

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 30-025-45854	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 603H

II. ¹⁰ Surface Location

UI or lot no. L	Section 5	Township 22S	Range 33E	Lot Idn	Feet from the 2140	North/South Line S	Feet from the 470	East/West line W	County Lea
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¹¹ Bottom Hole Location

UL or lot no. D	Section 32	Township 21S	Range 33E	Lot Idn	Feet from the 50	North/South line N	Feet from the 973	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

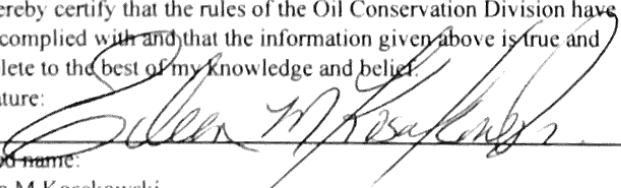
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
214984	Plains Marketing, L.P. 10 Desta Dr/Suite 200E Midland, TX 79705	O
24650	Targa Midstream Services, LLC 811 Louisiana, Suite 21 Houston, TX 77022	G

IV. Well Completion Data

²¹ Spud Date 04/27/2019	²² Ready Date 07/30/2019	²³ TD 20,304'	²⁴ PBTD 20,211'	²⁵ Perforations 12,248' – 20,196'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17.5"	13.375"	1,169	775		
12.25"	9.625"	3,772'/4,871'	970		
8.5"	5.5"	20,294'	3280		

V. Well Test Data

³¹ Date New Oil 07/31/2019	³² Gas Delivery Date 08/11/2019	³³ Test Date 8/19/2019	³⁴ Test Length 24	³⁵ Tbg. Pressure N/A	³⁶ Csg. Pressure 1491
³⁷ Choke Size 44	³⁸ Oil 1563	³⁹ Water 5262	⁴⁰ Gas 2414		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: 7/30/2024
Date: 2/21/22	Phone: 832-672-4604

DISTRICT I

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

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone (575) 748-1203 Fax: (575) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised August 4, 2011

Submit one copy to appropriate
District OfficeOIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT
As Drilled

API Number 30-025-45854	Pool Code 37870	Pool Name LEGG;BONE SPRING
Property Code 319599	Property Name DAGGER LAKE 5 STATE COM	Well Number 603H
OGRID No. 372417	Operator Name ADVANCE ENERGY PARTNERS HAT MESA	Elevation 3655'

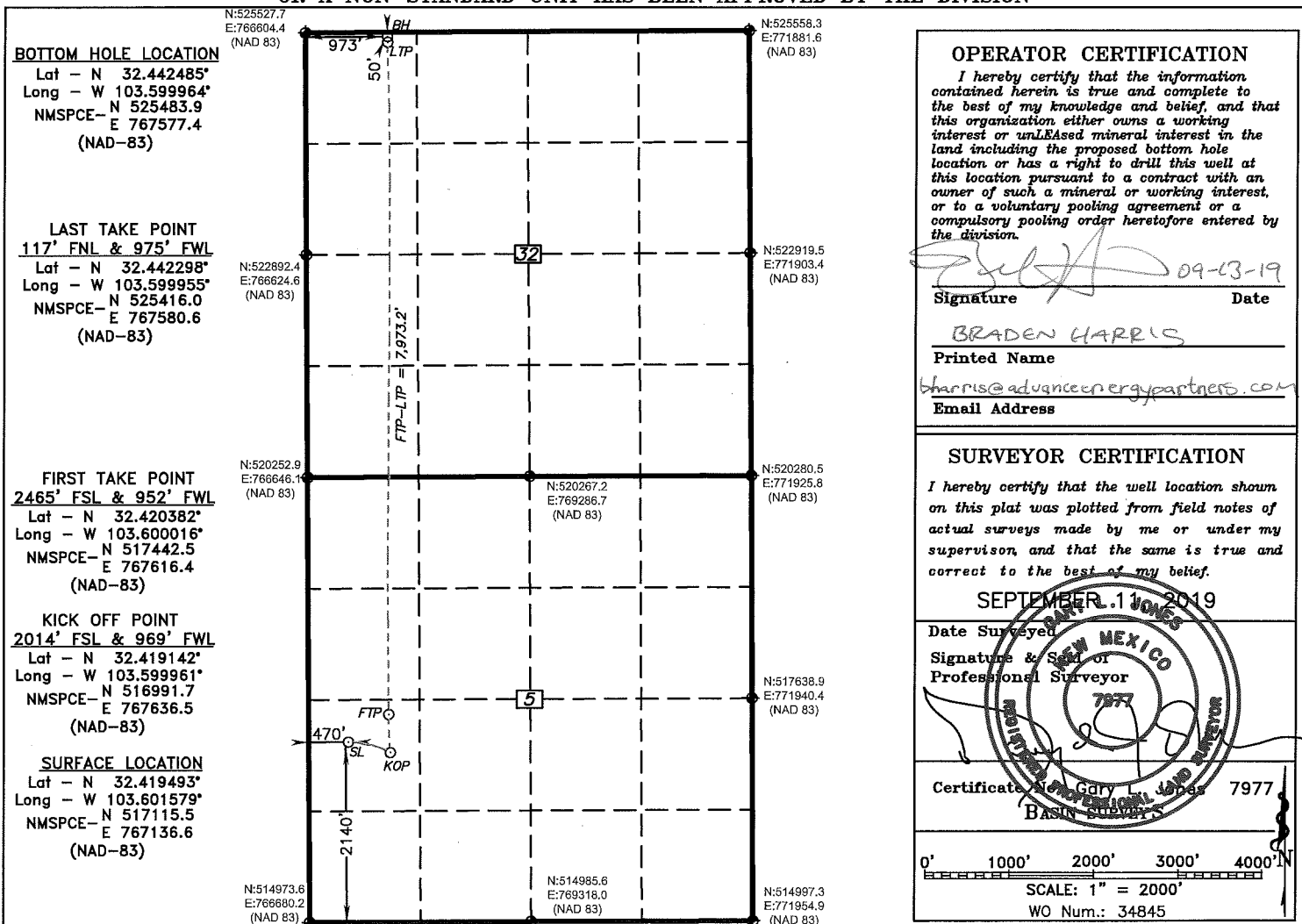
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	5	22 S	33 E		2140	SOUTH	470	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		50	NORTH	973	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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



End of Well Report

Advance Energy Partners, LLC Dagger Lake 5 State, Well No. 603H Lea County, New Mexico

Rig: H&P #620

Job No.: WT-19-063

Start Date: 04/26/2019

End Date: 05/23/2019

Directional Drillers:

Josh Cockrell, Joel Johnson, Omar Alaniz

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 #603H (WT-19-063)

2019-04-26 to 2019-05-23

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

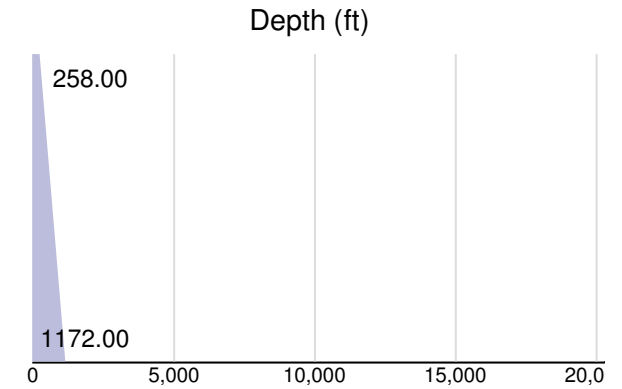
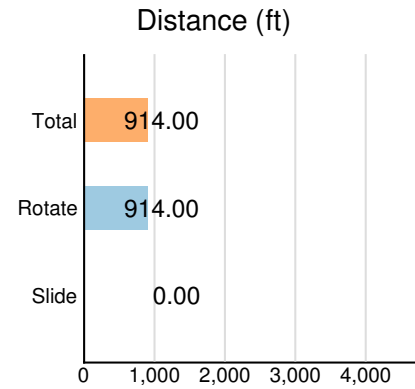
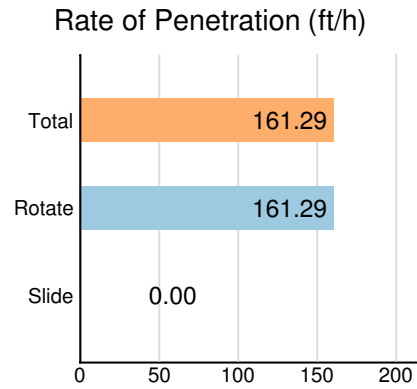
BHA Performance

BHA 1

BHA #1 Surface

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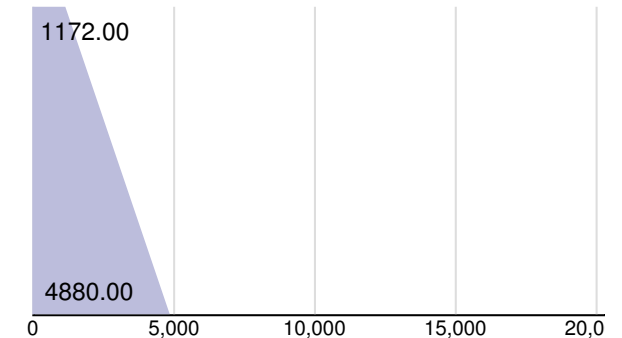
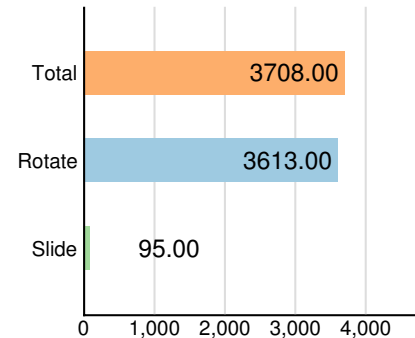
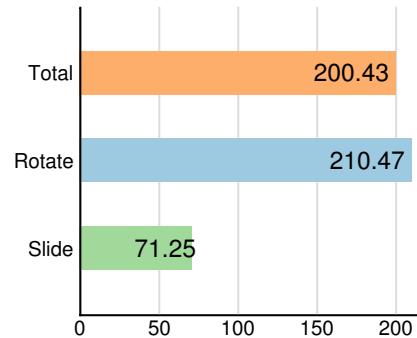


BHA 2

Drill Intermediate to Casing Point

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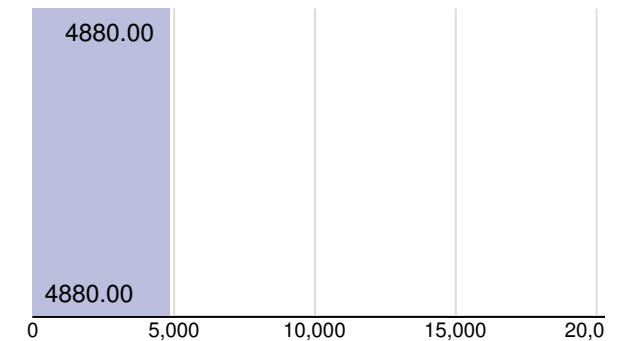
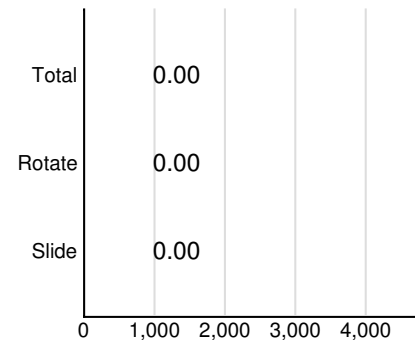
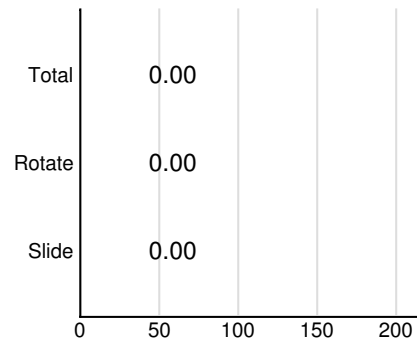


BHA 3

BHA #3

In: 05/10/2019 18:30

Out: 05/11/2019 02:45

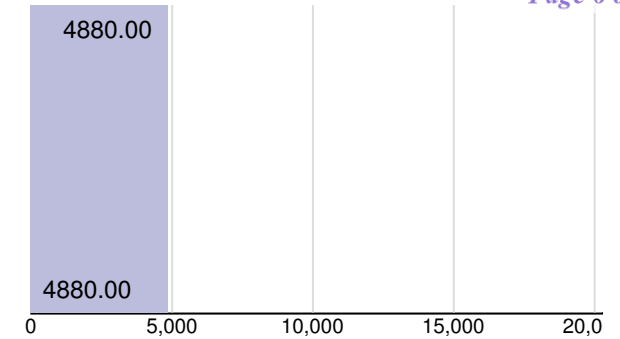
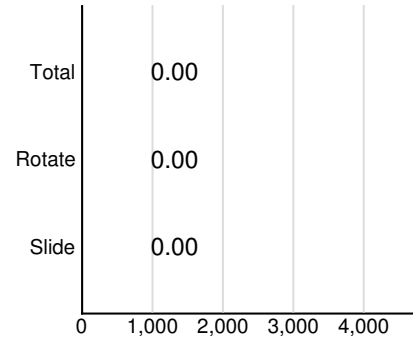
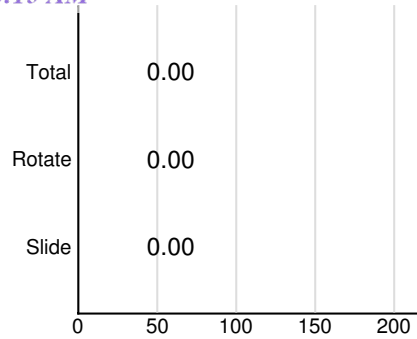


BHA 4

BHA #4 Drill out DV
Tool

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Out: 05/11/2019 11:00

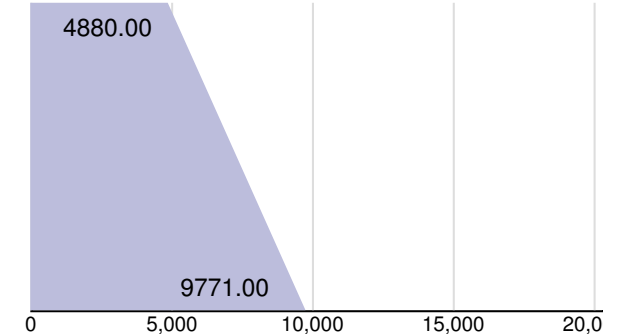
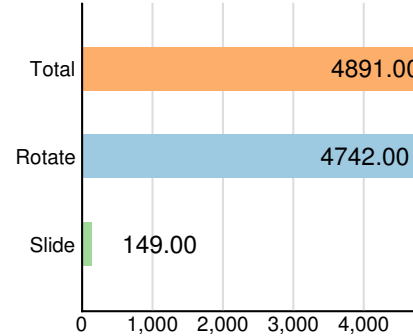
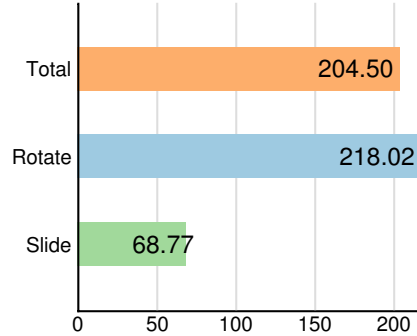


BHA 5

BHA #5
Intermediate #2

In: 05/11/2019 11:00

Out: 05/13/2019 00:30

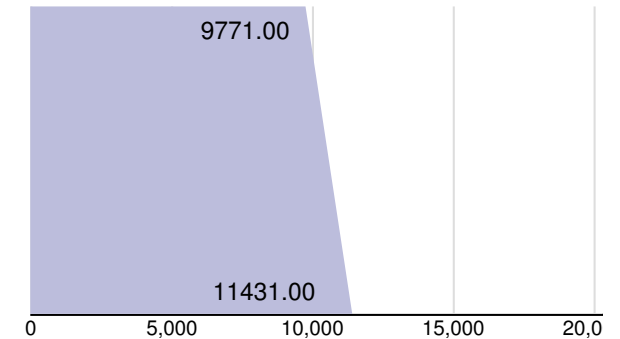
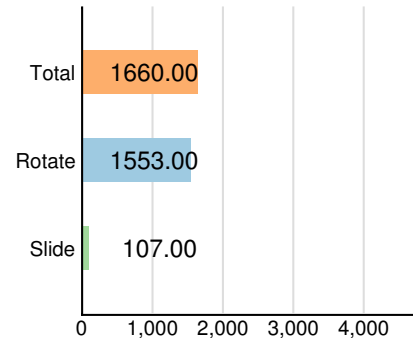
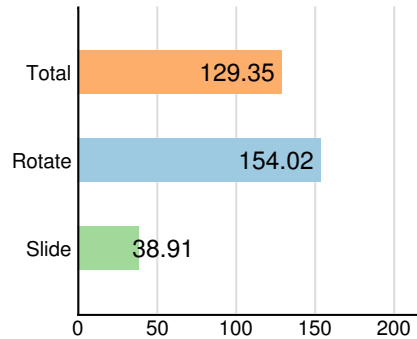


BHA 6

BHA #6
Intermediate #2

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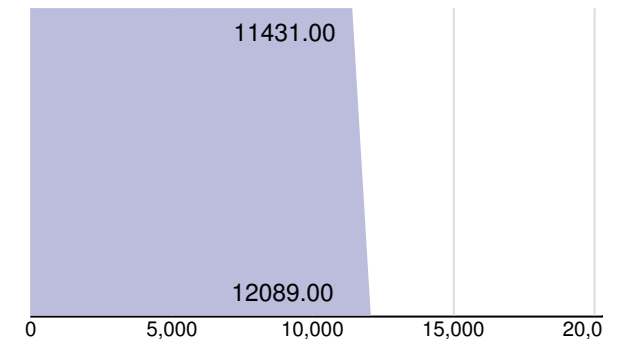
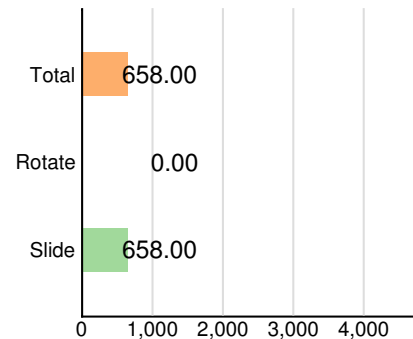
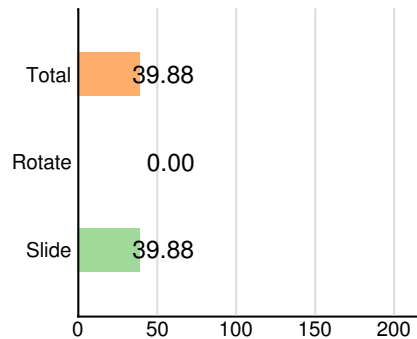


BHA 7

BHA #7 (Curve)

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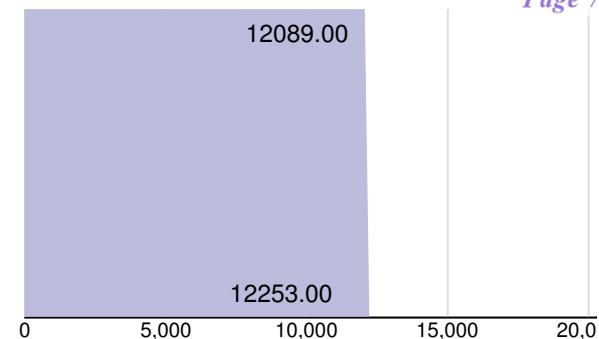
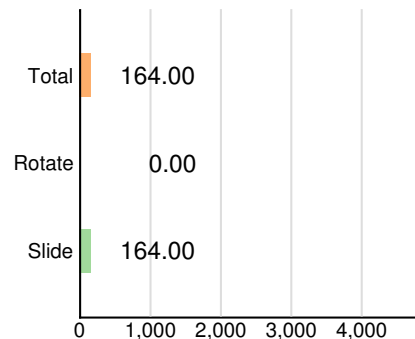
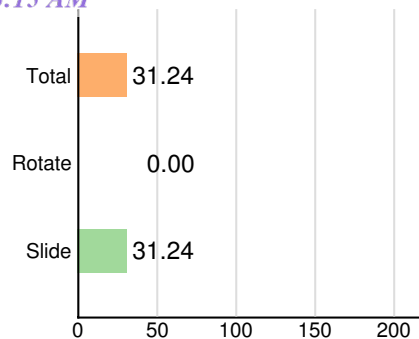


BHA 8

BHA #8 (Curve)

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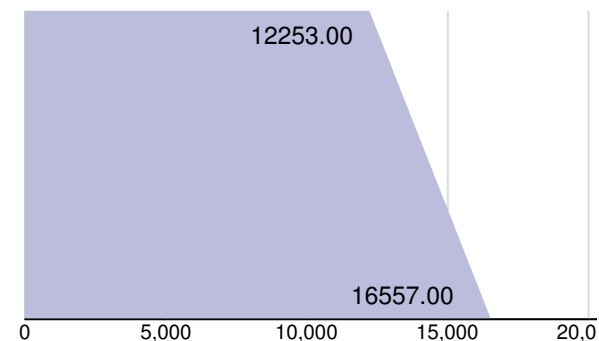
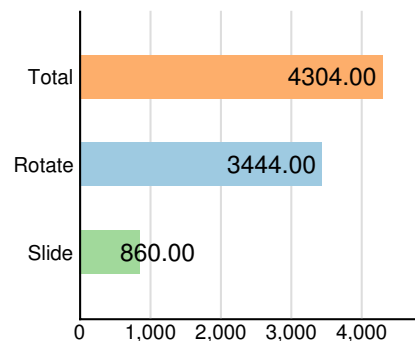
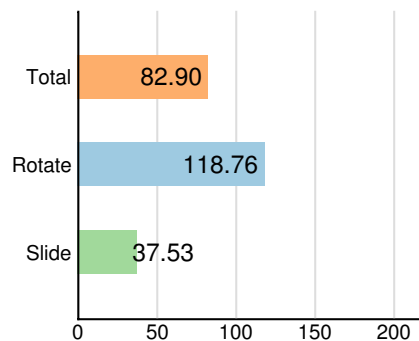


BHA 9

BHA #9 (Lateral Run)

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Out: 05/20/2019 00:00

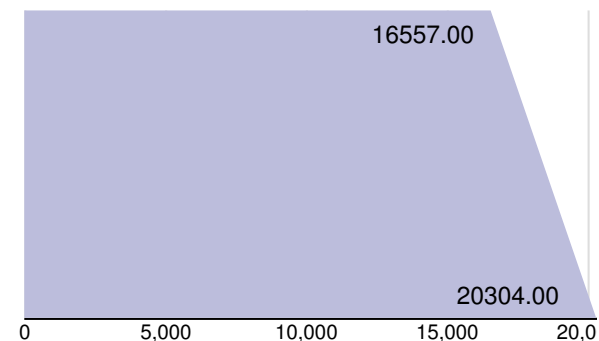
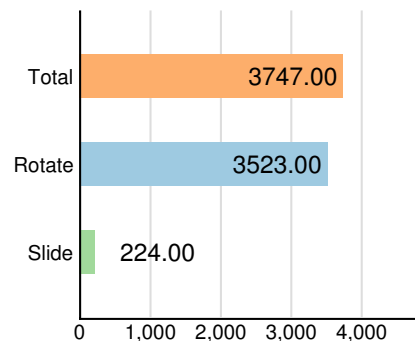
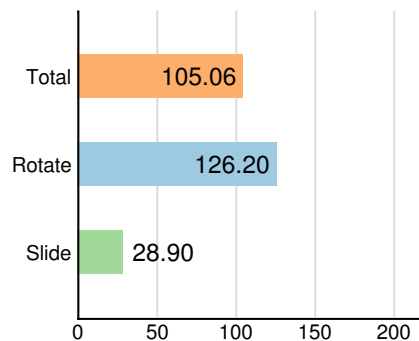


BHA 10

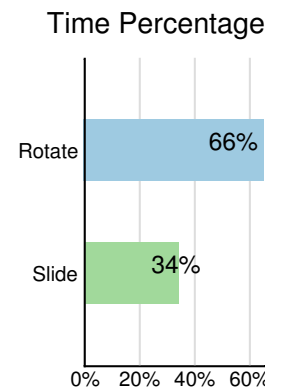
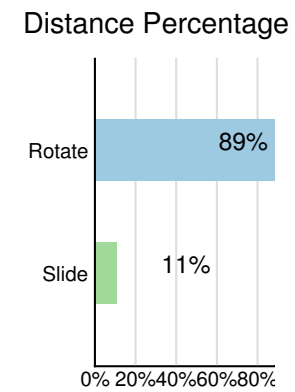
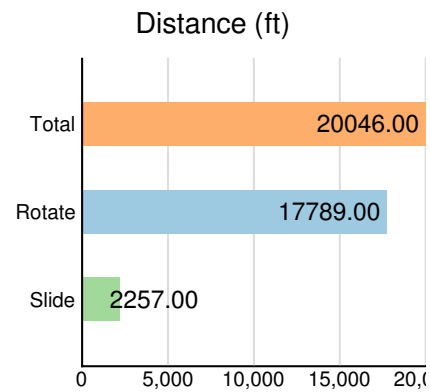
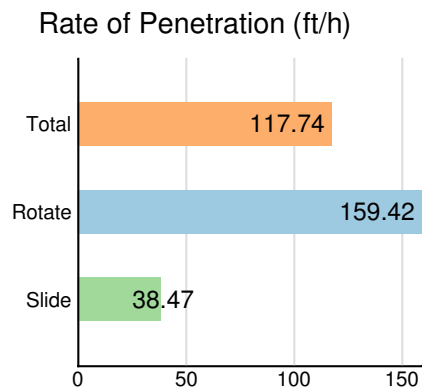
BHA #10 (Lateral II)

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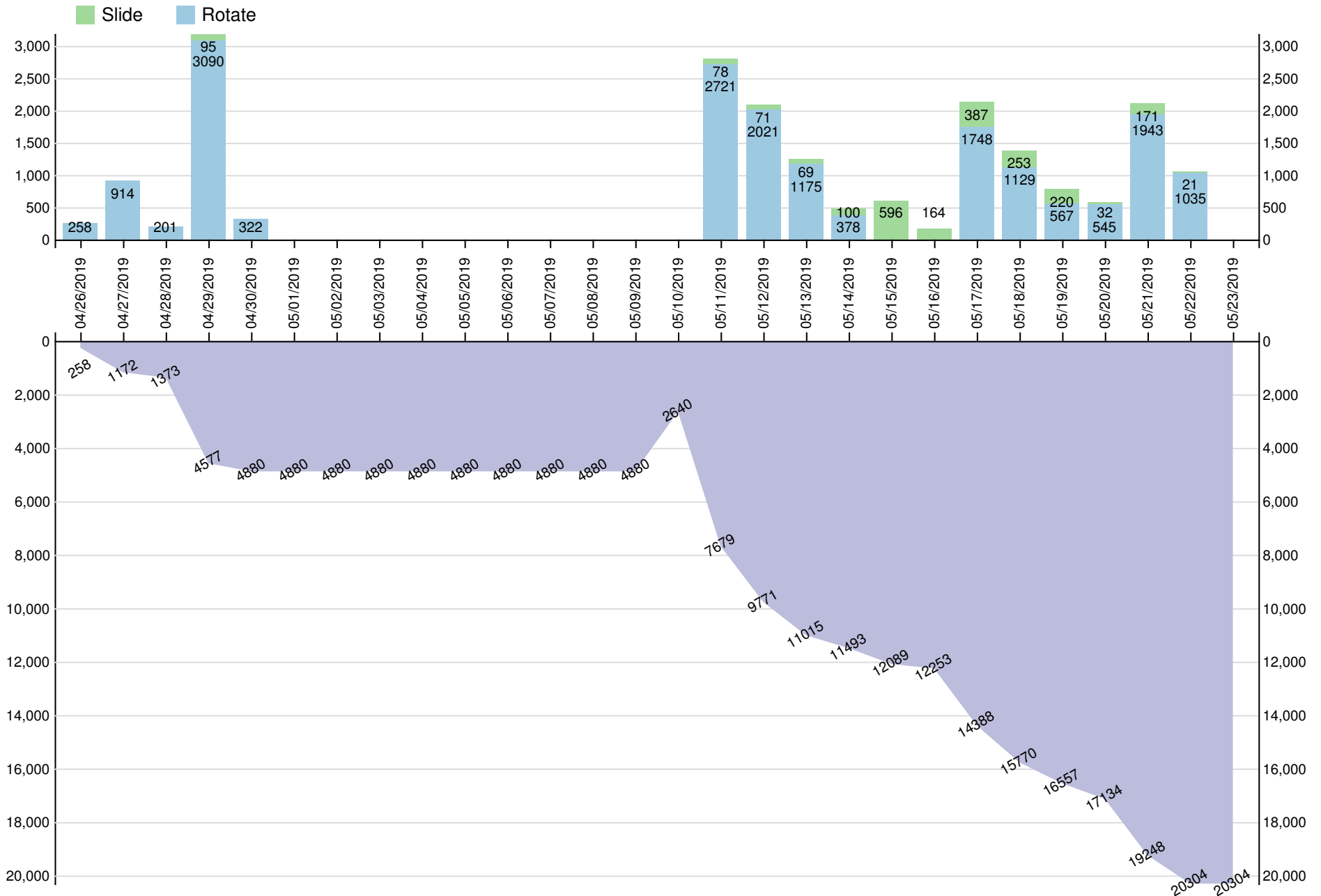
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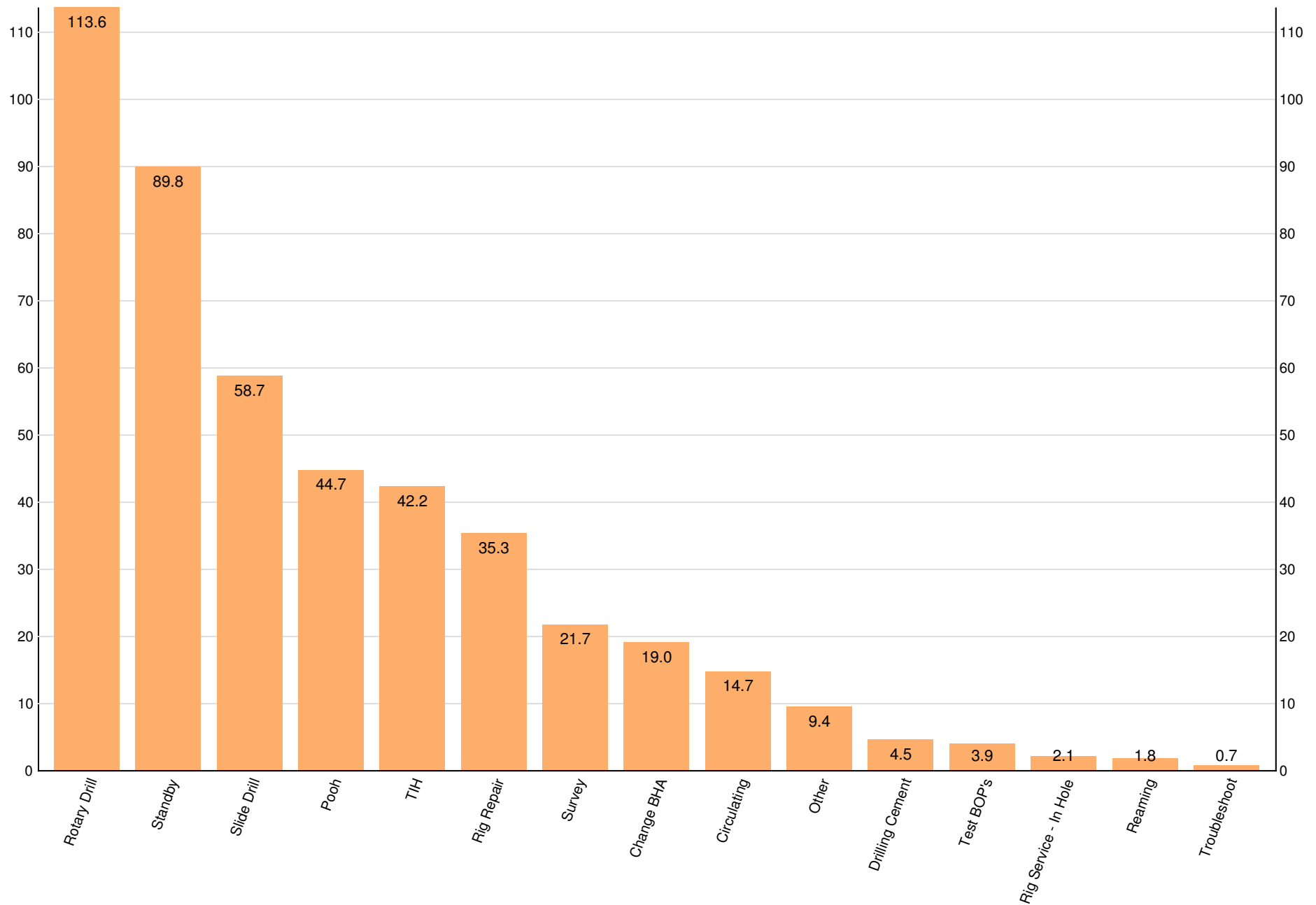
Total



Days vs. Depth



Directional Activity Hours





Proposed vs. As Drilled

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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

Advance Energy Partners, LLC

Dagger Lake 5 State 603H
Lea County, New Mexico
WT-19-063
H&P 620
Plan 1.0



Released to Imaging: 7/30/2024 2:03:30 PM

Received by OCD: 2/21/2022 11:56:15 AM

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

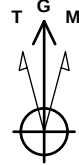
Page 12 of 12



SITE DETAILS: Dagger Lake 5 State 603H

Site Centre Northing: 517115.50
Easting: 767136.60

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid



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

Magnetic Field
Strength: 48094.4nT
Dip Angle: 60.19°
Date: 4/24/2019
Model: MVHD

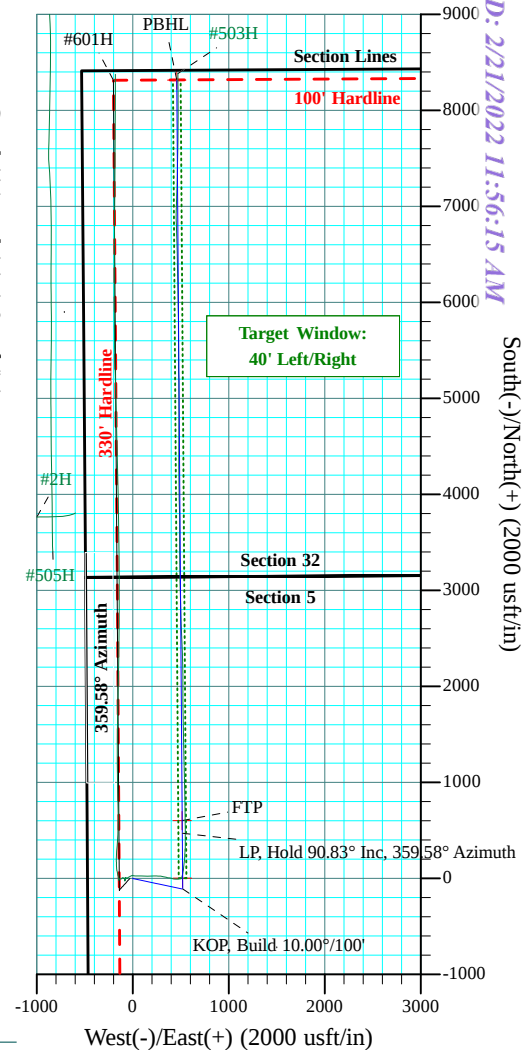
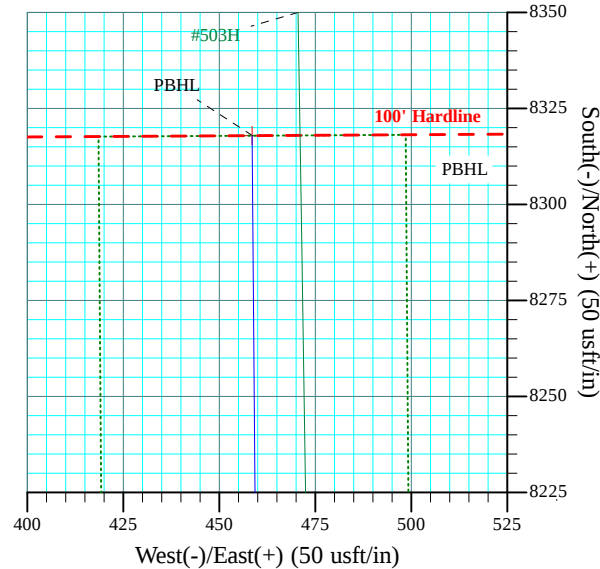
Magnetic North: 6.28° to Grid North

PROJECT DETAILS: Lea County, New Mexico

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

System Datum: Mean Sea Level

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

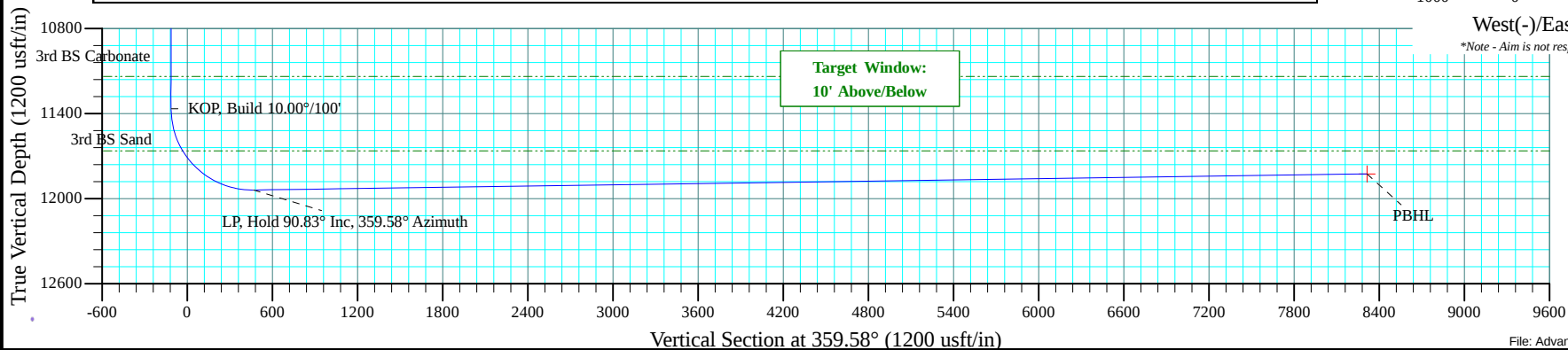


SECTION DETAILS

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	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3600.00	5.00	101.92	3599.37	-4.50	21.33	1.00	101.92	-4.66	Hold 5.0° Inc, 101.92° Azimuth
4	9210.28	5.00	101.92	9188.30	-105.50	499.76	0.00	0.00	-109.16	Drop 1.00°/100'
5	9710.28	0.00	0.00	9687.66	-110.00	521.09	1.00	180.00	-113.82	Hold Vertical
6	11389.72	0.00	0.00	11367.10	-110.00	521.09	0.00	0.00	-113.82	KOP, Build 10.00°/100'
7	12298.04	90.83	359.58	11940.00	471.26	516.78	10.00	359.58	467.46	L.P. Hold 90.83° Inc, 359.58° Azimuth
8	20145.82	90.83	359.58	11826.00	8318.00	458.60	0.00	0.00	8314.41	PBHL

DESIGN TARGET DETAILS

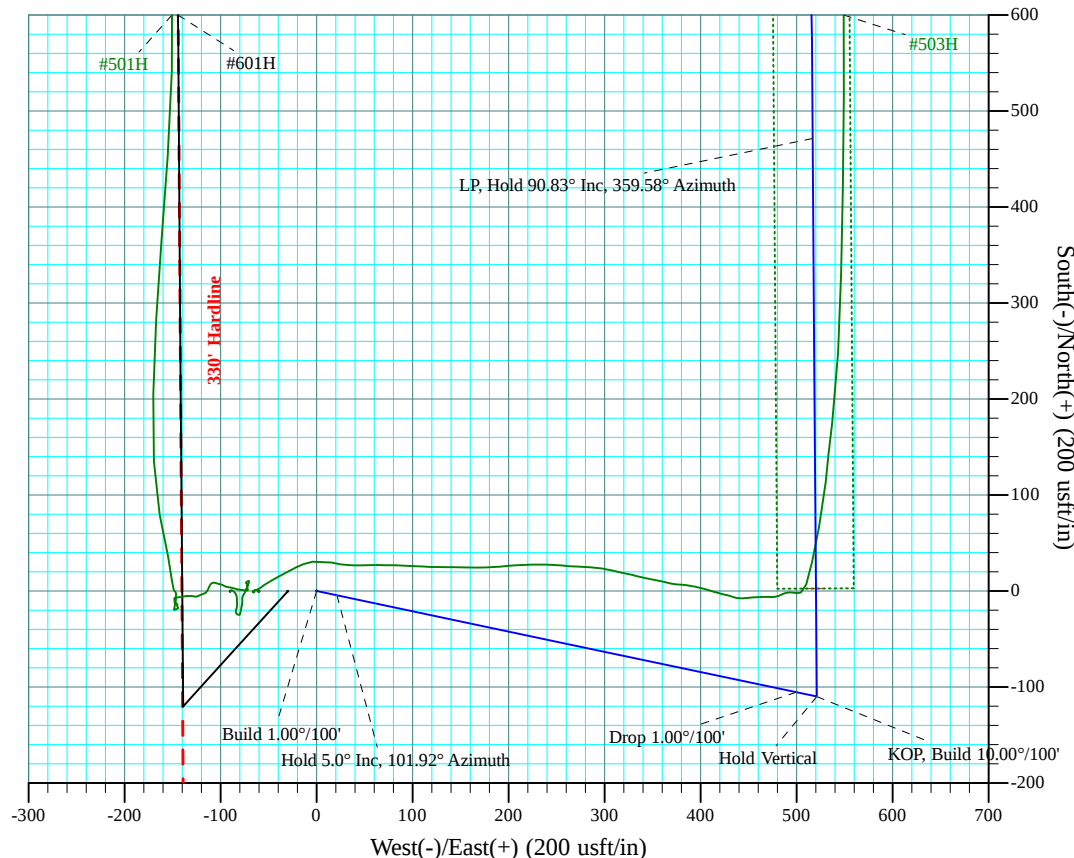
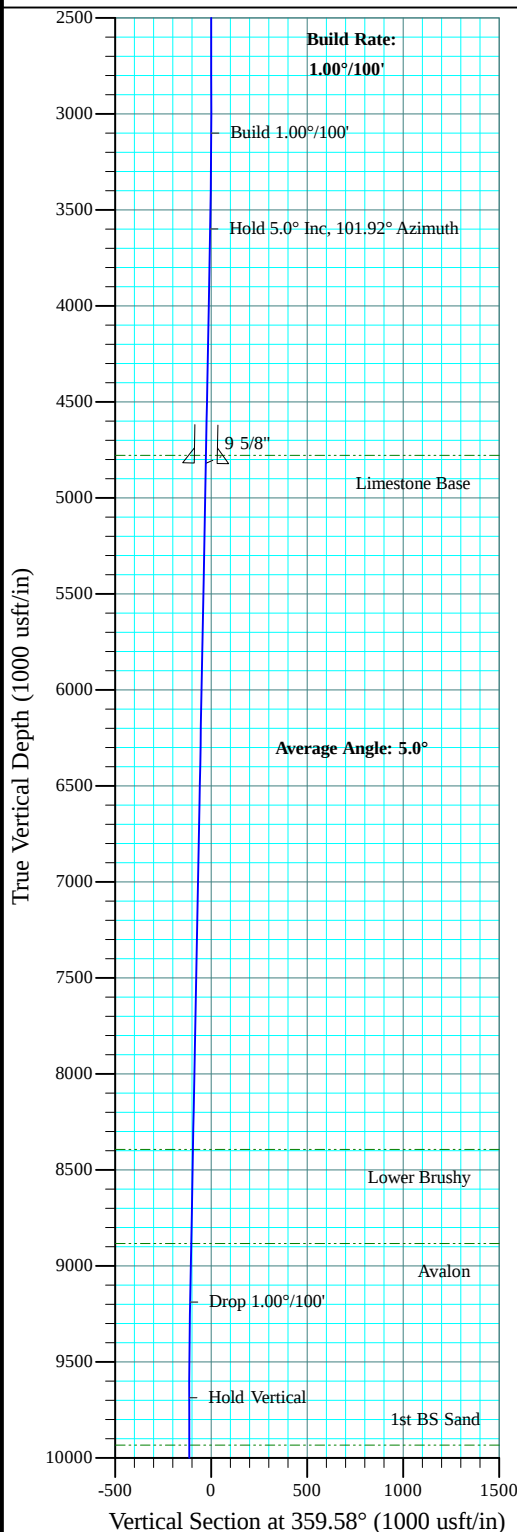
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Dagger603H)	0.00	602.80	515.80	517718.30	767652.40	32° 25' 16.101 N	103° 35' 59.617 W
KOP (Dagger603H)	0.00	2.60	519.80	517118.10	767656.40	32° 25' 10.162 N	103° 35' 59.618 W
PBHL r1 (Dagger603H)	11826.00	8318.00	458.60	525433.50	767595.20	32° 26' 32.447 N	103° 35' 59.666 W



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



Dagger Lake 5 State 603H
Lea County, New Mexico
WT-19-063
H&P 620
Plan 1.0



SITE DETAILS: Dagger Lake 5 State 603H	
Site Centre Northing:	517115.50
Easting:	767136.60
Positional Uncertainty:	0.00
Convergence:	0.39
Local North:	Grid
Depth Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)

PROJECT DETAILS: Lea County, New Mexico	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level



