.17	6480.00	6531.00	51.00	306.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	08:45	08:55	10-20	0.17	6531.00	6620.00	89.00	534.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	09:00	09:15	10-20	0.25	6620.00	6710.00	90.00	360.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	09:20	09:25	10-20	0.08	6710.00	6725.00	15.00	180.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Slide	10-20	09:25	09:35	10-20	0.17	6725.00	6745.00	20.00	120.00	120.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	09:35	09:45	10-20	0.17	6745.00	6800.00	55.00	330.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	09:50	10:05	10-20	0.25	6800.00	6889.00	89.00	356.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	10:10	10:30	10-20	0.33	6889.00	6979.00	90.00	270.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	10:35	11:10	10-20	0.58	6979.00	7068.00	89.00	152.57	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	11:15	11:35	10-20	0.33	7068.00	7158.00	90.00	270.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	11:40	11:45	10-20	0.08	7158.00	7172.00	14.00	168.00	N/A	705.00	50.0	45.00	3500.00	2950.00	
Slide	10-20	11:45	12:00	10-20	0.25	7172.00	7187.00	15.00	60.00	355.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-20	12:00	12:25	10-20	0.42	7187.00	7248.00	61.00	146.40	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	12:30	12:50	10-20	0.33	7248.00	7338.00	90.00	270.00	N/A	650.00	50.0	40.00	3000.00	2600.00	
Rotate	10-20	12:55	13:30	10-20	0.58	7338.00	7428.00	90.00	154.29	N/A	705.00	50.0	45.00	3500.00	2950.00	
Rotate	10-20	13:35	14:20	10-20	0.75	7428.00	7518.00	90.00	120.00	N/A	705.00	50.0	45.00	3500.00	2950.00	
Rotate	10-20	14:25	15:40	10-20	1.25	7518.00	7592.00	74.00	59.20	N/A	705.00	50.0	45.00	3500.00	2950.00	



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #4 (Intermediate 8.5")

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	10-21	00:00	00:25	10-21	0.42	7592.00	7608.00	16.00	38.40	N/A	705.00	50.0	45.00	3500.00	2950.00	
Rotate	10-21	00:30	00:35	10-21	0.08	7608.00	7610.00	2.00	24.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Slide	10-21	00:35	00:55	10-21	0.33	7610.00	7630.00	20.00	60.00	15.0	650.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	00:55	01:10	10-21	0.25	7630.00	7696.00	66.00	264.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Rotate	10-21	01:15	01:35	10-21	0.33	7696.00	7786.00	90.00	270.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Rotate	10-21	01:40	02:00	10-21	0.33	7786.00	7876.00	90.00	270.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Rotate	10-21	02:05	02:20	10-21	0.25	7876.00	7965.00	89.00	356.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Rotate	10-21	02:25	02:55	10-21	0.5	7965.00	8055.00	90.00	180.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Rotate	10-21	03:00	04:05	10-21	1.08	8055.00	8234.00	179.00	165.23	N/A	705.00	40.0	45.00	3500.00	2950.00	
Rotate	10-21	04:10	04:15	10-21	0.08	8234.00	8245.00	11.00	132.00	N/A	705.00	40.0	45.00	3500.00	2950.00	
Slide	10-21	04:15	04:25	10-21	0.17	8245.00	8255.00	10.00	60.00	15.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	04:25	04:45	10-21	0.33	8255.00	8324.00	69.00	207.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	04:50	04:55	10-21	0.08	8324.00	8335.00	11.00	132.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	04:55	05:15	10-21	0.33	8335.00	8350.00	15.00	45.00	30.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	05:15	05:25	10-21	0.17	8350.00	8413.00	63.00	378.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	05:30	06:15	10-21	0.75	8413.00	8503.00	90.00	120.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	06:20	07:10	10-21	0.83	8503.00	8593.00	90.00	108.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	07:15	08:10	10-21	0.92	8593.00	8682.00	89.00	97.09	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	08:15	09:20	10-21	1.08	8682.00	8772.00	90.00	83.08	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	09:35	10:40	10-21	1.08	8772.00	8862.00	90.00	83.08	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	10:45	10:55	10-21	0.17	8862.00	8866.00	4.00	24.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	10:55	11:15	10-21	0.33	8866.00	8881.00	15.00	45.00	30.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	11:15	12:00	10-21	0.75	8881.00	8952.00	71.00	94.67	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	12:05	12:10	10-21	0.08	8952.00	8955.00	3.00	36.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	12:10	12:30	10-21	0.33	8955.00	8970.00	15.00	45.00	15.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	12:30	13:20	10-21	0.83	8970.00	9041.00	71.00	85.20	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	13:25	14:35	10-21	1.17	9041.00	9131.00	90.00	77.14	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	14:40	14:45	10-21	0.08	9131.00	9136.00	5.00	60.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	14:45	15:15	10-21	0.5	9136.00	9161.00	25.00	50.00	0.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	15:15	15:55	10-21	0.67	9161.00	9220.00	59.00	88.50	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	16:00	16:45	10-21	0.75	9220.00	9310.00	90.00	120.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	16:50	16:55	10-21	0.08	9310.00	9316.00	6.00	72.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	16:55	17:40	10-21	0.75	9316.00	9346.00	30.00	40.00	10.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	17:40	18:05	10-21	0.42	9346.00	9400.00	54.00	129.60	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	18:10	18:50	10-21	0.67	9400.00	9489.00	89.00	133.50	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	18:55	19:00	10-21	0.08	9489.00	9501.00	12.00	144.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	19:00	19:25	10-21	0.42	9501.00	9531.00	30.00	72.00	10.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	19:25	19:45	10-21	0.33	9531.00	9579.00	48.00	144.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	19:50	20:25	10-21	0.58	9579.00	9669.00	90.00	154.29	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	20:30	20:45	10-21	0.25	9669.00	9675.00	6.00	24.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	20:45	21:10	10-21	0.42	9675.00	9705.00	30.00	72.00	30.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	21:10	21:20	10-21	0.17	9705.00	9758.00	53.00	318.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	21:25	22:10	10-21	0.75	9758.00	9848.00	90.00	120.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	22:15	22:20	10-21	0.08	9848.00	9855.00	7.00	84.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-21	22:20	23:00	10-21	0.67	9855.00	9885.00	30.00	45.00	35.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-21	23:00	23:20	10-21	0.33	9885.00	9938.00	53.00	159.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-21	23:25	00:00	10-22	0.58	9938.00	10010.00	72.00	123.43	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	00:00	00:05	10-22	0.08	10010.00	10027.00	17.00	204.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	00:10	00:15	10-22	0.08	10027.00	10040.00	13.00	156.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-22	00:15	00:50	10-22	0.58	10040.00	10058.00	18.00	30.86	35.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-22	00:50	01:20	10-22	0.5	10058.00	10117.00	59.00	118.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	01:25	01:40	10-22	0.25	10117.00	10120.00	3.00	12.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-22	01:40	02:15	10-22	0.58	10120.00	10150.00	30.00	51.43	10.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-22	02:15	02:40	10-22	0.42	10150.00	10207.00	57.00	136.80	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	02:45	02:55	10-22	0.17	10207.00	10210.00	3.00	18.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	10-22	02:55	03:25	10-22	0.5	10210.00	10225.00	15.00	30.00	45.0	700.00	N/A	25.00	3000.00	2600.00	
Rotate	10-22	03:25	04:10	10-22	0.75	10225.00	10296.00	71.00	94.67	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	04:15	05:05	10-22	0.83	10296.00	10386.00	90.00	108.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	05:25	06:25	10-22	1.0	10386.00	10476.00	90.00	90.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	06:30	07:30	10-22	1.0	10476.00	10565.00	89.00	89.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	07:35	08:30	10-22	0.92	10565.00	10655.00	90.00	98.18	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	10-22	08:35	09:35	10-22	1.0	10655.00	10744.00	89.00	89.00	N/A	705.00	30.0	45.00	3500.00	2950.00	



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #5 (8.5" Curve)

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Slide	11-05	16:45	18:25	11-05	1.67	10744.00	10804.00	60.00	36.00	0.0	530.00	N/A	30.00	2750.00	2350.00	
Slide	11-05	18:35	19:20	11-05	0.75	10804.00	10849.00	45.00	60.00	0.0	530.00	N/A	30.00	2750.00	2350.00	
Slide	11-05	19:30	20:00	11-05	0.5	10849.00	10893.00	44.00	88.00	0.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-05	20:10	20:25	11-05	0.25	10893.00	10908.00	15.00	60.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-05	20:25	20:55	11-05	0.5	10908.00	10938.00	30.00	60.00	340.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-05	21:05	21:20	11-05	0.25	10938.00	10953.00	15.00	60.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-05	21:20	21:45	11-05	0.42	10953.00	10983.00	30.00	72.00	340.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-05	21:55	22:05	11-05	0.17	10983.00	10991.00	8.00	48.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-05	22:05	22:35	11-05	0.5	10991.00	11028.00	37.00	74.00	335.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-05	22:45	22:55	11-05	0.17	11028.00	11036.00	8.00	48.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-05	22:55	23:20	11-05	0.42	11036.00	11073.00	37.00	88.80	330.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-05	23:30	23:40	11-05	0.17	11073.00	11081.00	8.00	48.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-05	23:40	00:10	11-06	0.5	11081.00	11118.00	37.00	74.00	330.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	00:20	00:30	11-06	0.17	11118.00	11135.00	17.00	102.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	00:30	00:55	11-06	0.42	11135.00	11163.00	28.00	67.20	330.0	530.00	N/A	30.00	2750.00	2350.00	
Slide	11-06	01:05	01:35	11-06	0.5	11163.00	11183.00	20.00	40.00	280.0	530.00	N/A	30.00	2750.00	2350.00	
Slide	11-06	01:35	01:55	11-06	0.33	11183.00	11208.00	25.00	75.00	320.0	530.00	N/A	30.00	2750.00	2350.00	
Slide	11-06	02:05	02:45	11-06	0.67	11208.00	11253.00	45.00	67.50	300.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	02:55	03:15	11-06	0.33	11253.00	11268.00	15.00	45.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	03:15	03:45	11-06	0.5	11268.00	11298.00	30.00	60.00	300.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	03:55	04:15	11-06	0.33	11298.00	11312.00	14.00	42.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	04:15	04:50	11-06	0.58	11312.00	11342.00	30.00	51.43	290.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	05:00	05:20	11-06	0.33	11342.00	11352.00	10.00	30.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	05:20	05:45	11-06	0.42	11352.00	11377.00	25.00	60.00	290.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	05:45	06:00	11-06	0.25	11377.00	11387.00	10.00	40.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	11-06	06:05	06:55	11-06	0.83	11387.00	11432.00	45.00	54.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	11-06	07:00	07:05	11-06	0.08	11432.00	11437.00	5.00	60.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	07:05	07:20	11-06	0.25	11437.00	11459.00	22.00	88.00	0.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	07:20	07:40	11-06	0.33	11459.00	11477.00	18.00	54.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	11-06	07:45	08:00	11-06	0.25	11477.00	11482.00	5.00	20.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	08:30	09:00	11-06	0.5	11482.00	11512.00	30.00	60.00	0.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	09:00	09:10	11-06	0.17	11512.00	11522.00	10.00	60.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Rotate	11-06	09:25	09:30	11-06	0.08	11522.00	11527.00	5.00	60.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	09:30	10:00	11-06	0.5	11527.00	11567.00	40.00	80.00	35.0	530.00	N/A	30.00	2750.00	2350.00	
Rotate	11-06	10:10	10:25	11-06	0.25	11567.00	11572.00	5.00	20.00	N/A	705.00	30.0	45.00	3500.00	2950.00	
Slide	11-06	10:25	11:00	11-06	0.58	11572.00	11611.00	39.00	66.86	30.0	530.00	N/A	30.00	2750.00	2350.00	
Slide	11-06	11:05	12:00	11-06	0.92	11611.00	11656.00	45.00	49.09	0.0		N/A				



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - 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
Rotate	11-07	05:30	06:10	11-07	0.67	11656.00	11711.00	55.00	82.50	N/A	645.00	50.0	30.00	3400.00	2900.00	
Rotate	11-07	06:15	06:25	11-07	0.17	11711.00	11718.00	7.00	42.00	N/A	645.00	50.0	30.00	3400.00	2900.00	
Slide	11-07	06:25	07:00	11-07	0.58	11718.00	11738.00	20.00	34.29	295.0	645.00	N/A	20.00	3200.00	2900.00	
Rotate	11-07	07:00	07:45	11-07	0.75	11738.00	11801.00	63.00	84.00	N/A	645.00	50.0	30.00	3400.00	2900.00	
Slide	11-07	08:00	08:40	11-07	0.67	11801.00	11851.00	50.00	75.00	20.0	645.00	N/A	20.00	3200.00	2900.00	
Rotate	11-07	08:40	09:05	11-07	0.42	11851.00	11891.00	40.00	96.00	N/A	645.00	50.0	30.00	3400.00	2900.00	
Rotate	11-07	09:10	10:10	11-07	1.0	11891.00	11980.00	89.00	89.00	N/A						
Slide	11-07	10:15	10:45	11-07	0.5	11980.00	12005.00	25.00	50.00	180.0	645.00	N/A	20.00	3200.00	2900.00	
Rotate	11-07	10:45	11:30	11-07	0.75	12005.00	12070.00	65.00	86.67	N/A						
Slide	11-07	11:35	11:55	11-07	0.33	12070.00	12092.00	22.00	66.00	140.0	645.00	N/A	20.00	3200.00	2900.00	
Rotate	11-07	11:55	13:00	11-07	1.08	12092.00	12160.00	68.00	62.77	N/A	645.00	60.0	30.00	3200.00	2750.00	
Slide	11-07	13:05	13:25	11-07	0.33	12160.00	12175.00	15.00	45.00	135.0	645.00	N/A	20.00	3200.00	2900.00	
Rotate	11-07	13:25	14:20	11-07	0.92	12175.00	12213.00	38.00	41.45	N/A	645.00	60.0	30.00	3200.00	2750.00	



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #7 (Sidetrack)

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	11-08	09:00	19:55	11-08	10.92	11219.00	11255.00	36.00	3.30	200.0	170.00	N/A	30.00	2400.00	2100.00	
Rotate	11-08	19:55	21:20	11-08	1.42	11255.00	11296.00	41.00	28.94	N/A	550.00	35.0	25.00	2500.00	2100.00	
Rotate	11-08	22:20	23:35	11-08	1.25	11296.00	11342.00	46.00	36.80	N/A	550.00	35.0	30.00	2500.00	2100.00	
Rotate	11-08	23:40	00:00	11-09	0.33	11342.00	11359.00	17.00	51.00	N/A	550.00	35.0	30.00	2500.00	2100.00	
Slide	11-09	00:00	00:50	11-09	0.83	11359.00	11400.00	41.00	49.20	270.0	170.00	N/A	50.00	2900.00	2200.00	
Rotate	11-09	00:50	01:15	11-09	0.42	11400.00	11432.00	32.00	76.80	N/A	550.00	35.0	30.00	2500.00	2100.00	
Rotate	11-09	01:20	01:50	11-09	0.5	11432.00	11444.00	12.00	24.00	N/A	550.00	35.0	30.00	2500.00	2100.00	
Slide	11-09	01:50	02:25	11-09	0.58	11444.00	11494.00	50.00	85.71	270.0	170.00	N/A	50.00	2900.00	2200.00	
Rotate	11-09	02:25	02:50	11-09	0.42	11494.00	11522.00	28.00	67.20	N/A	550.00	35.0	30.00	2500.00	2100.00	
Rotate	11-09	02:55	04:00	11-09	1.08	11522.00	11570.00	48.00	44.31	N/A	550.00	35.0	30.00	2500.00	2100.00	
Slide	11-09	04:00	04:20	11-09	0.33	11570.00	11611.00	41.00	123.00	0.0	170.00	N/A	60.00	3000.00	2200.00	
Slide	11-09	04:25	05:40	11-09	1.25	11611.00	11701.00	90.00	72.00	0.0	170.00	N/A	60.00	3000.00	2200.00	

	Job Number WT-19-158	Operator Advance Energy Partners				Rig Name H&P #389			
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H				Legal Well Name AFE Dagger Lake 5 State Com 551H			
	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	11-09	20:45	22:20	11-09	1.58	11701.00	11791.00	90.00	56.84	0.0	170.00	N/A	80.00	3000.00	2200.00	
Slide	11-09	22:25	23:40	11-09	1.25	11791.00	11859.00	68.00	54.40	340.0	170.00	N/A	80.00	3000.00	2200.00	



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #9 (Lateral)

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	11-10	13:15	14:30	11-10	1.25	11859.00	11925.00	66.00	52.80	N/A	700.00	40.0	30.00	3700.00	3100.00	
Slide	11-10	14:30	15:15	11-10	0.75	11925.00	11936.00	11.00	14.67	330.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-10	15:20	15:40	11-10	0.33	11936.00	11980.00	44.00	132.00	N/A	700.00	40.0	30.00	3700.00	3100.00	
Rotate	11-10	15:45	16:15	11-10	0.5	11980.00	12015.00	35.00	70.00	N/A	700.00	40.0	30.00	3700.00	3100.00	
Slide	11-10	16:15	17:00	11-10	0.75	12015.00	12035.00	20.00	26.67	325.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-10	17:00	17:15	11-10	0.25	12035.00	12070.00	35.00	140.00	N/A	700.00	40.0	30.00	3700.00	3100.00	
Rotate	11-10	17:20	18:15	11-10	0.92	12070.00	12160.00	90.00	98.18	N/A	700.00	60.0	30.00	3700.00	3100.00	
Rotate	11-10	18:30	19:15	11-10	0.75	12160.00	12249.00	89.00	118.67	N/A	700.00	60.0	40.00	3700.00	3100.00	
Rotate	11-10	19:20	20:20	11-10	1.0	12249.00	12339.00	90.00	90.00	N/A	700.00	60.0	40.00	3700.00	3100.00	
Rotate	11-10	20:25	20:45	11-10	0.33	12339.00	12355.00	16.00	48.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-10	20:45	21:25	11-10	0.67	12355.00	12375.00	20.00	30.00	60.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-10	21:25	21:55	11-10	0.5	12375.00	12429.00	54.00	108.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-10	22:00	22:50	11-10	0.83	12429.00	12482.00	53.00	63.60	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-10	22:50	23:35	11-10	0.75	12482.00	12518.00	36.00	48.00	0.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	00:00	01:00	11-11	1.0	12518.00	12608.00	90.00	90.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	01:05	01:35	11-11	0.5	12608.00	12661.00	53.00	106.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	01:35	02:30	11-11	0.92	12661.00	12697.00	36.00	39.27	120.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	02:45	03:05	11-11	0.33	12697.00	12738.00	41.00	123.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	03:05	04:10	11-11	1.08	12738.00	12787.00	49.00	45.23	160.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	04:15	04:55	11-11	0.67	12787.00	12877.00	90.00	135.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	05:00	05:48	11-11	0.8	12877.00	12917.00	40.00	50.00	180.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	05:48	06:10	11-11	0.37	12917.00	12967.00	50.00	136.36	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	06:15	07:10	11-11	0.92	12967.00	13057.00	90.00	98.18	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	07:15	08:00	11-11	0.75	13057.00	13087.00	30.00	40.00	270.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	08:00	08:55	11-11	0.92	13087.00	13146.00	59.00	64.36	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	09:00	09:35	11-11	0.58	13146.00	13166.00	20.00	34.29	325.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	09:35	10:20	11-11	0.75	13166.00	13236.00	70.00	93.33	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	10:25	10:40	11-11	0.25	13236.00	13250.00	14.00	56.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	10:40	11:00	11-11	0.33	13250.00	13264.00	14.00	42.00	0.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	11:00	11:50	11-11	0.83	13264.00	13326.00	62.00	74.40	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	11:55	12:10	11-11	0.25	13326.00	13336.00	10.00	40.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	12:10	12:30	11-11	0.33	13336.00	13346.00	10.00	30.00	0.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	12:30	13:15	11-11	0.75	13346.00	13415.00	69.00	92.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	13:20	14:20	11-11	1.0	13415.00	13505.00	90.00	90.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	14:25	14:40	11-11	0.25	13505.00	13535.00	30.00	120.00	200.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	14:40	15:40	11-11	1.0	13535.00	13595.00	60.00	60.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	15:45	16:30	11-11	0.75	13595.00	13685.00	90.00	120.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	16:35	17:05	11-11	0.5	13685.00	13707.00	22.00	44.00	70.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	17:05	17:50	11-11	0.75	13707.00	13774.00	67.00	89.33	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	17:55	18:30	11-11	0.58	13774.00	13799.00	25.00	42.86	160.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	18:30	19:05	11-11	0.58	13799.00	13864.00	65.00	111.43	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	19:10	20:15	11-11	1.08	13864.00	13954.00	90.00	83.08	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	20:20	20:30	11-11	0.17	13954.00	13957.00	3.00	18.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	20:30	20:45	11-11	0.25	13957.00	13977.00	20.00	80.00	45.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-11	20:45	21:55	11-11	1.17	13977.00	14043.00	66.00	56.57	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-11	22:00	23:15	11-11	1.25	14043.00	14133.00	90.00	72.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-11	23:20	00:55	11-12	1.58	14133.00	14158.00	25.00	15.79	45.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-12	00:55	01:35	11-12	0.67	14158.00	14222.00	64.00	96.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-12	01:40	02:10	11-12	0.5	14222.00	14265.00	43.00	86.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Slide	11-12	02:10	03:15	11-12	1.08	14265.00	14285.00	20.00	18.46	340.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-12	03:15	03:30	11-12	0.25	14285.00	14312.00	27.00	108.00	N/A	700.00	40.0	40.00	3700.00	3100.00	
Rotate	11-12	03:35	04:55	11-12	1.33	14312.00	14401.00	89.00	66.75	N/A	700.00	60.0	40.00	3700.00	3100.00	
Rotate	11-12	05:00	05:15	11-12	0.25	14401.00	14407.00	6.00	24.00	N/A	700.00	60.0	40.00	3700.00	3100.00	
Slide	11-12	05:15	05:50	11-12	0.58	14407.00	14427.00	20.00	34.29	180.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-12	05:50	06:40	11-12	0.83	14427.00	14491.00	64.00	76.80	N/A	700.00	60.0	40.00	3700.00	3100.00	
Rotate	11-12	06:45	07:45	11-12	1.0	14491.00	14564.00	73.00	73.00	N/A	700.00	60.0	40.00	3700.00	3100.00	
Slide	11-12	07:45	08:10	11-12	0.42	14564.00	14581.00	17.00	40.80	180.0	700.00	N/A	20.00	3500.00	3200.00	
Slide	11-12	08:15	09:00	11-12	0.75	14581.00	14596.00	15.00	20.00	210.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-12	09:00	10:00	11-12	1.0	14596.00	14654.00	58.00	58.00	N/A	700.00	60.0	40.00	3700.00	3100.00	
Slide	11-12	10:00	10:40	11-12	0.67	14654.00	14671.00	17.00	25.50	205.0	700.00	N/A	20.00	3500.00	3200.00	
Slide	11-12	10:45	11:50	11-12	1.08	14671.00	14691.00	20.00	18.46	220.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-12	11:50	13:05	11-12	1.25	14691.00	14760.00	69.00	55.20	N/A	700.00	60.0	40.00	3700.00	3100.00	
Slide	11-12	13:10	14:20	11-12	1.17	14760.00	14785.00	25.00	21.43	270.0	700.00	N/A	20.00	3500.00	3200.00	
Rotate	11-12	14:20	15:10	11-12	0.83	14785.00	14822.00	37.00	44.40	N/A	700.00	60.0	40.00	3700.00	3100.00	

