

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

Form C-101

August 1, 2011

Permit 292217

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

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

1. Operator Name and Address ADVANCE ENERGY PARTNERS HAT MESA, LLC 11490 Westheimer Rd., Ste 950 Houston, TX 77077		2. OGRID Number 372417
		3. API Number 30-025-48465
4. Property Code 319601	5. Property Name DAGGER STATE COM	6. Well No. 510H

7. Surface Location

UL - Lot F	Section 30	Township 21S	Range 33E	Lot Idn F	Feet From 2560	N/S Line N	Feet From 1980	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot C	Section 19	Township 21S	Range 33E	Lot Idn C	Feet From 100	N/S Line N	Feet From 2090	E/W Line W	County Lea
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9. Pool Information

WC-025 G-07 S213330F:BONE SPRING	97927
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3821
16. Multiple N	17. Proposed Depth 19270	18. Formation Bone Spring	19. Contractor	20. Spud Date 2/10/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1600	500	0
Int1	12.25	9.625	40	4000	950	0
Int1	12.25	9.625	40	5300	330	4000
Prod	8.5	5.5	20	19270	2300	0

Casing/Cement Program: Additional Comments

--

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Braden Harris	Approved By: Paul F Kautz	
Title: Vice President	Title: Geologist	
Email Address: bharris@advanceenergypartners.com	Approved Date: 2/9/2021	Expiration Date: 2/9/2023
Date: 2/8/2021	Phone: 406-300-3310	Conditions of Approval Attached

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102

Revised August 4, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code WC-025 G-06 S213326D 97927	Pool Name Bone Spring WC-025 G-07 S213330F; BONE SPRING
Property Code 319601	Property Name DAGGER STATE COM	Well Number 510H
OGRID No. 372417	Operator Name ADVANCE ENERGY PARTNERS HAT MESA	Elevation 3821'

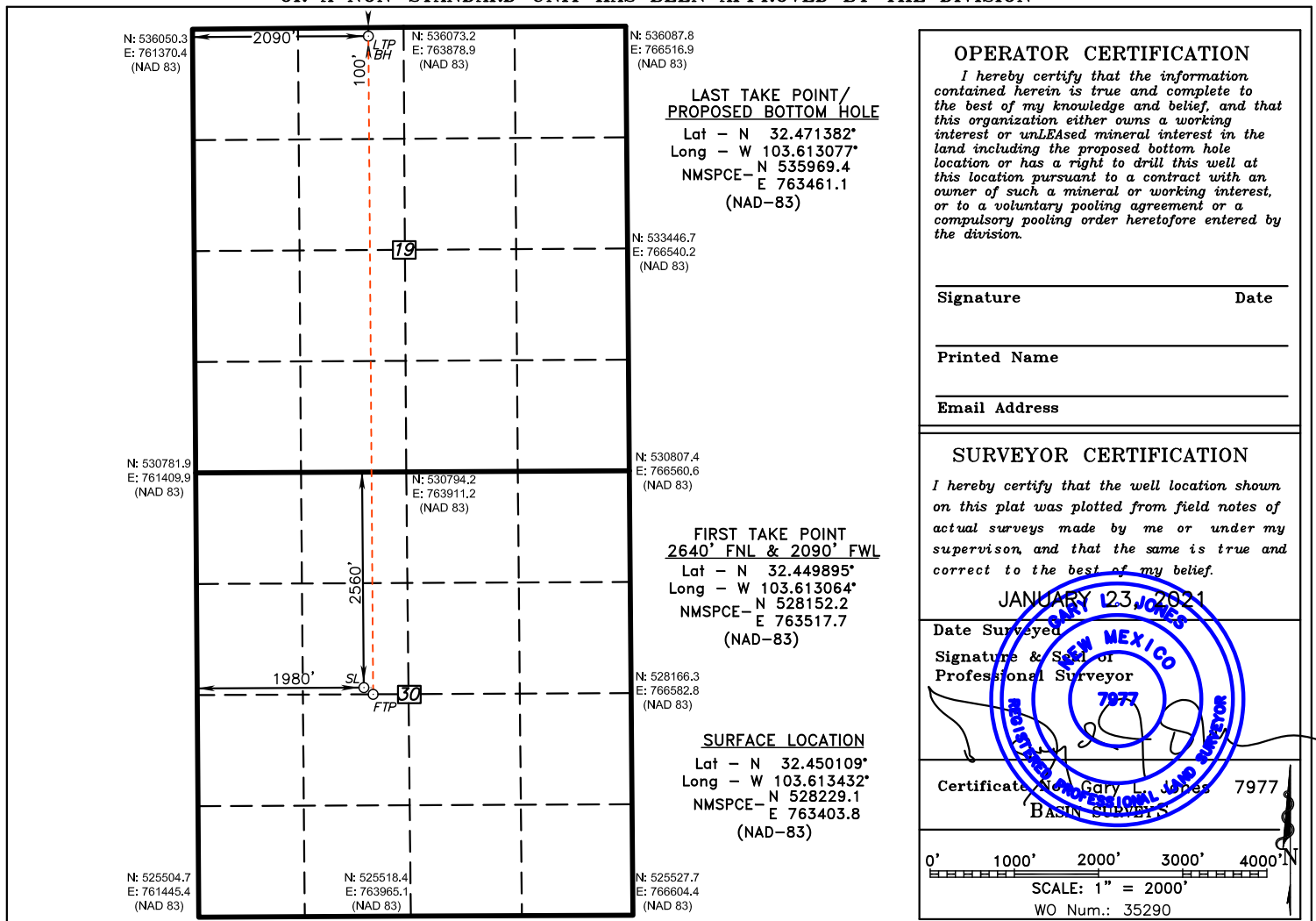
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
F	30	21 S	33 E		2560	NORTH	1980	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
C	19	21 S	33 E		100	NORTH	2090	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

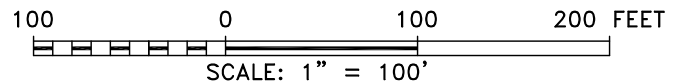
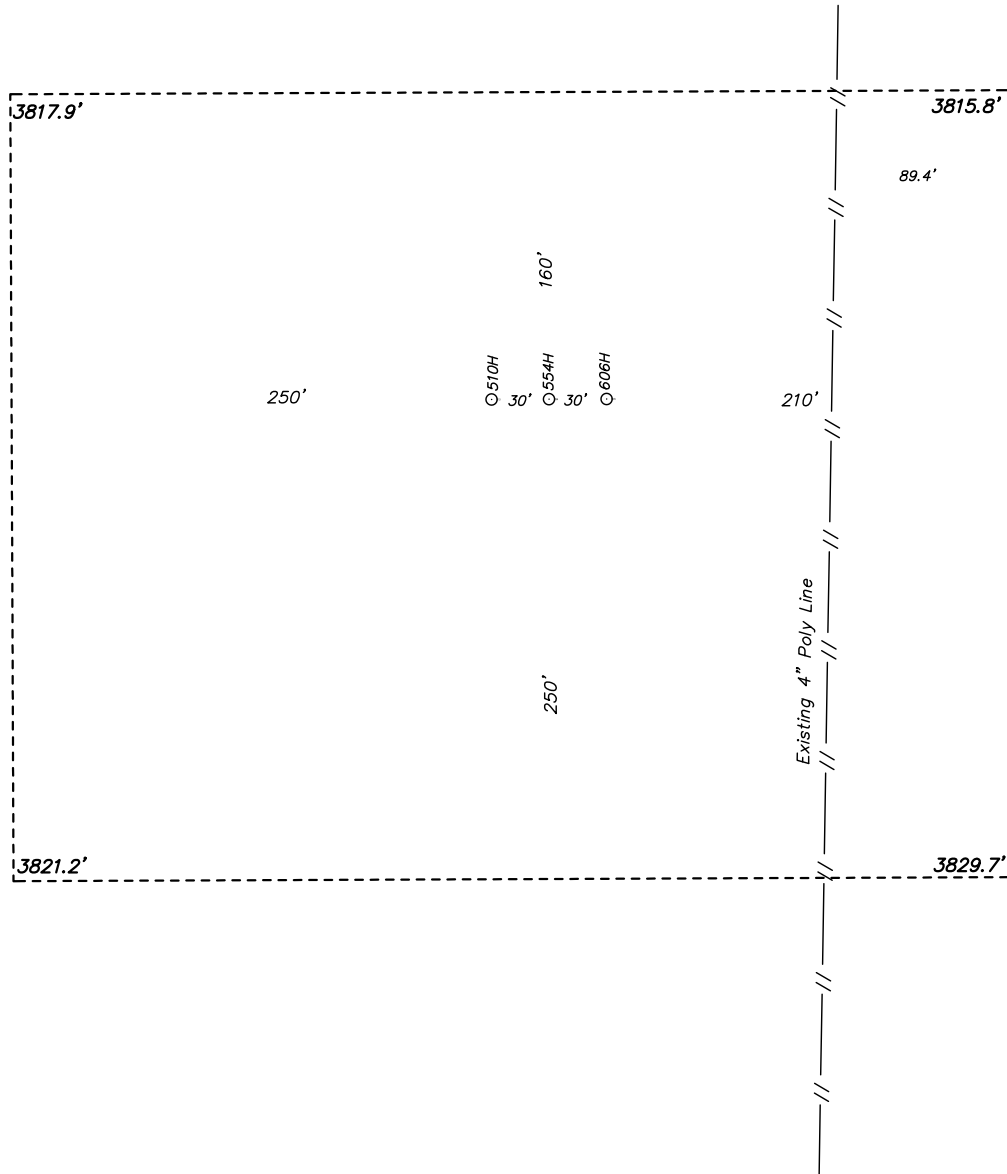
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



This survey map depicts a rectangular tract measuring 250' by 3821.2'. The tract is bounded by dashed lines. A vertical line, labeled 'Existing 4" Poly Line', runs through the tract, with segments of 210' and 89.4' indicated. A horizontal line, labeled 'Prop. Lease Rd.', is shown at the top left, with a width of 94.0' indicated. The tract is divided into two sections by the poly line. The left section is 250' wide. The right section is 89.4' wide. The total length of the tract is 3821.2'. The total width of the tract is 3815.8'. The map also shows a north arrow pointing towards the top right.

W.O. Number: 35290	Drawn By: K. GOAD	Date: 01-24-2021	Survey Date: 01-23-2021	Sheet 1 of 1 Sheets
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**SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER STATE COM #510H / WELL PAD TOPO

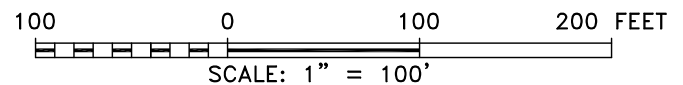
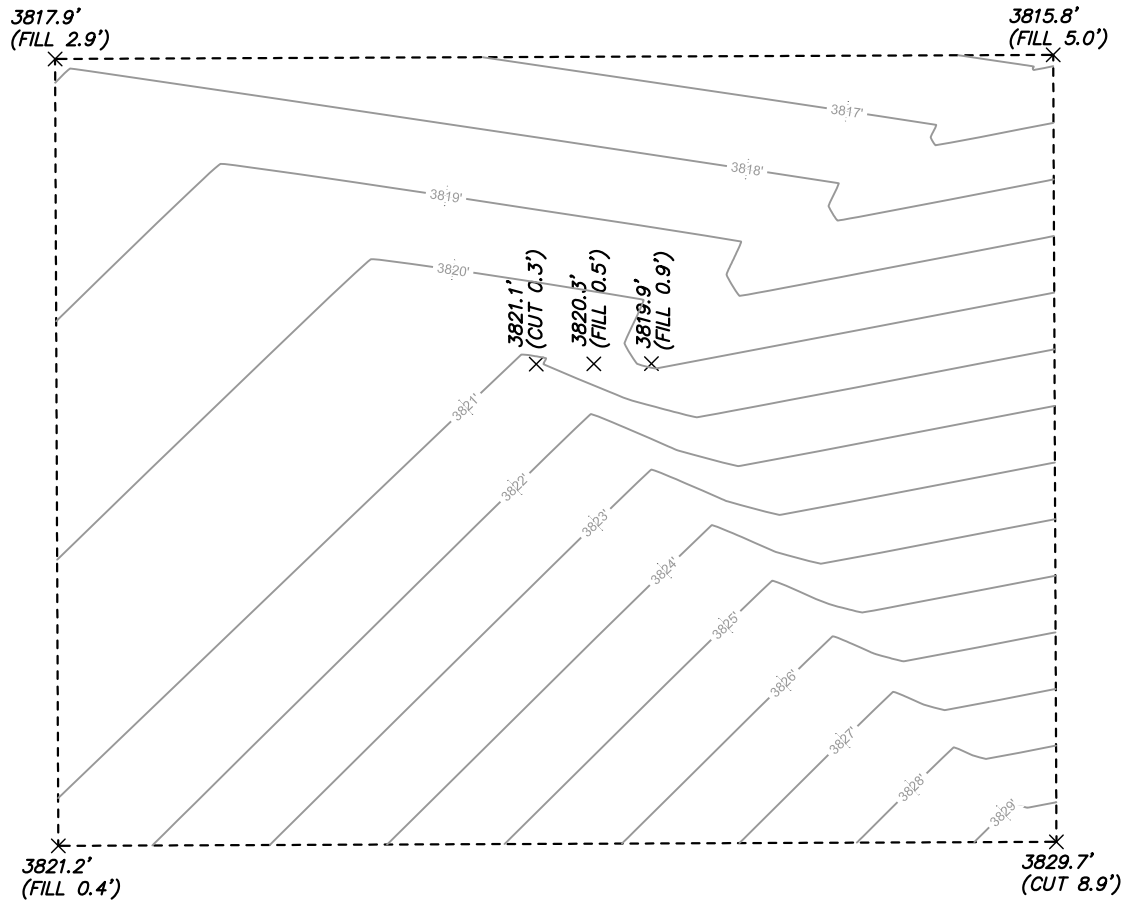
THE DAGGER STATE COM #510H LOCATED 2560' FROM
THE NORTH LINE AND 1980' FROM THE WEST LINE OF
SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST.

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

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in the oilfield

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

**SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



ADVANCE ENERGY PARTNERS HAT MESA

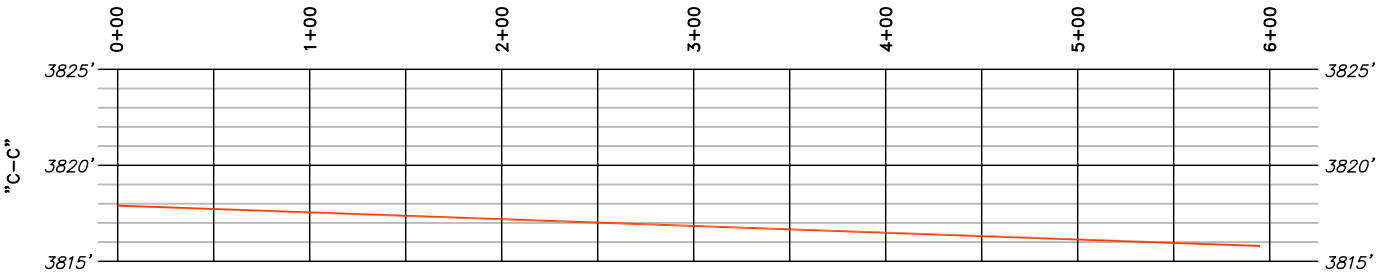
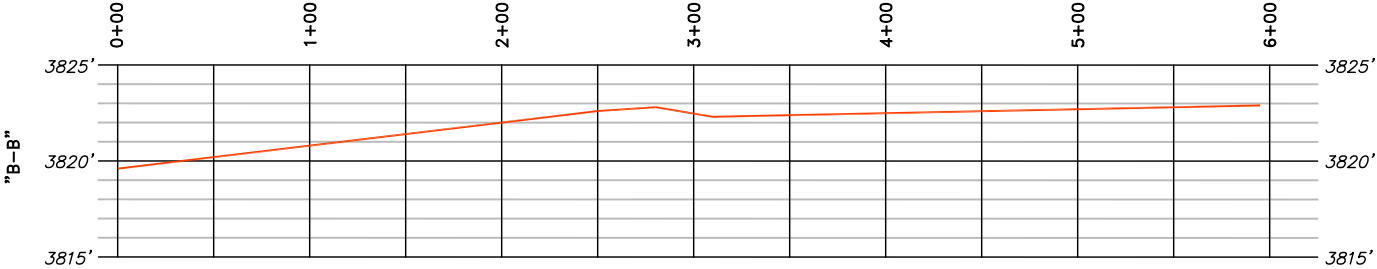
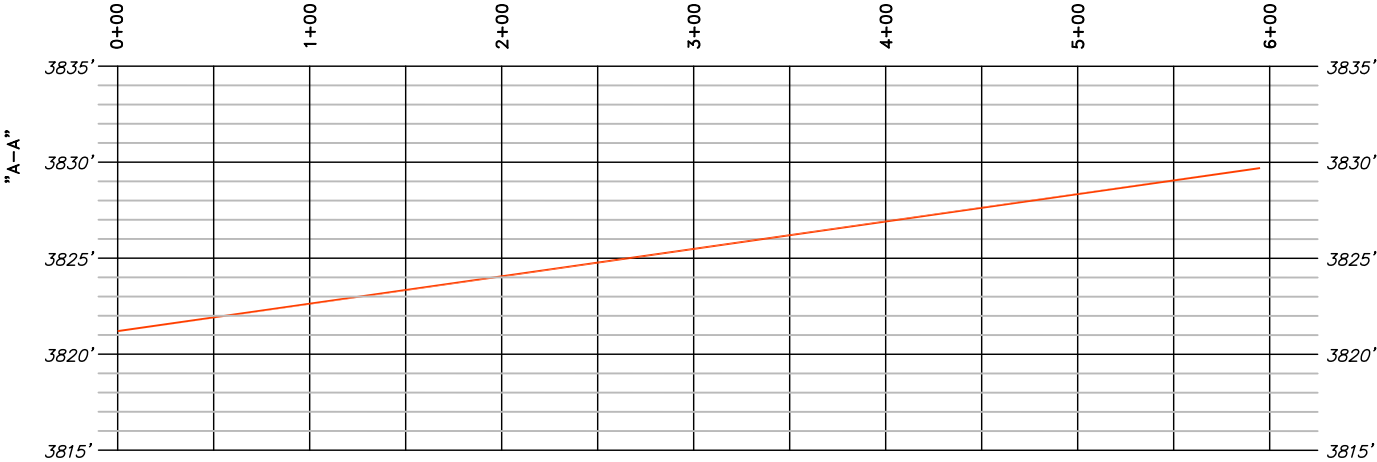
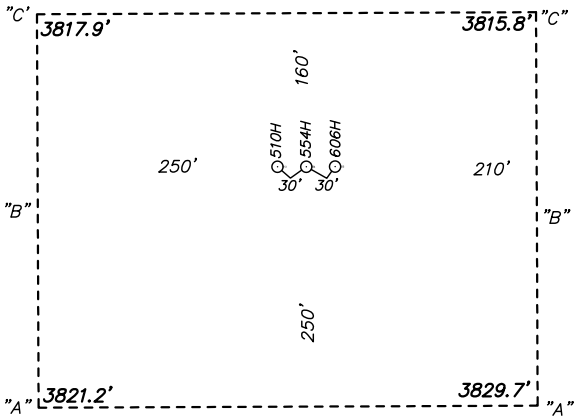
REF: DAGGER STATE COM PAD C / CUT & FILL

THE DAGGER STATE COM PAD C LOCATED IN
SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST.
N.M.P.M., LEA COUNTY, NEW MEXICO.