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

Magnetic Field
Strength: 48094.4nT
Dip Angle: 60.19°
Date: 4/24/2019
Model: MVHD

Magnetic North: 6.28° to Grid North

CASING DETAILS	
TVD	Name
1160.00	13 3/8"
4820.00	9 5/8"

SLOTS		
Slot Name	+N/-S	+E/-W
501H	-0.60	-89.90
503H	-0.30	-60.00
601H	-0.20	-30.00
603H	0.00	0.00

*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 (Dagger603H)	0.00	602.80	515.80	517718.30	767652.40	32° 25' 16.101 N	103° 35' 59.617 W
KOP (Dagger603H)	0.00	2.60	519.80	517118.10	767656.40	32° 25' 10.162 N	103° 35' 59.618 W
PBHL r1 (Dagger603H)	11826.00	8318.00	458.60	525433.50	767595.20	32° 26' 32.447 N	103° 35' 59.666 W

Drawn By: IG

Date Created: 4/16/2019

Date Revised: 4/24/2019

File: Advance Energy - Dagger Lake 5 State #603H Plan 1.0 Surface.wpc

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	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	3600.00	5.00	101.92	3599.37	-4.50	21.33	1.00	101.92	-4.66	Hold 5.0° Inc, 101.92° Azimuth
4	9210.28	5.00	101.92	9188.30	-105.50	499.76	0.00	0.00	-109.16	Drop 1.00°/100'
5	9710.28	0.00	0.00	9687.66	-110.00	521.09	1.00	180.00	-113.82	Hold Vertical
6	11389.72	0.00	0.00	11367.10	-110.00	521.09	0.00	0.00	-113.82	KOP, Build 1000°/100'
7	12014.62	90.83	359.58	11826.00	8318.00	458.60	0.00	0.00	467.46	LP, Hold 90.83° Inc, 359.58° Azimuth
8	20145.62	90.83	359.58	11826.00	8318.00	458.60	0.00	0.00	8314.41	PBHL

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.14 Single User Db

Project	Lea County, New Mexico		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Dagger Lake 5 State 603H			
Site Position:		Northing:	517,115.50 usft	Latitude:	32° 25' 10.172 N
From:	Map	Easting:	767,136.60 usft	Longitude:	103° 36' 5.682 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#603H - Slot 603H					
Well Position	+N/-S	0.00 usft	Northing:	517,115.50 usft	Latitude:	32° 25' 10.172 N
	+E/-W	0.00 usft	Easting:	767,136.60 usft	Longitude:	103° 36' 5.682 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,655.00 usft

Wellbore	Lateral 1r1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	4/24/2019	6.67	60.19	48,094.44003301

Design	Plan 1.0				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.58	

Survey Tool Program	Date	4/24/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	20,145.82	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 (Dagger603H) - KOP (Dagger603H)									
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

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Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
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Well:	#603H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.14 Single User Db

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,108.00	0.00	0.00	1,108.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,160.00	0.00	0.00	1,160.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 1.00°/100'									
3,200.00	1.00	101.92	3,199.99	-0.18	0.85	-0.19	1.00	1.00	0.00
3,300.00	2.00	101.92	3,299.96	-0.72	3.42	-0.75	1.00	1.00	0.00
3,400.00	3.00	101.92	3,399.86	-1.62	7.68	-1.68	1.00	1.00	0.00
3,500.00	4.00	101.92	3,499.68	-2.88	13.66	-2.98	1.00	1.00	0.00
3,600.00	5.00	101.92	3,599.37	-4.50	21.33	-4.66	1.00	1.00	0.00
Hold 5.0° Inc, 101.92° Azimuth									
3,700.00	5.00	101.92	3,698.99	-6.30	29.86	-6.52	0.00	0.00	0.00
3,800.00	5.00	101.92	3,798.60	-8.10	38.39	-8.38	0.00	0.00	0.00
3,900.00	5.00	101.92	3,898.22	-9.90	46.92	-10.25	0.00	0.00	0.00
4,000.00	5.00	101.92	3,997.84	-11.70	55.44	-12.11	0.00	0.00	0.00
4,100.00	5.00	101.92	4,097.46	-13.50	63.97	-13.97	0.00	0.00	0.00
4,200.00	5.00	101.92	4,197.08	-15.30	72.50	-15.84	0.00	0.00	0.00
4,300.00	5.00	101.92	4,296.70	-17.10	81.03	-17.70	0.00	0.00	0.00
4,400.00	5.00	101.92	4,396.32	-18.90	89.55	-19.56	0.00	0.00	0.00
4,500.00	5.00	101.92	4,495.94	-20.70	98.08	-21.42	0.00	0.00	0.00
4,600.00	5.00	101.92	4,595.56	-22.50	106.61	-23.29	0.00	0.00	0.00
4,700.00	5.00	101.92	4,695.18	-24.30	115.14	-25.15	0.00	0.00	0.00

Aim Directional Services, LLC

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Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
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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)
4,783.14	5.00	101.92	4,778.00	-25.80	122.23	-26.70	0.00	0.00	0.00
Limestone Base									
4,800.00	5.00	101.92	4,794.80	-26.11	123.66	-27.01	0.00	0.00	0.00
4,825.30	5.00	101.92	4,820.00	-26.56	125.82	-27.48	0.00	0.00	0.00
9 5/8"									
4,900.00	5.00	101.92	4,894.42	-27.91	132.19	-28.87	0.00	0.00	0.00
5,000.00	5.00	101.92	4,994.04	-29.71	140.72	-30.74	0.00	0.00	0.00
5,100.00	5.00	101.92	5,093.66	-31.51	149.25	-32.60	0.00	0.00	0.00
5,200.00	5.00	101.92	5,193.28	-33.31	157.77	-34.46	0.00	0.00	0.00
5,300.00	5.00	101.92	5,292.90	-35.11	166.30	-36.32	0.00	0.00	0.00
5,400.00	5.00	101.92	5,392.52	-36.91	174.83	-38.19	0.00	0.00	0.00
5,500.00	5.00	101.92	5,492.14	-38.71	183.36	-40.05	0.00	0.00	0.00
5,600.00	5.00	101.92	5,591.76	-40.51	191.89	-41.91	0.00	0.00	0.00
5,700.00	5.00	101.92	5,691.37	-42.31	200.41	-43.77	0.00	0.00	0.00
5,800.00	5.00	101.92	5,790.99	-44.11	208.94	-45.64	0.00	0.00	0.00
5,900.00	5.00	101.92	5,890.61	-45.91	217.47	-47.50	0.00	0.00	0.00
6,000.00	5.00	101.92	5,990.23	-47.71	226.00	-49.36	0.00	0.00	0.00
6,100.00	5.00	101.92	6,089.85	-49.51	234.52	-51.22	0.00	0.00	0.00
6,200.00	5.00	101.92	6,189.47	-51.31	243.05	-53.09	0.00	0.00	0.00
6,300.00	5.00	101.92	6,289.09	-53.11	251.58	-54.95	0.00	0.00	0.00
6,400.00	5.00	101.92	6,388.71	-54.91	260.11	-56.81	0.00	0.00	0.00
6,500.00	5.00	101.92	6,488.33	-56.71	268.63	-58.68	0.00	0.00	0.00
6,600.00	5.00	101.92	6,587.95	-58.51	277.16	-60.54	0.00	0.00	0.00
6,700.00	5.00	101.92	6,687.57	-60.31	285.69	-62.40	0.00	0.00	0.00
6,800.00	5.00	101.92	6,787.19	-62.11	294.22	-64.26	0.00	0.00	0.00
6,900.00	5.00	101.92	6,886.81	-63.91	302.74	-66.13	0.00	0.00	0.00
7,000.00	5.00	101.92	6,986.43	-65.71	311.27	-67.99	0.00	0.00	0.00
7,100.00	5.00	101.92	7,086.05	-67.51	319.80	-69.85	0.00	0.00	0.00
7,200.00	5.00	101.92	7,185.67	-69.31	328.33	-71.71	0.00	0.00	0.00
7,300.00	5.00	101.92	7,285.29	-71.11	336.86	-73.58	0.00	0.00	0.00
7,400.00	5.00	101.92	7,384.91	-72.91	345.38	-75.44	0.00	0.00	0.00
7,500.00	5.00	101.92	7,484.53	-74.71	353.91	-77.30	0.00	0.00	0.00
7,600.00	5.00	101.92	7,584.14	-76.51	362.44	-79.16	0.00	0.00	0.00
7,700.00	5.00	101.92	7,683.76	-78.31	370.97	-81.03	0.00	0.00	0.00
7,800.00	5.00	101.92	7,783.38	-80.11	379.49	-82.89	0.00	0.00	0.00
7,900.00	5.00	101.92	7,883.00	-81.91	388.02	-84.75	0.00	0.00	0.00
8,000.00	5.00	101.92	7,982.62	-83.71	396.55	-86.61	0.00	0.00	0.00
8,100.00	5.00	101.92	8,082.24	-85.51	405.08	-88.48	0.00	0.00	0.00
8,200.00	5.00	101.92	8,181.86	-87.31	413.60	-90.34	0.00	0.00	0.00
8,300.00	5.00	101.92	8,281.48	-89.11	422.13	-92.20	0.00	0.00	0.00
8,400.00	5.00	101.92	8,381.10	-90.91	430.66	-94.06	0.00	0.00	0.00
8,411.95	5.00	101.92	8,393.00	-91.13	431.68	-94.29	0.00	0.00	0.00
Lower Brushy									

Aim Directional Services, LLC

Survey Report

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Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
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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	101.92	8,480.72	-92.71	439.19	-95.93	0.00	0.00	0.00	
8,600.00	5.00	101.92	8,580.34	-94.51	447.71	-97.79	0.00	0.00	0.00	
8,700.00	5.00	101.92	8,679.96	-96.31	456.24	-99.65	0.00	0.00	0.00	
8,800.00	5.00	101.92	8,779.58	-98.11	464.77	-101.52	0.00	0.00	0.00	
8,900.00	5.00	101.92	8,879.20	-99.91	473.30	-103.38	0.00	0.00	0.00	
8,903.82	5.00	101.92	8,883.00	-99.98	473.62	-103.45	0.00	0.00	0.00	
Avalon										
9,000.00	5.00	101.92	8,978.82	-101.71	481.83	-105.24	0.00	0.00	0.00	
9,100.00	5.00	101.92	9,078.44	-103.51	490.35	-107.10	0.00	0.00	0.00	
9,200.00	5.00	101.92	9,178.06	-105.31	498.88	-108.97	0.00	0.00	0.00	
9,210.28	5.00	101.92	9,188.30	-105.50	499.76	-109.16	0.00	0.00	0.00	
Drop 1.00°/100'										
9,300.00	4.10	101.92	9,277.73	-106.97	506.72	-110.68	1.00	-1.00	0.00	
9,400.00	3.10	101.92	9,377.53	-108.27	512.87	-112.02	1.00	-1.00	0.00	
9,500.00	2.10	101.92	9,477.43	-109.20	517.31	-112.99	1.00	-1.00	0.00	
9,600.00	1.10	101.92	9,577.39	-109.78	520.05	-113.59	1.00	-1.00	0.00	
9,700.00	0.10	101.92	9,677.38	-110.00	521.08	-113.81	1.00	-1.00	0.00	
9,710.28	0.00	0.00	9,687.66	-110.00	521.09	-113.82	1.00	-1.00	0.00	
Hold Vertical										
9,800.00	0.00	0.00	9,777.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,877.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
9,955.62	0.00	0.00	9,933.00	-110.00	521.09	-113.82	0.00	0.00	0.00	
1st BS Sand										
10,000.00	0.00	0.00	9,977.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,077.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,177.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,277.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,377.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,477.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,595.62	0.00	0.00	10,573.00	-110.00	521.09	-113.82	0.00	0.00	0.00	
2nd BS Sand										
10,600.00	0.00	0.00	10,577.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,677.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,777.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,877.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,977.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
11,100.00	0.00	0.00	11,077.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
11,161.62	0.00	0.00	11,139.00	-110.00	521.09	-113.82	0.00	0.00	0.00	
3rd BS Carbonate										
11,200.00	0.00	0.00	11,177.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
11,300.00	0.00	0.00	11,277.38	-110.00	521.09	-113.82	0.00	0.00	0.00	
11,389.72	0.00	0.00	11,367.10	-110.00	521.09	-113.82	0.00	0.00	0.00	
KOP, Build 10.00°/100'										
11,400.00	1.03	359.58	11,377.38	-109.91	521.09	-113.72	10.00	10.00	0.00	
11,450.00	6.03	359.58	11,427.27	-106.83	521.07	-110.65	10.00	10.00	0.00	

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Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.14 Single User Db

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,500.00	11.03	359.58	11,476.70	-99.42	521.01	-103.24	10.00	10.00	0.00
11,550.00	16.03	359.58	11,525.30	-87.73	520.92	-91.54	10.00	10.00	0.00
11,600.00	21.03	359.58	11,572.69	-71.84	520.81	-75.66	10.00	10.00	0.00
11,650.00	26.03	359.58	11,618.52	-51.89	520.66	-55.71	10.00	10.00	0.00
11,700.00	31.03	359.58	11,662.44	-28.02	520.48	-31.83	10.00	10.00	0.00
11,700.66	31.09	359.58	11,663.00	-27.68	520.48	-31.50	10.00	10.00	0.00
3rd BS Sand									
11,750.00	36.03	359.58	11,704.10	-0.41	520.28	-4.23	10.00	10.00	0.00
11,800.00	41.03	359.58	11,743.21	30.72	520.05	26.91	10.00	10.00	0.00
11,850.00	46.03	359.58	11,779.45	65.15	519.79	61.33	10.00	10.00	0.00
11,900.00	51.03	359.58	11,812.55	102.60	519.51	98.79	10.00	10.00	0.00
11,950.00	56.03	359.58	11,842.26	142.79	519.22	138.98	10.00	10.00	0.00
12,000.00	61.03	359.58	11,868.36	185.42	518.90	181.61	10.00	10.00	0.00
12,050.00	66.03	359.58	11,890.64	230.16	518.57	226.36	10.00	10.00	0.00
12,100.00	71.03	359.58	11,908.93	276.68	518.22	272.87	10.00	10.00	0.00
12,150.00	76.03	359.58	11,923.11	324.61	517.87	320.80	10.00	10.00	0.00
12,200.00	81.03	359.58	11,933.05	373.59	517.50	369.79	10.00	10.00	0.00
12,250.00	86.03	359.58	11,938.68	423.26	517.14	419.46	10.00	10.00	0.00
12,298.04	90.83	359.58	11,940.00	471.26	516.78	467.46	10.00	10.00	0.00
LP, Hold 90.83° Inc, 359.58° Azimuth									
12,300.00	90.83	359.58	11,939.97	473.22	516.77	469.42	0.00	0.00	0.00
12,400.00	90.83	359.58	11,938.52	573.21	516.02	569.41	0.00	0.00	0.00
12,500.00	90.83	359.58	11,937.06	673.20	515.28	669.40	0.00	0.00	0.00
12,600.00	90.83	359.58	11,935.61	773.18	514.54	769.39	0.00	0.00	0.00
12,700.00	90.83	359.58	11,934.16	873.17	513.80	869.38	0.00	0.00	0.00
12,800.00	90.83	359.58	11,932.71	973.16	513.06	969.37	0.00	0.00	0.00
12,900.00	90.83	359.58	11,931.25	1,073.14	512.32	1,069.36	0.00	0.00	0.00
13,000.00	90.83	359.58	11,929.80	1,173.13	511.58	1,169.35	0.00	0.00	0.00
13,100.00	90.83	359.58	11,928.35	1,273.12	510.83	1,269.34	0.00	0.00	0.00
13,200.00	90.83	359.58	11,926.90	1,373.10	510.09	1,369.33	0.00	0.00	0.00
13,300.00	90.83	359.58	11,925.44	1,473.09	509.35	1,469.32	0.00	0.00	0.00
13,400.00	90.83	359.58	11,923.99	1,573.08	508.61	1,569.31	0.00	0.00	0.00
13,500.00	90.83	359.58	11,922.54	1,673.06	507.87	1,669.30	0.00	0.00	0.00
13,600.00	90.83	359.58	11,921.09	1,773.05	507.13	1,769.29	0.00	0.00	0.00
13,700.00	90.83	359.58	11,919.63	1,873.04	506.39	1,869.28	0.00	0.00	0.00
13,800.00	90.83	359.58	11,918.18	1,973.02	505.65	1,969.26	0.00	0.00	0.00
13,900.00	90.83	359.58	11,916.73	2,073.01	504.90	2,069.25	0.00	0.00	0.00
14,000.00	90.83	359.58	11,915.27	2,173.00	504.16	2,169.24	0.00	0.00	0.00
14,100.00	90.83	359.58	11,913.82	2,272.98	503.42	2,269.23	0.00	0.00	0.00
14,200.00	90.83	359.58	11,912.37	2,372.97	502.68	2,369.22	0.00	0.00	0.00
14,300.00	90.83	359.58	11,910.92	2,472.96	501.94	2,469.21	0.00	0.00	0.00
14,400.00	90.83	359.58	11,909.46	2,572.94	501.20	2,569.20	0.00	0.00	0.00
14,500.00	90.83	359.58	11,908.01	2,672.93	500.46	2,669.19	0.00	0.00	0.00
14,600.00	90.83	359.58	11,906.56	2,772.92	499.71	2,769.18	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 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.14 Single User Db

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,700.00	90.83	359.58	11,905.11	2,872.90	498.97	2,869.17	0.00	0.00	0.00
14,800.00	90.83	359.58	11,903.65	2,972.89	498.23	2,969.16	0.00	0.00	0.00
14,900.00	90.83	359.58	11,902.20	3,072.88	497.49	3,069.15	0.00	0.00	0.00
15,000.00	90.83	359.58	11,900.75	3,172.86	496.75	3,169.14	0.00	0.00	0.00
15,100.00	90.83	359.58	11,899.30	3,272.85	496.01	3,269.13	0.00	0.00	0.00
15,200.00	90.83	359.58	11,897.84	3,372.84	495.27	3,369.12	0.00	0.00	0.00
15,300.00	90.83	359.58	11,896.39	3,472.82	494.52	3,469.11	0.00	0.00	0.00
15,400.00	90.83	359.58	11,894.94	3,572.81	493.78	3,569.10	0.00	0.00	0.00
15,500.00	90.83	359.58	11,893.49	3,672.80	493.04	3,669.09	0.00	0.00	0.00
15,600.00	90.83	359.58	11,892.03	3,772.78	492.30	3,769.07	0.00	0.00	0.00
15,700.00	90.83	359.58	11,890.58	3,872.77	491.56	3,869.06	0.00	0.00	0.00
15,800.00	90.83	359.58	11,889.13	3,972.76	490.82	3,969.05	0.00	0.00	0.00
15,900.00	90.83	359.58	11,887.68	4,072.75	490.08	4,069.04	0.00	0.00	0.00
16,000.00	90.83	359.58	11,886.22	4,172.73	489.34	4,169.03	0.00	0.00	0.00
16,100.00	90.83	359.58	11,884.77	4,272.72	488.59	4,269.02	0.00	0.00	0.00
16,200.00	90.83	359.58	11,883.32	4,372.71	487.85	4,369.01	0.00	0.00	0.00
16,300.00	90.83	359.58	11,881.86	4,472.69	487.11	4,469.00	0.00	0.00	0.00
16,400.00	90.83	359.58	11,880.41	4,572.68	486.37	4,568.99	0.00	0.00	0.00
16,500.00	90.83	359.58	11,878.96	4,672.67	485.63	4,668.98	0.00	0.00	0.00
16,600.00	90.83	359.58	11,877.51	4,772.65	484.89	4,768.97	0.00	0.00	0.00
16,700.00	90.83	359.58	11,876.05	4,872.64	484.15	4,868.96	0.00	0.00	0.00
16,800.00	90.83	359.58	11,874.60	4,972.63	483.40	4,968.95	0.00	0.00	0.00
16,900.00	90.83	359.58	11,873.15	5,072.61	482.66	5,068.94	0.00	0.00	0.00
17,000.00	90.83	359.58	11,871.70	5,172.60	481.92	5,168.93	0.00	0.00	0.00
17,100.00	90.83	359.58	11,870.24	5,272.59	481.18	5,268.92	0.00	0.00	0.00
17,200.00	90.83	359.58	11,868.79	5,372.57	480.44	5,368.91	0.00	0.00	0.00
17,300.00	90.83	359.58	11,867.34	5,472.56	479.70	5,468.90	0.00	0.00	0.00
17,400.00	90.83	359.58	11,865.89	5,572.55	478.96	5,568.88	0.00	0.00	0.00
17,500.00	90.83	359.58	11,864.43	5,672.53	478.22	5,668.87	0.00	0.00	0.00
17,600.00	90.83	359.58	11,862.98	5,772.52	477.47	5,768.86	0.00	0.00	0.00
17,700.00	90.83	359.58	11,861.53	5,872.51	476.73	5,868.85	0.00	0.00	0.00
17,800.00	90.83	359.58	11,860.08	5,972.49	475.99	5,968.84	0.00	0.00	0.00
17,900.00	90.83	359.58	11,858.62	6,072.48	475.25	6,068.83	0.00	0.00	0.00
18,000.00	90.83	359.58	11,857.17	6,172.47	474.51	6,168.82	0.00	0.00	0.00
18,100.00	90.83	359.58	11,855.72	6,272.45	473.77	6,268.81	0.00	0.00	0.00
18,200.00	90.83	359.58	11,854.27	6,372.44	473.03	6,368.80	0.00	0.00	0.00
18,300.00	90.83	359.58	11,852.81	6,472.43	472.28	6,468.79	0.00	0.00	0.00
18,400.00	90.83	359.58	11,851.36	6,572.41	471.54	6,568.78	0.00	0.00	0.00
18,500.00	90.83	359.58	11,849.91	6,672.40	470.80	6,668.77	0.00	0.00	0.00
18,600.00	90.83	359.58	11,848.45	6,772.39	470.06	6,768.76	0.00	0.00	0.00
18,700.00	90.83	359.58	11,847.00	6,872.37	469.32	6,868.75	0.00	0.00	0.00
18,800.00	90.83	359.58	11,845.55	6,972.36	468.58	6,968.74	0.00	0.00	0.00
18,900.00	90.83	359.58	11,844.10	7,072.35	467.84	7,068.73	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 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.14 Single User Db

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
19,000.00	90.83	359.58	11,842.64	7,172.33	467.09	7,168.72	0.00	0.00	0.00	
19,100.00	90.83	359.58	11,841.19	7,272.32	466.35	7,268.71	0.00	0.00	0.00	
19,200.00	90.83	359.58	11,839.74	7,372.31	465.61	7,368.70	0.00	0.00	0.00	
19,300.00	90.83	359.58	11,838.29	7,472.29	464.87	7,468.68	0.00	0.00	0.00	
19,400.00	90.83	359.58	11,836.83	7,572.28	464.13	7,568.67	0.00	0.00	0.00	
19,500.00	90.83	359.58	11,835.38	7,672.27	463.39	7,668.66	0.00	0.00	0.00	
19,600.00	90.83	359.58	11,833.93	7,772.25	462.65	7,768.65	0.00	0.00	0.00	
19,700.00	90.83	359.58	11,832.48	7,872.24	461.91	7,868.64	0.00	0.00	0.00	
19,800.00	90.83	359.58	11,831.02	7,972.23	461.16	7,968.63	0.00	0.00	0.00	
19,900.00	90.83	359.58	11,829.57	8,072.21	460.42	8,068.62	0.00	0.00	0.00	
20,000.00	90.83	359.58	11,828.12	8,172.20	459.68	8,168.61	0.00	0.00	0.00	
20,100.00	90.83	359.58	11,826.67	8,272.19	458.94	8,268.60	0.00	0.00	0.00	
20,145.82	90.83	359.58	11,826.00	8,318.00	458.60	8,314.42	0.00	0.00	0.00	
PBHL - PBHL r1 (Dagger603H)										

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 (Dagger603H) - plan misses target center by 793.36usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	602.80	515.80	517,718.30	767,652.40	32° 25' 16.101 N	103° 35' 59.617 W	
KOP (Dagger603H) - plan misses target center by 519.81usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	2.60	519.80	517,118.10	767,656.40	32° 25' 10.162 N	103° 35' 59.618 W	
PBHL r1 (Dagger603H) - plan hits target center - Point	0.00	0.01	11,826.00	8,318.00	458.60	525,433.50	767,595.20	32° 26' 32.447 N	103° 35' 59.666 W	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,160.00	1,160.00	13 3/8"		13-3/8	17-1/2
4,825.30	4,820.00	9 5/8"		9-5/8	12-1/4

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Lateral 1r1	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1.0	Database:	EDM 5000.14 Single User Db

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,108.00	1,108.00	Rustler		0.00	
4,783.14	4,778.00	Limestone Base		0.00	
8,411.95	8,393.00	Lower Brushy		0.00	
8,903.82	8,883.00	Avalon		0.00	
9,955.62	9,933.00	1st BS Sand		0.00	
10,595.62	10,573.00	2nd BS Sand		0.00	
11,161.62	11,139.00	3rd BS Carbonate		0.00	
11,700.66	11,663.00	3rd BS Sand		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
3100	3100	0	0	Build 1.00°/100'	
3600	3599	-5	21	Hold 5.0° Inc, 101.92° Azimuth	
9210	9188	-105	500	Drop 1.00°/100'	
9710	9688	-110	521	Hold Vertical	
11,390	11,367	-110	521	KOP, Build 10.00°/100'	
12,298	11,940	471	517	LP, Hold 90.83° Inc, 359.58° Azimuth	
20,146	11,826	8318	459	PBHL	

Advance Energy Partners, LLC

Dagger Lake 5 State 603H
Lea County, New Mexico
WT-19-063
H&P 620
Plan 1.0 Final PVA



Released to Imaging: 7/30/2024 2:03:30 PM

Received by OCD: 2/21/2022 11:56:15 AM

True Vertical Depth (1200 usft/in)

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SITE DETAILS: Dagger Lake 5 State 603H

Site Centre Northing: 517115.50
Easting: 767136.60

Positional Uncertainty: 0.00
Convergence: 0.39
Local North: Grid



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

Magnetic Field
Strength: 48094.4nT
Dip Angle: 60.19°
Date: 4/24/2019
Model: MVHD

Magnetic North: 6.28° to Grid North

PROJECT DETAILS: Lea County, New Mexico

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

System Datum: Mean Sea Level

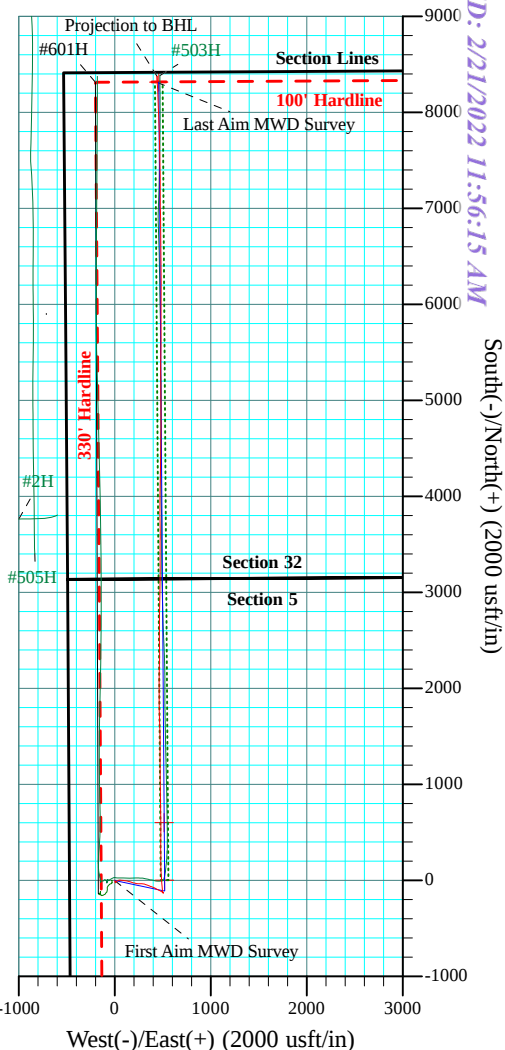
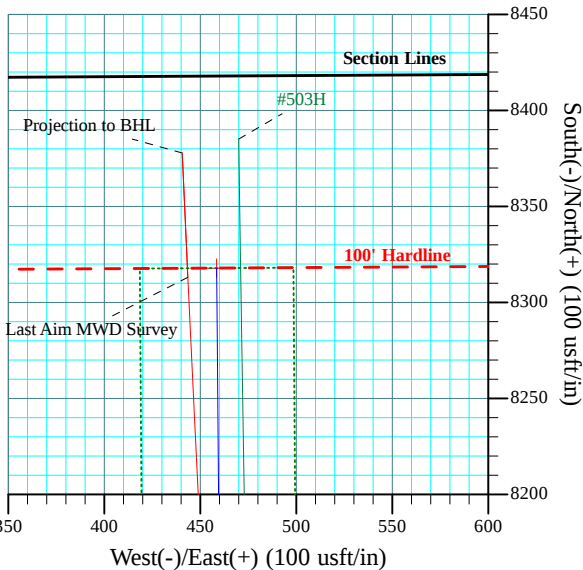
Depth Reference:
3655'GL+26.5'KB @ 3681.50usft (H&P 620)

SECTION DETAILS

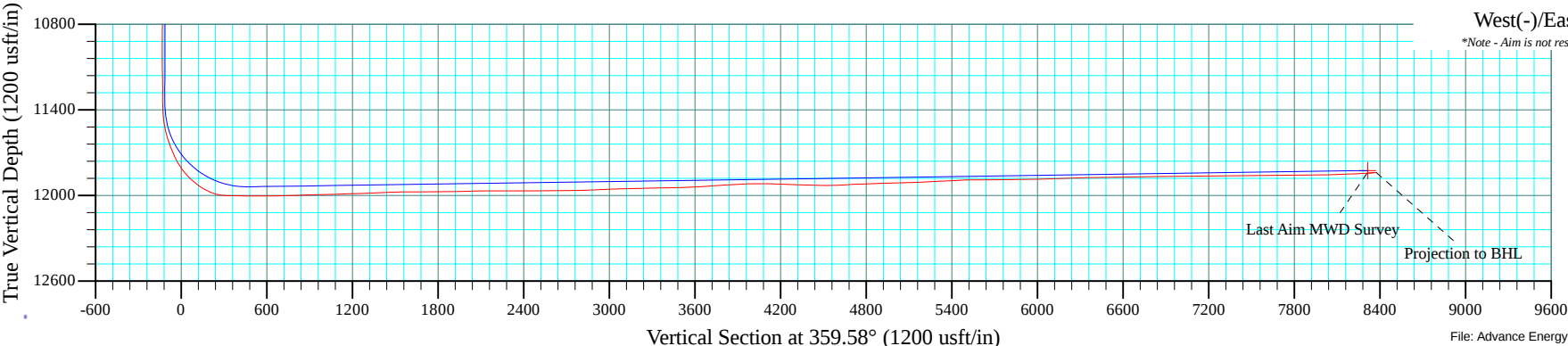
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	20239.00	93.63	357.40	11844.45	8313.16	443.60	0.00	0.00	8309.69	Last Aim MWD Survey
2	20304.00	93.63	357.40	11840.34	8377.97	440.66	0.00	0.00	8374.51	Projection to BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (Dagger603H)	0.00	602.80	515.80	517718.30	767652.40	32° 25' 16.101 N	103° 35' 59.617 W
KOP (Dagger603H)	0.00	2.60	519.80	517118.10	767656.40	32° 25' 10.162 N	103° 35' 59.618 W
PBHL r1 (Dagger603H)	11826.00	8318.00	458.60	525433.50	767595.20	32° 26' 32.447 N	103° 35' 59.666 W



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





Survey Reports

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Project	Lea County, New Mexico		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Dagger Lake 5 State 603H		
Site Position:		Northing:	517,115.50 usft
From:	Map	Easting:	767,136.60 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 25' 10.172 N
		Longitude:	103° 36' 5.682 W
		Grid Convergence:	0.39 °

Well	#603H - Slot 603H		
Well Position	+N/-S	0.00 usft	Northing: 517,115.50 usft
	+E/-W	0.00 usft	Easting: 767,136.60 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 25' 10.172 N
		Longitude:	103° 36' 5.682 W
		Ground Level:	3,655.00 usft

Wellbore	Aim MWD Surveys				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	4/30/2019	6.67	60.19	48,092.54585570

Design	Aim MWD Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.58	

Survey Program	Date	5/22/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
227.00	20,304.00	Aim MWD Surveys (Aim MWD Surveys)	B001Mb_MWD+HRGM	OWSG MWD + HRGM	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227.00	0.22	93.91	227.00	-0.03	0.43	-0.03	0.10	0.10	0.00
First Aim MWD Survey									
410.00	1.05	154.99	409.99	-1.57	1.49	-1.58	0.53	0.45	33.38
502.00	0.97	144.53	501.97	-2.97	2.30	-2.99	0.22	-0.09	-11.37
594.00	1.27	171.34	593.96	-4.61	2.91	-4.63	0.65	0.33	29.14
685.00	1.32	154.02	684.93	-6.55	3.52	-6.58	0.43	0.05	-19.03
776.00	1.27	174.41	775.91	-8.50	4.08	-8.53	0.51	-0.05	22.41
867.00	1.32	164.57	866.89	-10.51	4.45	-10.54	0.25	0.05	-10.81
958.00	1.45	185.93	957.86	-12.67	4.61	-12.70	0.58	0.14	23.47
1,053.00	1.23	170.11	1,052.84	-14.87	4.66	-14.90	0.45	-0.23	-16.65

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,111.00	1.45	189.27	1,110.82	-16.21	4.65	-16.24	0.86	0.38	33.03
1,212.00	1.01	190.94	1,211.80	-18.34	4.28	-18.37	0.44	-0.44	1.65
1,303.00	0.97	176.44	1,302.78	-19.90	4.17	-19.93	0.28	-0.04	-15.93
1,394.00	0.75	153.32	1,393.77	-21.20	4.49	-21.23	0.45	-0.24	-25.41
1,580.00	0.22	103.75	1,579.77	-22.37	5.38	-22.41	0.34	-0.28	-26.65
1,674.00	0.18	62.27	1,673.77	-22.34	5.69	-22.39	0.16	-0.04	-44.13
1,863.00	0.31	79.58	1,862.76	-22.11	6.45	-22.16	0.08	0.07	9.16
2,053.00	0.26	37.48	2,052.76	-21.68	7.22	-21.73	0.11	-0.03	-22.16
2,242.00	0.75	32.12	2,241.75	-20.29	8.14	-20.35	0.26	0.26	-2.84
2,337.00	0.70	33.97	2,336.75	-19.28	8.80	-19.35	0.06	-0.05	1.95
2,431.00	0.97	45.22	2,430.74	-18.25	9.68	-18.32	0.33	0.29	11.97
2,526.00	1.14	40.65	2,525.72	-16.96	10.87	-17.04	0.20	0.18	-4.81
2,620.00	1.27	47.06	2,619.70	-15.54	12.24	-15.63	0.20	0.14	6.82
2,809.00	2.02	48.38	2,808.62	-11.91	16.26	-12.02	0.40	0.40	0.70
2,904.00	2.11	52.42	2,903.56	-9.73	18.90	-9.86	0.18	0.09	4.25
2,998.00	2.51	58.93	2,997.48	-7.61	22.03	-7.77	0.51	0.43	6.93
3,092.00	2.99	54.18	3,091.37	-5.11	25.79	-5.30	0.56	0.51	-5.05
3,187.00	3.60	61.65	3,186.22	-2.25	30.42	-2.47	0.78	0.64	7.86
3,281.00	4.31	70.62	3,279.99	0.33	36.35	0.06	1.00	0.76	9.54
3,375.00	5.63	75.98	3,373.64	2.62	44.15	2.29	1.49	1.40	5.70
3,470.00	6.77	84.85	3,468.08	4.25	54.25	3.85	1.56	1.20	9.34
3,564.00	7.52	99.27	3,561.36	3.76	65.84	3.27	2.06	0.80	15.34
3,658.00	7.12	97.60	3,654.59	1.99	77.69	1.42	0.48	-0.43	-1.78
3,752.00	5.93	99.36	3,747.98	0.43	88.25	-0.21	1.28	-1.27	1.87
3,846.00	5.63	93.64	3,841.51	-0.65	97.65	-1.36	0.69	-0.32	-6.09
3,941.00	5.45	98.21	3,936.06	-1.59	106.76	-2.37	0.50	-0.19	4.81
4,035.00	6.02	101.20	4,029.59	-3.18	116.02	-4.03	0.68	0.61	3.18
4,129.00	5.63	99.71	4,123.11	-4.92	125.40	-5.84	0.44	-0.41	-1.59
4,224.00	5.01	97.95	4,217.70	-6.28	134.10	-7.26	0.67	-0.65	-1.85
4,318.00	5.45	104.63	4,311.31	-7.97	142.48	-9.02	0.80	0.47	7.11
4,413.00	6.07	109.46	4,405.83	-10.79	151.58	-11.90	0.83	0.65	5.08
4,507.00	5.80	107.27	4,499.32	-13.85	160.81	-15.03	0.37	-0.29	-2.33
4,601.00	5.01	107.18	4,592.90	-16.47	169.26	-17.71	0.84	-0.84	-0.10
4,696.00	4.57	107.71	4,687.57	-18.85	176.83	-20.15	0.47	-0.46	0.56
4,790.00	4.09	107.71	4,781.30	-21.01	183.59	-22.36	0.51	-0.51	0.00
4,810.00	3.96	109.46	4,801.25	-21.46	184.92	-22.81	0.89	-0.65	8.75
4,878.00	3.82	104.37	4,869.10	-22.80	189.33	-24.19	0.55	-0.21	-7.49
4,971.00	3.69	102.26	4,961.90	-24.21	195.26	-25.64	0.20	-0.14	-2.27
5,062.00	3.96	106.91	5,052.70	-25.74	201.12	-27.22	0.45	0.30	5.11
5,157.00	4.18	104.28	5,147.46	-27.55	207.62	-29.07	0.30	0.23	-2.77
5,251.00	4.13	102.26	5,241.21	-29.11	214.25	-30.68	0.16	-0.05	-2.15
5,345.00	4.00	99.71	5,334.97	-30.39	220.78	-32.00	0.24	-0.14	-2.71
5,440.00	3.96	96.90	5,429.74	-31.34	227.31	-33.00	0.21	-0.04	-2.96

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,534.00	3.91	101.03	5,523.52	-32.34	233.68	-34.05	0.31	-0.05	4.39	
5,628.00	3.82	95.66	5,617.31	-33.26	239.94	-35.02	0.40	-0.10	-5.71	
5,723.00	3.60	96.19	5,712.11	-33.90	246.05	-35.70	0.23	-0.23	0.56	
5,817.00	3.52	91.27	5,805.93	-34.28	251.87	-36.12	0.34	-0.09	-5.23	
5,912.00	4.53	84.06	5,900.69	-33.96	258.52	-35.85	1.19	1.06	-7.59	
6,006.00	4.88	86.34	5,994.38	-33.32	266.20	-35.27	0.42	0.37	2.43	
6,101.00	6.29	96.54	6,088.93	-33.65	275.40	-35.67	1.81	1.48	10.74	
6,195.00	6.77	94.87	6,182.32	-34.71	286.04	-36.80	0.55	0.51	-1.78	
6,290.00	6.86	93.73	6,276.64	-35.55	297.28	-37.73	0.17	0.09	-1.20	
6,385.00	6.95	103.40	6,370.96	-37.25	308.53	-39.51	1.23	0.09	10.18	
6,479.00	7.21	110.17	6,464.24	-40.61	319.60	-42.95	0.93	0.28	7.20	
6,573.00	7.12	110.08	6,557.51	-44.64	330.61	-47.06	0.10	-0.10	-0.10	
6,668.00	7.08	109.46	6,651.78	-48.61	341.66	-51.11	0.09	-0.04	-0.65	
6,762.00	7.03	110.08	6,745.07	-52.52	352.53	-55.10	0.10	-0.05	0.66	
6,856.00	6.99	110.43	6,838.37	-56.49	363.29	-59.15	0.06	-0.04	0.37	
6,951.00	6.51	109.64	6,932.71	-60.32	373.78	-63.05	0.51	-0.51	-0.83	
7,045.00	4.88	114.21	7,026.24	-63.75	382.44	-66.55	1.80	-1.73	4.86	
7,139.00	4.22	112.45	7,119.94	-66.71	389.29	-69.56	0.72	-0.70	-1.87	
7,234.00	4.26	114.39	7,214.68	-69.50	395.73	-72.40	0.16	0.04	2.04	
7,328.00	4.22	116.41	7,308.43	-72.48	402.01	-75.42	0.16	-0.04	2.15	
7,422.00	3.87	113.86	7,402.19	-75.30	408.01	-78.29	0.42	-0.37	-2.71	
7,517.00	3.52	113.59	7,497.00	-77.76	413.61	-80.79	0.37	-0.37	-0.28	
7,611.00	3.16	112.89	7,590.84	-79.93	418.64	-82.99	0.39	-0.38	-0.74	
7,706.00	3.03	124.84	7,685.70	-82.38	423.12	-85.48	0.69	-0.14	12.58	
7,800.00	4.04	119.48	7,779.52	-85.43	428.04	-88.56	1.13	1.07	-5.70	
7,894.00	4.66	113.95	7,873.25	-88.61	434.41	-91.79	0.80	0.66	-5.88	
7,989.00	4.57	114.74	7,967.94	-91.76	441.37	-94.99	0.12	-0.09	0.83	
8,083.00	4.53	116.14	8,061.64	-94.96	448.11	-98.24	0.13	-0.04	1.49	
8,177.00	4.62	115.79	8,155.34	-98.24	454.85	-101.58	0.10	0.10	-0.37	
8,271.00	4.48	114.03	8,249.05	-101.39	461.61	-104.77	0.21	-0.15	-1.87	
8,366.00	4.53	117.11	8,343.75	-104.61	468.34	-108.04	0.26	0.05	3.24	
8,460.00	4.13	120.54	8,437.49	-108.02	474.56	-111.49	0.51	-0.43	3.65	
8,555.00	4.26	120.89	8,532.23	-111.57	480.53	-115.09	0.14	0.14	0.37	
8,649.00	3.96	124.84	8,625.99	-115.21	486.19	-118.78	0.44	-0.32	4.20	
8,743.00	4.13	125.02	8,719.76	-119.01	491.63	-122.61	0.18	0.18	0.19	
8,838.00	4.26	129.33	8,814.50	-123.21	497.16	-126.85	0.36	0.14	4.54	
8,932.00	2.81	134.78	8,908.32	-127.05	501.50	-130.72	1.58	-1.54	5.80	
9,026.00	0.53	103.22	9,002.28	-128.77	503.55	-132.46	2.53	-2.43	-33.57	
9,121.00	0.70	52.16	9,097.27	-128.51	504.44	-132.21	0.58	0.18	-53.75	
9,215.00	0.79	67.19	9,191.26	-127.91	505.49	-131.61	0.23	0.10	15.99	
9,310.00	0.79	93.20	9,286.25	-127.69	506.75	-131.40	0.37	0.00	27.38	
9,404.00	0.53	107.79	9,380.25	-127.86	507.81	-131.58	0.33	-0.28	15.52	
9,498.00	0.62	189.62	9,474.24	-128.50	508.14	-132.22	0.80	0.10	87.05	

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,592.00	0.22	244.46	9,568.24	-129.08	507.89	-132.80	0.56	-0.43	58.34
9,687.00	0.79	340.35	9,663.24	-128.54	507.51	-132.25	0.89	0.60	100.94
9,781.00	1.10	329.37	9,757.23	-127.15	506.83	-130.86	0.38	0.33	-11.68
9,876.00	1.01	319.61	9,852.21	-125.73	505.82	-129.43	0.21	-0.09	-10.27
9,970.00	1.58	306.95	9,946.19	-124.32	504.25	-128.01	0.67	0.61	-13.47
10,064.00	1.49	295.62	10,040.15	-123.01	502.11	-126.69	0.34	-0.10	-12.05
10,159.00	0.40	214.84	10,135.14	-122.75	500.81	-126.42	1.56	-1.15	-85.03
10,254.00	0.66	160.00	10,230.14	-123.54	500.81	-127.20	0.57	0.27	-57.73
10,348.00	1.10	149.81	10,324.13	-124.82	501.44	-128.50	0.49	0.47	-10.84
10,442.00	1.36	130.56	10,418.10	-126.33	502.75	-130.01	0.52	0.28	-20.48
10,537.00	0.97	103.84	10,513.08	-127.25	504.38	-130.95	0.69	-0.41	-28.13
10,632.00	0.84	73.87	10,608.07	-127.25	505.83	-130.96	0.51	-0.14	-31.55
10,726.00	0.18	69.47	10,702.07	-127.01	506.63	-130.72	0.70	-0.70	-4.68
10,821.00	0.53	211.15	10,797.07	-127.33	506.55	-131.04	0.72	0.37	149.14
10,916.00	0.88	187.77	10,892.06	-128.43	506.22	-132.14	0.47	0.37	-24.61
11,010.00	0.26	230.58	10,986.06	-129.28	505.96	-132.99	0.76	-0.66	45.54
11,104.00	1.49	318.12	11,080.05	-128.51	504.98	-132.21	1.60	1.31	93.13
11,199.00	1.19	308.80	11,175.02	-126.97	503.38	-130.66	0.39	-0.32	-9.81
11,293.00	1.45	294.56	11,268.99	-125.87	501.54	-129.54	0.44	0.28	-15.15
11,363.00	0.84	310.12	11,338.98	-125.17	500.34	-128.83	0.97	-0.87	22.23
11,460.00	2.11	2.68	11,435.95	-122.92	499.88	-126.59	1.79	1.31	54.19
11,554.00	13.36	356.35	11,528.95	-110.32	499.27	-113.97	11.98	11.97	-6.73
11,649.00	18.86	354.77	11,620.18	-84.05	497.17	-87.69	5.81	5.79	-1.66
11,744.00	23.12	352.83	11,708.86	-50.24	493.44	-53.86	4.54	4.48	-2.04
11,793.00	28.26	352.57	11,753.00	-29.18	490.74	-32.78	10.49	10.49	-0.53
11,838.00	32.62	354.41	11,791.79	-6.53	488.18	-10.11	9.91	9.69	4.09
11,933.00	43.74	356.70	11,866.35	51.92	483.78	48.38	11.80	11.71	2.41
11,989.00	49.49	358.46	11,904.80	92.57	482.09	89.03	10.52	10.27	3.14
12,028.00	53.36	0.65	11,929.12	123.05	481.87	119.51	10.85	9.92	5.62
12,122.00	66.90	0.22	11,975.82	204.37	482.47	200.83	14.41	14.40	-0.46
12,167.00	74.77	358.46	11,990.59	246.84	481.96	243.30	17.87	17.49	-3.91
12,194.00	79.52	358.11	11,996.59	273.14	481.17	269.61	17.64	17.59	-1.30
12,248.00	88.57	359.34	12,002.19	326.78	479.98	323.25	16.91	16.76	2.28
12,342.00	89.85	359.95	12,003.48	420.77	479.40	417.24	1.51	1.36	0.65
12,436.00	89.49	0.22	12,004.03	514.76	479.54	511.23	0.48	-0.38	0.29
12,530.00	89.98	0.39	12,004.46	608.76	480.04	605.23	0.55	0.52	0.18
12,625.00	91.65	359.51	12,003.11	703.75	479.96	700.21	1.99	1.76	-0.93
12,719.00	91.87	359.07	12,000.22	797.70	478.80	794.16	0.52	0.23	-0.47
12,813.00	91.91	358.46	11,997.12	891.62	476.77	888.10	0.65	0.04	-0.65
12,907.00	91.65	358.90	11,994.20	985.55	474.61	982.05	0.54	-0.28	0.47
13,002.00	91.34	359.86	11,991.72	1,080.51	473.58	1,077.01	1.06	-0.33	1.01
13,096.00	91.78	0.39	11,989.17	1,174.48	473.78	1,170.97	0.73	0.47	0.56
13,191.00	92.18	359.60	11,985.88	1,269.42	473.78	1,265.91	0.93	0.42	-0.83
13,285.00	92.22	359.69	11,982.27	1,363.35	473.19	1,359.84	0.10	0.04	0.10