Slide	11-12	15:10	15:50	11-12	0.67	14822.00	14842.00	20.00	30.00	270.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-12	15:50	16:05	11-12	0.25	14842.00	14850.00	8.00	32.00	N/A	700.00	60.0	40.00	3700.00	3100.00
Rotate	11-12	16:10	17:00	11-12	0.83	14850.00	14902.00	52.00	62.40	N/A	700.00	60.0	40.00	3700.00	3100.00
Slide	11-12	17:00	18:00	11-12	1.0	14902.00	14932.00	30.00	30.00	340.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-12	18:00	18:20	11-12	0.33	14932.00	14939.00	7.00	21.00	N/A	700.00	40.0	40.00	3700.00	3100.00
Rotate	11-12	18:25	19:45	11-12	1.33	14939.00	15029.00	90.00	67.50	N/A	700.00	40.0	40.00	3700.00	3100.00
Rotate	11-12	19:50	20:00	11-12	0.17	15029.00	15033.00	4.00	24.00	N/A	700.00	40.0	40.00	3700.00	3100.00
Slide	11-12	20:00	20:40	11-12	0.67	15033.00	15046.00	13.00	19.50	315.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-12	20:40	21:25	11-12	0.75	15046.00	15119.00	73.00	97.33	N/A	700.00	40.0	40.00	3700.00	3100.00
Rotate	11-12	21:30	22:40	11-12	1.17	15119.00	15208.00	89.00	76.29	N/A	700.00	30.0	40.00	3700.00	3100.00
Rotate	11-12	22:45	23:50	11-12	1.08	15208.00	15298.00	90.00	83.08	N/A	700.00	30.0	60.00	3850.00	3300.00
Rotate	11-13	00:00	01:15	11-13	1.25	15298.00	15388.00	90.00	72.00	N/A	700.00	30.0	60.00	3850.00	3300.00
Rotate	11-13	01:20	02:25	11-13	1.08	15388.00	15477.00	89.00	82.15	N/A	700.00	30.0	60.00	3850.00	3300.00
Rotate	11-13	02:30	03:20	11-13	0.83	15477.00	15567.00	90.00	108.00	N/A	700.00	30.0	60.00	3850.00	3300.00
Slide	11-13	03:25	04:10	11-13	0.75	15567.00	15585.00	18.00	24.00	0.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-13	04:10	04:50	11-13	0.67	15585.00	15656.00	71.00	106.50	N/A	700.00	30.0	60.00	4200.00	3300.00
Rotate	11-13	04:55	06:25	11-13	1.5	15656.00	15746.00	90.00	60.00	N/A	700.00	30.0	60.00	4200.00	3300.00
Rotate	11-13	06:35	08:05	11-13	1.5	15746.00	15835.00	89.00	59.33	N/A	700.00	30.0	60.00	4200.00	3300.00
Rotate	11-13	08:20	09:25	11-13	1.08	15835.00	15925.00	90.00	83.08	N/A	700.00	30.0	60.00	4200.00	3300.00
Rotate	11-13	09:30	10:55	11-13	1.42	15925.00	16015.00	90.00	63.53	N/A	700.00	30.0	60.00	4200.00	3300.00
Slide	11-13	11:05	13:00	11-13	1.92	16015.00	16055.00	40.00	20.87	160.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-13	13:00	14:00	11-13	1.0	16055.00	16104.00	49.00	49.00	N/A	700.00	30.0	60.00	4200.00	3300.00
Rotate	11-13	14:05	14:35	11-13	0.5	16104.00	16136.00	32.00	64.00	N/A	700.00	30.0	60.00	4200.00	3300.00
Slide	11-13	14:35	16:10	11-13	1.58	16136.00	16146.00	10.00	6.32	180.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-13	16:10	16:40	11-13	0.5	16146.00	16164.00	18.00	36.00	N/A	700.00	30.0	60.00	4200.00	3300.00
Slide	11-13	16:40	17:50	11-13	1.17	16164.00	16178.00	14.00	12.00	180.0	700.00	N/A	20.00	3500.00	3200.00
Slide	11-13	18:50	19:10	11-13	0.33	16178.00	16188.00	10.00	30.00	180.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-13	19:10	19:20	11-13	0.17	16188.00	16194.00	6.00	36.00	N/A	700.00	50.0	60.00	4200.00	3300.00
Rotate	11-13	19:25	20:45	11-13	1.33	16194.00	16262.00	68.00	51.00	N/A	700.00	50.0	60.00	4200.00	3300.00
Slide	11-13	20:45	21:20	11-13	0.58	16262.00	16266.00	4.00	6.86	180.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-13	21:20	21:30	11-13	0.17	16266.00	16284.00	18.00	108.00	N/A	700.00	50.0	60.00	4200.00	3300.00
Slide	11-13	21:35	22:15	11-13	0.67	16284.00	16286.00	2.00	3.00	180.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-13	22:15	23:25	11-13	1.17	16286.00	16373.00	87.00	74.57	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-13	23:30	00:00	11-14	0.5	16373.00	16405.00	32.00	64.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	00:00	00:15	11-14	0.25	16405.00	16415.00	10.00	40.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Slide	11-14	00:15	02:00	11-14	1.75	16415.00	16440.00	25.00	14.29	0.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-14	02:00	02:25	11-14	0.42	16440.00	16463.00	23.00	55.20	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	02:30	03:55	11-14	1.42	16463.00	16552.00	89.00	62.82	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	04:00	04:20	11-14	0.33	16552.00	16570.00	18.00	54.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Slide	11-14	04:20	05:35	11-14	1.25	16570.00	16588.00	18.00	14.40	0.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-14	05:35	06:30	11-14	0.92	16588.00	16642.00	54.00	58.91	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	06:45	06:50	11-14	0.08	16642.00	16647.00	5.00	60.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Slide	11-14	06:50	09:10	11-14	2.33	16647.00	16672.00	25.00	10.71	30.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-14	09:10	09:50	11-14	0.67	16672.00	16732.00	60.00	90.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	09:55	11:15	11-14	1.33	16732.00	16821.00	89.00	66.75	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	11:20	11:45	11-14	0.42	16821.00	16855.00	34.00	81.60	N/A	700.00	30.0	55.00	4200.00	3300.00
Slide	11-14	11:45	13:25	11-14	1.67	16855.00	16880.00	25.00	15.00	30.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-14	13:25	13:45	11-14	0.33	16880.00	16911.00	31.00	93.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	14:00	14:15	11-14	0.25	16911.00	16945.00	34.00	136.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Slide	11-14	14:15	15:30	11-14	1.25	16945.00	16965.00	20.00	16.00	90.0	700.00	N/A	20.00	3500.00	3200.00
Rotate	11-14	15:30	15:55	11-14	0.42	16965.00	17000.00	35.00	84.00	N/A	700.00	30.0	55.00	4200.00	3300.00
Rotate	11-14	16:15	16:30	11-14	0.25	17000.00	17025.00	25.00	100.00	N/A	700.00	30.0	55.00	4200.00	3300.00



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

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	11-15	17:00	17:05	11-15	0.08	17025.00	17034.00	9.00	108.00	N/A	700.00	40.0	40.00	5200.00	4700.00	
Rotate	11-15	17:30	18:10	11-15	0.67	17034.00	17124.00	90.00	135.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-15	18:15	18:30	11-15	0.25	17124.00	17125.00	1.00	4.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-15	18:30	19:35	11-15	1.08	17125.00	17165.00	40.00	36.92	90.0	650.00	N/A	20.00	3900.00	3400.00	
Rotate	11-15	19:35	19:55	11-15	0.33	17165.00	17214.00	49.00	147.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-15	20:00	20:40	11-15	0.67	17214.00	17303.00	89.00	133.50	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-15	20:45	20:50	11-15	0.08	17303.00	17310.00	7.00	84.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-15	20:50	21:20	11-15	0.5	17310.00	17330.00	20.00	40.00	145.0	650.00	N/A	20.00	3900.00	3400.00	
Rotate	11-15	21:20	21:40	11-15	0.33	17330.00	17393.00	63.00	189.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-15	21:55	22:00	11-15	0.08	17393.00	17396.00	3.00	36.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-15	22:00	22:40	11-15	0.67	17396.00	17428.00	32.00	48.00	145.0	650.00	N/A	20.00	3900.00	3400.00	
Rotate	11-15	22:40	22:55	11-15	0.25	17428.00	17450.00	22.00	88.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-15	22:55	23:30	11-15	0.58	17450.00	17482.00	32.00	54.86	180.0	N/A					
Rotate	11-15	23:35	00:00	11-16	0.42	17482.00	17552.00	70.00	168.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	00:00	00:05	11-16	0.08	17552.00	17571.00	19.00	228.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	00:10	01:15	11-16	1.08	17571.00	17601.00	30.00	27.69	180.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	01:15	01:35	11-16	0.33	17601.00	17640.00	39.00	117.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	01:35	02:05	11-16	0.5	17640.00	17661.00	21.00	42.00	180.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	02:10	02:30	11-16	0.33	17661.00	17695.00	34.00	102.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	02:30	03:55	11-16	1.42	17695.00	17751.00	56.00	39.53	180.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	04:00	04:50	11-16	0.83	17751.00	17840.00	89.00	106.80	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	04:55	05:20	11-16	0.42	17840.00	17891.00	51.00	122.40	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	05:20	05:35	11-16	0.25	17891.00	17916.00	25.00	100.00	0.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	05:35	05:55	11-16	0.33	17916.00	17930.00	14.00	42.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	06:00	06:45	11-16	0.75	17930.00	18019.00	89.00	118.67	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	06:50	07:10	11-16	0.33	18019.00	18062.00	43.00	129.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	07:10	08:25	11-16	1.25	18062.00	18109.00	47.00	37.60	20.0	650.00	N/A	50.00	3800.00	3200.00	
Slide	11-16	08:40	09:35	11-16	0.92	18109.00	18141.00	32.00	34.91	30.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	09:35	10:05	11-16	0.5	18141.00	18199.00	58.00	116.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	10:10	10:20	11-16	0.17	18199.00	18230.00	31.00	186.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	10:25	11:20	11-16	0.92	18230.00	18260.00	30.00	32.73	210.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	11:20	11:35	11-16	0.25	18260.00	18288.00	28.00	112.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	11:40	12:05	11-16	0.42	18288.00	18338.00	50.00	120.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Slide	11-16	12:05	13:15	11-16	1.17	18338.00	18378.00	40.00	34.29	200.0	650.00	N/A	50.00	3800.00	3200.00	
Rotate	11-16	13:30	14:15	11-16	0.75	18378.00	18467.00	89.00	118.67	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	14:20	15:00	11-16	0.67	18467.00	18557.00	90.00	135.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	15:15	15:45	11-16	0.5	18557.00	18646.00	89.00	178.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	15:50	16:30	11-16	0.67	18646.00	18736.00	90.00	135.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	16:35	17:05	11-16	0.5	18736.00	18826.00	90.00	180.00	N/A	650.00	40.0	40.00	5000.00	4200.00	
Rotate	11-16	17:10	17:40	11-16	0.5	18826.00	18903.00	77.00	154.00	N/A	650.00	40.0	40.00	5000.00	4200.00	



Daily Reports

Lateral 1

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
	Company Man	

Wednesday, Oct 09 00:00 - 23:59 (Day 1 of 26)

Billing: \$16,187.50 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)		Downhole Hours	1.00	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	115.00 - 128.00
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
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #1 - BHA#1

Date In: Oct 9, 2019, 23:00 Date Out: Oct 10, 2019, 12:00

Bit Details		Motor Details		Directional Comments
OD (in)	17.500	Size (in)	8.0	Flow Rate: 400-900, Max Diff: 900 psi, Max Torque: 14,930 ft-lbs, BIT Runs: 2
Vendor	BAKER	Lobe/Stage	7/8, 4.0	
S/N	530910	Bend Angle	1.5	
Nozzles	9 X 12'S	Speed (rev/gal)	0.15	MWD Comments
Total Flow Area (in²)	0.994	Wear Pad OD (in)	8.250	
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend: 6.10 ft, Survey: 65.00 ft		
Drilling Hours for BHA	8.67			
Total Drilled for BHA (ft)	1082.00			POOH Reason
				Total Depth/Casing Point: MTR. Drained good at surface

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 17.5 BIT, Style: PDC, Gauge Length (in): 4.00, Size (in): 17.50	BAKER	530910	6 5/8" Reg Pin			17.500		1.50	1.50
Mud Motor Description: 8 " 1.5 FIXED 7/8 4.0, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4.0	AIM	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		29.76	31.26
Stabilizer Description: 17" STAB	DR	DR39581	6 5/8" Reg Box	6 5/8" Reg Pin	3.937	8.250		8.63	39.89
UBHO Sub Description: 8" UBHO, Type: NM	DR	DR9685	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.063		3.97	43.86
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	AIM	8001008	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.12	73.98
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	DR	DR41120	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.57	104.55
Crossover Sub Description: X-O ED 54 B X 6 5/8 P, Type: Steel	BD	BD14813	EverDrlg54 Box	6 5/8" Reg Pin	2.875	6.750		3.06	107.61
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1057.60

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	10-09	00:00	20:45	10-09			Standby. Skid Rig
Change BHA	6	10-09	20:45	23:00	10-09			P/U BHA # 1
Other	16	10-09	23:00	00:00	10-10			Fill cellar & wash to bottom

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Thursday, Oct 10 00:00 - 23:59 (Day 2 of 26)

Billing: \$5,100.00 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	140.00	Downhole Hours	12.00	Rotating WOB (klbs)	15.00 - 25.00
Bit Depth (ft)	1222.00	Drilling Hours	8.67	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	1222.00	Hours Circulating	0.92	Rotating SPM	140.00 - 264.00
Total Distance (ft)	1082.00	Hours Sliding	0.83	Sliding SPM	231.00 - 264.00
Distance Rotated (ft)	1020.00	Hours Rotating	7.83	Motor RPM	115.00 - 128.00
Distance Slid (ft)	62.00			Surface RPM	30.00 - 50.00
Inclination In	0.70			Flow Rate (gpm)	450.00 - 850.00
Inclination Out	1.45			On Bottom Pressure (psi)	1000.00 - 2200.00
Azimuth In	144.91	% Hours Rotating	90%	Off Bottom Pressure (psi)	600.00 - 1300.00
Azimuth Out	164.77	% Hours Sliding	10%		
AVG Total ROP (ft/h)	124.85	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	130.21	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	74.40				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #1 - BHA#1

Date In: Oct 9, 2019, 23:00 Date Out: Oct 10, 2019, 12:00

Bit Details		Motor Details		Directional Comments
OD (in)	17.500	Size (in)	8.0	Flow Rate: 400-900, Max Diff: 900 psi, Max Torque: 14,930 ft-lbs, BIT Runs: 2
Vendor	BAKER	Lobe/Stage	7/8, 4.0	
S/N	530910	Bend Angle	1.5	
Nozzles	9 X 12'S	Speed (rev/gal)	0.15	MWD Comments
Total Flow Area (in²)	0.994	Wear Pad OD (in)	8.250	POOH Reason Total Depth/Casing Point: MTR. Drained good at surface
Drilling Hours for Day	8.67	Bit Distances		
Total Drilled for Day (ft)	1082.00	Bend: 6.10 ft, Survey: 65.00 ft		
Drilling Hours for BHA	8.67			
Total Drilled for BHA (ft)	1082.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 17.5 BIT, Style: PDC, Gauge Length (in): 4.00, Size (in): 17.50	BAKER	530910	6 5/8" Reg Pin			17.500		1.50	1.50
Mud Motor Description: 8 " 1.5 FIXED 7/8 4.0, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4.0	AIM	800-40-002	6 5/8" Reg Box	6 5/8" Reg Box		8.000		29.76	31.26
Stabilizer Description: 17" STAB	DR	DR39581	6 5/8" Reg Box	6 5/8" Reg Pin	3.937	8.250		8.63	39.89
UBHO Sub Description: 8" UBHO, Type: NM	DR	DR9685	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.063		3.97	43.86
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	AIM	8001008	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.12	73.98
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	DR	DR41120	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.57	104.55
Crossover Sub Description: X-O ED 54 B X 6 5/8 P, Type: Steel	BD	BD14813	EverDrlg54 Box	6 5/8" Reg Pin	2.875	6.750		3.06	107.61
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1057.60

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	10-09	23:00	00:00	10-10			Fill cellar & wash to bottom
Rotary Drill	1	10-10	00:00	01:30	10-10	140.00	297.00	Pressure On (psi): 1000.00, Pressure Off (psi): 600.00, Weight On Bit (klbs): 15.00, Surface RPM: 30, Surface Torque (ft lbf): 5.00, Flow Rate (gpm): 450.00, Strokes Per Minute: 140.00

Survey	46	10-10	01:30	01:35	10-10	297.00	297.00	Inclination (°): 0.700, Azimuth (°): 144.910, TVD (ft): 231.99, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 232.00, Bit To Sensor (ft): 65.00, Temperature (°F): 87.00
Rotary Drill	1	10-10	01:35	02:20	10-10	297.00	392.00	Pressure On (psi): 1400.00, Pressure Off (psi): 700.00, Weight On Bit (klbs): 20.00, Surface RPM: 30, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Survey	46	10-10	02:20	02:25	10-10	392.00	392.00	Inclination (°): 1.140, Azimuth (°): 147.640, TVD (ft): 326.98, Dogleg (°/100 ft): 0.47, Sensor Depth (ft): 327.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	02:25	03:05	10-10	392.00	487.00	Pressure On (psi): 1400.00, Pressure Off (psi): 700.00, Weight On Bit (klbs): 20.00, Surface RPM: 30, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Survey	46	10-10	03:05	03:10	10-10	487.00	487.00	Inclination (°): 1.490, Azimuth (°): 158.530, TVD (ft): 421.96, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 422.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	03:10	03:25	10-10	487.00	501.00	Pressure On (psi): 1400.00, Pressure Off (psi): 700.00, Weight On Bit (klbs): 20.00, Surface RPM: 30, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Slide Drill	2	10-10	03:25	03:30	10-10	501.00	513.00	Pressure On (psi): 1800.00, Pressure Off (psi): 1300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231, Toolface: 330, Toolface Type: magnetic
Rotary Drill	1	10-10	03:30	03:45	10-10	513.00	582.00	Pressure On (psi): 1800.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	10-10	03:45	03:50	10-10	582.00	582.00	Inclination (°): 1.760, Azimuth (°): 163.980, TVD (ft): 516.92, Dogleg (°/100 ft): 0.33, Sensor Depth (ft): 517.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	03:50	04:20	10-10	582.00	677.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	04:20	04:25	10-10	677.00	677.00	Inclination (°): 1.630, Azimuth (°): 156.510, TVD (ft): 611.88, Dogleg (°/100 ft): 0.27, Sensor Depth (ft): 612.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	04:25	04:55	10-10	677.00	772.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	04:55	05:00	10-10	772.00	772.00	Inclination (°): 1.850, Azimuth (°): 168.200, TVD (ft): 706.83, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 707.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	05:00	05:05	10-10	772.00	776.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Slide Drill	2	10-10	05:05	05:20	10-10	776.00	796.00	Pressure On (psi): 2200.00, Pressure Off (psi): 1300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264, Toolface: 350, Toolface Type: magnetic
Rotary Drill	1	10-10	05:20	05:55	10-10	796.00	867.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	05:55	06:00	10-10	867.00	867.00	Inclination (°): 1.630, Azimuth (°): 168.730, TVD (ft): 801.79, Dogleg (°/100 ft): 0.23, Sensor Depth (ft): 802.00, Bit To Sensor (ft): 65.00, Temperature (°F): 102.00
Rotary Drill	1	10-10	06:00	06:50	10-10	867.00	962.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	06:50	06:55	10-10	962.00	962.00	Inclination (°): 1.760, Azimuth (°): 173.830, TVD (ft): 896.75, Dogleg (°/100 ft): 0.21, Sensor Depth (ft): 897.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	06:55	07:00	10-10	962.00	970.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Slide Drill	2	10-10	07:00	07:30	10-10	970.00	1000.00	Pressure On (psi): 2200.00, Pressure Off (psi): 1300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264, Toolface: 0, Toolface Type: magnetic
Rotary Drill	1	10-10	07:30	07:55	10-10	1000.00	1057.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	07:55	08:00	10-10	1057.00	1057.00	Inclination (°): 1.490, Azimuth (°): 158.100, TVD (ft): 991.71, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 992.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	08:00	08:30	10-10	1057.00	1147.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	08:30	08:35	10-10	1147.00	1147.00	Inclination (°): 1.540, Azimuth (°): 158.450, TVD (ft): 1081.68, Dogleg (°/100 ft): 0.06, Sensor Depth (ft): 1082.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	10-10	08:35	09:30	10-10	1147.00	1222.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-10	09:30	09:35	10-10	1222.00	1222.00	Inclination (°): 1.450, Azimuth (°): 164.770, TVD (ft): 1156.65, Dogleg (°/100 ft): 0.25, Sensor Depth (ft): 1157.00, Bit To Sensor (ft): 65.00
Circulating	3	10-10	09:35	10:30	10-10			
Pooh	7	10-10	10:30	11:30	10-10			POOH for [To run surface casing]
Other	16	10-10	11:30	12:00	10-10			Break Bit / Rack Back Tools
Standby	15	10-10	12:00	05:00	10-11			Standby. Casing Ops

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, Oct 11 00:00 - 23:59 (Day 3 of 26)

Billing: \$12,173.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	1222.00	Downhole Hours	17.50	Rotating WOB (klbs)	25.00 - 25.00
Bit Depth (ft)	3484.00	Drilling Hours	10.67	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	3484.00	Hours Circulating	1.25	Rotating SPM	250.00 - 264.00
Total Distance (ft)	2262.00	Hours Sliding	2.00	Sliding SPM	250.00 - 264.00
Distance Rotated (ft)	2075.00	Hours Rotating	8.67	Motor RPM	136.00 - 144.00
Distance Slid (ft)	187.00			Surface RPM	50.00 - 70.00
Inclination In	1.76			Flow Rate (gpm)	800.00 - 850.00
Inclination Out	1.32			On Bottom Pressure (psi)	2000.00 - 2900.00
Azimuth In	173.83	% Hours Rotating	81%	Off Bottom Pressure (psi)	1200.00 - 2300.00
Azimuth Out	108.70	% Hours Sliding	19%		
AVG Total ROP (ft/h)	212.06	% Distance Sliding	8%		
AVG Rotating ROP (ft/h)	239.42	% Distance Rotating	92%		
AVG Sliding ROP (ft/h)	93.50				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #2 - BHA #2 - 12.25"

Date In: Oct 11, 2019, 6:30 Date Out: Oct 12, 2019, 23:30

Bit Details		Motor Details		Directional Comments
OD (in)	12.250	Size (in)	8.0	Flow Rate: 400-900, Max Diff: 1330 psi, Max Torque: 22,020 ft-lbs, BIT Runs: 5
Vendor	BAKER	Lobe/Stage	7/8, 5.9	
S/N	5292881	Bend Angle	1.5	
Nozzles	6 X 12'S	Speed (rev/gal)	0.17	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	8.400	
Drilling Hours for Day	10.67	Bit Distances		
Total Drilled for Day (ft)	2262.00	Bend: 6.45 ft, Survey: 69.00 ft		
Drilling Hours for BHA	26.58			
Total Drilled for BHA (ft)	3603.00			
				POOH Reason
				Total Depth/Casing Point

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 12.25 BIT, Style: PDC, Gauge Length (in): 3.50, Size (in): 12.25	BAKER	5292881	6 5/8" Reg Pin			12.250		1.00	1.00
Mud Motor Description: 8" 1.5 FIXED 7/8 5.9 W/ 12" STAB, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	AIM	800-40-009	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.94	38.94
Stabilizer Description: 12" STAB	GATOR	GT40283	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	7.875		5.63	44.57
UBHO Sub Description: 8" UBHO, Type: NM	DR	DR9685	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.063		3.97	48.54
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	AIM	8001008	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.12	78.66
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	DR	DR41120	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.57	109.23
Crossover Sub Description: X-O 4 1/2 XH B X 6 5/8 P, Type: Steel	GT	GT10364	4 1/2" XH Box	6 5/8" Reg Pin	2.875	6.000		4.15	113.38
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	645.58
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	649.20
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1599.19

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	10-10	12:00	05:00	10-11			Standby. Casing Ops
Change BHA	6	10-11	05:00	06:30	10-11			P/U BHA # 2
TIH	8	10-11	06:30	08:45	10-11			P/U 6 1/2 DC's
TIH	8	10-11	08:45	09:15	10-11			TIH W/ BHA #2
Other	16	10-11	09:15	09:45	10-11			Test Casing
Circulating	3	10-11	09:45	11:00	10-11			Drill float & shoe
Rotary Drill	1	10-11	11:00	11:45	10-11	1222.00	1313.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	11:45	11:55	10-11	1313.00	1313.00	Inclination (°): 1.760, Azimuth (°): 173.830, TVD (ft): 1243.62, Dogleg (°/100 ft): 0.46, Sensor Depth (ft): 1244.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	11:55	12:00	10-11	1313.00	1322.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Slide Drill	2	10-11	12:00	12:10	10-11	1322.00	1337.00	Pressure On (psi): 2200.00, Pressure Off (psi): 1300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264, Toolface: 0, Toolface Type: magnetic
Rotary Drill	1	10-11	12:10	12:20	10-11	1337.00	1408.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	12:20	12:25	10-11	1408.00	1408.00	Inclination (°): 1.100, Azimuth (°): 117.750, TVD (ft): 1338.59, Dogleg (°/100 ft): 1.54, Sensor Depth (ft): 1339.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	12:25	12:45	10-11	1408.00	1504.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	12:45	12:50	10-11	1504.00	1504.00	Inclination (°): 1.580, Azimuth (°): 75.650, TVD (ft): 1434.57, Dogleg (°/100 ft): 1.11, Sensor Depth (ft): 1435.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	12:50	13:05	10-11	1504.00	1599.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	13:05	13:15	10-11	1599.00	1599.00	Inclination (°): 1.980, Azimuth (°): 80.140, TVD (ft): 1529.52, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 1530.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	13:15	13:20	10-11	1599.00	1618.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Slide Drill	2	10-11	13:20	13:30	10-11	1618.00	1638.00	Pressure On (psi): 2200.00, Pressure Off (psi): 1300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264, Toolface: 0, Toolface Type: magnetic
Rotary Drill	1	10-11	13:30	13:40	10-11	1638.00	1689.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	13:40	13:45	10-11	1689.00	1689.00	Inclination (°): 1.050, Azimuth (°): 51.400, TVD (ft): 1619.49, Dogleg (°/100 ft): 1.30, Sensor Depth (ft): 1620.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	13:45	14:05	10-11	1689.00	1778.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	14:05	14:10	10-11	1778.00	1778.00	Inclination (°): 0.920, Azimuth (°): 336.430, TVD (ft): 1708.48, Dogleg (°/100 ft): 1.35, Sensor Depth (ft): 1709.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	14:10	14:25	10-11	1778.00	1868.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	14:25	14:30	10-11	1868.00	1868.00	Inclination (°): 1.450, Azimuth (°): 326.580, TVD (ft): 1798.46, Dogleg (°/100 ft): 0.63, Sensor Depth (ft): 1799.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	14:30	14:35	10-11	1868.00	1878.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Slide Drill	2	10-11	14:35	14:45	10-11	1878.00	1893.00	Pressure On (psi): 2200.00, Pressure Off (psi): 1300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264, Toolface: 115, Toolface Type: magnetic
Rotary Drill	1	10-11	14:45	14:55	10-11	1893.00	1957.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	14:55	15:00	10-11	1957.00	1957.00	Inclination (°): 0.920, Azimuth (°): 9.740, TVD (ft): 1887.44, Dogleg (°/100 ft): 1.13, Sensor Depth (ft): 1888.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	15:00	15:20	10-11	1957.00	2047.00	Pressure On (psi): 2000.00, Pressure Off (psi): 1200.00, Weight On Bit (klbs): 25.00, Surface RPM: 50, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 850.00, Strokes Per Minute: 264.00
Survey	46	10-11	15:20	15:25	10-11	2047.00	2047.00	Inclination (°): 1.100, Azimuth (°): 53.150, TVD (ft): 1977.43, Dogleg (°/100 ft): 0.85, Sensor Depth (ft): 1978.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	15:25	16:00	10-11	2047.00	2137.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	16:00	16:05	10-11	2137.00	2137.00	Inclination (°): 1.140, Azimuth (°): 56.410, TVD (ft): 2067.41, Dogleg (°/100 ft): 0.08, Sensor Depth (ft): 2068.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	16:05	16:15	10-11	2137.00	2173.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-11	16:15	16:30	10-11	2173.00	2190.00	Pressure On (psi): 2600.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 200, Toolface Type: magnetic
Rotary Drill	1	10-11	16:30	16:45	10-11	2190.00	2227.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	16:45	16:50	10-11	2227.00	2227.00	Inclination (°): 1.580, Azimuth (°): 77.590, TVD (ft): 2157.39, Dogleg (°/100 ft): 0.73, Sensor Depth (ft): 2158.00, Bit To Sensor (ft): 69.00