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SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY,
NEW MEXICO.



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


GARY L. JONES, P.S. No. 7977
PROFESSIONAL LAND SURVEYOR No. 5074

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in the oilfield

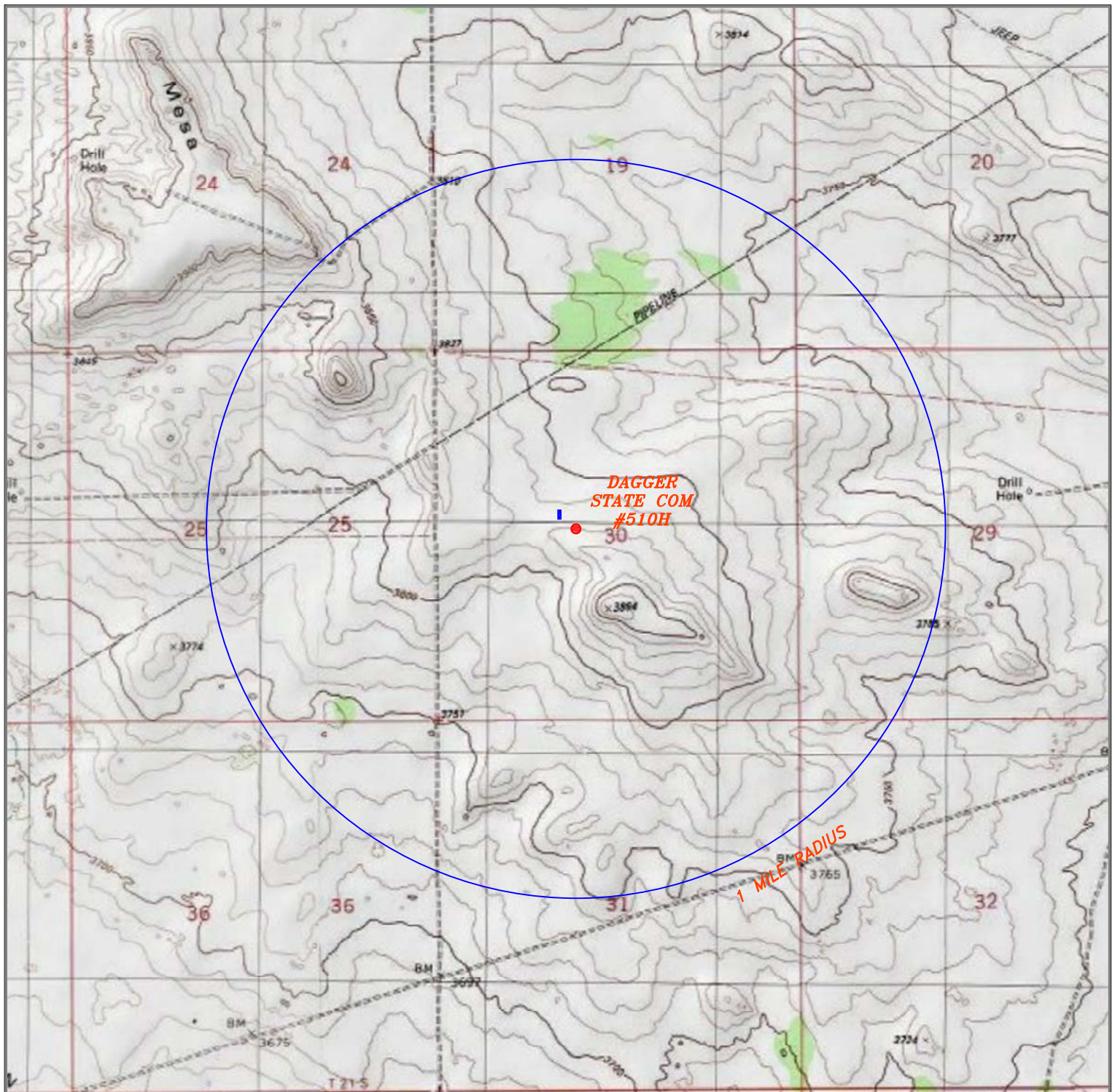
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Hobbs, New Mexico 88241 basinsurveys.com

CROSS SECTION
HORIZONTAL 1"=100'
VERTICAL 1"=50'

ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER STATE COM PAD C

THE DAGGER STATE COM PAD C LOCATED IN
SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST.
N.M.P.M., LEA COUNTY, NEW MEXICO.



DAGGER STATE COM #510H

Located 2560' FNL and 1980' FWL
 Section 30, Township 21 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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

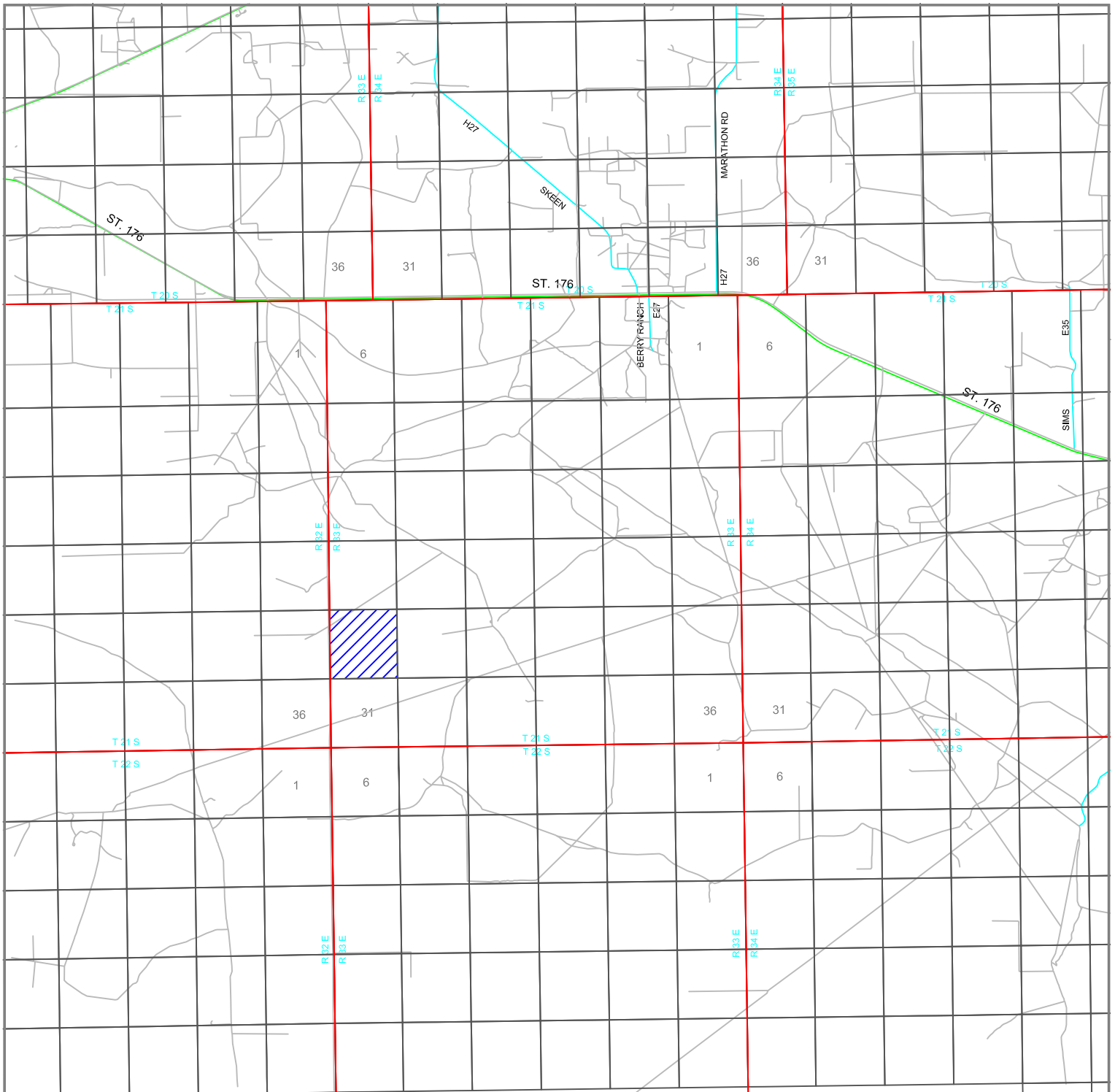
W.O. Number: KJG 35290

Survey Date: 01-23-2021

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



DAGGER STATE COM #510H

Located 2560' FNL and 1980' FWL
 Section 30, Township 21 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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

W.O. Number: KJG 35290

Survey Date: 01-23-2021

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



**ADVANCE
 ENERGY
 PARTNERS
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DAGGER STATE COM #510H

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

W.O. Number: KJG 35290

Survey Date: 01-23-2021

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 2/9/2021

☒ Original

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

☐ Amended - Reason for
Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
DAGGER STATE COM #510H	30-025-48465	F-30-21S-33E	2560N 1980W	1500	Flared	Flare during initial testing and cleanup

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to TARGA MIDSTREAM SERVICES LLC and will be connected to TARGA MIDSTREAM SERVICES LLC Low Pressure gathering system located in Lea County, New Mexico. It will require 0' of pipeline to connect the facility to Low Pressure gathering system. ADVANCE ENERGY PARTNERS HAT MESA, LLC provides (periodically) to TARGA MIDSTREAM SERVICES LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, ADVANCE ENERGY PARTNERS HAT MESA, LLC and TARGA MIDSTREAM SERVICES LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at TARGA MIDSTREAM SERVICES LLC Processing Plant located in Sec. 30, Twn. 21S, Rng. 33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 292217

PERMIT COMMENTS

Operator Name and Address: ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417] 11490 Westheimer Rd., Ste 950 Houston, TX 77077		API Number: 30-025-48465
		Well: DAGGER STATE COM #510H
Created By	Comment	Comment Date

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 292217

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417] 11490 Westheimer Rd., Ste 950 Houston, TX 77077	API Number: 30-025-48465
	Well: DAGGER STATE COM #510H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	Three String Casing Program - In accordance with R-111-P all strings shall be cemented to surface.

Kautz, Paul, EMNRD

From: Martin, Ed <emartin@slo.state.nm.us>
Sent: Friday, July 15, 2016 7:37 AM
To: Rutley, James; Katie Keller; Kevin Ryan
Cc: Tate F. Savage
Subject: RE: AMTEX "Dagger Draw" Drill Island in Section 30 21S 33E

The New Mexico State Land Office concurs. Drill Island to which this email refers is approved.

Ed Martin
 Oil and Gas Manager
 Oil Gas and Minerals Division
 505.827.5746
 New Mexico State Land Office
 310 Old Santa Fe Trail
 P.O. Box 1148
 Santa Fe, NM 87504-1148
 emartin@slo.state.nm.us



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From: Rutley, James [mailto:jrutley@blm.gov]
Sent: Tuesday, July 05, 2016 6:48 AM
To: Katie Keller <katiek@intrepidpotash.com>; Kevin Ryan <Kevin.Ryan@intrepidpotash.com>
Cc: Tate F. Savage <tate.savage@amtexenergy.com>; Martin, Ed <emartin@slo.state.nm.us>
Subject: AMTEX "Dagger Draw" Drill Island in Section 30 21S 33E

Good Morning Katie and Kevin,

AMTEX Energy proposed to State Lands and BLM the AMTEX Drill Island for its Dagger Draw operations. The drill island and development area's 30 day notification period expired without objection or protest. The development area consists of all of sections 19, 30 and 31 in T21S R33E and all wells will be drilled from the AMTEX Drill Island in Section 30(see attached survey).

Because the drill island is on State Lands and not BLM, a formal Federal development area was not approved but would have been if on Federal Lands.

Only wells drilled from or proposed from the AMTEX Drill Island will be approved with respect to your LMR. All other wells not on drill island will be subject to provisions of Oil Conservation Division Order R-111-P as to whether the proposed locations are within an established Life-of-Mine-Reserve that is filed with BLM by you.

Thanks,

Jim

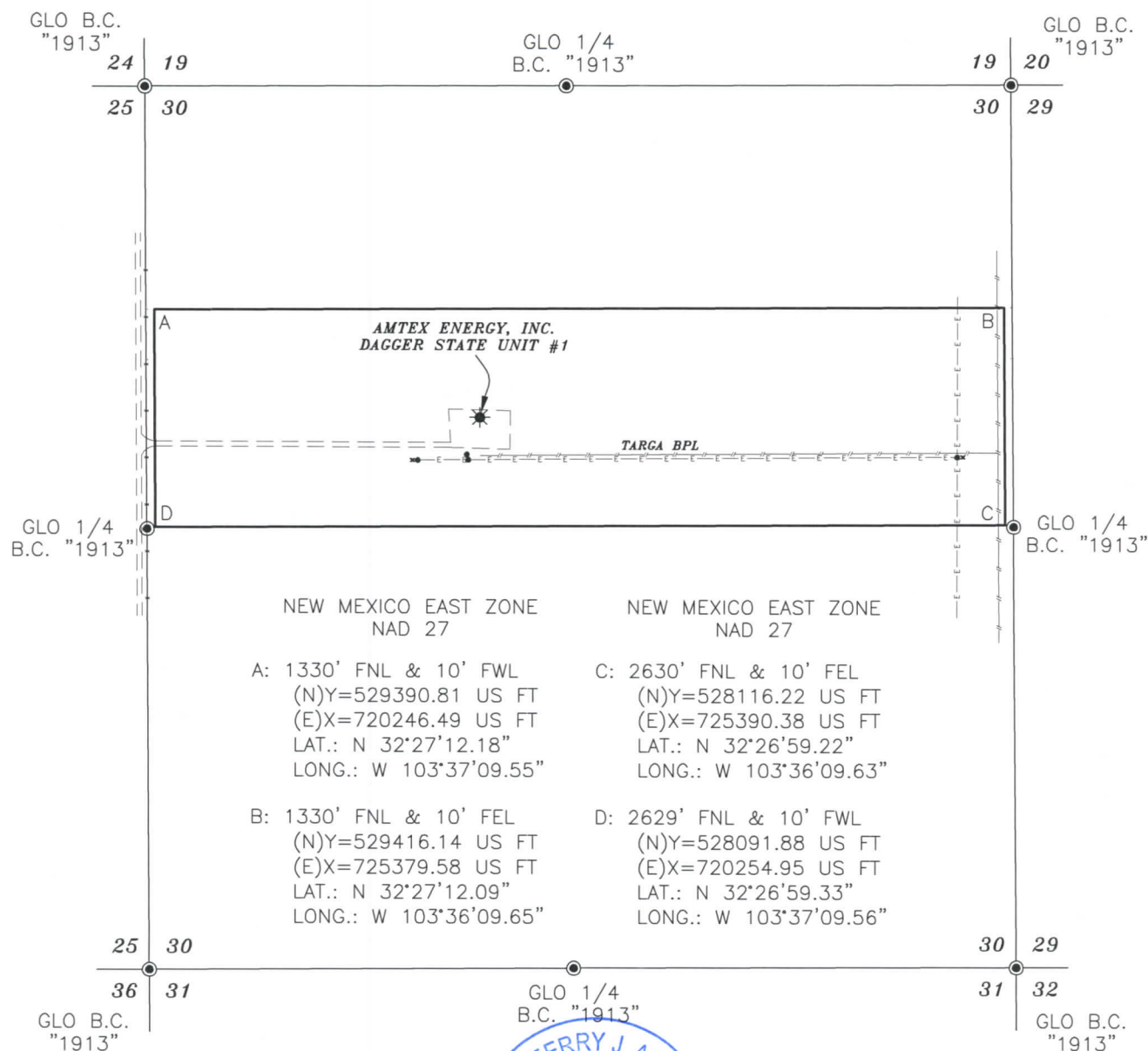
James S. Rutley
Geologist
Carlsbad Field Office
Bureau of Land Management
(575) 234-5904

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AMTEX ENERGY, INC.
AMTEX/COG DRILL ISLAND IN SECTION 30,
TOWNSHIP 21 SOUTH, RANGE 33 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO



SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.