Aim Directional Services, LLC

Survey Report

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Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,379.00	92.13	359.25	11,978.71	1,457.28	472.32	1,453.77	0.48	-0.10	-0.47
13,474.00	91.16	358.28	11,975.98	1,552.21	470.28	1,548.72	1.44	-1.02	-1.02
13,568.00	90.07	358.11	11,974.97	1,646.16	467.32	1,642.69	1.17	-1.16	-0.18
13,663.00	90.29	358.37	11,974.67	1,741.11	464.40	1,737.66	0.36	0.23	0.27
13,757.00	90.51	359.51	11,974.02	1,835.09	462.66	1,831.65	1.24	0.23	1.21
13,788.00	90.77	0.83	11,973.67	1,866.09	462.75	1,862.65	4.34	0.84	4.26
13,851.00	91.52	359.60	11,972.41	1,929.08	462.99	1,925.63	2.29	1.19	-1.95
13,946.00	91.25	359.69	11,970.11	2,024.05	462.40	2,020.60	0.30	-0.28	0.09
13,977.00	91.21	0.48	11,969.45	2,055.04	462.45	2,051.59	2.55	-0.13	2.55
14,040.00	90.42	1.71	11,968.55	2,118.02	463.65	2,114.56	2.32	-1.25	1.95
14,134.00	90.20	0.92	11,968.04	2,211.99	465.81	2,208.52	0.87	-0.23	-0.84
14,229.00	90.07	0.22	11,967.82	2,306.99	466.75	2,303.50	0.75	-0.14	-0.74
14,323.00	90.15	359.42	11,967.64	2,400.99	466.46	2,397.50	0.86	0.09	-0.85
14,417.00	89.98	359.78	11,967.53	2,494.98	465.80	2,491.50	0.42	-0.18	0.38
14,511.00	89.71	0.22	11,967.79	2,588.98	465.80	2,585.50	0.55	-0.29	0.47
14,606.00	90.55	0.13	11,967.57	2,683.98	466.09	2,680.49	0.89	0.88	-0.09
14,700.00	91.82	359.86	11,965.63	2,777.96	466.08	2,774.47	1.38	1.35	-0.29
14,794.00	92.53	1.27	11,962.06	2,871.88	467.01	2,868.38	1.68	0.76	1.50
14,889.00	91.65	1.80	11,958.60	2,966.78	469.55	2,963.26	1.08	-0.93	0.56
14,983.00	92.04	1.27	11,955.57	3,060.70	472.07	3,057.16	0.70	0.41	-0.56
15,077.00	91.12	0.65	11,952.98	3,154.65	473.64	3,151.09	1.18	-0.98	-0.66
15,172.00	91.38	359.86	11,950.91	3,249.63	474.07	3,246.06	0.88	0.27	-0.83
15,266.00	92.18	359.42	11,947.99	3,343.58	473.48	3,340.02	0.97	0.85	-0.47
15,360.00	90.59	0.30	11,945.71	3,437.55	473.25	3,433.99	1.93	-1.69	0.94
15,455.00	91.03	0.57	11,944.37	3,532.53	473.97	3,528.97	0.54	0.46	0.28
15,549.00	93.23	359.86	11,940.88	3,626.46	474.32	3,622.89	2.46	2.34	-0.76
15,643.00	95.34	359.07	11,933.85	3,720.19	473.45	3,716.62	2.40	2.24	-0.84
15,737.00	92.57	358.28	11,927.37	3,813.93	471.28	3,810.37	3.06	-2.95	-0.84
15,831.00	93.10	0.22	11,922.72	3,907.80	470.05	3,904.25	2.14	0.56	2.06
15,925.00	90.90	0.92	11,919.44	4,001.73	470.98	3,998.17	2.46	-2.34	0.74
16,019.00	89.71	1.45	11,918.94	4,095.71	472.93	4,092.13	1.39	-1.27	0.56
16,113.00	88.26	1.27	11,920.61	4,189.67	475.16	4,186.07	1.55	-1.54	-0.19
16,208.00	87.69	1.01	11,923.96	4,284.59	477.05	4,280.98	0.66	-0.60	-0.27
16,302.00	88.13	0.22	11,927.39	4,378.52	478.05	4,374.90	0.96	0.47	-0.84
16,396.00	88.75	0.39	11,929.95	4,472.48	478.55	4,468.85	0.68	0.66	0.18
16,441.00	89.36	0.74	11,930.69	4,517.47	479.00	4,513.84	1.56	1.36	0.78
16,490.00	91.56	1.09	11,930.30	4,566.46	479.78	4,562.82	4.55	4.49	0.71
16,537.00	92.79	0.83	11,928.51	4,613.42	480.57	4,609.78	2.67	2.62	-0.55
16,583.00	93.32	1.36	11,926.06	4,659.35	481.44	4,655.69	1.63	1.15	1.15
16,630.00	93.76	1.18	11,923.16	4,706.25	482.48	4,702.58	1.01	0.94	-0.38
16,677.00	91.87	0.57	11,920.85	4,753.18	483.20	4,749.51	4.23	-4.02	-1.30
16,771.00	91.25	0.22	11,918.29	4,847.14	483.85	4,843.47	0.76	-0.66	-0.37
16,866.00	92.18	359.42	11,915.45	4,942.10	483.55	4,938.42	1.29	0.98	-0.84

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Dagger Lake 5 State 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,960.00	91.74	358.55	11,912.24	5,036.03	481.89	5,032.36	1.04	-0.47	-0.93	
17,054.00	91.65	358.19	11,909.46	5,129.95	479.21	5,126.30	0.39	-0.10	-0.38	
17,148.00	92.62	0.22	11,905.95	5,223.87	477.91	5,220.23	2.39	1.03	2.16	
17,243.00	92.84	0.92	11,901.43	5,318.76	478.85	5,315.10	0.77	0.23	0.74	
17,337.00	93.58	0.57	11,896.16	5,412.60	480.07	5,408.94	0.87	0.79	-0.37	
17,431.00	92.00	1.09	11,891.59	5,506.48	481.43	5,502.80	1.77	-1.68	0.55	
17,526.00	89.80	0.74	11,890.10	5,601.45	482.95	5,597.75	2.34	-2.32	-0.37	
17,620.00	89.71	0.30	11,890.50	5,695.44	483.80	5,691.74	0.48	-0.10	-0.47	
17,714.00	90.29	359.86	11,890.50	5,789.44	483.94	5,785.74	0.77	0.62	-0.47	
17,808.00	91.12	0.04	11,889.34	5,883.43	483.85	5,879.73	0.90	0.88	0.19	
17,903.00	92.13	0.04	11,886.65	5,978.39	483.92	5,974.68	1.06	1.06	0.00	
17,997.00	90.99	0.13	11,884.09	6,072.36	484.06	6,068.64	1.22	-1.21	0.10	
18,091.00	91.52	0.04	11,882.03	6,166.33	484.20	6,162.62	0.57	0.56	-0.10	
18,186.00	92.57	359.69	11,878.64	6,261.27	483.98	6,257.55	1.16	1.11	-0.37	
18,280.00	91.60	0.04	11,875.22	6,355.21	483.75	6,351.49	1.10	-1.03	0.37	
18,374.00	89.67	359.07	11,874.18	6,449.19	483.02	6,445.48	2.30	-2.05	-1.03	
18,469.00	90.37	359.34	11,874.15	6,544.18	481.71	6,540.48	0.79	0.74	0.28	
18,563.00	92.48	359.51	11,871.81	6,638.14	480.76	6,634.44	2.25	2.24	0.18	
18,657.00	91.30	358.81	11,868.71	6,732.08	479.39	6,728.39	1.46	-1.26	-0.74	
18,752.00	90.02	359.16	11,867.61	6,827.06	477.70	6,823.37	1.40	-1.35	0.37	
18,846.00	90.42	359.07	11,867.25	6,921.04	476.25	6,917.37	0.44	0.43	-0.10	
18,940.00	91.43	359.25	11,865.74	7,015.02	474.87	7,011.35	1.09	1.07	0.19	
19,034.00	90.51	359.78	11,864.14	7,109.00	474.08	7,105.34	1.13	-0.98	0.56	
19,129.00	89.49	0.48	11,864.14	7,204.00	474.29	7,200.33	1.30	-1.07	0.74	
19,223.00	90.20	359.86	11,864.40	7,298.00	474.57	7,294.32	1.00	0.76	-0.66	
19,317.00	90.73	358.99	11,863.64	7,391.99	473.63	7,388.32	1.08	0.56	-0.93	
19,411.00	91.16	358.90	11,862.09	7,485.96	471.90	7,482.30	0.47	0.46	-0.10	
19,506.00	90.77	358.81	11,860.49	7,580.93	470.00	7,577.28	0.42	-0.41	-0.09	
19,600.00	91.08	357.84	11,858.97	7,674.87	467.25	7,671.24	1.08	0.33	-1.03	
19,694.00	90.42	358.63	11,857.74	7,768.82	464.36	7,765.21	1.10	-0.70	0.84	
19,788.00	90.02	358.11	11,857.38	7,862.78	461.68	7,859.19	0.70	-0.43	-0.55	
19,883.00	90.77	358.19	11,856.72	7,957.73	458.62	7,954.15	0.79	0.79	0.08	
19,977.00	91.47	357.84	11,854.88	8,051.65	455.36	8,048.10	0.83	0.74	-0.37	
20,071.00	91.82	357.40	11,852.19	8,145.53	451.46	8,142.01	0.60	0.37	-0.47	
20,165.00	92.66	357.23	11,848.51	8,239.36	447.06	8,235.86	0.91	0.89	-0.18	
20,239.00	93.63	357.40	11,844.45	8,313.16	443.60	8,309.69	1.33	1.31	0.23	
Last Aim MWD Survey										
20,304.00	93.63	357.40	11,840.34	8,377.97	440.66	8,374.51	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 603H
Project:	Lea County, New Mexico	TVD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Site:	Dagger Lake 5 State 603H	MD Reference:	3655'GL+26.5'KB @ 3681.50usft (H&P 620)
Well:	#603H	North Reference:	Grid
Wellbore:	Aim MWD Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Aim MWD Surveys	Database:	EDM 5000.14 Single User Db

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
227.00	227.00	-0.03	0.43	First Aim MWD Survey
20,239.00	11,844.45	8,313.16	443.60	Last Aim MWD Survey
20,304.00	11,840.34	8,377.97	440.66	Projection to BHL



BHA Reports

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #1 - BHA #1 Surface (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	8.00	Date In	2019-04-27 07:15
Lobe/Stage	7/8, 4.0	Depth In (ft)	258.00
Bend Angle	1.50	Date Out	2019-04-27 18:15
Speed (rev/gal)	0.15	Depth Out (ft)	1172.00
Wear Pad OD (in)	8.375	Distance Slid (ft)	0.00
Incident	No	Distance Rotated (ft)	914.00
Motor Results		% Distance Sliding	0.00%
Average Total ROP (ft/h)	161.29	% Distance Rotating	100.00%
Average Slide ROP (ft/h)	0.00		
Average Rotating ROP (ft/h)	161.29		

BHA Objective
Drill Surface to Casing Point

Bit Details		POOH Reason/Notes
OD (in)	17.500	
Vendor	Baker	
S/N	7046740	Total Depth/Casing Point: POOH for 13 3/8" Casing
Nozzles	9x12's	
Total Flow Area (in²)	0.994	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: None
		MWD:

Bit Distances		Comments
Bit To Bend (Bit to Bend):	6.09 ft,	Directional: 8" Contender : 1.50° FBH 7/8 4.0 Stg. W/ Slick Sleeve. Protracted Angle: 1.46°, Flow Rate 400-900,
Survey (Bit to Survey):	61.00 ft	Max Diff 900 psi, Max Operating Torque: 14,930 ft/lbs, Rev/Gal: .15 / Bit Data: Baker 17.50", Type DP606S, SN: 7046740 Jets: 9x12's, TFA: 0.994 Runs on Bit: 8

Mud Properties		Parameters	
Type	Water	Flow Rate (gpm)	889.00 - 901.00
WT	9.40	On Bottom Pressure (psi)	2265.00 - 3080.00
VIS	26.00	Off Bottom Pressure (psi)	641.00 - 2200.00
PV	1.00	Stall Pressure (psi)	0.00
YP	3.00	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: DP606S, Style: PDC, Gauge Length (in): 4.50, Size (in): 17.50	Baker	7046740	6 5/8" Reg Pin			17.500		1.46	1.46
Mud Motor Description: 8" 7/8 4.0 Stg FBH @1.50° W/Slick Sleeve, Size (in): 8.00, Bend Angle (°): 1.50, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4.0	Aim	800-40-005	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.02	31.48
Stabilizer Description: 17" Stabilizer	DTI	DR27308	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		5.94	37.42
UBHO Sub Description: NM UBHO, Type: NM	Aim	GT8066846	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		4.08	41.50
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001019	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.59	72.09
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001012	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.52	102.61
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR41388	4 1/2" IF Box	6 5/8" Reg Pin	2.750	8.000		3.39	106.00
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.84	1019.84





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #2 - Drill Intermediate to Casing Point (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	8.00	Date In	2019-04-28 15:15
Lobe/Stage	7/8, 5.9	Depth In (ft)	1172.00
Bend Angle	1.50	Date Out	2019-04-30 08:15
Speed (rev/gal)	0.17	Depth Out (ft)	4880.00
Wear Pad OD (in)	8.250	Distance Slid (ft)	95.00
Incident	No	Distance Rotated (ft)	3613.00
Motor Results		% Distance Sliding	2.56%
Average Total ROP (ft/h)	200.43	% Distance Rotating	97.44%
Average Slide ROP (ft/h)	71.25		
Average Rotating ROP (ft/h)	210.47		

BHA Objective
BHA #2 1st Intermediate

Bit Details		POOH Reason/Notes
OD (in)	12.250	
Vendor	Baker	
S/N	7163483	Total Depth/Casing Point: TD Casing Point
Nozzles	6x12's	
Total Flow Area (in²)	0.663	

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

Bit Distances		Comments
Bit To Bend (Bit to Bend):	5.55 ft,	Directional: 8" Butch : 1.50° FBH 7/8 5.9 Stg. W/12" NBS. Protracted Angle: 1.48°, Flow Rate 400-900, Max Diff 1390 psi, Max Operating Torque: 21,870 ft/lbs, Rev/Gal: .166 / Bit Data: Baker 12.25", Type T806FX, SN: 7163483 Jets: 6x12's, TFA: 0.663 Runs on Bit: 5
Survey (Bit to Survey):	70.00 ft	

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm)
WT	10.50	On Bottom Pressure (psi)
VIS	35.00	Off Bottom Pressure (psi)
PV	2.00	Stall Pressure (psi)
YP	6.00	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: 12.25 Baker T806FX, Style: PDC, Gauge Length (in): 3.25, Size (in): 12.25	Baker	7163483	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 8" 7/8 5.9 Stg FBH @1.50° W/12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	Butches	BDT800-010	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.10	38.35
Stabilizer Description: 12" Stabilizer	DTI	DR41350	6 5/8" Reg Box	6 5/8" Reg Pin	2.813	8.250		5.43	43.78
UBHO Sub Description: NM UBHO, Type: NM	Aim	GT8066846	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		4.08	47.86
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001019	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.59	78.45
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001012	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.52	108.97
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR28831	4 1/2" XH Box	6 5/8" Reg Pin	2.875	7.750		2.65	111.62
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		527.87	639.49
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR19258	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.375		2.73	642.22
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.84	1556.06





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #3 - BHA #3 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-05-10 18:30
Lobe/Stage	7/8, 8.5	Depth In (ft)	4880.00
Bend Angle	1.50	Date Out	2019-05-11 02:45
Speed (rev/gal)	0.26	Depth Out (ft)	4880.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	0.00
Incident	No	Distance Rotated (ft)	0.00
Motor Results		% Distance Sliding	0%
Average Total ROP (ft/h)	0.00	% Distance Rotating	0%
Average Slide ROP (ft/h)	0.00		
Average Rotating ROP (ft/h)	0.00		

BHA Objective
Drill Intermediate 2 to KOP

Bit Details		POOH Reason/Notes
OD (in)	8.500	
Vendor	Halliburton	
S/N	13244778	
Nozzles	6 x 12	
Total Flow Area (in²)	0.663	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: Bit was still green, motor drained good and BHA was racked back in Derrik.
		MWD:

Bit Distances		Comments
Bit To Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		Directional: 7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm)
WT	9.20	On Bottom Pressure (psi)
VIS	30.00	Off Bottom Pressure (psi)
PV	3.00	Stall Pressure (psi)
YP	2.00	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: MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13244778	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS002	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

BHA #4 - BHA #4 Drill out DV Tool (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	N/A	Date In 2019-05-11 02:45	Downhole Hours 8.25
Lobe/Stage	N/A	Depth In (ft) 4880.00	Drilling/Circulating Hours 1.75
Bend Angle	N/A	Date Out 2019-05-11 11:00	Drilling Hours 0.00
Speed (rev/gal)	N/A	Depth Out (ft) 4880.00	Circulating Hours 1.75
Wear Pad OD (in)	N/A	Distance Slid (ft) 0.00	Sliding Hours 0.00
Incident	No	Distance Rotated (ft) 0.00	Rotating Hours 0.00
Motor Results		% Distance Sliding 0%	% Hours Sliding 0.00%
Average Total ROP (ft/h)	0.00	% Distance Rotating 0%	% Hours Rotating 0.00%
Average Slide ROP (ft/h)	0.00	BHA Objective	
Average Rotating ROP (ft/h)	0.00	Drill Out DV Tool, Float and Shoe	

Bit Details		POOH Reason/Notes
OD (in)	8.500	Other: POOH once DV tool, Float, And Shoe was Drilled
Vendor	Baker Hughes	
S/N	5289434	
Nozzles	3x22	
Total Flow Area (in²)	1.114	

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

Bit Distances	Comments
Bit To N/A	Directional: N/A

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm) 750.00 - 750.00
WT	9.20	On Bottom Pressure (psi) 1450.00 - 1600.00
VIS	30.00	Off Bottom Pressure (psi) 1400.00 - 1550.00
PV	3.00	Stall Pressure (psi) 0.00
YP	1.00	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: GX117, Style: Roller Cone, Gauge Length (in): 0.00, Size (in): 8.50	Baker Hughes	5289434	4 1/2" Reg Pin			8.500		1.00	1.00
Other Description: Bit Sub	Rig	Rig Bit Sub	4 1/2" XH Box	4 1/2" Reg Box	2.813	6.000		2.00	3.00
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	6.44
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	919.81





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #5 - BHA #5 Intermediate #2 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-05-11 11:00
Lobe/Stage	7/8, 8.5	Depth In (ft)	4880.00
Bend Angle	1.50	Date Out	2019-05-13 00:30
Speed (rev/gal)	0.26	Depth Out (ft)	9771.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	149.00
Incident	No	Distance Rotated (ft)	4742.00
Motor Results		% Distance Sliding	3.05%
Average Total ROP (ft/h)	204.50	% Distance Rotating	96.95%
Average Slide ROP (ft/h)	68.77	BHA Objective	
Average Rotating ROP (ft/h)	218.02	Drill Intermediate #2 to KOP	

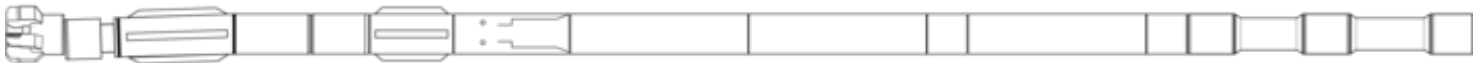
Bit Details		POOH Reason/Notes	
OD (in)	8.500	Penetration Rate: Pooh for Rop, Once out bit was graded 2-4 due to chipped, broken and missing cutters along shoulder.	
Vendor	Halliburton		
S/N	13244778		
Nozzles	6 x 12		
Total Flow Area (in²)	0.663		

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

Bit Distances		Comments
Bit To Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		Directional: 7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0

Mud Properties		Parameters	
Type	Brine	Flow Rate (gpm)	725.00 - 753.00
WT	9.10	On Bottom Pressure (psi)	3500.00 - 4700.00
VIS	29.00	Off Bottom Pressure (psi)	3000.00 - 3800.00
PV	2.00	Stall Pressure (psi)	0.00
YP	3.00	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: MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13244778	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS002	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #6 - BHA #6 Intermediate #2 (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-05-13 00:30
Lobe/Stage	6/7, 8.4	Depth In (ft)	9771.00
Bend Angle	1.50	Date Out	2019-05-14 12:30
Speed (rev/gal)	0.30	Depth Out (ft)	11431.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	107.00
Incident	No	Distance Rotated (ft)	1553.00
Motor Results		% Distance Sliding	6.45%
Average Total ROP (ft/h)	129.35	% Distance Rotating	93.55%
Average Slide ROP (ft/h)	38.91		
Average Rotating ROP (ft/h)	154.02		

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

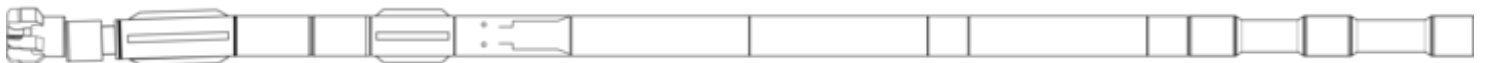
S/N	13050197	POOH Reason/Notes
Nozzles	6 x 12	Total Depth/Casing Point: Reached KOP, POOH for Curve Assembly
Total Flow Area (in²)	0.663	

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

Bit Distances		Comments
Bit To Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		Directional: 7" Contender: 1.50° FBH 6/7 8.4 Stg. W/8 1/4" NBS. Protracted Angle: 1.63°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GT65DM, SN: 13050197 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0

Mud Properties		Parameters
Type	Brine	Flow Rate (gpm)
WT	9.40	On Bottom Pressure (psi)
VIS	30.00	Off Bottom Pressure (psi)
PV	2.00	Stall Pressure (psi)
YP	3.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: GT65DM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13050197	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 6/7 8.4 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	700-40-31	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.98	35.98
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	41.76
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	46.18
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	75.15
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	104.13
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	107.01
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	636.28
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	639.72
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1553.09





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #7 - BHA #7 (Curve) (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-05-14 13:30
Lobe/Stage	6/7, 8.4	Depth In (ft)	11431.00
Bend Angle	2.00	Date Out	2019-05-15 21:30
Speed (rev/gal)	0.30	Depth Out (ft)	12089.00
Wear Pad OD (in)	7.313	Distance Slid (ft)	658.00
Incident	No	Distance Rotated (ft)	0.00
Motor Results		% Distance Sliding	100.00%
Average Total ROP (ft/h)	39.88	% Distance Rotating	0.00%
Average Slide ROP (ft/h)	39.88		
Average Rotating ROP (ft/h)	0.00		

Bit Details		BHA Objective
OD (in)	8.500	Drill Curve @ 10°/100'
Vendor	Halliburton	

S/N	13192807	POOH Reason/Notes
Nozzles	5 x 20	Build Rate: BHA was not achieving build rates need to land on Target
Total Flow Area (in²)	1.530	

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

Bit Distances		Comments
Bit To Bend (Bit to Bend): 4.07 ft, Survey (Bit to Survey): 63.00 ft, Gamma (Bit to Gamma): 48.00 ft		Directional: 7" Contender: 2.0° FBH 6/7 8.4 Stg. Mtr Slick. Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GTD55DM, SN: 13192807 Jets: 5x20's, TFA: 1.53 Runs on Bit: 2

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.60	On Bottom Pressure (psi)
VIS	79.00	Off Bottom Pressure (psi)
PV	19.00	Stall Pressure (psi)
YP	7.00	Stalls
		NPT

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: GTD55DM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13192807	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 2.0° FBH 6/7 8.4 Stg Mtr. Slick, Size (in): 7.00, Bend Angle (°): 2.0, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	CDM650-012	4 1/2" IF Box	4 1/2" Reg Box		7.000		32.83	33.83
Float Sub Description: Float Sub, Type: Steel	DTI	DR22381	4 1/2" IF Box	4 1/2" IF Pin	2.825	6.625		2.48	36.31
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		4.42	40.73
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	69.70
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	98.68
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	111.18





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #8 - BHA #8 (Curve) (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	6.75	Date In	2019-05-15 22:30
Lobe/Stage	7/8, 5.7	Depth In (ft)	12089.00
Bend Angle	2.60	Date Out	2019-05-16 16:30
Speed (rev/gal)	0.21	Depth Out (ft)	12253.00
Wear Pad OD (in)	7.313	Distance Slid (ft)	164.00
Incident	No	Distance Rotated (ft)	0.00
Motor Results		% Distance Sliding	100.00%
Average Total ROP (ft/h)	31.24	% Distance Rotating	0.00%
Average Slide ROP (ft/h)	31.24	BHA Objective	
Average Rotating ROP (ft/h)	0.00	Drill Curve while Achieving Build Rate for Soft Landing	

Bit Details		POOH Reason/Notes	
OD (in)	8.500	Total Depth/Casing Point: Section Projected Landed @ 90°	
Vendor	Baker		
S/N	5288335		
Nozzles	4x18s		
Total Flow Area (in²)	0.994		

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

Bit Distances		Comments	
Bit To Bend (Bit to Bend): 5.13 ft, Survey (Bit to Survey): 59.00 ft, Gamma (Bit to Gamma): 44.00 ft		Directional: 7" Contender: 2.60° FBH 7/8 5.7 Stg. Mtr W/ 8 1/8 NB Stab. Protracted Angle: 2.59°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .21 / Bit Data:BAker 8 1/2", Type KMX624T, SN: 5288335 Jets: 4x18's, TFA: .994 Runs on Bit: 0	

Mud Properties		Parameters	
Type	Oil Based	Flow Rate (gpm)	700.00 - 700.00
WT	9.70	On Bottom Pressure (psi)	4000.00 - 4000.00
VIS	81.00	Off Bottom Pressure (psi)	3700.00 - 3700.00
PV	22.00	Stall Pressure (psi)	0.00
YP	9.00	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: KMX624T, Style: Other, Gauge Length (in): 0.25, Size (in): 8.50	Baker	5288335	4 1/2" Reg Pin			8.500		0.85	0.85
Mud Motor Description: 2.60° FBH 6/7 8.4 Stg Mtr W/8 1/8" Stab, Size (in): 6.75, Bend Angle (°): 2.6, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM650-009	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.52	32.37
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		4.42	36.79
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	65.76
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	94.74
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	107.24





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #9 - BHA #9 (Lateral Run) (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-05-16 20:45
Lobe/Stage	7/8, 8.5	Depth In (ft)	12253.00
Bend Angle	1.75	Date Out	2019-05-20 00:00
Speed (rev/gal)	0.26	Depth Out (ft)	16557.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	860.00
Incident	Yes	Distance Rotated (ft)	3444.00
Motor Results		% Distance Sliding	19.98%
Average Total ROP (ft/h)	82.90	% Distance Rotating	80.02%
Average Slide ROP (ft/h)	37.53		
Average Rotating ROP (ft/h)	118.76		

Bit Details		BHA Objective
OD (in)	8.500	Drill Lateral to TD
Vendor	Halliburton	
S/N	13080800	
Nozzles	6 x 22	
Total Flow Area (in²)	2.220	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: Surface inspection showed a rung bit. motor looked and sounded good. we did find several chunks of steel on top of the UBHO sleeve. Appeared to be from the agitator.
		MWD:
Bit Distances		Comments
Bit To Bend (Bit to Bend): 4.10 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		Directional: 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	9.70	On Bottom Pressure (psi)
VIS	56.00	Off Bottom Pressure (psi)
PV	14.00	Stall Pressure (psi)
YP	10.00	Stalls
		NPT
		Motor RPM
		Surface RPM
		Rotating WOB (klbs)
		Sliding WOB (klbs)
		Temp (°F)

Items (Directional)									
Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM66DC, Style: Other, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13080800	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS003	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.72
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.01
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	79.98
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	108.96
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.42
Agitator Description: Agitator, Size (in): 6.50	Rubicon	A13696-06	4 1/2" IF Box	4 1/2" IF Pin		6.500		35.20	2976.62





Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

BHA #10 - BHA #10 (Lateral II) (Directional)

Motor Details		Date/Depth/Distances	Hours
Size(in)	7.00	Date In	2019-05-20 00:00
Lobe/Stage	7/8, 8.5	Depth In (ft)	16557.00
Bend Angle	1.75	Date Out	2019-05-22 23:15
Speed (rev/gal)	0.26	Depth Out (ft)	20304.00
Wear Pad OD (in)	7.187	Distance Slid (ft)	224.00
Incident	No	Distance Rotated (ft)	3523.00
Motor Results		% Distance Sliding	5.98%
Average Total ROP (ft/h)	105.06	% Distance Rotating	94.02%
Average Slide ROP (ft/h)	28.90		
Average Rotating ROP (ft/h)	126.20		

Bit Details		BHA Objective
OD (in)	8.500	Drill lateral F/16558 to TD of 20,145 +/-
Vendor	Baker	

S/N	5294400	POOH Reason/Notes
Nozzles	6 x 22	Total Depth/Casing Point: TD Well @ 20304, Inspected BHA on surface. Motor drained good, had 1/8" play & minimal squat in bearings. Bit was 1/8 under gauged and had chipped cutters on gauge.
Total Flow Area (in²)	2.227	

MWD		Incident Notes
Max Downhole Temp (°F)	N/A	Directional: None
		MWD:

Bit Distances		Comments
Bit To Bend (Bit to Bend): 4.06 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		Directional: Directional Comments 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.75°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Baker Hughes 8 1/2", Type DD506TWX, SN: 5294400 Jets: 6 x 22's, TFA: 2.227 Runs on Bit: 1

Mud Properties		Parameters
Type	Oil Based	Flow Rate (gpm)
WT	10.00	On Bottom Pressure (psi)
VIS	66.00	Off Bottom Pressure (psi)
PV	20.00	Stall Pressure (psi)
YP	10.00	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: DD506TWX, Style: PDC, Gauge Length (in): 4.25, Size (in): 8.50	Baker	5294400	4 1/2" Reg Pin			8.500		1.08	1.08
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.26	35.34
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.84
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.13
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	80.10
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	109.08
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.54
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX-650-079	4 1/2" IF Box	4 1/2" IF Pin		6.500		34.42	2975.96





Mud Motor Reports

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 1 (BHA #1 Surface)

Motor Details		Date/Depth/Distances	Hours
S/N	800-40-005	Date In	2019-04-27 07:15
Size (in)	8.0	Depth In (ft)	258.00
Lobe/Stage	7/8, 4.00	Date Out	2019-04-27 18:15
Bend Angle	1.5	Depth Out (ft)	1172.00
Speed (rev/gal)	0.15	Total Drilled (ft)	914.00
Wear Pad OD (in)	8.375	Distance Slid (ft)	0.00
Manufacturer	N/A	Distance Rotated (ft)	914.00
Motor Results		% Distance Sliding	0.00%
Motor Incident	No	% Distance Rotating	100.00%
Average Total ROP (ft/h)	161.29		
Average Slide ROP (ft/h)	0.00		
Average Rotating ROP (ft/h)	161.29		
Bit Details			
OD (in)	17.500	On Bottom Pressure (psi)	2265.00 - 3080.00
Vendor	Baker	Off Bottom Pressure (psi)	641.00 - 2200.00
S/N	7046740	NPT	0.0
Nozzles	9x12's		
Total Flow Area (in²)	0.994		
Bit Type	PDC		
Bit Distances			
Bend (Bit to Bend): 6.09 ft, Survey (Bit to Survey): 61.00 ft			
Mud Properties			
Type	Water		
WT	9.40		
VIS	26.00		
PV	1.00		
YP	3.00		
POOH Reason/Notes			
Total Depth/Casing Point: POOH for 13 3/8" Casing			
Incident Notes			
Directional: None			
MWD:			
Comments			
Directional: 8" Contender : 1.50° FBH 7/8 4.0 Stg. W/ Slick Sleeve.Protracted Angle: 1.46°, Flow Rate 400-900, Max Diff 900 psi, Max Operating Torque: 14,930 ft/lbs, Rev/Gal: .15 / Bit Data: Baker 17.50", Type DP606S, SN: 7046740 Jets: 9x12's, TFA: 0.994 Runs on Bit: 8			
MWD:			



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 2 (Drill Intermediate to Casing Point)

Motor Details		Date/Depth/Distances		Hours	
S/N	BDT800-010	Date In	2019-04-28 15:15	Downhole Hours	41.00
Size (in)	8.0	Depth In (ft)	1172.00	Drilling/Circulating Hours	21.50
Lobe/Stage	7/8, 5.90	Date Out	2019-04-30 08:15		
Bend Angle	1.5	Depth Out (ft)	4880.00	Circulating Hours	3.00
Speed (rev/gal)	0.17	Total Drilled (ft)	3708.00	Drilling Hours	18.50
Wear Pad OD (in)	8.250	Distance Slid (ft)	95.00	Sliding Hours	1.33
Manufacturer	N/A	Distance Rotated (ft)	3613.00	Rotating Hours	17.17
Motor Results		% Distance Sliding	2.56%	% Hours Rotating	92.79%
Motor Incident	No	% Distance Rotating	97.44%	% Hours Sliding	7.21%
Average Total ROP (ft/h)	200.43	BHA Parameters			
Average Slide ROP (ft/h)	71.25	Flow Rate (gpm)	563.00 - 900.00	Motor RPM	94.00 - 149.00
Average Rotating ROP (ft/h)	210.47	Stalls	0	Surface RPM	40.00 - 93.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	20.00 - 63.00
OD (in)	12.250	On Bottom Pressure (psi)	1837.00 - 5300.00	Sliding WOB (klbs)	20.00 - 29.00
Vendor	Baker	Off Bottom Pressure (psi)	1420.00 - 4150.00	Temp (°F)	100.40 - 145.00
S/N	7163483	NPT	3.0		
Nozzles	6x12's	BHA Objective			
Total Flow Area (in²)	0.663	BHA #2 1st Intermediate			
Bit Type	PDC				
Bit Distances					
Bend (Bit to Bend): 5.55 ft, Survey (Bit to Survey): 70.00 ft					
Mud Properties					
Type	Brine				
WT	10.50				
VIS	35.00				
PV	2.00				
YP	6.00				
POOH Reason/Notes					
Total Depth/Casing Point: TD Casing Point					
Incident Notes					
Directional: On surface motor drained good, no visible damage					
MWD:					
Comments					
Directional: 8" Butch : 1.50° FBH 7/8 5.9 Stg. W/12" NBS. Protracted Angle: 1.48°, Flow Rate 400-900, Max Diff 1390 psi, Max Operating Torque: 21,870 ft/lbs, Rev/Gal: .166 / Bit Data: Baker 12.25", Type T806FX, SN: 7163483 Jets: 6x12's, TFA: 0.663 Runs on Bit: 5					
MWD:					



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 3 (BHA #3)

Motor Details		Date/Depth/Distances	Hours
S/N	700DDS002	Date In	2019-05-10 18:30
Size (in)	7.0	Depth In (ft)	4880.00
Lobe/Stage	7/8, 8.50	Date Out	2019-05-11 02:45
Bend Angle	1.5	Depth Out (ft)	4880.00
Speed (rev/gal)	0.26	Total Drilled (ft)	0.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	0.00
Manufacturer	N/A	Distance Rotated (ft)	0.00
Motor Results		% Distance Sliding	0
Motor Incident		No	% Hours Rotating
Average Total ROP (ft/h)		0.00	0%
Average Slide ROP (ft/h)		0.00	% Hours Sliding
Average Rotating ROP (ft/h)		0.00	0%
Bit Details		BHA Parameters	
OD (in)	8.500	Flow Rate (gpm)	399.00 - 399.00
Vendor	Halliburton	Stalls	0
S/N	13244778	Stall Pressure (psi)	0.00
Nozzles	6 x 12	On Bottom Pressure (psi)	1240.00 - 1600.00
Total Flow Area (in ²)	0.663	Off Bottom Pressure (psi)	1140.00 - 1140.00
Bit Type	PDC	NPT	2.5
Bit Distances		BHA Objective	
Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		Drill Intermediate 2 to KOP	
Mud Properties			
Type	Brine		
WT	9.20		
VIS	30.00		
PV	3.00		
YP	2.00		

POOH Reason/Notes

Change Bottom Hole Assembly: Spent 2.5hrs. trying to drill out the DV tool. POOH to pick up tri cone bit and drill out with conventional BHA.

Incident Notes

Directional: Bit was still green, motor drained good and BHA was racked back in Derrik.

MWD:

Comments

Directional: 7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0

MWD:



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 4 (BHA #4 Drill out DV Tool)

Motor Details		Date/Depth/Distances		Hours	
S/N		Date In	2019-05-11 02:45	Downhole Hours	8.25
Size (in)		Depth In (ft)	4880.00	Drilling/Circulating Hours	1.75
Lobe/Stage	N/A	Date Out	2019-05-11 11:00		
Bend Angle		Depth Out (ft)	4880.00	Circulating Hours	1.75
Speed (rev/gal)		Total Drilled (ft)	0.00	Drilling Hours	0.00
Wear Pad OD (in)	N/A	Distance Slid (ft)	0.00	Sliding Hours	0.00
Manufacturer		Distance Rotated (ft)	0.00	Rotating Hours	0.00
Motor Results		% Distance Sliding	0	% Hours Rotating	0%
Motor Incident	No	% Distance Rotating	0	% Hours Sliding	0%
Average Total ROP (ft/h)	0.00	BHA Parameters			
Average Slide ROP (ft/h)	0.00	Flow Rate (gpm)	750.00 - 750.00	Motor RPM	-
Average Rotating ROP (ft/h)	0.00	Stalls	0	Surface RPM	30.00 - 30.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	30.00 - 30.00
OD (in)	8.500	On Bottom Pressure (psi)	1450.00 - 1600.00	Sliding WOB (klbs)	0.00 - 0.00
Vendor	Baker Hughes	Off Bottom Pressure (psi)	1400.00 - 1550.00	Temp (°F)	91.00 - 91.00
S/N	5289434	NPT	0.0		
Nozzles	3x22	BHA Objective			
Total Flow Area (in²)	1.114	Drill Out DV Tool, Float and Shoe			
Bit Type	Roller Cone				
Bit Distances					
N/A					
Mud Properties					
Type	Brine				
WT	9.20				
VIS	30.00				
PV	3.00				
YP	1.00				
POOH Reason/Notes					
Other: POOH once DV tool, Float, And Shoe was Drilled					
Incident Notes					
Directional:					
MWD:					
Comments					
Directional:					
MWD:					



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 5 (BHA #5 Intermediate #2)

Motor Details		Date/Depth/Distances		Hours	
S/N	700DDS002	Date In	2019-05-11 11:00	Downhole Hours	37.50
Size (in)	7.0	Depth In (ft)	4880.00	Drilling/Circulating Hours	23.92
Lobe/Stage	7/8, 8.50	Date Out	2019-05-13 00:30		
Bend Angle	1.5	Depth Out (ft)	9771.00	Circulating Hours	0.00
Speed (rev/gal)	0.26	Total Drilled (ft)	4891.00	Drilling Hours	23.92
Wear Pad OD (in)	7.125	Distance Slid (ft)	149.00	Sliding Hours	2.17
Manufacturer	N/A	Distance Rotated (ft)	4742.00	Rotating Hours	21.75
Motor Results		% Distance Sliding	3.05%	% Hours Rotating	90.94%
Motor Incident	No	% Distance Rotating	96.95%	% Hours Sliding	9.06%
Average Total ROP (ft/h)	204.50	BHA Parameters			
Average Slide ROP (ft/h)	68.77	Flow Rate (gpm)	725.00 - 753.00	Motor RPM	94.00 - 149.00
Average Rotating ROP (ft/h)	218.02	Stalls	0	Surface RPM	30.00 - 82.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	36.00 - 60.00
OD (in)	8.500	On Bottom Pressure (psi)	3500.00 - 4700.00	Sliding WOB (klbs)	25.00 - 48.00
Vendor	Halliburton	Off Bottom Pressure (psi)	3000.00 - 3800.00	Temp (°F)	141.00 - 151.00
S/N	13244778	NPT	0.0		
Nozzles	6 x 12	BHA Objective			
Total Flow Area (in²)	0.663	Drill Intermediate #2 to KOP			
Bit Type	PDC				
Bit Distances					
Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft					
Mud Properties					
Type	Brine				
WT	9.10				
VIS	29.00				
PV	2.00				
YP	3.00				
POOH Reason/Notes					
Penetration Rate: Pooh for Rop, Once out bit was graded 2-4 due to chipped, broken and missing cutters along shoulder.					
Incident Notes					
Directional:					
MWD:					
Comments					
Directional: 7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0					
MWD:					



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 6 (BHA #6 Intermediate #2)

Motor Details		Date/Depth/Distances		Hours	
S/N	700-40-31	Date In	2019-05-13 00:30	Downhole Hours	36.00
Size (in)	7.0	Depth In (ft)	9771.00	Drilling/Circulating Hours	12.83
Lobe/Stage	6/7, 8.40	Date Out	2019-05-14 12:30		
Bend Angle	1.5	Depth Out (ft)	11431.00	Circulating Hours	0.00
Speed (rev/gal)	0.30	Total Drilled (ft)	1660.00	Drilling Hours	12.83
Wear Pad OD (in)	7.125	Distance Slid (ft)	107.00	Sliding Hours	2.75
Manufacturer	N/A	Distance Rotated (ft)	1553.00	Rotating Hours	10.08
Motor Results		% Distance Sliding	6.45%	% Hours Rotating	78.57%
Motor Incident	No	% Distance Rotating	93.55%	% Hours Sliding	21.43%
Average Total ROP (ft/h)	129.35	BHA Parameters			
Average Slide ROP (ft/h)	38.91	Flow Rate (gpm)	750.00 - 750.00	Motor RPM	94.00 - 149.00
Average Rotating ROP (ft/h)	154.02	Stalls	0	Surface RPM	30.00 - 30.00
Bit Details		Stall Pressure (psi)	0.00	Rotating WOB (klbs)	51.00 - 51.00
OD (in)	8.500	On Bottom Pressure (psi)	3800.00 - 4100.00	Sliding WOB (klbs)	25.00 - 25.00
Vendor	Halliburton	Off Bottom Pressure (psi)	3500.00 - 3850.00	Temp (°F)	-0.00 - -0.00
S/N	13050197	NPT	0.0		
Nozzles	6 x 12	BHA Objective			
Total Flow Area (in²)	0.663	Drill to KOP			
Bit Type	PDC				
Bit Distances					
Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft					
Mud Properties					
Type	Brine				
WT	9.40				
VIS	30.00				
PV	2.00				
YP	3.00				
POOH Reason/Notes					
Total Depth/Casing Point: Reached KOP, POOH for Curve Assembly					
Incident Notes					
Directional:					
MWD:					
Comments					
Directional: 7" Contender: 1.50° FBH 6/7 8.4 Stg. W/8 1/4" NBS. Protracted Angle: 1.63°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GT65DM, SN: 13050197 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0					
MWD:					



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 7 (BHA #7 (Curve))

Motor Details		Date/Depth/Distances	Hours
S/N	CDM650-012	Date In	2019-05-14 13:30
Size (in)	7.0	Depth In (ft)	11431.00
Lobe/Stage	6/7, 8.40	Date Out	2019-05-15 21:30
Bend Angle	2.0	Depth Out (ft)	12089.00
Speed (rev/gal)	0.30	Total Drilled (ft)	658.00
Wear Pad OD (in)	7.313	Distance Slid (ft)	658.00
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)	39.88		
Average Slide ROP (ft/h)	39.88		
Average Rotating ROP (ft/h)	0.00		
Bit Details			
OD (in)	8.500		
Vendor	Halliburton		
S/N	13192807		
Nozzles	5 x 20		
Total Flow Area (in²)	1.530		
Bit Type	PDC		
Bit Distances			
Bend (Bit to Bend): 4.07 ft, Survey (Bit to Survey): 63.00 ft, Gamma (Bit to Gamma): 48.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.60		
VIS	79.00		
PV	19.00		
YP	7.00		
POOH Reason/Notes			
Build Rate: BHA was not achieving build rates need to land on Target			
Incident Notes			
Directional:			
MWD:			
Comments			
Directional: 7" Contender: 2.0° FBH 6/7 8.4 Stg. Mtr Slick. Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GTD55DM, SN: 13192807 Jets: 5x20's, TFA: 1.53 Runs on Bit: 2			
MWD:			



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Mud Motor Report - BHA 8 (BHA #8 (Curve))

Motor Details		Date/Depth/Distances	Hours
S/N	CDM650-009	Date In	2019-05-15 22:30
Size (in)	6.75	Depth In (ft)	12089.00
Lobe/Stage	7/8, 5.70	Date Out	2019-05-16 16:30
Bend Angle	2.6	Depth Out (ft)	12253.00
Speed (rev/gal)	0.21	Total Drilled (ft)	164.00
Wear Pad OD (in)	7.313	Distance Slid (ft)	164.00
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)	31.24		
Average Slide ROP (ft/h)	31.24		
Average Rotating ROP (ft/h)	0.00		
Bit Details			
OD (in)	8.500		
Vendor	Baker		
S/N	5288335		
Nozzles	4x18s		
Total Flow Area (in²)	0.994		
Bit Type	Other		
Bit Distances			
Bend (Bit to Bend): 5.13 ft, Survey (Bit to Survey): 59.00 ft, Gamma (Bit to Gamma): 44.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.70		
VIS	81.00		
PV	22.00		
YP	9.00		
POOH Reason/Notes			
Total Depth/Casing Point: Section Projected Landed @ 90°			
Incident Notes			
Directional:			
MWD:			
Comments			
Directional: 7" Contender: 2.60° FBH 7/8 5.7 Stg. Mtr W/ 8 1/8 NB Stab. Protracted Angle: 2.59°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .21 / Bit Data: Baker 8 1/2", Type KMX624T, SN: 5288335 Jets: 4x18's, TFA: .994 Runs on Bit: 0			
MWD:			



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 9 (BHA #9 (Lateral Run))

Motor Details		Date/Depth/Distances	Hours
S/N	700DDS003	Date In	2019-05-16 20:45
Size (in)	7.0	Depth In (ft)	12253.00
Lobe/Stage	7/8, 8.50	Date Out	2019-05-20 00:00
Bend Angle	1.75	Depth Out (ft)	16557.00
Speed (rev/gal)	0.26	Total Drilled (ft)	4304.00
Wear Pad OD (in)	7.125	Distance Slid (ft)	860.00
Manufacturer	N/A	Distance Rotated (ft)	3444.00
Motor Results		% Distance Sliding	19.98%
Motor Incident	Yes	% Distance Rotating	80.02%
Average Total ROP (ft/h)	82.90	BHA Parameters	
Average Slide ROP (ft/h)	37.53	Flow Rate (gpm)	675.00 - 700.00
Average Rotating ROP (ft/h)	118.76	Stalls	0
Bit Details		Stall Pressure (psi)	1910.00
OD (in)	8.500	On Bottom Pressure (psi)	4000.00 - 6200.00
Vendor	Halliburton	Off Bottom Pressure (psi)	3700.00 - 5650.00
S/N	13080800	NPT	0.0
Nozzles	6 x 22	BHA Objective	
Total Flow Area (in²)	2.220	Drill Lateral to TD	
Bit Type	Other		
Bit Distances			
Bend (Bit to Bend): 4.10 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft			
Mud Properties			
Type	Oil Based		
WT	9.70		
VIS	56.00		
PV	14.00		
YP	10.00		
POOH Reason/Notes			
Pressure Spike: Made connection after SPR's. After bringing pumps online we hade 1000 psi over previous off bottom PSI. brought pumps down 75 spm to get same OBP as before. slacked off to bottom and tagged with 37 WOB and PSI increased 1000 psi. picked up off bottom and lost 100 psi. Psi maintained 900 psi over off bottom Psi.			
Incident Notes			
Directional: Surface inspection showed a rung bit. motor looked and sounded good. we did find several chunks of steel on top of the UBHO sleeve. Appeared to be from the agitator.			
MWD:			
Comments			
Directional: 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0			
MWD:			



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Mud Motor Report - BHA 10 (BHA #10 (Lateral II))

Motor Details		Date/Depth/Distances	Hours
S/N	700DDS018	Date In	2019-05-20 00:00
Size (in)	7.0	Depth In (ft)	16557.00
Lobe/Stage	7/8, 8.50	Date Out	2019-05-22 23:15
Bend Angle	1.75	Depth Out (ft)	20304.00
Speed (rev/gal)	0.26	Total Drilled (ft)	3747.00
Wear Pad OD (in)	7.187	Distance Slid (ft)	224.00
Manufacturer	N/A	Distance Rotated (ft)	3523.00
Motor Results		% Distance Sliding	5.98%
Motor Incident		% Distance Rotating	94.02%
Average Total ROP (ft/h)	105.06	BHA Parameters	
Average Slide ROP (ft/h)	28.90	Flow Rate (gpm)	590.00 - 627.00
Average Rotating ROP (ft/h)	126.20	Stalls	0
Bit Details		Stall Pressure (psi)	0.00
OD (in)	8.500	On Bottom Pressure (psi)	790.00 - 6150.00
Vendor	Baker	Off Bottom Pressure (psi)	5110.00 - 5300.00
S/N	5294400	NPT	9.25
Nozzles	6 x 22	BHA Objective	
Total Flow Area (in ²)	2.227	Drill lateral F/16558 to TD of 20,145 +/-	
Bit Type	PDC		
Bit Distances			
Bend (Bit to Bend): 4.06 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft			
Mud Properties			
Type	Oil Based		
WT	10.00		
VIS	66.00		
PV	20.00		
YP	10.00		

POOH Reason/Notes

Total Depth/Casing Point: TD Well @ 20304, Inspected BHA on surface. Motor drained good, had 1/8" play & minimal squat in bearings. Bit was 1/8 under gauged and had chipped cutters on gauge.