Rotary Drill	1	10-11	16:50	17:25	10-11	2227.00	2316.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	17:25	17:30	10-11	2316.00	2316.00	Inclination (°): 1.540, Azimuth (°): 106.150, TVD (ft): 2246.36, Dogleg (°/100 ft): 0.87, Sensor Depth (ft): 2247.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	17:30	17:35	10-11	2316.00	2328.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-11	17:35	17:45	10-11	2328.00	2343.00	Pressure On (psi): 2600.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 230, Toolface Type: magnetic
Rotary Drill	1	10-11	17:45	18:00	10-11	2343.00	2406.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	18:00	18:05	10-11	2406.00	2406.00	Inclination (°): 1.800, Azimuth (°): 128.210, TVD (ft): 2336.32, Dogleg (°/100 ft): 0.76, Sensor Depth (ft): 2337.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	18:05	18:15	10-11	2406.00	2420.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-11	18:15	18:25	10-11	2420.00	2440.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 260, Toolface Type: magnetic
Rotary Drill	1	10-11	18:25	18:40	10-11	2440.00	2496.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	18:40	18:45	10-11	2496.00	2496.00	Inclination (°): 1.450, Azimuth (°): 156.690, TVD (ft): 2426.29, Dogleg (°/100 ft): 0.96, Sensor Depth (ft): 2427.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	18:45	19:10	10-11	2496.00	2586.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	19:10	19:15	10-11	2586.00	2586.00	Inclination (°): 1.540, Azimuth (°): 168.550, TVD (ft): 2516.26, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 2517.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	19:15	19:40	10-11	2586.00	2676.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	19:40	19:45	10-11	2676.00	2676.00	Inclination (°): 1.230, Azimuth (°): 151.500, TVD (ft): 2606.23, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 2607.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	19:45	19:50	10-11	2676.00	2685.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-11	19:50	20:05	10-11	2685.00	2715.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 240, Toolface Type: magnetic
Rotary Drill	1	10-11	20:05	20:10	10-11	2715.00	2765.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	20:10	20:15	10-11	2765.00	2765.00	Inclination (°): 1.670, Azimuth (°): 159.500, TVD (ft): 2695.20, Dogleg (°/100 ft): 0.54, Sensor Depth (ft): 2696.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	20:15	20:35	10-11	2765.00	2855.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	20:35	20:40	10-11	2855.00	2855.00	Inclination (°): 1.850, Azimuth (°): 179.010, TVD (ft): 2785.16, Dogleg (°/100 ft): 0.69, Sensor Depth (ft): 2786.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	20:40	21:00	10-11	2855.00	2945.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	21:00	21:05	10-11	2945.00	2945.00	Inclination (°): 1.850, Azimuth (°): 160.470, TVD (ft): 2875.11, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 2876.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	21:05	21:25	10-11	2945.00	3034.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	21:25	21:30	10-11	3034.00	3034.00	Inclination (°): 1.490, Azimuth (°): 139.290, TVD (ft): 2964.08, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 2965.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	21:30	21:35	10-11	3034.00	3046.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-11	21:35	22:05	10-11	3046.00	3081.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 230, Toolface Type: magnetic
Rotary Drill	1	10-11	22:05	22:10	10-11	3081.00	3124.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	22:10	22:15	10-11	3124.00	3124.00	Inclination (°): 1.710, Azimuth (°): 160.470, TVD (ft): 3054.04, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 3055.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	22:15	22:30	10-11	3124.00	3214.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	22:30	22:35	10-11	3214.00	3214.00	Inclination (°): 2.200, Azimuth (°): 176.110, TVD (ft): 3143.99, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 3145.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	22:35	23:00	10-11	3214.00	3304.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	23:00	23:05	10-11	3304.00	3304.00	Inclination (°): 2.110, Azimuth (°): 162.490, TVD (ft): 3233.93, Dogleg (°/100 ft): 0.58, Sensor Depth (ft): 3235.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	23:05	23:15	10-11	3304.00	3394.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00

Survey	46	10-11	23:15	23:20	10-11	3394.00	3394.00	Inclination (°): 1.760, Azimuth (°): 148.430, TVD (ft): 3323.88, Dogleg (°/100 ft): 0.65, Sensor Depth (ft): 3325.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-11	23:20	23:25	10-11	3394.00	3405.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 70, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-11	23:25	23:35	10-11	3405.00	3425.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 320, Toolface Type: magnetic
Rotary Drill	1	10-11	23:35	23:50	10-11	3425.00	3484.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-11	23:50	00:00	10-12	3484.00	3484.00	Inclination (°): 1.320, Azimuth (°): 108.700, TVD (ft): 3413.84, Dogleg (°/100 ft): 1.25, Sensor Depth (ft): 3415.00, Bit To Sensor (ft): 69.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Oct 12 00:00 - 23:59 (Day 4 of 26)

Billing: \$5,600.00 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	3484.00	Downhole Hours	23.50	Rotating WOB (klbs)	25.00 - 25.00
Bit Depth (ft)	4825.00	Drilling Hours	15.92	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	4825.00	Hours Circulating	0.83	Rotating SPM	250.00 - 250.00
Total Distance (ft)	1341.00	Hours Sliding	0.83	Sliding SPM	250.00 - 250.00
Distance Rotated (ft)	1261.00	Hours Rotating	15.08	Motor RPM	136.00 - 144.00
Distance Slid (ft)	80.00			Surface RPM	60.00 - 60.00
Inclination In	1.45			Flow Rate (gpm)	800.00 - 800.00
Inclination Out	0.26			On Bottom Pressure (psi)	2900.00 - 2900.00
Azimuth In	100.00	% Hours Rotating	95%	Off Bottom Pressure (psi)	2300.00 - 2300.00
Azimuth Out	36.10	% Hours Sliding	5%		
AVG Total ROP (ft/h)	84.25	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	83.60	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	96.00				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #2 - BHA #2 - 12.25"

Date In: Oct 11, 2019, 6:30 Date Out: Oct 12, 2019, 23:30

Bit Details		Motor Details		Directional Comments
OD (in)	12.250	Size (in)	8.0	Flow Rate: 400-900, Max Diff: 1330 psi, Max Torque: 22,020 ft-lbs, BIT Runs: 5
Vendor	BAKER	Lobe/Stage	7/8, 5.9	
S/N	5292881	Bend Angle	1.5	
Nozzles	6 X 12'S	Speed (rev/gal)	0.17	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	8.400	POOH Reason Total Depth/Casing Point
Drilling Hours for Day	15.92	Bit Distances		
Total Drilled for Day (ft)	1341.00	Bend: 6.45 ft, Survey: 69.00 ft		
Drilling Hours for BHA	26.58			
Total Drilled for BHA (ft)	3603.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 12.25 BIT, Style: PDC, Gauge Length (in): 3.50, Size (in): 12.25	BAKER	5292881	6 5/8" Reg Pin			12.250		1.00	1.00
Mud Motor Description: 8 " 1.5 FIXED 7/8 5.9 W/ 12" STAB, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	AIM	800-40-009	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.94	38.94
Stabilizer Description: 12" STAB	GATOR	GT40283	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	7.875		5.63	44.57
UBHO Sub Description: 8" UBHO, Type: NM	DR	DR9685	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.063		3.97	48.54
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	AIM	8001008	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.12	78.66
Drill Collar Description: 8" NMDC, Style: Slick Drill, Type: NM	DR	DR41120	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.57	109.23
Crossover Sub Description: X-O 4 1/2 XH B X 6 5/8 P, Type: Steel	GT	GT10364	4 1/2" XH Box	6 5/8" Reg Pin	2.875	6.000		4.15	113.38
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	645.58
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	649.20
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1599.19

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	10-11	23:50	00:00	10-12	3484.00	3484.00	Inclination (°): 1.320, Azimuth (°): 108.700, TVD (ft): 3413.84, Dogleg (°/100 ft): 1.25, Sensor Depth (ft): 3415.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	00:00	00:10	10-12	3484.00	3574.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	00:10	00:15	10-12	3574.00	3574.00	Inclination (°): 1.450, Azimuth (°): 100.000, TVD (ft): 3503.82, Dogleg (°/100 ft): 0.27, Sensor Depth (ft): 3505.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	00:15	00:25	10-12	3574.00	3587.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-12	00:25	00:40	10-12	3587.00	3627.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 280, Toolface Type: magnetic
Rotary Drill	1	10-12	00:40	00:45	10-12	3627.00	3663.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	00:45	00:50	10-12	3663.00	3663.00	Inclination (°): 0.840, Azimuth (°): 121.090, TVD (ft): 3592.80, Dogleg (°/100 ft): 0.82, Sensor Depth (ft): 3594.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	00:50	01:10	10-12	3663.00	3753.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	01:10	01:15	10-12	3753.00	3753.00	Inclination (°): 1.270, Azimuth (°): 281.670, TVD (ft): 3682.79, Dogleg (°/100 ft): 2.31, Sensor Depth (ft): 3684.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	01:15	01:55	10-12	3753.00	3843.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	01:55	02:00	10-12	3843.00	3843.00	Inclination (°): 1.410, Azimuth (°): 266.640, TVD (ft): 3772.77, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 3774.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	02:00	02:05	10-12	3843.00	3850.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-12	02:05	02:20	10-12	3850.00	3870.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 85, Toolface Type: magnetic
Rotary Drill	1	10-12	02:20	02:40	10-12	3870.00	3933.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	02:40	02:45	10-12	3933.00	3933.00	Inclination (°): 0.880, Azimuth (°): 23.360, TVD (ft): 3862.76, Dogleg (°/100 ft): 2.19, Sensor Depth (ft): 3864.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	02:45	03:15	10-12	3933.00	4022.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	03:15	03:20	10-12	4022.00	4022.00	Inclination (°): 1.980, Azimuth (°): 52.360, TVD (ft): 3951.73, Dogleg (°/100 ft): 1.44, Sensor Depth (ft): 3953.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	03:20	04:20	10-12	4022.00	4112.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Rig Service - In Hole	19	10-12	04:20	04:40	10-12			
Survey	46	10-12	04:40	04:45	10-12	4112.00	4112.00	Inclination (°): 2.770, Azimuth (°): 68.180, TVD (ft): 4041.66, Dogleg (°/100 ft): 1.13, Sensor Depth (ft): 4043.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	04:45	04:50	10-12	4112.00	4115.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Slide Drill	2	10-12	04:50	05:10	10-12	4115.00	4135.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250, Toolface: 250, Toolface Type: magnetic
Rotary Drill	1	10-12	05:10	05:30	10-12	4135.00	4202.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	05:30	05:35	10-12	4202.00	4202.00	Inclination (°): 1.140, Azimuth (°): 74.160, TVD (ft): 4131.60, Dogleg (°/100 ft): 1.82, Sensor Depth (ft): 4133.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	05:35	06:30	10-12	4202.00	4292.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	06:30	06:35	10-12	4292.00	4292.00	Inclination (°): 0.570, Azimuth (°): 98.860, TVD (ft): 4221.59, Dogleg (°/100 ft): 0.74, Sensor Depth (ft): 4223.00, Bit To Sensor (ft): 69.00, Temperature (°F): 122.00
Rotary Drill	1	10-12	06:35	07:35	10-12	4292.00	4381.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	07:35	07:40	10-12	4381.00	4381.00	Inclination (°): 0.620, Azimuth (°): 98.070, TVD (ft): 4310.59, Dogleg (°/100 ft): 0.06, Sensor Depth (ft): 4312.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	07:40	09:05	10-12	4381.00	4471.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	09:05	09:10	10-12	4471.00	4471.00	Inclination (°): 1.010, Azimuth (°): 81.810, TVD (ft): 4400.58, Dogleg (°/100 ft): 0.50, Sensor Depth (ft): 4402.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	09:10	10:50	10-12	4471.00	4561.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	10:50	10:55	10-12	4561.00	4561.00	Inclination (°): 0.620, Azimuth (°): 81.450, TVD (ft): 4490.57, Dogleg (°/100 ft): 0.43, Sensor Depth (ft): 4492.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	10:55	12:40	10-12	4561.00	4651.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	12:40	12:45	10-12	4651.00	4651.00	Inclination (°): 0.880, Azimuth (°): 50.340, TVD (ft): 4580.56, Dogleg (°/100 ft): 0.53, Sensor Depth (ft): 4582.00, Bit To Sensor (ft): 69.00

Rotary Drill	1	10-12	12:45	14:35	10-12	4651.00	4741.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	14:35	14:50	10-12	4741.00	4741.00	Inclination (°): 0.620, Azimuth (°): 33.640, TVD (ft): 4670.55, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 4672.00, Bit To Sensor (ft): 69.00
Rotary Drill	1	10-12	14:50	17:35	10-12	4741.00	4825.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2300.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 800.00, Strokes Per Minute: 250.00
Survey	46	10-12	17:35	17:40	10-12	4825.00	4825.00	Inclination (°): 0.260, Azimuth (°): 36.100, TVD (ft): 4754.55, Dogleg (°/100 ft): 0.43, Sensor Depth (ft): 4756.00, Bit To Sensor (ft): 69.00, Temperature (°F): 123.00
Circulating	3	10-12	17:40	18:30	10-12			
Pooh	7	10-12	18:30	22:30	10-12			POOH
Change BHA	6	10-12	22:30	23:30	10-12			L/D BHA
Standby	15	10-12	23:30	06:00	10-13			Standby. Casing Ops

MWD Activities

No Activities

	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Sunday, Oct 13 00:00 - 23:59 (Day 5 of 26) Billing: N/A (\$351,170.14 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
Advance Directional	Directional Driller
Robert Olivarez	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	10-12	23:30	06:00	10-13			Standby. Casing Ops

MWD Activities								
No Activities								



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Oct 19 00:00 - 23:59 (Day 6 of 26)

Billing: \$11,176.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)		Downhole Hours	4.25	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	136.00 - 144.00
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
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #3 - Intermediate 8.5"

Date In: Oct 19, 2019, 19:45 Date Out: Oct 20, 2019, 20:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	1324478	Bend Angle	1.5	
Nozzles	6 X 12'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.230	
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend: 5.37 ft, Survey: 66.00 ft		
Drilling Hours for BHA	12.50			
Total Drilled for BHA (ft)	2767.00			
				POOH Reason
				Penetration Rate: LOW ROP

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5 BIT, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	1324478	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-025	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.25	37.25
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.12
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	BT6751558	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.790		3.56	46.68
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	75.45
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	105.83
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	108.80
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	641.00
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	644.62
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1594.61

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	10-19	00:00	18:30	10-19			Standby while WALKING RIG & RIGGING UP

Change BHA	6	10-19	18:30	19:45	10-19			P/U BHA # 3
TIH	8	10-19	19:45	22:10	10-19			TIH W/ BHA #3
Other	16	10-19	22:10	22:55	10-19			Test Casing and Drill Out DV Tool
TIH	8	10-19	22:55	23:30	10-19			TIH W/ BHA #3
Drilling Cement	17	10-19	23:30	00:45	10-20	4764.00	4825.00	Drilling Cement and Float Equipment

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, Oct 20 00:00 - 23:59 (Day 7 of 26)

Billing: \$9,400.00 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	4825.00	Downhole Hours	24.00	Rotating WOB (klbs)	35.00 - 45.00
Bit Depth (ft)	7592.00	Drilling Hours	12.50	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	7592.00	Hours Circulating	1.92	Rotating SPM	204.00 - 218.00
Total Distance (ft)	2767.00	Hours Sliding	1.58	Sliding SPM	204.00 - 204.00
Distance Rotated (ft)	2592.00	Hours Rotating	10.92	Motor RPM	136.00 - 144.00
Distance Slid (ft)	175.00			Surface RPM	40.00 - 50.00
Inclination In	0.44			Flow Rate (gpm)	650.00 - 705.00
Inclination Out	6.02			On Bottom Pressure (psi)	3000.00 - 3500.00
Azimuth In	347.76	% Hours Rotating	87%	Off Bottom Pressure (psi)	2600.00 - 2950.00
Azimuth Out	9.56	% Hours Sliding	13%		
AVG Total ROP (ft/h)	221.36	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	237.44	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	110.53				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #3 - Intermediate 8.5"

Date In: Oct 19, 2019, 19:45 Date Out: Oct 20, 2019, 20:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	1324478	Bend Angle	1.5	
Nozzles	6 X 12'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.230	POOH Reason Penetration Rate: LOW ROP
Drilling Hours for Day	12.50	Bit Distances		
Total Drilled for Day (ft)	2767.00	Bend: 5.37 ft, Survey: 66.00 ft		
Drilling Hours for BHA	12.50			
Total Drilled for BHA (ft)	2767.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5 BIT, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	1324478	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-025	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.25	37.25
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.12
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	BT6751558	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.790		3.56	46.68
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	75.45
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	105.83
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	108.80
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	641.00
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	644.62
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1594.61

MWD Items

No Items

BHA #4 - Intermediate 8.5"

Date In: Oct 20, 2019, 20:00 Date Out: Oct 22, 2019, 18:00

Bit Details			Motor Details			Directional Comments		
OD (in)	8.500		Size (in)	7.0		Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit:		
Vendor	SECURITY		Lobe/Stage	7/8, 8.5				
S/N	13266539		Bend Angle	1.5		MWD Comments		
Nozzles	6 X 12'S		Speed (rev/gal)	0.26				
Total Flow Area (in²)	0.663		Wear Pad OD (in)	7.210		POOH Reason		
Drilling Hours for Day	0.00		Bit Distances					
Total Drilled for Day (ft)			Bend: 5.32 ft, Survey: 64.00 ft			Total Depth/Casing Point		
Drilling Hours for BHA	30.33							
Total Drilled for BHA (ft)	3152.00							

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" MM65DRM, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13266539	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-031	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.21	37.21
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.08
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	675-180 NM	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.740		2.64	45.72
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	74.49
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	104.87
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	107.84
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	640.04
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	643.66
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1593.65

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Drilling Cement	17	10-19	23:30	00:45	10-20	4764.00	4825.00	Drilling Cement and Float Equipment
Rotary Drill	1	10-20	00:45	01:25	10-20	4825.00	4916.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 35.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	01:25	01:30	10-20	4916.00	4916.00	Inclination (°): 0.440, Azimuth (°): 347.760, TVD (ft): 4848.55, Dogleg (°/100 ft): 0.35, Sensor Depth (ft): 4850.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	01:30	01:40	10-20	4916.00	4925.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	01:40	01:45	10-20	4925.00	4935.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 350, Toolface Type: magnetic
Rotary Drill	1	10-20	01:45	02:00	10-20	4935.00	5006.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	02:00	02:05	10-20	5006.00	5006.00	Inclination (°): 1.360, Azimuth (°): 348.640, TVD (ft): 4938.54, Dogleg (°/100 ft): 1.02, Sensor Depth (ft): 4940.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	02:05	02:15	10-20	5006.00	5015.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	02:15	02:20	10-20	5015.00	5030.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 350, Toolface Type: magnetic
Rotary Drill	1	10-20	02:20	02:40	10-20	5030.00	5105.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	02:40	02:45	10-20	5105.00	5120.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 0, Toolface Type: magnetic

Rotary Drill	1	10-20	02:45	02:55	10-20	5120.00	5185.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	02:55	03:00	10-20	5185.00	5185.00	Inclination (°): 4.400, Azimuth (°): 348.200, TVD (ft): 5117.29, Dogleg (°/100 ft): 1.70, Sensor Depth (ft): 5119.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	03:00	03:05	10-20	5185.00	5196.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	03:05	03:15	10-20	5196.00	5211.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 0, Toolface Type: magnetic
Rotary Drill	1	10-20	03:15	03:20	10-20	5211.00	5275.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	03:20	03:25	10-20	5275.00	5275.00	Inclination (°): 6.330, Azimuth (°): 350.400, TVD (ft): 5206.89, Dogleg (°/100 ft): 2.16, Sensor Depth (ft): 5209.00, Bit To Sensor (ft): 66.00, Temperature (°F): 109.00
Rotary Drill	1	10-20	03:25	03:40	10-20	5275.00	5365.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	03:40	03:45	10-20	5365.00	5365.00	Inclination (°): 7.210, Azimuth (°): 346.360, TVD (ft): 5296.26, Dogleg (°/100 ft): 1.11, Sensor Depth (ft): 5299.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	03:45	04:05	10-20	5365.00	5454.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	04:05	04:10	10-20	5454.00	5454.00	Inclination (°): 7.430, Azimuth (°): 347.500, TVD (ft): 5384.54, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 5388.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	04:10	04:25	10-20	5454.00	5544.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	04:25	04:30	10-20	5544.00	5544.00	Inclination (°): 7.160, Azimuth (°): 344.070, TVD (ft): 5473.81, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 5478.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	04:30	04:45	10-20	5544.00	5634.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	04:45	04:50	10-20	5634.00	5634.00	Inclination (°): 6.680, Azimuth (°): 342.050, TVD (ft): 5563.15, Dogleg (°/100 ft): 0.60, Sensor Depth (ft): 5568.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	04:50	04:55	10-20	5634.00	5645.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	04:55	05:00	10-20	5645.00	5660.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	10-20	05:00	05:15	10-20	5660.00	5724.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	05:15	05:20	10-20	5724.00	5724.00	Inclination (°): 6.680, Azimuth (°): 345.920, TVD (ft): 5652.54, Dogleg (°/100 ft): 0.50, Sensor Depth (ft): 5658.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	05:20	05:30	10-20	5724.00	5730.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	05:30	05:40	10-20	5730.00	5750.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	10-20	05:40	05:50	10-20	5750.00	5814.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	05:50	05:55	10-20	5814.00	5814.00	Inclination (°): 7.520, Azimuth (°): 349.430, TVD (ft): 5741.85, Dogleg (°/100 ft): 1.05, Sensor Depth (ft): 5748.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	05:55	06:10	10-20	5814.00	5903.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	06:10	06:15	10-20	5903.00	5903.00	Inclination (°): 7.030, Azimuth (°): 347.320, TVD (ft): 5830.13, Dogleg (°/100 ft): 0.63, Sensor Depth (ft): 5837.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	06:15	06:20	10-20	5903.00	5925.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	06:20	06:30	10-20	5925.00	5945.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	10-20	06:30	06:35	10-20	5945.00	5993.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	06:35	06:40	10-20	5993.00	5993.00	Inclination (°): 8.920, Azimuth (°): 352.250, TVD (ft): 5919.26, Dogleg (°/100 ft): 2.23, Sensor Depth (ft): 5927.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	06:40	06:55	10-20	5993.00	6083.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	06:55	07:00	10-20	6083.00	6083.00	Inclination (°): 9.450, Azimuth (°): 355.940, TVD (ft): 6008.11, Dogleg (°/100 ft): 0.88, Sensor Depth (ft): 6017.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	07:00	07:10	10-20	6083.00	6172.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	07:10	07:15	10-20	6172.00	6172.00	Inclination (°): 9.670, Azimuth (°): 354.710, TVD (ft): 6095.87, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 6106.00, Bit To Sensor (ft): 66.00

Rotary Drill	1	10-20	07:15	07:20	10-20	6172.00	6190.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	07:20	07:25	10-20	6190.00	6200.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	10-20	07:25	07:35	10-20	6200.00	6262.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	07:35	07:40	10-20	6262.00	6262.00	Inclination (°): 9.360, Azimuth (°): 355.850, TVD (ft): 6184.63, Dogleg (°/100 ft): 0.40, Sensor Depth (ft): 6196.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	07:40	07:50	10-20	6262.00	6351.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	07:50	07:55	10-20	6351.00	6351.00	Inclination (°): 8.880, Azimuth (°): 352.510, TVD (ft): 6272.51, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 6285.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	07:55	08:05	10-20	6351.00	6441.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	08:05	08:10	10-20	6441.00	6441.00	Inclination (°): 9.050, Azimuth (°): 352.510, TVD (ft): 6361.41, Dogleg (°/100 ft): 0.19, Sensor Depth (ft): 6375.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	08:10	08:15	10-20	6441.00	6460.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	08:15	08:30	10-20	6460.00	6480.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 120, Toolface Type: gravity
Rotary Drill	1	10-20	08:30	08:40	10-20	6480.00	6531.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	08:40	08:45	10-20	6531.00	6531.00	Inclination (°): 8.750, Azimuth (°): 355.150, TVD (ft): 6450.33, Dogleg (°/100 ft): 0.56, Sensor Depth (ft): 6465.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	08:45	08:55	10-20	6531.00	6620.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	08:55	09:00	10-20	6620.00	6620.00	Inclination (°): 8.220, Azimuth (°): 0.420, TVD (ft): 6538.35, Dogleg (°/100 ft): 1.06, Sensor Depth (ft): 6554.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	09:00	09:15	10-20	6620.00	6710.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	09:15	09:20	10-20	6710.00	6710.00	Inclination (°): 8.310, Azimuth (°): 359.190, TVD (ft): 6627.42, Dogleg (°/100 ft): 0.22, Sensor Depth (ft): 6644.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	09:20	09:25	10-20	6710.00	6725.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	10-20	09:25	09:35	10-20	6725.00	6745.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 120, Toolface Type: gravity
Rotary Drill	1	10-20	09:35	09:45	10-20	6745.00	6800.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	09:45	09:50	10-20	6800.00	6800.00	Inclination (°): 7.520, Azimuth (°): 6.660, TVD (ft): 6716.56, Dogleg (°/100 ft): 1.44, Sensor Depth (ft): 6734.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	09:50	10:05	10-20	6800.00	6889.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	10:05	10:10	10-20	6889.00	6889.00	Inclination (°): 6.950, Azimuth (°): 12.900, TVD (ft): 6804.86, Dogleg (°/100 ft): 1.09, Sensor Depth (ft): 6823.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	10:10	10:30	10-20	6889.00	6979.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	10:30	10:35	10-20	6979.00	6979.00	Inclination (°): 6.730, Azimuth (°): 13.690, TVD (ft): 6894.21, Dogleg (°/100 ft): 0.27, Sensor Depth (ft): 6913.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	10:35	11:10	10-20	6979.00	7068.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	11:10	11:15	10-20	7068.00	7068.00	Inclination (°): 6.370, Azimuth (°): 15.890, TVD (ft): 6982.63, Dogleg (°/100 ft): 0.49, Sensor Depth (ft): 7002.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	11:15	11:35	10-20	7068.00	7158.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	11:35	11:40	10-20	7158.00	7158.00	Inclination (°): 5.890, Azimuth (°): 17.560, TVD (ft): 7072.12, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 7092.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	11:40	11:45	10-20	7158.00	7172.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 50, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-20	11:45	12:00	10-20	7172.00	7187.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 355, Toolface Type: magnetic
Rotary Drill	1	10-20	12:00	12:25	10-20	7187.00	7248.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	10-20	12:25	12:30	10-20	7248.00	7248.00	Inclination (°): 6.330, Azimuth (°): 14.390, TVD (ft): 7161.61, Dogleg (°/100 ft): 0.62, Sensor Depth (ft): 7182.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	12:30	12:50	10-20	7248.00	7338.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 40.00, Surface RPM: 50, Surface Torque (ft lbf): 10.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00