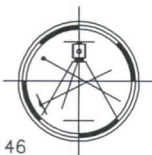
LEGEND

- - DENOTES FOUND MONUMENT AS NOTED
- E—E—E— - DENOTES ELECTRIC LINE
- P—P—P—P— - DENOTES PIPELINE
- X—X—X—X— - DENOTES FENCE LINE
- == == == - DENOTES CALICHE ROAD

Terry J. Asel 5/13/2016
 Terry J. Asel N.M. R.P.L.S. No. 15079

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
 HOBBS, NEW MEXICO - 575-393-9146



1000' 0 1000' 2000' FEET
 SCALE: 1"=1000'

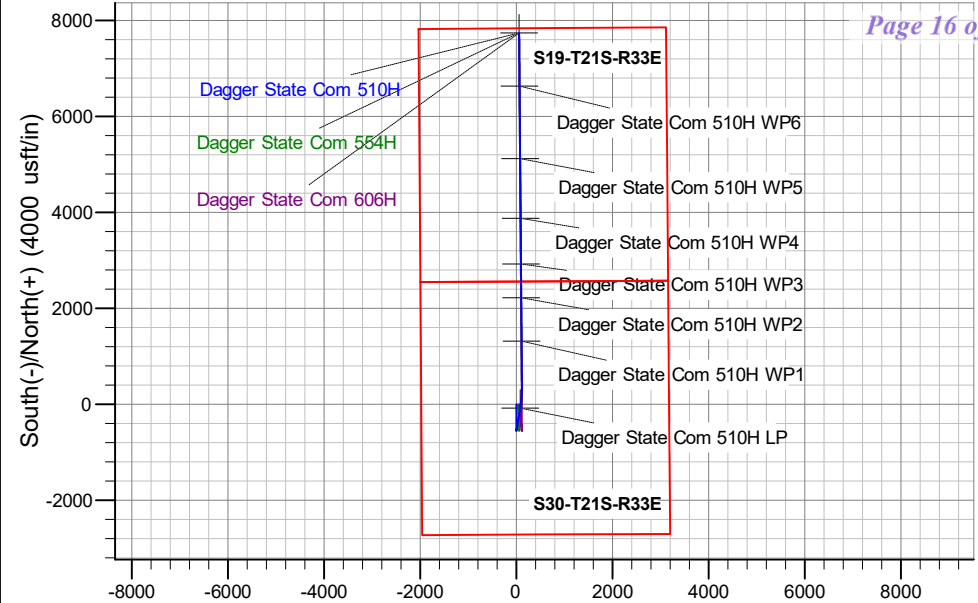
**WELL DETAILS: Dagger State Com 510H****Ground Elev: 3821.0 KB: 3855.5**

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	528229.22	763403.75	32° 27' 0.392 N	103° 36' 48.355 W

PROJECT DETAILS: Hat Mesa

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

System Datum: Mean Sea Level

**SECTION DETAILS**

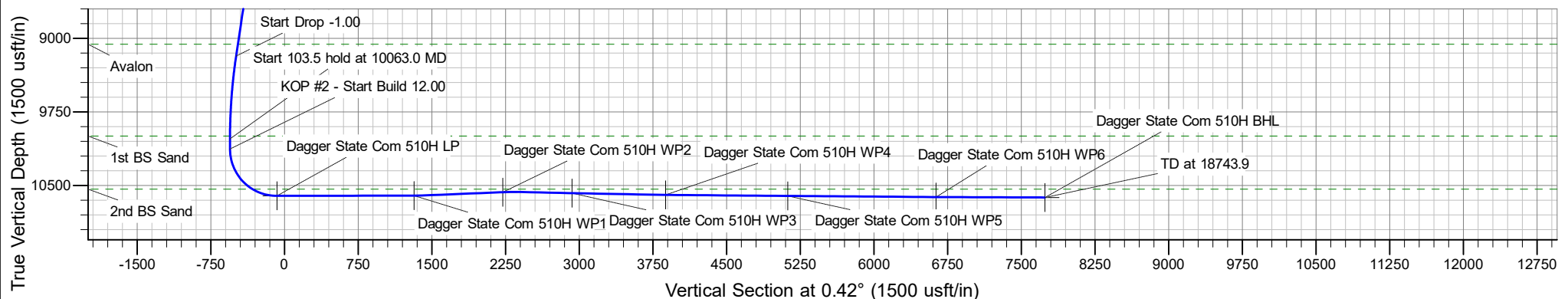
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5450.0	0.00	0.00	5450.0	0.0	0.0	0.00	0.00	0.0	KOP - Start Build 1.00
3	6297.1	8.47	180.00	6294.1	-62.5	0.0	1.00	180.00	-62.5	Start 2918.7 hold at 6297.1 MD
4	9215.9	8.47	180.00	9180.9	-492.5	0.0	0.00	0.00	-492.5	Start Drop -1.00
5	10063.0	0.00	0.00	10025.0	-555.0	0.0	1.00	180.00	-555.0	Start 103.5 hold at 10063.0 MD
6	10166.5	0.00	0.00	10128.5	-555.0	0.0	0.00	0.00	-555.0	KOP #2 - Start Build 12.00
7	10916.5	90.00	9.32	10606.0	-83.8	77.3	12.00	9.32	-83.3	LP - Start 6.8 hold at 10916.5 MD
8	10923.4	90.00	9.32	10606.0	-77.1	78.4	0.00	0.00	-76.5	Start DLS 2.00 TFO -89.41
9	11412.3	90.10	359.54	10605.6	409.7	116.1	2.00	-89.41	410.6	Start 907.8 hold at 11412.3 MD
10	12320.1	90.10	359.54	10604.0	1317.5	108.8	0.00	0.00	1318.3	WP1 - Start DLS 2.00 TFO -0.07
11	12433.1	92.36	359.54	10601.6	1430.5	107.9	2.00	-0.07	1431.3	Start 790.7 hold at 12433.1 MD
12	13223.8	92.36	359.54	10569.0	2220.5	101.5	0.00	0.00	2221.2	WP2 - Start DLS 2.00 TFO 180.00
13	13406.0	88.72	359.54	10567.3	2402.7	100.0	2.00	180.00	2403.4	Start 523.0 hold at 13406.0 MD
14	13929.0	88.72	359.54	10579.0	2925.5	95.8	0.00	0.00	2926.1	WP3 - Start DLS 2.00 TFO 1.73
15	13939.1	88.92	359.54	10579.2	2935.6	95.7	2.00	1.73	2936.2	Start 942.6 hold at 13939.1 MD
16	14881.7	88.92	359.54	10597.0	3878.0	88.2	0.00	0.00	3878.5	WP4 - Start DLS 2.00 TFO -0.30
17	14913.1	89.55	359.54	10597.4	3909.5	87.9	2.00	-0.30	3910.0	Start 1213.1 hold at 14913.1 MD
18	16126.3	89.55	359.54	10607.0	5122.5	78.2	0.00	0.00	5122.9	WP5 - Start 17.5 hold at 16126.3 MD
19	16180.0	89.55	359.54	10607.4	5176.3	77.8	0.00	0.00	5176.7	
20	17635.9	89.55	359.54	10619.0	6632.0	66.1	0.00	0.00	6632.3	WP6 - Start DLS 2.00 TFO 1.12
21	17648.2	89.79	359.54	10619.1	6644.3	66.0	2.00	1.12	6644.7	Start 1095.7 hold at 17648.2 MD
22	18743.9	89.79	359.54	10623.0	7740.0	57.3	0.00	0.00	7740.2	TD at 18743.9

000 usft/in)



Azimuths to Grid North
 True North: -0.39°
 Magnetic North: 6.21°

Magnetic Field
 Strength: 47692.8nT
 Dip Angle: 60.21°
 Date: 1/25/2021
 Model: IGRF2015





Advance Energy Partners

Hat Mesa

Dagger State

Dagger State Com 510H

Dagger State Com 510H

Plan: Dagger State Com 510H - Prelim 1

Standard Planning Report

02 February, 2021



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 510H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

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

Site	Dagger State			
Site Position:		Northing:	529,194.79 usft	Latitude: 32° 27' 9.770 N
From:	Lat/Long	Easting:	766,028.88 usft	Longitude: 103° 36' 17.644 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	

Well	Dagger State Com 510H			
Well Position	+N/-S	0.0 usft	Northing:	528,229.23 usft
	+E/-W	0.0 usft	Easting:	763,403.75 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,821.0 usft
Grid Convergence:	0.39 °			

Wellbore	Dagger State Com 510H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/25/2021	6.60	60.21	47,692.83926964

Design	Dagger State Com 510H - Prelim 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.42

Plan Survey Tool Program	Date	2/2/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,743.9	Dagger State Com 510H - Prelim	MWD+HRGM
			OWSG MWD + HRGM	



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Project:	Hat Mesa	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,450.0	0.00	0.00	5,450.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,297.1	8.47	180.00	6,294.1	-62.5	0.0	1.00	1.00	0.00	180.00	
9,215.9	8.47	180.00	9,180.9	-492.5	0.0	0.00	0.00	0.00	0.00	
10,063.0	0.00	0.00	10,025.0	-555.0	0.0	1.00	-1.00	0.00	180.00	
10,166.5	0.00	0.00	10,128.5	-555.0	0.0	0.00	0.00	0.00	0.00	
10,916.5	90.00	9.32	10,606.0	-83.8	77.3	12.00	12.00	0.00	9.32	
10,923.4	90.00	9.32	10,606.0	-77.1	78.4	0.00	0.00	0.00	0.00	Dagger State Com 51
11,412.3	90.10	359.54	10,605.6	409.7	116.1	2.00	0.02	-2.00	-89.41	
12,320.1	90.10	359.54	10,604.0	1,317.5	108.8	0.00	0.00	0.00	0.00	Dagger State Com 51
12,433.1	92.36	359.54	10,601.6	1,430.5	107.9	2.00	2.00	0.00	-0.07	
13,223.8	92.36	359.54	10,569.0	2,220.5	101.5	0.00	0.00	0.00	0.00	Dagger State Com 51
13,406.0	88.72	359.54	10,567.3	2,402.7	100.0	2.00	-2.00	0.00	180.00	
13,929.0	88.72	359.54	10,579.0	2,925.5	95.8	0.00	0.00	0.00	0.00	Dagger State Com 51
13,939.1	88.92	359.54	10,579.2	2,935.6	95.7	2.00	2.00	0.06	1.73	
14,881.7	88.92	359.54	10,597.0	3,878.0	88.2	0.00	0.00	0.00	0.00	Dagger State Com 51
14,913.1	89.55	359.54	10,597.4	3,909.5	87.9	2.00	2.00	-0.01	-0.30	
16,126.3	89.55	359.54	10,607.0	5,122.5	78.2	0.00	0.00	0.00	0.00	Dagger State Com 51
16,180.0	89.55	359.54	10,607.4	5,176.3	77.8	0.00	0.00	0.00	0.00	
17,635.9	89.55	359.54	10,619.0	6,632.0	66.1	0.00	0.00	0.00	0.00	Dagger State Com 51
17,648.2	89.79	359.54	10,619.1	6,644.3	66.0	2.00	2.00	0.04	1.12	
18,743.9	89.79	359.54	10,623.0	7,740.0	57.3	0.00	0.00	0.00	0.00	Dagger State Com 51



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Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,531.0	0.00	0.00	1,531.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00



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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)
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,357.0	0.00	0.00	5,357.0	0.0	0.0	0.0	0.00	0.00	0.00
Base of Limestone									
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,450.0	0.00	0.00	5,450.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.00									
5,500.0	0.50	180.00	5,500.0	-0.2	0.0	-0.2	1.00	1.00	0.00
5,600.0	1.50	180.00	5,600.0	-2.0	0.0	-2.0	1.00	1.00	0.00
5,700.0	2.50	180.00	5,699.9	-5.5	0.0	-5.5	1.00	1.00	0.00
5,800.0	3.50	180.00	5,799.8	-10.7	0.0	-10.7	1.00	1.00	0.00
5,900.0	4.50	180.00	5,899.5	-17.7	0.0	-17.7	1.00	1.00	0.00
6,000.0	5.50	180.00	5,999.2	-26.4	0.0	-26.4	1.00	1.00	0.00
6,100.0	6.50	180.00	6,098.6	-36.8	0.0	-36.8	1.00	1.00	0.00
6,200.0	7.50	180.00	6,197.9	-49.0	0.0	-49.0	1.00	1.00	0.00
6,297.1	8.47	180.00	6,294.1	-62.5	0.0	-62.5	1.00	1.00	0.00
Start 2918.7 hold at 6297.1 MD									
6,300.0	8.47	180.00	6,296.9	-62.9	0.0	-62.9	0.00	0.00	0.00
6,400.0	8.47	180.00	6,395.8	-77.7	0.0	-77.7	0.00	0.00	0.00
6,500.0	8.47	180.00	6,494.7	-92.4	0.0	-92.4	0.00	0.00	0.00
6,600.0	8.47	180.00	6,593.6	-107.1	0.0	-107.1	0.00	0.00	0.00
6,700.0	8.47	180.00	6,692.5	-121.9	0.0	-121.9	0.00	0.00	0.00
6,800.0	8.47	180.00	6,791.4	-136.6	0.0	-136.6	0.00	0.00	0.00
6,900.0	8.47	180.00	6,890.3	-151.3	0.0	-151.3	0.00	0.00	0.00
7,000.0	8.47	180.00	6,989.2	-166.1	0.0	-166.1	0.00	0.00	0.00
7,100.0	8.47	180.00	7,088.2	-180.8	0.0	-180.8	0.00	0.00	0.00
7,200.0	8.47	180.00	7,187.1	-195.5	0.0	-195.5	0.00	0.00	0.00
7,300.0	8.47	180.00	7,286.0	-210.2	0.0	-210.2	0.00	0.00	0.00
7,400.0	8.47	180.00	7,384.9	-225.0	0.0	-225.0	0.00	0.00	0.00
7,500.0	8.47	180.00	7,483.8	-239.7	0.0	-239.7	0.00	0.00	0.00
7,600.0	8.47	180.00	7,582.7	-254.4	0.0	-254.4	0.00	0.00	0.00
7,700.0	8.47	180.00	7,681.6	-269.2	0.0	-269.2	0.00	0.00	0.00
7,800.0	8.47	180.00	7,780.5	-283.9	0.0	-283.9	0.00	0.00	0.00
7,900.0	8.47	180.00	7,879.4	-298.6	0.0	-298.6	0.00	0.00	0.00
8,000.0	8.47	180.00	7,978.3	-313.4	0.0	-313.4	0.00	0.00	0.00
8,100.0	8.47	180.00	8,077.2	-328.1	0.0	-328.1	0.00	0.00	0.00
8,200.0	8.47	180.00	8,176.2	-342.8	0.0	-342.8	0.00	0.00	0.00
8,300.0	8.47	180.00	8,275.1	-357.6	0.0	-357.6	0.00	0.00	0.00
8,400.0	8.47	180.00	8,374.0	-372.3	0.0	-372.3	0.00	0.00	0.00
8,500.0	8.47	180.00	8,472.9	-387.0	0.0	-387.0	0.00	0.00	0.00
8,551.7	8.47	180.00	8,524.0	-394.6	0.0	-394.6	0.00	0.00	0.00
Lower Brushy									
8,600.0	8.47	180.00	8,571.8	-401.8	0.0	-401.7	0.00	0.00	0.00
8,700.0	8.47	180.00	8,670.7	-416.5	0.0	-416.5	0.00	0.00	0.00
8,800.0	8.47	180.00	8,769.6	-431.2	0.0	-431.2	0.00	0.00	0.00
8,900.0	8.47	180.00	8,868.5	-446.0	0.0	-445.9	0.00	0.00	0.00
9,000.0	8.47	180.00	8,967.4	-460.7	0.0	-460.7	0.00	0.00	0.00
9,093.6	8.47	180.00	9,060.0	-474.5	0.0	-474.5	0.00	0.00	0.00
Avalon									
9,100.0	8.47	180.00	9,066.3	-475.4	0.0	-475.4	0.00	0.00	0.00
9,200.0	8.47	180.00	9,165.2	-490.1	0.0	-490.1	0.00	0.00	0.00
9,215.9	8.47	180.00	9,180.9	-492.5	0.0	-492.5	0.00	0.00	0.00
Start Drop -1.00									



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 510H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