Incident Notes

Directional: None

MWD:

Comments

Directional: Directional Comments 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.75°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Baker Hughes 8 1/2", Type DD506TWX, SN: 5294400 Jets: 6 x 22's, TFA: 2.227 Runs on Bit: 1

MWD:



Slide/Rotate Reports

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	04-27	07:15	08:20	04-27	1.08	258.00	288.00	30.00	27.69	N/A	889.00	52.0	20.00	2265.00	641.00	Surface
Rotate	04-27	10:10	10:30	04-27	0.33	288.00	379.00	91.00	273.00	N/A	901.00	62.0	21.00	2473.00	800.00	Surface
Rotate	04-27	10:30	10:50	04-27	0.33	379.00	471.00	92.00	276.00	N/A	900.00	60.0	24.00	2581.00	1175.00	Surface
Rotate	04-27	11:00	11:20	04-27	0.33	471.00	563.00	92.00	276.00	N/A	900.00	61.0	25.00	2578.00	1925.00	Surface
Rotate	04-27	11:30	11:45	04-27	0.25	563.00	655.00	92.00	368.00	N/A	900.00	60.0	25.00	2830.00	1900.00	Surface
Rotate	04-27	11:55	12:20	04-27	0.42	655.00	746.00	91.00	218.40	N/A	900.00	60.0	28.00	2850.00	1900.00	Surface
Rotate	04-27	12:30	13:00	04-27	0.5	746.00	837.00	91.00	182.00	N/A	900.00	61.0	32.00	3020.00	2080.00	Surface
Rotate	04-27	13:10	13:45	04-27	0.58	837.00	928.00	91.00	156.00	N/A	900.00	60.0	34.00	3080.00	2200.00	Surface
Rotate	04-27	13:55	14:30	04-27	0.58	928.00	1019.00	91.00	156.00	N/A	900.00	60.0	34.00	3080.00	2200.00	Surface
Rotate	04-27	14:35	15:10	04-27	0.58	1019.00	1114.00	95.00	162.86	N/A	900.00	60.0	34.00	3080.00	2200.00	Surface
Rotate	04-27	15:15	15:55	04-27	0.67	1114.00	1172.00	58.00	87.00	N/A	900.00	60.0	34.00	3080.00	2200.00	Surface, Intermediate



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #2 (Drill Intermediate to Casing Point)

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	04-28	22:30	22:35	04-28	0.08	1172.00	1191.00	19.00	228.00	N/A	563.00	40.0	20.00	1837.00	1420.00	Intermediate
Rotate	04-28	22:35	23:25	04-28	0.83	1191.00	1282.00	91.00	109.20	N/A	900.00	62.0	20.00	3390.00	3280.00	Intermediate
Rotate	04-28	23:35	23:50	04-28	0.25	1282.00	1373.00	91.00	364.00	N/A	900.00	62.0	26.00	3760.00	3220.00	Intermediate
Rotate	04-29	00:00	00:25	04-29	0.42	1373.00	1464.00	91.00	218.40	N/A	900.00	62.0	26.00	3760.00	3220.00	Intermediate
Rotate	04-29	00:35	01:00	04-29	0.42	1464.00	1650.00	186.00	446.40	N/A	900.00	93.0	23.00	3890.00	3360.00	Intermediate
Rotate	04-29	01:05	01:30	04-29	0.42	1650.00	1744.00	94.00	225.60	N/A	900.00	70.0	23.00	4000.00	3380.00	Intermediate
Rotate	04-29	01:35	02:20	04-29	0.75	1744.00	1933.00	189.00	252.00	N/A	900.00	70.0	23.00	4000.00	3380.00	Intermediate
Rotate	04-29	02:25	03:40	04-29	1.25	1933.00	2123.00	190.00	152.00	N/A	900.00	80.0	23.00	3820.00	3480.00	Intermediate
Rotate	04-29	03:45	05:10	04-29	1.42	2123.00	2312.00	189.00	133.41	N/A	900.00	72.0	25.00	3700.00	3500.00	Intermediate
Rotate	04-29	05:15	05:45	04-29	0.5	2312.00	2364.00	52.00	104.00	N/A	727.00	83.0	27.00	2450.00	2400.00	Intermediate
Rotate	04-29	11:05	11:25	04-29	0.33	2364.00	2407.00	43.00	129.00	N/A	727.00	83.0	27.00	2450.00	2400.00	Intermediate
Rotate	04-29	11:40	12:00	04-29	0.33	2407.00	2501.00	94.00	282.00	N/A	727.00	83.0	27.00	2450.00	2400.00	Intermediate
Rotate	04-29	12:05	12:35	04-29	0.5	2501.00	2596.00	95.00	190.00	N/A	727.00	83.0	27.00	2450.00	2400.00	Intermediate
Rotate	04-29	12:40	13:25	04-29	0.75	2596.00	2690.00	94.00	125.33	N/A	727.00	83.0	27.00	2450.00	2400.00	Intermediate
Rotate	04-29	13:30	14:00	04-29	0.5	2690.00	2879.00	189.00	378.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	14:25	14:45	04-29	0.33	2879.00	2974.00	95.00	285.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	14:50	15:00	04-29	0.17	2974.00	3068.00	94.00	564.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	15:05	15:20	04-29	0.25	3068.00	3162.00	94.00	376.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	15:25	15:30	04-29	0.08	3162.00	3183.00	21.00	252.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Slide	04-29	15:30	15:40	04-29	0.17	3183.00	3203.00	20.00	120.00	140.0	900.00	N/A	20.00	3800.00	3600.00	Intermediate
Rotate	04-29	15:40	15:50	04-29	0.17	3203.00	3257.00	54.00	324.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	16:05	16:15	04-29	0.17	3257.00	3351.00	94.00	564.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	16:20	16:25	04-29	0.08	3351.00	3445.00	94.00	1128.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	16:30	16:35	04-29	0.08	3445.00	3459.00	14.00	168.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Slide	04-29	16:35	16:40	04-29	0.08	3459.00	3479.00	20.00	240.00	180.0	900.00	N/A	20.00	3800.00	3600.00	Intermediate
Rotate	04-29	16:40	16:50	04-29	0.17	3479.00	3540.00	61.00	366.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	16:55	17:05	04-29	0.17	3540.00	3634.00	94.00	564.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	17:10	17:15	04-29	0.08	3634.00	3645.00	11.00	132.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Slide	04-29	17:15	17:25	04-29	0.17	3645.00	3670.00	25.00	150.00	270.0	900.00	N/A	20.00	4000.00	3600.00	Intermediate
Rotate	04-29	17:25	17:55	04-29	0.5	3670.00	3728.00	58.00	116.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	18:00	18:30	04-29	0.5	3728.00	3822.00	94.00	188.00	N/A	727.00	83.0	45.00	2450.00	2400.00	Intermediate
Rotate	04-29	18:35	19:20	04-29	0.75	3822.00	3916.00	94.00	125.33	N/A	900.00	84.0	57.00	4420.00	3740.00	Intermediate
Rotate	04-29	19:25	19:30	04-29	0.08	3916.00	3926.00	10.00	120.00	N/A	900.00	84.0	57.00	4420.00	3740.00	Intermediate
Slide	04-29	19:30	20:00	04-29	0.5	3926.00	3941.00	15.00	30.00	180.0	900.00	N/A	28.00	4234.00	3740.00	Intermediate
Rotate	04-29	20:00	20:30	04-29	0.5	3941.00	4011.00	70.00	140.00	N/A	900.00	81.0	56.00	4600.00	3900.00	Intermediate
Rotate	04-29	20:35	21:05	04-29	0.5	4011.00	4105.00	94.00	188.00	N/A	895.00	82.0	58.00	4850.00	3864.00	Intermediate
Rotate	04-29	21:10	21:35	04-29	0.42	4105.00	4199.00	94.00	225.60	N/A	895.00	82.0	58.00	4950.00	3864.00	Intermediate
Rotate	04-29	21:40	22:05	04-29	0.42	4199.00	4294.00	95.00	228.00	N/A	900.00	82.0	58.00	5050.00	3900.00	Intermediate
Rotate	04-29	22:10	22:15	04-29	0.08	4294.00	4304.00	10.00	120.00	N/A	900.00	82.0	62.00	4980.00	4030.00	Intermediate
Slide	04-29	22:15	22:40	04-29	0.42	4304.00	4319.00	15.00	36.00	180.0	900.00	N/A	29.00	4400.00	4030.00	Intermediate
Rotate	04-29	22:40	23:00	04-29	0.33	4319.00	4388.00	69.00	207.00	N/A	900.00	82.0	62.00	4980.00	4030.00	Intermediate
Rotate	04-29	23:05	23:35	04-29	0.5	4388.00	4483.00	95.00	190.00	N/A	900.00	83.0	62.00	5168.00	4090.00	Intermediate
Rotate	04-29	23:40	00:05	04-30	0.42	4483.00	4577.00	94.00	225.60	N/A	900.00	83.0	62.00	5168.00	4090.00	Intermediate
Rotate	04-30	00:10	00:40	04-30	0.5	4577.00	4671.00	94.00	188.00	N/A	900.00	82.0	62.00	5110.00	4130.00	Intermediate
Rotate	04-30	00:45	01:15	04-30	0.5	4671.00	4766.00	95.00	190.00	N/A	900.00	80.0	62.00	5300.00	4150.00	Intermediate
Rotate	04-30	01:20	01:50	04-30	0.5	4766.00	4860.00	94.00	188.00	N/A	896.00	80.0	63.00	4900.00	4020.00	Intermediate
Rotate	04-30	01:55	02:05	04-30	0.17	4860.00	4880.00	20.00	120.00	N/A	725.00	82.0	60.00	3860.00	3000.00	Intermediate

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620	
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H	
	Play Delaware Basin	State/Province and Country New Mexico, US		County Lea	Company Man

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

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
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	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Slide/Rotate Report - BHA #4 (BHA #4 Drill out DV Tool)

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
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Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #5 (BHA #5 Intermediate #2)

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	05-11	14:20	14:35	05-11	0.25	4880.00	4948.00	68.00	272.00	N/A	725.00	82.0	60.00	3860.00	3000.00	Intermediate
Rotate	05-11	14:40	15:00	05-11	0.33	4948.00	5039.00	91.00	273.00	N/A	725.00	82.0	60.00	3860.00	3000.00	Intermediate
Rotate	05-11	15:05	15:15	05-11	0.17	5039.00	5130.00	91.00	546.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	15:20	15:30	05-11	0.17	5130.00	5225.00	95.00	570.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	15:35	15:45	05-11	0.17	5225.00	5319.00	94.00	564.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	15:50	16:00	05-11	0.17	5319.00	5413.00	94.00	564.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	16:05	16:15	05-11	0.17	5413.00	5508.00	95.00	570.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	16:20	16:30	05-11	0.17	5508.00	5602.00	94.00	564.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	16:35	16:40	05-11	0.08	5602.00	5624.00	22.00	264.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	17:20	17:30	05-11	0.17	5624.00	5696.00	72.00	432.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	17:35	17:45	05-11	0.17	5696.00	5791.00	95.00	570.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	17:50	18:00	05-11	0.17	5791.00	5885.00	94.00	564.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Slide	05-11	18:05	18:15	05-11	0.17	5885.00	5910.00	25.00	150.00	120.0	750.00	N/A	25.00	3500.00	3200.00	Intermediate
Rotate	05-11	18:15	18:30	05-11	0.25	5910.00	5980.00	70.00	280.00	N/A	750.00	82.0	36.00	3950.00	3200.00	Intermediate
Rotate	05-11	18:35	18:45	05-11	0.17	5980.00	6054.00	74.00	444.00	N/A	753.00	30.0	52.00	4600.00	3330.00	Intermediate
Slide	05-11	18:45	18:55	05-11	0.17	6054.00	6074.00	20.00	120.00	170.0	750.00	N/A	25.00	3710.00	3330.00	Intermediate
Rotate	05-11	19:00	19:10	05-11	0.17	6074.00	6169.00	95.00	570.00	N/A	753.00	30.0	52.00	4600.00	3330.00	Intermediate
Rotate	05-11	19:15	19:20	05-11	0.08	6169.00	6263.00	94.00	1128.00	N/A	753.00	30.0	52.00	4600.00	3420.00	Intermediate
Rotate	05-11	19:25	19:35	05-11	0.17	6263.00	6358.00	95.00	570.00	N/A	753.00	30.0	52.00	4600.00	3420.00	Intermediate
Rotate	05-11	19:40	19:45	05-11	0.08	6358.00	6368.00	10.00	120.00	N/A	753.00	41.0	52.00	4561.00	3490.00	Intermediate
Slide	05-11	19:45	19:50	05-11	0.08	6368.00	6391.00	23.00	276.00	180.0	750.00	N/A	25.00	3710.00	3330.00	Intermediate
Rotate	05-11	19:50	20:00	05-11	0.17	6391.00	6453.00	62.00	372.00	N/A	753.00	41.0	52.00	4561.00	3490.00	Intermediate
Rotate	05-11	20:05	20:10	05-11	0.08	6453.00	6547.00	94.00	1128.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	20:15	20:25	05-11	0.17	6547.00	6641.00	94.00	564.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	20:30	20:35	05-11	0.08	6641.00	6736.00	95.00	1140.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	20:40	20:50	05-11	0.17	6736.00	6830.00	94.00	564.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	20:55	21:05	05-11	0.17	6830.00	6924.00	94.00	564.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	21:10	21:20	05-11	0.17	6924.00	7009.00	85.00	510.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Slide	05-11	21:20	21:30	05-11	0.17	7009.00	7019.00	10.00	60.00	290.0	750.00	N/A	25.00	3710.00	3330.00	Intermediate
Rotate	05-11	21:35	22:10	05-11	0.58	7019.00	7113.00	94.00	161.14	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	22:15	22:30	05-11	0.25	7113.00	7207.00	94.00	376.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	22:35	22:45	05-11	0.17	7207.00	7302.00	95.00	570.00	N/A	753.00	31.0	52.00	4600.00	3690.00	Intermediate
Rotate	05-11	22:50	23:00	05-11	0.17	7302.00	7396.00	94.00	564.00	N/A	753.00	31.0	53.00	4700.00	3800.00	Intermediate
Rotate	05-11	23:05	23:20	05-11	0.25	7396.00	7490.00	94.00	376.00	N/A	753.00	31.0	53.00	4700.00	3800.00	Intermediate
Rotate	05-11	23:25	23:35	05-11	0.17	7490.00	7585.00	95.00	570.00	N/A	753.00	31.0	53.00	4700.00	3800.00	Intermediate
Rotate	05-11	23:40	23:55	05-11	0.25	7585.00	7679.00	94.00	376.00	N/A	753.00	31.0	53.00	4700.00	3800.00	Intermediate
Rotate	05-12	00:00	00:25	05-12	0.42	7679.00	7774.00	95.00	228.00	N/A	753.00	31.0	53.00	4600.00	3500.00	Intermediate
Rotate	05-12	00:30	00:35	05-12	0.08	7774.00	7784.00	10.00	120.00	N/A	753.00	31.0	53.00	4600.00	3500.00	Intermediate
Slide	05-12	00:35	01:00	05-12	0.42	7784.00	7815.00	31.00	74.40	100.0		N/A				Intermediate
Rotate	05-12	01:00	01:15	05-12	0.25	7815.00	7868.00	53.00	212.00	N/A	753.00	31.0	53.00	4600.00	3500.00	Intermediate
Rotate	05-12	01:20	01:35	05-12	0.25	7868.00	7962.00	94.00	376.00	N/A	753.00	31.0	53.00	4600.00	3500.00	Intermediate
Rotate	05-12	01:40	02:05	05-12	0.42	7962.00	8057.00	95.00	228.00	N/A	753.00	31.0	53.00	4600.00	3500.00	Intermediate
Rotate	05-12	02:10	02:30	05-12	0.33	8057.00	8151.00	94.00	282.00	N/A	753.00	31.0	53.00	4600.00	3500.00	Intermediate
Rotate	05-12	02:35	03:15	05-12	0.67	8151.00	8245.00	94.00	141.00	N/A	753.00	31.0	53.00	4000.00	3400.00	Intermediate
Rotate	05-12	03:20	03:40	05-12	0.33	8245.00	8339.00	94.00	282.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	03:45	04:10	05-12	0.42	8339.00	8434.00	95.00	228.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	04:15	04:55	05-12	0.67	8434.00	8528.00	94.00	141.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	05:10	05:45	05-12	0.58	8528.00	8623.00	95.00	162.86	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	05:50	06:35	05-12	0.75	8623.00	8717.00	94.00	125.33	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	06:40	07:35	05-12	0.92	8717.00	8811.00	94.00	102.55	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	07:40	08:35	05-12	0.92	8811.00	8906.00	95.00	103.64	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	08:40	08:50	05-12	0.17	8906.00	8916.00	10.00	60.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Slide	05-12	08:50	09:25	05-12	0.58	8916.00	8936.00	20.00	34.29	310.0	750.00	N/A	48.00	3550.00	3300.00	Intermediate
Rotate	05-12	09:25	09:40	05-12	0.25	8936.00	9000.00	64.00	256.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	09:55	10:05	05-12	0.17	9000.00	9010.00	10.00	60.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Slide	05-12	10:05	10:40	05-12	0.58	9010.00	9030.00	20.00	34.29	340.0	750.00	N/A	48.00	3550.00	3300.00	Intermediate
Rotate	05-12	10:40	11:20	05-12	0.67	9030.00	9094.00	64.00	96.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	11:25	11:40	05-12	0.25	9094.00	9189.00	95.00	380.00	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	11:45	13:00	05-12	1.25	9189.00	9283.00	94.00	75.20	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	13:05	14:10	05-12	1.08	9283.00	9378.00	95.00	87.69	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	14:15	15:25	05-12	1.17	9378.00	9472.00	94.00	80.57	N/A	753.00	31.0	53.00	4200.00	3400.00	Intermediate
Rotate	05-12	15:30	17:10	05-12	1.67	9472.00	9566.00	94.00	56.40	N/A						Intermediate
Rotate	05-12	17:15	18:20	05-12	1.08	9566.00	9660.00	94.00	86.77	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-12	18:25	19:20	05-12	0.92	9660.00	9755.00	95.00	103.64	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate

Rotate	05-12	19:25	19:35	05-12	0.17	9755.00	9771.00	16.00	96.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
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Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #6 (BHA #6 Intermediate #2)

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	05-13	13:50	14:15	05-13	0.42	9771.00	9849.00	78.00	187.20	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	14:20	14:50	05-13	0.5	9849.00	9944.00	95.00	190.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	14:55	15:25	05-13	0.5	9944.00	10038.00	94.00	188.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	15:30	16:05	05-13	0.58	10038.00	10132.00	94.00	161.14	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	16:10	16:15	05-13	0.08	10132.00	10142.00	10.00	120.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Slide	05-13	16:15	16:35	05-13	0.33	10142.00	10162.00	20.00	60.00	120.0	750.00	N/A	25.00	4100.00	3850.00	Intermediate
Rotate	05-13	16:35	17:05	05-13	0.5	10162.00	10227.00	65.00	130.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	17:10	17:50	05-13	0.67	10227.00	10321.00	94.00	141.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	17:55	18:25	05-13	0.5	10321.00	10415.00	94.00	188.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	18:30	19:10	05-13	0.67	10415.00	10509.00	94.00	141.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	19:15	19:30	05-13	0.25	10509.00	10522.00	13.00	52.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Slide	05-13	19:30	20:15	05-13	0.75	10522.00	10550.00	28.00	37.33	30.0	750.00	N/A	25.00	4100.00	3850.00	Intermediate
Rotate	05-13	20:15	20:40	05-13	0.42	10550.00	10605.00	55.00	132.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	20:45	21:20	05-13	0.58	10605.00	10700.00	95.00	162.86	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	21:25	22:05	05-13	0.67	10700.00	10794.00	94.00	141.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	22:20	22:40	05-13	0.33	10794.00	10889.00	95.00	285.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	22:45	23:20	05-13	0.58	10889.00	10984.00	95.00	162.86	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-13	23:25	23:30	05-13	0.08	10984.00	10994.00	10.00	120.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Slide	05-13	23:30	00:00	05-14	0.5	10994.00	11015.00	21.00	42.00	0.0	750.00	N/A	25.00	4100.00	3850.00	Intermediate
Slide	05-14	00:00	00:25	05-14	0.42	11015.00	11030.00	15.00	36.00	0.0	750.00	N/A	25.00	4100.00	3850.00	Intermediate
Rotate	05-14	00:25	00:50	05-14	0.42	11030.00	11078.00	48.00	115.20	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-14	00:55	01:00	05-14	0.08	11078.00	11088.00	10.00	120.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Slide	05-14	01:00	01:45	05-14	0.75	11088.00	11111.00	23.00	30.67	0.0	750.00	N/A	25.00	4100.00	3850.00	Intermediate
Rotate	05-14	01:45	02:20	05-14	0.58	11111.00	11172.00	61.00	104.57	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-14	02:25	03:00	05-14	0.58	11172.00	11267.00	95.00	162.86	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-14	03:05	03:40	05-14	0.58	11267.00	11361.00	94.00	161.14	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate
Rotate	05-14	03:45	04:15	05-14	0.5	11361.00	11431.00	70.00	140.00	N/A	750.00	30.0	51.00	3800.00	3500.00	Intermediate, Curve



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Slide/Rotate Report - BHA #7 (BHA #7 (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	05-14	20:15	00:00	05-15	3.75	11431.00	11493.00	62.00	16.53	0.0	600.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	00:00	01:05	05-15	1.08	11493.00	11523.00	30.00	27.69	0.0	600.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	01:10	02:45	05-15	1.58	11523.00	11617.00	94.00	59.37	0.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	02:55	05:00	05-15	2.08	11617.00	11712.00	95.00	45.60	10.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	05:10	07:30	05-15	2.33	11712.00	11807.00	95.00	40.71	20.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	07:40	08:45	05-15	1.08	11807.00	11856.00	49.00	45.23	30.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	08:55	10:15	05-15	1.33	11856.00	11901.00	45.00	33.75	30.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	10:25	11:50	05-15	1.42	11901.00	11996.00	95.00	67.06	30.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	12:00	13:15	05-15	1.25	11996.00	12052.00	56.00	44.80	20.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-15	13:25	14:00	05-15	0.58	12052.00	12089.00	37.00	63.43	20.0	700.00	N/A	35.00	4000.00	3700.00	Curve

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Slide/Rotate Report - BHA #8 (BHA #8 (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	05-16	05:00	08:00	05-16	3.0	12089.00	12181.00	92.00	30.67	0.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-16	08:10	09:40	05-16	1.5	12181.00	12226.00	45.00	30.00	0.0	700.00	N/A	35.00	4000.00	3700.00	Curve
Slide	05-16	09:50	10:35	05-16	0.75	12226.00	12253.00	27.00	36.00	20.0	700.00	N/A	35.00	4000.00	3700.00	Curve, Lateral



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	05-17	03:00	03:20	05-17	0.33	12253.00	12313.00	60.00	180.00	N/A	700.00	30.0	40.00	6200.00	5650.00	Lateral
Rotate	05-17	03:25	03:50	05-17	0.42	12313.00	12407.00	94.00	225.60	N/A	700.00	30.0	44.00	6200.00	5650.00	Lateral
Rotate	05-17	03:55	04:20	05-17	0.42	12407.00	12501.00	94.00	225.60	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	04:25	04:30	05-17	0.08	12501.00	12511.00	10.00	120.00	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	04:30	05:15	05-17	0.75	12511.00	12529.00	18.00	24.00	0.0	700.00	N/A	35.00	4000.00	3700.00	Lateral
Rotate	05-17	05:15	05:30	05-17	0.25	12529.00	12595.00	66.00	264.00	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	05:35	05:40	05-17	0.08	12595.00	12605.00	10.00	120.00	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	05:40	06:10	05-17	0.5	12605.00	12625.00	20.00	40.00	1.0	700.00	N/A	35.00	4000.00	3700.00	Lateral
Rotate	05-17	06:10	06:30	05-17	0.33	12625.00	12690.00	65.00	195.00	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	06:35	06:55	05-17	0.33	12690.00	12784.00	94.00	282.00	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	07:00	07:25	05-17	0.42	12784.00	12878.00	94.00	225.60	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	07:30	07:35	05-17	0.08	12878.00	12888.00	10.00	120.00	N/A	700.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	07:35	07:50	05-17	0.25	12888.00	12908.00	20.00	80.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	07:50	08:05	05-17	0.25	12908.00	12972.00	64.00	256.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	08:10	08:15	05-17	0.08	12972.00	12982.00	10.00	120.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	08:15	08:30	05-17	0.25	12982.00	13002.00	20.00	80.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	08:30	08:45	05-17	0.25	13002.00	13067.00	65.00	260.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	08:55	09:00	05-17	0.08	13067.00	13077.00	10.00	120.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	09:00	09:15	05-17	0.25	13077.00	13097.00	20.00	80.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	09:15	09:30	05-17	0.25	13097.00	13161.00	64.00	256.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	09:35	09:55	05-17	0.33	13161.00	13256.00	95.00	285.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	10:00	10:05	05-17	0.08	13256.00	13266.00	10.00	120.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	10:05	10:30	05-17	0.42	13266.00	13296.00	30.00	72.00	100.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	10:30	10:45	05-17	0.25	13296.00	13350.00	54.00	216.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	10:50	11:10	05-17	0.33	13350.00	13444.00	94.00	282.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	11:15	11:20	05-17	0.08	13444.00	13454.00	10.00	120.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	11:20	11:45	05-17	0.42	13454.00	13479.00	25.00	60.00	130.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	11:45	12:00	05-17	0.25	13479.00	13539.00	60.00	240.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	12:05	12:15	05-17	0.17	13539.00	13552.00	13.00	78.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	12:15	12:35	05-17	0.33	13552.00	13582.00	30.00	90.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	12:35	12:55	05-17	0.33	13582.00	13633.00	51.00	153.00	N/A	675.00	30.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	13:00	13:30	05-17	0.5	13633.00	13671.00	38.00	76.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	13:30	13:50	05-17	0.33	13671.00	13728.00	57.00	171.00	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	13:55	15:25	05-17	1.5	13728.00	13806.00	78.00	52.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	15:25	15:35	05-17	0.17	13806.00	13822.00	16.00	96.00	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	15:40	15:50	05-17	0.17	13822.00	13853.00	31.00	186.00	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	15:55	16:10	05-17	0.25	13853.00	13916.00	63.00	252.00	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	16:35	16:40	05-17	0.08	13916.00	13923.00	7.00	84.00	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	19:10	20:00	05-17	0.83	13923.00	13973.00	50.00	60.00	100.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	20:00	20:35	05-17	0.58	13973.00	14011.00	38.00	65.14	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Slide	05-17	20:40	21:40	05-17	1.0	14011.00	14049.00	38.00	38.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-17	21:50	22:10	05-17	0.33	14049.00	14105.00	56.00	168.00	N/A	675.00	40.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	22:15	22:35	05-17	0.33	14105.00	14199.00	94.00	282.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	22:40	23:20	05-17	0.67	14199.00	14294.00	95.00	142.50	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-17	23:25	00:00	05-18	0.58	14294.00	14388.00	94.00	161.14	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	00:05	00:15	05-18	0.17	14388.00	14398.00	10.00	60.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Slide	05-18	00:15	00:25	05-18	0.17	14398.00	14403.00	5.00	30.00	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Slide	05-18	00:35	01:35	05-18	1.0	14403.00	14443.00	40.00	40.00	80.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	01:35	01:55	05-18	0.33	14443.00	14482.00	39.00	117.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	02:00	02:50	05-18	0.83	14482.00	14576.00	94.00	112.80	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	02:55	03:00	05-18	0.08	14576.00	14586.00	10.00	120.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Slide	05-18	03:00	03:50	05-18	0.83	14586.00	14621.00	35.00	42.00	60.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	03:50	04:15	05-18	0.42	14621.00	14671.00	50.00	120.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	04:20	05:15	05-18	0.92	14671.00	14765.00	94.00	102.55	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	05:20	05:25	05-18	0.08	14765.00	14775.00	10.00	120.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Slide	05-18	05:25	06:40	05-18	1.25	14775.00	14816.00	41.00	32.80	90.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	06:40	07:25	05-18	0.75	14816.00	14859.00	43.00	57.33	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	07:30	07:45	05-18	0.25	14859.00	14875.00	16.00	64.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Slide	05-18	07:45	08:25	05-18	0.67	14875.00	14890.00	15.00	22.50	150.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	08:25	09:10	05-18	0.75	14890.00	14954.00	64.00	85.33	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	09:20	10:15	05-18	0.92	14954.00	15048.00	94.00	102.55	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	10:20	10:25	05-18	0.08	15048.00	15058.00	10.00	120.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Slide	05-18	10:25	10:55	05-18	0.5	15058.00	15073.00	15.00	30.00	150.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	10:55	11:30	05-18	0.58	15073.00	15142.00	69.00	118.29	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral

Rotate	05-18	11:35	12:25	05-18	0.83	15142.00	15237.00	95.00	114.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	12:30	13:00	05-18	0.5	15237.00	15278.00	41.00	82.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	13:35	14:50	05-18	1.25	15278.00	15331.00	53.00	42.40	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	14:55	15:10	05-18	0.25	15331.00	15341.00	10.00	40.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Slide	05-18	15:10	16:15	05-18	1.08	15341.00	15371.00	30.00	27.69	130.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	16:15	17:15	05-18	1.0	15371.00	15425.00	54.00	54.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-18	18:00	19:05	05-18	1.08	15425.00	15520.00	95.00	87.69	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Rotate	05-18	19:10	20:10	05-18	1.0	15520.00	15614.00	94.00	94.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Rotate	05-18	20:15	20:25	05-18	0.17	15614.00	15624.00	10.00	60.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Slide	05-18	20:25	21:30	05-18	1.08	15624.00	15657.00	33.00	30.46	180.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	21:30	22:15	05-18	0.75	15657.00	15708.00	51.00	68.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Slide	05-18	22:20	23:35	05-18	1.25	15708.00	15747.00	39.00	31.20	160.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-18	23:40	00:00	05-19	0.33	15747.00	15770.00	23.00	69.00	N/A	675.00	70.0	44.00	5900.00	5000.00	Lateral
Rotate	05-19	00:00	00:40	05-19	0.67	15770.00	15802.00	32.00	48.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Rotate	05-19	00:50	01:00	05-19	0.17	15802.00	15812.00	10.00	60.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Slide	05-19	01:00	02:25	05-19	1.42	15812.00	15847.00	35.00	24.71	135.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-19	02:25	02:55	05-19	0.5	15847.00	15896.00	49.00	98.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Rotate	05-19	03:00	03:05	05-19	0.08	15896.00	15906.00	10.00	120.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Slide	05-19	03:10	04:50	05-19	1.67	15906.00	15961.00	55.00	33.00	180.0	675.00	N/A	35.00	5300.00	5000.00	Lateral
Rotate	05-19	04:50	05:05	05-19	0.25	15961.00	15990.00	29.00	116.00	N/A	675.00	70.0	54.00	5900.00	5000.00	Lateral
Rotate	05-19	05:15	05:20	05-19	0.08	15990.00	16000.00	10.00	120.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Rotate	05-19	05:25	06:00	05-19	0.58	16000.00	16084.00	84.00	144.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Rotate	05-19	06:05	06:10	05-19	0.08	16084.00	16094.00	10.00	120.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Slide	05-19	06:10	06:30	05-19	0.33	16094.00	16104.00	10.00	30.00	180.0	675.00	N/A	20.00	5300.00	5000.00	Lateral
Rotate	05-19	06:30	07:15	05-19	0.75	16104.00	16178.00	74.00	98.67	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Rotate	05-19	07:20	08:10	05-19	0.83	16178.00	16273.00	95.00	114.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Rotate	05-19	08:15	08:20	05-19	0.08	16273.00	16283.00	10.00	120.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Slide	05-19	08:20	09:20	05-19	1.0	16283.00	16313.00	30.00	30.00	0.0	675.00	N/A	20.00	5300.00	5000.00	Lateral
Rotate	05-19	09:20	10:10	05-19	0.83	16313.00	16367.00	54.00	64.80	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Rotate	05-19	10:15	10:30	05-19	0.25	16367.00	16377.00	10.00	40.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Slide	05-19	10:30	12:00	05-19	1.5	16377.00	16422.00	45.00	30.00	0.0	675.00	N/A	20.00	5300.00	5000.00	Lateral
Rotate	05-19	12:00	12:45	05-19	0.75	16422.00	16461.00	39.00	52.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral
Slide	05-19	12:50	15:00	05-19	2.17	16461.00	16506.00	45.00	20.77	0.0	675.00	N/A	20.00	5300.00	5000.00	Lateral
Rotate	05-19	15:05	15:50	05-19	0.75	16506.00	16557.00	51.00	68.00	N/A	675.00	70.0	50.00	6100.00	5300.00	Lateral



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

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

Activity	Start Date	Start Time	End Time	End Date	Hours	Start Depth (ft)	End Depth (ft)	Distance (ft)	RoP (ft/h)	Toolface	Flow Rate (gpm)	Surface RPM	WOB (klbs)	Press On (psi)	Press Off (psi)	Hole Section Type
Rotate	05-20	18:25	18:50	05-20	0.42	16557.00	16602.00	45.00	108.00	N/A	625.00	30.0	48.00	790.00	5110.00	Lateral
Rotate	05-20	18:55	19:20	05-20	0.42	16602.00	16648.00	46.00	110.40	N/A	625.00	30.0	48.00	790.00	5110.00	Lateral
Rotate	05-20	19:30	19:40	05-20	0.17	16648.00	16659.00	11.00	66.00	N/A	625.00	30.0	48.00	790.00	5110.00	Lateral
Slide	05-20	19:40	20:00	05-20	0.33	16659.00	16674.00	15.00	45.00	200.0	627.00	N/A	40.00	5310.00	5110.00	Lateral
Rotate	05-20	20:00	20:15	05-20	0.25	16674.00	16695.00	21.00	84.00	N/A	625.00	30.0	48.00	790.00	5110.00	Lateral
Rotate	05-20	20:20	20:30	05-20	0.17	16695.00	16742.00	47.00	282.00	N/A	625.00	30.0	48.00	790.00	5110.00	Lateral
Rotate	05-20	20:35	21:10	05-20	0.58	16742.00	16836.00	94.00	161.14	N/A	625.00	30.0	50.00	790.00	5110.00	Lateral
Rotate	05-20	21:15	21:20	05-20	0.08	16836.00	16847.00	11.00	132.00	N/A	625.00	30.0	50.00	790.00	5110.00	Lateral
Slide	05-20	21:20	21:45	05-20	0.42	16847.00	16860.00	13.00	31.20	0.0	627.00	N/A	30.00	5310.00	5110.00	Lateral
Rotate	05-20	21:45	22:10	05-20	0.42	16860.00	16931.00	71.00	170.40	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-20	22:15	22:55	05-20	0.67	16931.00	17025.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-20	23:00	23:40	05-20	0.67	17025.00	17119.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-20	23:45	23:50	05-20	0.08	17119.00	17130.00	11.00	132.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-20	23:50	00:00	05-21	0.17	17130.00	17134.00	4.00	24.00	70.0	627.00	N/A	40.00	5310.00	5110.00	Lateral
Slide	05-21	00:00	00:35	05-21	0.58	17134.00	17156.00	22.00	37.71	90.0	627.00	N/A	40.00	5310.00	5110.00	Lateral
Rotate	05-21	00:35	01:00	05-21	0.42	17156.00	17213.00	57.00	136.80	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	01:05	01:50	05-21	0.75	17213.00	17308.00	95.00	126.67	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	01:55	02:35	05-21	0.67	17308.00	17402.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	02:40	02:45	05-21	0.08	17402.00	17413.00	11.00	132.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	02:45	03:15	05-21	0.5	17413.00	17433.00	20.00	40.00	160.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	03:15	03:50	05-21	0.58	17433.00	17496.00	63.00	108.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	03:55	04:00	05-21	0.08	17496.00	17508.00	12.00	144.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	04:00	04:35	05-21	0.58	17508.00	17530.00	22.00	37.71	200.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	04:35	05:05	05-21	0.5	17530.00	17591.00	61.00	122.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	05:10	05:50	05-21	0.67	17591.00	17685.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	05:55	06:50	05-21	0.92	17685.00	17779.00	94.00	102.55	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	06:55	07:35	05-21	0.67	17779.00	17873.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	07:40	08:20	05-21	0.67	17873.00	17968.00	95.00	142.50	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	08:25	08:35	05-21	0.17	17968.00	17978.00	10.00	60.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	08:35	09:00	05-21	0.42	17978.00	17988.00	10.00	24.00	180.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	09:00	09:45	05-21	0.75	17988.00	18062.00	74.00	98.67	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	09:50	10:45	05-21	0.92	18062.00	18156.00	94.00	102.55	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	10:50	11:30	05-21	0.67	18156.00	18251.00	95.00	142.50	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	11:35	11:40	05-21	0.08	18251.00	18261.00	10.00	120.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	11:40	12:30	05-21	0.83	18261.00	18281.00	20.00	24.00	180.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	12:30	12:55	05-21	0.42	18281.00	18345.00	64.00	153.60	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	13:00	13:10	05-21	0.17	18345.00	18355.00	10.00	60.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	13:10	13:45	05-21	0.58	18355.00	18370.00	15.00	25.71	180.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	13:45	14:20	05-21	0.58	18370.00	18439.00	69.00	118.29	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	14:25	15:10	05-21	0.75	18439.00	18534.00	95.00	126.67	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	15:15	15:55	05-21	0.67	18534.00	18628.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	16:25	16:40	05-21	0.25	18628.00	18635.00	7.00	28.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	16:40	17:25	05-21	0.75	18635.00	18657.00	22.00	29.33	180.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	17:25	17:55	05-21	0.5	18657.00	18722.00	65.00	130.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	18:00	18:05	05-21	0.08	18722.00	18733.00	11.00	132.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	18:05	18:45	05-21	0.67	18733.00	18748.00	15.00	22.50	160.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	18:45	19:20	05-21	0.58	18748.00	18817.00	69.00	118.29	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	19:25	20:05	05-21	0.67	18817.00	18911.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	20:10	20:50	05-21	0.67	18911.00	19005.00	94.00	141.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	20:55	21:05	05-21	0.17	19005.00	19017.00	12.00	72.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Slide	05-21	21:05	22:10	05-21	1.08	19017.00	19042.00	25.00	23.08	180.0	627.00	N/A	40.00	5550.00	5300.00	Lateral
Rotate	05-21	22:10	22:40	05-21	0.5	19042.00	19099.00	57.00	114.00	N/A	625.00	40.0	48.00	6150.00	5300.00	Lateral
Rotate	05-21	22:45	23:25	05-21	0.67	19099.00	19194.00	95.00	142.50	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-21	23:30	00:00	05-22	0.5	19194.00	19248.00	54.00	108.00	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	00:00	00:15	05-22	0.25	19248.00	19288.00	40.00	160.00	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	00:20	01:05	05-22	0.75	19288.00	19382.00	94.00	125.33	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	01:10	01:50	05-22	0.67	19382.00	19476.00	94.00	141.00	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	01:55	02:45	05-22	0.83	19476.00	19571.00	95.00	114.00	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	02:50	03:35	05-22	0.75	19571.00	19665.00	94.00	125.33	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	03:40	03:45	05-22	0.08	19665.00	19676.00	11.00	132.00	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Slide	05-22	03:45	04:35	05-22	0.83	19676.00	19697.00	21.00	25.20	135.0	601.00	N/A	42.00	6000.00	5300.00	Lateral
Rotate	05-22	04:35	05:10	05-22	0.58	19697.00	19759.00	62.00	106.29	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	05:15	06:00	05-22	0.75	19759.00	19853.00	94.00	125.33	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	06:05	06:50	05-22	0.75	19853.00	19948.00	95.00	126.67	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral

Rotate	05-22	06:55	07:40	05-22	0.75	19948.00	20042.00	94.00	125.33	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	07:45	08:35	05-22	0.83	20042.00	20136.00	94.00	112.80	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	08:40	09:25	05-22	0.75	20136.00	20230.00	94.00	125.33	N/A	601.00	40.0	44.00	6000.00	5200.00	Lateral
Rotate	05-22	09:30	10:00	05-22	0.5	20230.00	20304.00	74.00	148.00	N/A	590.00	43.0	46.00	6020.00	5140.00	Lateral



Daily Reports

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Friday, Apr 26 00:00 - 23:59 (Day 1 of 28)

Billing: N/A (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	0.00	Downhole Hours	0.00	Rotating WOB (klbs)	14.00 - 20.00
Bit Depth (ft)	258.00	Drilling Hours	2.00	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	258.00	Hours Circulating	0.00	Rotating SPM	155.00 - 641.00
Total Distance (ft)	258.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	258.00	Hours Rotating	2.00	Motor RPM	-
Distance Slid (ft)	0.00			Surface RPM	51.00 - 52.00
Inclination In				Flow Rate (gpm)	499.00 - 889.00
Inclination Out				On Bottom Pressure (psi)	945.00 - 2265.00
Azimuth In		% Hours Rotating	100%	Off Bottom Pressure (psi)	595.00 - 641.00
Azimuth Out		% Hours Sliding	0%		
AVG Total ROP (ft/h)	129.00	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	129.00	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel	
Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities								
Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Standby	15	04-26	00:00	05:25	04-26			Standby while Rigging up Over the 603H
Change BHA	6	04-26	05:25	06:50	04-26			P/U BHA # 1
Rotary Drill	1	04-26	06:50	07:30	04-26	0.00	197.00	Pressure On (psi): 945.00, Pressure Off (psi): 595.00, Weight On Bit (klbs): 14.00, Surface RPM: 51, Surface Torque (ft lbf): 9.00, Flow Rate (gpm): 499.00, Strokes Per Minute: 155.00
Rotary Drill	1	04-26	07:30	08:50	04-26	197.00	258.00	Pressure On (psi): 2265.00, Pressure Off (psi): 641.00, Weight On Bit (klbs): 20.00, Surface RPM: 52, Surface Torque (ft lbf): 19.00, Flow Rate (gpm): 889.00, Strokes Per Minute: 641.00
Rig Repair	14	04-26	08:50	07:15	04-27			Work on Rig

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, Apr 27 00:00 - 23:59 (Day 2 of 28)

Billing: \$18,187.50 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	258.00	Downhole Hours	11.00	Rotating WOB (klbs)	20.00 - 34.00
Bit Depth (ft)	1172.00	Drilling Hours	5.67	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	1172.00	Hours Circulating	1.00	Rotating SPM	279.00 - 641.00
Total Distance (ft)	914.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	914.00	Hours Rotating	5.67	Motor RPM	75.00 - 135.00
Distance Slid (ft)	0.00			Surface RPM	52.00 - 62.00
Inclination In	0.22			Flow Rate (gpm)	889.00 - 901.00
Inclination Out	1.45			On Bottom Pressure (psi)	2265.00 - 3080.00
Azimuth In	93.91	% Hours Rotating	100%	Off Bottom Pressure (psi)	641.00 - 2200.00
Azimuth Out	189.27	% Hours Sliding	0%		
AVG Total ROP (ft/h)	161.29	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	161.29	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

BHA #1 - BHA #1 Surface

Date In: Apr 27, 2019, 7:15 Date Out: Apr 27, 2019, 18:15

Bit Details		Motor Details		Directional Comments
OD (in)	17.500	Size (in)	8.0	8" Contender : 1.50° FBH 7/8 4.0 Stg. W/ Slick Sleeve.Protracted Angle: 1.46°, Flow Rate 400-900, Max Diff 900 psi, Max Operating Torque: 14,930 ft/lbs, Rev/Gal: .15 / Bit Data: Baker 17.50", Type DP606S, SN: 7046740 Jets: 9x12's, TFA: 0.994 Runs on Bit: 8
Vendor	Baker	Lobe/Stage	7/8, 4.0	
S/N	7046740	Bend Angle	1.5	
Nozzles	9x12's	Speed (rev/gal)	0.15	
Total Flow Area (in²)	0.994	Wear Pad OD (in)	8.375	MWD Comments
Drilling Hours for Day	5.67	Bit Distances		POOH Reason Total Depth/Casing Point: POOH for 13 3/8" Casing
Total Drilled for Day (ft)	914.00	Bend (Bit to Bend): 6.09 ft, Survey (Bit to Survey): 61.00 ft		
Drilling Hours for BHA	5.67			
Total Drilled for BHA (ft)	914.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DP606S, Style: PDC, Gauge Length (in): 4.50, Size (in): 17.50	Baker	7046740	6 5/8" Reg Pin			17.500		1.46	1.46
Mud Motor Description: 8" 7/8 4.0 Stg FBH @1.50° W/Slick Sleeve, Size (in): 8.00, Bend Angle (°): 1.50, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 4.0	Aim	800-40-005	6 5/8" Reg Box	6 5/8" Reg Box		8.000		30.02	31.48
Stabilizer Description: 17" Stabilizer	DTI	DR27308	6 5/8" Reg Box	6 5/8" Reg Pin	2.875	8.000		5.94	37.42
UBHO Sub Description: NM UBHO, Type: NM	Aim	GT8066846	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		4.08	41.50
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001019	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.59	72.09
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001012	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.52	102.61
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR41388	4 1/2" IF Box	6 5/8" Reg Pin	2.750	8.000		3.39	106.00
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.84	1019.84

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Rig Repair	14	04-26	08:50	07:15	04-27			Work on Rig
Rotary Drill	1	04-27	07:15	08:20	04-27	258.00	288.00	Pressure On (psi): 2265.00, Pressure Off (psi): 641.00, Weight On Bit (klbs): 20.00, Surface RPM: 52, Surface Torque (ft lbf): 19.00, Flow Rate (gpm): 889.00, Strokes Per Minute: 641.00
Rig Repair	14	04-27	08:20	10:00	04-27			Work on Rig

Survey	46	04-27	10:00	10:10	04-27	288.00	288.00	Inclination (°): 0.220, Azimuth (°): 93.910, TVD (ft): 227.00, Dogleg (°/100 ft): 0.10, Sensor Depth (ft): 227.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	10:10	10:30	04-27	288.00	379.00	Pressure On (psi): 2473.00, Pressure Off (psi): 800.00, Weight On Bit (klbs): 21.00, Surface RPM: 62, Surface Torque (ft lbf): 18.00, Flow Rate (gpm): 901.00, Strokes Per Minute: 279.00
Rotary Drill	1	04-27	10:30	10:50	04-27	379.00	471.00	Pressure On (psi): 2581.00, Pressure Off (psi): 1175.00, Weight On Bit (klbs): 24.00, Surface RPM: 60, Surface Torque (ft lbf): 16.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	10:50	11:00	04-27	471.00	471.00	Inclination (°): 1.050, Azimuth (°): 154.990, TVD (ft): 409.99, Dogleg (°/100 ft): 0.53, Sensor Depth (ft): 410.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	11:00	11:20	04-27	471.00	563.00	Pressure On (psi): 2578.00, Pressure Off (psi): 1925.00, Weight On Bit (klbs): 25.00, Surface RPM: 61, Surface Torque (ft lbf): 15.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	11:20	11:30	04-27	563.00	563.00	Inclination (°): 0.970, Azimuth (°): 144.530, TVD (ft): 501.97, Dogleg (°/100 ft): 0.22, Sensor Depth (ft): 502.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	11:30	11:45	04-27	563.00	655.00	Pressure On (psi): 2830.00, Pressure Off (psi): 1900.00, Weight On Bit (klbs): 25.00, Surface RPM: 60, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	11:45	11:55	04-27	655.00	655.00	Inclination (°): 1.270, Azimuth (°): 171.340, TVD (ft): 593.96, Dogleg (°/100 ft): 0.65, Sensor Depth (ft): 594.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	11:55	12:20	04-27	655.00	746.00	Pressure On (psi): 2850.00, Pressure Off (psi): 1900.00, Weight On Bit (klbs): 28.00, Surface RPM: 60, Surface Torque (ft lbf): 17.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	12:20	12:30	04-27	746.00	746.00	Inclination (°): 1.320, Azimuth (°): 154.020, TVD (ft): 684.93, Dogleg (°/100 ft): 0.43, Sensor Depth (ft): 685.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	12:30	13:00	04-27	746.00	837.00	Pressure On (psi): 3020.00, Pressure Off (psi): 2080.00, Weight On Bit (klbs): 32.00, Surface RPM: 61, Surface Torque (ft lbf): 22.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	13:00	13:10	04-27	837.00	837.00	Inclination (°): 1.270, Azimuth (°): 174.410, TVD (ft): 775.91, Dogleg (°/100 ft): 0.51, Sensor Depth (ft): 776.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	13:10	13:45	04-27	837.00	928.00	Pressure On (psi): 3080.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 34.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	13:45	13:55	04-27	928.00	928.00	Inclination (°): 1.320, Azimuth (°): 164.570, TVD (ft): 866.89, Dogleg (°/100 ft): 0.25, Sensor Depth (ft): 867.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	13:55	14:30	04-27	928.00	1019.00	Pressure On (psi): 3080.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 34.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	14:30	14:35	04-27	1019.00	1019.00	Inclination (°): 1.450, Azimuth (°): 185.930, TVD (ft): 957.86, Dogleg (°/100 ft): 0.58, Sensor Depth (ft): 958.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	14:35	15:10	04-27	1019.00	1114.00	Pressure On (psi): 3080.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 34.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	15:10	15:15	04-27	1114.00	1114.00	Inclination (°): 1.230, Azimuth (°): 170.110, TVD (ft): 1052.84, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 1053.00, Bit To Sensor (ft): 61.00
Rotary Drill	1	04-27	15:15	15:55	04-27	1114.00	1172.00	Pressure On (psi): 3080.00, Pressure Off (psi): 2200.00, Weight On Bit (klbs): 34.00, Surface RPM: 60, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-27	15:55	16:00	04-27	1172.00	1172.00	Inclination (°): 1.450, Azimuth (°): 189.270, TVD (ft): 1110.82, Dogleg (°/100 ft): 0.86, Sensor Depth (ft): 1111.00, Bit To Sensor (ft): 61.00
Circulating	3	04-27	16:00	17:00	04-27			TD Section
Pooh	7	04-27	17:00	17:45	04-27			TD Section
Change BHA	6	04-27	17:45	18:15	04-27			Rack Back BHA #1
Standby	15	04-27	18:15	15:15	04-28			Run Casing, Cement & Skid Rig

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, Apr 28 00:00 - 23:59 (Day 3 of 28)

Billing: \$14,673.75 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	1172.00	Downhole Hours	8.75	Rotating WOB (klbs)	20.00 - 26.00
Bit Depth (ft)	1373.00	Drilling Hours	1.17	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	1373.00	Hours Circulating	2.00	Rotating SPM	174.00 - 279.00
Total Distance (ft)	201.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	201.00	Hours Rotating	1.17	Motor RPM	94.00 - 149.00
Distance Slid (ft)	0.00			Surface RPM	40.00 - 62.00
Inclination In	1.01			Flow Rate (gpm)	563.00 - 900.00
Inclination Out	0.97			On Bottom Pressure (psi)	1837.00 - 3760.00
Azimuth In	190.94	% Hours Rotating	100%	Off Bottom Pressure (psi)	1420.00 - 3280.00
Azimuth Out	176.44	% Hours Sliding	0%		
AVG Total ROP (ft/h)	172.29	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	172.29	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

BHA #2 - Drill Intermediate to Casing Point

Date In: Apr 28, 2019, 15:15 Date Out: Apr 30, 2019, 8:15

Bit Details		Motor Details	Directional Comments	
OD (in)	12.250	Size (in)	8.0	8" Butch : 1.50° FBH 7/8 5.9 Stg. W/12" NBS. Protracted Angle: 1.48°, Flow Rate 400-900, Max Diff 1390 psi, Max Operating Torque: 21,870 ft/lbs, Rev/Gal: .166 / Bit Data: Baker 12.25", Type T806FX, SN: 7163483 Jets: 6x12's, TFA: 0.663 Runs on Bit: 5
Vendor	Baker	Lobe/Stage	7/8, 5.9	
S/N	7163483	Bend Angle	1.5	
Nozzles	6x12's	Speed (rev/gal)	0.17	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	8.250	
Drilling Hours for Day	1.17	Bit Distances		
Total Drilled for Day (ft)	201.00	Bend (Bit to Bend):		
Drilling Hours for BHA	18.50	5.55 ft, Survey (Bit to Survey):	70.00 ft	POOH Reason
Total Drilled for BHA (ft)	3708.00			Total Depth/Casing Point: TD 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 Baker T806FX, Style: PDC, Gauge Length (in): 3.25, Size (in): 12.25	Baker	7163483	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 8" 7/8 5.9 Stg FBH @1.50° W/12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	Butches	BDT800-010	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.10	38.35
Stabilizer Description: 12" Stabilizer	DTI	DR41350	6 5/8" Reg Box	6 5/8" Reg Pin	2.813	8.250		5.43	43.78
UBHO Sub Description: NM UBHO, Type: NM	Aim	GT8066846	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		4.08	47.86
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001019	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.59	78.45
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001012	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.52	108.97
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR28831	4 1/2" XH Box	6 5/8" Reg Pin	2.875	7.750		2.65	111.62
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		527.87	639.49
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR19258	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.375		2.73	642.22
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.84	1556.06

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	04-27	18:15	15:15	04-28			Run Casing, Cement & Skid Rig
Change BHA	6	04-28	15:15	19:10	04-28			P/U BHA #2
TIH	8	04-28	19:10	20:30	04-28			TIH W/ BHA #2
Drilling Cement	17	04-28	20:30	22:30	04-28	1126.00	1172.00	Drilling Cement and Float Equipment F/1126 - T/1128 [GPM = 562, RPM = 40, WOB = 40, DIFF = 200]
Rotary Drill	1	04-28	22:30	22:35	04-28	1172.00	1191.00	Pressure On (psi): 1837.00, Pressure Off (psi): 1420.00, Weight On Bit (klbs): 20.00, Surface RPM: 40, Surface Torque (ft lbf): 14.00, Flow Rate (gpm): 563.00, Strokes Per Minute: 174.00
Rotary Drill	1	04-28	22:35	23:25	04-28	1191.00	1282.00	Pressure On (psi): 3390.00, Pressure Off (psi): 3280.00, Weight On Bit (klbs): 20.00, Surface RPM: 62, Surface Torque (ft lbf): 7.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-28	23:25	23:35	04-28	1283.00	1283.00	Inclination (°): 1.010, Azimuth (°): 190.940, TVD (ft): 1211.80, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 1212.00, Bit To Sensor (ft): 71.00, Temperature (°F): 100.40
Rotary Drill	1	04-28	23:35	23:50	04-28	1282.00	1373.00	Pressure On (psi): 3760.00, Pressure Off (psi): 3220.00, Weight On Bit (klbs): 26.00, Surface RPM: 62, Surface Torque (ft lbf): 13.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-28	23:50	00:00	04-29	1373.00	1373.00	Inclination (°): 0.970, Azimuth (°): 176.440, TVD (ft): 1302.78, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 1303.00, Bit To Sensor (ft): 70.00

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, Apr 29 00:00 - 23:59 (Day 4 of 28)

Billing: \$7,100.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	1373.00	Downhole Hours	24.00	Rotating WOB (klbs)	23.00 - 62.00
Bit Depth (ft)	4483.00	Drilling Hours	15.25	Sliding WOB (klbs)	20.00 - 29.00
Bottom Hole Depth (ft)	4483.00	Hours Circulating	0.00	Rotating SPM	225.00 - 279.00
Total Distance (ft)	3110.00	Hours Sliding	1.33	Sliding SPM	236.00 - 279.00
Distance Rotated (ft)	3015.00	Hours Rotating	13.92	Motor RPM	94.00 - 149.00
Distance Slid (ft)	95.00			Surface RPM	62.00 - 93.00
Inclination In	0.75			Flow Rate (gpm)	727.00 - 900.00
Inclination Out	6.07			On Bottom Pressure (psi)	2450.00 - 5168.00
Azimuth In	153.32	% Hours Rotating	91%	Off Bottom Pressure (psi)	2400.00 - 4090.00
Azimuth Out	109.46	% Hours Sliding	9%		
AVG Total ROP (ft/h)	204.51	% Distance Sliding	3%		
AVG Rotating ROP (ft/h)	216.91	% Distance Rotating	97%		
AVG Sliding ROP (ft/h)	71.25				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

BHA #2 - Drill Intermediate to Casing Point

Date In: Apr 28, 2019, 15:15 Date Out: Apr 30, 2019, 8:15

Bit Details		Motor Details		Directional Comments	
OD (in)	12.250	Size (in)	8.0	8" Butch : 1.50° FBH 7/8 5.9 Stg. W/12" NBS. Protracted Angle: 1.48°, Flow Rate 400-900, Max Diff 1390 psi, Max Operating Torque: 21,870 ft/lbs, Rev/Gal: .166 / Bit Data: Baker 12.25", Type T806FX, SN: 7163483 Jets: 6x12's, TFA: 0.663 Runs on Bit: 5	
Vendor	Baker	Lobe/Stage	7/8, 5.9		
S/N	7163483	Bend Angle	1.5		
Nozzles	6x12's	Speed (rev/gal)	0.17	MWD Comments	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	8.250		
Drilling Hours for Day	15.25	Bit Distances			
Total Drilled for Day (ft)	3110.00	Bend (Bit to Bend): 5.55 ft, Survey (Bit to Survey): 70.00 ft			
Drilling Hours for BHA	18.50			POOH Reason	
Total Drilled for BHA (ft)	3708.00			Total Depth/Casing Point: TD 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 Baker T806FX, Style: PDC, Gauge Length (in): 3.25, Size (in): 12.25	Baker	7163483	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 8" 7/8 5.9 Stg FBH @1.50° W/12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	Butches	BDT800-010	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.10	38.35
Stabilizer Description: 12" Stabilizer	DTI	DR41350	6 5/8" Reg Box	6 5/8" Reg Pin	2.813	8.250		5.43	43.78
UBHO Sub Description: NM UBHO, Type: NM	Aim	GT8066846	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		4.08	47.86
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001019	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.59	78.45
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001012	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.52	108.97
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR28831	4 1/2" XH Box	6 5/8" Reg Pin	2.875	7.750		2.65	111.62
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		527.87	639.49
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR19258	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.375		2.73	642.22
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.84	1556.06

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	04-28	23:50	00:00	04-29	1373.00	1373.00	Inclination (°): 0.970, Azimuth (°): 176.440, TVD (ft): 1302.78, Dogleg (°/100 ft): 0.28, Sensor Depth (ft): 1303.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	00:00	00:25	04-29	1373.00	1464.00	Pressure On (psi): 3760.00, Pressure Off (psi): 3220.00, Weight On Bit (klbs): 26.00, Surface RPM: 62, Surface Torque (ft lbf): 13.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	00:25	00:35	04-29	1464.00	1464.00	Inclination (°): 0.750, Azimuth (°): 153.320, TVD (ft): 1393.77, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 1394.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	00:35	01:00	04-29	1464.00	1650.00	Pressure On (psi): 3890.00, Pressure Off (psi): 3360.00, Weight On Bit (klbs): 23.00, Surface RPM: 93, Surface Torque (ft lbf): 9.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	01:00	01:05	04-29	1650.00	1650.00	Inclination (°): 0.220, Azimuth (°): 103.750, TVD (ft): 1579.77, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 1580.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	01:05	01:30	04-29	1650.00	1744.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3380.00, Weight On Bit (klbs): 23.00, Surface RPM: 70, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	01:30	01:35	04-29	1744.00	1744.00	Inclination (°): 0.180, Azimuth (°): 62.270, TVD (ft): 1673.77, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 1674.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	01:35	02:20	04-29	1744.00	1933.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3380.00, Weight On Bit (klbs): 23.00, Surface RPM: 70, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	02:20	02:25	04-29	1933.00	1933.00	Inclination (°): 0.310, Azimuth (°): 79.580, TVD (ft): 1862.76, Dogleg (°/100 ft): 0.08, Sensor Depth (ft): 1863.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	02:25	03:40	04-29	1933.00	2123.00	Pressure On (psi): 3820.00, Pressure Off (psi): 3480.00, Weight On Bit (klbs): 23.00, Surface RPM: 80, Surface Torque (ft lbf): 8000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	03:40	03:45	04-29	2123.00	2123.00	Inclination (°): 0.260, Azimuth (°): 37.480, TVD (ft): 2052.76, Dogleg (°/100 ft): 0.11, Sensor Depth (ft): 2053.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	03:45	05:10	04-29	2123.00	2312.00	Pressure On (psi): 3700.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 25.00, Surface RPM: 72, Surface Torque (ft lbf): 10000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	05:10	05:15	04-29	2312.00	2312.00	Inclination (°): 0.750, Azimuth (°): 32.120, TVD (ft): 2241.75, Dogleg (°/100 ft): 0.26, Sensor Depth (ft): 2242.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	05:15	05:45	04-29	2312.00	2364.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 27.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Rig Repair	14	04-29	05:45	11:05	04-29			Work on Top Drive due to Shutting Off
Rotary Drill	1	04-29	11:05	11:25	04-29	2364.00	2407.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 27.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	11:25	11:40	04-29	2407.00	2407.00	Inclination (°): 0.700, Azimuth (°): 33.970, TVD (ft): 2336.75, Dogleg (°/100 ft): 0.06, Sensor Depth (ft): 2337.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	11:40	12:00	04-29	2407.00	2501.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 27.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	12:00	12:05	04-29	2501.00	2501.00	Inclination (°): 0.970, Azimuth (°): 45.220, TVD (ft): 2430.74, Dogleg (°/100 ft): 0.33, Sensor Depth (ft): 2431.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	12:05	12:35	04-29	2501.00	2596.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 27.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	12:35	12:40	04-29	2596.00	2596.00	Inclination (°): 1.140, Azimuth (°): 40.650, TVD (ft): 2525.72, Dogleg (°/100 ft): 0.20, Sensor Depth (ft): 2526.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	12:40	13:25	04-29	2596.00	2690.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 27.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	13:25	13:30	04-29	2690.00	2690.00	Inclination (°): 1.270, Azimuth (°): 47.060, TVD (ft): 2619.70, Dogleg (°/100 ft): 0.20, Sensor Depth (ft): 2620.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	13:30	14:00	04-29	2690.00	2879.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Rig Service - In Hole	19	04-29	14:00	14:20	04-29			Grease Top-Drive / Rig Service
Survey	46	04-29	14:20	14:25	04-29	2879.00	2879.00	Inclination (°): 2.020, Azimuth (°): 48.380, TVD (ft): 2808.62, Dogleg (°/100 ft): 0.40, Sensor Depth (ft): 2809.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	14:25	14:45	04-29	2879.00	2974.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	14:45	14:50	04-29	2974.00	2974.00	Inclination (°): 2.110, Azimuth (°): 52.420, TVD (ft): 2903.56, Dogleg (°/100 ft): 0.18, Sensor Depth (ft): 2904.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	14:50	15:00	04-29	2974.00	3068.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	15:00	15:05	04-29	3068.00	3068.00	Inclination (°): 2.510, Azimuth (°): 58.930, TVD (ft): 2997.48, Dogleg (°/100 ft): 0.51, Sensor Depth (ft): 2998.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	15:05	15:20	04-29	3068.00	3162.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	15:20	15:25	04-29	3162.00	3162.00	Inclination (°): 2.990, Azimuth (°): 54.180, TVD (ft): 3091.37, Dogleg (°/100 ft): 0.56, Sensor Depth (ft): 3092.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	15:25	15:30	04-29	3162.00	3183.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Slide Drill	2	04-29	15:30	15:40	04-29	3183.00	3203.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3600.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 236, Toolface: 140, Toolface Type: magnetic

Rotary Drill	1	04-29	15:40	15:50	04-29	3203.00	3257.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	15:50	16:05	04-29	3257.00	3257.00	Inclination (°): 3.600, Azimuth (°): 61.650, TVD (ft): 3186.22, Dogleg (°/100 ft): 0.78, Sensor Depth (ft): 3187.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	16:05	16:15	04-29	3257.00	3351.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	16:15	16:20	04-29	3351.00	3351.00	Inclination (°): 4.310, Azimuth (°): 70.620, TVD (ft): 3279.99, Dogleg (°/100 ft): 1.00, Sensor Depth (ft): 3281.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	16:20	16:25	04-29	3351.00	3445.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	16:25	16:30	04-29	3445.00	3445.00	Inclination (°): 5.630, Azimuth (°): 75.980, TVD (ft): 3373.64, Dogleg (°/100 ft): 1.49, Sensor Depth (ft): 3375.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	16:30	16:35	04-29	3445.00	3459.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Slide Drill	2	04-29	16:35	16:40	04-29	3459.00	3479.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3600.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 236, Toolface: 180, Toolface Type: magnetic
Rotary Drill	1	04-29	16:40	16:50	04-29	3479.00	3540.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	16:50	16:55	04-29	3540.00	3540.00	Inclination (°): 6.770, Azimuth (°): 84.850, TVD (ft): 3468.08, Dogleg (°/100 ft): 1.56, Sensor Depth (ft): 3470.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	16:55	17:05	04-29	3540.00	3634.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	17:05	17:10	04-29	3634.00	3634.00	Inclination (°): 7.520, Azimuth (°): 99.270, TVD (ft): 3561.36, Dogleg (°/100 ft): 2.06, Sensor Depth (ft): 3564.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	17:10	17:15	04-29	3634.00	3645.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Slide Drill	2	04-29	17:15	17:25	04-29	3645.00	3670.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3600.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 236, Toolface: 270, Toolface Type: magnetic
Rotary Drill	1	04-29	17:25	17:55	04-29	3670.00	3728.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	17:55	18:00	04-29	3728.00	3728.00	Inclination (°): 7.120, Azimuth (°): 97.600, TVD (ft): 3654.59, Dogleg (°/100 ft): 0.48, Sensor Depth (ft): 3658.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	18:00	18:30	04-29	3728.00	3822.00	Pressure On (psi): 2450.00, Pressure Off (psi): 2400.00, Weight On Bit (klbs): 45.00, Surface RPM: 83, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 727.00, Strokes Per Minute: 225.00
Survey	46	04-29	18:30	18:35	04-29	3822.00	3822.00	Inclination (°): 5.930, Azimuth (°): 99.360, TVD (ft): 3747.98, Dogleg (°/100 ft): 1.28, Sensor Depth (ft): 3752.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	18:35	19:20	04-29	3822.00	3916.00	Pressure On (psi): 4420.00, Pressure Off (psi): 3740.00, Weight On Bit (klbs): 57.00, Surface RPM: 84, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	19:20	19:25	04-29	3916.00	3916.00	Inclination (°): 5.630, Azimuth (°): 93.640, TVD (ft): 3841.51, Dogleg (°/100 ft): 0.69, Sensor Depth (ft): 3846.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	19:25	19:30	04-29	3916.00	3926.00	Pressure On (psi): 4420.00, Pressure Off (psi): 3740.00, Weight On Bit (klbs): 57.00, Surface RPM: 84, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Slide Drill	2	04-29	19:30	20:00	04-29	3926.00	3941.00	Pressure On (psi): 4234.00, Pressure Off (psi): 3740.00, Weight On Bit (klbs): 28.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279, Toolface: 180, Toolface Type: magnetic
Rotary Drill	1	04-29	20:00	20:30	04-29	3941.00	4011.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3900.00, Weight On Bit (klbs): 56.00, Surface RPM: 81, Surface Torque (ft lbf): 14000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	20:30	20:35	04-29	4011.00	4011.00	Inclination (°): 5.450, Azimuth (°): 98.210, TVD (ft): 3936.06, Dogleg (°/100 ft): 0.50, Sensor Depth (ft): 3941.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	20:35	21:05	04-29	4011.00	4105.00	Pressure On (psi): 4850.00, Pressure Off (psi): 3864.00, Weight On Bit (klbs): 58.00, Surface RPM: 82, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 895.00, Strokes Per Minute: 279.00
Survey	46	04-29	21:05	21:10	04-29	4105.00	4105.00	Inclination (°): 6.020, Azimuth (°): 101.200, TVD (ft): 4029.59, Dogleg (°/100 ft): 0.68, Sensor Depth (ft): 4035.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	21:10	21:35	04-29	4105.00	4199.00	Pressure On (psi): 4950.00, Pressure Off (psi): 3864.00, Weight On Bit (klbs): 58.00, Surface RPM: 82, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 895.00, Strokes Per Minute: 279.00
Survey	46	04-29	21:35	21:40	04-29	4199.00	4199.00	Inclination (°): 5.630, Azimuth (°): 99.710, TVD (ft): 4123.11, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 4129.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	21:40	22:05	04-29	4199.00	4294.00	Pressure On (psi): 5050.00, Pressure Off (psi): 3900.00, Weight On Bit (klbs): 58.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	22:05	22:10	04-29	4294.00	4294.00	Inclination (°): 5.010, Azimuth (°): 97.950, TVD (ft): 4217.70, Dogleg (°/100 ft): 0.67, Sensor Depth (ft): 4224.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	22:10	22:15	04-29	4294.00	4304.00	Pressure On (psi): 4980.00, Pressure Off (psi): 4030.00, Weight On Bit (klbs): 62.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Slide Drill	2	04-29	22:15	22:40	04-29	4304.00	4319.00	Pressure On (psi): 4400.00, Pressure Off (psi): 4030.00, Weight On Bit (klbs): 29.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279, Toolface: 180, Toolface Type: magnetic

Rotary Drill	1	04-29	22:40	23:00	04-29	4319.00	4388.00	Pressure On (psi): 4980.00, Pressure Off (psi): 4030.00, Weight On Bit (klbs): 62.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	23:00	23:05	04-29	4388.00	4388.00	Inclination (°): 5.450, Azimuth (°): 104.630, TVD (ft): 4311.31, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 4318.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	23:05	23:35	04-29	4388.00	4483.00	Pressure On (psi): 5168.00, Pressure Off (psi): 4090.00, Weight On Bit (klbs): 62.00, Surface RPM: 83, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-29	23:35	23:40	04-29	4483.00	4483.00	Inclination (°): 6.070, Azimuth (°): 109.460, TVD (ft): 4405.83, Dogleg (°/100 ft): 0.83, Sensor Depth (ft): 4413.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-29	23:40	00:05	04-30	4483.00	4577.00	Pressure On (psi): 5168.00, Pressure Off (psi): 4090.00, Weight On Bit (klbs): 62.00, Surface RPM: 83, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, Apr 30 00:00 - 23:59 (Day 5 of 28)

Billing: \$7,100.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	4483.00	Downhole Hours	8.25	Rotating WOB (klbs)	60.00 - 63.00
Bit Depth (ft)	4880.00	Drilling Hours	2.08	Sliding WOB (klbs)	
Bottom Hole Depth (ft)	4880.00	Hours Circulating	1.00	Rotating SPM	225.00 - 279.00
Total Distance (ft)	397.00	Hours Sliding	0.00	Sliding SPM	
Distance Rotated (ft)	397.00	Hours Rotating	2.08	Motor RPM	94.00 - 149.00
Distance Slid (ft)	0.00			Surface RPM	80.00 - 83.00
Inclination In	5.80			Flow Rate (gpm)	725.00 - 900.00
Inclination Out	3.96			On Bottom Pressure (psi)	3860.00 - 5300.00
Azimuth In	107.27	% Hours Rotating	100%	Off Bottom Pressure (psi)	3000.00 - 4150.00
Azimuth Out	109.46	% Hours Sliding	0%		
AVG Total ROP (ft/h)	190.56	% Distance Sliding	0%		
AVG Rotating ROP (ft/h)	190.56	% Distance Rotating	100%		
AVG Sliding ROP (ft/h)	0.00				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

BHA #2 - Drill Intermediate to Casing Point

Date In: Apr 28, 2019, 15:15 Date Out: Apr 30, 2019, 8:15

Bit Details		Motor Details	Directional Comments	
OD (in)	12.250	Size (in)	8.0	8" Butch : 1.50° FBH 7/8 5.9 Stg. W/12" NBS. Protracted Angle: 1.48°, Flow Rate 400-900, Max Diff 1390 psi, Max Operating Torque: 21,870 ft/lbs, Rev/Gal: .166 / Bit Data: Baker 12.25", Type T806FX, SN: 7163483 Jets: 6x12's, TFA: 0.663 Runs on Bit: 5
Vendor	Baker	Lobe/Stage	7/8, 5.9	
S/N	7163483	Bend Angle	1.5	
Nozzles	6x12's	Speed (rev/gal)	0.17	MWD Comments
Total Flow Area (in²)	0.663	Wear Pad OD (in)	8.250	
Drilling Hours for Day	2.08	Bit Distances		
Total Drilled for Day (ft)	397.00	Bend (Bit to Bend):		
Drilling Hours for BHA	18.50	5.55 ft, Survey (Bit to Survey):	70.00 ft	POOH Reason
Total Drilled for BHA (ft)	3708.00			Total Depth/Casing Point: TD 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 Baker T806FX, Style: PDC, Gauge Length (in): 3.25, Size (in): 12.25	Baker	7163483	6 5/8" Reg Pin			12.250		1.25	1.25
Mud Motor Description: 8" 7/8 5.9 Stg FBH @1.50° W/12" NBS, Size (in): 8.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.9	Butches	BDT800-010	6 5/8" Reg Box	6 5/8" Reg Box		8.000		37.10	38.35
Stabilizer Description: 12" Stabilizer	DTI	DR41350	6 5/8" Reg Box	6 5/8" Reg Pin	2.813	8.250		5.43	43.78
UBHO Sub Description: NM UBHO, Type: NM	Aim	GT8066846	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		4.08	47.86
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001019	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.59	78.45
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	80001012	6 5/8" Reg Box	6 5/8" Reg Pin	3.250	8.000		30.52	108.97
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR28831	4 1/2" XH Box	6 5/8" Reg Pin	2.875	7.750		2.65	111.62
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		527.87	639.49
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR19258	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.375		2.73	642.22
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.84	1556.06

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Rotary Drill	1	04-29	23:40	00:05	04-30	4483.00	4577.00	Pressure On (psi): 5168.00, Pressure Off (psi): 4090.00, Weight On Bit (klbs): 62.00, Surface RPM: 83, Surface Torque (ft lbf): 20.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-30	00:05	00:10	04-30	4577.00	4577.00	Inclination (°): 5.800, Azimuth (°): 107.270, TVD (ft): 4499.32, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 4507.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-30	00:10	00:40	04-30	4577.00	4671.00	Pressure On (psi): 5110.00, Pressure Off (psi): 4130.00, Weight On Bit (klbs): 62.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-30	00:40	00:45	04-30	4671.00	4671.00	Inclination (°): 5.010, Azimuth (°): 107.180, TVD (ft): 4592.90, Dogleg (°/100 ft): 0.84, Sensor Depth (ft): 4601.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-30	00:45	01:15	04-30	4671.00	4766.00	Pressure On (psi): 5300.00, Pressure Off (psi): 4150.00, Weight On Bit (klbs): 62.00, Surface RPM: 80, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 900.00, Strokes Per Minute: 279.00
Survey	46	04-30	01:15	01:20	04-30	4766.00	4766.00	Inclination (°): 4.570, Azimuth (°): 107.710, TVD (ft): 4687.57, Dogleg (°/100 ft): 0.47, Sensor Depth (ft): 4696.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-30	01:20	01:50	04-30	4766.00	4860.00	Pressure On (psi): 4900.00, Pressure Off (psi): 4020.00, Weight On Bit (klbs): 63.00, Surface RPM: 80, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 896.00, Strokes Per Minute: 276.00
Survey	46	04-30	01:50	01:55	04-30	4860.00	4860.00	Inclination (°): 4.090, Azimuth (°): 107.710, TVD (ft): 4781.30, Dogleg (°/100 ft): 0.51, Sensor Depth (ft): 4790.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	04-30	01:55	02:05	04-30	4860.00	4880.00	Pressure On (psi): 3860.00, Pressure Off (psi): 3000.00, Weight On Bit (klbs): 60.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 725.00, Strokes Per Minute: 225.00
Survey	46	04-30	02:05	02:10	04-30	4880.00	4880.00	Inclination (°): 3.960, Azimuth (°): 109.460, TVD (ft): 4801.25, Dogleg (°/100 ft): 0.89, Sensor Depth (ft): 4810.00, Bit To Sensor (ft): 70.00, Temperature (°F): 145.00
Circulating	3	04-30	02:10	03:10	04-30			TD Section Reached Casing Point
Pooh	7	04-30	03:10	07:00	04-30			POOH to Run 9 5/8" Casing
Pooh	7	04-30	07:00	08:15	04-30			Break off bit, Rack back BHA #2
Standby	15	04-30	08:15	23:30	04-30			Standby while / Running Casing , Cement, Nipple Down
Standby	15	04-30	23:30	06:00	05-01			Nipple Down BOP & Skid Rig

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, May 01 00:00 - 23:59 (Day of 28)

Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs**Directional Activities**

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Standby	15	04-30	23:30	06:00	05-01			Nipple Down BOP & Skid Rig

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Thursday, May 02 00:00 - 23:59 (Day 6 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Friday, May 03 00:00 - 23:59 (Day 7 of 28)

Billing: N/A (\$253,954.14 total)

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

Personnel	
Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Saturday, May 04 00:00 - 23:59 (Day 8 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Sunday, May 05 00:00 - 23:59 (Day 9 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Monday, May 06 00:00 - 23:59 (Day 10 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Tuesday, May 07 00:00 - 23:59 (Day 11 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Wednesday, May 08 00:00 - 23:59 (Day 12 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities

	Job Number WT-19-063	Operator Advance Energy Partners		Rig Name H&P #620
	Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H		Legal Well Name AFE Dagger Lake 5 State #603H
	Play Delaware Basin	State/Province and Country New Mexico, US	County Lea	Company Man

Thursday, May 09 00:00 - 23:59 (Day 13 of 28) Billing: N/A (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

No BHAs

Directional Activities

No Activities

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, May 10 00:00 - 23:59 (Day 14 of 28)

Billing: \$24,872.25 (\$253,954.14 total)

Drilling Summary			Drilling Parameters	
Start Depth (ft)	Downhole Hours	5.50	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)	0.00	Hours Sliding	0.00	Sliding SPM
Distance Rotated (ft)	0.00	Hours Rotating	0.00	Motor RPM
Distance Slid (ft)	0.00			104.00 - 104.00
Inclination In			Surface RPM	
Inclination Out			Flow Rate (gpm)	
Azimuth In	% Hours Rotating		On Bottom Pressure (psi)	
Azimuth Out	% Hours Sliding		Off Bottom Pressure (psi)	
AVG Total ROP (ft/h)	0.00	% Distance Sliding		
AVG Rotating ROP (ft/h)	0.00	% Distance Rotating		
AVG Sliding ROP (ft/h)	0.00			

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller

BHA #3 - BHA #3

Date In: May 10, 2019, 18:30 Date Out: May 11, 2019, 2:45

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13244778	Bend Angle	1.5	
Nozzles	6 x 12	Speed (rev/gal)	0.26	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	0.00	Bit Distances		POOH Reason Change Bottom Hole Assembly: Spent 2.5hrs. trying to drill out the DV tool. POOH to pick up tri cone bit and drill out with conventional BHA.
Total Drilled for Day (ft)		Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		
Drilling Hours for BHA	0.00			
Total Drilled for BHA (ft)				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13244778	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS002	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Standby	15	05-10	00:00	17:00	05-10			Standby while Skidding Rig, Nipple Up BOP
Change BHA	6	05-10	17:00	18:30	05-10			P/U BHA # 3
Rig Service - In Hole	19	05-10	18:30	19:20	05-10			Rig Service
TIH	8	05-10	19:20	21:45	05-10			TIH W/ BHA #3
Drilling Cement	17	05-10	21:45	00:15	05-11	2635.00	2640.00	Drilling Cement and Float Equipment F/ 2635 - T/ 2640 [GPM = 399, RPM = 40, WOB = 19, DIFF = 69]

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, May 11 00:00 - 23:59 (Day 15 of 28)

Billing: \$8,950.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	4880.00	Downhole Hours	24.00	Rotating WOB (klbs)	36.00 - 60.00
Bit Depth (ft)	7679.00	Drilling Hours	6.50	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	7679.00	Hours Circulating	4.25	Rotating SPM	225.00 - 237.00
Total Distance (ft)	2799.00	Hours Sliding	0.58	Sliding SPM	234.00 - 234.00
Distance Rotated (ft)	2721.00	Hours Rotating	5.92	Motor RPM	94.00 - 149.00
Distance Slid (ft)	78.00			Surface RPM	30.00 - 82.00
Inclination In	3.82			Flow Rate (gpm)	725.00 - 753.00
Inclination Out	3.16			On Bottom Pressure (psi)	3500.00 - 4700.00
Azimuth In	104.37	% Hours Rotating	91%	Off Bottom Pressure (psi)	3000.00 - 3800.00
Azimuth Out	112.89	% Hours Sliding	9%		
AVG Total ROP (ft/h)	430.62	% Distance Sliding	3%		
AVG Rotating ROP (ft/h)	459.89	% Distance Rotating	97%		
AVG Sliding ROP (ft/h)	133.71				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller

BHA #3 - BHA #3

Date In: May 10, 2019, 18:30 Date Out: May 11, 2019, 2:45

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13244778	Bend Angle	1.5	
Nozzles	6 x 12	Speed (rev/gal)	0.26	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		
Drilling Hours for BHA	0.00	POOH Reason		
Total Drilled for BHA (ft)		Change Bottom Hole Assembly: Spent 2.5hrs. trying to drill out the DV tool. POOH to pick up tri cone bit and drill out with conventional BHA.		