Survey	46	10-20	12:50	12:55	10-20	7338.00	7338.00	Inclination (°): 6.640, Azimuth (°): 9.560, TVD (ft): 7251.03, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 7272.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	12:55	13:30	10-20	7338.00	7428.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 50, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-20	13:30	13:35	10-20	7428.00	7428.00	Inclination (°): 6.550, Azimuth (°): 8.770, TVD (ft): 7340.44, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 7362.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	13:35	14:20	10-20	7428.00	7518.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 50, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-20	14:20	14:25	10-20	7518.00	7518.00	Inclination (°): 6.020, Azimuth (°): 9.560, TVD (ft): 7429.90, Dogleg (°/100 ft): 0.60, Sensor Depth (ft): 7452.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-20	14:25	15:40	10-20	7518.00	7592.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 50, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Circulating	3	10-20	15:40	16:20	10-20			CIRC TO POOH
Pooh	7	10-20	16:20	19:15	10-20			POOH
Change BHA	6	10-20	19:15	20:00	10-20			P/U BHA # 4
Rig Service - Out Hole	20	10-20	20:00	20:45	10-20			
TIH	8	10-20	20:45	00:00	10-21			TIH W/ BHA #4

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Oct 21 00:00 - 23:59 (Day 8 of 26)

Billing: \$6,200.00 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	7592.00	Downhole Hours	24.00	Rotating WOB (klbs)	45.00 - 45.00
Bit Depth (ft)	10010.00	Drilling Hours	21.67	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	10010.00	Hours Circulating	0.00	Rotating SPM	218.00 - 218.00
Total Distance (ft)	2418.00	Hours Sliding	4.25	Sliding SPM	204.00 - 219.00
Distance Rotated (ft)	2198.00	Hours Rotating	17.42	Motor RPM	136.00 - 144.00
Distance Slid (ft)	220.00			Surface RPM	30.00 - 50.00
Inclination In	5.71			Flow Rate (gpm)	650.00 - 705.00
Inclination Out	5.45			On Bottom Pressure (psi)	3000.00 - 3500.00
Azimuth In	10.44	% Hours Rotating	80%	Off Bottom Pressure (psi)	2600.00 - 2950.00
Azimuth Out	13.34	% Hours Sliding	20%		
AVG Total ROP (ft/h)	111.60	% Distance Sliding	9%		
AVG Rotating ROP (ft/h)	126.20	% Distance Rotating	91%		
AVG Sliding ROP (ft/h)	51.76				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #4 - Intermediate 8.5"

Date In: Oct 20, 2019, 20:00 Date Out: Oct 22, 2019, 18:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit:
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13266539	Bend Angle	1.5	
Nozzles	6 X 12'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.210	POOH Reason Total Depth/Casing Point
Drilling Hours for Day	21.67	Bit Distances		
Total Drilled for Day (ft)	2418.00	Bend: 5.32 ft, Survey: 64.00 ft		
Drilling Hours for BHA	30.33			
Total Drilled for BHA (ft)	3152.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" MM65DRM, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13266539	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-031	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.21	37.21
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.08
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	675-180 NM	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.740		2.64	45.72
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	74.49
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	104.87
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	107.84
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	640.04
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	643.66
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1593.65

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	10-20	20:45	00:00	10-21			TIH W/ BHA #4
Rotary Drill	1	10-21	00:00	00:25	10-21	7592.00	7608.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 50, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	00:25	00:30	10-21	7608.00	7608.00	Inclination (°): 5.710, Azimuth (°): 10.440, TVD (ft): 7519.42, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 7542.00, Bit To Sensor (ft): 66.00
Rotary Drill	1	10-21	00:30	00:35	10-21	7608.00	7610.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	00:35	00:55	10-21	7610.00	7630.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 15, Toolface Type: magnetic
Rotary Drill	1	10-21	00:55	01:10	10-21	7630.00	7696.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	01:10	01:15	10-21	7696.00	7696.00	Inclination (°): 7.380, Azimuth (°): 13.160, TVD (ft): 7608.83, Dogleg (°/100 ft): 1.89, Sensor Depth (ft): 7632.00, Bit To Sensor (ft): 64.00, Temperature (°F): 123.00
Rotary Drill	1	10-21	01:15	01:35	10-21	7696.00	7786.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	01:35	01:40	10-21	7786.00	7786.00	Inclination (°): 7.740, Azimuth (°): 13.870, TVD (ft): 7698.05, Dogleg (°/100 ft): 0.41, Sensor Depth (ft): 7722.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	01:40	02:00	10-21	7786.00	7876.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	02:00	02:05	10-21	7876.00	7876.00	Inclination (°): 7.250, Azimuth (°): 14.310, TVD (ft): 7787.28, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 7812.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	02:05	02:20	10-21	7876.00	7965.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	02:20	02:25	10-21	7965.00	7965.00	Inclination (°): 6.900, Azimuth (°): 12.280, TVD (ft): 7875.61, Dogleg (°/100 ft): 0.48, Sensor Depth (ft): 7901.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	02:25	02:55	10-21	7965.00	8055.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	02:55	03:00	10-21	8055.00	8055.00	Inclination (°): 6.550, Azimuth (°): 13.080, TVD (ft): 7964.99, Dogleg (°/100 ft): 0.40, Sensor Depth (ft): 7991.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	03:00	04:05	10-21	8055.00	8234.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	04:05	04:10	10-21	8234.00	8234.00	Inclination (°): 5.850, Azimuth (°): 12.640, TVD (ft): 8142.94, Dogleg (°/100 ft): 0.39, Sensor Depth (ft): 8170.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	04:10	04:15	10-21	8234.00	8245.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	04:15	04:25	10-21	8245.00	8255.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 15, Toolface Type: magnetic
Rotary Drill	1	10-21	04:25	04:45	10-21	8255.00	8324.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	04:45	04:50	10-21	8324.00	8324.00	Inclination (°): 6.290, Azimuth (°): 8.330, TVD (ft): 8232.43, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 8260.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	04:50	04:55	10-21	8324.00	8335.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	04:55	05:15	10-21	8335.00	8350.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 30, Toolface Type: magnetic
Rotary Drill	1	10-21	05:15	05:25	10-21	8350.00	8413.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	05:25	05:30	10-21	8413.00	8413.00	Inclination (°): 7.300, Azimuth (°): 9.380, TVD (ft): 8320.81, Dogleg (°/100 ft): 1.14, Sensor Depth (ft): 8349.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	05:30	06:15	10-21	8413.00	8503.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	06:15	06:20	10-21	8503.00	8503.00	Inclination (°): 7.690, Azimuth (°): 11.050, TVD (ft): 8410.04, Dogleg (°/100 ft): 0.50, Sensor Depth (ft): 8439.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	06:20	07:10	10-21	8503.00	8593.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	07:10	07:15	10-21	8593.00	8593.00	Inclination (°): 7.160, Azimuth (°): 9.470, TVD (ft): 8499.28, Dogleg (°/100 ft): 0.63, Sensor Depth (ft): 8529.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	07:15	08:10	10-21	8593.00	8682.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	08:10	08:15	10-21	8682.00	8682.00	Inclination (°): 6.770, Azimuth (°): 10.180, TVD (ft): 8587.63, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 8618.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	08:15	09:20	10-21	8682.00	8772.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	09:20	09:35	10-21	8772.00	8772.00	Inclination (°): 6.460, Azimuth (°): 9.470, TVD (ft): 8677.03, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 8708.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	09:35	10:40	10-21	8772.00	8862.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00

Survey	46	10-21	10:40	10:45	10-21	8862.00	8862.00	Inclination (°): 5.710, Azimuth (°): 7.800, TVD (ft): 8766.52, Dogleg (°/100 ft): 0.86, Sensor Depth (ft): 8798.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	10:45	10:55	10-21	8862.00	8866.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	10:55	11:15	10-21	8866.00	8881.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 30, Toolface Type: magnetic
Rotary Drill	1	10-21	11:15	12:00	10-21	8881.00	8952.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	12:00	12:05	10-21	8952.00	8952.00	Inclination (°): 5.580, Azimuth (°): 16.770, TVD (ft): 8856.09, Dogleg (°/100 ft): 0.99, Sensor Depth (ft): 8888.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	12:05	12:10	10-21	8952.00	8955.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	12:10	12:30	10-21	8955.00	8970.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 15, Toolface Type: magnetic
Rotary Drill	1	10-21	12:30	13:20	10-21	8970.00	9041.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	13:20	13:25	10-21	9041.00	9041.00	Inclination (°): 5.800, Azimuth (°): 21.600, TVD (ft): 8944.65, Dogleg (°/100 ft): 0.59, Sensor Depth (ft): 8977.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	13:25	14:35	10-21	9041.00	9131.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	14:35	14:40	10-21	9131.00	9131.00	Inclination (°): 5.050, Azimuth (°): 18.960, TVD (ft): 9034.24, Dogleg (°/100 ft): 0.88, Sensor Depth (ft): 9067.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	14:40	14:45	10-21	9131.00	9136.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	14:45	15:15	10-21	9136.00	9161.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 0, Toolface Type: magnetic
Rotary Drill	1	10-21	15:15	15:55	10-21	9161.00	9220.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	15:55	16:00	10-21	9220.00	9220.00	Inclination (°): 5.850, Azimuth (°): 14.570, TVD (ft): 9122.84, Dogleg (°/100 ft): 1.01, Sensor Depth (ft): 9156.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	16:00	16:45	10-21	9220.00	9310.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	16:45	16:50	10-21	9310.00	9310.00	Inclination (°): 5.190, Azimuth (°): 16.150, TVD (ft): 9212.42, Dogleg (°/100 ft): 0.75, Sensor Depth (ft): 9246.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	16:50	16:55	10-21	9310.00	9316.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	16:55	17:40	10-21	9316.00	9346.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	10-21	17:40	18:05	10-21	9346.00	9400.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	18:05	18:10	10-21	9400.00	9400.00	Inclination (°): 5.710, Azimuth (°): 14.310, TVD (ft): 9302.02, Dogleg (°/100 ft): 0.61, Sensor Depth (ft): 9336.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	18:10	18:50	10-21	9400.00	9489.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	18:50	18:55	10-21	9489.00	9489.00	Inclination (°): 5.270, Azimuth (°): 15.890, TVD (ft): 9390.61, Dogleg (°/100 ft): 0.52, Sensor Depth (ft): 9425.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	18:55	19:00	10-21	9489.00	9501.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	19:00	19:25	10-21	9501.00	9531.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	10-21	19:25	19:45	10-21	9531.00	9579.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	19:45	19:50	10-21	9579.00	9579.00	Inclination (°): 5.230, Azimuth (°): 13.160, TVD (ft): 9480.23, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 9515.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	19:50	20:25	10-21	9579.00	9669.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	20:25	20:30	10-21	9669.00	9669.00	Inclination (°): 5.580, Azimuth (°): 1.210, TVD (ft): 9569.83, Dogleg (°/100 ft): 1.31, Sensor Depth (ft): 9605.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	20:30	20:45	10-21	9669.00	9675.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	20:45	21:10	10-21	9675.00	9705.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 30, Toolface Type: magnetic
Rotary Drill	1	10-21	21:10	21:20	10-21	9705.00	9758.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	21:20	21:25	10-21	9758.00	9758.00	Inclination (°): 5.710, Azimuth (°): 359.190, TVD (ft): 9658.40, Dogleg (°/100 ft): 0.27, Sensor Depth (ft): 9694.00, Bit To Sensor (ft): 64.00

Rotary Drill	1	10-21	21:25	22:10	10-21	9758.00	9848.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	22:10	22:15	10-21	9848.00	9848.00	Inclination (°): 5.670, Azimuth (°): 5.340, TVD (ft): 9747.96, Dogleg (°/100 ft): 0.68, Sensor Depth (ft): 9784.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	22:15	22:20	10-21	9848.00	9855.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-21	22:20	23:00	10-21	9855.00	9885.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 35, Toolface Type: magnetic
Rotary Drill	1	10-21	23:00	23:20	10-21	9885.00	9938.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-21	23:20	23:25	10-21	9938.00	9938.00	Inclination (°): 5.450, Azimuth (°): 13.340, TVD (ft): 9837.54, Dogleg (°/100 ft): 0.89, Sensor Depth (ft): 9874.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-21	23:25	00:00	10-22	9938.00	10010.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Oct 22 00:00 - 23:59 (Day 9 of 26)

Billing: \$6,200.00 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	10010.00	Downhole Hours	18.00	Rotating WOB (klbs)	45.00 - 45.00
Bit Depth (ft)	10744.00	Drilling Hours	8.67	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	10744.00	Hours Circulating	1.08	Rotating SPM	218.00 - 218.00
Total Distance (ft)	734.00	Hours Sliding	1.67	Sliding SPM	219.00 - 219.00
Distance Rotated (ft)	671.00	Hours Rotating	7.00	Motor RPM	136.00 - 144.00
Distance Slid (ft)	63.00			Surface RPM	30.00 - 30.00
Inclination In	4.88			Flow Rate (gpm)	700.00 - 705.00
Inclination Out	2.15			On Bottom Pressure (psi)	3000.00 - 3500.00
Azimuth In	10.18	% Hours Rotating	81%	Off Bottom Pressure (psi)	2600.00 - 2950.00
Azimuth Out	333.44	% Hours Sliding	19%		
AVG Total ROP (ft/h)	87.14	% Distance Sliding	9%		
AVG Rotating ROP (ft/h)	97.98	% Distance Rotating	91%		
AVG Sliding ROP (ft/h)	37.80				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #4 - Intermediate 8.5"

Date In: Oct 20, 2019, 20:00 Date Out: Oct 22, 2019, 18:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 300 - 750, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit:
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13266539	Bend Angle	1.5	
Nozzles	6 X 12'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.210	
Drilling Hours for Day	8.67	Bit Distances		
Total Drilled for Day (ft)	734.00	Bend: 5.32 ft, Survey: 64.00 ft		
Drilling Hours for BHA	30.33			
Total Drilled for BHA (ft)	3152.00			
				POOH Reason
				Total Depth/Casing Point

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" MM65DRM, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13266539	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.5 w/ 8.25" NBS, Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-031	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.21	37.21
Stabilizer Description: 8.25" NM STAB	DTI	DR39402	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.860		5.87	43.08
UBHO Sub Description: 6.75" UBHO, Type: NM	AIM	675-180 NM	4 1/2" IF Box	4 1/2" IF Pin	3.000	6.740		2.64	45.72
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR41069	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.570		28.77	74.49
Drill Collar Description: 6.75" NMDC, Style: Slick Drill, Type: NM	DTI	DR22185	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.470		30.38	104.87
Crossover Sub Description: X-O 4 1/2 XH B X 4 1/2 IF P, Type: Steel	DTI	DR23271	4 1/2" XH Box	4 1/2" IF Pin	2.875	6.520		2.97	107.84
Drill Collar Description: 6 STANDS 6.5 DC'S, Style: Spiral Drill, Type: Steel	RIG1	RIG1	4 1/2" XH Box	4 1/2" XH Pin	2.875	6.500		532.20	640.04
Crossover Sub Description: X-O ED 54 B - 4 1/2 XH P, Type: Steel	BD	BD13519	EverDrlg54 Box	4 1/2" XH Pin	2.875	6.625		3.62	643.66
HWDP Description: 10 STANDS HWDP, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	3.875	3.688		949.99	1593.65

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	10-21	23:25	00:00	10-22	9938.00	10010.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Rotary Drill	1	10-22	00:00	00:05	10-22	10010.00	10027.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	00:05	00:10	10-22	10027.00	10027.00	Inclination (°): 4.880, Azimuth (°): 10.180, TVD (ft): 9926.17, Dogleg (°/100 ft): 0.72, Sensor Depth (ft): 9963.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	00:10	00:15	10-22	10027.00	10040.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-22	00:15	00:50	10-22	10040.00	10058.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 35, Toolface Type: magnetic
Rotary Drill	1	10-22	00:50	01:20	10-22	10058.00	10117.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	01:20	01:25	10-22	10117.00	10117.00	Inclination (°): 4.880, Azimuth (°): 6.220, TVD (ft): 10015.85, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 10053.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	01:25	01:40	10-22	10117.00	10120.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-22	01:40	02:15	10-22	10120.00	10150.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 10, Toolface Type: magnetic
Rotary Drill	1	10-22	02:15	02:40	10-22	10150.00	10207.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	02:40	02:45	10-22	10207.00	10207.00	Inclination (°): 5.980, Azimuth (°): 4.730, TVD (ft): 10105.44, Dogleg (°/100 ft): 1.23, Sensor Depth (ft): 10143.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	02:45	02:55	10-22	10207.00	10210.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	10-22	02:55	03:25	10-22	10210.00	10225.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2600.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 219, Toolface: 45, Toolface Type: magnetic
Rotary Drill	1	10-22	03:25	04:10	10-22	10225.00	10296.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	04:10	04:15	10-22	10296.00	10296.00	Inclination (°): 6.770, Azimuth (°): 10.260, TVD (ft): 10193.89, Dogleg (°/100 ft): 1.12, Sensor Depth (ft): 10232.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	04:15	05:05	10-22	10296.00	10386.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Rig Service - In Hole	19	10-22	05:05	05:20	10-22			
Survey	46	10-22	05:20	05:25	10-22	10386.00	10386.00	Inclination (°): 5.490, Azimuth (°): 10.260, TVD (ft): 10283.38, Dogleg (°/100 ft): 1.42, Sensor Depth (ft): 10322.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	05:25	06:25	10-22	10386.00	10476.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	06:25	06:30	10-22	10476.00	10476.00	Inclination (°): 3.520, Azimuth (°): 6.750, TVD (ft): 10373.09, Dogleg (°/100 ft): 2.21, Sensor Depth (ft): 10412.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	06:30	07:30	10-22	10476.00	10565.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	07:30	07:35	10-22	10565.00	10565.00	Inclination (°): 2.550, Azimuth (°): 351.450, TVD (ft): 10461.97, Dogleg (°/100 ft): 1.41, Sensor Depth (ft): 10501.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	07:35	08:30	10-22	10565.00	10655.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	08:30	08:35	10-22	10655.00	10655.00	Inclination (°): 2.550, Azimuth (°): 338.360, TVD (ft): 10551.88, Dogleg (°/100 ft): 0.65, Sensor Depth (ft): 10591.00, Bit To Sensor (ft): 64.00
Rotary Drill	1	10-22	08:35	09:35	10-22	10655.00	10744.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	10-22	09:35	09:40	10-22	10744.00	10744.00	Inclination (°): 2.150, Azimuth (°): 333.440, TVD (ft): 10640.81, Dogleg (°/100 ft): 0.50, Sensor Depth (ft): 10680.00, Bit To Sensor (ft): 64.00, Temperature (°F): 163.40
Circulating	3	10-22	09:40	10:45	10-22			CIRCULATING
Pooh	7	10-22	10:45	13:30	10-22			POOH
L/D DP	28	10-22	13:30	16:45	10-22			L/D HWDP
Change BHA	6	10-22	16:45	18:00	10-22			L/D BHA 4
Standby	15	10-22	18:00	02:00	10-23			Walk rig to 801H
MWD Activities								
No Activities								

	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Wednesday, Oct 23 00:00 - 23:59 (Day 10 of 26) Billing: N/A (\$351,170.14 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
Advance Directional	Directional Driller
Robert Olivarez	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	10-22	18:00	02:00	10-23			Walk rig to 801H

MWD Activities								
No Activities								

	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Sunday, Nov 03 23:00 - 22:59 (Day 11 of 26) Billing: \$5,743.31 (\$351,170.14 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
Advance Directional	Directional Driller
Robert Olivarez	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	11-04	18:00	03:00	11-05			Standby Skid Rig to #551H, N/U & Test BOPs & Rig Up

MWD Activities								
No Activities								



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Nov 04 23:00 - 22:59 (Day 12 of 26)

Billing: \$31,464.10 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	10744.00	Downhole Hours	17.00	Rotating WOB (klbs)	45.00 - 45.00
Bit Depth (ft)	11036.00	Drilling Hours	5.17	Sliding WOB (klbs)	30.00 - 30.00
Bottom Hole Depth (ft)	11036.00	Hours Circulating	2.25	Rotating SPM	218.00 - 218.00
Total Distance (ft)	292.00	Hours Sliding	4.33	Sliding SPM	164.00 - 164.00
Distance Rotated (ft)	46.00	Hours Rotating	0.83	Motor RPM	136.00 - 144.00
Distance Slid (ft)	246.00			Surface RPM	30.00 - 30.00
Inclination In	2.07			Flow Rate (gpm)	530.00 - 705.00
Inclination Out	27.01			On Bottom Pressure (psi)	2750.00 - 3500.00
Azimuth In	329.04	% Hours Rotating	16%	Off Bottom Pressure (psi)	2350.00 - 2950.00
Azimuth Out	22.57	% Hours Sliding	84%		
AVG Total ROP (ft/h)	59.84	% Distance Sliding	84%		
AVG Rotating ROP (ft/h)	54.00	% Distance Rotating	16%		
AVG Sliding ROP (ft/h)	60.95				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #5 - 8.5" Curve

Date In: Nov 5, 2019, 6:00 Date Out: Nov 6, 2019, 21:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 5.0	
S/N	13291183	Bend Angle	2.12	
Nozzles	6 X 18'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	1.491	Wear Pad OD (in)	7.210	
Drilling Hours for Day	5.17	Bit Distances		
Total Drilled for Day (ft)	292.00	Bend: 4.10 ft, Other (Bit to RINC): 34.00 ft, Gamma (Bit to Gamma): 34.00 ft, Survey (Bit to Survey): 74.00 ft, Resistivity (Bit to Resistivity): 42.00 ft		POOH Reason Change Bottom Hole Assembly: P/U BHA #6
Drilling Hours for BHA	15.83			
Total Drilled for BHA (ft)	912.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" GTD64C, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13291183	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 5.0 FXD 2.12 w/ SS, Size (in): 7.00, Bend Angle (°): 2.12, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.0	AIM	650-017CDM	4 1/2" IF Box	4 1/2" Reg Box		7.000		26.02	27.02
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.48
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	50.05
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.55
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.10
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.31
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.42
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.35

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	11-04	18:00	03:00	11-05			Standby Skid Rig to #551H, N/U & Test BOPs & Rig Up

Standby	15	11-05	03:00	06:00	11-05			Standby while Pull Packer
Change BHA	6	11-05	06:00	08:30	11-05			P/U BHA # 5 (longer time due to resisitivity tools)
P/U DP	29	11-05	08:30	10:00	11-05			
TIH	8	11-05	10:00	14:30	11-05			TIH W/ BHA #5
Change Mud	5	11-05	14:30	16:15	11-05			
Circulating	3	11-05	16:15	16:45	11-05			RELOG 10713 - 10744
Slide Drill	2	11-05	16:45	18:25	11-05	10744.00	10804.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 0, Toolface Type: magnetic
Survey	46	11-05	18:25	18:35	11-05	10804.00	10804.00	Inclination (°): 2.070, Azimuth (°): 329.040, TVD (ft): 10690.77, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 10730.00, Bit To Sensor (ft): 74.00
Slide Drill	2	11-05	18:35	19:20	11-05	10804.00	10849.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 0, Toolface Type: magnetic
Survey	46	11-05	19:20	19:30	11-05	10849.00	10849.00	Inclination (°): 5.650, Azimuth (°): 5.250, TVD (ft): 10735.67, Dogleg (°/100 ft): 9.25, Sensor Depth (ft): 10775.00, Bit To Sensor (ft): 74.00
Slide Drill	2	11-05	19:30	20:00	11-05	10849.00	10893.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 0, Toolface Type: gravity
Survey	46	11-05	20:00	20:10	11-05	10893.00	10893.00	Inclination (°): 11.670, Azimuth (°): 16.420, TVD (ft): 10779.15, Dogleg (°/100 ft): 14.14, Sensor Depth (ft): 10819.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-05	20:10	20:25	11-05	10893.00	10908.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-05	20:25	20:55	11-05	10908.00	10938.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 340, Toolface Type: gravity
Survey	46	11-05	20:55	21:05	11-05	10938.00	10938.00	Inclination (°): 19.050, Azimuth (°): 20.900, TVD (ft): 10822.51, Dogleg (°/100 ft): 16.60, Sensor Depth (ft): 10864.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-05	21:05	21:20	11-05	10938.00	10953.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-05	21:20	21:45	11-05	10953.00	10983.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 340, Toolface Type: gravity
Survey	46	11-05	21:45	21:55	11-05	10983.00	10983.00	Inclination (°): 22.700, Azimuth (°): 22.300, TVD (ft): 10864.55, Dogleg (°/100 ft): 8.19, Sensor Depth (ft): 10909.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-05	21:55	22:05	11-05	10983.00	10991.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-05	22:05	22:35	11-05	10991.00	11028.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 335, Toolface Type: gravity
Survey	46	11-05	22:35	22:45	11-05	11028.00	11028.00	Inclination (°): 27.010, Azimuth (°): 22.570, TVD (ft): 10905.38, Dogleg (°/100 ft): 9.58, Sensor Depth (ft): 10954.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-05	22:45	22:55	11-05	11028.00	11036.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-05	22:55	23:20	11-05	11036.00	11073.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 330, Toolface Type: gravity
Survey	46	11-05	23:20	23:30	11-05	11073.00	11073.00	Inclination (°): 32.190, Azimuth (°): 21.950, TVD (ft): 10944.49, Dogleg (°/100 ft): 11.53, Sensor Depth (ft): 10999.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-05	23:30	23:40	11-05	11073.00	11081.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-05	23:40	00:10	11-06	11081.00	11118.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 330, Toolface Type: gravity