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)
9,300.0	7.63	180.00	9,264.2	-504.3	0.0	-504.3	1.00	-1.00	0.00
9,400.0	6.63	180.00	9,363.5	-516.7	0.0	-516.7	1.00	-1.00	0.00
9,500.0	5.63	180.00	9,462.9	-527.4	0.0	-527.3	1.00	-1.00	0.00
9,600.0	4.63	180.00	9,562.5	-536.3	0.0	-536.3	1.00	-1.00	0.00
9,700.0	3.63	180.00	9,662.2	-543.5	0.0	-543.5	1.00	-1.00	0.00
9,800.0	2.63	180.00	9,762.1	-549.0	0.0	-548.9	1.00	-1.00	0.00
9,900.0	1.63	180.00	9,862.0	-552.7	0.0	-552.7	1.00	-1.00	0.00
10,000.0	0.63	180.00	9,962.0	-554.7	0.0	-554.6	1.00	-1.00	0.00
10,034.0	0.29	180.00	9,996.0	-554.9	0.0	-554.9	1.00	-1.00	0.00
1st BS Sand									
10,063.0	0.00	0.00	10,025.0	-555.0	0.0	-555.0	1.00	-1.00	0.00
Start 103.5 hold at 10063.0 MD									
10,100.0	0.00	0.00	10,062.0	-555.0	0.0	-555.0	0.00	0.00	0.00
10,166.5	0.00	0.00	10,128.5	-555.0	0.0	-555.0	0.00	0.00	0.00
KOP #2 - Start Build 12.00									
10,200.0	4.01	9.32	10,162.0	-553.8	0.2	-553.8	12.00	12.00	0.00
10,300.0	16.01	9.32	10,260.3	-536.7	3.0	-536.7	12.00	12.00	0.00
10,400.0	28.01	9.32	10,352.8	-499.8	9.1	-499.7	12.00	12.00	0.00
10,500.0	40.01	9.32	10,435.5	-444.7	18.1	-444.5	12.00	12.00	0.00
10,600.0	52.01	9.32	10,504.9	-373.8	29.7	-373.6	12.00	12.00	0.00
10,658.6	59.05	9.32	10,538.0	-326.2	37.5	-325.9	12.00	12.00	0.00
2nd BS Sand									
10,700.0	64.01	9.32	10,557.7	-290.3	43.4	-289.9	12.00	12.00	0.00
10,800.0	76.01	9.32	10,591.8	-197.7	58.6	-197.3	12.00	12.00	0.00
10,900.0	88.01	9.32	10,605.7	-100.2	74.6	-99.6	12.00	12.00	0.00
10,916.5	90.00	9.32	10,606.0	-83.8	77.3	-83.3	12.00	12.00	0.00
LP - Start 6.8 hold at 10916.5 MD									
10,923.4	90.00	9.32	10,606.0	-77.1	78.4	-76.5	0.00	0.00	0.00
Start DLS 2.00 TFO -89.41 - Dagger State Com 510H LP									
11,000.0	90.02	7.78	10,606.0	-1.3	89.8	-0.7	2.00	0.02	-2.00
11,100.0	90.04	5.78	10,605.9	98.0	101.6	98.7	2.00	0.02	-2.00
11,200.0	90.06	3.78	10,605.9	197.6	109.9	198.4	2.00	0.02	-2.00
11,300.0	90.08	1.78	10,605.7	297.5	114.8	298.3	2.00	0.02	-2.00
11,400.0	90.10	359.78	10,605.6	397.5	116.2	398.3	2.00	0.02	-2.00
11,412.3	90.10	359.54	10,605.6	409.7	116.1	410.6	2.00	0.02	-2.00
Start 907.8 hold at 11412.3 MD									
11,500.0	90.10	359.54	10,605.4	497.5	115.4	498.3	0.00	0.00	0.00
11,600.0	90.10	359.54	10,605.2	597.5	114.6	598.3	0.00	0.00	0.00
11,700.0	90.10	359.54	10,605.1	697.5	113.8	698.3	0.00	0.00	0.00
11,800.0	90.10	359.54	10,604.9	797.5	113.0	798.3	0.00	0.00	0.00
11,900.0	90.10	359.54	10,604.7	897.5	112.2	898.3	0.00	0.00	0.00
12,000.0	90.10	359.54	10,604.6	997.5	111.4	998.3	0.00	0.00	0.00
12,100.0	90.10	359.54	10,604.4	1,097.5	110.6	1,098.2	0.00	0.00	0.00
12,200.0	90.10	359.54	10,604.2	1,197.5	109.8	1,198.2	0.00	0.00	0.00
12,300.0	90.10	359.54	10,604.0	1,297.4	109.0	1,298.2	0.00	0.00	0.00
12,320.1	90.10	359.54	10,604.0	1,317.5	108.8	1,318.3	0.00	0.00	0.00
WP1 - Start DLS 2.00 TFO -0.07 - Dagger State Com 510H WP1									
12,400.0	91.70	359.54	10,602.7	1,397.4	108.2	1,398.2	2.00	2.00	0.00
12,433.1	92.36	359.54	10,601.6	1,430.5	107.9	1,431.3	2.00	2.00	0.00
Start 790.7 hold at 12433.1 MD									
12,500.0	92.36	359.54	10,598.8	1,497.4	107.3	1,498.1	0.00	0.00	0.00
12,600.0	92.36	359.54	10,594.7	1,597.3	106.5	1,598.0	0.00	0.00	0.00
12,700.0	92.36	359.54	10,590.6	1,697.2	105.7	1,697.9	0.00	0.00	0.00



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Project:	Hat Mesa	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

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)
12,800.0	92.36	359.54	10,586.5	1,797.1	104.9	1,797.8	0.00	0.00	0.00
12,900.0	92.36	359.54	10,582.3	1,897.0	104.1	1,897.7	0.00	0.00	0.00
13,000.0	92.36	359.54	10,578.2	1,996.9	103.3	1,997.6	0.00	0.00	0.00
13,100.0	92.36	359.54	10,574.1	2,096.8	102.5	2,097.5	0.00	0.00	0.00
13,200.0	92.36	359.54	10,570.0	2,196.7	101.7	2,197.4	0.00	0.00	0.00
13,223.8	92.36	359.54	10,569.0	2,220.5	101.5	2,221.2	0.00	0.00	0.00
WP2 - Start DLS 2.00 TFO 180.00 - Dagger State Com 510H WP2									
13,300.0	90.84	359.54	10,566.9	2,296.7	100.9	2,297.4	2.00	-2.00	0.00
13,400.0	88.84	359.54	10,567.2	2,396.7	100.1	2,397.3	2.00	-2.00	0.00
13,406.0	88.72	359.54	10,567.3	2,402.7	100.0	2,403.4	2.00	-2.00	0.00
Start 523.0 hold at 13406.0 MD									
13,500.0	88.72	359.54	10,569.4	2,496.6	99.3	2,497.3	0.00	0.00	0.00
13,600.0	88.72	359.54	10,571.6	2,596.6	98.5	2,597.3	0.00	0.00	0.00
13,700.0	88.72	359.54	10,573.9	2,696.6	97.7	2,697.2	0.00	0.00	0.00
13,800.0	88.72	359.54	10,576.1	2,796.6	96.8	2,797.2	0.00	0.00	0.00
13,900.0	88.72	359.54	10,578.4	2,896.5	96.0	2,897.2	0.00	0.00	0.00
13,929.0	88.72	359.54	10,579.0	2,925.5	95.8	2,926.1	0.00	0.00	0.00
WP3 - Start DLS 2.00 TFO 1.73 - Dagger State Com 510H WP3									
13,939.1	88.92	359.54	10,579.2	2,935.6	95.7	2,936.2	2.00	2.00	0.06
Start 942.6 hold at 13939.1 MD									
14,000.0	88.92	359.54	10,580.4	2,996.5	95.2	2,997.1	0.00	0.00	0.00
14,100.0	88.92	359.54	10,582.2	3,096.5	94.4	3,097.1	0.00	0.00	0.00
14,200.0	88.92	359.54	10,584.1	3,196.5	93.6	3,197.1	0.00	0.00	0.00
14,300.0	88.92	359.54	10,586.0	3,296.4	92.8	3,297.0	0.00	0.00	0.00
14,400.0	88.92	359.54	10,587.9	3,396.4	92.0	3,397.0	0.00	0.00	0.00
14,500.0	88.92	359.54	10,589.8	3,496.4	91.2	3,497.0	0.00	0.00	0.00
14,600.0	88.92	359.54	10,591.7	3,596.4	90.4	3,597.0	0.00	0.00	0.00
14,700.0	88.92	359.54	10,593.6	3,696.4	89.6	3,696.9	0.00	0.00	0.00
14,800.0	88.92	359.54	10,595.5	3,796.3	88.9	3,796.9	0.00	0.00	0.00
14,881.7	88.92	359.54	10,597.0	3,878.0	88.2	3,878.5	0.00	0.00	0.00
WP4 - Start DLS 2.00 TFO -0.30 - Dagger State Com 510H WP4									
14,900.0	89.28	359.54	10,597.3	3,896.3	88.1	3,896.9	2.00	2.00	-0.01
14,913.1	89.55	359.54	10,597.4	3,909.5	87.9	3,910.0	2.00	2.00	-0.01
Start 1213.1 hold at 14913.1 MD									
15,000.0	89.55	359.54	10,598.1	3,996.3	87.3	3,996.8	0.00	0.00	0.00
15,100.0	89.55	359.54	10,598.9	4,096.3	86.4	4,096.8	0.00	0.00	0.00
15,200.0	89.55	359.54	10,599.7	4,196.3	85.6	4,196.8	0.00	0.00	0.00
15,300.0	89.55	359.54	10,600.5	4,296.3	84.8	4,296.8	0.00	0.00	0.00
15,400.0	89.55	359.54	10,601.3	4,396.3	84.0	4,396.8	0.00	0.00	0.00
15,500.0	89.55	359.54	10,602.1	4,496.3	83.2	4,496.8	0.00	0.00	0.00
15,600.0	89.55	359.54	10,602.8	4,596.3	82.4	4,596.8	0.00	0.00	0.00
15,700.0	89.55	359.54	10,603.6	4,696.3	81.6	4,696.7	0.00	0.00	0.00
15,800.0	89.55	359.54	10,604.4	4,796.3	80.8	4,796.7	0.00	0.00	0.00
15,900.0	89.55	359.54	10,605.2	4,896.3	80.0	4,896.7	0.00	0.00	0.00
16,000.0	89.55	359.54	10,606.0	4,996.2	79.2	4,996.7	0.00	0.00	0.00
16,100.0	89.55	359.54	10,606.8	5,096.2	78.4	5,096.7	0.00	0.00	0.00
16,126.3	89.55	359.54	10,607.0	5,122.5	78.2	5,122.9	0.00	0.00	0.00
WP5 - Start 17.5 hold at 16126.3 MD - Dagger State Com 510H WP5									
16,143.8	89.55	359.54	10,607.1	5,140.0	78.1	5,140.5	0.00	0.00	0.00
Start 1492.1 hold at 16143.8 MD									
16,180.0	89.55	359.54	10,607.4	5,176.3	77.8	5,176.7	0.00	0.00	0.00
16,200.0	89.55	359.54	10,607.6	5,196.2	77.6	5,196.7	0.00	0.00	0.00
16,300.0	89.55	359.54	10,608.4	5,296.2	76.8	5,296.7	0.00	0.00	0.00



Planning Report

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Project:	Hat Mesa	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

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)
16,400.0	89.55	359.54	10,609.2	5,396.2	76.0	5,396.6	0.00	0.00	0.00
16,500.0	89.55	359.54	10,610.0	5,496.2	75.2	5,496.6	0.00	0.00	0.00
16,600.0	89.55	359.54	10,610.7	5,596.2	74.4	5,596.6	0.00	0.00	0.00
16,700.0	89.55	359.54	10,611.5	5,696.2	73.6	5,696.6	0.00	0.00	0.00
16,800.0	89.55	359.54	10,612.3	5,796.2	72.8	5,796.6	0.00	0.00	0.00
16,900.0	89.55	359.54	10,613.1	5,896.2	72.0	5,896.6	0.00	0.00	0.00
17,000.0	89.55	359.54	10,613.9	5,996.2	71.2	5,996.5	0.00	0.00	0.00
17,100.0	89.55	359.54	10,614.7	6,096.2	70.4	6,096.5	0.00	0.00	0.00
17,200.0	89.55	359.54	10,615.5	6,196.2	69.6	6,196.5	0.00	0.00	0.00
17,300.0	89.55	359.54	10,616.3	6,296.2	68.8	6,296.5	0.00	0.00	0.00
17,400.0	89.55	359.54	10,617.1	6,396.2	68.0	6,396.5	0.00	0.00	0.00
17,500.0	89.55	359.54	10,617.8	6,496.2	67.2	6,496.5	0.00	0.00	0.00
17,600.0	89.55	359.54	10,618.6	6,596.1	66.4	6,596.5	0.00	0.00	0.00
17,635.9	89.55	359.54	10,618.9	6,632.0	66.1	6,632.3	0.00	0.00	0.00
WP6 - Start DLS 2.00 TFO 1.12 - Dagger State Com 510H WP6									
17,648.2	89.79	359.54	10,619.1	6,644.3	66.0	6,644.7	2.00	2.00	0.04
Start 1095.7 hold at 17648.2 MD									
17,700.0	89.79	359.54	10,619.3	6,696.1	65.6	6,696.4	0.00	0.00	0.00
17,800.0	89.79	359.54	10,619.6	6,796.1	64.8	6,796.4	0.00	0.00	0.00
17,900.0	89.79	359.54	10,620.0	6,896.1	64.0	6,896.4	0.00	0.00	0.00
18,000.0	89.79	359.54	10,620.3	6,996.1	63.2	6,996.4	0.00	0.00	0.00
18,100.0	89.79	359.54	10,620.7	7,096.1	62.4	7,096.4	0.00	0.00	0.00
18,200.0	89.79	359.54	10,621.0	7,196.1	61.6	7,196.4	0.00	0.00	0.00
18,300.0	89.79	359.54	10,621.4	7,296.1	60.8	7,296.4	0.00	0.00	0.00
18,400.0	89.79	359.54	10,621.8	7,396.1	60.0	7,396.4	0.00	0.00	0.00
18,500.0	89.79	359.54	10,622.1	7,496.1	59.2	7,496.3	0.00	0.00	0.00
18,600.0	89.79	359.54	10,622.5	7,596.1	58.4	7,596.3	0.00	0.00	0.00
18,700.0	89.79	359.54	10,622.8	7,696.1	57.6	7,696.3	0.00	0.00	0.00
18,743.9	89.79	359.54	10,623.0	7,740.0	57.3	7,740.2	0.00	0.00	0.00
TD at 18743.9 - Dagger State Com 510H BHL									



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Wellbore:	Dagger State Com 510H		
Design:	Dagger State Com 510H - Prelim 1		

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
Dagger State Com 510H - plan hits target center - Point	0.00	0.00	10,569.0	2,220.5	101.5	530,449.73	763,505.25	32° 27' 22.357 N	103° 36' 46.996 W
Dagger State Com 510H - plan hits target center - Point	0.00	0.00	10,579.0	2,925.5	95.8	531,154.73	763,499.55	32° 27' 29.334 N	103° 36' 47.007 W
Dagger State Com 510H - plan hits target center - Point	0.00	0.01	10,597.0	3,878.0	88.2	532,107.23	763,491.95	32° 27' 38.759 N	103° 36' 47.021 W
Dagger State Com 510H - plan hits target center - Point	0.00	0.00	10,604.0	1,317.5	108.8	529,546.73	763,512.55	32° 27' 13.422 N	103° 36' 46.982 W
Dagger State Com 510H - plan hits target center - Point	0.00	0.00	10,606.0	-77.1	78.4	528,152.14	763,482.15	32° 26' 59.624 N	103° 36' 47.446 W
Dagger State Com 510H - plan hits target center - Point	0.00	0.00	10,607.0	5,122.5	78.2	533,351.73	763,481.95	32° 27' 51.074 N	103° 36' 47.039 W
Dagger State Com 510H - plan misses target center by 0.1usft at 17635.9usft MD (10618.9 TVD, 6632.0 N, 66.1 E) - Point	0.00	0.01	10,619.0	6,632.0	66.1	534,861.23	763,469.85	32° 28' 6.011 N	103° 36' 47.062 W
Dagger State Com 510H - plan hits target center - Point	0.00	0.00	10,623.0	7,740.0	57.3	535,969.23	763,461.04	32° 28' 16.975 N	103° 36' 47.077 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
10,916.5	10,606.0	LP	5-1/2	5-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,531.0	1,531.0	Rustler		0.00		
5,357.0	5,357.0	Base of Limestone		0.00		
8,551.7	8,524.0	Lower Brushy		0.00		
9,093.6	9,060.0	Avalon		0.00		
10,034.0	9,996.0	1st BS Sand		0.00		
10,658.6	10,538.0	2nd BS Sand		0.00		