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13244778	4 1/2" Reg Box			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDSO02	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	Aim	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96

MWD Items

No Items

BHA #4 - BHA #4 Drill out DV Tool

Date In: May 11, 2019, 2:45 Date Out: May 11, 2019, 11:00

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)			
Vendor	Baker Hughes	Lobe/Stage			
S/N	5289434	Bend Angle			
Nozzles	3x22	Speed (rev/gal)		MWD Comments	
Total Flow Area (in²)	1.114	Wear Pad OD (in)		N/A	
Drilling Hours for Day	0.00	Bit Distances			
Total Drilled for Day (ft)		N/A			
Drilling Hours for BHA	0.00				
Total Drilled for BHA (ft)				POOH Reason	
				Other: POOH once DV tool, Float, And Shoe was Drilled	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>GX117, Style: Roller Cone, Gauge Length (in): 0.00, Size (in): 8.50</i>	Baker Hughes	5289434	4 1/2" Reg Pin			8.500		1.00	1.00
Other Description: <i>Bit Sub</i>	Rig	Rig Bit Sub	4 1/2" XH Box	4 1/2" Reg Box	2.813	6.000		2.00	3.00
Crossover Sub Description: <i>Cross Over, Type: Steel</i>	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	6.44
HWDP Description: <i>10 Stands HWDP, Style: Slick</i>			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	919.81

MWD Items

No Items

BHA #5 - BHA #5 Intermediate #2

Date In: May 11, 2019, 11:00 Date Out: May 13, 2019, 0:30

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0	
Vendor	Halliburton	Lobe/Stage	7/8, 8.5		
S/N	13244778	Bend Angle	1.5		
Nozzles	6 x 12	Speed (rev/gal)	0.26	MWD Comments	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125		
Drilling Hours for Day	6.50	Bit Distances			
Total Drilled for Day (ft)	2799.00	Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft			
Drilling Hours for BHA	23.92			POOH Reason	
Total Drilled for BHA (ft)	4891.00			Penetration Rate: Pooh for Rop, Once out bit was graded 2-4 due to chipped, broken and missing cutters along shoulder.	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50</i>	Halliburton	13244778	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: <i>1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5</i>	Discovery	700DDS002	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: <i>8.25" Stabilizer</i>	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: <i>NM UBHO, Type: NM</i>	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: <i>NMDC, Style: Slick Drill, Type: NM</i>	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: <i>NMDC, Style: Slick Drill, Type: NM</i>	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: <i>X-over Sub, Type: Steel</i>	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: <i>6 Stds DC, Style: Slick Drill, Type: Steel</i>	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: <i>Cross Over, Type: Steel</i>	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: <i>10 Stands HWDP, Style: Slick</i>			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96

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	05-10	21:45	00:15	05-11	2635.00	2640.00	Drilling Cement and Float Equipment F/ 2635 - T/ 2640 [GPM = 399, RPM = 40, WOB = 19, DIFF = 69]

Pooh	7	05-11	00:15	02:35	05-11			POOH to P/U Tri Cone Bit and Conventional BHA to drill out DV Tool, Float and Shoe.
Change BHA	6	05-11	02:35	02:45	05-11			Rack back BHA #3
Change BHA	6	05-11	02:45	03:15	05-11			P/U BHA # 4
TIH	8	05-11	03:15	06:15	05-11			TIH W/ BHA #4
Reaming	4	05-11	06:15	07:00	05-11			Reaming F/ 2622- T/ 2713 [GPM = 550, RPM = 50]
TIH	8	05-11	07:00	08:00	05-11			TIH W/ BHA #4
Reaming	4	05-11	08:00	09:00	05-11			Reaming F/ 4789 - T/ 4879 [GPM = 750, RPM = 80]
Pooh	7	05-11	09:00	10:10	05-11			POOH for BHA #5
Change BHA	6	05-11	10:10	11:00	05-11			P/U BHA # 5
TIH	8	05-11	11:00	14:20	05-11			TIH W/ BHA #5
Rotary Drill	1	05-11	14:20	14:35	05-11	4880.00	4948.00	Pressure On (psi): 3860.00, Pressure Off (psi): 3000.00, Weight On Bit (klbs): 60.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 725.00, Strokes Per Minute: 225.00
Survey	46	05-11	14:35	14:40	05-11	4948.00	4948.00	Inclination (°): 3.820, Azimuth (°): 104.370, TVD (ft): 4869.10, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 4878.00, Bit To Sensor (ft): 70.00
Rotary Drill	1	05-11	14:40	15:00	05-11	4948.00	5039.00	Pressure On (psi): 3860.00, Pressure Off (psi): 3000.00, Weight On Bit (klbs): 60.00, Surface RPM: 82, Surface Torque (ft lbf): 19000.00, Flow Rate (gpm): 725.00, Strokes Per Minute: 225.00
Survey	46	05-11	15:00	15:05	05-11	5039.00	5039.00	Inclination (°): 3.690, Azimuth (°): 102.260, TVD (ft): 4961.90, Dogleg (°/100 ft): 0.20, Sensor Depth (ft): 4971.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	15:05	15:15	05-11	5039.00	5130.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	15:15	15:20	05-11	5130.00	5130.00	Inclination (°): 3.960, Azimuth (°): 106.910, TVD (ft): 5052.70, Dogleg (°/100 ft): 0.45, Sensor Depth (ft): 5062.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	15:20	15:30	05-11	5130.00	5225.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	15:30	15:35	05-11	5225.00	5225.00	Inclination (°): 4.180, Azimuth (°): 104.280, TVD (ft): 5147.46, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 5157.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	15:35	15:45	05-11	5225.00	5319.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	15:45	15:50	05-11	5319.00	5319.00	Inclination (°): 4.130, Azimuth (°): 102.260, TVD (ft): 5241.21, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 5251.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	15:50	16:00	05-11	5319.00	5413.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	16:00	16:05	05-11	5413.00	5413.00	Inclination (°): 4.000, Azimuth (°): 99.710, TVD (ft): 5334.97, Dogleg (°/100 ft): 0.24, Sensor Depth (ft): 5345.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	16:05	16:15	05-11	5413.00	5508.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	16:15	16:20	05-11	5508.00	5508.00	Inclination (°): 3.960, Azimuth (°): 96.900, TVD (ft): 5429.74, Dogleg (°/100 ft): 0.21, Sensor Depth (ft): 5440.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	16:20	16:30	05-11	5508.00	5602.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	16:30	16:35	05-11	5602.00	5602.00	Inclination (°): 3.910, Azimuth (°): 101.030, TVD (ft): 5523.52, Dogleg (°/100 ft): 0.31, Sensor Depth (ft): 5534.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	16:35	16:40	05-11	5602.00	5624.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Rig Repair	14	05-11	16:40	17:20	05-11			Work on Mud Pumps / Work pipe with no flow while repairing
Rotary Drill	1	05-11	17:20	17:30	05-11	5624.00	5696.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	17:30	17:35	05-11	5696.00	5696.00	Inclination (°): 3.820, Azimuth (°): 95.660, TVD (ft): 5617.31, Dogleg (°/100 ft): 0.40, Sensor Depth (ft): 5628.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	17:35	17:45	05-11	5696.00	5791.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	17:45	17:50	05-11	5791.00	5791.00	Inclination (°): 3.600, Azimuth (°): 96.190, TVD (ft): 5712.11, Dogleg (°/100 ft): 0.23, Sensor Depth (ft): 5723.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	17:50	18:00	05-11	5791.00	5885.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	18:00	18:05	05-11	5885.00	5885.00	Inclination (°): 3.520, Azimuth (°): 91.270, TVD (ft): 5805.93, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 5817.00, Bit To Sensor (ft): 68.00
Slide Drill	2	05-11	18:05	18:15	05-11	5885.00	5910.00	Pressure On (psi): 3500.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 120, Toolface Type: magnetic
Rotary Drill	1	05-11	18:15	18:30	05-11	5910.00	5980.00	Pressure On (psi): 3950.00, Pressure Off (psi): 3200.00, Weight On Bit (klbs): 36.00, Surface RPM: 82, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237.00
Survey	46	05-11	18:30	18:35	05-11	5980.00	5980.00	Inclination (°): 4.530, Azimuth (°): 84.060, TVD (ft): 5900.69, Dogleg (°/100 ft): 1.19, Sensor Depth (ft): 5912.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	18:35	18:45	05-11	5980.00	6054.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3330.00, Weight On Bit (klbs): 52.00, Surface RPM: 30, Surface Torque (ft lbf): 15000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00

Slide Drill	2	05-11	18:45	18:55	05-11	6054.00	6074.00	Pressure On (psi): 3710.00, Pressure Off (psi): 3330.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 170, Toolface Type: <i>magnetic</i>
Survey	46	05-11	18:55	19:00	05-11	6074.00	6074.00	Inclination (°): 4.880, Azimuth (°): 86.340, TVD (ft): 5994.38, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 6006.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	19:00	19:10	05-11	6074.00	6169.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3330.00, Weight On Bit (klbs): 52.00, Surface RPM: 30, Surface Torque (ft lbf): 15000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	19:10	19:15	05-11	6169.00	6169.00	Inclination (°): 6.290, Azimuth (°): 96.540, TVD (ft): 6088.93, Dogleg (°/100 ft): 1.81, Sensor Depth (ft): 6101.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	19:15	19:20	05-11	6169.00	6263.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3420.00, Weight On Bit (klbs): 52.00, Surface RPM: 30, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	19:20	19:25	05-11	6263.00	6263.00	Inclination (°): 6.770, Azimuth (°): 94.870, TVD (ft): 6182.32, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 6195.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	19:25	19:35	05-11	6263.00	6358.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3420.00, Weight On Bit (klbs): 52.00, Surface RPM: 30, Surface Torque (ft lbf): 16000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	19:35	19:40	05-11	6358.00	6358.00	Inclination (°): 6.860, Azimuth (°): 93.730, TVD (ft): 6276.64, Dogleg (°/100 ft): 0.17, Sensor Depth (ft): 6290.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	19:40	19:45	05-11	6358.00	6368.00	Pressure On (psi): 4561.00, Pressure Off (psi): 3490.00, Weight On Bit (klbs): 52.00, Surface RPM: 41, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Slide Drill	2	05-11	19:45	19:50	05-11	6368.00	6391.00	Pressure On (psi): 3710.00, Pressure Off (psi): 3330.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 180, Toolface Type: <i>magnetic</i>
Rotary Drill	1	05-11	19:50	20:00	05-11	6391.00	6453.00	Pressure On (psi): 4561.00, Pressure Off (psi): 3490.00, Weight On Bit (klbs): 52.00, Surface RPM: 41, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	20:00	20:05	05-11	6453.00	6453.00	Inclination (°): 6.950, Azimuth (°): 103.400, TVD (ft): 6370.96, Dogleg (°/100 ft): 1.23, Sensor Depth (ft): 6385.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	20:05	20:10	05-11	6453.00	6547.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	20:10	20:15	05-11	6547.00	6547.00	Inclination (°): 7.210, Azimuth (°): 110.170, TVD (ft): 6464.24, Dogleg (°/100 ft): 0.93, Sensor Depth (ft): 6479.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	20:15	20:25	05-11	6547.00	6641.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	20:25	20:30	05-11	6641.00	6641.00	Inclination (°): 7.120, Azimuth (°): 110.080, TVD (ft): 6557.51, Dogleg (°/100 ft): 0.10, Sensor Depth (ft): 6573.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	20:30	20:35	05-11	6641.00	6736.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	20:35	20:40	05-11	6736.00	6736.00	Inclination (°): 7.080, Azimuth (°): 109.460, TVD (ft): 6651.78, Dogleg (°/100 ft): 0.09, Sensor Depth (ft): 6668.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	20:40	20:50	05-11	6736.00	6830.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	20:50	20:55	05-11	6830.00	6830.00	Inclination (°): 7.030, Azimuth (°): 110.080, TVD (ft): 6745.07, Dogleg (°/100 ft): 0.10, Sensor Depth (ft): 6762.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	20:55	21:05	05-11	6830.00	6924.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	21:05	21:10	05-11	6924.00	6924.00	Inclination (°): 6.990, Azimuth (°): 110.430, TVD (ft): 6838.37, Dogleg (°/100 ft): 0.06, Sensor Depth (ft): 6856.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	21:10	21:20	05-11	6924.00	7009.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Slide Drill	2	05-11	21:20	21:30	05-11	7009.00	7019.00	Pressure On (psi): 3710.00, Pressure Off (psi): 3330.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 234, Toolface: 290, Toolface Type: <i>magnetic</i>
Survey	46	05-11	21:30	21:35	05-11	7019.00	7019.00	Inclination (°): 6.510, Azimuth (°): 109.640, TVD (ft): 6932.71, Dogleg (°/100 ft): 0.51, Sensor Depth (ft): 6951.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	21:35	22:10	05-11	7019.00	7113.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	22:10	22:15	05-11	7113.00	7113.00	Inclination (°): 4.880, Azimuth (°): 114.210, TVD (ft): 7026.24, Dogleg (°/100 ft): 1.80, Sensor Depth (ft): 7045.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	22:15	22:30	05-11	7113.00	7207.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	22:30	22:35	05-11	7207.00	7207.00	Inclination (°): 4.220, Azimuth (°): 112.450, TVD (ft): 7119.94, Dogleg (°/100 ft): 0.72, Sensor Depth (ft): 7139.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	22:35	22:45	05-11	7207.00	7302.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3690.00, Weight On Bit (klbs): 52.00, Surface RPM: 31, Surface Torque (ft lbf): 17000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	22:45	22:50	05-11	7302.00	7302.00	Inclination (°): 4.260, Azimuth (°): 114.390, TVD (ft): 7214.68, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 7234.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	22:50	23:00	05-11	7302.00	7396.00	Pressure On (psi): 4700.00, Pressure Off (psi): 3800.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18500.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	23:00	23:05	05-11	7396.00	7396.00	Inclination (°): 4.220, Azimuth (°): 116.410, TVD (ft): 7308.43, Dogleg (°/100 ft): 0.16, Sensor Depth (ft): 7328.00, Bit To Sensor (ft): 68.00

Rotary Drill	1	05-11	23:05	23:20	05-11	7396.00	7490.00	Pressure On (psi): 4700.00, Pressure Off (psi): 3800.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18500.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	23:20	23:25	05-11	7490.00	7490.00	Inclination (°): 3.870, Azimuth (°): 113.860, TVD (ft): 7402.19, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 7422.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	23:25	23:35	05-11	7490.00	7585.00	Pressure On (psi): 4700.00, Pressure Off (psi): 3800.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18500.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	23:35	23:40	05-11	7585.00	7585.00	Inclination (°): 3.520, Azimuth (°): 113.590, TVD (ft): 7497.00, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 7517.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-11	23:40	23:55	05-11	7585.00	7679.00	Pressure On (psi): 4700.00, Pressure Off (psi): 3800.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18500.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-11	23:55	00:00	05-12	7679.00	7679.00	Inclination (°): 3.160, Azimuth (°): 112.890, TVD (ft): 7590.84, Dogleg (°/100 ft): 0.39, Sensor Depth (ft): 7611.00, Bit To Sensor (ft): 68.00

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, May 12 00:00 - 23:59 (Day 16 of 28)

Billing: \$8,200.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	7679.00	Downhole Hours	24.00	Rotating WOB (klbs)	51.00 - 53.00
Bit Depth (ft)	9771.00	Drilling Hours	17.42	Sliding WOB (klbs)	48.00 - 48.00
Bottom Hole Depth (ft)	9771.00	Hours Circulating	0.00	Rotating SPM	231.00 - 234.00
Total Distance (ft)	2092.00	Hours Sliding	1.58	Sliding SPM	237.00 - 237.00
Distance Rotated (ft)	2021.00	Hours Rotating	15.83	Motor RPM	94.00 - 149.00
Distance Slid (ft)	71.00			Surface RPM	30.00 - 31.00
Inclination In	3.03			Flow Rate (gpm)	750.00 - 753.00
Inclination Out	0.79			On Bottom Pressure (psi)	3550.00 - 4600.00
Azimuth In	124.84	% Hours Rotating	91%	Off Bottom Pressure (psi)	3300.00 - 3500.00
Azimuth Out	340.35	% Hours Sliding	9%		
AVG Total ROP (ft/h)	120.11	% Distance Sliding	3%		
AVG Rotating ROP (ft/h)	127.64	% Distance Rotating	97%		
AVG Sliding ROP (ft/h)	44.84				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller

BHA #5 - BHA #5 Intermediate #2

Date In: May 11, 2019, 11:00 Date Out: May 13, 2019, 0:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13244778	Bend Angle	1.5	
Nozzles	6 x 12	Speed (rev/gal)	0.26	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	17.42	Bit Distances		POOH Reason Penetration Rate: Pooh for Rop, Once out bit was graded 2-4 due to chipped, broken and missing cutters along shoulder.
Total Drilled for Day (ft)	2092.00	Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		
Drilling Hours for BHA	23.92			
Total Drilled for BHA (ft)	4891.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13244778	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS002	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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Survey	46	05-11	23:55	00:00	05-12	7679.00	7679.00	Inclination (°): 3.160, Azimuth (°): 112.890, TVD (ft): 7590.84, Dogleg (°/100 ft): 0.39, Sensor Depth (ft): 7611.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	00:00	00:25	05-12	7679.00	7774.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	00:25	00:30	05-12	7774.00	7774.00	Inclination (°): 3.030, Azimuth (°): 124.840, TVD (ft): 7685.70, Dogleg (°/100 ft): 0.69, Sensor Depth (ft): 7706.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	00:30	00:35	05-12	7774.00	7784.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Slide Drill	2	05-12	00:35	01:00	05-12	7784.00	7815.00	Toolface: 100, Toolface Type: magnetic
Rotary Drill	1	05-12	01:00	01:15	05-12	7815.00	7868.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	01:15	01:20	05-12	7868.00	7868.00	Inclination (°): 4.040, Azimuth (°): 119.480, TVD (ft): 7779.52, Dogleg (°/100 ft): 1.13, Sensor Depth (ft): 7800.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	01:20	01:35	05-12	7868.00	7962.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	01:35	01:40	05-12	7962.00	7962.00	Inclination (°): 4.660, Azimuth (°): 113.950, TVD (ft): 7873.25, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 7894.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	01:40	02:05	05-12	7962.00	8057.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	02:05	02:10	05-12	8057.00	8057.00	Inclination (°): 4.570, Azimuth (°): 114.740, TVD (ft): 7967.94, Dogleg (°/100 ft): 0.12, Sensor Depth (ft): 7989.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	02:10	02:30	05-12	8057.00	8151.00	Pressure On (psi): 4600.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	02:30	02:35	05-12	8151.00	8151.00	Inclination (°): 4.530, Azimuth (°): 116.140, TVD (ft): 8061.64, Dogleg (°/100 ft): 0.13, Sensor Depth (ft): 8083.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	02:35	03:15	05-12	8151.00	8245.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	03:15	03:20	05-12	8245.00	8245.00	Inclination (°): 4.620, Azimuth (°): 115.790, TVD (ft): 8155.34, Dogleg (°/100 ft): 0.10, Sensor Depth (ft): 8177.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	03:20	03:40	05-12	8245.00	8339.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	03:40	03:45	05-12	8339.00	8339.00	Inclination (°): 4.480, Azimuth (°): 114.030, TVD (ft): 8249.05, Dogleg (°/100 ft): 0.21, Sensor Depth (ft): 8271.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	03:45	04:10	05-12	8339.00	8434.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	04:10	04:15	05-12	8434.00	8434.00	Inclination (°): 4.530, Azimuth (°): 117.110, TVD (ft): 8343.75, Dogleg (°/100 ft): 0.26, Sensor Depth (ft): 8366.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	04:15	04:55	05-12	8434.00	8528.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	04:55	05:10	05-12	8528.00	8528.00	Inclination (°): 4.130, Azimuth (°): 120.540, TVD (ft): 8437.49, Dogleg (°/100 ft): 0.51, Sensor Depth (ft): 8460.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	05:10	05:45	05-12	8528.00	8623.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	05:45	05:50	05-12	8623.00	8623.00	Inclination (°): 4.260, Azimuth (°): 120.890, TVD (ft): 8532.23, Dogleg (°/100 ft): 0.14, Sensor Depth (ft): 8555.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	05:50	06:35	05-12	8623.00	8717.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	06:35	06:40	05-12	8717.00	8717.00	Inclination (°): 3.960, Azimuth (°): 124.840, TVD (ft): 8625.99, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 8649.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	06:40	07:35	05-12	8717.00	8811.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	07:35	07:40	05-12	8811.00	8811.00	Inclination (°): 4.130, Azimuth (°): 125.020, TVD (ft): 8719.76, Dogleg (°/100 ft): 0.18, Sensor Depth (ft): 8743.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	07:40	08:35	05-12	8811.00	8906.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	08:35	08:40	05-12	8906.00	8906.00	Inclination (°): 4.260, Azimuth (°): 129.330, TVD (ft): 8814.50, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 8838.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	08:40	08:50	05-12	8906.00	8916.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Slide Drill	2	05-12	08:50	09:25	05-12	8916.00	8936.00	Pressure On (psi): 3550.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 48.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237, Toolface: 310, Toolface Type: magnetic
Rotary Drill	1	05-12	09:25	09:40	05-12	8936.00	9000.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	09:40	09:55	05-12	9000.00	9000.00	Inclination (°): 2.810, Azimuth (°): 134.780, TVD (ft): 8908.32, Dogleg (°/100 ft): 1.58, Sensor Depth (ft): 8932.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	09:55	10:05	05-12	9000.00	9010.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00

Slide Drill	2	05-12	10:05	10:40	05-12	9010.00	9030.00	Pressure On (psi): 3550.00, Pressure Off (psi): 3300.00, Weight On Bit (klbs): 48.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237, Toolface: 340, Toolface Type: magnetic
Rotary Drill	1	05-12	10:40	11:20	05-12	9030.00	9094.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	11:20	11:25	05-12	9094.00	9094.00	Inclination (°): 0.530, Azimuth (°): 103.220, TVD (ft): 9002.28, Dogleg (°/100 ft): 2.53, Sensor Depth (ft): 9026.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	11:25	11:40	05-12	9094.00	9189.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	11:40	11:45	05-12	9189.00	9189.00	Inclination (°): 0.700, Azimuth (°): 52.160, TVD (ft): 9097.27, Dogleg (°/100 ft): 0.58, Sensor Depth (ft): 9121.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	11:45	13:00	05-12	9189.00	9283.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	13:00	13:05	05-12	9283.00	9283.00	Inclination (°): 0.790, Azimuth (°): 67.190, TVD (ft): 9191.26, Dogleg (°/100 ft): 0.23, Sensor Depth (ft): 9215.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	13:05	14:10	05-12	9283.00	9378.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	14:10	14:15	05-12	9378.00	9378.00	Inclination (°): 0.790, Azimuth (°): 93.200, TVD (ft): 9286.25, Dogleg (°/100 ft): 0.37, Sensor Depth (ft): 9310.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	14:15	15:25	05-12	9378.00	9472.00	Pressure On (psi): 4200.00, Pressure Off (psi): 3400.00, Weight On Bit (klbs): 53.00, Surface RPM: 31, Surface Torque (ft lbf): 11000.00, Flow Rate (gpm): 753.00, Strokes Per Minute: 234.00
Survey	46	05-12	15:25	15:30	05-12	9472.00	9472.00	Inclination (°): 0.530, Azimuth (°): 107.790, TVD (ft): 9380.25, Dogleg (°/100 ft): 0.33, Sensor Depth (ft): 9404.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	15:30	17:10	05-12	9472.00	9566.00	
Survey	46	05-12	17:10	17:15	05-12	9566.00	9566.00	Inclination (°): 0.620, Azimuth (°): 189.620, TVD (ft): 9474.24, Dogleg (°/100 ft): 0.80, Sensor Depth (ft): 9498.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	17:15	18:20	05-12	9566.00	9660.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-12	18:20	18:25	05-12	9660.00	9660.00	Inclination (°): 0.220, Azimuth (°): 244.460, TVD (ft): 9568.24, Dogleg (°/100 ft): 0.56, Sensor Depth (ft): 9592.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	18:25	19:20	05-12	9660.00	9755.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-12	19:20	19:25	05-12	9755.00	9755.00	Inclination (°): 0.790, Azimuth (°): 340.350, TVD (ft): 9663.24, Dogleg (°/100 ft): 0.89, Sensor Depth (ft): 9687.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-12	19:25	19:35	05-12	9755.00	9771.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Pooh	7	05-12	19:35	00:00	05-13			POOH for ROP

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, May 13 00:00 - 23:59 (Day 17 of 28)

Billing: \$17,450.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	9771.00	Downhole Hours	24.00	Rotating WOB (klbs)	51.00 - 51.00
Bit Depth (ft)	11015.00	Drilling Hours	8.92	Sliding WOB (klbs)	25.00 - 25.00
Bottom Hole Depth (ft)	11015.00	Hours Circulating	0.00	Rotating SPM	231.00 - 231.00
Total Distance (ft)	1244.00	Hours Sliding	1.58	Sliding SPM	237.00 - 237.00
Distance Rotated (ft)	1175.00	Hours Rotating	7.33	Motor RPM	94.00 - 149.00
Distance Slid (ft)	69.00			Surface RPM	30.00 - 30.00
Inclination In	1.10			Flow Rate (gpm)	750.00 - 750.00
Inclination Out	0.88			On Bottom Pressure (psi)	3800.00 - 4100.00
Azimuth In	329.37	% Hours Rotating	82%	Off Bottom Pressure (psi)	3500.00 - 3850.00
Azimuth Out	187.77	% Hours Sliding	18%		
AVG Total ROP (ft/h)	139.51	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	160.23	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	43.58				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller

BHA #5 - BHA #5 Intermediate #2

Date In: May 11, 2019, 11:00 Date Out: May 13, 2019, 0:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.50° FBH 7/8 8.5 Stg. W/8 1/4" NBS. Protracted Angle: 1.53°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18,710 ft/lbs, Rev/Gal: .26 / Bit Data: Halliburton 8 1/2", Type MM65DRM, SN: 13244778 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13244778	Bend Angle	1.5	
Nozzles	6 x 12	Speed (rev/gal)	0.26	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		
Drilling Hours for BHA	23.92			
Total Drilled for BHA (ft)	4891.00			
				POOH Reason
				Penetration Rate: Pooh for Rop, Once out bit was graded 2-4 due to chipped, broken and missing cutters along shoulder.

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM65DRM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13244778	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 7/8 8.5 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS002	4 1/2" IF Box	4 1/2" Reg Box		7.000		33.85	34.85
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	40.63
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	45.05
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	74.02
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	103.00
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	105.88
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	635.15
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	638.59
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1551.96

MWD Items

No Items

BHA #6 - BHA #6 Intermediate #2

Date In: May 13, 2019, 0:30 Date Out: May 14, 2019, 12:30

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Contender: 1.50° FBH 6/7 8.4 Stg. W/8 1/4" NBS. Protracted Angle: 1.63°. Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GT65DM, SN: 13050197 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0	
Vendor	Halliburton	Lobe/Stage	6/7, 8.4		
S/N	13050197	Bend Angle	1.5		
Nozzles	6 x 12	Speed (rev/gal)	0.30		
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125	MWD Comments	
Drilling Hours for Day	8.92	Bit Distances		POOH Reason	
Total Drilled for Day (ft)	1244.00	Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft			
Drilling Hours for BHA	12.83				
Total Drilled for BHA (ft)	1660.00				
				Total Depth/Casing Point: Reached KOP, POOH for Curve Assembly	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: GT65DM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13050197	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 6/7 8.4 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	700-40-31	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.98	35.98
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	41.76
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	46.18
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	75.15
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	104.13
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	107.01
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	636.28
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	639.72
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1553.09

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	05-12	19:35	00:00	05-13			POOH for ROP
Pooh	7	05-13	00:00	00:30	05-13			POOH for Bit and Motor
Change BHA	6	05-13	00:30	01:45	05-13			P/U BHA # 6
Rig Repair	14	05-13	01:45	02:50	05-13			Repair ST-80
Change BHA	6	05-13	02:50	03:05	05-13			P/U BHA # 6
Rig Repair	14	05-13	03:05	04:05	05-13			Work On St-80
Change BHA	6	05-13	04:05	05:00	05-13			P/U BHA # 6
TIH	8	05-13	05:00	13:50	05-13			TIH W/ BHA #6
Rotary Drill	1	05-13	13:50	14:15	05-13	9771.00	9849.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	14:15	14:20	05-13	9849.00	9849.00	Inclination (°): 1.100, Azimuth (°): 329.370, TVD (ft): 9757.23, Dogleg (°/100 ft): 0.38, Sensor Depth (ft): 9781.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	14:20	14:50	05-13	9849.00	9944.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	14:50	14:55	05-13	9944.00	9944.00	Inclination (°): 1.010, Azimuth (°): 319.610, TVD (ft): 9852.21, Dogleg (°/100 ft): 0.21, Sensor Depth (ft): 9876.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	14:55	15:25	05-13	9944.00	10038.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	15:25	15:30	05-13	10038.00	10038.00	Inclination (°): 1.580, Azimuth (°): 306.950, TVD (ft): 9946.19, Dogleg (°/100 ft): 0.67, Sensor Depth (ft): 9970.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	15:30	16:05	05-13	10038.00	10132.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	16:05	16:10	05-13	10132.00	10132.00	Inclination (°): 1.490, Azimuth (°): 295.620, TVD (ft): 10040.15, Dogleg (°/100 ft): 0.34, Sensor Depth (ft): 10064.00, Bit To Sensor (ft): 68.00

Rotary Drill	1	05-13	16:10	16:15	05-13	10132.00	10142.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Slide Drill	2	05-13	16:15	16:35	05-13	10142.00	10162.00	Pressure On (psi): 4100.00, Pressure Off (psi): 3850.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237, Toolface: 120, Toolface Type: magnetic
Rotary Drill	1	05-13	16:35	17:05	05-13	10162.00	10227.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	17:05	17:10	05-13	10227.00	10227.00	Inclination (°): 0.400, Azimuth (°): 214.840, TVD (ft): 10135.14, Dogleg (°/100 ft): 1.56, Sensor Depth (ft): 10159.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	17:10	17:50	05-13	10227.00	10321.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	17:50	17:55	05-13	10321.00	10321.00	Inclination (°): 0.660, Azimuth (°): 160.000, TVD (ft): 10230.14, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 10254.00, Bit To Sensor (ft): 67.00
Rotary Drill	1	05-13	17:55	18:25	05-13	10321.00	10415.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	18:25	18:30	05-13	10415.00	10415.00	Inclination (°): 1.100, Azimuth (°): 149.810, TVD (ft): 10324.13, Dogleg (°/100 ft): 0.49, Sensor Depth (ft): 10348.00, Bit To Sensor (ft): 67.00
Rotary Drill	1	05-13	18:30	19:10	05-13	10415.00	10509.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	19:10	19:15	05-13	10509.00	10509.00	Inclination (°): 1.360, Azimuth (°): 130.560, TVD (ft): 10418.10, Dogleg (°/100 ft): 0.52, Sensor Depth (ft): 10442.00, Bit To Sensor (ft): 67.00
Rotary Drill	1	05-13	19:15	19:30	05-13	10509.00	10522.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Slide Drill	2	05-13	19:30	20:15	05-13	10522.00	10550.00	Pressure On (psi): 4100.00, Pressure Off (psi): 3850.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237, Toolface: 30, Toolface Type: magnetic
Rotary Drill	1	05-13	20:15	20:40	05-13	10550.00	10605.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	20:40	20:45	05-13	10605.00	10605.00	Inclination (°): 0.970, Azimuth (°): 103.840, TVD (ft): 10513.08, Dogleg (°/100 ft): 0.69, Sensor Depth (ft): 10537.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	20:45	21:20	05-13	10605.00	10700.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	21:20	21:25	05-13	10700.00	10700.00	Inclination (°): 0.840, Azimuth (°): 73.870, TVD (ft): 10608.07, Dogleg (°/100 ft): 0.51, Sensor Depth (ft): 10632.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	21:25	22:05	05-13	10700.00	10794.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	22:05	22:20	05-13	10794.00	10794.00	Inclination (°): 0.180, Azimuth (°): 69.470, TVD (ft): 10702.07, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 10726.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	22:20	22:40	05-13	10794.00	10889.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	22:40	22:45	05-13	10889.00	10889.00	Inclination (°): 0.530, Azimuth (°): 211.150, TVD (ft): 10797.07, Dogleg (°/100 ft): 0.72, Sensor Depth (ft): 10821.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	22:45	23:20	05-13	10889.00	10984.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Survey	46	05-13	23:20	23:25	05-13	10984.00	10984.00	Inclination (°): 0.880, Azimuth (°): 187.770, TVD (ft): 10892.06, Dogleg (°/100 ft): 0.47, Sensor Depth (ft): 10916.00, Bit To Sensor (ft): 68.00
Rotary Drill	1	05-13	23:25	23:30	05-13	10984.00	10994.00	Pressure On (psi): 3800.00, Pressure Off (psi): 3500.00, Weight On Bit (klbs): 51.00, Surface RPM: 30, Surface Torque (ft lbf): 13000.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 231.00
Slide Drill	2	05-13	23:30	00:00	05-14	10994.00	11015.00	Pressure On (psi): 4100.00, Pressure Off (psi): 3850.00, Weight On Bit (klbs): 25.00, Flow Rate (gpm): 750.00, Strokes Per Minute: 237, Toolface: 0, Toolface Type: magnetic

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, May 14 00:00 - 23:59 (Day 18 of 28)

Billing: \$19,650.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11015.00	Downhole Hours	23.00	Rotating WOB (klbs)	51.00 - 51.00
Bit Depth (ft)	11493.00	Drilling Hours	7.67	Sliding WOB (klbs)	25.00 - 35.00
Bottom Hole Depth (ft)	11493.00	Hours Circulating	0.00	Rotating SPM	231.00 - 231.00
Total Distance (ft)	478.00	Hours Sliding	4.92	Sliding SPM	183.00 - 237.00
Distance Rotated (ft)	378.00	Hours Rotating	2.75	Motor RPM	94.00 - 149.00
Distance Slid (ft)	100.00			Surface RPM	30.00 - 30.00
Inclination In	0.26			Flow Rate (gpm)	600.00 - 750.00
Inclination Out	0.84			On Bottom Pressure (psi)	3800.00 - 4100.00
Azimuth In	230.58	% Hours Rotating	36%	Off Bottom Pressure (psi)	3500.00 - 3850.00
Azimuth Out	310.12	% Hours Sliding	64%		
AVG Total ROP (ft/h)	61.10	% Distance Sliding	21%		
AVG Rotating ROP (ft/h)	137.45	% Distance Rotating	79%		
AVG Sliding ROP (ft/h)	22.34				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller

BHA #6 - BHA #6 Intermediate #2

Date In: May 13, 2019, 0:30 Date Out: May 14, 2019, 12:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Contender: 1.50° FBH 6/7 8.4 Stg. W/8 1/4" NBS. Protracted Angle: 1.63°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GT65DM, SN: 13050197 Jets: 6x12's, TFA: 0.663 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	6/7, 8.4	
S/N	13050197	Bend Angle	1.5	
Nozzles	6 x 12	Speed (rev/gal)	0.30	
Total Flow Area (in²)	0.663	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	3.92	Bit Distances		
Total Drilled for Day (ft)	416.00	Bend (Bit to Bend): 4.05 ft, Survey (Bit to Survey): 68.00 ft, Gamma (Bit to Gamma): 53.00 ft		
Drilling Hours for BHA	12.83			
Total Drilled for BHA (ft)	1660.00			
				POOH Reason
				Total Depth/Casing Point: Reached KOP, POOH for Curve Assembly

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: GT65DM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13050197	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.5° FBH 6/7 8.4 Stg Mtr. w/ 8.25" Stab., Size (in): 7.00, Bend Angle (°): 1.5, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	700-40-31	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.98	35.98
Stabilizer Description: 8.25" Stabilizer	DTI	DR37941	4 1/2" IF Box	4 1/2" IF Pin	2.750	6.750		5.78	41.76
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.350		4.42	46.18
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		28.97	75.15
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	104.13
Crossover Sub Description: X-over Sub, Type: Steel	DTI	DR8849	4 1/2" XH Box	4 1/2" IF Pin	3.000	6.500		2.88	107.01
Drill Collar Description: 6 Stds DC, Style: Slick Drill, Type: Steel	Rig	Rig	4 1/2" XH Box	4 1/2" XH Pin	3.000	6.500		529.27	636.28
Crossover Sub Description: Cross Over, Type: Steel	DTI	DR37309	4 1/2" IF Box	4 1/2" XH Pin	2.750	6.675		3.44	639.72
HWDP Description: 10 Stands HWDP, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	2.875	4.000		913.37	1553.09

MWD Items

No Items

BHA #7 - BHA #7 (Curve)

Date In: May 14, 2019, 13:30 Date Out: May 15, 2019, 21:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Contender: 2.0° FBH 6/7 8.4 Stg. Mtr Slick. Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GTD55DM, SN: 13192807 Jets: 5x20's, TFA: 1.53 Runs on Bit: 2
Vendor	Halliburton	Lobe/Stage	6/7, 8.4	
S/N	13192807	Bend Angle	2.0	
Nozzles	5 x 20	Speed (rev/gal)	0.30	
Total Flow Area (in²)	1.530	Wear Pad OD (in)	7.313	
Drilling Hours for Day	3.75	Bit Distances		MWD Comments
Total Drilled for Day (ft)	62.00	Bend (Bit to Bend): 4.07 ft, Survey (Bit to Survey): 63.00 ft, Gamma (Bit to Gamma): 48.00 ft		
Drilling Hours for BHA	16.50			
Total Drilled for BHA (ft)	658.00			
				POOH Reason
				Build Rate: BHA was not acheiving build rates need to land on Target

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: <i>GTD55DM</i> , Style: <i>PDC</i> , Gauge Length (in): <i>3.50</i> , Size (in): <i>8.50</i>	Halliburton	13192807	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: <i>2.0° FBH 6/7 8.4 Stg Mtr. Slick</i> , Size (in): <i>7.00</i> , Bend Angle (°): <i>2.0</i> , Rotor Lobe: <i>6</i> , Stator Lobe: <i>7</i> , Stator Stage: <i>8.4</i>	Aim	CDM650-012	4 1/2" IF Box	4 1/2" Reg Box		7.000		32.83	33.83
Float Sub Description: <i>Float Sub</i> , Type: <i>Steel</i>	DTI	DR22381	4 1/2" IF Box	4 1/2" IF Pin	2.825	6.625		2.48	36.31
UBHO Sub Description: <i>NM UBHO</i> , Type: <i>NM</i>	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		4.42	40.73
Drill Collar Description: <i>NMDC</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	69.70
Drill Collar Description: <i>NMDC</i> , Style: <i>Slick Drill</i> , Type: <i>NM</i>	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	98.68
Drill Collar Description: <i>NM Pony</i> , Style: <i>Pony</i> , Type: <i>NM</i>	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	111.18

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	05-13	23:30	00:00	05-14	10994.00	11015.00	Pressure On (psi): <i>4100.00</i> , Pressure Off (psi): <i>3850.00</i> , Weight On Bit (klbs): <i>25.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>237</i> , Toolface: <i>0</i> , Toolface Type: <i>magnetic</i>
Slide Drill	2	05-14	00:00	00:25	05-14	11015.00	11030.00	Pressure On (psi): <i>4100.00</i> , Pressure Off (psi): <i>3850.00</i> , Weight On Bit (klbs): <i>25.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>237</i> , Toolface: <i>0</i> , Toolface Type: <i>magnetic</i>
Rotary Drill	1	05-14	00:25	00:50	05-14	11030.00	11078.00	Pressure On (psi): <i>3800.00</i> , Pressure Off (psi): <i>3500.00</i> , Weight On Bit (klbs): <i>51.00</i> , Surface RPM: <i>30</i> , Surface Torque (ft lbf): <i>13000.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>231.00</i>
Survey	46	05-14	00:50	00:55	05-14	11078.00	11078.00	Inclination (°): <i>0.260</i> , Azimuth (°): <i>230.580</i> , TVD (ft): <i>10986.06</i> , Dogleg (°/100 ft): <i>0.76</i> , Sensor Depth (ft): <i>11010.00</i> , Bit To Sensor (ft): <i>68.00</i>
Rotary Drill	1	05-14	00:55	01:00	05-14	11078.00	11088.00	Pressure On (psi): <i>3800.00</i> , Pressure Off (psi): <i>3500.00</i> , Weight On Bit (klbs): <i>51.00</i> , Surface RPM: <i>30</i> , Surface Torque (ft lbf): <i>13000.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>231.00</i>
Slide Drill	2	05-14	01:00	01:45	05-14	11088.00	11111.00	Pressure On (psi): <i>4100.00</i> , Pressure Off (psi): <i>3850.00</i> , Weight On Bit (klbs): <i>25.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>237</i> , Toolface: <i>0</i> , Toolface Type: <i>magnetic</i>
Rotary Drill	1	05-14	01:45	02:20	05-14	11111.00	11172.00	Pressure On (psi): <i>3800.00</i> , Pressure Off (psi): <i>3500.00</i> , Weight On Bit (klbs): <i>51.00</i> , Surface RPM: <i>30</i> , Surface Torque (ft lbf): <i>13000.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>231.00</i>
Survey	46	05-14	02:20	02:25	05-14	11172.00	11172.00	Inclination (°): <i>1.490</i> , Azimuth (°): <i>318.120</i> , TVD (ft): <i>11080.04</i> , Dogleg (°/100 ft): <i>1.60</i> , Sensor Depth (ft): <i>11104.00</i> , Bit To Sensor (ft): <i>68.00</i>
Rotary Drill	1	05-14	02:25	03:00	05-14	11172.00	11267.00	Pressure On (psi): <i>3800.00</i> , Pressure Off (psi): <i>3500.00</i> , Weight On Bit (klbs): <i>51.00</i> , Surface RPM: <i>30</i> , Surface Torque (ft lbf): <i>13000.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>231.00</i>
Survey	46	05-14	03:00	03:05	05-14	11267.00	11267.00	Inclination (°): <i>1.190</i> , Azimuth (°): <i>308.800</i> , TVD (ft): <i>11175.02</i> , Dogleg (°/100 ft): <i>0.39</i> , Sensor Depth (ft): <i>11199.00</i> , Bit To Sensor (ft): <i>68.00</i>
Rotary Drill	1	05-14	03:05	03:40	05-14	11267.00	11361.00	Pressure On (psi): <i>3800.00</i> , Pressure Off (psi): <i>3500.00</i> , Weight On Bit (klbs): <i>51.00</i> , Surface RPM: <i>30</i> , Surface Torque (ft lbf): <i>13000.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>231.00</i>
Survey	46	05-14	03:40	03:45	05-14	11361.00	11361.00	Inclination (°): <i>1.450</i> , Azimuth (°): <i>294.560</i> , TVD (ft): <i>11268.99</i> , Dogleg (°/100 ft): <i>0.44</i> , Sensor Depth (ft): <i>11293.00</i> , Bit To Sensor (ft): <i>68.00</i>
Rotary Drill	1	05-14	03:45	04:15	05-14	11361.00	11431.00	Pressure On (psi): <i>3800.00</i> , Pressure Off (psi): <i>3500.00</i> , Weight On Bit (klbs): <i>51.00</i> , Surface RPM: <i>30</i> , Surface Torque (ft lbf): <i>13000.00</i> , Flow Rate (gpm): <i>750.00</i> , Strokes Per Minute: <i>231.00</i>
Survey	46	05-14	04:15	04:30	05-14	11431.00	11431.00	Inclination (°): <i>0.840</i> , Azimuth (°): <i>310.120</i> , TVD (ft): <i>11338.98</i> , Dogleg (°/100 ft): <i>0.97</i> , Sensor Depth (ft): <i>11363.00</i> , Bit To Sensor (ft): <i>68.00</i>
Other	16	05-14	04:30	05:00	05-14			Flow Check
Pooh	7	05-14	05:00	12:30	05-14			POOH for Curve Assembly

Change BHA	6	05-14	12:30	13:50	05-14			P/U BHA # 7
TIH	8	05-14	13:50	16:40	05-14			TIH W/ BHA #7
Other	16	05-14	16:40	18:20	05-14			Slip And Cut Drill Line
TIH	8	05-14	18:20	19:40	05-14			TIH W/ BHA #7
Other	16	05-14	19:40	20:15	05-14			Fill Tanks with OBM
Slide Drill	2	05-14	20:15	00:00	05-15	11431.00	11493.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 183, Toolface: 0, Toolface Type: magnetic

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, May 15 00:00 - 23:59 (Day 19 of 28)

Billing: \$18,900.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	11493.00	Downhole Hours	23.00	Rotating WOB (klbs)	
Bit Depth (ft)	12089.00	Drilling Hours	12.75	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	12089.00	Hours Circulating	0.00	Rotating SPM	
Total Distance (ft)	596.00	Hours Sliding	12.75	Sliding SPM	183.00 - 226.00
Distance Rotated (ft)	0.00	Hours Rotating	0.00	Motor RPM	94.00 - 149.00
Distance Slid (ft)	596.00			Surface RPM	
Inclination In	2.11			Flow Rate (gpm)	600.00 - 700.00
Inclination Out	53.36			On Bottom Pressure (psi)	4000.00 - 4000.00
Azimuth In	2.68	% Hours Rotating	0%	Off Bottom Pressure (psi)	3700.00 - 3700.00
Azimuth Out	0.65	% Hours Sliding	100%		
AVG Total ROP (ft/h)	39.88	% Distance Sliding	100%		
AVG Rotating ROP (ft/h)	0.00	% Distance Rotating	0%		
AVG Sliding ROP (ft/h)	39.88				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller

BHA #7 - BHA #7 (Curve)

Date In: May 14, 2019, 13:30 Date Out: May 15, 2019, 21:30

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Contender: 2.0° FBH 6/7 8.4 Stg. Mtr Slick. Protracted Angle: 2.08°, Flow Rate 350-750, Max Diff 1980 psi, Max Operating Torque: 16,550 ft/lbs, Rev/Gal: .30 / Bit Data: Halliburton 8 1/2", Type GTD55DM, SN: 13192807 Jets: 5x20's, TFA: 1.53 Runs on Bit: 2	
Vendor	Halliburton	Lobe/Stage	6/7, 8.4		
S/N	13192807	Bend Angle	2.0		
Nozzles	5 x 20	Speed (rev/gal)	0.30		
Total Flow Area (in²)	1.530	Wear Pad OD (in)	7.313	MWD Comments	
Drilling Hours for Day	12.75	Bit Distances			
Total Drilled for Day (ft)	596.00	Bend (Bit to Bend): 4.07 ft, Survey (Bit to Survey): 63.00 ft, Gamma (Bit to Gamma): 48.00 ft			
Drilling Hours for BHA	16.50				
Total Drilled for BHA (ft)	658.00				
				POOH Reason	
				Build Rate: BHA was not acheiving build rates need to land on Target	

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: GTD55DM, Style: PDC, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13192807	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 2.0° FBH 6/7 8.4 Stg Mtr. Slick, Size (in): 7.00, Bend Angle (°): 2.0, Rotor Lobe: 6, Stator Lobe: 7, Stator Stage: 8.4	Aim	CDM650-012	4 1/2" IF Box	4 1/2" Reg Box		7.000		32.83	33.83
Float Sub Description: Float Sub, Type: Steel	DTI	DR22381	4 1/2" IF Box	4 1/2" IF Pin	2.825	6.625		2.48	36.31
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		4.42	40.73
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	69.70
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	98.68
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	111.18

MWD Items

No Items

BHA #8 - BHA #8 (Curve)

Date In: May 15, 2019, 22:30 Date Out: May 16, 2019, 16:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.75	7" Contender: 2.60° FBH 7/8 5.7 Stg. Mtr W/ 8 1/8 NB Stab. Protracted Angle: 2.59°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .21 / Bit Data:Baker 8 1/2", Type KMX624T, SN: 5288335 Jets: 4x18's, TFA: .994 Runs on Bit: 0
Vendor	Baker	Lobe/Stage	7/8, 5.7	
S/N	5288335	Bend Angle	2.6	
Nozzles	4x18s	Speed (rev/gal)	0.21	MWD Comments
Total Flow Area (in²)	0.994	Wear Pad OD (in)	7.313	POOH Reason Total Depth/Casing Point: Section Projected Landed @ 90°
Drilling Hours for Day	0.00	Bit Distances		
Total Drilled for Day (ft)		Bend (Bit to Bend): 5.13 ft, Survey (Bit to Survey): 59.00 ft, Gamma (Bit to Gamma): 44.00 ft		
Drilling Hours for BHA	5.25			
Total Drilled for BHA (ft)	164.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: KMX624T, Style: Other, Gauge Length (in): 0.25, Size (in): 8.50	Baker	5288335	4 1/2" Reg Pin			8.500		0.85	0.85
Mud Motor Description: 2.60° FBH 6/7 8.4 Stg Mtr W/8 1/8" Stab, Size (in): 6.75, Bend Angle (°): 2.6, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM650-009	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.52	32.37
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		4.42	36.79
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	65.76
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	94.74
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	107.24