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Nov 05 23:00 - 22:59 (Day 13 of 26)

Billing: \$26,059.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11036.00	Downhole Hours	24.00	Rotating WOB (klbs)	45.00 - 45.00
Bit Depth (ft)	11656.00	Drilling Hours	10.67	Sliding WOB (klbs)	30.00 - 30.00
Bottom Hole Depth (ft)	11656.00	Hours Circulating	1.58	Rotating SPM	218.00 - 218.00
Total Distance (ft)	620.00	Hours Sliding	7.08	Sliding SPM	164.00 - 164.00
Distance Rotated (ft)	167.00	Hours Rotating	3.58	Motor RPM	136.00 - 144.00
Distance Slid (ft)	453.00			Surface RPM	30.00 - 30.00
Inclination In	32.19			Flow Rate (gpm)	530.00 - 705.00
Inclination Out	77.33			On Bottom Pressure (psi)	2750.00 - 3500.00
Azimuth In	21.95	% Hours Rotating	34%	Off Bottom Pressure (psi)	2350.00 - 2950.00
Azimuth Out	358.13	% Hours Sliding	66%		
AVG Total ROP (ft/h)	57.02	% Distance Sliding	73%		
AVG Rotating ROP (ft/h)	46.54	% Distance Rotating	27%		
AVG Sliding ROP (ft/h)	62.40				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #5 - 8.5" Curve

Date In: Nov 5, 2019, 6:00 Date Out: Nov 6, 2019, 21:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 5.0	
S/N	13291183	Bend Angle	2.12	
Nozzles	6 X 18'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	1.491	Wear Pad OD (in)	7.210	POOH Reason Change Bottom Hole Assembly: P/U BHA #6
Drilling Hours for Day	10.67	Bit Distances		
Total Drilled for Day (ft)	620.00	Bend: 4.10 ft, Other (Bit to RINC): 34.00 ft, Gamma (Bit to Gamma): 34.00 ft, Survey (Bit to Survey): 74.00 ft, Resistivity (Bit to Resistivity): 42.00 ft		
Drilling Hours for BHA	15.83			
Total Drilled for BHA (ft)	912.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" GTD64C, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	SECURITY	13291183	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 5.0 FXD 2.12 w/ SS, Size (in): 7.00, Bend Angle (°): 2.12, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.0	AIM	650-017CDM	4 1/2" IF Box	4 1/2" Reg Box		7.000		26.02	27.02
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.48
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	50.05
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.55
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.10
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.31
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.42
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.35

MWD Items

No Items

BHA #6 -

Date In: Nov 6, 2019, 21:30 Date Out: Nov 7, 2019, 20:40

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1	
Vendor	SECURITY	Lobe/Stage	7/8, 8.5		
S/N	12884208	Bend Angle	1.75		
Nozzles	6 X 22'S	Speed (rev/gal)	0.26	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.210	POOH Reason Penetration Rate: While ROT Diff and ROP fell off. Picked up and tried to drill again with same results.	
Drilling Hours for Day	0.00	Bit Distances			
Total Drilled for Day (ft)		Bend: 5.31 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft, Survey: 83.00 ft, Other (R - INC): 43.63 ft			
Drilling Hours for BHA	8.17				
Total Drilled for BHA (ft)	557.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" GT65D, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	12884208	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/ SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-002	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.20
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.70
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.25
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.46
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.57
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.50

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Slide Drill	2	11-05	23:40	00:10	11-06	11081.00	11118.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 330, Toolface Type: gravity
Survey	46	11-06	00:10	00:20	11-06	11118.00	11118.00	Inclination (°): 37.420, Azimuth (°): 18.700, TVD (ft): 10981.43, Dogleg (°/100 ft): 12.33, Sensor Depth (ft): 11044.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	00:20	00:30	11-06	11118.00	11135.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-06	00:30	00:55	11-06	11135.00	11163.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 330, Toolface Type: gravity
Survey	46	11-06	00:55	01:05	11-06	11163.00	11163.00	Inclination (°): 41.800, Azimuth (°): 17.650, TVD (ft): 11016.09, Dogleg (°/100 ft): 9.85, Sensor Depth (ft): 11089.00, Bit To Sensor (ft): 74.00
Slide Drill	2	11-06	01:05	01:35	11-06	11163.00	11183.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 280, Toolface Type: gravity
Slide Drill	2	11-06	01:35	01:55	11-06	11183.00	11208.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 320, Toolface Type: gravity
Survey	46	11-06	01:55	02:05	11-06	11208.00	11208.00	Inclination (°): 45.730, Azimuth (°): 16.060, TVD (ft): 11048.58, Dogleg (°/100 ft): 9.07, Sensor Depth (ft): 11134.00, Bit To Sensor (ft): 74.00
Slide Drill	2	11-06	02:05	02:45	11-06	11208.00	11253.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 300, Toolface Type: gravity
Survey	46	11-06	02:45	02:55	11-06	11253.00	11253.00	Inclination (°): 50.680, Azimuth (°): 13.950, TVD (ft): 11078.57, Dogleg (°/100 ft): 11.54, Sensor Depth (ft): 11179.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	02:55	03:15	11-06	11253.00	11268.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00

Slide Drill	2	11-06	03:15	03:45	11-06	11268.00	11298.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 300, Toolface Type: gravity
Survey	46	11-06	03:45	03:55	11-06	11298.00	11298.00	Inclination (°): 57.180, Azimuth (°): 10.350, TVD (ft): 11105.05, Dogleg (°/100 ft): 15.82, Sensor Depth (ft): 11224.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	03:55	04:15	11-06	11298.00	11312.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-06	04:15	04:50	11-06	11312.00	11342.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 290, Toolface Type: gravity
Survey	46	11-06	04:50	05:00	11-06	11342.00	11342.00	Inclination (°): 60.280, Azimuth (°): 6.920, TVD (ft): 11127.89, Dogleg (°/100 ft): 9.70, Sensor Depth (ft): 11268.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	05:00	05:20	11-06	11342.00	11352.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-06	05:20	05:45	11-06	11352.00	11377.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 290, Toolface Type: gravity
Rotary Drill	1	11-06	05:45	06:00	11-06	11377.00	11387.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	11-06	06:00	06:05	11-06	11387.00	11387.00	Inclination (°): 62.890, Azimuth (°): 2.970, TVD (ft): 11149.31, Dogleg (°/100 ft): 9.65, Sensor Depth (ft): 11313.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	06:05	06:55	11-06	11387.00	11432.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	11-06	06:55	07:00	11-06	11432.00	11432.00	Inclination (°): 64.320, Azimuth (°): 355.230, TVD (ft): 11169.34, Dogleg (°/100 ft): 15.73, Sensor Depth (ft): 11358.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	07:00	07:05	11-06	11432.00	11437.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-06	07:05	07:20	11-06	11437.00	11459.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-06	07:20	07:40	11-06	11459.00	11477.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	11-06	07:40	07:45	11-06	11477.00	11477.00	Inclination (°): 64.780, Azimuth (°): 354.440, TVD (ft): 11188.68, Dogleg (°/100 ft): 1.89, Sensor Depth (ft): 11403.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	07:45	08:00	11-06	11477.00	11482.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Circulating	3	11-06	08:00	08:30	11-06			TROUBLE SHOOT MWD
Slide Drill	2	11-06	08:30	09:00	11-06	11482.00	11512.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-06	09:00	09:10	11-06	11512.00	11522.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Survey	46	11-06	09:10	09:25	11-06	11522.00	11522.00	Inclination (°): 65.510, Azimuth (°): 353.210, TVD (ft): 11207.59, Dogleg (°/100 ft): 2.96, Sensor Depth (ft): 11448.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	09:25	09:30	11-06	11522.00	11527.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-06	09:30	10:00	11-06	11527.00	11567.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 35, Toolface Type: gravity
Survey	46	11-06	10:00	10:10	11-06	11567.00	11567.00	Inclination (°): 68.560, Azimuth (°): 353.740, TVD (ft): 11225.15, Dogleg (°/100 ft): 6.86, Sensor Depth (ft): 11493.00, Bit To Sensor (ft): 74.00
Rotary Drill	1	11-06	10:10	10:25	11-06	11567.00	11572.00	Pressure On (psi): 3500.00, Pressure Off (psi): 2950.00, Weight On Bit (klbs): 45.00, Surface RPM: 30, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 705.00, Strokes Per Minute: 218.00
Slide Drill	2	11-06	10:25	11:00	11-06	11572.00	11611.00	Pressure On (psi): 2750.00, Pressure Off (psi): 2350.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 530.00, Strokes Per Minute: 164, Toolface: 30, Toolface Type: gravity
Survey	46	11-06	11:00	11:05	11-06	11611.00	11611.00	Inclination (°): 72.060, Azimuth (°): 355.850, TVD (ft): 11239.97, Dogleg (°/100 ft): 9.15, Sensor Depth (ft): 11537.00, Bit To Sensor (ft): 74.00
Slide Drill	2	11-06	11:05	12:00	11-06	11611.00	11656.00	Toolface: 0, Toolface Type: gravity
Survey	46	11-06	12:00	12:10	11-06	11656.00	11656.00	Inclination (°): 77.330, Azimuth (°): 358.130, TVD (ft): 11251.85, Dogleg (°/100 ft): 12.69, Sensor Depth (ft): 11582.00, Bit To Sensor (ft): 74.00
Circulating	3	11-06	12:10	13:15	11-06			BOTTOMS UP
Pooh	7	11-06	13:15	21:30	11-06			POOH for P/U LATERAL BHA
Other	16	11-06	21:30	22:00	11-06			DUMP & REPROGRAM MWD
Change BHA	6	11-06	22:00	23:45	11-06			P/U BHA 6
Other	16	11-06	23:45	00:00	11-07			TEST MWD

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, Nov 06 23:00 - 22:59 (Day 14 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11656.00	Downhole Hours	21.67	Rotating WOB (klbs)	30.00 - 30.00
Bit Depth (ft)	12213.00	Drilling Hours	8.17	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	12213.00	Hours Circulating	0.92	Rotating SPM	200.00 - 200.00
Total Distance (ft)	557.00	Hours Sliding	2.42	Sliding SPM	200.00 - 200.00
Distance Rotated (ft)	425.00	Hours Rotating	5.75	Motor RPM	136.00 - 144.00
Distance Slid (ft)	132.00			Surface RPM	50.00 - 60.00
Inclination In	83.31			Flow Rate (gpm)	645.00 - 645.00
Inclination Out	87.09			On Bottom Pressure (psi)	3200.00 - 3400.00
Azimuth In	1.21	% Hours Rotating	70%	Off Bottom Pressure (psi)	2750.00 - 2900.00
Azimuth Out	357.26	% Hours Sliding	30%		
AVG Total ROP (ft/h)	68.20	% Distance Sliding	24%		
AVG Rotating ROP (ft/h)	73.91	% Distance Rotating	76%		
AVG Sliding ROP (ft/h)	54.62				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #6 -

Date In: Nov 6, 2019, 21:30 Date Out: Nov 7, 2019, 20:40

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	12884208	Bend Angle	1.75	
Nozzles	6 X 22'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.210	
Drilling Hours for Day	8.17	Bit Distances		
Total Drilled for Day (ft)	557.00	Bend: 5.31 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft, Survey: 83.00 ft, Other (R - INC): 43.63 ft		POOH Reason
Drilling Hours for BHA	8.17			
Total Drilled for BHA (ft)	557.00			
				Penetration Rate: While ROT Diff and ROP fell off. Picked up and tried to drill again with same results.

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8.5" GT65D, Style: PDC, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	12884208	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/ SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-002	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.20
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.70
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.25
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.46
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.57
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.50

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	11-06	23:45	00:00	11-07			TEST MWD

TIH	8	11-07	00:00	05:30	11-07			TIH W/ BHA #6
Rotary Drill	1	11-07	05:30	06:10	11-07	11656.00	11711.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 50, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200.00
Survey	46	11-07	06:10	06:15	11-07	11711.00	11711.00	Inclination (°): 83.310, Azimuth (°): 1.210, TVD (ft): 11259.58, Dogleg (°/100 ft): 14.58, Sensor Depth (ft): 11628.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-07	06:15	06:25	11-07	11711.00	11718.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 50, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200.00
Slide Drill	2	11-07	06:25	07:00	11-07	11718.00	11738.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200, Toolface: 295, Toolface Type: gravity
Rotary Drill	1	11-07	07:00	07:45	11-07	11738.00	11801.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 50, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200.00
Survey	46	11-07	07:45	08:00	11-07	11801.00	11801.00	Inclination (°): 85.350, Azimuth (°): 358.220, TVD (ft): 11268.47, Dogleg (°/100 ft): 4.01, Sensor Depth (ft): 11718.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-07	08:00	08:40	11-07	11801.00	11851.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200, Toolface: 20, Toolface Type: gravity
Rotary Drill	1	11-07	08:40	09:05	11-07	11851.00	11891.00	Pressure On (psi): 3400.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 30.00, Surface RPM: 50, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200.00
Survey	46	11-07	09:05	09:10	11-07	11891.00	11891.00	Inclination (°): 85.810, Azimuth (°): 355.850, TVD (ft): 11275.41, Dogleg (°/100 ft): 2.67, Sensor Depth (ft): 11808.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-07	09:10	10:10	11-07	11891.00	11980.00	
Survey	46	11-07	10:10	10:15	11-07	11980.00	11980.00	Inclination (°): 91.970, Azimuth (°): 358.220, TVD (ft): 11277.14, Dogleg (°/100 ft): 7.42, Sensor Depth (ft): 11897.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-07	10:15	10:45	11-07	11980.00	12005.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-07	10:45	11:30	11-07	12005.00	12070.00	
Survey	46	11-07	11:30	11:35	11-07	12070.00	12070.00	Inclination (°): 90.710, Azimuth (°): 356.200, TVD (ft): 11275.03, Dogleg (°/100 ft): 2.64, Sensor Depth (ft): 11987.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-07	11:35	11:55	11-07	12070.00	12092.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200, Toolface: 140, Toolface Type: gravity
Rotary Drill	1	11-07	11:55	13:00	11-07	12092.00	12160.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2750.00, Weight On Bit (klbs): 30.00, Surface RPM: 60, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200.00
Survey	46	11-07	13:00	13:05	11-07	12160.00	12160.00	Inclination (°): 87.090, Azimuth (°): 357.260, TVD (ft): 11276.76, Dogleg (°/100 ft): 4.19, Sensor Depth (ft): 12077.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-07	13:05	13:25	11-07	12160.00	12175.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2900.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200, Toolface: 135, Toolface Type: gravity
Rotary Drill	1	11-07	13:25	14:20	11-07	12175.00	12213.00	Pressure On (psi): 3200.00, Pressure Off (psi): 2750.00, Weight On Bit (klbs): 30.00, Surface RPM: 60, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 645.00, Strokes Per Minute: 200.00
Circulating	3	11-07	14:20	15:15	11-07			
Pooh	7	11-07	15:15	20:40	11-07			POOH. Quit drilling
Change BHA	6	11-07	20:40	21:15	11-07			L/D Motor. Bit Pin stuck in Bit Box
Other	16	11-07	21:15	23:30	11-07			Wait on Bit for Sidetrack
Change BHA	6	11-07	23:30	00:00	11-08			P/U BHA # 7 & Test MWD

MWD Activities

No Activities



Daily Reports

Lateral 2

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Thursday, Nov 07 23:00 - 22:59 (Day 15 of 26)

Billing: \$21,714.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11219.00	Downhole Hours	21.25	Rotating WOB (klbs)	25.00 - 25.00
Bit Depth (ft)	11296.00	Drilling Hours	12.33	Sliding WOB (klbs)	30.00 - 30.00
Bottom Hole Depth (ft)	11296.00	Hours Circulating	1.50	Rotating SPM	170.00 - 170.00
Total Distance (ft)	77.00	Hours Sliding	10.92	Sliding SPM	550.00 - 550.00
Distance Rotated (ft)	41.00	Hours Rotating	1.42	Motor RPM	93.00 - 93.00
Distance Slid (ft)	36.00			Surface RPM	35.00 - 35.00
Inclination In				Flow Rate (gpm)	170.00 - 550.00
Inclination Out				On Bottom Pressure (psi)	2400.00 - 2500.00
Azimuth In		% Hours Rotating	11%	Off Bottom Pressure (psi)	2100.00 - 2100.00
Azimuth Out		% Hours Sliding	89%		
AVG Total ROP (ft/h)	10.06	% Distance Sliding	47%		
AVG Rotating ROP (ft/h)	34.67	% Distance Rotating	53%		
AVG Sliding ROP (ft/h)	3.30				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #7 - Sidetrack

Date In: Nov 8, 2019, 1:45 Date Out: Nov 9, 2019, 14:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.5	Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 3
Vendor	Security	Lobe/Stage	7/8, 5.0	
S/N	13184324	Bend Angle	2.12	
Nozzles	6x18	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	1.491	Wear Pad OD (in)	7.000	POOH Reason Build Rate: POOH for 2.6°
Drilling Hours for Day	12.33	Bit Distances		
Total Drilled for Day (ft)	77.00	Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft, Survey: 73.00 ft, Other (R - INC): 33.45 ft		
Drilling Hours for BHA	19.33			
Total Drilled for BHA (ft)	482.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GTD64C, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	Security	13184324	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 6 1/2" 7/8 5.0 FXD 2.12 w/ SS, Size (in): 6.50, Bend Angle (°): 2.12, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.0	AIM	650-006	4 1/2" IF Box	4 1/2" Reg Box		6.500		25.99	26.99
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.45
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	50.02
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.52
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.07
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.28
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.39
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.32

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	11-07	23:30	00:00	11-08			P/U BHA # 7 & Test MWD

Change BHA	6	11-08	00:00	01:45	11-08			P/U BHA 7 & Test MWD
TIH	8	11-08	01:45	07:30	11-08			TIH W/ BHA # 7
Circulating	3	11-08	07:30	09:00	11-08			Cut Trough
Slide Drill	2	11-08	09:00	19:55	11-08	11219.00	11255.00	Pressure On (psi): 2400.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 200, Toolface Type: gravity
Rotary Drill	1	11-08	19:55	21:20	11-08	11255.00	11296.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 25.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Rig Service - In Hole	19	11-08	21:20	22:20	11-08			C/O Swivel Packing
Rotary Drill	1	11-08	22:20	23:35	11-08	11296.00	11342.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Survey	46	11-08	23:35	23:40	11-08	11342.00	11342.00	Inclination (°): 49.400, Azimuth (°): 9.740, TVD (ft): 11131.93, Dogleg (°/100 ft): 17.32, Sensor Depth (ft): 11269.00, Bit To Sensor (ft): 73.00
Rotary Drill	1	11-08	23:40	00:00	11-09	11342.00	11359.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, Nov 08 23:00 - 22:59 (Day 16 of 26)

Billing: \$21,714.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11296.00	Downhole Hours	24.00	Rotating WOB (klbs)	30.00 - 30.00
Bit Depth (ft)	11791.00	Drilling Hours	8.58	Sliding WOB (klbs)	50.00 - 80.00
Bottom Hole Depth (ft)	11791.00	Hours Circulating	1.67	Rotating SPM	170.00 - 170.00
Total Distance (ft)	495.00	Hours Sliding	4.58	Sliding SPM	550.00 - 550.00
Distance Rotated (ft)	183.00	Hours Rotating	4.00	Motor RPM	93.00 - 143.00
Distance Slid (ft)	312.00			Surface RPM	35.00 - 35.00
Inclination In	49.40			Flow Rate (gpm)	170.00 - 550.00
Inclination Out	61.07			On Bottom Pressure (psi)	2500.00 - 3000.00
Azimuth In	9.74	% Hours Rotating	47%	Off Bottom Pressure (psi)	2100.00 - 2200.00
Azimuth Out	357.34	% Hours Sliding	53%		
AVG Total ROP (ft/h)	60.23	% Distance Sliding	63%		
AVG Rotating ROP (ft/h)	49.82	% Distance Rotating	37%		
AVG Sliding ROP (ft/h)	65.14				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #7 - Sidetrack

Date In: Nov 8, 2019, 1:45 Date Out: Nov 9, 2019, 14:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.5	Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit: 3
Vendor	Securitiy	Lobe/Stage	7/8, 5.0	
S/N	13184324	Bend Angle	2.12	
Nozzles	6x18	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	1.491	Wear Pad OD (in)	7.000	
Drilling Hours for Day	7.00	Bit Distances		POOH Reason Build Rate: POOH for 2.6°
Total Drilled for Day (ft)	405.00	Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft, Survey: 73.00 ft, Other (R - INC): 33.45 ft		
Drilling Hours for BHA	19.33			
Total Drilled for BHA (ft)	482.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GTD64C, Style: PDC, Gauge Length (in): 2.50, Size (in): 8.50	Securitiy	13184324	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 6 1/2" 7/8 5.0 FXD 2.12 w/ SS, Size (in): 6.50, Bend Angle (°): 2.12, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.0	AIM	650-006	4 1/2" IF Box	4 1/2" Reg Box		6.500		25.99	26.99
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.45
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	50.02
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.52
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.07
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.28
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.39
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.32

MWD Items

No Items

BHA #8 - BHA #8

Date In: Nov 9, 2019, 14:30 Date Out: Nov 10, 2019, 7:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.5	Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit:
Vendor	BAKER	Lobe/Stage	7/8, 5.0	
S/N	5279702	Bend Angle	2.6	
Nozzles	4 X 18'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.994	Wear Pad OD (in)	7.000	POOH Reason Total Depth/Casing Point: POOH for lateral assembly
Drilling Hours for Day	1.58	Bit Distances		
Total Drilled for Day (ft)	90.00	Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft,		
Drilling Hours for BHA	2.83	Survey: 73.00 ft, Other (R - INC): 33.45 ft		
Total Drilled for BHA (ft)	158.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" KM624, Style: Other, Gauge Length (in): 2.50, Size (in): 8.50	BAKER	5279702	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 6 1/2" 7/8 5.0 FXD 2.60 8" STAB., Size (in): 6.50, Bend Angle (°): 2.60, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5	AIM	CDM650-001	4 1/2" IF Box	4 1/2" Reg Box		6.500		25.95	26.95
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.41
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	49.98
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.48
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.03
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.24
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.35
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.28

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	11-08	23:40	00:00	11-09	11342.00	11359.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Slide Drill	2	11-09	00:00	00:50	11-09	11359.00	11400.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 270, Toolface Type: gravity
Rotary Drill	1	11-09	00:50	01:15	11-09	11400.00	11432.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Survey	46	11-09	01:15	01:20	11-09	11432.00	11432.00	Inclination (°): 47.640, Azimuth (°): 10.180, TVD (ft): 11191.54, Dogleg (°/100 ft): 1.99, Sensor Depth (ft): 11359.00, Bit To Sensor (ft): 73.00
Rotary Drill	1	11-09	01:20	01:50	11-09	11432.00	11444.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Slide Drill	2	11-09	01:50	02:25	11-09	11444.00	11494.00	Pressure On (psi): 2900.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 270, Toolface Type: gravity
Rotary Drill	1	11-09	02:25	02:50	11-09	11494.00	11522.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Survey	46	11-09	02:50	02:55	11-09	11522.00	11522.00	Inclination (°): 48.720, Azimuth (°): 0.330, TVD (ft): 11251.63, Dogleg (°/100 ft): 8.24, Sensor Depth (ft): 11449.00, Bit To Sensor (ft): 73.00
Rotary Drill	1	11-09	02:55	04:00	11-09	11522.00	11570.00	Pressure On (psi): 2500.00, Pressure Off (psi): 2100.00, Weight On Bit (klbs): 30.00, Surface RPM: 35, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 550.00, Strokes Per Minute: 170.00
Slide Drill	2	11-09	04:00	04:20	11-09	11570.00	11611.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 60.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 0, Toolface Type: gravity
Survey	46	11-09	04:20	04:25	11-09	11611.00	11611.00	Inclination (°): 47.440, Azimuth (°): 353.480, TVD (ft): 11311.13, Dogleg (°/100 ft): 5.90, Sensor Depth (ft): 11538.00, Bit To Sensor (ft): 73.00