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Design:	Dagger State Com 510H - Prelim 1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,450.0	5,450.0	0.0	0.0	KOP - Start Build 1.00
6,297.1	6,294.1	-62.5	0.0	Start 2918.7 hold at 6297.1 MD
9,215.9	9,180.9	-492.5	0.0	Start Drop -1.00
10,063.0	10,025.0	-555.0	0.0	Start 103.5 hold at 10063.0 MD
10,166.5	10,128.5	-555.0	0.0	KOP #2 - Start Build 12.00
10,916.5	10,606.0	-83.8	77.3	LP - Start 6.8 hold at 10916.5 MD
10,923.4	10,606.0	-77.1	78.4	Start DLS 2.00 TFO -89.41
11,412.3	10,605.6	409.7	116.1	Start 907.8 hold at 11412.3 MD
12,320.1	10,604.0	1,317.5	108.8	WP1 - Start DLS 2.00 TFO -0.07
12,433.1	10,601.6	1,430.5	107.9	Start 790.7 hold at 12433.1 MD
13,223.8	10,569.0	2,220.5	101.5	WP2 - Start DLS 2.00 TFO 180.00
13,406.0	10,567.3	2,402.7	100.0	Start 523.0 hold at 13406.0 MD
13,929.0	10,579.0	2,925.5	95.8	WP3 - Start DLS 2.00 TFO 1.73
13,939.1	10,579.2	2,935.6	95.7	Start 942.6 hold at 13939.1 MD
14,881.7	10,597.0	3,878.0	88.2	WP4 - Start DLS 2.00 TFO -0.30
14,913.1	10,597.4	3,909.5	87.9	Start 1213.1 hold at 14913.1 MD
16,126.3	10,607.0	5,122.5	78.2	WP5 - Start 17.5 hold at 16126.3 MD
16,143.8	10,607.1	5,140.0	78.1	Start 1492.1 hold at 16143.8 MD
17,635.9	10,619.0	6,632.0	66.1	WP6 - Start DLS 2.00 TFO 1.12
17,648.2	10,619.1	6,644.3	66.0	Start 1095.7 hold at 17648.2 MD
18,743.9	10,623.0	7,740.0	57.3	TD at 18743.9



Advance Energy Partners

Hat Mesa

Dagger State

Dagger State Com 510H

Dagger State Com 510H

Dagger State Com 510H - Prelim 1

Anticollision Report

02 February, 2021



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference	Dagger State Com 510H - Prelim 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 2/2/2021	
From (usft)	To (usft)	Survey (Wellbore)
0.0	18,743.9	Dagger State Com 510H - Prelim 1 (Dagge
		Tool Name
		MWD+HRGM
		Description
		OWSG MWD + HRGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Dagger State						
Dagger State Com 554H - Dagger State Com 554H - Da	5,450.0	5,449.0	33.1	5.6	1.205	Level 3, CC
Dagger State Com 554H - Dagger State Com 554H - Da	5,500.0	5,499.0	33.2	5.6	1.202	Level 3, ES
Dagger State Com 554H - Dagger State Com 554H - Da	5,600.0	5,599.0	33.4	5.6	1.201	Level 3, SF
Dagger State Com 606H - Dagger State Com 606H - Da	5,450.0	5,449.0	63.3	35.8	2.302	CC
Dagger State Com 606H - Dagger State Com 606H - Da	5,600.0	5,599.0	63.4	35.7	2.283	ES
Dagger State Com 606H - Dagger State Com 606H - Da	10,525.0	10,473.2	105.4	57.5	2.198	SF

Offset Design:	Dagger State - Dagger State Com 554H - Dagger State Com 554H - Dagger State Com 554H - Prelim 1												Offset Site Error:	0.0 usft
Survey Program:	0-MWD+HRGM												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	84.57	3.1	33.0	33.2					
100.0	100.0	99.0	99.0	0.5	0.5	84.57	3.1	33.0	33.1	32.1	1.06	31.408		
200.0	200.0	199.0	199.0	1.7	1.7	84.57	3.1	33.0	33.1	29.7	3.41	9.712		
300.0	300.0	299.0	299.0	2.4	2.4	84.57	3.1	33.0	33.1	28.3	4.82	6.880		
400.0	400.0	399.0	399.0	3.0	2.9	84.57	3.1	33.0	33.1	27.2	5.90	5.614		
500.0	500.0	499.0	499.0	3.4	3.4	84.57	3.1	33.0	33.1	26.3	6.83	4.855		
600.0	600.0	599.0	599.0	3.8	3.8	84.57	3.1	33.0	33.1	25.5	7.64	4.335		
700.0	700.0	699.0	699.0	4.2	4.2	84.57	3.1	33.0	33.1	24.7	8.39	3.949		
800.0	800.0	799.0	799.0	4.5	4.5	84.57	3.1	33.0	33.1	24.1	9.08	3.649		
900.0	900.0	899.0	899.0	4.9	4.9	84.57	3.1	33.0	33.1	23.4	9.73	3.407		
1,000.0	1,000.0	999.0	999.0	5.2	5.2	84.57	3.1	33.0	33.1	22.8	10.34	3.205		
1,100.0	1,100.0	1,099.0	1,099.0	5.5	5.5	84.57	3.1	33.0	33.1	22.2	10.92	3.034		
1,200.0	1,200.0	1,199.0	1,199.0	5.7	5.7	84.57	3.1	33.0	33.1	21.7	11.48	2.887		
1,300.0	1,300.0	1,299.0	1,299.0	6.0	6.0	84.57	3.1	33.0	33.1	21.1	12.01	2.758		
1,400.0	1,400.0	1,399.0	1,399.0	6.3	6.3	84.57	3.1	33.0	33.1	20.6	12.53	2.645		
1,500.0	1,500.0	1,499.0	1,499.0	6.5	6.5	84.57	3.1	33.0	33.1	20.1	13.03	2.543		
1,600.0	1,600.0	1,599.0	1,599.0	6.8	6.8	84.57	3.1	33.0	33.1	19.6	13.51	2.452		
1,700.0	1,700.0	1,699.0	1,699.0	7.0	7.0	84.57	3.1	33.0	33.1	19.1	13.99	2.369		
1,800.0	1,800.0	1,799.0	1,799.0	7.2	7.2	84.57	3.1	33.0	33.1	18.7	14.45	2.294		
1,900.0	1,900.0	1,899.0	1,899.0	7.4	7.4	84.57	3.1	33.0	33.1	18.2	14.90	2.224		
2,000.0	2,000.0	1,999.0	1,999.0	7.7	7.7	84.57	3.1	33.0	33.1	17.8	15.34	2.160		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 554H - Dagger State Com 554H - Dagger State Com 554H - Prelim 1													Offset Site Error: 0.0 usft	
Survey Program: Reference		0-MWD+HRGM Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance				Offset Well Error: 0.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
2,100.0	2,100.0	2,099.0	2,099.0	7.9	7.9	84.57	3.1	33.0	33.1	17.4	15.77	2.101		
2,200.0	2,200.0	2,199.0	2,199.0	8.1	8.1	84.57	3.1	33.0	33.1	16.9	16.19	2.047		
2,300.0	2,300.0	2,299.0	2,299.0	8.3	8.3	84.57	3.1	33.0	33.1	16.5	16.61	1.995		
2,400.0	2,400.0	2,399.0	2,399.0	8.5	8.5	84.57	3.1	33.0	33.1	16.1	17.01	1.948		
2,500.0	2,500.0	2,499.0	2,499.0	8.7	8.7	84.57	3.1	33.0	33.1	15.7	17.42	1.903		
2,600.0	2,600.0	2,599.0	2,599.0	8.9	8.9	84.57	3.1	33.0	33.1	15.3	17.81	1.860		
2,700.0	2,700.0	2,699.0	2,699.0	9.1	9.1	84.57	3.1	33.0	33.1	14.9	18.20	1.821		
2,800.0	2,800.0	2,799.0	2,799.0	9.3	9.3	84.57	3.1	33.0	33.1	14.6	18.58	1.783		
2,900.0	2,900.0	2,899.0	2,899.0	9.5	9.5	84.57	3.1	33.0	33.1	14.2	18.96	1.747		
3,000.0	3,000.0	2,999.0	2,999.0	9.7	9.7	84.57	3.1	33.0	33.1	13.8	19.34	1.714		
3,100.0	3,100.0	3,099.0	3,099.0	9.9	9.9	84.57	3.1	33.0	33.1	13.4	19.71	1.681		
3,200.0	3,200.0	3,199.0	3,199.0	10.0	10.0	84.57	3.1	33.0	33.1	13.1	20.07	1.651		
3,300.0	3,300.0	3,299.0	3,299.0	10.2	10.2	84.57	3.1	33.0	33.1	12.7	20.43	1.622		
3,400.0	3,400.0	3,399.0	3,399.0	10.4	10.4	84.57	3.1	33.0	33.1	12.3	20.79	1.594		
3,500.0	3,500.0	3,499.0	3,499.0	10.6	10.6	84.57	3.1	33.0	33.1	12.0	21.15	1.567		
3,600.0	3,600.0	3,599.0	3,599.0	10.7	10.7	84.57	3.1	33.0	33.1	11.6	21.50	1.541		
3,700.0	3,700.0	3,699.0	3,699.0	10.9	10.9	84.57	3.1	33.0	33.1	11.3	21.84	1.517		
3,800.0	3,800.0	3,799.0	3,799.0	11.1	11.1	84.57	3.1	33.0	33.1	10.9	22.19	1.493 Level 3		
3,900.0	3,900.0	3,899.0	3,899.0	11.3	11.3	84.57	3.1	33.0	33.1	10.6	22.53	1.471 Level 3		
4,000.0	4,000.0	3,999.0	3,999.0	11.4	11.4	84.57	3.1	33.0	33.1	10.3	22.87	1.449 Level 3		
4,100.0	4,100.0	4,099.0	4,099.0	11.6	11.6	84.57	3.1	33.0	33.1	9.9	23.21	1.428 Level 3		
4,200.0	4,200.0	4,199.0	4,199.0	11.8	11.8	84.57	3.1	33.0	33.1	9.6	23.54	1.408 Level 3		
4,300.0	4,300.0	4,299.0	4,299.0	11.9	11.9	84.57	3.1	33.0	33.1	9.3	23.87	1.388 Level 3		
4,400.0	4,400.0	4,399.0	4,399.0	12.1	12.1	84.57	3.1	33.0	33.1	8.9	24.20	1.369 Level 3		
4,500.0	4,500.0	4,499.0	4,499.0	12.3	12.3	84.57	3.1	33.0	33.1	8.6	24.52	1.351 Level 3		
4,600.0	4,600.0	4,599.0	4,599.0	12.4	12.4	84.57	3.1	33.0	33.1	8.3	24.85	1.334 Level 3		
4,700.0	4,700.0	4,699.0	4,699.0	12.6	12.6	84.57	3.1	33.0	33.1	8.0	25.17	1.316 Level 3		
4,800.0	4,800.0	4,799.0	4,799.0	12.7	12.7	84.57	3.1	33.0	33.1	7.6	25.49	1.300 Level 3		
4,900.0	4,900.0	4,899.0	4,899.0	12.9	12.9	84.57	3.1	33.0	33.1	7.3	25.81	1.284 Level 3		
5,000.0	5,000.0	4,999.0	4,999.0	13.1	13.1	84.57	3.1	33.0	33.1	7.0	26.12	1.268 Level 3		
5,100.0	5,100.0	5,099.0	5,099.0	13.2	13.2	84.57	3.1	33.0	33.1	6.7	26.44	1.253 Level 3		
5,200.0	5,200.0	5,199.0	5,199.0	13.4	13.4	84.57	3.1	33.0	33.1	6.4	26.75	1.239 Level 3		
5,300.0	5,300.0	5,299.0	5,299.0	13.5	13.5	84.57	3.1	33.0	33.1	6.1	27.06	1.224 Level 3		
5,400.0	5,400.0	5,399.0	5,399.0	13.7	13.7	84.57	3.1	33.0	33.1	5.8	27.37	1.211 Level 3		
5,450.0	5,450.0	5,449.0	5,449.0	13.7	13.8	84.57	3.1	33.0	33.1	5.6	27.49	1.205 Level 3, CC		
5,500.0	5,500.0	5,499.0	5,499.0	13.8	13.8	-95.80	3.1	33.0	33.2	5.6	27.59	1.202 Level 3, ES		
5,600.0	5,600.0	5,599.0	5,599.0	13.8	14.0	-98.78	3.1	33.0	33.4	5.6	27.78	1.201 Level 3, SF		
5,700.0	5,699.9	5,699.0	5,699.0	13.9	14.1	-104.24	2.9	33.0	34.0	6.1	27.91	1.220 Level 3		
5,800.0	5,799.8	5,799.1	5,799.1	14.0	14.1	-109.75	1.2	33.1	35.1	7.1	28.00	1.255 Level 3		
5,900.0	5,899.5	5,899.2	5,899.1	14.1	14.2	-114.84	-2.3	33.2	36.6	8.5	28.12	1.302 Level 3		
6,000.0	5,999.2	5,999.4	5,999.2	14.2	14.3	-119.44	-7.5	33.5	38.4	10.2	28.26	1.360 Level 3		
6,100.0	6,098.6	6,099.7	6,099.2	14.4	14.4	-123.53	-14.5	33.8	40.5	12.1	28.42	1.426 Level 3		
6,200.0	6,197.9	6,200.0	6,199.2	14.5	14.5	-127.14	-23.2	34.2	42.9	14.2	28.63	1.498 Level 3		
6,297.1	6,294.1	6,297.6	6,296.2	14.7	14.6	-130.21	-33.4	34.6	45.4	16.5	28.87	1.571		
6,300.0	6,296.9	6,300.4	6,299.0	14.7	14.6	-130.29	-33.7	34.6	45.4	16.6	28.87	1.574		
6,400.0	6,395.8	6,400.8	6,398.7	15.0	14.8	-132.26	-45.9	35.2	47.6	18.5	29.10	1.634		
6,500.0	6,494.7	6,500.8	6,497.8	15.2	15.0	-133.54	-58.7	35.8	49.3	19.9	29.41	1.678		
6,600.0	6,593.6	6,600.8	6,597.0	15.5	15.2	-134.73	-71.4	36.3	51.2	21.4	29.76	1.719		
6,700.0	6,692.5	6,700.7	6,696.2	15.8	15.4	-135.84	-84.1	36.9	53.0	22.8	30.15	1.757		
6,800.0	6,791.4	6,800.7	6,795.3	16.1	15.7	-136.88	-96.9	37.5	54.8	24.3	30.58	1.793		
6,900.0	6,890.3	6,900.7	6,894.5	16.4	16.0	-137.84	-109.6	38.0	56.7	25.7	31.05	1.826		
7,000.0	6,989.2	7,000.7	6,993.6	16.8	16.3	-138.75	-122.3	38.6	58.6	27.0	31.55	1.857		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