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	05-14	20:15	00:00	05-15	11431.00	11493.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 183, Toolface: 0, Toolface Type: magnetic
Slide Drill	2	05-15	00:00	01:05	05-15	11493.00	11523.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 600.00, Strokes Per Minute: 183, Toolface: 0, Toolface Type: magnetic
Survey	46	05-15	01:05	01:10	05-15	11523.00	11523.00	Inclination (°): 2.110, Azimuth (°): 2.680, TVD (ft): 11435.95, Dogleg (°/100 ft): 1.79, Sensor Depth (ft): 11460.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	01:10	02:45	05-15	11523.00	11617.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 0, Toolface Type: magnetic
Survey	46	05-15	02:45	02:55	05-15	11617.00	11617.00	Inclination (°): 13.360, Azimuth (°): 356.350, TVD (ft): 11528.95, Dogleg (°/100 ft): 11.98, Sensor Depth (ft): 11554.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	02:55	05:00	05-15	11617.00	11712.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 10, Toolface Type: gravity
Survey	46	05-15	05:00	05:10	05-15	11712.00	11712.00	Inclination (°): 18.860, Azimuth (°): 354.770, TVD (ft): 11620.18, Dogleg (°/100 ft): 5.81, Sensor Depth (ft): 11649.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	05:10	07:30	05-15	11712.00	11807.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 20, Toolface Type: gravity
Survey	46	05-15	07:30	07:40	05-15	11807.00	11807.00	Inclination (°): 23.120, Azimuth (°): 352.830, TVD (ft): 11708.86, Dogleg (°/100 ft): 4.54, Sensor Depth (ft): 11744.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	07:40	08:45	05-15	11807.00	11856.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 30, Toolface Type: gravity
Survey	46	05-15	08:45	08:55	05-15	11856.00	11856.00	Inclination (°): 28.260, Azimuth (°): 352.570, TVD (ft): 11753.00, Dogleg (°/100 ft): 10.49, Sensor Depth (ft): 11793.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	08:55	10:15	05-15	11856.00	11901.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 30, Toolface Type: gravity
Survey	46	05-15	10:15	10:25	05-15	11901.00	11901.00	Inclination (°): 32.620, Azimuth (°): 354.410, TVD (ft): 11791.79, Dogleg (°/100 ft): 9.91, Sensor Depth (ft): 11838.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	10:25	11:50	05-15	11901.00	11996.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 30, Toolface Type: gravity
Survey	46	05-15	11:50	12:00	05-15	11996.00	11996.00	Inclination (°): 43.740, Azimuth (°): 356.700, TVD (ft): 11866.35, Dogleg (°/100 ft): 11.80, Sensor Depth (ft): 11933.00, Bit To Sensor (ft): 63.00
Slide Drill	2	05-15	12:00	13:15	05-15	11996.00	12052.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 20, Toolface Type: gravity
Survey	46	05-15	13:15	13:25	05-15	12052.00	12052.00	Inclination (°): 49.490, Azimuth (°): 358.460, TVD (ft): 11904.80, Dogleg (°/100 ft): 10.52, Sensor Depth (ft): 11989.00, Bit To Sensor (ft): 63.00

Slide Drill	2	05-15	13:25	14:00	05-15	12052.00	12089.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 20, Toolface Type: gravity
Survey	46	05-15	14:00	14:10	05-15	12089.00	12089.00	Inclination (°): 53.360, Azimuth (°): 0.650, TVD (ft): 11929.12, Dogleg (°/100 ft): 10.85, Sensor Depth (ft): 12028.00, Bit To Sensor (ft): 61.00
Pooh	7	05-15	14:10	21:00	05-15			POOH for Bit and Motor
Change BHA	6	05-15	21:00	22:30	05-15			P/U BHA # 8
TIH	8	05-15	22:30	00:00	05-16			TIH W/ BHA #8

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Thursday, May 16 00:00 - 23:59 (Day 20 of 28)

Billing: \$22,745.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	12089.00	Downhole Hours	19.75	Rotating WOB (klbs)	
Bit Depth (ft)	12253.00	Drilling Hours	5.25	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	12253.00	Hours Circulating	0.00	Rotating SPM	
Total Distance (ft)	164.00	Hours Sliding	5.25	Sliding SPM	226.00 - 226.00
Distance Rotated (ft)	0.00	Hours Rotating	0.00	Motor RPM	94.00 - 149.00
Distance Slid (ft)	164.00			Surface RPM	
Inclination In	66.90			Flow Rate (gpm)	700.00 - 700.00
Inclination Out	79.52			On Bottom Pressure (psi)	4000.00 - 4000.00
Azimuth In	0.22	% Hours Rotating	0%	Off Bottom Pressure (psi)	3700.00 - 3700.00
Azimuth Out	358.11	% Hours Sliding	100%		
AVG Total ROP (ft/h)	31.24	% Distance Sliding	100%		
AVG Rotating ROP (ft/h)	0.00	% Distance Rotating	0%		
AVG Sliding ROP (ft/h)	31.24				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller

BHA #8 - BHA #8 (Curve)

Date In: May 15, 2019, 22:30 Date Out: May 16, 2019, 16:30

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	6.75	7" Contender: 2.60° FBH 7/8 5.7 Stg. Mtr W/ 8 1/8 NB Stab. Protracted Angle: 2.59°, Flow Rate 300-600, Max Diff 1280 psi, Max Operating Torque: 13,720 ft/lbs, Rev/Gal: .21 / Bit Data: BAKER 8 1/2", Type KMX624T, SN: 5288335 Jets: 4x18's, TFA: .994 Runs on Bit: 0
Vendor	Baker	Lobe/Stage	7/8, 5.7	
S/N	5288335	Bend Angle	2.6	
Nozzles	4x18s	Speed (rev/gal)	0.21	MWD Comments
Total Flow Area (in²)	0.994	Wear Pad OD (in)	7.313	
Drilling Hours for Day	5.25	Bit Distances		
Total Drilled for Day (ft)	164.00	Bend (Bit to Bend): 5.13 ft, Survey (Bit to Survey): 59.00 ft, Gamma (Bit to Gamma): 44.00 ft		
Drilling Hours for BHA	5.25			POOH Reason
Total Drilled for BHA (ft)	164.00			Total Depth/Casing Point: Section Projected Landed @ 90°

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: KMX624T, Style: Other, Gauge Length (in): 0.25, Size (in): 8.50	Baker	5288335	4 1/2" Reg Pin			8.500		0.85	0.85
Mud Motor Description: 2.60° FBH 6/7 8.4 Stg Mtr W/8 1/8" Stab, Size (in): 6.75, Bend Angle (°): 2.6, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 5.7	Aim	CDM650-009	4 1/2" IF Box	4 1/2" Reg Box		6.750		31.52	32.37
UBHO Sub Description: NM UBHO, Type: NM	Aim	675-127NM	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.750		4.42	36.79
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	65.76
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	94.74
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	107.24

MWD Items

No Items

BHA #9 - BHA #9 (Lateral Run)

Date In: May 16, 2019, 20:45 Date Out: May 20, 2019, 0:00

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0	
Vendor	Halliburton	Lobe/Stage	7/8, 8.5		
S/N	13080800	Bend Angle	1.75		
Nozzles	6 x 22	Speed (rev/gal)	0.26	MWD Comments	
Total Flow Area (in²)	2.220	Wear Pad OD (in)	7.125	POOH Reason Pressure Spike: Made connection after SPR's. After bringing pumps online we had 1000 psi over previous off bottom PSI. brought pumps down 75 spm to get same OBP as before. slacked off to bottom and tagged with 37 WOB and PSI increased 1000 psi. picked up off bottom and lost 100 psi. Psi maintained 900 psi over off bottom Psi.	
Drilling Hours for Day	0.00	Bit Distances			
Total Drilled for Day (ft)		Bend (Bit to Bend): 4.10 ft, Survey			
Drilling Hours for BHA	51.92	(Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft			
Total Drilled for BHA (ft)	4302.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM66DC, Style: Other, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13080800	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS003	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.72
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.01
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	79.98
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	108.96
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.42
Agitator Description: Agitator, Size (in): 6.50	Rubicon	A13696-06	4 1/2" IF Box	4 1/2" IF Pin		6.500		35.20	2976.62

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	05-15	22:30	00:00	05-16			TIH W/ BHA #8
TIH	8	05-16	00:00	05:00	05-16			TIH W/ BHA #8
Slide Drill	2	05-16	05:00	08:00	05-16	12089.00	12181.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 0, Toolface Type: gravity
Survey	46	05-16	08:00	08:10	05-16	12181.00	12181.00	Inclination (°): 66.900, Azimuth (°): 0.220, TVD (ft): 11975.82, Dogleg (°/100 ft): 14.41, Sensor Depth (ft): 12122.00, Bit To Sensor (ft): 59.00
Slide Drill	2	05-16	08:10	09:40	05-16	12181.00	12226.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 0, Toolface Type: gravity
Survey	46	05-16	09:40	09:50	05-16	12226.00	12226.00	Inclination (°): 74.770, Azimuth (°): 358.460, TVD (ft): 11990.59, Dogleg (°/100 ft): 17.87, Sensor Depth (ft): 12167.00, Bit To Sensor (ft): 59.00
Slide Drill	2	05-16	09:50	10:35	05-16	12226.00	12253.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 20, Toolface Type: gravity
Survey	46	05-16	10:35	10:50	05-16	12253.00	12253.00	Inclination (°): 79.520, Azimuth (°): 358.110, TVD (ft): 11996.59, Dogleg (°/100 ft): 17.64, Sensor Depth (ft): 12194.00, Bit To Sensor (ft): 59.00
Other	16	05-16	10:50	11:35	05-16			Flow Check
Pooh	7	05-16	11:35	15:10	05-16			POOH for Lateral Assembly
Change BHA	6	05-16	15:10	16:15	05-16			P/U BHA # 10
Test BOP's	30	05-16	16:15	20:10	05-16			Test Bops
Change BHA	6	05-16	20:10	20:45	05-16			P/U BHA # 8
TIH	8	05-16	20:45	00:00	05-17			TIH W/ BHA #9

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Friday, May 17 00:00 - 23:59 (Day 21 of 28)

Billing: \$8,700.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	12253.00	Downhole Hours	24.00	Rotating WOB (klbs)	40.00 - 44.00
Bit Depth (ft)	14388.00	Drilling Hours	16.00	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	14388.00	Hours Circulating	0.83	Rotating SPM	216.00 - 221.00
Total Distance (ft)	2135.00	Hours Sliding	7.00	Sliding SPM	210.00 - 226.00
Distance Rotated (ft)	1748.00	Hours Rotating	9.00	Motor RPM	94.00 - 149.00
Distance Slid (ft)	387.00			Surface RPM	30.00 - 70.00
Inclination In	88.57			Flow Rate (gpm)	675.00 - 700.00
Inclination Out	90.07			On Bottom Pressure (psi)	4000.00 - 6200.00
Azimuth In	359.34	% Hours Rotating	56%	Off Bottom Pressure (psi)	3700.00 - 5650.00
Azimuth Out	0.22	% Hours Sliding	44%		
AVG Total ROP (ft/h)	133.44	% Distance Sliding	18%		
AVG Rotating ROP (ft/h)	194.22	% Distance Rotating	82%		
AVG Sliding ROP (ft/h)	55.29				

Personnel

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

BHA #9 - BHA #9 (Lateral Run)

Date In: May 16, 2019, 20:45 Date Out: May 20, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13080800	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.220	Wear Pad OD (in)	7.125	
Drilling Hours for Day	16.00	Bit Distances		
Total Drilled for Day (ft)	2135.00	Bend (Bit to Bend): 4.10 ft, Survey		
Drilling Hours for BHA	51.92	(Bit to Survey): 65.00 ft, Gamma (Bit		
Total Drilled for BHA (ft)	4302.00	to Gamma): 57.00 ft		

POOH Reason

Pressure Spike: Made connection after SPR's. After bringing pumps online we had 1000 psi over previous off bottom PSI. brought pumps down 75 spm to get same OBP as before. slacked off to bottom and tagged with 37 WOB and PSI increased 1000 psi. picked up off bottom and lost 100 psi. Psi maintained 900 psi over off bottom Psi.

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM66DC, Style: Other, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13080800	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS003	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.72
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.01
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	79.98
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	108.96
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.42
Agitator Description: Agitator, Size (in): 6.50	Rubicon	A13696-06	4 1/2" IF Box	4 1/2" IF Pin		6.500		35.20	2976.62

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
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TIH	8	05-16	20:45	00:00	05-17			TIH W/ BHA #9
TIH	8	05-17	00:00	02:10	05-17			TIH W/ BHA #9
Circulating	3	05-17	02:10	03:00	05-17			Circulate out Trip Gas
Rotary Drill	1	05-17	03:00	03:20	05-17	12253.00	12313.00	Pressure On (psi): 6200.00, Pressure Off (psi): 5650.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 20000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	03:20	03:25	05-17	12313.00	12313.00	Inclination (°): 88.570, Azimuth (°): 359.340, TVD (ft): 12002.19, Dogleg (°/100 ft): 16.91, Sensor Depth (ft): 12248.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	03:25	03:50	05-17	12313.00	12407.00	Pressure On (psi): 6200.00, Pressure Off (psi): 5650.00, Weight On Bit (klbs): 40.00, Surface RPM: 30, Surface Torque (ft lbf): 21000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	03:50	03:55	05-17	12407.00	12407.00	Inclination (°): 89.850, Azimuth (°): 359.950, TVD (ft): 12003.48, Dogleg (°/100 ft): 1.51, Sensor Depth (ft): 12342.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	03:55	04:20	05-17	12407.00	12501.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	04:20	04:25	05-17	12501.00	12501.00	Inclination (°): 89.490, Azimuth (°): 0.220, TVD (ft): 12004.03, Dogleg (°/100 ft): 0.48, Sensor Depth (ft): 12436.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	04:25	04:30	05-17	12501.00	12511.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	05-17	04:30	05:15	05-17	12511.00	12529.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	05-17	05:15	05:30	05-17	12529.00	12595.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	05:30	05:35	05-17	12595.00	12595.00	Inclination (°): 89.980, Azimuth (°): 0.390, TVD (ft): 12004.46, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 12530.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	05:35	05:40	05-17	12595.00	12605.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	05-17	05:40	06:10	05-17	12605.00	12625.00	Pressure On (psi): 4000.00, Pressure Off (psi): 3700.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 226, Toolface: 1, Toolface Type: gravity
Rotary Drill	1	05-17	06:10	06:30	05-17	12625.00	12690.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	06:30	06:35	05-17	12690.00	12690.00	Inclination (°): 91.650, Azimuth (°): 359.510, TVD (ft): 12003.11, Dogleg (°/100 ft): 1.99, Sensor Depth (ft): 12625.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	06:35	06:55	05-17	12690.00	12784.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	06:55	07:00	05-17	12784.00	12784.00	Inclination (°): 91.870, Azimuth (°): 359.070, TVD (ft): 12000.22, Dogleg (°/100 ft): 0.52, Sensor Depth (ft): 12719.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	07:00	07:25	05-17	12784.00	12878.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Survey	46	05-17	07:25	07:30	05-17	12878.00	12878.00	Inclination (°): 91.910, Azimuth (°): 358.460, TVD (ft): 11997.12, Dogleg (°/100 ft): 0.65, Sensor Depth (ft): 12813.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	07:30	07:35	05-17	12878.00	12888.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 700.00, Strokes Per Minute: 216.00
Slide Drill	2	05-17	07:35	07:50	05-17	12888.00	12908.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-17	07:50	08:05	05-17	12908.00	12972.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	08:05	08:10	05-17	12972.00	12972.00	Inclination (°): 91.650, Azimuth (°): 358.900, TVD (ft): 11994.20, Dogleg (°/100 ft): 0.54, Sensor Depth (ft): 12907.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	08:10	08:15	05-17	12972.00	12982.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-17	08:15	08:30	05-17	12982.00	13002.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-17	08:30	08:45	05-17	13002.00	13067.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	08:45	08:55	05-17	13067.00	13067.00	Inclination (°): 91.340, Azimuth (°): 359.860, TVD (ft): 11991.72, Dogleg (°/100 ft): 1.06, Sensor Depth (ft): 13002.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	08:55	09:00	05-17	13067.00	13077.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-17	09:00	09:15	05-17	13077.00	13097.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity

Rotary Drill	1	05-17	09:15	09:30	05-17	13097.00	13161.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	09:30	09:35	05-17	13161.00	13161.00	Inclination (°): 91.780, Azimuth (°): 0.390, TVD (ft): 11989.16, Dogleg (°/100 ft): 0.73, Sensor Depth (ft): 13096.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	09:35	09:55	05-17	13161.00	13256.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	09:55	10:00	05-17	13256.00	13256.00	Inclination (°): 92.180, Azimuth (°): 359.600, TVD (ft): 11985.88, Dogleg (°/100 ft): 0.93, Sensor Depth (ft): 13191.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	10:00	10:05	05-17	13256.00	13266.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-17	10:05	10:30	05-17	13266.00	13296.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 100, Toolface Type: gravity
Rotary Drill	1	05-17	10:30	10:45	05-17	13296.00	13350.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	10:45	10:50	05-17	13350.00	13350.00	Inclination (°): 92.220, Azimuth (°): 359.690, TVD (ft): 11982.27, Dogleg (°/100 ft): 0.10, Sensor Depth (ft): 13285.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	10:50	11:10	05-17	13350.00	13444.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	11:10	11:15	05-17	13444.00	13444.00	Inclination (°): 92.130, Azimuth (°): 359.250, TVD (ft): 11978.71, Dogleg (°/100 ft): 0.48, Sensor Depth (ft): 13379.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	11:15	11:20	05-17	13444.00	13454.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-17	11:20	11:45	05-17	13454.00	13479.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 130, Toolface Type: gravity
Rotary Drill	1	05-17	11:45	12:00	05-17	13479.00	13539.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	12:00	12:05	05-17	13539.00	13539.00	Inclination (°): 91.160, Azimuth (°): 358.280, TVD (ft): 11975.98, Dogleg (°/100 ft): 1.44, Sensor Depth (ft): 13474.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	12:05	12:15	05-17	13539.00	13552.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-17	12:15	12:35	05-17	13552.00	13582.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-17	12:35	12:55	05-17	13582.00	13633.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 30, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	12:55	13:00	05-17	13633.00	13633.00	Inclination (°): 90.070, Azimuth (°): 358.110, TVD (ft): 11974.97, Dogleg (°/100 ft): 1.17, Sensor Depth (ft): 13568.00, Bit To Sensor (ft): 65.00
Slide Drill	2	05-17	13:00	13:30	05-17	13633.00	13671.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-17	13:30	13:50	05-17	13671.00	13728.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	13:50	13:55	05-17	13728.00	13728.00	Inclination (°): 90.290, Azimuth (°): 358.370, TVD (ft): 11974.67, Dogleg (°/100 ft): 0.36, Sensor Depth (ft): 13663.00, Bit To Sensor (ft): 65.00
Slide Drill	2	05-17	13:55	15:25	05-17	13728.00	13806.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-17	15:25	15:35	05-17	13806.00	13822.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	15:35	15:40	05-17	13822.00	13822.00	Inclination (°): 90.510, Azimuth (°): 359.510, TVD (ft): 11974.02, Dogleg (°/100 ft): 1.24, Sensor Depth (ft): 13757.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	15:40	15:50	05-17	13822.00	13853.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	15:50	15:55	05-17	13853.00	13853.00	Inclination (°): 90.770, Azimuth (°): 0.830, TVD (ft): 11973.67, Dogleg (°/100 ft): 4.34, Sensor Depth (ft): 13788.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	15:55	16:10	05-17	13853.00	13916.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Rig Service - In Hole	19	05-17	16:10	16:30	05-17			Rlg Service
Survey	46	05-17	16:30	16:35	05-17	13916.00	13916.00	Inclination (°): 91.520, Azimuth (°): 359.600, TVD (ft): 11972.41, Dogleg (°/100 ft): 2.29, Sensor Depth (ft): 13851.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	16:35	16:40	05-17	13916.00	13923.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Rig Repair	14	05-17	16:40	19:10	05-17			C/O Saber Sub

Slide Drill	2	05-17	19:10	20:00	05-17	13923.00	13973.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 100, Toolface Type: gravity
Rotary Drill	1	05-17	20:00	20:35	05-17	13973.00	14011.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	20:35	20:40	05-17	14011.00	14011.00	Inclination (°): 91.250, Azimuth (°): 359.690, TVD (ft): 11970.11, Dogleg (°/100 ft): 0.30, Sensor Depth (ft): 13946.00, Bit To Sensor (ft): 65.00
Slide Drill	2	05-17	20:40	21:40	05-17	14011.00	14049.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Survey	46	05-17	21:40	21:50	05-17	14042.00	14042.00	Inclination (°): 91.210, Azimuth (°): 0.480, TVD (ft): 11969.45, Dogleg (°/100 ft): 2.55, Sensor Depth (ft): 13977.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	21:50	22:10	05-17	14049.00	14105.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	22:10	22:15	05-17	14105.00	14105.00	Inclination (°): 90.420, Azimuth (°): 1.710, TVD (ft): 11968.55, Dogleg (°/100 ft): 2.32, Sensor Depth (ft): 14040.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	22:15	22:35	05-17	14105.00	14199.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	22:35	22:40	05-17	14199.00	14199.00	Inclination (°): 90.200, Azimuth (°): 0.920, TVD (ft): 11968.04, Dogleg (°/100 ft): 0.87, Sensor Depth (ft): 14134.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	22:40	23:20	05-17	14199.00	14294.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-17	23:20	23:25	05-17	14294.00	14294.00	Inclination (°): 90.070, Azimuth (°): 0.220, TVD (ft): 11967.82, Dogleg (°/100 ft): 0.75, Sensor Depth (ft): 14229.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-17	23:25	00:00	05-18	14294.00	14388.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Saturday, May 18 00:00 - 23:59 (Day 22 of 28)

Billing: \$8,700.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	14388.00	Downhole Hours	24.00	Rotating WOB (klbs)	44.00 - 54.00
Bit Depth (ft)	15770.00	Drilling Hours	21.17	Sliding WOB (klbs)	35.00 - 35.00
Bottom Hole Depth (ft)	15770.00	Hours Circulating	0.25	Rotating SPM	221.00 - 221.00
Total Distance (ft)	1382.00	Hours Sliding	7.83	Sliding SPM	210.00 - 210.00
Distance Rotated (ft)	1129.00	Hours Rotating	13.33	Motor RPM	94.00 - 149.00
Distance Slid (ft)	253.00			Surface RPM	70.00 - 70.00
Inclination In	90.15			Flow Rate (gpm)	675.00 - 675.00
Inclination Out	95.34			On Bottom Pressure (psi)	5300.00 - 5900.00
Azimuth In	359.42	% Hours Rotating	63%	Off Bottom Pressure (psi)	5000.00 - 5000.00
Azimuth Out	359.07	% Hours Sliding	37%		
AVG Total ROP (ft/h)	67.86	% Distance Sliding	18%		
AVG Rotating ROP (ft/h)	87.88	% Distance Rotating	82%		
AVG Sliding ROP (ft/h)	32.30				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Shawn Flores	MWD Engineer
Orey Meredith	Directional Driller

BHA #9 - BHA #9 (Lateral Run)

Date In: May 16, 2019, 20:45 Date Out: May 20, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13080800	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	
Total Flow Area (in²)	2.220	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	21.17	Bit Distances		POOH Reason Pressure Spike: Made connection after SPR's. After bringing pumps online we had 1000 psi over previous off bottom PSI. brought pumps
Total Drilled for Day (ft)	1382.00	Bend (Bit to Bend): 4.10 ft, Survey		
Drilling Hours for BHA	51.92	(Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		
Total Drilled for BHA (ft)	4302.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM66DC, Style: Other, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13080800	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS003	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.72
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.01
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	79.98
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	108.96
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.42
Agitator Description: Agitator, Size (in): 6.50	Rubicon	A13696-06	4 1/2" IF Box	4 1/2" IF Pin		6.500		35.20	2976.62

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Rotary Drill	1	05-17	23:25	00:00	05-18	14294.00	14388.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	00:00	00:05	05-18	14388.00	14388.00	Inclination (°): 90.150, Azimuth (°): 359.420, TVD (ft): 11967.64, Dogleg (°/100 ft): 0.86, Sensor Depth (ft): 14323.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	00:05	00:15	05-18	14388.00	14398.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	00:15	00:25	05-18	14398.00	14403.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Circulating	3	05-18	00:25	00:35	05-18			Pressure test module on pump 1
Slide Drill	2	05-18	00:35	01:35	05-18	14403.00	14443.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 80, Toolface Type: gravity
Rotary Drill	1	05-18	01:35	01:55	05-18	14443.00	14482.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	01:55	02:00	05-18	14482.00	14482.00	Inclination (°): 89.980, Azimuth (°): 359.780, TVD (ft): 11967.53, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 14417.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	02:00	02:50	05-18	14482.00	14576.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	02:50	02:55	05-18	14576.00	14576.00	Inclination (°): 89.710, Azimuth (°): 0.220, TVD (ft): 11967.79, Dogleg (°/100 ft): 0.55, Sensor Depth (ft): 14511.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	02:55	03:00	05-18	14576.00	14586.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	03:00	03:50	05-18	14586.00	14621.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 60, Toolface Type: gravity
Rotary Drill	1	05-18	03:50	04:15	05-18	14621.00	14671.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	04:15	04:20	05-18	14671.00	14671.00	Inclination (°): 90.550, Azimuth (°): 0.130, TVD (ft): 11967.57, Dogleg (°/100 ft): 0.89, Sensor Depth (ft): 14606.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	04:20	05:15	05-18	14671.00	14765.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	05:15	05:20	05-18	14765.00	14765.00	Inclination (°): 91.820, Azimuth (°): 359.860, TVD (ft): 11965.63, Dogleg (°/100 ft): 1.38, Sensor Depth (ft): 14700.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	05:20	05:25	05-18	14765.00	14775.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	05:25	06:40	05-18	14775.00	14816.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-18	06:40	07:25	05-18	14816.00	14859.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	07:25	07:30	05-18	14859.00	14859.00	Inclination (°): 92.530, Azimuth (°): 1.270, TVD (ft): 11962.06, Dogleg (°/100 ft): 1.68, Sensor Depth (ft): 14794.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	07:30	07:45	05-18	14859.00	14875.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	07:45	08:25	05-18	14875.00	14890.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 150, Toolface Type: gravity
Rotary Drill	1	05-18	08:25	09:10	05-18	14890.00	14954.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	09:10	09:20	05-18	14954.00	14954.00	Inclination (°): 91.650, Azimuth (°): 1.800, TVD (ft): 11958.60, Dogleg (°/100 ft): 1.08, Sensor Depth (ft): 14889.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	09:20	10:15	05-18	14954.00	15048.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	10:15	10:20	05-18	15048.00	15048.00	Inclination (°): 92.040, Azimuth (°): 1.270, TVD (ft): 11955.57, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 14983.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	10:20	10:25	05-18	15048.00	15058.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	10:25	10:55	05-18	15058.00	15073.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 150, Toolface Type: gravity
Rotary Drill	1	05-18	10:55	11:30	05-18	15073.00	15142.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00

Survey	46	05-18	11:30	11:35	05-18	15142.00	15142.00	Inclination (°): 91.120, Azimuth (°): 0.650, TVD (ft): 11952.98, Dogleg (°/100 ft): 1.18, Sensor Depth (ft): 15077.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	11:35	12:25	05-18	15142.00	15237.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	12:25	12:30	05-18	15237.00	15237.00	Inclination (°): 91.380, Azimuth (°): 359.860, TVD (ft): 11950.91, Dogleg (°/100 ft): 0.88, Sensor Depth (ft): 15172.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	12:30	13:00	05-18	15237.00	15278.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Rig Repair	14	05-18	13:00	13:35	05-18			Working on 2 Pumps, Circulated on 1 Pump
Rotary Drill	1	05-18	13:35	14:50	05-18	15278.00	15331.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	14:50	14:55	05-18	15331.00	15331.00	Inclination (°): 92.180, Azimuth (°): 359.420, TVD (ft): 11947.99, Dogleg (°/100 ft): 0.97, Sensor Depth (ft): 15266.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	14:55	15:10	05-18	15331.00	15341.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	15:10	16:15	05-18	15341.00	15371.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 130, Toolface Type: gravity
Rotary Drill	1	05-18	16:15	17:15	05-18	15371.00	15425.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Troubleshoot	34	05-18	17:15	17:55	05-18			Try to Downlink MWD tool / Unsuccessful
Survey	46	05-18	17:55	18:00	05-18	15425.00	15425.00	Inclination (°): 90.590, Azimuth (°): 0.300, TVD (ft): 11945.71, Dogleg (°/100 ft): 1.93, Sensor Depth (ft): 15360.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	18:00	19:05	05-18	15425.00	15520.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	19:05	19:10	05-18	15520.00	15520.00	Inclination (°): 91.030, Azimuth (°): 0.570, TVD (ft): 11944.37, Dogleg (°/100 ft): 0.54, Sensor Depth (ft): 15455.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	19:10	20:10	05-18	15520.00	15614.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	20:10	20:15	05-18	15614.00	15614.00	Inclination (°): 93.230, Azimuth (°): 359.860, TVD (ft): 11940.88, Dogleg (°/100 ft): 2.46, Sensor Depth (ft): 15549.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-18	20:15	20:25	05-18	15614.00	15624.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-18	20:25	21:30	05-18	15624.00	15657.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-18	21:30	22:15	05-18	15657.00	15708.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-18	22:15	22:20	05-18	15708.00	15708.00	Inclination (°): 95.340, Azimuth (°): 359.070, TVD (ft): 11933.85, Dogleg (°/100 ft): 2.40, Sensor Depth (ft): 15643.00, Bit To Sensor (ft): 65.00
Slide Drill	2	05-18	22:20	23:35	05-18	15708.00	15747.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 160, Toolface Type: gravity
Circulating	3	05-18	23:35	23:40	05-18			MWD Check shot @ 15662 Svy depth 94.59 INC 358.37 AZ
Rotary Drill	1	05-18	23:40	00:00	05-19	15747.00	15770.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Sunday, May 19 00:00 - 23:59 (Day 23 of 28)

Billing: \$9,500.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	15770.00	Downhole Hours	24.00	Rotating WOB (klbs)	50.00 - 54.00
Bit Depth (ft)	16555.00	Drilling Hours	14.75	Sliding WOB (klbs)	20.00 - 35.00
Bottom Hole Depth (ft)	16557.00	Hours Circulating	2.33	Rotating SPM	210.00 - 221.00
Total Distance (ft)	787.00	Hours Sliding	8.08	Sliding SPM	210.00 - 210.00
Distance Rotated (ft)	567.00	Hours Rotating	6.67	Motor RPM	94.00 - 163.00
Distance Slid (ft)	220.00			Surface RPM	70.00 - 70.00
Inclination In	92.57			Flow Rate (gpm)	675.00 - 675.00
Inclination Out	91.56			On Bottom Pressure (psi)	5300.00 - 6100.00
Azimuth In	358.28	% Hours Rotating	45%	Off Bottom Pressure (psi)	5000.00 - 5300.00
Azimuth Out	1.09	% Hours Sliding	55%		
AVG Total ROP (ft/h)	53.70	% Distance Sliding	28%		
AVG Rotating ROP (ft/h)	84.29	% Distance Rotating	72%		
AVG Sliding ROP (ft/h)	27.22				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Shawn Flores	MWD Engineer
Orey Meredith	Directional Driller

BHA #9 - BHA #9 (Lateral Run)

Date In: May 16, 2019, 20:45 Date Out: May 20, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13080800	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	
Total Flow Area (in²)	2.220	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day	14.75	Bit Distances		
Total Drilled for Day (ft)	785.00	Bend (Bit to Bend): 4.10 ft, Survey		
Drilling Hours for BHA	51.92	(Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		
Total Drilled for BHA (ft)	4302.00			POOH Reason
				Pressure Spike: Made connection after SPR's. After bringing pumps online we had 1000 psi over previous off bottom PSI. brought pumps

Pressure Spike: Made connection after SPR's. After bringing pumps online we had 1000 psi over previous off bottom PSI. brought pumps down 75 spm to get same OBP as before. slacked off to bottom and tagged with 37 WOB and PSI increased 1000 psi. picked up off bottom and lost 100 psi. Psi maintained 900 psi over off bottom Psi.

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM66DC, Style: Other, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13080800	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS003	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.72
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.01
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	79.98
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	108.96
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.42
Agitator Description: Agitator, Size (in): 6.50	Rubicon	A13696-06	4 1/2" IF Box	4 1/2" IF Pin		6.500		35.20	2976.62

MWD Items

No Items

BHA #10 - BHA #10 (Lateral II)

Date In: May 20, 2019, 0:00 Date Out: May 22, 2019, 23:15

Bit Details		Motor Details		Directional Comments	
OD (in)	8.500	Size (in)	7.0	Directional Comments 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.75°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Baker Hughes 8 1/2", Type DD506TWX, SN: 5294400 Jets: 6 x 22's, TFA: 2.227 Runs on Bit: 1	
Vendor	Baker	Lobe/Stage	7/8, 8.5		
S/N	5294400	Bend Angle	1.75		
Nozzles	6 x 22	Speed (rev/gal)	0.26	MWD Comments	
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.187	POOH Reason Total Depth/Casing Point: TD Well @ 20304, Inspected BHA on surface. Motor drained good, had 1/8" play & minimal squat in bearings. Bit was 1/8 under gauged and had chipped cutters on gauge.	
Drilling Hours for Day		Bit Distances			
Total Drilled for Day (ft)		Bend (Bit to Bend): 4.06 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft			
Drilling Hours for BHA	35.67				
Total Drilled for BHA (ft)	3747.00				

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD506TWX, Style: PDC, Gauge Length (in): 4.25, Size (in): 8.50	Baker	5294400	4 1/2" Reg Pin			8.500		1.08	1.08
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.26	35.34
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.84
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.13
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	80.10
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	109.08
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.54
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX-650-079	4 1/2" IF Box	4 1/2" IF Pin		6.500		34.42	2975.96

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Rotary Drill	1	05-18	23:40	00:00	05-19	15747.00	15770.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 44.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Rotary Drill	1	05-19	00:00	00:40	05-19	15770.00	15802.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-19	00:40	00:50	05-19	15802.00	15802.00	Inclination (°): 92.570, Azimuth (°): 358.280, TVD (ft): 11927.37, Dogleg (°/100 ft): 3.06, Sensor Depth (ft): 15737.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	00:50	01:00	05-19	15802.00	15812.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Slide Drill	2	05-19	01:00	02:25	05-19	15812.00	15847.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 135, Toolface Type: gravity
Rotary Drill	1	05-19	02:25	02:55	05-19	15847.00	15896.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-19	02:55	03:00	05-19	15896.00	15896.00	Inclination (°): 93.100, Azimuth (°): 0.220, TVD (ft): 11922.72, Dogleg (°/100 ft): 2.14, Sensor Depth (ft): 15831.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	03:00	03:05	05-19	15896.00	15906.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Circulating	3	05-19	03:05	03:10	05-19			Mwd Check shot
Slide Drill	2	05-19	03:10	04:50	05-19	15906.00	15961.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 35.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-19	04:50	05:05	05-19	15961.00	15990.00	Pressure On (psi): 5900.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 54.00, Surface RPM: 70, Surface Torque (ft lbf): 18000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 221.00
Survey	46	05-19	05:05	05:15	05-19	15990.00	15990.00	Inclination (°): 90.900, Azimuth (°): 0.920, TVD (ft): 11919.44, Dogleg (°/100 ft): 2.46, Sensor Depth (ft): 15925.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	05:15	05:20	05-19	15990.00	16000.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Circulating	3	05-19	05:20	05:25	05-19			MWD Check shot @ 15935

Rotary Drill	1	05-19	05:25	06:00	05-19	16000.00	16084.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	05-19	06:00	06:05	05-19	16084.00	16084.00	Inclination (°): 89.710, Azimuth (°): 1.450, TVD (ft): 11918.94, Dogleg (°/100 ft): 1.39, Sensor Depth (ft): 16019.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	06:05	06:10	05-19	16084.00	16094.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	05-19	06:10	06:30	05-19	16094.00	16104.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-19	06:30	07:15	05-19	16104.00	16178.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	05-19	07:15	07:20	05-19	16178.00	16178.00	Inclination (°): 88.260, Azimuth (°): 1.270, TVD (ft): 11920.61, Dogleg (°/100 ft): 1.55, Sensor Depth (ft): 16113.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	07:20	08:10	05-19	16178.00	16273.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	05-19	08:10	08:15	05-19	16273.00	16273.00	Inclination (°): 87.690, Azimuth (°): 1.010, TVD (ft): 11923.96, Dogleg (°/100 ft): 0.66, Sensor Depth (ft): 16208.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	08:15	08:20	05-19	16273.00	16283.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	05-19	08:20	09:20	05-19	16283.00	16313.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	05-19	09:20	10:10	05-19	16313.00	16367.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	05-19	10:10	10:15	05-19	16367.00	16367.00	Inclination (°): 88.130, Azimuth (°): 0.220, TVD (ft): 11927.39, Dogleg (°/100 ft): 0.96, Sensor Depth (ft): 16302.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	10:15	10:30	05-19	16367.00	16377.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Slide Drill	2	05-19	10:30	12:00	05-19	16377.00	16422.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	05-19	12:00	12:45	05-19	16422.00	16461.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Survey	46	05-19	12:45	12:50	05-19	16461.00	16461.00	Inclination (°): 88.750, Azimuth (°): 0.390, TVD (ft): 11929.95, Dogleg (°/100 ft): 0.68, Sensor Depth (ft): 16396.00, Bit To Sensor (ft): 65.00
Slide Drill	2	05-19	12:50	15:00	05-19	16461.00	16506.00	Pressure On (psi): 5300.00, Pressure Off (psi): 5000.00, Weight On Bit (klbs): 20.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210, Toolface: 0, Toolface Type: gravity
Survey	46	05-19	15:00	15:05	05-19	16506.00	16506.00	Inclination (°): 89.360, Azimuth (°): 0.740, TVD (ft): 11930.69, Dogleg (°/100 ft): 1.56, Sensor Depth (ft): 16441.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-19	15:05	15:50	05-19	16506.00	16557.00	Pressure On (psi): 6100.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 50.00, Surface RPM: 70, Surface Torque (ft lbf): 23000.00, Flow Rate (gpm): 675.00, Strokes Per Minute: 210.00
Rig Service - In Hole	19	05-19	15:50	16:10	05-19			Rig Service
Circulating	3	05-19	16:10	16:45	05-19			Trouble Shoot MWD, not syncing up
Circulating	3	05-19	16:45	17:00	05-19			Trouble PSI Increase off bottom,(1000 PSI increase)
Survey	46	05-19	17:00	17:05	05-19	16555.00	16555.00	Inclination (°): 91.560, Azimuth (°): 1.090, TVD (ft): 11930.30, Dogleg (°/100 ft): 4.55, Sensor Depth (ft): 16490.00, Bit To Sensor (ft): 65.00
Circulating	3	05-19	17:05	18:25	05-19			Circulate to POOH for PSI Increase of 1000 LBS
Pooh	7	05-19	18:25	23:40	05-19			POOH for psi increase
Change BHA	6	05-19	23:40	00:00	05-20			L/D BHA # 9 (L/d Top monel, pull MWD, drain motor, Break bit)

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Monday, May 20 00:00 - 23:59 (Day 24 of 28)

Billing: \$23,545.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	16557.00	Downhole Hours	24.00	Rotating WOB (klbs)	48.00 - 50.00
Bit Depth (ft)	17134.00	Drilling Hours	4.83	Sliding WOB (klbs)	30.00 - 40.00
Bottom Hole Depth (ft)	17134.00	Hours Circulating	4.42	Rotating SPM	194.00 - 194.00
Total Distance (ft)	577.00	Hours Sliding	0.92	Sliding SPM	194.00 - 194.00
Distance Rotated (ft)	545.00	Hours Rotating	3.92	Motor RPM	94.00 - 163.00
Distance Slid (ft)	32.00			Surface RPM	30.00 - 40.00
Inclination In	92.79			Flow Rate (gpm)	625.00 - 627.00
Inclination Out	91.65			On Bottom Pressure (psi)	790.00 - 6150.00
Azimuth In	0.83	% Hours Rotating	81%	Off Bottom Pressure (psi)	5110.00 - 5300.00
Azimuth Out	358.19	% Hours Sliding	19%		
AVG Total ROP (ft/h)	119.38	% Distance Sliding	6%		
AVG Rotating ROP (ft/h)	139.15	% Distance Rotating	94%		
AVG Sliding ROP (ft/h)	34.91				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Shawn Flores	MWD Engineer
Orey Meredith	Directional Driller

BHA #9 - BHA #9 (Lateral Run)

Date In: May 16, 2019, 20:45 Date Out: May 20, 2019, 0:00

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.76°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Halliburton 8 1/2", Type MM66DC, SN: 13080800 Jets: 6 x 22's, TFA: 2.22 Runs on Bit: 0
Vendor	Halliburton	Lobe/Stage	7/8, 8.5	
S/N	13080800	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	
Total Flow Area (in²)	2.220	Wear Pad OD (in)	7.125	MWD Comments
Drilling Hours for Day		Bit Distances		POOH Reason Pressure Spike: Made connection after SPR's. After bringing pumps online we had 1000 psi over previous off bottom PSI. brought pumps
Total Drilled for Day (ft)		Bend (Bit to Bend): 4.10 ft, Survey		
Drilling Hours for BHA	51.92	(Bit to Survey): 65.00 ft, Gamma (Bit		
Total Drilled for BHA (ft)	4302.00	to Gamma): 57.00 ft		

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: MM66DC, Style: Other, Gauge Length (in): 3.50, Size (in): 8.50	Halliburton	13080800	4 1/2" Reg Pin			8.500		1.00	1.00
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS003	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.22	35.22
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.72
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.01
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	79.98
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	108.96
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.42
Agitator Description: Agitator, Size (in): 6.50	Rubicon	A13696-06	4 1/2" IF Box	4 1/2" IF Pin		6.500		35.20	2976.62

MWD Items

No Items

BHA #10 - BHA #10 (Lateral II)

Date In: May 20, 2019, 0:00 Date Out: May 22, 2019, 23:15

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Directional Comments 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.75°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Baker Hughes 8 1/2", Type DD506TWX, SN: 5294400 Jets: 6 x 22's, TFA: 2.227 Runs on Bit: 1
Vendor	Baker	Lobe/Stage	7/8, 8.5	
S/N	5294400	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.187	
Drilling Hours for Day	4.83	Bit Distances		
Total Drilled for Day (ft)	577.00	Bend (Bit to Bend): 4.06 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		POOH Reason
Drilling Hours for BHA	35.67			
Total Drilled for BHA (ft)	3747.00			
		Total Depth/Casing Point: TD Well @ 20304, Inspected BHA on surface. Motor drained good, had 1/8" play & minimal squat in bearings. Bit was 1/8 under gauged and had chipped cutters on gauge.		