Slide Drill	2	11-09	04:25	05:40	11-09	11611.00	11701.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 60.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 0, Toolface Type: gravity
Survey	46	11-09	05:40	05:55	11-09	11701.00	11701.00	Inclination (°): 51.620, Azimuth (°): 355.670, TVD (ft): 11369.54, Dogleg (°/100 ft): 5.00, Sensor Depth (ft): 11628.00, Bit To Sensor (ft): 73.00
Circulating	3	11-09	05:55	07:00	11-09			
Pooh	7	11-09	07:00	12:45	11-09			POOH for [BUR]
Change BHA	6	11-09	12:45	14:30	11-09			P/U BHA # 8 AND DIAL UP TO 2.60 BEND
TIH	8	11-09	14:30	16:00	11-09			TIH W/ BHA #8
Other	16	11-09	16:00	17:00	11-09			SLIP & CUT
TIH	8	11-09	17:00	19:30	11-09			TIH W/ BHA #8
Circulating	3	11-09	19:30	19:50	11-09			HS motor into Curve
TIH	8	11-09	19:50	20:10	11-09			TIH W/ BHA #8
Circulating	3	11-09	20:10	20:25	11-09			HS motor into Sidetrack
TIH	8	11-09	20:25	20:45	11-09			TIH W/ BHA #8
Slide Drill	2	11-09	20:45	22:20	11-09	11701.00	11791.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 80.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 0, Toolface Type: gravity
Survey	46	11-09	22:20	22:25	11-09	11791.00	11791.00	Inclination (°): 61.070, Azimuth (°): 357.340, TVD (ft): 11419.36, Dogleg (°/100 ft): 10.61, Sensor Depth (ft): 11718.00, Bit To Sensor (ft): 73.00
Slide Drill	2	11-09	22:25	23:40	11-09	11791.00	11859.00	Pressure On (psi): 3000.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 80.00, Flow Rate (gpm): 170.00, Strokes Per Minute: 550, Toolface: 340, Toolface Type: gravity
Survey	46	11-09	23:40	23:45	11-09	11859.00	11859.00	Inclination (°): 72.280, Azimuth (°): 0.160, TVD (ft): 11446.24, Dogleg (°/100 ft): 16.92, Sensor Depth (ft): 11786.00, Bit To Sensor (ft): 73.00
Circulating	3	11-09	23:45	00:55	11-10			

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Nov 09 23:00 - 22:59 (Day 17 of 26)

Billing: \$26,059.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11791.00	Downhole Hours	24.00	Rotating WOB (klbs)	30.00 - 40.00
Bit Depth (ft)	12482.00	Drilling Hours	10.08	Sliding WOB (klbs)	20.00 - 80.00
Bottom Hole Depth (ft)	12482.00	Hours Circulating	1.17	Rotating SPM	220.00 - 220.00
Total Distance (ft)	691.00	Hours Sliding	3.42	Sliding SPM	220.00 - 550.00
Distance Rotated (ft)	572.00	Hours Rotating	6.67	Motor RPM	143.00 - 182.00
Distance Slid (ft)	119.00			Surface RPM	40.00 - 60.00
Inclination In	72.28			Flow Rate (gpm)	170.00 - 700.00
Inclination Out	91.29			On Bottom Pressure (psi)	3000.00 - 3700.00
Azimuth In	0.16	% Hours Rotating	66%	Off Bottom Pressure (psi)	2200.00 - 3200.00
Azimuth Out	354.36	% Hours Sliding	34%		
AVG Total ROP (ft/h)	68.77	% Distance Sliding	17%		
AVG Rotating ROP (ft/h)	85.80	% Distance Rotating	83%		
AVG Sliding ROP (ft/h)	29.83				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #8 - BHA #8

Date In: Nov 9, 2019, 14:30 Date Out: Nov 10, 2019, 7:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.5	Flow Rate: 300-600, Max Diff: 1130 psi , Max Torque: 10,480 ft-lbs Runs on bit:
Vendor	BAKER	Lobe/Stage	7/8, 5.0	
S/N	5279702	Bend Angle	2.6	
Nozzles	4 X 18'S	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	0.994	Wear Pad OD (in)	7.000	
Drilling Hours for Day	1.25	Bit Distances		
Total Drilled for Day (ft)	68.00	Bend: 4.35 ft, Resistivity: 41.75 ft, Gamma: 33.85 ft,		
Drilling Hours for BHA	2.83	Survey: 73.00 ft, Other (R - INC): 33.45 ft		POOH Reason
Total Drilled for BHA (ft)	158.00			Total Depth/Casing Point: POOH for lateral assembly

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" KM624, Style: Other, Gauge Length (in): 2.50, Size (in): 8.50	BAKER	5279702	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 6 1/2" 7/8 5.0 FXD 2.60 8" STAB., Size (in): 6.50, Bend Angle (°): 2.60, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5	AIM	CDM650-001	4 1/2" IF Box	4 1/2" Reg Box		6.500		25.95	26.95
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	30.41
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	49.98
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	64.48
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	94.03
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	97.24
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	126.35
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B, Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	130.28

MWD Items

No Items

BHA #9 - Lateral

Date In: Nov 10, 2019, 7:30 Date Out: Nov 15, 2019, 0:00

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1	
Vendor	SECURITY	Lobe/Stage	7/8, 8.5		
S/N	13293671	Bend Angle	1.75		
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	POOH Reason Downhole Motor Incident: No diff, Quit drilling	
Drilling Hours for Day	8.83	Bit Distances			
Total Drilled for Day (ft)	623.00	Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft, Survey: 83.00 ft, Other (R - INC): 43.00 ft			
Drilling Hours for BHA	91.75				
Total Drilled for BHA (ft)	5166.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Circulating	3	11-09	23:45	00:55	11-10			
Pooh	7	11-10	00:55	06:00	11-10			POOH for Lateral Assembly
Change BHA	6	11-10	06:00	07:30	11-10			P/U BHA # 9
TIH	8	11-10	07:30	13:15	11-10			TIH W/ BHA #9
Rotary Drill	1	11-10	13:15	14:30	11-10	11859.00	11925.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 30.00, Surface RPM: 40, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-10	14:30	15:15	11-10	11925.00	11936.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 330, Toolface Type: gravity
Survey	46	11-10	15:15	15:20	11-10	11936.00	11936.00	Inclination (°): 85.240, Azimuth (°): 359.720, TVD (ft): 11459.28, Dogleg (°/100 ft): 19.35, Sensor Depth (ft): 11853.00, Bit To Sensor (ft): 83.00, Temperature (°F): 137.00
Rotary Drill	1	11-10	15:20	15:40	11-10	11936.00	11980.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 30.00, Surface RPM: 40, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-10	15:40	15:45	11-10	11980.00	11980.00	Inclination (°): 85.750, Azimuth (°): 359.450, TVD (ft): 11462.73, Dogleg (°/100 ft): 1.31, Sensor Depth (ft): 11897.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-10	15:45	16:15	11-10	11980.00	12015.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 30.00, Surface RPM: 40, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-10	16:15	17:00	11-10	12015.00	12035.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 325, Toolface Type: gravity
Rotary Drill	1	11-10	17:00	17:15	11-10	12035.00	12070.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 30.00, Surface RPM: 40, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-10	17:15	17:20	11-10	12070.00	12070.00	Inclination (°): 89.860, Azimuth (°): 357.260, TVD (ft): 11466.18, Dogleg (°/100 ft): 5.17, Sensor Depth (ft): 11987.00, Bit To Sensor (ft): 83.00

Rotary Drill	1	11-10	17:20	18:15	11-10	12070.00	12160.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 30.00, Surface RPM: 60, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-10	18:15	18:30	11-10	12160.00	12160.00	Inclination (°): 91.860, Azimuth (°): 353.920, TVD (ft): 11464.83, Dogleg (°/100 ft): 4.33, Sensor Depth (ft): 12077.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-10	18:30	19:15	11-10	12160.00	12249.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-10	19:15	19:20	11-10	12249.00	12249.00	Inclination (°): 92.430, Azimuth (°): 353.560, TVD (ft): 11461.50, Dogleg (°/100 ft): 0.76, Sensor Depth (ft): 12166.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-10	19:20	20:20	11-10	12249.00	12339.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-10	20:20	20:25	11-10	12339.00	12339.00	Inclination (°): 92.160, Azimuth (°): 353.740, TVD (ft): 11457.89, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 12256.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-10	20:25	20:45	11-10	12339.00	12355.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-10	20:45	21:25	11-10	12355.00	12375.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 60, Toolface Type: gravity
Rotary Drill	1	11-10	21:25	21:55	11-10	12375.00	12429.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-10	21:55	22:00	11-10	12429.00	12429.00	Inclination (°): 91.290, Azimuth (°): 354.360, TVD (ft): 11455.18, Dogleg (°/100 ft): 1.19, Sensor Depth (ft): 12346.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-10	22:00	22:50	11-10	12429.00	12482.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-10	22:50	23:35	11-10	12482.00	12518.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 0, Toolface Type: gravity
Rig Service - In Hole	19	11-10	23:35	23:55	11-10			
Survey	46	11-10	23:55	00:00	11-11	12518.00	12518.00	Inclination (°): 91.220, Azimuth (°): 356.820, TVD (ft): 11453.23, Dogleg (°/100 ft): 2.76, Sensor Depth (ft): 12435.00, Bit To Sensor (ft): 83.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, Nov 10 23:00 - 22:59 (Day 18 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	12482.00	Downhole Hours	24.00	Rotating WOB (klbs)	40.00 - 40.00
Bit Depth (ft)	14043.00	Drilling Hours	21.17	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	14043.00	Hours Circulating	0.00	Rotating SPM	220.00 - 220.00
Total Distance (ft)	1561.00	Hours Sliding	7.13	Sliding SPM	220.00 - 220.00
Distance Rotated (ft)	1229.00	Hours Rotating	14.03	Motor RPM	182.00 - 182.00
Distance Slid (ft)	332.00			Surface RPM	40.00 - 40.00
Inclination In	91.22			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	88.06			On Bottom Pressure (psi)	3500.00 - 3700.00
Azimuth In	356.82	% Hours Rotating	66%	Off Bottom Pressure (psi)	3100.00 - 3200.00
Azimuth Out	358.84	% Hours Sliding	34%		
AVG Total ROP (ft/h)	70.54	% Distance Sliding	21%		
AVG Rotating ROP (ft/h)	86.30	% Distance Rotating	79%		
AVG Sliding ROP (ft/h)	40.29				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #9 - Lateral

Date In: Nov 10, 2019, 7:30 Date Out: Nov 15, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13293671	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	
Drilling Hours for Day	21.17	Bit Distances		
Total Drilled for Day (ft)	1561.00	Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,		POOH Reason
Drilling Hours for BHA	91.75	Survey: 83.00 ft, Other (R - INC): 43.00 ft		
Total Drilled for BHA (ft)	5166.00			
				Downhole Motor Incident: No diff, Quit drilling

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49

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	11-10	23:55	00:00	11-11	12518.00	12518.00	Inclination (°): 91.220, Azimuth (°): 356.820, TVD (ft): 11453.23, Dogleg

(°/100 ft): 2.76, Sensor Depth (ft): 12435.00, Bit To Sensor (ft): 83.00

Rotary Drill	1	11-11	00:00	01:00	11-11	12518.00	12608.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	01:00	01:05	11-11	12608.00	12608.00	Inclination (°): 93.720, Azimuth (°): 355.410, TVD (ft): 11449.36, Dogleg (°/100 ft): 3.19, Sensor Depth (ft): 12525.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	01:05	01:35	11-11	12608.00	12661.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-11	01:35	02:30	11-11	12661.00	12697.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 120, Toolface Type: gravity
Survey	46	11-11	02:30	02:45	11-11	12697.00	12697.00	Inclination (°): 94.100, Azimuth (°): 355.320, TVD (ft): 11443.29, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 12614.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	02:45	03:05	11-11	12697.00	12738.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-11	03:05	04:10	11-11	12738.00	12787.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 160, Toolface Type: gravity
Survey	46	11-11	04:10	04:15	11-11	12787.00	12787.00	Inclination (°): 94.600, Azimuth (°): 358.130, TVD (ft): 11436.46, Dogleg (°/100 ft): 3.16, Sensor Depth (ft): 12704.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	04:15	04:55	11-11	12787.00	12877.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	04:55	05:00	11-11	12877.00	12877.00	Inclination (°): 92.450, Azimuth (°): 0.950, TVD (ft): 11430.92, Dogleg (°/100 ft): 3.94, Sensor Depth (ft): 12794.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-11	05:00	05:48	11-11	12877.00	12917.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-11	05:48	06:10	11-11	12917.00	12967.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	06:10	06:15	11-11	12967.00	12967.00	Inclination (°): 92.600, Azimuth (°): 2.620, TVD (ft): 11426.96, Dogleg (°/100 ft): 1.86, Sensor Depth (ft): 12884.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	06:15	07:10	11-11	12967.00	13057.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	07:10	07:15	11-11	13057.00	13057.00	Inclination (°): 90.140, Azimuth (°): 4.810, TVD (ft): 11424.81, Dogleg (°/100 ft): 3.66, Sensor Depth (ft): 12974.00, Bit To Sensor (ft): 83.00, Temperature (°F): 162.00
Slide Drill	2	11-11	07:15	08:00	11-11	13057.00	13087.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 270, Toolface Type: gravity
Rotary Drill	1	11-11	08:00	08:55	11-11	13087.00	13146.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	08:55	09:00	11-11	13146.00	13146.00	Inclination (°): 89.310, Azimuth (°): 3.410, TVD (ft): 11425.23, Dogleg (°/100 ft): 1.83, Sensor Depth (ft): 13063.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-11	09:00	09:35	11-11	13146.00	13166.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 325, Toolface Type: gravity
Rotary Drill	1	11-11	09:35	10:20	11-11	13166.00	13236.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	10:20	10:25	11-11	13236.00	13236.00	Inclination (°): 89.260, Azimuth (°): 359.280, TVD (ft): 11426.36, Dogleg (°/100 ft): 4.59, Sensor Depth (ft): 13153.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	10:25	10:40	11-11	13236.00	13250.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-11	10:40	11:00	11-11	13250.00	13264.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-11	11:00	11:50	11-11	13264.00	13326.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	11:50	11:55	11-11	13326.00	13326.00	Inclination (°): 90.080, Azimuth (°): 357.780, TVD (ft): 11426.88, Dogleg (°/100 ft): 1.90, Sensor Depth (ft): 13243.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	11:55	12:10	11-11	13326.00	13336.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-11	12:10	12:30	11-11	13336.00	13346.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-11	12:30	13:15	11-11	13346.00	13415.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	13:15	13:20	11-11	13415.00	13415.00	Inclination (°): 91.900, Azimuth (°): 356.990, TVD (ft): 11425.34, Dogleg (°/100 ft): 2.23, Sensor Depth (ft): 13332.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	13:20	14:20	11-11	13415.00	13505.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	14:20	14:25	11-11	13505.00	13505.00	Inclination (°): 93.090, Azimuth (°): 358.050, TVD (ft): 11421.42, Dogleg (°/100 ft): 1.77, Sensor Depth (ft): 13422.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-11	14:25	14:40	11-11	13505.00	13535.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 200, Toolface Type: gravity

Rotary Drill	1	11-11	14:40	15:40	11-11	13535.00	13595.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	15:40	15:45	11-11	13595.00	13595.00	Inclination (°): 92.320, Azimuth (°): 355.590, TVD (ft): 11417.17, Dogleg (°/100 ft): 2.86, Sensor Depth (ft): 13512.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	15:45	16:30	11-11	13595.00	13685.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	16:30	16:35	11-11	13685.00	13685.00	Inclination (°): 89.860, Azimuth (°): 356.380, TVD (ft): 11415.46, Dogleg (°/100 ft): 2.87, Sensor Depth (ft): 13602.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-11	16:35	17:05	11-11	13685.00	13707.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 70, Toolface Type: gravity
Rotary Drill	1	11-11	17:05	17:50	11-11	13707.00	13774.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	17:50	17:55	11-11	13774.00	13774.00	Inclination (°): 91.130, Azimuth (°): 358.840, TVD (ft): 11414.69, Dogleg (°/100 ft): 3.11, Sensor Depth (ft): 13691.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-11	17:55	18:30	11-11	13774.00	13799.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	11-11	18:30	19:05	11-11	13799.00	13864.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	19:05	19:10	11-11	13864.00	13864.00	Inclination (°): 89.950, Azimuth (°): 0.600, TVD (ft): 11413.84, Dogleg (°/100 ft): 2.35, Sensor Depth (ft): 13781.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	19:10	20:15	11-11	13864.00	13954.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	20:15	20:20	11-11	13954.00	13954.00	Inclination (°): 87.660, Azimuth (°): 358.660, TVD (ft): 11415.72, Dogleg (°/100 ft): 3.33, Sensor Depth (ft): 13871.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	20:20	20:30	11-11	13954.00	13957.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-11	20:30	20:45	11-11	13957.00	13977.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 45, Toolface Type: gravity
Rotary Drill	1	11-11	20:45	21:55	11-11	13977.00	14043.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	21:55	22:00	11-11	14043.00	14043.00	Inclination (°): 88.060, Azimuth (°): 358.840, TVD (ft): 11419.04, Dogleg (°/100 ft): 0.49, Sensor Depth (ft): 13960.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-11	22:00	23:15	11-11	14043.00	14133.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-11	23:15	23:20	11-11	14133.00	14133.00	Inclination (°): 88.560, Azimuth (°): 359.890, TVD (ft): 11421.70, Dogleg (°/100 ft): 1.29, Sensor Depth (ft): 14050.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-11	23:20	00:55	11-12	14133.00	14158.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 45, Toolface Type: gravity

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Nov 11 23:00 - 22:59 (Day 19 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	14043.00	Downhole Hours	24.00	Rotating WOB (klbs)	40.00 - 40.00
Bit Depth (ft)	15208.00	Drilling Hours	23.67	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	15208.00	Hours Circulating	0.00	Rotating SPM	220.00 - 220.00
Total Distance (ft)	1165.00	Hours Sliding	9.67	Sliding SPM	220.00 - 220.00
Distance Rotated (ft)	943.00	Hours Rotating	14.00	Motor RPM	182.00 - 182.00
Distance Slid (ft)	222.00			Surface RPM	30.00 - 60.00
Inclination In	88.56			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	90.54			On Bottom Pressure (psi)	3500.00 - 3700.00
Azimuth In	359.89	% Hours Rotating	59%	Off Bottom Pressure (psi)	3100.00 - 3200.00
Azimuth Out	357.70	% Hours Sliding	41%		
AVG Total ROP (ft/h)	49.57	% Distance Sliding	19%		
AVG Rotating ROP (ft/h)	68.17	% Distance Rotating	81%		
AVG Sliding ROP (ft/h)	22.97				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #9 - Lateral

Date In: Nov 10, 2019, 7:30 Date Out: Nov 15, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13293671	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	POOH Reason Downhole Motor Incident: No diff, Quit drilling
Drilling Hours for Day	23.67	Bit Distances		
Total Drilled for Day (ft)	1165.00	Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,		
Drilling Hours for BHA	91.75	Survey: 83.00 ft, Other (R - INC): 43.00 ft		
Total Drilled for BHA (ft)	5166.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49

MWD Items

No Items

Directional Activities

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

Slide Drill	2	11-11	23:20	00:55	11-12	14133.00	14158.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 45, Toolface Type: gravity
Rotary Drill	1	11-12	00:55	01:35	11-12	14158.00	14222.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	01:35	01:40	11-12	14222.00	14222.00	Inclination (°): 89.970, Azimuth (°): 2.350, TVD (ft): 11422.84, Dogleg (°/100 ft): 3.19, Sensor Depth (ft): 14139.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	01:40	02:10	11-12	14222.00	14265.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	02:10	03:15	11-12	14265.00	14285.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 340, Toolface Type: gravity
Rotary Drill	1	11-12	03:15	03:30	11-12	14285.00	14312.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	03:30	03:35	11-12	14312.00	14312.00	Inclination (°): 90.890, Azimuth (°): 2.000, TVD (ft): 11422.16, Dogleg (°/100 ft): 1.09, Sensor Depth (ft): 14229.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	03:35	04:55	11-12	14312.00	14401.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	04:55	05:00	11-12	14401.00	14401.00	Inclination (°): 92.740, Azimuth (°): 0.070, TVD (ft): 11419.35, Dogleg (°/100 ft): 3.00, Sensor Depth (ft): 14318.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	05:00	05:15	11-12	14401.00	14407.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	05:15	05:50	11-12	14407.00	14427.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-12	05:50	06:40	11-12	14427.00	14491.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	06:40	06:45	11-12	14491.00	14491.00	Inclination (°): 92.760, Azimuth (°): 1.210, TVD (ft): 11415.03, Dogleg (°/100 ft): 1.27, Sensor Depth (ft): 14408.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	06:45	07:45	11-12	14491.00	14564.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	07:45	08:10	11-12	14564.00	14581.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Survey	46	11-12	08:10	08:15	11-12	14581.00	14581.00	Inclination (°): 90.870, Azimuth (°): 0.860, TVD (ft): 11412.18, Dogleg (°/100 ft): 2.14, Sensor Depth (ft): 14498.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-12	08:15	09:00	11-12	14581.00	14596.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	11-12	09:00	10:00	11-12	14596.00	14654.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	10:00	10:40	11-12	14654.00	14671.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 205, Toolface Type: gravity
Survey	46	11-12	10:40	10:45	11-12	14671.00	14671.00	Inclination (°): 90.820, Azimuth (°): 4.020, TVD (ft): 11410.85, Dogleg (°/100 ft): 3.57, Sensor Depth (ft): 14588.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-12	10:45	11:50	11-12	14671.00	14691.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 220, Toolface Type: gravity
Rotary Drill	1	11-12	11:50	13:05	11-12	14691.00	14760.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	13:05	13:10	11-12	14760.00	14760.00	Inclination (°): 88.340, Azimuth (°): 4.900, TVD (ft): 11411.50, Dogleg (°/100 ft): 2.96, Sensor Depth (ft): 14677.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-12	13:10	14:20	11-12	14760.00	14785.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 270, Toolface Type: gravity
Rotary Drill	1	11-12	14:20	15:10	11-12	14785.00	14822.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	15:10	15:50	11-12	14822.00	14842.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 270, Toolface Type: gravity
Rotary Drill	1	11-12	15:50	16:05	11-12	14842.00	14850.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	16:05	16:10	11-12	14850.00	14850.00	Inclination (°): 87.070, Azimuth (°): 2.620, TVD (ft): 11415.11, Dogleg (°/100 ft): 2.90, Sensor Depth (ft): 14767.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	16:10	17:00	11-12	14850.00	14902.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	17:00	18:00	11-12	14902.00	14932.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 340, Toolface Type: gravity
Rotary Drill	1	11-12	18:00	18:20	11-12	14932.00	14939.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	18:20	18:25	11-12	14939.00	14939.00	Inclination (°): 87.460, Azimuth (°): 0.160, TVD (ft): 11419.35, Dogleg (°/100 ft): 2.80, Sensor Depth (ft): 14856.00, Bit To Sensor (ft): 83.00

Rotary Drill	1	11-12	18:25	19:45	11-12	14939.00	15029.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	19:45	19:50	11-12	15029.00	15029.00	Inclination (°): 91.020, Azimuth (°): 0.600, TVD (ft): 11420.55, Dogleg (°/100 ft): 3.99, Sensor Depth (ft): 14946.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	19:50	20:00	11-12	15029.00	15033.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-12	20:00	20:40	11-12	15033.00	15046.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 315, Toolface Type: gravity
Rotary Drill	1	11-12	20:40	21:25	11-12	15046.00	15119.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	21:25	21:30	11-12	15119.00	15119.00	Inclination (°): 90.140, Azimuth (°): 358.750, TVD (ft): 11419.64, Dogleg (°/100 ft): 2.28, Sensor Depth (ft): 15036.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	21:30	22:40	11-12	15119.00	15208.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3100.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	22:40	22:45	11-12	15208.00	15208.00	Inclination (°): 90.540, Azimuth (°): 357.700, TVD (ft): 11419.11, Dogleg (°/100 ft): 1.26, Sensor Depth (ft): 15125.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-12	22:45	23:50	11-12	15208.00	15298.00	Pressure On (psi): 3850.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-12	23:50	00:00	11-13	15298.00	15298.00	Inclination (°): 90.140, Azimuth (°): 358.840, TVD (ft): 11418.57, Dogleg (°/100 ft): 1.34, Sensor Depth (ft): 15215.00, Bit To Sensor (ft): 83.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Nov 12 23:00 - 22:59 (Day 20 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	15208.00	Downhole Hours	24.00	Rotating WOB (klbs)	60.00 - 60.00
Bit Depth (ft)	16286.00	Drilling Hours	21.08	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	16286.00	Hours Circulating	0.00	Rotating SPM	220.00 - 220.00
Total Distance (ft)	1078.00	Hours Sliding	7.00	Sliding SPM	220.00 - 220.00
Distance Rotated (ft)	980.00	Hours Rotating	14.08	Motor RPM	182.00 - 182.00
Distance Slid (ft)	98.00			Surface RPM	30.00 - 50.00
Inclination In	90.14			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	88.98			On Bottom Pressure (psi)	3500.00 - 4200.00
Azimuth In	358.84	% Hours Rotating	67%	Off Bottom Pressure (psi)	3200.00 - 3300.00
Azimuth Out	1.83	% Hours Sliding	33%		
AVG Total ROP (ft/h)	51.09	% Distance Sliding	9%		
AVG Rotating ROP (ft/h)	68.80	% Distance Rotating	91%		
AVG Sliding ROP (ft/h)	14.00				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #9 - Lateral

Date In: Nov 10, 2019, 7:30 Date Out: Nov 15, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13293671	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	
Drilling Hours for Day	21.08	Bit Distances		
Total Drilled for Day (ft)	1078.00	Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,		POOH Reason
Drilling Hours for BHA	91.75	Survey: 83.00 ft, Other (R - INC): 43.00 ft		
Total Drilled for BHA (ft)	5166.00			
				Downhole Motor Incident: No diff, Quit drilling

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49

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	11-12	23:50	00:00	11-13	15298.00	15298.00	Inclination (°): 90.140, Azimuth (°): 358.840, TVD (ft): 11418.57, Dogleg