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Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 554H - Dagger State Com 554H - Dagger State Com 554H - Prelim 1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	7,088.2	7,100.7	7,092.8	17.1	16.6	-139.60	-135.1	39.2	60.5	28.4	32.08	1.885	
7,200.0	7,187.1	7,200.6	7,192.0	17.5	16.9	-140.39	-147.8	39.8	62.4	29.7	32.65	1.911	
7,300.0	7,286.0	7,300.6	7,291.1	17.9	17.2	-141.14	-160.5	40.3	64.3	31.1	33.25	1.934	
7,400.0	7,384.9	7,400.6	7,390.3	18.3	17.6	-141.85	-173.3	40.9	66.2	32.4	33.88	1.955	
7,500.0	7,483.8	7,500.6	7,489.5	18.7	17.9	-142.52	-186.0	41.5	68.2	33.6	34.53	1.974	
7,600.0	7,582.7	7,600.6	7,588.6	19.1	18.3	-143.14	-198.8	42.0	70.1	34.9	35.21	1.991	
7,700.0	7,681.6	7,700.5	7,687.8	19.5	18.7	-143.74	-211.5	42.6	72.1	36.2	35.92	2.006	
7,800.0	7,780.5	7,800.5	7,786.9	20.0	19.1	-144.30	-224.2	43.2	74.0	37.4	36.65	2.020	
7,900.0	7,879.4	7,900.5	7,886.1	20.4	19.5	-144.84	-237.0	43.8	76.0	38.6	37.40	2.032	
8,000.0	7,978.3	8,000.5	7,985.3	20.9	19.9	-145.34	-249.7	44.3	78.0	39.8	38.18	2.042	
8,100.0	8,077.2	8,100.4	8,084.4	21.3	20.4	-145.83	-262.4	44.9	80.0	41.0	38.97	2.052	
8,200.0	8,176.2	8,200.4	8,183.6	21.8	20.8	-146.28	-275.2	45.5	81.9	42.2	39.79	2.060	
8,300.0	8,275.1	8,300.4	8,282.7	22.3	21.2	-146.72	-287.9	46.1	83.9	43.3	40.62	2.067	
8,400.0	8,374.0	8,400.4	8,381.9	22.8	21.7	-147.14	-300.7	46.6	85.9	44.5	41.47	2.072	
8,500.0	8,472.9	8,500.4	8,481.1	23.3	22.1	-147.54	-313.4	47.2	87.9	45.6	42.33	2.077	
8,600.0	8,571.8	8,600.3	8,580.2	23.8	22.6	-147.92	-326.1	47.8	89.9	46.7	43.21	2.082	
8,700.0	8,670.7	8,700.3	8,679.4	24.3	23.1	-148.28	-338.9	48.3	92.0	47.8	44.10	2.085	
8,800.0	8,769.6	8,800.3	8,778.6	24.8	23.5	-148.63	-351.6	48.9	94.0	49.0	45.01	2.088	
8,900.0	8,868.5	8,900.3	8,877.7	25.3	24.0	-148.96	-364.3	49.5	96.0	50.1	45.93	2.090	
9,000.0	8,967.4	9,000.2	8,976.9	25.8	24.5	-149.28	-377.1	50.1	98.0	51.1	46.86	2.091	
9,100.0	9,066.3	9,100.2	9,076.0	26.3	25.0	-149.59	-389.8	50.6	100.0	52.2	47.80	2.093	
9,200.0	9,165.2	9,200.2	9,175.2	26.9	25.5	-149.88	-402.6	51.2	102.0	53.3	48.75	2.093	
9,215.9	9,180.9	9,216.1	9,190.9	26.9	25.6	-149.93	-404.6	51.3	102.4	53.5	48.89	2.094	
9,300.0	9,264.2	9,300.2	9,274.4	27.4	26.0	-150.00	-415.3	51.8	103.5	53.9	49.64	2.086	
9,400.0	9,363.5	9,400.2	9,373.6	27.9	26.5	-149.63	-428.0	52.3	103.5	53.1	50.43	2.053	
9,500.0	9,462.9	9,500.2	9,472.7	28.4	27.0	-148.76	-440.8	52.9	102.0	51.0	51.08	1.998	
9,600.0	9,562.5	9,600.1	9,571.8	28.9	27.5	-147.32	-453.5	53.5	99.1	47.6	51.54	1.923	
9,700.0	9,662.2	9,699.9	9,670.8	29.3	28.0	-145.19	-466.2	54.1	94.8	43.1	51.74	1.832	
9,800.0	9,762.1	9,799.7	9,769.8	29.8	28.5	-142.18	-478.9	54.6	89.2	37.7	51.59	1.730	
9,900.0	9,862.0	9,899.2	9,868.5	30.1	29.1	-137.98	-491.6	55.2	82.7	31.7	50.91	1.624	
10,000.0	9,962.0	9,998.7	9,967.1	30.5	29.6	-132.13	-504.3	55.8	75.4	25.9	49.45	1.525	
10,063.0	10,025.0	10,060.9	10,028.9	30.6	29.9	52.59	-512.1	56.1	70.8	22.8	47.97	1.476 Level 3	
10,100.0	10,062.0	10,097.4	10,065.1	30.6	30.1	55.54	-516.4	56.3	68.4	21.4	46.98	1.456 Level 3	
10,166.5	10,128.5	10,163.2	10,130.5	30.6	30.4	60.91	-523.5	56.6	64.9	19.6	45.24	1.434 Level 3	
10,175.0	10,137.0	10,171.5	10,138.8	30.6	30.4	52.36	-524.3	56.7	64.4	19.4	45.00	1.432 Level 3	
10,200.0	10,162.0	10,196.2	10,163.4	30.5	30.6	55.32	-526.8	56.8	62.8	18.7	44.09	1.424 Level 3	
10,225.0	10,186.8	10,220.6	10,187.7	30.4	30.7	59.39	-529.1	56.9	60.6	17.7	42.91	1.412 Level 3	
10,250.0	10,211.6	10,244.8	10,211.8	30.3	30.8	64.73	-531.3	57.0	58.2	16.6	41.55	1.401 Level 3	
10,275.0	10,236.1	10,268.8	10,235.7	30.2	30.9	71.47	-533.4	57.1	55.9	15.6	40.31	1.387 Level 3	
10,300.0	10,260.3	10,292.4	10,259.2	30.1	31.0	79.60	-535.3	57.2	54.2	14.5	39.72	1.364 Level 3	
10,321.9	10,281.1	10,312.7	10,279.4	30.0	31.1	87.68	-536.9	57.2	53.6	13.3	40.32	1.329 Level 3	
10,325.0	10,284.1	10,315.6	10,282.3	30.0	31.1	88.88	-537.1	57.2	53.6	13.1	40.51	1.323 Level 3	
10,350.0	10,307.5	10,338.4	10,305.0	29.9	31.2	98.77	-538.8	57.3	54.8	11.8	43.05	1.273 Level 3	
10,375.0	10,330.4	10,360.6	10,327.2	29.8	31.3	108.53	-540.4	57.4	58.3	11.5	46.80	1.245 Level 3	
10,400.0	10,352.8	10,382.4	10,348.9	29.7	31.4	117.48	-541.9	57.4	64.2	13.5	50.69	1.266 Level 3	
10,425.0	10,374.6	10,403.5	10,370.0	29.5	31.5	125.22	-543.2	57.5	72.5	18.5	53.96	1.344 Level 3	
10,450.0	10,395.6	10,424.0	10,390.5	29.4	31.6	131.65	-544.4	57.6	83.0	26.6	56.36	1.472 Level 3	
10,475.0	10,416.0	10,443.8	10,410.3	29.3	31.7	136.87	-545.5	57.6	95.3	37.3	58.01	1.644	
10,500.0	10,435.5	10,462.9	10,429.3	29.2	31.8	141.04	-546.5	57.7	109.3	50.2	59.10	1.850	
10,525.0	10,454.3	10,481.1	10,447.5	29.1	31.9	144.33	-547.4	57.7	124.8	65.0	59.81	2.086	
10,550.0	10,472.1	10,498.5	10,464.9	29.0	32.0	146.90	-548.2	57.7	141.5	81.2	60.26	2.348	
10,575.0	10,489.0	10,515.0	10,481.4	28.9	32.0	148.87	-548.9	57.8	159.3	98.7	60.54	2.631	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 554H - Dagger State Com 554H - Dagger State Com 554H - Prelim 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,600.0	10,504.9	10,530.6	10,497.0	28.8	32.1	150.32	-549.5	57.8	178.1	117.4	60.70	2.934	
10,625.0	10,519.7	10,545.2	10,511.5	28.7	32.1	151.30	-550.1	57.8	197.8	137.0	60.79	3.253	
10,650.0	10,533.5	10,558.8	10,525.1	28.6	32.2	151.86	-550.6	57.8	218.3	157.5	60.84	3.589	
10,675.0	10,546.2	10,571.2	10,537.6	28.5	32.2	151.99	-551.0	57.9	239.6	178.8	60.85	3.938	
10,700.0	10,557.7	10,582.6	10,548.9	28.4	32.3	151.67	-551.3	57.9	261.6	200.7	60.85	4.299	
10,725.0	10,568.1	10,592.8	10,559.1	28.4	32.3	150.83	-551.6	57.9	284.1	223.3	60.83	4.671	
10,750.0	10,577.2	10,601.8	10,568.1	28.3	32.4	149.34	-551.9	57.9	307.2	246.4	60.80	5.052	
10,775.0	10,585.2	10,609.5	10,575.9	28.2	32.4	146.98	-552.1	57.9	330.7	269.9	60.77	5.442	
10,800.0	10,591.8	10,616.0	10,582.3	28.2	32.4	143.39	-552.2	57.9	354.6	293.9	60.73	5.839	
10,825.0	10,597.3	10,621.2	10,587.5	28.2	32.4	137.90	-552.3	57.9	378.8	318.1	60.70	6.241	
10,850.0	10,601.4	10,625.0	10,591.3	28.1	32.4	129.34	-552.4	57.9	403.3	342.7	60.67	6.648	
10,875.0	10,604.2	10,627.5	10,593.8	28.1	32.5	115.85	-552.5	57.9	428.0	367.3	60.65	7.057	
10,900.0	10,605.7	10,628.5	10,594.9	28.1	32.5	95.74	-552.5	57.9	452.8	392.1	60.63	7.467	
10,916.5	10,606.0	10,628.5	10,594.8	28.1	32.5	79.80	-552.5	57.9	469.2	408.6	60.62	7.739	
10,923.4	10,606.0	10,628.3	10,594.6	28.1	32.5	79.64	-552.5	57.9	476.0	415.3	60.62	7.852	
11,000.0	10,606.0	10,626.5	10,592.8	28.1	32.4	74.01	-552.5	57.9	552.2	491.6	60.60	9.113	
11,100.0	10,605.9	10,624.0	10,590.3	28.2	32.4	55.67	-552.4	57.9	652.0	591.4	60.59	10.761	
11,200.0	10,605.9	11,888.5	11,309.6	28.2	30.2	179.47	194.3	116.2	704.8	639.2	65.60	10.744	
11,300.0	10,605.7	11,988.1	11,310.2	28.3	30.3	179.93	293.9	115.5	705.4	639.1	66.35	10.631	
11,400.0	10,605.6	12,088.0	11,310.7	28.3	30.3	-179.88	393.8	114.7	706.1	638.9	67.18	10.510	
11,412.3	10,605.6	12,100.3	11,310.7	28.3	30.3	-179.88	406.1	114.6	706.2	638.9	67.28	10.495	
11,500.0	10,605.4	12,188.0	11,311.2	28.4	30.3	-179.88	493.8	113.9	706.8	638.7	68.06	10.384	
11,600.0	10,605.2	12,288.0	11,311.7	28.5	30.4	-179.88	593.8	113.2	707.5	638.4	69.01	10.252	
11,700.0	10,605.1	12,396.8	11,311.9	28.8	30.5	-179.88	702.6	112.3	707.8	637.5	70.34	10.063	
11,800.0	10,604.9	12,496.8	11,311.1	29.4	30.7	-179.88	802.6	111.5	707.3	635.9	71.41	9.905	
11,900.0	10,604.7	12,596.8	11,310.4	30.5	31.2	-179.89	902.6	110.7	706.7	634.2	72.53	9.744	
12,000.0	10,604.6	12,696.8	11,309.7	31.9	32.3	-179.89	1,002.6	109.9	706.2	632.5	73.70	9.581	
12,100.0	10,604.4	12,796.8	11,309.0	33.4	33.7	-179.89	1,102.6	109.2	705.6	630.7	74.92	9.418	
12,200.0	10,604.2	12,896.8	11,308.2	35.0	35.2	-179.89	1,202.6	108.4	705.1	628.9	76.18	9.255	
12,300.0	10,604.0	12,996.8	11,307.5	36.6	36.9	-179.89	1,302.5	107.6	704.5	627.0	77.48	9.092	
12,320.1	10,604.0	13,016.8	11,307.4	37.0	37.2	-179.89	1,322.6	107.4	704.4	626.6	77.75	9.060	
12,335.8	10,603.9	13,032.6	11,307.3	37.2	37.5	-179.89	1,338.4	107.3	704.4	626.4	77.96	9.035	
12,400.0	10,602.7	13,096.8	11,306.8	38.3	38.5	-179.89	1,402.5	106.8	705.1	626.2	78.83	8.944	
12,433.1	10,601.6	13,129.9	11,306.6	38.9	39.1	-179.89	1,435.7	106.5	706.0	626.7	79.28	8.905	
12,500.0	10,598.8	13,196.7	11,306.1	40.0	40.3	-179.90	1,502.5	106.0	708.3	628.1	80.20	8.831	
12,600.0	10,594.7	13,296.7	11,305.3	41.8	42.0	-179.90	1,602.4	105.2	711.7	630.1	81.60	8.721	
12,700.0	10,590.6	13,396.6	11,304.6	43.5	43.8	-179.90	1,702.3	104.4	715.1	632.0	83.04	8.611	
12,800.0	10,586.5	13,496.6	11,303.9	45.3	45.6	-179.90	1,802.3	103.7	718.5	633.9	84.51	8.501	
12,900.0	10,582.3	13,596.5	11,303.2	47.2	47.4	-179.90	1,902.2	102.9	721.9	635.8	86.02	8.392	
13,000.0	10,578.2	13,696.4	11,302.4	49.0	49.2	-179.91	2,002.2	102.1	725.3	637.7	87.55	8.284	
13,100.0	10,574.1	13,796.4	11,301.7	50.8	51.1	-179.91	2,102.1	101.3	728.6	639.5	89.10	8.177	
13,200.0	10,570.0	13,896.3	11,301.0	52.7	52.9	-179.91	2,202.0	100.5	732.0	641.4	90.69	8.072	
13,223.8	10,569.0	13,920.1	11,300.8	53.1	53.4	-179.91	2,225.8	100.3	732.8	641.8	91.07	8.047	
13,300.0	10,566.9	13,996.3	11,300.3	54.6	54.8	-179.91	2,302.0	99.7	734.4	642.1	92.30	7.957	
13,406.0	10,567.3	14,102.3	11,299.5	56.5	56.8	-179.91	2,408.0	98.9	733.2	639.1	94.14	7.789	
13,500.0	10,569.4	14,196.2	11,298.8	58.3	58.6	-179.92	2,501.9	98.1	730.5	634.7	95.74	7.629	
13,600.0	10,571.6	14,296.2	11,298.1	60.2	60.5	-179.92	2,601.9	97.4	727.5	630.1	97.43	7.467	
13,700.0	10,573.9	14,396.2	11,297.4	62.1	62.4	-179.92	2,701.8	96.6	724.5	625.4	99.13	7.309	
13,800.0	10,576.1	14,496.1	11,296.7	64.0	64.3	-179.92	2,801.8	95.8	721.6	620.7	100.85	7.155	
13,900.0	10,578.4	14,596.1	11,295.9	65.9	66.2	-179.92	2,901.7	95.0	718.6	616.0	102.59	7.005	
13,929.0	10,579.0	14,625.0	11,295.7	66.5	66.8	-179.92	2,930.7	94.8	717.7	614.6	103.10	6.962	
13,939.1	10,579.2	14,635.1	11,295.6	66.7	67.0	-179.92	2,940.8	94.7	717.5	614.2	103.27	6.947	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 554H - Dagger State Com 554H - Dagger State Com 554H - Prelim 1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,000.0	10,580.4	14,696.0	11,295.2	67.9	68.1	-179.92	3,001.7	94.2	715.9	611.5	104.34	6.861	
14,100.0	10,582.2	14,804.5	11,293.7	69.8	70.2	-179.92	3,110.2	93.4	712.5	605.8	106.70	6.678	
14,200.0	10,584.1	14,904.5	11,291.7	71.7	72.2	-179.92	3,210.1	92.6	708.7	600.3	108.49	6.533	
14,300.0	10,586.0	15,004.4	11,289.8	73.7	74.1	-179.92	3,310.0	91.8	704.9	594.6	110.29	6.391	
14,400.0	10,587.9	15,104.3	11,287.9	75.6	76.0	-179.93	3,409.9	91.0	701.1	589.0	112.11	6.254	
14,500.0	10,589.8	15,204.2	11,286.0	77.5	78.0	-179.93	3,509.8	90.2	697.3	583.4	113.94	6.120	
14,600.0	10,591.7	15,304.2	11,284.1	79.5	79.9	-179.93	3,609.7	89.5	693.5	577.7	115.79	5.989	
14,700.0	10,593.6	15,404.1	11,282.1	81.4	81.9	-179.93	3,709.6	88.7	689.7	572.0	117.64	5.863	
14,800.0	10,595.5	15,504.0	11,280.2	83.4	83.9	-179.93	3,809.5	87.9	685.9	566.4	119.51	5.739	
14,881.7	10,597.0	15,585.6	11,278.6	85.0	85.5	-179.93	3,891.1	87.3	682.8	561.7	121.04	5.641	
14,900.0	10,597.3	15,604.0	11,278.3	85.4	85.8	-179.93	3,909.4	87.1	682.1	560.7	121.39	5.619	
14,913.1	10,597.4	15,617.1	11,278.0	85.6	86.1	-179.93	3,922.5	87.0	681.7	560.1	121.63	5.605	
15,000.0	10,598.1	15,703.9	11,276.4	87.3	87.8	-179.93	4,009.4	86.3	679.4	556.1	123.27	5.511	
15,100.0	10,598.9	15,803.9	11,274.5	89.3	89.7	-179.93	4,109.3	85.6	676.7	551.5	125.17	5.406	
15,200.0	10,599.7	15,889.3	11,273.5	91.2	91.4	-179.94	4,194.7	84.9	674.8	548.9	125.91	5.359	
15,219.5	10,599.8	15,905.0	11,273.6	91.6	91.7	-179.94	4,210.5	84.8	674.7	548.8	125.98	5.356	
15,300.0	10,600.5	15,981.6	11,274.6	93.2	93.2	-179.94	4,287.0	84.2	675.2	548.0	127.18	5.309	
15,400.0	10,601.3	16,081.6	11,275.9	95.2	95.2	-179.94	4,387.0	83.4	675.7	546.6	129.10	5.234	
15,500.0	10,602.1	16,181.6	11,277.3	97.2	97.2	-179.94	4,486.9	82.6	676.3	545.3	131.03	5.162	
15,600.0	10,602.8	16,281.6	11,278.7	99.1	99.1	-179.94	4,586.9	81.9	676.9	544.0	132.96	5.091	
15,700.0	10,603.6	16,381.6	11,280.1	101.1	101.1	-179.95	4,686.9	81.1	677.5	542.6	134.91	5.022	
15,800.0	10,604.4	16,481.6	11,281.5	103.1	103.1	-179.95	4,786.9	80.3	678.1	541.2	136.86	4.955	
15,900.0	10,605.2	16,581.6	11,282.8	105.1	105.1	-179.95	4,886.9	79.5	678.7	539.9	138.82	4.889	
16,000.0	10,606.0	16,681.6	11,284.2	107.0	107.1	-179.95	4,986.9	78.7	679.3	538.5	140.78	4.825	
16,100.0	10,606.8	16,781.6	11,285.6	109.0	109.0	-179.96	5,086.9	78.0	679.9	537.1	142.76	4.763	
16,126.3	10,607.0	16,807.8	11,286.0	109.5	109.6	-179.96	5,113.1	77.8	680.0	536.8	143.27	4.746	
16,180.0	10,607.4	16,861.6	11,286.7	110.6	110.6	-179.96	5,166.9	77.3	680.3	536.0	144.33	4.714	
16,200.0	10,607.6	16,881.6	11,287.0	111.0	111.0	-179.96	5,186.8	77.2	680.5	535.7	144.73	4.702	
16,300.0	10,608.4	16,981.6	11,288.4	113.0	113.0	-179.96	5,286.8	76.4	681.1	534.3	146.71	4.642	
16,400.0	10,609.2	17,081.6	11,289.7	115.0	115.0	-179.96	5,386.8	75.6	681.6	532.9	148.70	4.584	
16,500.0	10,610.0	17,165.9	11,291.7	117.0	116.7	-179.96	5,471.1	75.0	683.2	533.9	149.30	4.576	
16,600.0	10,610.7	17,256.7	11,296.0	118.9	118.5	-179.97	5,561.8	74.3	687.1	536.6	150.47	4.566	
16,700.0	10,611.5	17,356.6	11,300.9	120.9	120.4	-179.97	5,661.6	73.5	691.3	538.8	152.49	4.533	
16,800.0	10,612.3	17,456.5	11,305.9	122.9	122.4	-179.97	5,761.4	72.7	695.5	541.0	154.49	4.502	
16,900.0	10,613.1	17,556.4	11,310.9	124.9	124.4	-179.97	5,861.2	71.9	699.7	543.2	156.50	4.471	
17,000.0	10,613.9	17,656.4	11,315.9	126.9	126.4	-179.97	5,961.0	71.1	703.9	545.4	158.52	4.441	
17,100.0	10,614.7	17,756.3	11,320.9	128.9	128.4	-179.97	6,060.8	70.3	708.1	547.6	160.54	4.411	
17,200.0	10,615.5	17,856.2	11,325.9	130.9	130.4	-179.98	6,160.5	69.6	712.3	549.8	162.56	4.382	
17,300.0	10,616.3	17,969.0	11,331.1	132.9	132.6	-179.98	6,273.2	68.7	716.2	550.4	165.77	4.321	
17,400.0	10,617.1	18,090.2	11,332.7	134.9	135.0	-179.98	6,394.4	67.7	716.6	547.0	169.64	4.224	
17,500.0	10,617.8	18,190.2	11,332.9	136.9	137.0	-179.98	6,494.4	67.0	716.1	544.4	171.68	4.171	
17,600.0	10,618.6	18,290.2	11,333.2	138.9	139.0	-179.99	6,594.4	66.2	715.5	541.8	173.72	4.119	
17,635.9	10,619.0	18,326.0	11,333.3	139.6	139.7	-179.98	6,630.2	65.9	715.3	540.8	174.45	4.100	
17,648.2	10,619.1	18,338.4	11,333.3	139.8	140.0	-179.98	6,642.6	65.8	715.2	540.5	174.71	4.094	
17,700.0	10,619.3	18,390.2	11,333.4	140.9	141.0	-179.98	6,694.4	65.4	715.2	539.4	175.76	4.069	