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD506TWX, Style: PDC, Gauge Length (in): 4.25, Size (in): 8.50	Baker	5294400	4 1/2" Reg Pin			8.500		1.08	1.08
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.26	35.34
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.84
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.13
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	80.10
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	109.08
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.54
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX-650-079	4 1/2" IF Box	4 1/2" IF Pin		6.500		34.42	2975.96

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	05-19	23:40	00:00	05-20			L/D BHA # 9 (L/d Top monel, pull MWD, drain motor, Break bit)
Other	16	05-20	00:00	00:20	05-20			Trouble shoot air psi loss after shutting blind rams
Change BHA	6	05-20	00:20	02:10	05-20			P/U BHA # 10 (l/d motor, p/u new motor and make up same, m/u bit, scribe, while orienting sleeve we noticed chunks of metal on top of sleeve, break shock miser and clean metal out, orient sleeve, install mwd) (St-80 was down due to pinched control cables, had to use rig tongs and chain tongs)
Circulating	3	05-20	02:10	02:15	05-20			Test MWD (100 SPM, 320 GPM, 590 Psi, 140 # Pulse)
Change BHA	6	05-20	02:15	02:20	05-20			P/U BHA # 10 (M/u top monel)
TIH	8	05-20	02:20	03:20	05-20			TIH W/ BHA #10
Other	16	05-20	03:20	04:25	05-20			Slip and cut Drill line
Circulating	3	05-20	04:25	04:30	05-20			Pre Agitator Test (MW 9.9 PPG, 100 SPM, 320 GPM, 775 PSI, 120 #)
Other	16	05-20	04:30	09:00	05-20			Wait on agitator
Circulating	3	05-20	09:00	09:15	05-20			Test Agitator
TIH	8	05-20	09:15	14:30	05-20			TIH W/ BHA #10
Circulating	3	05-20	14:30	16:20	05-20			Wash & Ream f/15600' t/16522'
Circulating	3	05-20	16:20	17:00	05-20			Circ. / Gas thru Choke
Circulating	3	05-20	17:00	17:30	05-20			Circ. & Cond. Mud
Circulating	3	05-20	17:30	18:00	05-20			Relog 30'
Circulating	3	05-20	18:00	18:25	05-20			Circulate
Rotary Drill	1	05-20	18:25	18:50	05-20	16557.00	16602.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 48.00, Surface RPM: 30, Surface Torque (ft lbf): 21000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	18:50	18:55	05-20	16602.00	16602.00	Inclination (°): 92.790, Azimuth (°): 0.830, TVD (ft): 11928.51, Dogleg (°/100 ft): 2.67, Sensor Depth (ft): 16537.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	18:55	19:20	05-20	16602.00	16648.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 48.00, Surface RPM: 30, Surface Torque (ft lbf): 21000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Circulating	3	05-20	19:20	19:25	05-20			Slow pump rates
Survey	46	05-20	19:25	19:30	05-20	16648.00	16648.00	Inclination (°): 93.320, Azimuth (°): 1.360, TVD (ft): 11926.06, Dogleg (°/100 ft): 1.63, Sensor Depth (ft): 16583.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	19:30	19:40	05-20	16648.00	16659.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 48.00, Surface RPM: 30, Surface Torque (ft lbf): 21000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00

Slide Drill	2	05-20	19:40	20:00	05-20	16659.00	16674.00	Pressure On (psi): 5310.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 200, Toolface Type: gravity
Rotary Drill	1	05-20	20:00	20:15	05-20	16674.00	16695.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 48.00, Surface RPM: 30, Surface Torque (ft lbf): 21000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	20:15	20:20	05-20	16695.00	16695.00	Inclination (°): 93.760, Azimuth (°): 1.180, TVD (ft): 11923.16, Dogleg (°/100 ft): 1.01, Sensor Depth (ft): 16630.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	20:20	20:30	05-20	16695.00	16742.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 48.00, Surface RPM: 30, Surface Torque (ft lbf): 21000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	20:30	20:35	05-20	16742.00	16742.00	Inclination (°): 91.870, Azimuth (°): 0.570, TVD (ft): 11920.85, Dogleg (°/100 ft): 4.23, Sensor Depth (ft): 16677.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	20:35	21:10	05-20	16742.00	16836.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 24000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	21:10	21:15	05-20	16836.00	16836.00	Inclination (°): 91.250, Azimuth (°): 0.220, TVD (ft): 11918.29, Dogleg (°/100 ft): 0.76, Sensor Depth (ft): 16771.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	21:15	21:20	05-20	16836.00	16847.00	Pressure On (psi): 790.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 50.00, Surface RPM: 30, Surface Torque (ft lbf): 24000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-20	21:20	21:45	05-20	16847.00	16860.00	Pressure On (psi): 5310.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 30.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 0, Toolface Type: gravity
Rotary Drill	1	05-20	21:45	22:10	05-20	16860.00	16931.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	22:10	22:15	05-20	16931.00	16931.00	Inclination (°): 92.180, Azimuth (°): 359.420, TVD (ft): 11915.45, Dogleg (°/100 ft): 1.29, Sensor Depth (ft): 16866.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	22:15	22:55	05-20	16931.00	17025.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	22:55	23:00	05-20	17025.00	17025.00	Inclination (°): 91.740, Azimuth (°): 358.550, TVD (ft): 11912.24, Dogleg (°/100 ft): 1.04, Sensor Depth (ft): 16960.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	23:00	23:40	05-20	17025.00	17119.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-20	23:40	23:45	05-20	17119.00	17119.00	Inclination (°): 91.650, Azimuth (°): 358.190, TVD (ft): 11909.46, Dogleg (°/100 ft): 0.39, Sensor Depth (ft): 17054.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-20	23:45	23:50	05-20	17119.00	17130.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-20	23:50	00:00	05-21	17130.00	17134.00	Pressure On (psi): 5310.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 70, Toolface Type: gravity

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Tuesday, May 21 00:00 - 23:59 (Day 25 of 28)

Billing: \$9,500.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	17134.00	Downhole Hours	24.00	Rotating WOB (klbs)	44.00 - 48.00
Bit Depth (ft)	19248.00	Drilling Hours	21.75	Sliding WOB (klbs)	40.00 - 40.00
Bottom Hole Depth (ft)	19248.00	Hours Circulating	0.00	Rotating SPM	186.00 - 194.00
Total Distance (ft)	2114.00	Hours Sliding	6.00	Sliding SPM	194.00 - 194.00
Distance Rotated (ft)	1943.00	Hours Rotating	15.75	Motor RPM	153.00 - 163.00
Distance Slid (ft)	171.00			Surface RPM	40.00 - 40.00
Inclination In	92.62			Flow Rate (gpm)	601.00 - 627.00
Inclination Out	89.49			On Bottom Pressure (psi)	5310.00 - 6150.00
Azimuth In	0.22	% Hours Rotating	72%	Off Bottom Pressure (psi)	5110.00 - 5300.00
Azimuth Out	0.48	% Hours Sliding	28%		
AVG Total ROP (ft/h)	96.64	% Distance Sliding	8%		
AVG Rotating ROP (ft/h)	123.37	% Distance Rotating	92%		
AVG Sliding ROP (ft/h)	28.38				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Shawn Flores	MWD Engineer
Orey Meredith	Directional Driller

BHA #10 - BHA #10 (Lateral II)

Date In: May 20, 2019, 0:00 Date Out: May 22, 2019, 23:15

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Directional Comments 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.75°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Baker Hughes 8 1/2", Type DD506TWX, SN: 5294400 Jets: 6 x 22's, TFA: 2.227 Runs on Bit: 1
Vendor	Baker	Lobe/Stage	7/8, 8.5	
S/N	5294400	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.187	
Drilling Hours for Day	21.75	Bit Distances		POOH Reason Total Depth/Casing Point: TD Well @ 20304, Inspected BHA on surface. Motor drained good, had 1/8" play & minimal squat in bearings. Bit was 1/8 under gauged and had chipped cutters on gauge.
Total Drilled for Day (ft)	2114.00	Bend (Bit to Bend): 4.06 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		
Drilling Hours for BHA	35.67			
Total Drilled for BHA (ft)	3747.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD506TWX, Style: PDC, Gauge Length (in): 4.25, Size (in): 8.50	Baker	5294400	4 1/2" Reg Pin			8.500		1.08	1.08
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDS018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.26	35.34
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.84
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.13
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	80.10
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	109.08
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.54
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX-650-079	4 1/2" IF Box	4 1/2" IF Pin		6.500		34.42	2975.96

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	05-20	23:50	00:00	05-21	17130.00	17134.00	Pressure On (psi): 5310.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 70, Toolface Type: gravity
Slide Drill	2	05-21	00:00	00:35	05-21	17134.00	17156.00	Pressure On (psi): 5310.00, Pressure Off (psi): 5110.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 90, Toolface Type: gravity
Rotary Drill	1	05-21	00:35	01:00	05-21	17156.00	17213.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	01:00	01:05	05-21	17213.00	17213.00	Inclination (°): 92.620, Azimuth (°): 0.220, TVD (ft): 11905.95, Dogleg (°/100 ft): 2.39, Sensor Depth (ft): 17148.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	01:05	01:50	05-21	17213.00	17308.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	01:50	01:55	05-21	17308.00	17308.00	Inclination (°): 92.840, Azimuth (°): 0.920, TVD (ft): 11901.43, Dogleg (°/100 ft): 0.77, Sensor Depth (ft): 17243.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	01:55	02:35	05-21	17308.00	17402.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	02:35	02:40	05-21	17402.00	17402.00	Inclination (°): 93.580, Azimuth (°): 0.570, TVD (ft): 11896.16, Dogleg (°/100 ft): 0.87, Sensor Depth (ft): 17337.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	02:40	02:45	05-21	17402.00	17413.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	02:45	03:15	05-21	17413.00	17433.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	05-21	03:15	03:50	05-21	17433.00	17496.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	03:50	03:55	05-21	17496.00	17496.00	Inclination (°): 92.000, Azimuth (°): 1.090, TVD (ft): 11891.59, Dogleg (°/100 ft): 1.77, Sensor Depth (ft): 17431.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	03:55	04:00	05-21	17496.00	17508.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	04:00	04:35	05-21	17508.00	17530.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 200, Toolface Type: gravity
Rotary Drill	1	05-21	04:35	05:05	05-21	17530.00	17591.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	05:05	05:10	05-21	17591.00	17591.00	Inclination (°): 89.800, Azimuth (°): 0.740, TVD (ft): 11890.10, Dogleg (°/100 ft): 2.34, Sensor Depth (ft): 17526.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	05:10	05:50	05-21	17591.00	17685.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	05:50	05:55	05-21	17685.00	17685.00	Inclination (°): 89.710, Azimuth (°): 0.300, TVD (ft): 11890.50, Dogleg (°/100 ft): 0.48, Sensor Depth (ft): 17620.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	05:55	06:50	05-21	17685.00	17779.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	06:50	06:55	05-21	17779.00	17779.00	Inclination (°): 90.290, Azimuth (°): 359.860, TVD (ft): 11890.50, Dogleg (°/100 ft): 0.77, Sensor Depth (ft): 17714.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	06:55	07:35	05-21	17779.00	17873.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	07:35	07:40	05-21	17873.00	17873.00	Inclination (°): 91.120, Azimuth (°): 0.040, TVD (ft): 11889.34, Dogleg (°/100 ft): 0.90, Sensor Depth (ft): 17808.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	07:40	08:20	05-21	17873.00	17968.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	08:20	08:25	05-21	17968.00	17968.00	Inclination (°): 92.130, Azimuth (°): 0.040, TVD (ft): 11886.65, Dogleg (°/100 ft): 1.06, Sensor Depth (ft): 17903.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	08:25	08:35	05-21	17968.00	17978.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	08:35	09:00	05-21	17978.00	17988.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-21	09:00	09:45	05-21	17988.00	18062.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	09:45	09:50	05-21	18062.00	18062.00	Inclination (°): 90.990, Azimuth (°): 0.130, TVD (ft): 11884.09, Dogleg (°/100 ft): 1.22, Sensor Depth (ft): 17997.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	09:50	10:45	05-21	18062.00	18156.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	10:45	10:50	05-21	18156.00	18156.00	Inclination (°): 91.520, Azimuth (°): 0.040, TVD (ft): 11882.03, Dogleg (°/100 ft): 0.57, Sensor Depth (ft): 18091.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	10:50	11:30	05-21	18156.00	18251.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	11:30	11:35	05-21	18251.00	18251.00	Inclination (°): 92.570, Azimuth (°): 359.690, TVD (ft): 11878.64, Dogleg (°/100 ft): 1.16, Sensor Depth (ft): 18186.00, Bit To Sensor (ft): 65.00

Rotary Drill	1	05-21	11:35	11:40	05-21	18251.00	18261.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	11:40	12:30	05-21	18261.00	18281.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-21	12:30	12:55	05-21	18281.00	18345.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	12:55	13:00	05-21	18345.00	18345.00	Inclination (°): 91.600, Azimuth (°): 0.040, TVD (ft): 11875.22, Dogleg (°/100 ft): 1.10, Sensor Depth (ft): 18280.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	13:00	13:10	05-21	18345.00	18355.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	13:10	13:45	05-21	18355.00	18370.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-21	13:45	14:20	05-21	18370.00	18439.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	14:20	14:25	05-21	18439.00	18439.00	Inclination (°): 89.670, Azimuth (°): 359.070, TVD (ft): 11874.18, Dogleg (°/100 ft): 2.30, Sensor Depth (ft): 18374.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	14:25	15:10	05-21	18439.00	18534.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	15:10	15:15	05-21	18534.00	18534.00	Inclination (°): 90.370, Azimuth (°): 359.340, TVD (ft): 11874.15, Dogleg (°/100 ft): 0.79, Sensor Depth (ft): 18469.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	15:15	15:55	05-21	18534.00	18628.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Rig Service - In Hole	19	05-21	15:55	16:10	05-21			Rig Service
Survey	46	05-21	16:10	16:25	05-21	18628.00	18628.00	Inclination (°): 92.480, Azimuth (°): 359.510, TVD (ft): 11871.81, Dogleg (°/100 ft): 2.25, Sensor Depth (ft): 18563.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	16:25	16:40	05-21	18628.00	18635.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	16:40	17:25	05-21	18635.00	18657.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-21	17:25	17:55	05-21	18657.00	18722.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	17:55	18:00	05-21	18722.00	18722.00	Inclination (°): 91.300, Azimuth (°): 358.810, TVD (ft): 11868.71, Dogleg (°/100 ft): 1.46, Sensor Depth (ft): 18657.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	18:00	18:05	05-21	18722.00	18733.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	18:05	18:45	05-21	18733.00	18748.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 160, Toolface Type: gravity
Rotary Drill	1	05-21	18:45	19:20	05-21	18748.00	18817.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	19:20	19:25	05-21	18817.00	18817.00	Inclination (°): 90.020, Azimuth (°): 359.160, TVD (ft): 11867.61, Dogleg (°/100 ft): 1.40, Sensor Depth (ft): 18752.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	19:25	20:05	05-21	18817.00	18911.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	20:05	20:10	05-21	18911.00	18911.00	Inclination (°): 90.420, Azimuth (°): 359.070, TVD (ft): 11867.25, Dogleg (°/100 ft): 0.44, Sensor Depth (ft): 18846.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	20:10	20:50	05-21	18911.00	19005.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	20:50	20:55	05-21	19005.00	19005.00	Inclination (°): 91.430, Azimuth (°): 359.250, TVD (ft): 11865.74, Dogleg (°/100 ft): 1.09, Sensor Depth (ft): 18940.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	20:55	21:05	05-21	19005.00	19017.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Slide Drill	2	05-21	21:05	22:10	05-21	19017.00	19042.00	Pressure On (psi): 5550.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 40.00, Flow Rate (gpm): 627.00, Strokes Per Minute: 194, Toolface: 180, Toolface Type: gravity
Rotary Drill	1	05-21	22:10	22:40	05-21	19042.00	19099.00	Pressure On (psi): 6150.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 25000.00, Flow Rate (gpm): 625.00, Strokes Per Minute: 194.00
Survey	46	05-21	22:40	22:45	05-21	19099.00	19099.00	Inclination (°): 90.510, Azimuth (°): 359.780, TVD (ft): 11864.14, Dogleg (°/100 ft): 1.13, Sensor Depth (ft): 19034.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	22:45	23:25	05-21	19099.00	19194.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 48.00, Surface RPM: 40, Surface Torque (ft lbf): 27000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-21	23:25	23:30	05-21	19194.00	19194.00	Inclination (°): 89.490, Azimuth (°): 0.480, TVD (ft): 11864.14, Dogleg (°/100 ft): 1.30, Sensor Depth (ft): 19129.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-21	23:30	00:00	05-22	19194.00	19248.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 28000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
		Company Man

Wednesday, May 22 00:00 - 23:59 (Day 26 of 28)

Billing: \$9,500.00 (\$253,954.14 total)

Drilling Summary				Drilling Parameters	
Start Depth (ft)	19248.00	Downhole Hours	23.25	Rotating WOB (klbs)	44.00 - 46.00
Bit Depth (ft)	20304.00	Drilling Hours	9.08	Sliding WOB (klbs)	42.00 - 42.00
Bottom Hole Depth (ft)	20304.00	Hours Circulating	4.83	Rotating SPM	182.00 - 186.00
Total Distance (ft)	1056.00	Hours Sliding	0.83	Sliding SPM	186.00 - 186.00
Distance Rotated (ft)	1035.00	Hours Rotating	8.25	Motor RPM	153.00 - 163.00
Distance Slid (ft)	21.00			Surface RPM	40.00 - 43.00
Inclination In	90.20			Flow Rate (gpm)	590.00 - 601.00
Inclination Out	93.63			On Bottom Pressure (psi)	6000.00 - 6020.00
Azimuth In	359.86	% Hours Rotating	91%	Off Bottom Pressure (psi)	5140.00 - 5300.00
Azimuth Out	357.40	% Hours Sliding	9%		
AVG Total ROP (ft/h)	115.83	% Distance Sliding	2%		
AVG Rotating ROP (ft/h)	124.46	% Distance Rotating	98%		
AVG Sliding ROP (ft/h)	25.20				

Personnel

Name	Position
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Shawn Flores	MWD Engineer
Orey Meredith	Directional Driller

BHA #10 - BHA #10 (Lateral II)

Date In: May 20, 2019, 0:00 Date Out: May 22, 2019, 23:15

Bit Details		Motor Details		Directional Comments
OD (in)	8.500	Size (in)	7.0	Directional Comments 7" Discovery: 1.75° FBH 7/8 8.5 Stg. Mtr w/ slick sleeve. Protracted Angle: 1.75°, Flow Rate 400-750, Max Diff 1910 psi, Max Operating Torque: 18710 ft/lbs, Rev/Gal: 0.26 / Bit Data: Baker Hughes 8 1/2", Type DD506TWX, SN: 5294400 Jets: 6 x 22's, TFA: 2.227 Runs on Bit: 1
Vendor	Baker	Lobe/Stage	7/8, 8.5	
S/N	5294400	Bend Angle	1.75	
Nozzles	6 x 22	Speed (rev/gal)	0.26	MWD Comments
Total Flow Area (in²)	2.227	Wear Pad OD (in)	7.187	POOH Reason Total Depth/Casing Point: TD Well @ 20304, Inspected BHA on surface. Motor drained good, had 1/8" play & minimal squat in bearings. Bit was 1/8 under gauged and had chipped cutters on gauge.
Drilling Hours for Day	9.08	Bit Distances		
Total Drilled for Day (ft)	1056.00	Bend (Bit to Bend): 4.06 ft, Survey (Bit to Survey): 65.00 ft, Gamma (Bit to Gamma): 57.00 ft		
Drilling Hours for BHA	35.67			
Total Drilled for BHA (ft)	3747.00			

Directional Items

Description	Vendor	SN#	Top Conn	Btm Conn	ID (in)	OD (in)	Fn Len. (ft)	Len (ft)	Aggr. Len (ft)
Bit Description: DD506TWX, Style: PDC, Gauge Length (in): 4.25, Size (in): 8.50	Baker	5294400	4 1/2" Reg Pin			8.500		1.08	1.08
Mud Motor Description: 1.75° FBH 7/8 8.5 Stg Mtr w/ slick sleeve, Size (in): 7.00, Bend Angle (°): 1.75, Rotor Lobe: 7, Stator Lobe: 8, Stator Stage: 8.5	Discovery	700DDSD018	4 1/2" IF Box	4 1/2" Reg Box		7.000		34.26	35.34
Drill Collar Description: NM Pony, Style: Pony, Type: NM	DTI	DR24886	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		12.50	47.84
UBHO Sub Description: NM UBHO, Type: Steel	Gordan	GT650-239	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.500		3.29	51.13
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR24195	4 1/2" IF Box	4 1/2" IF Pin	3.250	6.375		28.97	80.10
Drill Collar Description: NMDC, Style: Slick Drill, Type: NM	DTI	DR41332	4 1/2" IF Box	4 1/2" IF Pin	2.875	6.500		28.98	109.08
Drill Pipe Description: (30 Stds) 5" Drill Pipe, Style: Slick			4 1/2" IF Box	4 1/2" IF Pin	3.000	5.000		2832.46	2941.54
Agitator Description: Agitator, Size (in): 6.50	Rubicon	RSX-650-079	4 1/2" IF Box	4 1/2" IF Pin		6.500		34.42	2975.96

MWD Items

No Items

Directional Activities

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Rotary Drill	1	05-21	23:30	00:00	05-22	19194.00	19248.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 28000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Rotary Drill	1	05-22	00:00	00:15	05-22	19248.00	19288.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 28000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	00:15	00:20	05-22	19288.00	19288.00	Inclination (°): 90.200, Azimuth (°): 359.860, TVD (ft): 11864.40, Dogleg (°/100 ft): 1.00, Sensor Depth (ft): 19223.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	00:20	01:05	05-22	19288.00	19382.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 28000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	01:05	01:10	05-22	19382.00	19382.00	Inclination (°): 90.730, Azimuth (°): 358.990, TVD (ft): 11863.64, Dogleg (°/100 ft): 1.08, Sensor Depth (ft): 19317.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	01:10	01:50	05-22	19382.00	19476.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 28000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	01:50	01:55	05-22	19476.00	19476.00	Inclination (°): 91.160, Azimuth (°): 358.900, TVD (ft): 11862.09, Dogleg (°/100 ft): 0.47, Sensor Depth (ft): 19411.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	01:55	02:45	05-22	19476.00	19571.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	02:45	02:50	05-22	19571.00	19571.00	Inclination (°): 90.770, Azimuth (°): 358.810, TVD (ft): 11860.49, Dogleg (°/100 ft): 0.42, Sensor Depth (ft): 19506.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	02:50	03:35	05-22	19571.00	19665.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	03:35	03:40	05-22	19665.00	19665.00	Inclination (°): 91.080, Azimuth (°): 357.840, TVD (ft): 11858.97, Dogleg (°/100 ft): 1.08, Sensor Depth (ft): 19600.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	03:40	03:45	05-22	19665.00	19676.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Slide Drill	2	05-22	03:45	04:35	05-22	19676.00	19697.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5300.00, Weight On Bit (klbs): 42.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186, Toolface: 135, Toolface Type: gravity
Rotary Drill	1	05-22	04:35	05:10	05-22	19697.00	19759.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	05:10	05:15	05-22	19759.00	19759.00	Inclination (°): 90.420, Azimuth (°): 358.630, TVD (ft): 11857.74, Dogleg (°/100 ft): 1.10, Sensor Depth (ft): 19694.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	05:15	06:00	05-22	19759.00	19853.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	06:00	06:05	05-22	19853.00	19853.00	Inclination (°): 90.020, Azimuth (°): 358.110, TVD (ft): 11857.38, Dogleg (°/100 ft): 0.70, Sensor Depth (ft): 19788.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	06:05	06:50	05-22	19853.00	19948.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	06:50	06:55	05-22	19948.00	19948.00	Inclination (°): 90.770, Azimuth (°): 358.190, TVD (ft): 11856.72, Dogleg (°/100 ft): 0.79, Sensor Depth (ft): 19883.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	06:55	07:40	05-22	19948.00	20042.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	07:40	07:45	05-22	20042.00	20042.00	Inclination (°): 91.470, Azimuth (°): 357.840, TVD (ft): 11854.88, Dogleg (°/100 ft): 0.83, Sensor Depth (ft): 19977.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	07:45	08:35	05-22	20042.00	20136.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	08:35	08:40	05-22	20136.00	20136.00	Inclination (°): 91.820, Azimuth (°): 357.400, TVD (ft): 11852.19, Dogleg (°/100 ft): 0.60, Sensor Depth (ft): 20071.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	08:40	09:25	05-22	20136.00	20230.00	Pressure On (psi): 6000.00, Pressure Off (psi): 5200.00, Weight On Bit (klbs): 44.00, Surface RPM: 40, Surface Torque (ft lbf): 29000.00, Flow Rate (gpm): 601.00, Strokes Per Minute: 186.00
Survey	46	05-22	09:25	09:30	05-22	20230.00	20230.00	Inclination (°): 92.660, Azimuth (°): 357.230, TVD (ft): 11848.51, Dogleg (°/100 ft): 0.91, Sensor Depth (ft): 20165.00, Bit To Sensor (ft): 65.00
Rotary Drill	1	05-22	09:30	10:00	05-22	20230.00	20304.00	Pressure On (psi): 6020.00, Pressure Off (psi): 5140.00, Weight On Bit (klbs): 46.00, Surface RPM: 43, Surface Torque (ft lbf): 28000.00, Flow Rate (gpm): 590.00, Strokes Per Minute: 182.00
Survey	46	05-22	10:00	10:05	05-22	20304.00	20304.00	Inclination (°): 93.630, Azimuth (°): 357.400, TVD (ft): 11844.45, Dogleg (°/100 ft): 1.33, Sensor Depth (ft): 20239.00, Bit To Sensor (ft): 65.00
Survey	46	05-22	10:05	10:10	05-22	20304.00	20304.00	Inclination (°): 93.630, Azimuth (°): 357.400, TVD (ft): 11840.34, Dogleg (°/100 ft): 0.00, Sensor Depth (ft): 20304.00, Bit To Sensor (ft): 0.00
								Straight Line to 20,304'

Circulating	3	05-22	10:10	15:00	05-22			Circ. @ TD
Pooh	7	05-22	15:00	22:15	05-22			POOH , Racked Bach BHA to run production casing
Change BHA	6	05-22	22:15	23:15	05-22			Rack Back BHA #10
Standby	15	05-22	23:15	23:55	05-23			Standby while Run Casing, Cement , Skid Rig

MWD Activities

No Activities



Job Number WT-19-063	Operator Advance Energy Partners	Rig Name H&P #620
Start Date 2019-04-26	Well Name Dagger Lake 5 State #603H	Legal Well Name AFE Dagger Lake 5 State #603H
Play Delaware Basin	State/Province and Country New Mexico, US	County Lea
Company Man		

Thursday, May 23 00:00 - 23:59 (Day of 28)

Billing: \$16,680.64 (\$253,954.14 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
Omar Alaniz	Directional Driller
Kyle Kusak	MWD Engineer
Nathan Woods	Directional Driller
Josh Cockrell	Directional Driller
Joel Johnson	Directional Driller
Shawn Flores	MWD Engineer
Orey Meredith	Directional Driller

No BHAs**Directional Activities**

Activity Type	Code	Start Date	Start Time	End Time	End Date	Start (ft)	End (ft)	Comments/Details
Standby	15	05-22	23:15	23:55	05-23			Standby while Run Casing, Cement , Skid Rig

MWD Activities

No Activities



Surface Plat

Dagger Lake 5 State #603H (WT-19-063)

2019-04-26 to 2019-05-23

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	603H
OGRID No.	Operator Name	Elevation
	ADVANCE ENERGY PARTNERS HAT MESA	3655'

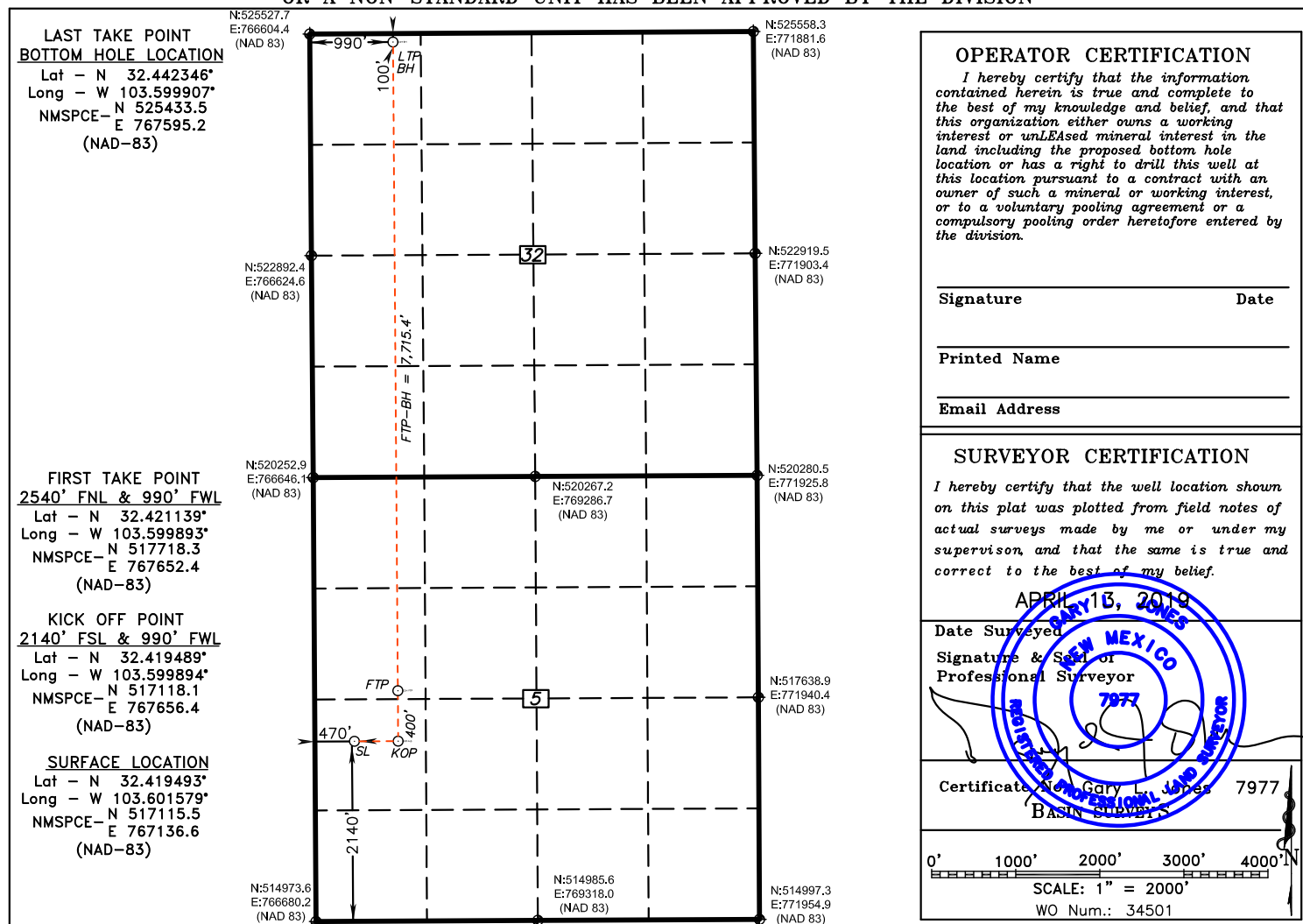
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	5	22 S	33 E		2140	SOUTH	470	WEST	LEA

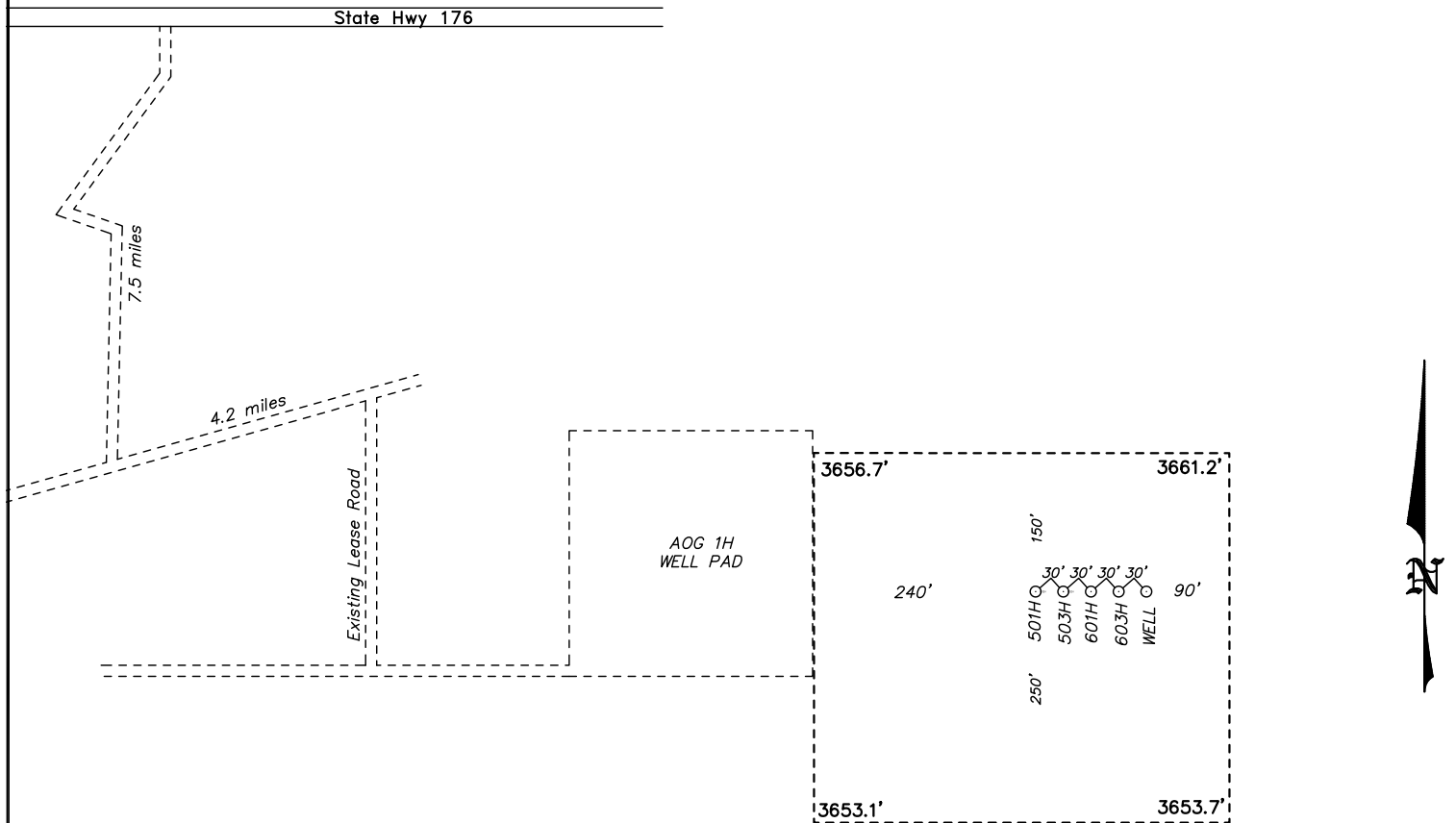
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
D	32	21 S	33 E		100	NORTH	990	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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



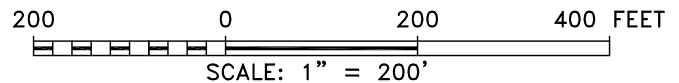
**SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



**ADVANCE ENERGY PARTNERS HAT MESA
DAGGER LAKE 5 STATE 603H
ELEV. - 3655'**

Lat - N 32.419493°
Long - W 103.601579°
NMSPCE - N 517115.5
 E 767136.6
(NAD-83)

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



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER LAKE 5 STATE 603H / WELL PAD TOPO

THE DAGGER LAKE 5 STATE 603H LOCATED 2140' FROM
THE SOUTH LINE AND 470' FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST.

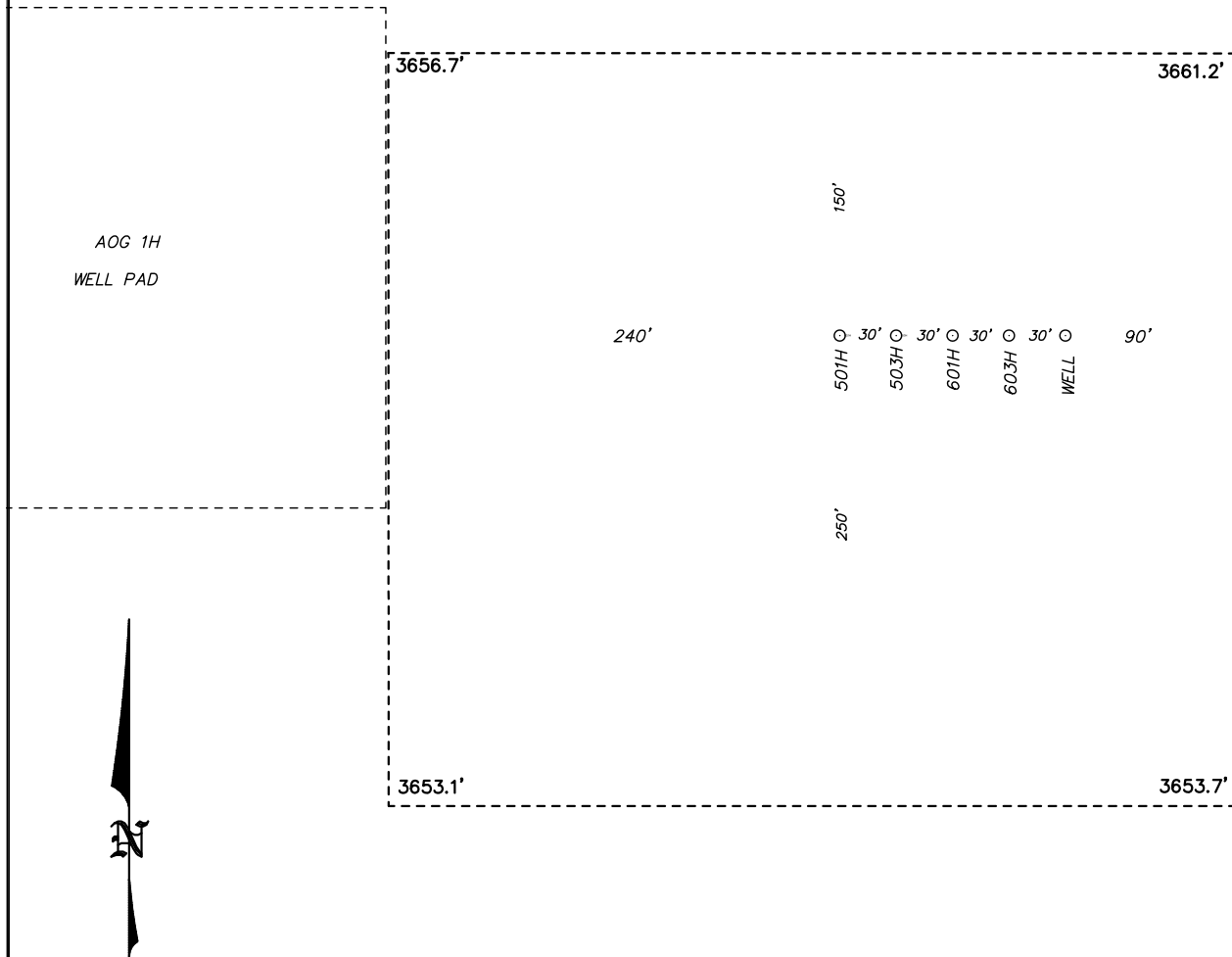
N.M.P.M., LEA COUNTY, NEW MEXICO.

basin
surveys
focused on excellence
in the oilfield

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

W.O. Number: 34501	Drawn By: K. GOAD	Date: 04-15-2019	Survey Date: 04-13-2019	Sheet 1 of 1 Sheets
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**SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



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

ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER LAKE 5 STATE 603H / WELL PAD TOPO

THE DAGGER LAKE 5 STATE 603H LOCATED 2140' FROM
THE SOUTH LINE AND 470' FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 22 SOUTH, RANGE 33 EAST.

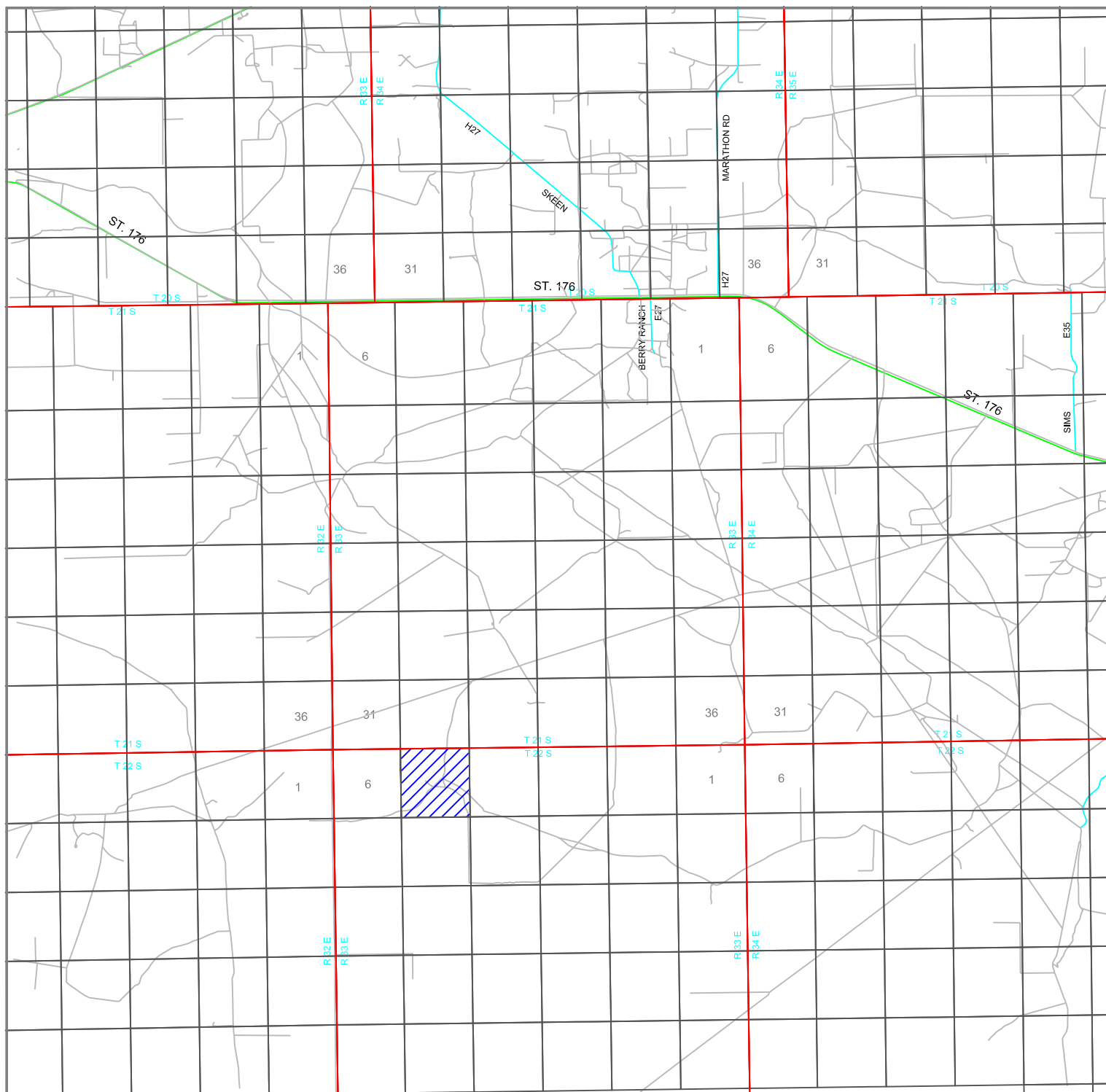
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W.O. Number: 34501	Drawn By: K. GOAD	Date: 04-15-2019	Survey Date: 04-13-2019	Sheet 1 of 1 Sheets
--------------------	-------------------	------------------	-------------------------	---------------------





DAGGER LAKE 5 STATE 603H

Located 2140' FSL and 470' FWL
 Section 5, Township 22 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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 basinsurveys.com

0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

W.O. Number: KJG 34501

Survey Date: 04-15-2019

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



DAGGER LAKE 5 STATE 603H

Located 2140' FSL and 470' FWL
Section 5, Township 22 South, Range 33 East,
N.M.P.M., Lea County, New Mexico.



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

W.O. Number: KJG 34501

Survey Date: 04-15-2019

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

WELL API NO. 30-025-45854
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Dagger Lake 5 State Com
8. Well Number 603H
9. OGRID Number 372417
10. Pool name or Wildcat LEGG;BONE SPRING
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3655' GR

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Advance Energy Partners Hat Mesa

3. Address of Operator

11490 Westheimer Rd, Houston, TX 77077

4. Well Location

Unit Letter L : 2140 feet from the S line and 470 feet from the W line
Section 5 Township 22S Range 33E NMPM County LEA

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- 6/11/19: Pressure test casing to 9,800 psi for 30 minutes.
- 6/25/19 - 7/09/19: Perforate from 12,248' - 20,196' (2340). Frac with 23,402,060 lbs sand and 22,746,780 gal fluid.
- 7/26/19 - 7/28/19: Drill all plugs out and clean out to PBTD of 20,211'.
- 7/30/19: Begin flowback - Ready to produce.
- 2/21/22 - **CORRECTION to Casing Depths filed on 6/04/19. CORRECT depths are as follows:**
 - 13.375" Surface Casing set at 1,169'
 - 9.625" Intermediate Casing set at 3,772'/4,871'
 - 5.5" Production Casing set at 20,294'

Spud Date:

04/27/2019

Rig Release Date:

05/24/2019

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	Form C-105 Revised April 3, 2017
1. WELL API NO. 30-025-45854		
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																																	
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER	6. Well Number: 603H																																	
8. Name of Operator Advance Energy Partners Hat Mesa, LLC	9. OGRID 372417																																	
10. Address of Operator 11490 Westheimer RD, Suite 950 Houston, TX 77077	11. Pool name or Wildcat LEGG;BONE SPRING																																	
<table border="1"> <tr> <th>12. Location</th> <th>Unit Ltr</th> <th>Section</th> <th>Township</th> <th>Range</th> <th>Lot</th> <th>Feet from the</th> <th>N/S Line</th> <th>Feet from the</th> <th>E/W Line</th> <th>County</th> </tr> <tr> <td>Surface:</td> <td>L</td> <td>5</td> <td>22S</td> <td>33E</td> <td></td> <td>2140</td> <td>S</td> <td>470</td> <td>W</td> <td>Lea</td> </tr> <tr> <td>BH:</td> <td>D</td> <td>32</td> <td>21S</td> <td>33E</td> <td></td> <td>50</td> <td>N</td> <td>973</td> <td>W</td> <td>Lea</td> </tr> </table>	12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County	Surface:	L	5	22S	33E		2140	S	470	W	Lea	BH:	D	32	21S	33E		50	N	973	W	Lea	
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	470	W	Lea																								
BH:	D	32	21S	33E		50	N	973	W	Lea																								
13. Date Spudded 04/27/19	14. Date T.D. Reached 05/22/2019	15. Date Rig Released 05/24/2019	16. Date Completed (Ready to Produce) 07/30/2019	17. Elevations (DF and RKB, RT, GR, etc.) 3,655' GR																														
18. Total Measured Depth of Well 20,304'	19. Plug Back Measured Depth 20,211'	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 12,248' - 20,196' 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#	1,169'	17.75	775	
9.625"	40#	3,772'/4,871'	12.25	970	
5.5"	20#	20,294'	8.5	3280	

LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

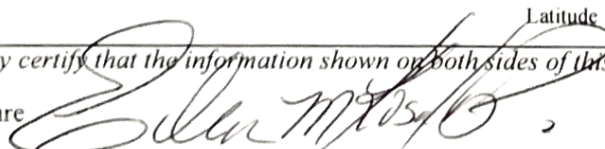
TUBING RECORD

SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number) 12,248' - 20,196' (2340 holes)	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. <table border="1"> <tr> <th>DEPTH INTERVAL</th> <th>AMOUNT AND KIND MATERIAL USED</th> </tr> <tr> <td>12,248' - 20,196'</td> <td>23,402,060 lbs sand 22,746,780 Gals water</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED	12,248' - 20,196'	23,402,060 lbs sand 22,746,780 Gals water				
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED								
12,248' - 20,196'	23,402,060 lbs sand 22,746,780 Gals water								

PRODUCTION

28. Date First Production 07/31/2019	Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing	Well Status (Prod. or Shut-in) Prod					
Date of Test 08/19/2019	Hours Tested 24	Choke Size 44	Prod'n For Test Period 24	Oil - Bbl 1563	Gas - MCF 2414	Water - Bbl. 5262	Gas - Oil Ratio 1550
Flow Tubing Press. N/A	Casing Pressure 1491	Calculated 24-Hour Rate	Oil - Bbl. 1563	Gas - MCF 2414	Water - Bbl. 5262	Oil Gravity - API - (Corr.) 41.4	
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. 34. If an on-site burial was used at the well, report the exact location of the on-site burial:	33. Rig Release Date: 05/24/2019
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. 2, from.....to.....

No. 3, 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

Revised to: June 1997 7/20/2024 2:03:30 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 82959

ACKNOWLEDGMENTS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	OGRID: 372417
	Action Number: 82959
	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

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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
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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 82959

CONDITIONS

Operator: ADVANCE ENERGY PARTNERS HAT MESA, LLC 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	OGRID: 372417
	Action Number: 82959
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	Going Forward, file a [C-103] NOI Change of Plans (C-103A) for changes made to drilling/casing depths prior to operations and submittal of C-104 Completion Packet.	7/30/2024