(°/100 ft): 1.34, Sensor Depth (ft): 15215.00, Bit To Sensor (ft): 83.00

Rotary Drill	1	11-13	00:00	01:15	11-13	15298.00	15388.00	Pressure On (psi): 3850.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	01:15	01:20	11-13	15388.00	15388.00	Inclination (°): 89.790, Azimuth (°): 358.220, TVD (ft): 11418.63, Dogleg (°/100 ft): 0.79, Sensor Depth (ft): 15305.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	01:20	02:25	11-13	15388.00	15477.00	Pressure On (psi): 3850.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	02:25	02:30	11-13	15477.00	15477.00	Inclination (°): 90.140, Azimuth (°): 357.430, TVD (ft): 11418.68, Dogleg (°/100 ft): 0.97, Sensor Depth (ft): 15394.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	02:30	03:20	11-13	15477.00	15567.00	Pressure On (psi): 3850.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	03:20	03:25	11-13	15567.00	15567.00	Inclination (°): 88.960, Azimuth (°): 358.750, TVD (ft): 11419.39, Dogleg (°/100 ft): 1.97, Sensor Depth (ft): 15484.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-13	03:25	04:10	11-13	15567.00	15585.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-13	04:10	04:50	11-13	15585.00	15656.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	04:50	04:55	11-13	15656.00	15656.00	Inclination (°): 89.660, Azimuth (°): 355.940, TVD (ft): 11420.46, Dogleg (°/100 ft): 3.25, Sensor Depth (ft): 15573.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	04:55	06:25	11-13	15656.00	15746.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	06:25	06:35	11-13	15746.00	15746.00	Inclination (°): 91.090, Azimuth (°): 358.220, TVD (ft): 11419.87, Dogleg (°/100 ft): 2.99, Sensor Depth (ft): 15663.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	06:35	08:05	11-13	15746.00	15835.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	08:05	08:20	11-13	15835.00	15835.00	Inclination (°): 92.560, Azimuth (°): 357.080, TVD (ft): 11417.04, Dogleg (°/100 ft): 2.09, Sensor Depth (ft): 15752.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	08:20	09:25	11-13	15835.00	15925.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	09:25	09:30	11-13	15925.00	15925.00	Inclination (°): 92.080, Azimuth (°): 356.730, TVD (ft): 11413.40, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 15842.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	09:30	10:55	11-13	15925.00	16015.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	10:55	11:05	11-13	16015.00	16015.00	Inclination (°): 92.210, Azimuth (°): 357.430, TVD (ft): 11410.03, Dogleg (°/100 ft): 0.79, Sensor Depth (ft): 15932.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-13	11:05	13:00	11-13	16015.00	16055.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	11-13	13:00	14:00	11-13	16055.00	16104.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	14:00	14:05	11-13	16104.00	16104.00	Inclination (°): 92.160, Azimuth (°): 359.100, TVD (ft): 11406.63, Dogleg (°/100 ft): 1.88, Sensor Depth (ft): 16021.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	14:05	14:35	11-13	16104.00	16136.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-13	14:35	16:10	11-13	16136.00	16146.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-13	16:10	16:40	11-13	16146.00	16164.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-13	16:40	17:50	11-13	16164.00	16178.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Rig Repair	14	11-13	17:50	18:50	11-13			Rig lost air pressure
Slide Drill	2	11-13	18:50	19:10	11-13	16178.00	16188.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-13	19:10	19:20	11-13	16188.00	16194.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 50, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	19:20	19:25	11-13	16194.00	16194.00	Inclination (°): 90.850, Azimuth (°): 358.920, TVD (ft): 11404.27, Dogleg (°/100 ft): 1.47, Sensor Depth (ft): 16111.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	19:25	20:45	11-13	16194.00	16262.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 50, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-13	20:45	21:20	11-13	16262.00	16266.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-13	21:20	21:30	11-13	16266.00	16284.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 60.00, Surface RPM: 50, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	21:30	21:35	11-13	16284.00	16284.00	Inclination (°): 88.980, Azimuth (°): 1.830, TVD (ft): 11404.40, Dogleg (°/100 ft): 3.84, Sensor Depth (ft): 16201.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-13	21:35	22:15	11-13	16284.00	16286.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 180, Toolface Type: gravity

Rotary Drill	1	11-13	22:15	23:25	11-13	16286.00	16373.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-13	23:25	23:30	11-13	16373.00	16373.00	Inclination (°): 87.310, Azimuth (°): 359.360, TVD (ft): 11407.28, Dogleg (°/100 ft): 3.35, Sensor Depth (ft): 16290.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-13	23:30	00:00	11-14	16373.00	16405.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, Nov 13 23:00 - 22:59 (Day 21 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	16286.00	Downhole Hours	24.00	Rotating WOB (klbs)	55.00 - 55.00
Bit Depth (ft)	17025.00	Drilling Hours	17.00	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	17025.00	Hours Circulating	1.00	Rotating SPM	220.00 - 220.00
Total Distance (ft)	739.00	Hours Sliding	8.25	Sliding SPM	220.00 - 220.00
Distance Rotated (ft)	626.00	Hours Rotating	8.75	Motor RPM	182.00 - 182.00
Distance Slid (ft)	113.00			Surface RPM	30.00 - 30.00
Inclination In	87.31			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	91.33			On Bottom Pressure (psi)	3500.00 - 4200.00
Azimuth In	359.36	% Hours Rotating	51%	Off Bottom Pressure (psi)	3200.00 - 3300.00
Azimuth Out	356.46	% Hours Sliding	49%		
AVG Total ROP (ft/h)	41.18	% Distance Sliding	15%		
AVG Rotating ROP (ft/h)	71.08	% Distance Rotating	85%		
AVG Sliding ROP (ft/h)	13.70				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #9 - Lateral

Date In: Nov 10, 2019, 7:30 Date Out: Nov 15, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13293671	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	POOH Reason
Drilling Hours for Day	17.00	Bit Distances		
Total Drilled for Day (ft)	739.00	Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,		
Drilling Hours for BHA	91.75	Survey: 83.00 ft, Other (R - INC): 43.00 ft		
Total Drilled for BHA (ft)	5166.00			Downhole Motor Incident: No diff, Quit drilling

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49

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	11-13	23:30	00:00	11-14	16373.00	16405.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Rotary Drill	1	11-14	00:00	00:15	11-14	16405.00	16415.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-14	00:15	02:00	11-14	16415.00	16440.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-14	02:00	02:25	11-14	16440.00	16463.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-14	02:25	02:30	11-14	16463.00	16463.00	Inclination (°): 86.760, Azimuth (°): 359.720, TVD (ft): 11411.94, Dogleg (°/100 ft): 0.73, Sensor Depth (ft): 16380.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	02:30	03:55	11-14	16463.00	16552.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-14	03:55	04:00	11-14	16552.00	16552.00	Inclination (°): 87.860, Azimuth (°): 359.720, TVD (ft): 11416.12, Dogleg (°/100 ft): 1.24, Sensor Depth (ft): 16469.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	04:00	04:20	11-14	16552.00	16570.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-14	04:20	05:35	11-14	16570.00	16588.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-14	05:35	06:30	11-14	16588.00	16642.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Other	16	11-14	06:30	06:40	11-14			SPR's
Survey	46	11-14	06:40	06:45	11-14	16642.00	16642.00	Inclination (°): 86.820, Azimuth (°): 357.700, TVD (ft): 11420.29, Dogleg (°/100 ft): 2.52, Sensor Depth (ft): 16559.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	06:45	06:50	11-14	16642.00	16647.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-14	06:50	09:10	11-14	16647.00	16672.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 30, Toolface Type: gravity
Rotary Drill	1	11-14	09:10	09:50	11-14	16672.00	16732.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-14	09:50	09:55	11-14	16732.00	16732.00	Inclination (°): 88.320, Azimuth (°): 356.820, TVD (ft): 11424.11, Dogleg (°/100 ft): 1.93, Sensor Depth (ft): 16649.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	09:55	11:15	11-14	16732.00	16821.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-14	11:15	11:20	11-14	16821.00	16821.00	Inclination (°): 89.880, Azimuth (°): 356.990, TVD (ft): 11425.51, Dogleg (°/100 ft): 1.76, Sensor Depth (ft): 16738.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	11:20	11:45	11-14	16821.00	16855.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-14	11:45	13:25	11-14	16855.00	16880.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 30, Toolface Type: gravity
Rotary Drill	1	11-14	13:25	13:45	11-14	16880.00	16911.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Survey	46	11-14	13:45	14:00	11-14	16911.00	16911.00	Inclination (°): 89.330, Azimuth (°): 354.790, TVD (ft): 11426.13, Dogleg (°/100 ft): 2.52, Sensor Depth (ft): 16828.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	14:00	14:15	11-14	16911.00	16945.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Slide Drill	2	11-14	14:15	15:30	11-14	16945.00	16965.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	11-14	15:30	15:55	11-14	16965.00	17000.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Other	16	11-14	15:55	16:10	11-14			DOWNLINK MWD TOOL
Survey	46	11-14	16:10	16:15	11-14	17000.00	17000.00	Inclination (°): 91.330, Azimuth (°): 356.460, TVD (ft): 11425.62, Dogleg (°/100 ft): 2.93, Sensor Depth (ft): 16917.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-14	16:15	16:30	11-14	17000.00	17025.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 55.00, Surface RPM: 30, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Circulating	3	11-14	16:30	17:30	11-14			Lost Diff & ROP
Pooh	7	11-14	17:30	00:00	11-15			POOH

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Thursday, Nov 14 23:00 - 22:59 (Day 22 of 26)

Billing: \$35,809.10 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	17025.00	Downhole Hours	24.00	Rotating WOB (klbs)	40.00 - 40.00
Bit Depth (ft)	17450.00	Drilling Hours	5.00	Sliding WOB (klbs)	20.00 - 20.00
Bottom Hole Depth (ft)	17450.00	Hours Circulating	1.08	Rotating SPM	204.00 - 220.00
Total Distance (ft)	425.00	Hours Sliding	2.25	Sliding SPM	204.00 - 204.00
Distance Rotated (ft)	333.00	Hours Rotating	2.75	Motor RPM	0.00 - 182.00
Distance Slid (ft)	92.00			Surface RPM	40.00 - 40.00
Inclination In	92.23			Flow Rate (gpm)	650.00 - 700.00
Inclination Out	93.20			On Bottom Pressure (psi)	3900.00 - 5200.00
Azimuth In	357.52	% Hours Rotating	55%	Off Bottom Pressure (psi)	3400.00 - 4700.00
Azimuth Out	359.45	% Hours Sliding	45%		
AVG Total ROP (ft/h)	87.83	% Distance Sliding	22%		
AVG Rotating ROP (ft/h)	127.26	% Distance Rotating	78%		
AVG Sliding ROP (ft/h)	43.76				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #9 - Lateral

Date In: Nov 10, 2019, 7:30 Date Out: Nov 15, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 1
Vendor	SECURITY	Lobe/Stage	7/8, 8.5	
S/N	13293671	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.250	
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend: 5.32 ft, Resistivity: 51.93 ft, Gamma: 44.03 ft,		POOH Reason
Drilling Hours for BHA	91.75	Survey: 83.00 ft, Other (R - INC): 43.00 ft		
Total Drilled for BHA (ft)	5166.00			
				Downhole Motor Incident: No diff, Quit drilling

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" GT65DHEO, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	SECURITY	13293671	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-033	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.16	37.16
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.62
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M5740	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.57	60.19
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.69
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C808	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.55	104.24
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.45
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.56
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.49

MWD Items

No Items

BHA #10 - Lateral w/ Agitator

Date In: Nov 15, 2019, 0:00 Date Out: Nov 17, 2019, 10:30

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2	
Vendor	Hughes	Lobe/Stage	7/8, 8.5		
S/N	5293516	Bend Angle	1.75		
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.310	POOH Reason Total Depth/Casing Point: TD	
Drilling Hours for Day	5.00	Bit Distances			
Total Drilled for Day (ft)	425.00	Bend: 5.30 ft, Resistivity: 50.83 ft, Gamma: 43.93 ft, Survey: 83.00 ft, Other (R - INC): 43.53 ft			
Drilling Hours for BHA	21.83				
Total Drilled for BHA (ft)	1878.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" DD506TWX, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	Hughes	5293516	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-029	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M699	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.70	60.33
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.83
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C767	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.18	104.01
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.22
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.33
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.26
Drill Pipe Description: 30 Stnds 5.5" Drill Pipe, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	4.000	5.500		2689.31	2829.57
Crossover Sub Description: XO - 4 1/2IF-B x ED54- P, Type: Steel	Black Diamond	BD8069	4 1/2" IF Box	EverDrlg54 Pin	3.000	6.750		4.01	2833.58
Agitator Description: Agitator, Size (in): 6.75	NOV	AGHF0675- 0189	4 1/2" IF Box	4 1/2" IF Pin		6.750		25.45	2859.03
Crossover Sub Description: XO - ED54-B x 4 1/2IF- P, Type: Steel	Black Diamond	BD15118	EverDrlg54 Box	4 1/2" IF Pin	3.000	6.750		4.64	2863.67

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Pooh	7	11-14	17:30	00:00	11-15			POOH
Change BHA	6	11-15	00:00	04:00	11-15			P/U BHA # 10
Circulating	3	11-15	04:00	04:20	11-15			Test MWD
Troubleshoot	34	11-15	04:20	09:00	11-15			TROUBLESHOOT MWD TOOL / C/O BATTERIES & DATA LINK / TEST (GOOD)
TIH	8	11-15	09:00	11:00	11-15			TIH W/ BHA #??
Other	16	11-15	11:00	11:30	11-15			SLIP & CUT DRILL LINE
Rig Service - In Hole	19	11-15	11:30	12:00	11-15			RIG SERVICE
TIH	8	11-15	12:00	13:50	11-15			TIH W/ BHA #10
Orient Pipe	36	11-15	13:50	14:10	11-15			ORIENT MOTOR IN SIDETRACK
TIH	8	11-15	14:10	16:45	11-15			TIH W/ BHA #10
Circulating	3	11-15	16:45	17:00	11-15			RELOG GAMMA
Rotary Drill	1	11-15	17:00	17:05	11-15	17025.00	17034.00	Pressure On (psi): 5200.00, Pressure Off (psi): 4700.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 220.00
Circulating	3	11-15	17:05	17:15	11-15			CIRCULATING GAS
Survey	46	11-15	17:15	17:30	11-15	17034.00	17034.00	Inclination (°): 92.230, Azimuth (°): 357.520, TVD (ft): 11424.56, Dogleg (°/100 ft): 4.09, Sensor Depth (ft): 16951.00, Bit To Sensor (ft): 83.00

Rotary Drill	1	11-15	17:30	18:10	11-15	17034.00	17124.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-15	18:10	18:15	11-15	17124.00	17124.00	Inclination (°): 92.430, Azimuth (°): 355.150, TVD (ft): 11420.90, Dogleg (°/100 ft): 2.64, Sensor Depth (ft): 17041.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-15	18:15	18:30	11-15	17124.00	17125.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-15	18:30	19:35	11-15	17125.00	17165.00	Pressure On (psi): 3900.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	11-15	19:35	19:55	11-15	17165.00	17214.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-15	19:55	20:00	11-15	17214.00	17214.00	Inclination (°): 92.850, Azimuth (°): 357.340, TVD (ft): 11416.75, Dogleg (°/100 ft): 2.48, Sensor Depth (ft): 17131.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-15	20:00	20:40	11-15	17214.00	17303.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-15	20:40	20:45	11-15	17303.00	17303.00	Inclination (°): 93.180, Azimuth (°): 359.720, TVD (ft): 11412.07, Dogleg (°/100 ft): 2.70, Sensor Depth (ft): 17220.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-15	20:45	20:50	11-15	17303.00	17310.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-15	20:50	21:20	11-15	17310.00	17330.00	Pressure On (psi): 3900.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 145, Toolface Type: gravity
Rotary Drill	1	11-15	21:20	21:40	11-15	17330.00	17393.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-15	21:40	21:55	11-15	17393.00	17393.00	Inclination (°): 93.200, Azimuth (°): 359.450, TVD (ft): 11407.06, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 17310.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-15	21:55	22:00	11-15	17393.00	17396.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-15	22:00	22:40	11-15	17396.00	17428.00	Pressure On (psi): 3900.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 145, Toolface Type: gravity
Rotary Drill	1	11-15	22:40	22:55	11-15	17428.00	17450.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-15	22:55	23:30	11-15	17450.00	17482.00	Toolface: 180, Toolface Type: gravity
Survey	46	11-15	23:30	23:35	11-15	17482.00	17482.00	Inclination (°): 92.800, Azimuth (°): 359.800, TVD (ft): 11402.41, Dogleg (°/100 ft): 0.60, Sensor Depth (ft): 17399.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-15	23:35	00:00	11-16	17482.00	17552.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, Nov 15 23:00 - 22:59 (Day 23 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	17450.00	Downhole Hours	24.00	Rotating WOB (klbs)	40.00 - 40.00
Bit Depth (ft)	18903.00	Drilling Hours	16.83	Sliding WOB (klbs)	50.00 - 50.00
Bottom Hole Depth (ft)	18903.00	Hours Circulating	3.58	Rotating SPM	204.00 - 204.00
Total Distance (ft)	1453.00	Hours Sliding	8.08	Sliding SPM	204.00 - 204.00
Distance Rotated (ft)	1140.00	Hours Rotating	8.75	Motor RPM	0.00 - 0.00
Distance Slid (ft)	313.00			Surface RPM	40.00 - 40.00
Inclination In	92.80			Flow Rate (gpm)	650.00 - 650.00
Inclination Out	89.70			On Bottom Pressure (psi)	3800.00 - 5000.00
Azimuth In	359.80	% Hours Rotating	52%	Off Bottom Pressure (psi)	3200.00 - 4200.00
Azimuth Out	1.21	% Hours Sliding	48%		
AVG Total ROP (ft/h)	87.45	% Distance Sliding	22%		
AVG Rotating ROP (ft/h)	130.29	% Distance Rotating	78%		
AVG Sliding ROP (ft/h)	37.47				

Personnel

Name	Position
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #10 - Lateral w/ Agitator

Date In: Nov 15, 2019, 0:00 Date Out: Nov 17, 2019, 10:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2
Vendor	Hughes	Lobe/Stage	7/8, 8.5	
S/N	5293516	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.310	POOH Reason Total Depth/Casing Point: TD
Drilling Hours for Day	16.83	Bit Distances		
Total Drilled for Day (ft)	1453.00	Bend: 5.30 ft, Resistivity: 50.83 ft, Gamma: 43.93 ft,		
Drilling Hours for BHA	21.83	Survey: 83.00 ft, Other (R - INC): 43.53 ft		
Total Drilled for BHA (ft)	1878.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" DD506TWX, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	Hughes	5293516	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-029	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M699	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.70	60.33
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.83
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C767	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.18	104.01
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.22
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.33
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.26
Drill Pipe Description: 30 Stnds 5.5" Drill Pipe, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	4.000	5.500		2689.31	2829.57
Crossover Sub Description: XO - 4 1/2IF-B x ED54- P, Type: Steel	Black Diamond	BD8069	4 1/2" IF Box	EverDrlg54 Pin	3.000	6.750		4.01	2833.58
Agitator Description: Agitator, Size (in): 6.75	NOV	AGHF0675- 0189	4 1/2" IF Box	4 1/2" IF Pin		6.750		25.45	2859.03

Crossover Sub Description: XO - ED54-B x 4 1/2IF- P, Type: Steel	Black Diamond	BD15118	EverDrig54 Box	4 1/2" IF Pin	3.000	6.750	4.64	2863.67
--	---------------	---------	-------------------	---------------	-------	-------	------	---------

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	11-15	23:35	00:00	11-16	17482.00	17552.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Rotary Drill	1	11-16	00:00	00:05	11-16	17552.00	17571.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	00:05	00:10	11-16	17571.00	17571.00	Inclination (°): 90.560, Azimuth (°): 2.880, TVD (ft): 11399.80, Dogleg (°/100 ft): 4.28, Sensor Depth (ft): 17488.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-16	00:10	01:15	11-16	17571.00	17601.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	11-16	01:15	01:35	11-16	17601.00	17640.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-16	01:35	02:05	11-16	17640.00	17661.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 180, Toolface Type: gravity
Survey	46	11-16	02:05	02:10	11-16	17661.00	17661.00	Inclination (°): 90.450, Azimuth (°): 2.790, TVD (ft): 11399.00, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 17578.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	02:10	02:30	11-16	17661.00	17695.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-16	02:30	03:55	11-16	17695.00	17751.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 180, Toolface Type: gravity
Survey	46	11-16	03:55	04:00	11-16	17751.00	17751.00	Inclination (°): 90.080, Azimuth (°): 359.540, TVD (ft): 11398.59, Dogleg (°/100 ft): 3.63, Sensor Depth (ft): 17668.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	04:00	04:50	11-16	17751.00	17840.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	04:50	04:55	11-16	17840.00	17840.00	Inclination (°): 86.030, Azimuth (°): 0.770, TVD (ft): 11401.61, Dogleg (°/100 ft): 4.76, Sensor Depth (ft): 17757.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	04:55	05:20	11-16	17840.00	17891.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-16	05:20	05:35	11-16	17891.00	17916.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	11-16	05:35	05:55	11-16	17916.00	17930.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	05:55	06:00	11-16	17930.00	17930.00	Inclination (°): 85.530, Azimuth (°): 0.680, TVD (ft): 11408.23, Dogleg (°/100 ft): 0.56, Sensor Depth (ft): 17847.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	06:00	06:45	11-16	17930.00	18019.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	06:45	06:50	11-16	18019.00	18019.00	Inclination (°): 86.430, Azimuth (°): 0.070, TVD (ft): 11414.47, Dogleg (°/100 ft): 1.22, Sensor Depth (ft): 17936.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	06:50	07:10	11-16	18019.00	18062.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-16	07:10	08:25	11-16	18062.00	18109.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 20, Toolface Type: gravity
Survey	46	11-16	08:25	08:40	11-16	18109.00	18109.00	Inclination (°): 85.640, Azimuth (°): 1.830, TVD (ft): 11420.69, Dogleg (°/100 ft): 2.14, Sensor Depth (ft): 18026.00, Bit To Sensor (ft): 83.00
Slide Drill	2	11-16	08:40	09:35	11-16	18109.00	18141.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 30, Toolface Type: gravity
Rotary Drill	1	11-16	09:35	10:05	11-16	18141.00	18199.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	10:05	10:10	11-16	18199.00	18199.00	Inclination (°): 90.410, Azimuth (°): 4.640, TVD (ft): 11423.79, Dogleg (°/100 ft): 6.15, Sensor Depth (ft): 18116.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	10:10	10:20	11-16	18199.00	18230.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Other	16	11-16	10:20	10:25	11-16			CHECK SHOT
Slide Drill	2	11-16	10:25	11:20	11-16	18230.00	18260.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 210, Toolface Type: gravity
Rotary Drill	1	11-16	11:20	11:35	11-16	18260.00	18288.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	11:35	11:40	11-16	18288.00	18288.00	Inclination (°): 93.330, Azimuth (°): 7.710, TVD (ft): 11420.89, Dogleg (°/100 ft): 4.76, Sensor Depth (ft): 18205.00, Bit To Sensor (ft): 83.00

Rotary Drill	1	11-16	11:40	12:05	11-16	18288.00	18338.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Slide Drill	2	11-16	12:05	13:15	11-16	18338.00	18378.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 50.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204, Toolface: 200, Toolface Type: gravity
Survey	46	11-16	13:15	13:30	11-16	18378.00	18378.00	Inclination (°): 94.100, Azimuth (°): 2.180, TVD (ft): 11415.05, Dogleg (°/100 ft): 6.19, Sensor Depth (ft): 18295.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	13:30	14:15	11-16	18378.00	18467.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	14:15	14:20	11-16	18467.00	18467.00	Inclination (°): 90.650, Azimuth (°): 1.210, TVD (ft): 11411.37, Dogleg (°/100 ft): 4.03, Sensor Depth (ft): 18384.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	14:20	15:00	11-16	18467.00	18557.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	15:00	15:15	11-16	18557.00	18557.00	Inclination (°): 90.430, Azimuth (°): 2.620, TVD (ft): 11410.52, Dogleg (°/100 ft): 1.59, Sensor Depth (ft): 18474.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	15:15	15:45	11-16	18557.00	18646.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	15:45	15:50	11-16	18646.00	18646.00	Inclination (°): 90.630, Azimuth (°): 2.090, TVD (ft): 11409.69, Dogleg (°/100 ft): 0.64, Sensor Depth (ft): 18563.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	15:50	16:30	11-16	18646.00	18736.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	16:30	16:35	11-16	18736.00	18736.00	Inclination (°): 90.380, Azimuth (°): 2.000, TVD (ft): 11408.90, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 18653.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	16:35	17:05	11-16	18736.00	18826.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	17:05	17:10	11-16	18826.00	18826.00	Inclination (°): 90.160, Azimuth (°): 1.470, TVD (ft): 11408.48, Dogleg (°/100 ft): 0.64, Sensor Depth (ft): 18743.00, Bit To Sensor (ft): 83.00
Rotary Drill	1	11-16	17:10	17:40	11-16	18826.00	18903.00	Pressure On (psi): 5000.00, Pressure Off (psi): 4200.00, Weight On Bit (klbs): 40.00, Surface RPM: 40, Surface Torque (ft lbf): 30.00, Flow Rate (gpm): 650.00, Strokes Per Minute: 204.00
Survey	46	11-16	17:40	17:50	11-16	18903.00	18903.00	Inclination (°): 89.700, Azimuth (°): 1.210, TVD (ft): 11408.57, Dogleg (°/100 ft): 0.69, Sensor Depth (ft): 18820.00, Bit To Sensor (ft): 83.00
Circulating	3	11-16	17:50	21:25	11-16			
L/D DP	28	11-16	21:25	09:30	11-17			POOH L/D DP

MWD Activities

No Activities



Job Number WT-19-158	Operator Advance Energy Partners	Rig Name H&P #389
Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H	Legal Well Name AFE Dagger Lake 5 State Com 551H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Nov 16 23:00 - 22:59 (Day 24 of 26)

Billing: \$12,014.75 (\$351,170.14 total)

Drilling Summary			Drilling Parameters	
Start Depth (ft)	Downhole Hours	11.50	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)	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	Hours Rotating	0.00	Motor RPM	0.00 - 0.00
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
Advance Directional	Directional Driller
Robert Olivarez	MWD Engineer