17,800.0	10,619.6	18,490.2	11,333.7	142.9	143.0	-179.99	6,794.4	64.6	715.0	537.2	177.81	4.021	
17,900.0	10,620.0	18,590.2	11,333.9	144.9	145.0	-179.99	6,894.4	63.9	714.9	535.1	179.87	3.975	
18,000.0	10,620.3	18,690.2	11,334.2	146.8	147.0	-179.99	6,994.4	63.1	714.8	532.9	181.92	3.929	
18,100.0	10,620.7	18,790.2	11,334.4	148.8	149.0	-179.99	7,094.4	62.3	714.7	530.7	183.98	3.885	
18,200.0	10,621.0	18,890.2	11,334.6	150.8	151.0	-179.99	7,194.4	61.5	714.6	528.6	186.04	3.841	
18,300.0	10,621.4	18,990.2	11,334.9	152.8	153.0	-179.99	7,294.3	60.8	714.5	526.4	188.11	3.798	
18,400.0	10,621.8	19,090.2	11,335.1	154.8	155.0	-179.99	7,394.3	60.0	714.4	524.2	190.18	3.756	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 554H - Dagger State Com 554H - Dagger State Com 554H - Prelim 1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
18,500.0	10,622.1	19,190.2	11,335.4	156.8	157.0	-180.00	7,494.3	59.2	714.3	522.0	192.25	3.715		
18,600.0	10,622.5	19,290.2	11,335.6	158.8	159.0	-180.00	7,594.3	58.4	714.2	519.8	194.32	3.675		
18,700.0	10,622.8	19,390.2	11,335.9	160.8	161.0	-180.00	7,694.3	57.6	714.0	517.6	196.40	3.636		
18,743.9	10,623.0	19,434.1	11,336.0	161.7	161.9	-180.00	7,738.2	57.3	714.0	516.7	197.31	3.619		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 606H - Dagger State Com 606H - Dagger State Com 606H - Prelim 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM												Offset Well Error:	0.0 usft
Reference	Offset	Rule Assigned:										Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	0.0	0.0	86.98	3.3	63.2	63.3				
100.0	100.0	99.0	99.0	0.5	0.5	86.98	3.3	63.2	63.3	62.3	1.06	60.005	
200.0	200.0	199.0	199.0	1.7	1.7	86.98	3.3	63.2	63.3	59.9	3.41	18.555	
300.0	300.0	299.0	299.0	2.4	2.4	86.98	3.3	63.2	63.3	58.5	4.82	13.145	
400.0	400.0	399.0	399.0	3.0	2.9	86.98	3.3	63.2	63.3	57.4	5.90	10.725	
500.0	500.0	499.0	499.0	3.4	3.4	86.98	3.3	63.2	63.3	56.5	6.83	9.275	
600.0	600.0	599.0	599.0	3.8	3.8	86.98	3.3	63.2	63.3	55.7	7.64	8.281	
700.0	700.0	699.0	699.0	4.2	4.2	86.98	3.3	63.2	63.3	54.9	8.39	7.545	
800.0	800.0	799.0	799.0	4.5	4.5	86.98	3.3	63.2	63.3	54.2	9.08	6.972	
900.0	900.0	899.0	899.0	4.9	4.9	86.98	3.3	63.2	63.3	53.6	9.73	6.508	
1,000.0	1,000.0	999.0	999.0	5.2	5.2	86.98	3.3	63.2	63.3	53.0	10.34	6.123	
1,100.0	1,100.0	1,099.0	1,099.0	5.5	5.5	86.98	3.3	63.2	63.3	52.4	10.92	5.797	
1,200.0	1,200.0	1,199.0	1,199.0	5.7	5.7	86.98	3.3	63.2	63.3	51.8	11.48	5.516	
1,300.0	1,300.0	1,299.0	1,299.0	6.0	6.0	86.98	3.3	63.2	63.3	51.3	12.01	5.270	
1,400.0	1,400.0	1,399.0	1,399.0	6.3	6.3	86.98	3.3	63.2	63.3	50.8	12.53	5.053	
1,500.0	1,500.0	1,499.0	1,499.0	6.5	6.5	86.98	3.3	63.2	63.3	50.3	13.03	4.859	
1,600.0	1,600.0	1,599.0	1,599.0	6.8	6.8	86.98	3.3	63.2	63.3	49.8	13.51	4.684	
1,700.0	1,700.0	1,699.0	1,699.0	7.0	7.0	86.98	3.3	63.2	63.3	49.3	13.99	4.526	
1,800.0	1,800.0	1,799.0	1,799.0	7.2	7.2	86.98	3.3	63.2	63.3	48.9	14.45	4.382	
1,900.0	1,900.0	1,899.0	1,899.0	7.4	7.4	86.98	3.3	63.2	63.3	48.4	14.90	4.250	
2,000.0	2,000.0	1,999.0	1,999.0	7.7	7.7	86.98	3.3	63.2	63.3	48.0	15.34	4.128	
2,100.0	2,100.0	2,099.0	2,099.0	7.9	7.9	86.98	3.3	63.2	63.3	47.5	15.77	4.015	
2,200.0	2,200.0	2,199.0	2,199.0	8.1	8.1	86.98	3.3	63.2	63.3	47.1	16.19	3.910	
2,300.0	2,300.0	2,299.0	2,299.0	8.3	8.3	86.98	3.3	63.2	63.3	46.7	16.61	3.812	
2,400.0	2,400.0	2,399.0	2,399.0	8.5	8.5	86.98	3.3	63.2	63.3	46.3	17.01	3.721	
2,500.0	2,500.0	2,499.0	2,499.0	8.7	8.7	86.98	3.3	63.2	63.3	45.9	17.42	3.635	
2,600.0	2,600.0	2,599.0	2,599.0	8.9	8.9	86.98	3.3	63.2	63.3	45.5	17.81	3.554	
2,700.0	2,700.0	2,699.0	2,699.0	9.1	9.1	86.98	3.3	63.2	63.3	45.1	18.20	3.478	
2,800.0	2,800.0	2,799.0	2,799.0	9.3	9.3	86.98	3.3	63.2	63.3	44.7	18.58	3.406	
2,900.0	2,900.0	2,899.0	2,899.0	9.5	9.5	86.98	3.3	63.2	63.3	44.3	18.96	3.338	
3,000.0	3,000.0	2,999.0	2,999.0	9.7	9.7	86.98	3.3	63.2	63.3	44.0	19.34	3.274	
3,100.0	3,100.0	3,099.0	3,099.0	9.9	9.9	86.98	3.3	63.2	63.3	43.6	19.71	3.212	
3,200.0	3,200.0	3,199.0	3,199.0	10.0	10.0	86.98	3.3	63.2	63.3	43.2	20.07	3.154	
3,300.0	3,300.0	3,299.0	3,299.0	10.2	10.2	86.98	3.3	63.2	63.3	42.9	20.43	3.098	
3,400.0	3,400.0	3,399.0	3,399.0	10.4	10.4	86.98	3.3	63.2	63.3	42.5	20.79	3.045	
3,500.0	3,500.0	3,499.0	3,499.0	10.6	10.6	86.98	3.3	63.2	63.3	42.2	21.15	2.994	
3,600.0	3,600.0	3,599.0	3,599.0	10.7	10.7	86.98	3.3	63.2	63.3	41.8	21.50	2.945	
3,700.0	3,700.0	3,699.0	3,699.0	10.9	10.9	86.98	3.3	63.2	63.3	41.5	21.84	2.898	
3,800.0	3,800.0	3,799.0	3,799.0	11.1	11.1	86.98	3.3	63.2	63.3	41.1	22.19	2.853	
3,900.0	3,900.0	3,899.0	3,899.0	11.3	11.3	86.98	3.3	63.2	63.3	40.8	22.53	2.810	
4,000.0	4,000.0	3,999.0	3,999.0	11.4	11.4	86.98	3.3	63.2	63.3	40.4	22.87	2.768	
4,100.0	4,100.0	4,099.0	4,099.0	11.6	11.6	86.98	3.3	63.2	63.3	40.1	23.21	2.728	
4,200.0	4,200.0	4,199.0	4,199.0	11.8	11.8	86.98	3.3	63.2	63.3	39.8	23.54	2.689	
4,300.0	4,300.0	4,299.0	4,299.0	11.9	11.9	86.98	3.3	63.2	63.3	39.4	23.87	2.652	
4,400.0	4,400.0	4,399.0	4,399.0	12.1	12.1	86.98	3.3	63.2	63.3	39.1	24.20	2.616	
4,500.0	4,500.0	4,499.0	4,499.0	12.3	12.3	86.98	3.3	63.2	63.3	38.8	24.52	2.581	
4,600.0	4,600.0	4,599.0	4,599.0	12.4	12.4	86.98	3.3	63.2	63.3	38.5	24.85	2.548	
4,700.0	4,700.0	4,699.0	4,699.0	12.6	12.6	86.98	3.3	63.2	63.3	38.1	25.17	2.515	
4,800.0	4,800.0	4,799.0	4,799.0	12.7	12.7	86.98	3.3	63.2	63.3	37.8	25.49	2.484	
4,900.0	4,900.0	4,899.0	4,899.0	12.9	12.9	86.98	3.3	63.2	63.3	37.5	25.81	2.453	
5,000.0	5,000.0	4,999.0	4,999.0	13.1	13.1	86.98	3.3	63.2	63.3	37.2	26.12	2.423	
5,100.0	5,100.0	5,099.0	5,099.0	13.2	13.2	86.98	3.3	63.2	63.3	36.9	26.44	2.395	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 606H - Dagger State Com 606H - Dagger State Com 606H - Prelim 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.0	5,200.0	5,199.0	5,199.0	13.4	13.4	86.98	3.3	63.2	63.3	36.6	26.75	2.367	
5,300.0	5,300.0	5,299.0	5,299.0	13.5	13.5	86.98	3.3	63.2	63.3	36.2	27.06	2.339	
5,400.0	5,400.0	5,399.0	5,399.0	13.7	13.7	86.98	3.3	63.2	63.3	35.9	27.37	2.313	
5,450.0	5,450.0	5,449.0	5,449.0	13.7	13.8	86.98	3.3	63.2	63.3	35.8	27.49	2.302 CC	
5,500.0	5,500.0	5,499.0	5,499.0	13.8	13.8	-93.22	3.3	63.2	63.3	35.7	27.59	2.295	
5,600.0	5,600.0	5,599.0	5,599.0	13.8	14.0	-94.79	3.3	63.2	63.4	35.7	27.78	2.283 ES	
5,700.0	5,699.9	5,698.9	5,698.9	13.9	14.1	-97.91	3.3	63.2	63.8	35.8	27.99	2.280	
5,800.0	5,799.8	5,798.8	5,798.8	14.0	14.3	-102.48	3.3	63.2	64.8	36.6	28.19	2.297	
5,900.0	5,899.5	5,898.7	5,898.7	14.1	14.4	-108.16	3.1	63.2	66.6	38.2	28.32	2.350	
6,000.0	5,999.2	5,998.7	5,998.7	14.2	14.4	-113.62	1.4	63.4	69.2	40.8	28.43	2.434	
6,100.0	6,098.6	6,098.9	6,098.9	14.4	14.5	-118.58	-2.0	63.7	72.6	44.0	28.58	2.540	
6,200.0	6,197.9	6,199.3	6,199.0	14.5	14.6	-123.01	-7.3	64.2	76.6	47.8	28.75	2.664	
6,297.1	6,294.1	6,296.8	6,296.4	14.7	14.7	-126.81	-14.0	64.8	81.0	52.0	28.95	2.797	
6,300.0	6,296.9	6,299.7	6,299.2	14.7	14.7	-126.91	-14.2	64.8	81.1	52.2	28.96	2.801	
6,400.0	6,395.8	6,400.3	6,399.5	15.0	14.8	-129.88	-23.0	65.6	85.5	56.3	29.19	2.930	
6,500.0	6,494.7	6,501.1	6,499.7	15.2	14.9	-131.65	-33.5	66.5	89.1	59.6	29.47	3.022	
6,600.0	6,593.6	6,601.1	6,599.1	15.5	15.1	-132.77	-44.9	67.5	92.1	62.3	29.77	3.093	
6,700.0	6,692.5	6,701.1	6,698.4	15.8	15.3	-133.82	-56.4	68.6	95.1	65.0	30.10	3.159	
6,800.0	6,791.4	6,801.0	6,797.6	16.1	15.5	-134.80	-67.8	69.6	98.1	67.7	30.47	3.220	
6,900.0	6,890.3	6,901.0	6,896.9	16.4	15.7	-135.72	-79.2	70.6	101.2	70.3	30.87	3.278	
7,000.0	6,989.2	7,000.9	6,996.2	16.8	16.0	-136.59	-90.7	71.6	104.3	73.0	31.31	3.332	
7,100.0	7,088.2	7,100.8	7,095.5	17.1	16.2	-137.40	-102.1	72.7	107.4	75.6	31.77	3.381	
7,200.0	7,187.1	7,200.8	7,194.7	17.5	16.5	-138.17	-113.6	73.7	110.6	78.3	32.27	3.426	
7,300.0	7,286.0	7,300.7	7,294.0	17.9	16.8	-138.90	-125.0	74.7	113.7	80.9	32.80	3.467	
7,400.0	7,384.9	7,400.7	7,393.3	18.3	17.1	-139.59	-136.4	75.7	116.9	83.5	33.35	3.505	
7,500.0	7,483.8	7,500.6	7,492.6	18.7	17.4	-140.24	-147.9	76.8	120.1	86.2	33.94	3.539	
7,600.0	7,582.7	7,600.5	7,591.9	19.1	17.8	-140.86	-159.3	77.8	123.3	88.8	34.55	3.569	
7,700.0	7,681.6	7,700.5	7,691.1	19.5	18.1	-141.45	-170.8	78.8	126.5	91.3	35.18	3.596	
7,800.0	7,780.5	7,800.4	7,790.4	20.0	18.5	-142.00	-182.2	79.8	129.8	93.9	35.84	3.620	
7,900.0	7,879.4	7,900.4	7,889.7	20.4	18.8	-142.53	-193.6	80.9	133.0	96.5	36.53	3.641	
8,000.0	7,978.3	8,000.3	7,989.0	20.9	19.2	-143.04	-205.1	81.9	136.3	99.0	37.23	3.660	
8,100.0	8,077.2	8,100.2	8,088.2	21.3	19.6	-143.52	-216.5	82.9	139.5	101.6	37.96	3.676	
8,200.0	8,176.2	8,200.2	8,187.5	21.8	20.0	-143.98	-228.0	83.9	142.8	104.1	38.70	3.690	
8,300.0	8,275.1	8,300.1	8,286.8	22.3	20.4	-144.42	-239.4	85.0	146.1	106.6	39.47	3.702	
8,400.0	8,374.0	8,400.1	8,386.1	22.8	20.8	-144.84	-250.8	86.0	149.4	109.1	40.25	3.712	
8,500.0	8,472.9	8,500.0	8,485.4	23.3	21.3	-145.24	-262.3	87.0	152.7	111.6	41.05	3.720	
8,600.0	8,571.8	8,599.9	8,584.6	23.8	21.7	-145.62	-273.7	88.0	156.0	114.1	41.86	3.727	
8,700.0	8,670.7	8,699.9	8,683.9	24.3	22.1	-145.99	-285.2	89.1	159.3	116.6	42.69	3.732	
8,800.0	8,769.6	8,799.8	8,783.2	24.8	22.6	-146.34	-296.6	90.1	162.6	119.1	43.53	3.736	
8,900.0	8,868.5	8,899.8	8,882.5	25.3	23.0	-146.68	-308.0	91.1	166.0	121.6	44.39	3.739	
9,000.0	8,967.4	8,999.7	8,981.7	25.8	23.5	-147.01	-319.5	92.1	169.3	124.0	45.26	3.741	
9,100.0	9,066.3	9,099.6	9,081.0	26.3	23.9	-147.32	-330.9	93.2	172.6	126.5	46.14	3.742	
9,200.0	9,165.2	9,199.6	9,180.3	26.9	24.4	-147.62	-342.4	94.2	176.0	129.0	47.03	3.742	
9,215.9	9,180.9	9,215.4	9,196.1	26.9	24.5	-147.67	-344.2	94.4	176.5	129.4	47.17	3.742	
9,300.0	9,264.2	9,299.5	9,279.6	27.4	24.9	-147.82	-353.8	95.2	178.8	130.9	47.88	3.734	
9,400.0	9,363.5	9,399.5	9,378.9	27.9	25.3	-147.71	-365.2	96.2	180.2	131.5	48.68	3.702	
9,500.0	9,462.9	9,499.5	9,478.3	28.4	25.8	-147.30	-376.7	97.3	180.1	130.7	49.38	3.647	
9,600.0	9,562.5	9,599.5	9,577.6	28.9	26.3	-146.58	-388.1	98.3	178.5	128.5	49.98	3.572	
9,700.0	9,662.2	9,699.4	9,676.8	29.3	26.8	-145.52	-399.6	99.3	175.6	125.1	50.45	3.480	
9,800.0	9,762.1	9,799.2	9,775.9	29.8	27.3	-144.08	-411.0	100.3	171.2	120.5	50.77	3.373	
9,900.0	9,862.0	9,898.9	9,875.0	30.1	27.8	-142.19	-422.4	101.4	165.7	114.8	50.88	3.256	
10,000.0	9,962.0	9,998.4	9,973.9	30.5	28.3	-139.76	-433.8	102.4	158.9	108.2	50.72	3.133	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 606H - Dagger State Com 606H - Dagger State Com 606H - Prelim 1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,063.0	10,025.0	10,061.1	10,036.1	30.6	28.6	42.10	-441.0	103.0	154.2	103.8	50.39	3.059		
10,100.0	10,062.0	10,097.8	10,072.6	30.6	28.8	43.28	-445.2	103.4	151.3	101.2	50.11	3.019		
10,166.5	10,128.5	10,163.9	10,138.2	30.6	29.1	45.51	-452.7	104.1	146.3	96.7	49.56	2.952		
10,175.0	10,137.0	10,172.3	10,146.6	30.6	29.1	36.55	-453.7	104.2	145.6	96.2	49.47	2.944		
10,200.0	10,162.0	10,197.0	10,171.1	30.5	29.3	37.90	-456.5	104.4	143.0	93.9	49.08	2.913		
10,225.0	10,186.8	10,221.4	10,195.4	30.4	29.4	39.69	-459.3	104.7	139.3	90.8	48.56	2.870		
10,250.0	10,211.6	10,245.6	10,219.4	30.3	29.5	41.99	-462.1	104.9	134.9	87.0	47.86	2.818		
10,275.0	10,236.1	10,269.4	10,243.0	30.2	29.6	44.88	-464.8	105.2	129.6	82.7	46.97	2.760		
10,300.0	10,260.3	10,292.7	10,266.2	30.1	29.7	48.43	-467.5	105.4	123.8	77.9	45.88	2.699		
10,325.0	10,284.1	10,315.5	10,288.9	30.0	29.9	52.73	-470.1	105.6	117.6	73.0	44.56	2.639		
10,350.0	10,307.5	10,337.8	10,311.0	29.9	30.0	57.86	-472.7	105.9	111.2	68.2	43.04	2.584		
10,375.0	10,330.4	10,359.5	10,332.5	29.8	30.1	63.83	-475.1	106.1	105.1	63.7	41.42	2.538		
10,400.0	10,352.8	10,380.5	10,353.4	29.7	30.2	70.58	-477.5	106.3	99.8	59.8	39.96	2.497		
10,425.0	10,374.6	10,400.7	10,373.5	29.5	30.3	77.93	-479.9	106.5	95.8	56.6	39.14	2.447		
10,450.0	10,395.6	10,420.1	10,392.8	29.4	30.4	85.55	-482.1	106.7	93.8	54.3	39.54	2.373		
10,456.4	10,400.9	10,425.0	10,397.6	29.4	30.4	87.50	-482.6	106.8	93.7	53.8	39.89	2.350		
10,475.0	10,416.0	10,438.7	10,411.3	29.3	30.5	93.03	-484.2	106.9	94.5	53.1	41.46	2.281		
10,500.0	10,435.5	10,456.4	10,428.8	29.2	30.6	100.01	-486.2	107.1	98.4	53.8	44.53	2.209		
10,525.0	10,454.3	10,473.2	10,445.5	29.1	30.7	106.20	-488.2	107.3	105.4	57.5	47.97	2.198 SF		
10,550.0	10,472.1	10,488.9	10,461.1	29.0	30.8	111.44	-490.0	107.4	115.5	64.4	51.10	2.261		
10,575.0	10,489.0	10,503.7	10,475.7	28.9	30.8	115.68	-491.6	107.6	128.3	74.7	53.62	2.393		
10,600.0	10,504.9	10,517.3	10,489.3	28.8	30.9	118.95	-493.2	107.7	143.3	87.8	55.51	2.582		
10,625.0	10,519.7	10,529.8	10,501.7	28.7	31.0	121.28	-494.6	107.8	160.2	103.4	56.87	2.818		
10,650.0	10,533.5	10,541.2	10,513.0	28.6	31.0	122.72	-495.9	108.0	178.7	120.8	57.83	3.090		
10,675.0	10,546.2	10,551.4	10,523.2	28.5	31.1	123.28	-497.1	108.1	198.4	139.9	58.51	3.390		
10,700.0	10,557.7	10,560.4	10,532.1	28.4	31.1	122.93	-498.1	108.2	219.1	160.1	58.99	3.714		
10,725.0	10,568.1	10,568.2	10,539.8	28.4	31.2	121.60	-499.0	108.2	240.7	181.4	59.32	4.057		
10,750.0	10,577.2	10,574.7	10,546.3	28.3	31.2	119.16	-499.8	108.3	263.0	203.4	59.56	4.416		
10,775.0	10,585.2	10,579.9	10,551.5	28.2	31.2	115.41	-500.4	108.4	285.9	226.1	59.73	4.786		
10,800.0	10,591.8	10,583.9	10,555.4	28.2	31.2	110.11	-500.8	108.4	309.2	249.4	59.86	5.166		
10,825.0	10,597.3	10,586.5	10,558.0	28.2	31.3	102.98	-501.1	108.4	332.9	273.0	59.94	5.554		
10,850.0	10,601.4	10,587.9	10,559.4	28.1	31.3	93.91	-501.3	108.4	356.8	296.8	60.01	5.946		
10,875.0	10,604.2	10,587.9	10,559.4	28.1	31.3	83.12	-501.3	108.4	380.9	320.9	60.06	6.343		
10,900.0	10,605.7	10,586.6	10,558.2	28.1	31.3	71.43	-501.1	108.4	405.1	345.0	60.09	6.741		
10,916.5	10,606.0	10,585.1	10,556.6	28.1	31.2	63.77	-501.0	108.4	421.1	361.0	60.11	7.005		
10,923.4	10,606.0	10,584.3	10,555.9	28.1	31.2	63.42	-500.9	108.4	427.7	367.6	60.12	7.114		
11,000.0	10,606.0	10,575.7	10,547.3	28.1	31.2	56.07	-499.9	108.3	502.2	442.1	60.18	8.346		
11,100.0	10,605.9	10,564.5	10,536.1	28.2	31.1	43.94	-498.6	108.2	600.6	540.3	60.23	9.972		
11,200.0	10,605.9	10,553.1	10,524.8	28.2	31.1	28.59	-497.3	108.1	699.5	639.2	60.27	11.605		
11,300.0	10,605.7	10,541.6	10,513.4	28.3	31.0	10.94	-496.0	108.0	798.7	738.4	60.33	13.239		
11,400.0	10,605.6	10,530.0	10,501.9	28.3	31.0	-6.40	-494.7	107.8	898.1	837.7	60.40	14.867		
11,412.3	10,605.6	10,528.5	10,500.5	28.3	31.0	-8.37	-494.5	107.8	910.2	849.8	60.41	15.067		
11,500.0	10,605.4	10,518.3	10,490.3	28.4	30.9	-7.69	-493.3	107.7	997.4	936.9	60.48	16.490		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3853.5usft (Original Well Ele