BHA #10 - Lateral w/ Agitator

Date In: Nov 15, 2019, 0:00 Date Out: Nov 17, 2019, 10:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Flow Rate: 500-700, Max Diff: 1910 psi , Max Torque: 18,710 ft-lbs Runs on bit: 2
Vendor	Hughes	Lobe/Stage	7/8, 8.5	
S/N	5293516	Bend Angle	1.75	
Nozzles	6 x 22's	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.310	POOH Reason Total Depth/Casing Point: TD
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend: 5.30 ft, Resistivity: 50.83 ft, Gamma: 43.93 ft, Survey: 83.00 ft, Other (R - INC): 43.53 ft		
Drilling Hours for BHA	21.83			
Total Drilled for BHA (ft)	1878.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: 8 1/2" DD506TWX, Style: Other, Gauge Length (in): 3.00, Size (in): 8.50	Hughes	5293516	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 7" 7/8 8.5 FXD 1.75 w/SS, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	AIM	700-40-029	4 1/2" IF Box	4 1/2" Reg Box		7.000		36.17	37.17
Crossover Sub Description: X-O 4 1/2 IF P - 5 1/2 FH B, Type: NM	DR	DR3547	5 1/2" FH Box	4 1/2" IF Pin	3.313	7.250		3.46	40.63
Drill Collar Description: 6 3/4 NMDC (MWD AWR), Style: Slick Drill, Type: NM	SCHLUMBERGER	R67M699	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.750		19.70	60.33
Drill Collar Description: 6.3/4" NMDC (MWD ABS), Style: Slick Drill, Type: NM	SCHLUMBERGER	M67C594	5 1/2" FH Box	5 1/2" FH Pin	3.750	6.470		14.50	74.83
Drill Collar Description: 6 3/4 NMDC (MWD), Style: Slick Drill, Type: NM	SCHLUMBERGER	D67C767	5 1/2" FH Box	5 1/2" FH Pin	3.500	6.750		29.18	104.01
Crossover Sub Description: X-O 5 1/2 FH P - 4 1/2 IF B, Type: NM	DR	DR35128	4 1/2" IF Box	5 1/2" FH Pin	3.625	6.875		3.21	107.22
Drill Collar Description: 6 3/4 NMDC, Style: Slick Drill, Type: NM	DR	DR34857	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		29.11	136.33
Crossover Sub Description: X-O 4 1/2 IF P - ED54 B , Type: Steel	BD	BD8076	EverDrlg54 Box	4 1/2" IF Pin	3.250	6.625		3.93	140.26
Drill Pipe Description: 30 Stnds 5.5" Drill Pipe, Style: Slick			EverDrlg54 Box	EverDrlg54 Pin	4.000	5.500		2689.31	2829.57
Crossover Sub Description: XO - 4 1/2IF-B x ED54- P, Type: Steel	Black Diamond	BD8069	4 1/2" IF Box	EverDrlg54 Pin	3.000	6.750		4.01	2833.58
Agitator Description: Agitator, Size (in): 6.75	NOV	AGHF0675- 0189	4 1/2" IF Box	4 1/2" IF Pin		6.750		25.45	2859.03

Crossover Sub Description: XO - ED54-B x 4 1/2IF- P, Type: Steel	Black Diamond	BD15118	EverDrig54 Box	4 1/2" IF Pin	3.000	6.750		4.64	2863.67
--	---------------	---------	-------------------	---------------	-------	-------	--	------	---------

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
L/D DP	28	11-16	21:25	09:30	11-17			POOH L/D DP
Change BHA	6	11-17	09:30	10:30	11-17			L/D BHA # 10
Standby	15	11-17	10:30	06:00	11-18			Standby while CASING OPS

MWD Activities

No Activities

	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Sunday, Nov 17 23:00 - 22:59 (Day 25 of 26) Billing: \$500.00 (\$351,170.14 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
Advance Directional	Directional Driller
Robert Olivarez	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	11-17	10:30	06:00	11-18			Standby while CASING OPS
Standby	15	11-18	06:00	06:00	11-19			Standby

MWD Activities
No Activities

	Job Number WT-19-158	Operator Advance Energy Partners		Rig Name H&P #389
	Start Date 2019-10-07	Well Name Dagger Lake 5 State Com 551H		Legal Well Name AFE Dagger Lake 5 State Com 551H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Monday, Nov 18 23:00 - 22:59 (Day 26 of 26) Billing: \$17,620.07 (\$351,170.14 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
Advance Directional	Directional Driller
Robert Olivarez	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	11-18	06:00	06:00	11-19			Standby

MWD Activities								
No Activities								



Surface Plat

Dagger Lake 5 State Com 551H (WT-19-158)

2019-10-07 to 2019-11-25

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 COM	551H
OGRID No.	Operator Name	Elevation
	ADVANCE ENERGY PARTNERS HAT MESA	3654'

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	530	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	660	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

**LAST TAKE POINT
BOTTOM HOLE LOCATION**
Lat - N 32.442347
Long - W 103.600978
NMSPC - N 525431.5
E 767265.2
(NAD-83)

FIRST TAKE POINT
2540' FNL & 660' FWL
Lat - N 32.421142
Long - W 103.600964
NMSPC - N 517716.5
E 767322.5
(NAD-83)

SURFACE LOCATION
Lat - N 32.419492
Long - W 103.601384
NMSPC - N 517116.0
E 767196.5
(NAD-83)

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

Signature _____ Date _____

Printed Name _____

Email Address _____

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

SEPTEMBER 14 2019

Date Surveyed _____

Signature & Seal of Professional Surveyor _____

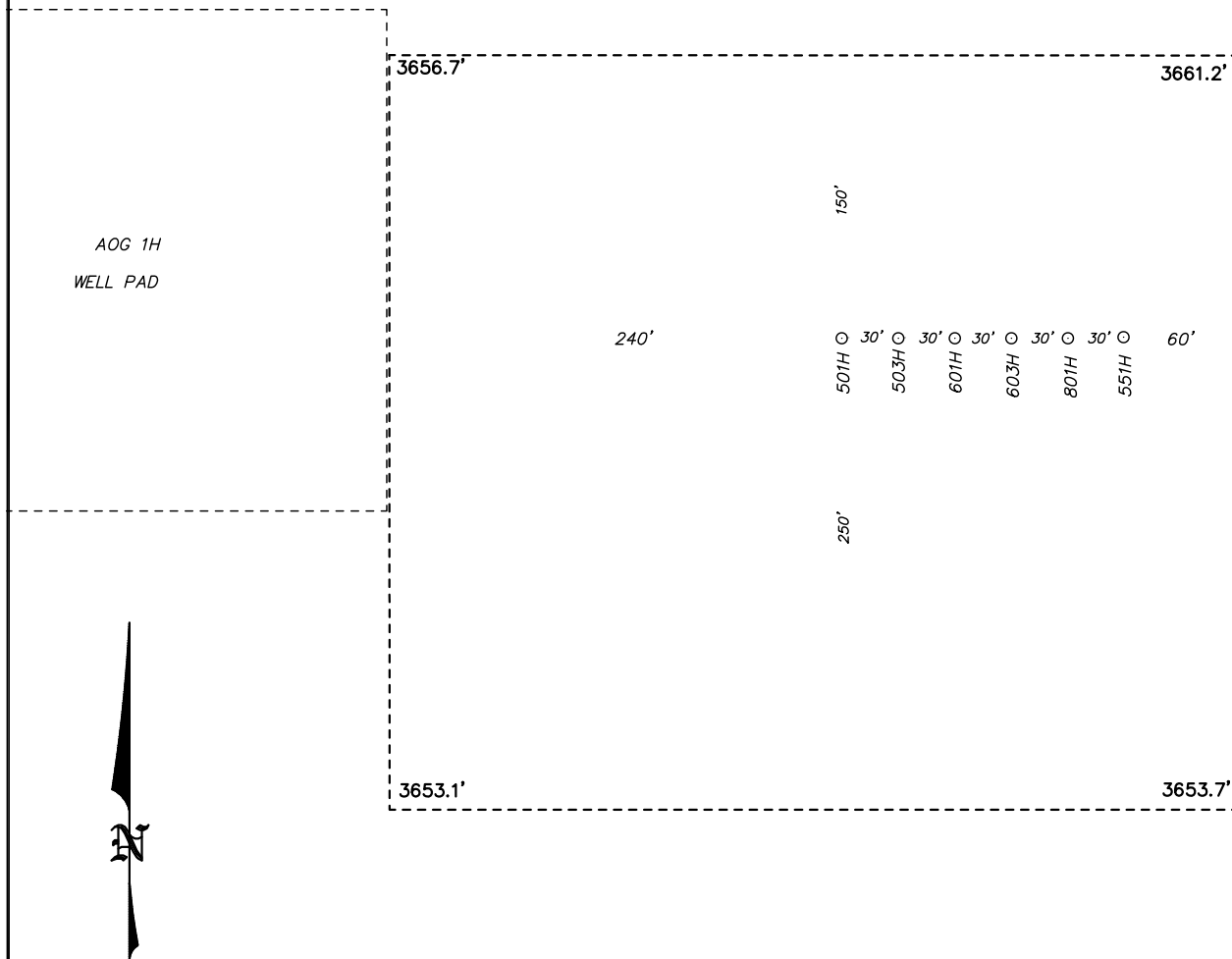
Certificate No. Gary L. Jones 7977
BASIN SURVEYING

0' 1000' 2000' 3000' 4000' IN
SCALE: 1" = 2000'
WO Num.: 34859

State Hwy 176



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



I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.



GARY L. JONES, N.M.P.S. No. 7977
LEA COUNTY, TEXAS No. 5074

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 basinsurveys.com

100 0 100 200 FEET
SCALE: 1" = 100'

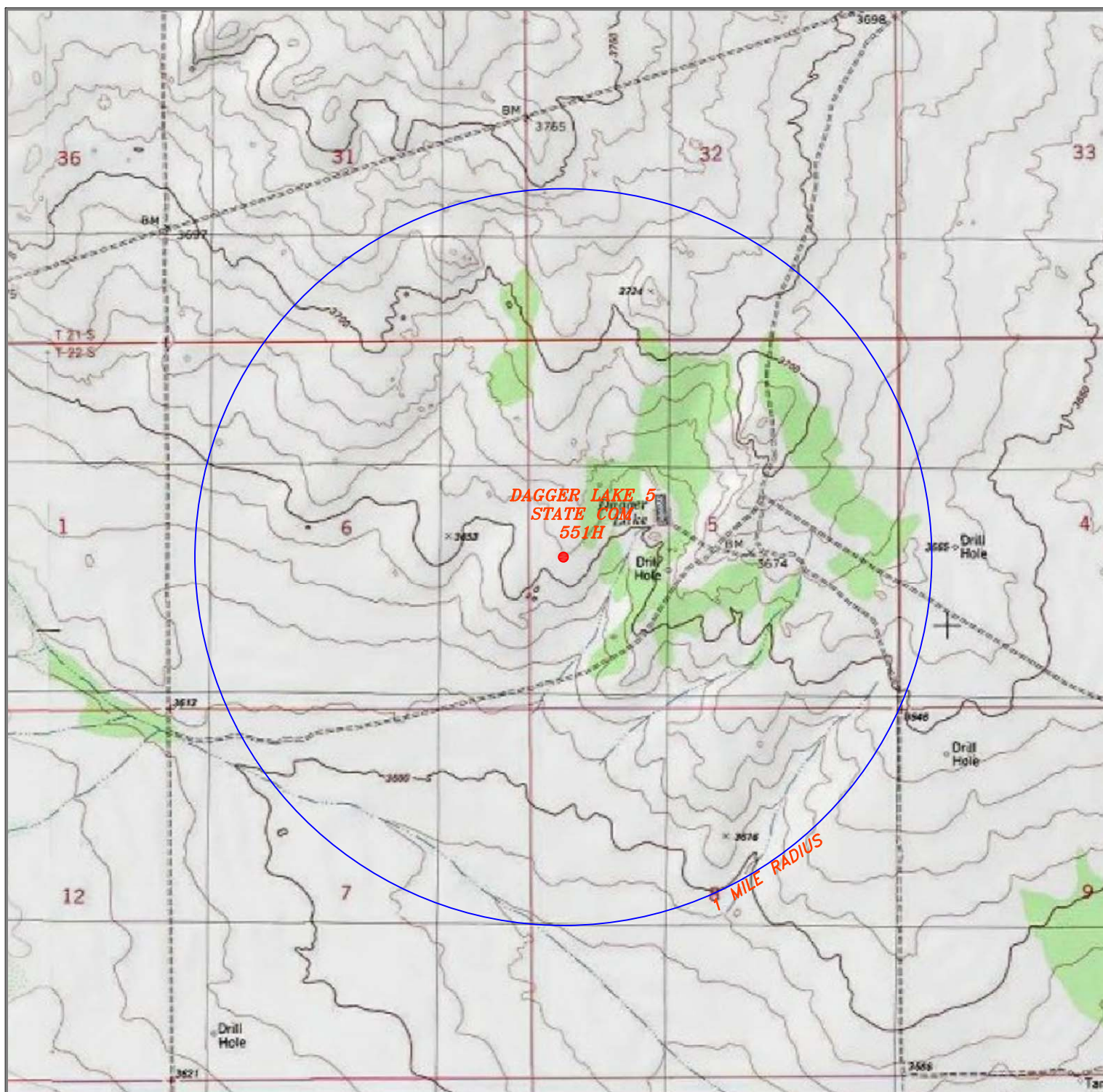
ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER LAKE 5 STATE COM 551H / WELL PAD TOPO

THE DAGGER LAKE 5 STATE COM 551H LOCATED 2140' FROM
THE SOUTH LINE AND 530' FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST.

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

W.O. Number: 34859	Drawn By: J. GOAD	Date: 9-24-2019	Survey Date: 9-14-2019	Sheet 1 of 1 Sheets
--------------------	-------------------	-----------------	------------------------	---------------------



DAGGER LAKE 5 STATE COM 551H

Located 2140' FSL and 530' FWL
 Section 5, Township 22 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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

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

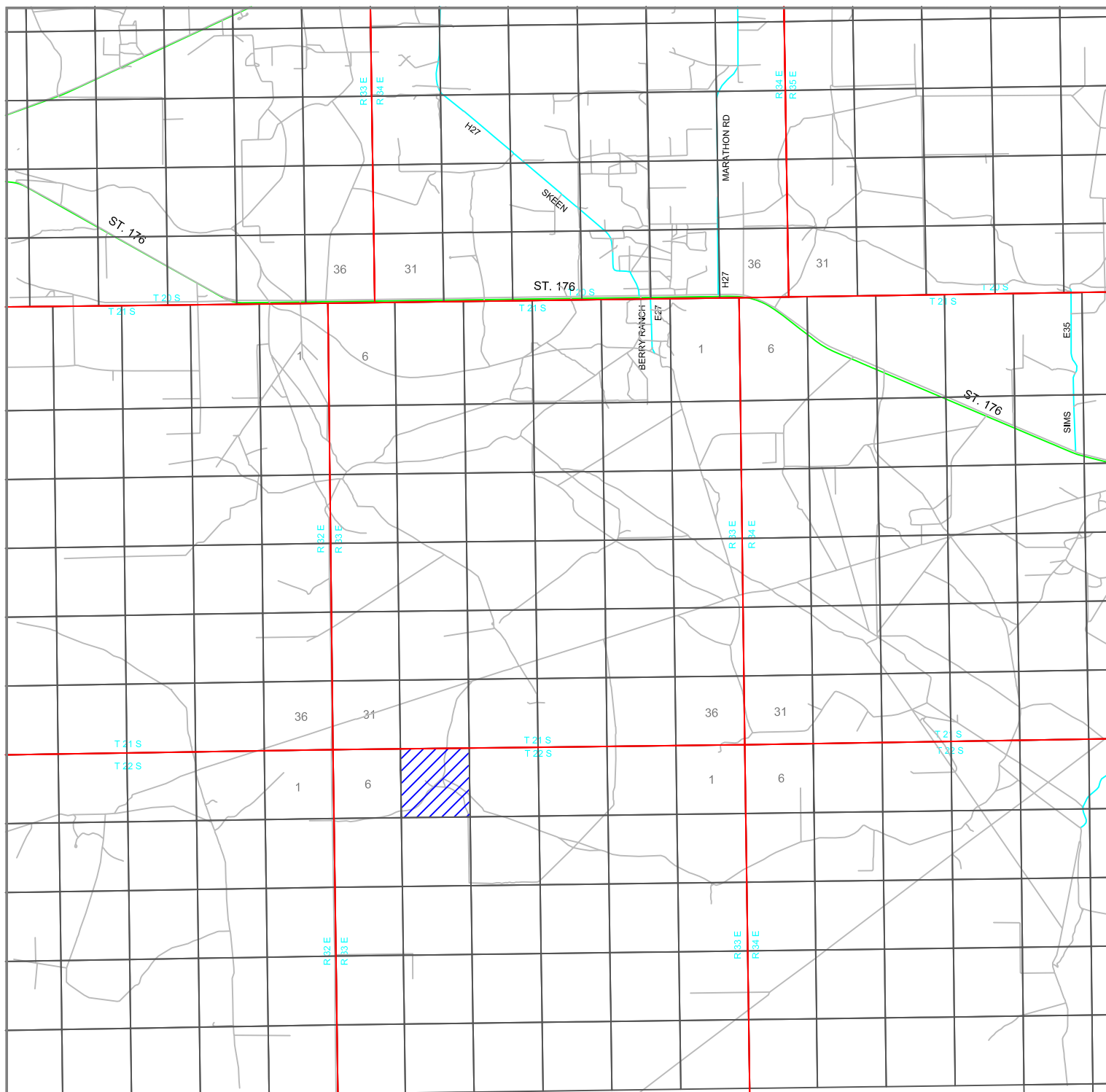
W.O. Number: JG 34859

Survey Date: 9-14-2019

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



DAGGER LAKE 5 STATE COM 551H

Located 2140' FSL and 530' FWL
 Section 5, Township 22 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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

0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

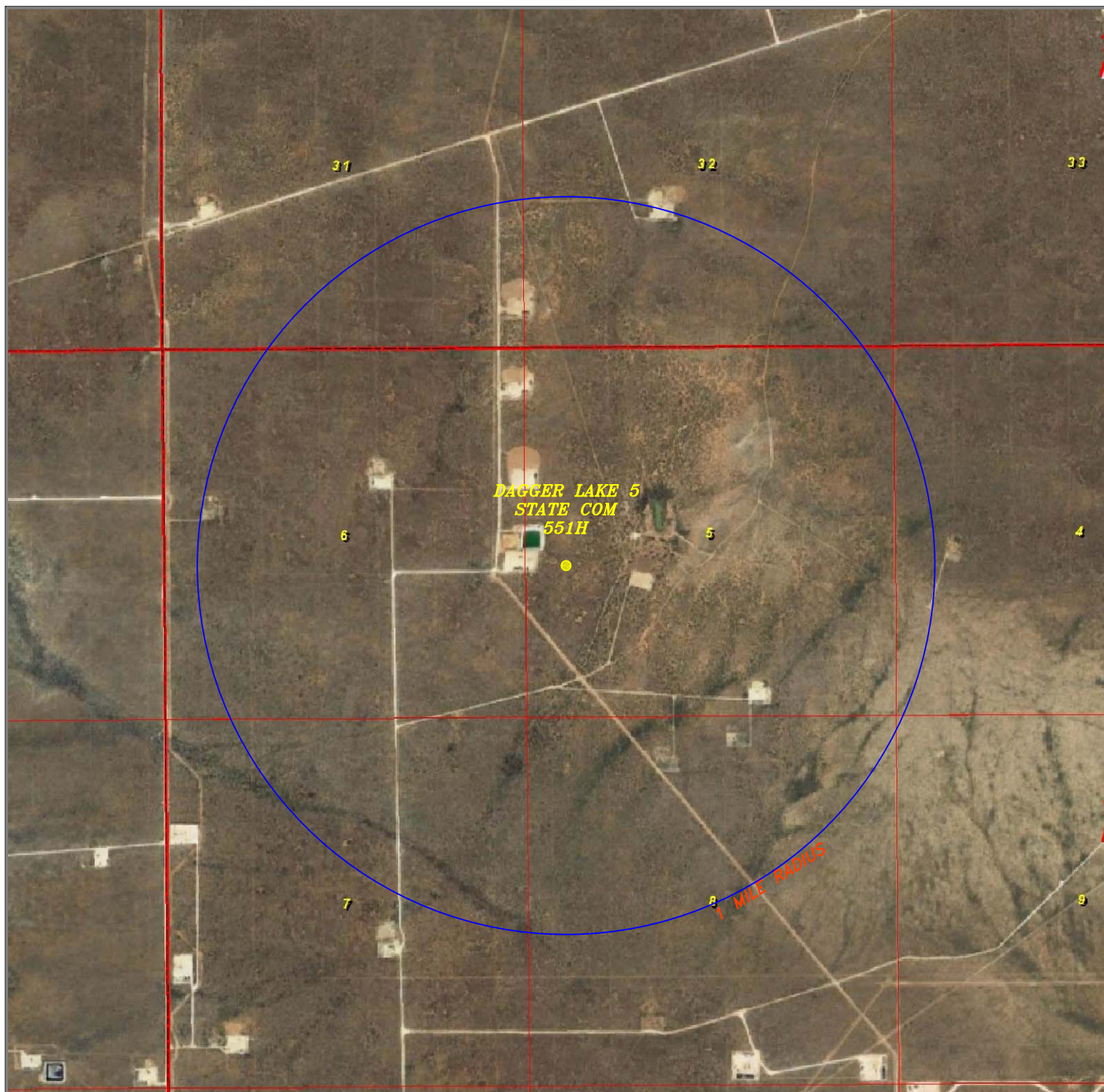
W.O. Number: JG 34859

Survey Date: 9-14-2019

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



DAGGER LAKE 5 STATE COM 551H

Located 2140' FSL and 530' FWL
 Section 5, Township 22 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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

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

W.O. Number: JG 34859

Survey Date: 9-14-2019

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**

Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

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.)		WELL API NO. 30-025-46416
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator Advance Energy Partners Hat Mesa		6. State Oil & Gas Lease No.
3. Address of Operator 11490 Westheimer Rd, Houston, TX 77077		7. Lease Name or Unit Agreement Name Dagger Lake 5 State Com
4. Well Location Unit Letter <u>L</u> : <u>2140</u> feet from the <u>S</u> line and <u>530</u> feet from the <u>W</u> line Section <u>5</u> Township <u>22S</u> Range <u>33E</u> NMPM County LEA		8. Well Number <u>551H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3654'		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.

- 11/23/19: Pressure test casing to 10,000 psi for 30 minutes.
- 12/01/19 – 12/14/19: Perforate from 11,853' – 18,816' (2104). Frac with 17,564,420 lbs sand and 23,014,740 gal fluid.
- 12/16/19 – 12/18/19: Drill all plugs out and clean out to PBTD of 18,846'.
- 12/19/19: Begin flowback – Ready to produce.
- 2/21/22 – **CORRECTION to Casing Depths filed on 12/06/19. CORRECT depths are as follows:**
 - 13.375" Surface Casing set at 1,212'
 - 9.625" Intermediate Casing set at 3,841'4,815'
 - 5.5" Production Casing set at 18,893'

Spud Date: 10/10/2019

Rig Release Date: 11/19/2019

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.

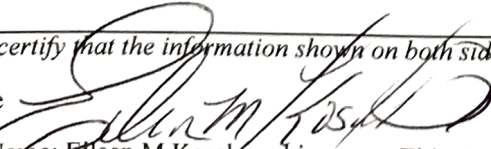
E-mail address: ekosakowski@advanceenergypartners.com

DATE: 2/21/22

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 Form C-105					
1. WELL API NO. 30-025-46416										
2. Type of Lease ☒ STATE ☐ FEE ☐ FED/INDIAN										
3. State Oil & Gas Lease No.										
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)						5. Lease Name or Unit Agreement Name Dagger Lake 5 State Com				
						6. Well Number: 551H				
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER										
8. Name of Operator Advance Energy Partners Hat Mesa, LLC						9. OGRID 372417				
10. Address of Operator 11490 Westheimer RD, Suite 950 Houston, TX 77077						11. Pool name or Wildcat LEGG;BONE SPRING				
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	530	W	Lea
BH:	D	32	21S	33E		77	N	686	W	Lea
13. Date Spudded 10/10/19	14. Date T.D. Reached 11/16/2019	15. Date Rig Released 11/19/2019		16. Date Completed (Ready to Produce) 12/19/2019		17. Elevations (DF and RKB, RT, GR, etc.) 3,654' GR				
18. Total Measured Depth of Well 18,903'		19. Plug Back Measured Depth 18,846'		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 11,853' - 18,816' Bone Spring										
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#		1,212'		14.75		565		
9.625"		40#		3,841'/4,815'		12.25		1305		
5.5"		20#		18,893'		8.5		2460		
24. LINER RECORD										
SIZE	TOP	BOTTOM	SACKS CEMENT		SCREEN		25. TUBING RECORD			
							SIZE DEPTH SET PACKER SET			
26. Perforation record (interval, size, and number) 11,853'-18,816' (2104 holes)						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED 11,853'-18,816' 17,564,420 lbs sand, 23,014,740 Gals water				
28. PRODUCTION										
Date First Production 12/22/2019		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Prod				
Date of Test 01/16/20	Hours Tested 24	Choke Size 64/64	Prod'n For Test Period 24	Oil - Bbl 1314	Gas - MCF 1443	Water - Bbl. 2682	Gas - Oil Ratio 1098			
Flow Tubing Press. N/A	Casing Pressure 446	Calculated 24-Hour Rate	Oil - Bbl. 1314	Gas - MCF 1443	Water - Bbl. 2682	Oil Gravity - API - (Corr.) 42				
29. Disposition of Gas (Sold, used for fuel, vented, etc.)							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: 11/19/2019				
34. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude _____ Longitude _____ NAD83										
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature 						Date: 2/21/22				
Printed Name: Eileen M. Kosakowski						Title: Sr. Eng Tech. E-mail Address: ekosakowski@advanceenergypartners.com				

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 9043	T.Todilto	
T. Abo	T.	T. Entrada	
T. Wolfcamp 12060	T.	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....

No. 3, from.....to.....

No. 2, from.....to.....

No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

Released to: Jennings 7/26/2024 2:27:31 PM

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 82932

ACKNOWLEDGMENTS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	OGRID: 372417
	Action Number: 82932
	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.

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

CONDITIONS

Action 82932

CONDITIONS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	OGRID: 372417
	Action Number: 82932
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	None	7/26/2024