Offset Depths are relative to Offset Datum

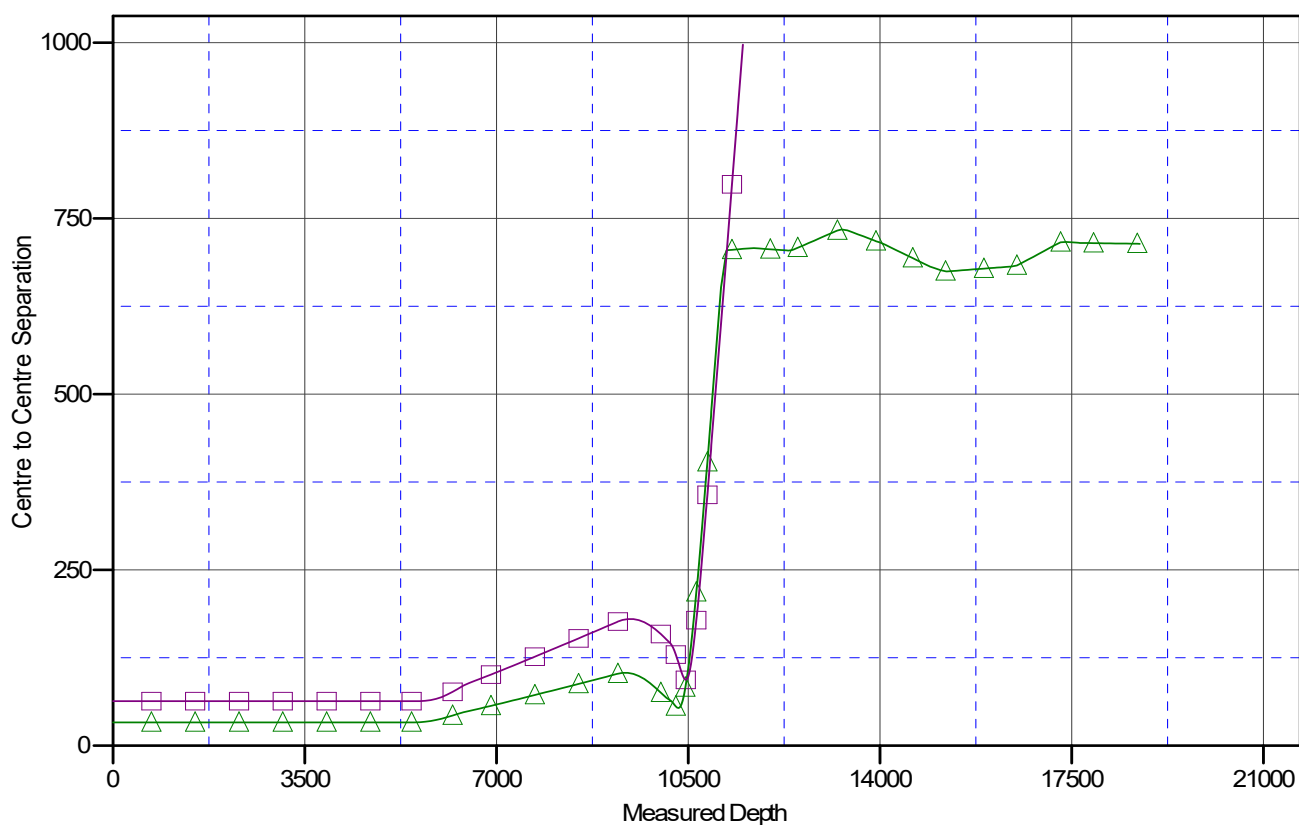
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Dagger State Com 510H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.39°

Ladder Plot



LEGEND

Dagger State Com 554H, Dagger State Com 554H, Dagger State Com 554H - Prelim 1 V0
 Dagger State Com 606H, Dagger State Com 606H, Dagger State Com 606H - Prelim 1 V0



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 510H
Project:	Hat Mesa	TVD Reference:	WELL @ 3853.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3853.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 510H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 510H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 510H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3853.5usft (Original Well Ele

Offset Depths are relative to Offset Datum

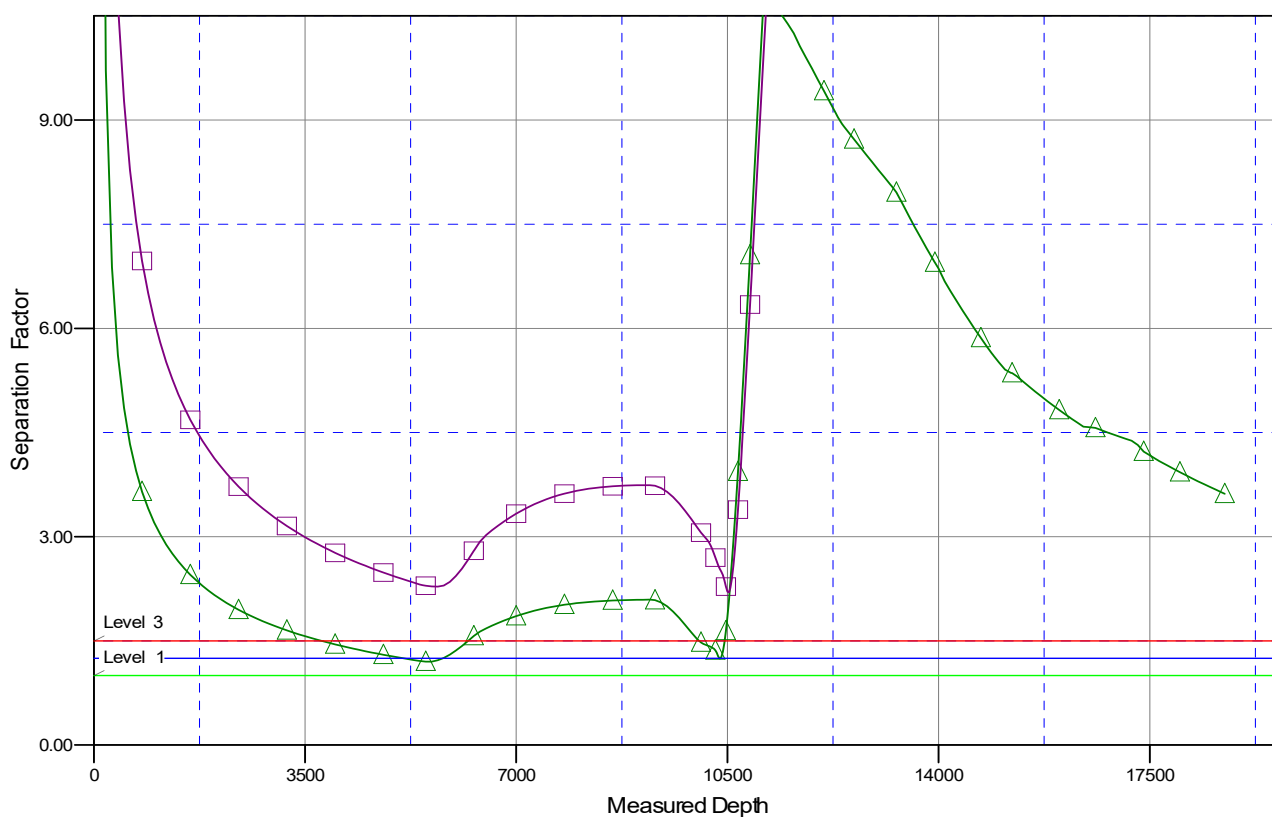
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Dagger State Com 510H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.39°

Separation Factor Plot



LEGEND

Dagger State Com 554H, Dagger State Com 554H, Dagger State Com 554H - Prelim 1 VO
 Dagger State Com 606H, Dagger State Com 606H, Dagger State Com 606H - Prelim 1 VO