

District I

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

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

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

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101

August 1, 2011

Permit 296181

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 30-025-48902
4. Property Code 319601	5. Property Name DAGGER STATE COM	6. Well No. 608H

7. Surface Location

UL - Lot L	Section 30	Township 21S	Range 33E	Lot Idn L	Feet From 2370	N/S Line S	Feet From 710	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot D	Section 19	Township 21S	Range 33E	Lot Idn D	Feet From 100	N/S Line N	Feet From 330	E/W Line W	County Lea
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9. Pool Information

WC-025 G-06 S213326D;BONE SPRING	97929
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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 3816
16. Multiple N	17. Proposed Depth 19270	18. Formation Bone Spring	19. Contractor	20. Spud Date 5/24/2021
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	5300	330	4000
Int1	12.25	9.625	40	4000	950	0
Prod	8.5	5.5	20	19270	2300	0

Casing/Cement Program: Additional Comments

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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: 5/21/2021	Expiration Date: 5/21/2023
Date: 5/14/2021	Phone: 406-300-3310	Conditions of Approval Attached

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State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102

Revised August 4, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	97929	WC-025 G-06 S213326D; BONE SPRING
Property Code	Property Name	Well Number
319601	DAGGER STATE COM	608H
OGRIID No.	Operator Name	Elevation
372417	ADVANCE ENERGY PARTNERS HAT MESA	3816'

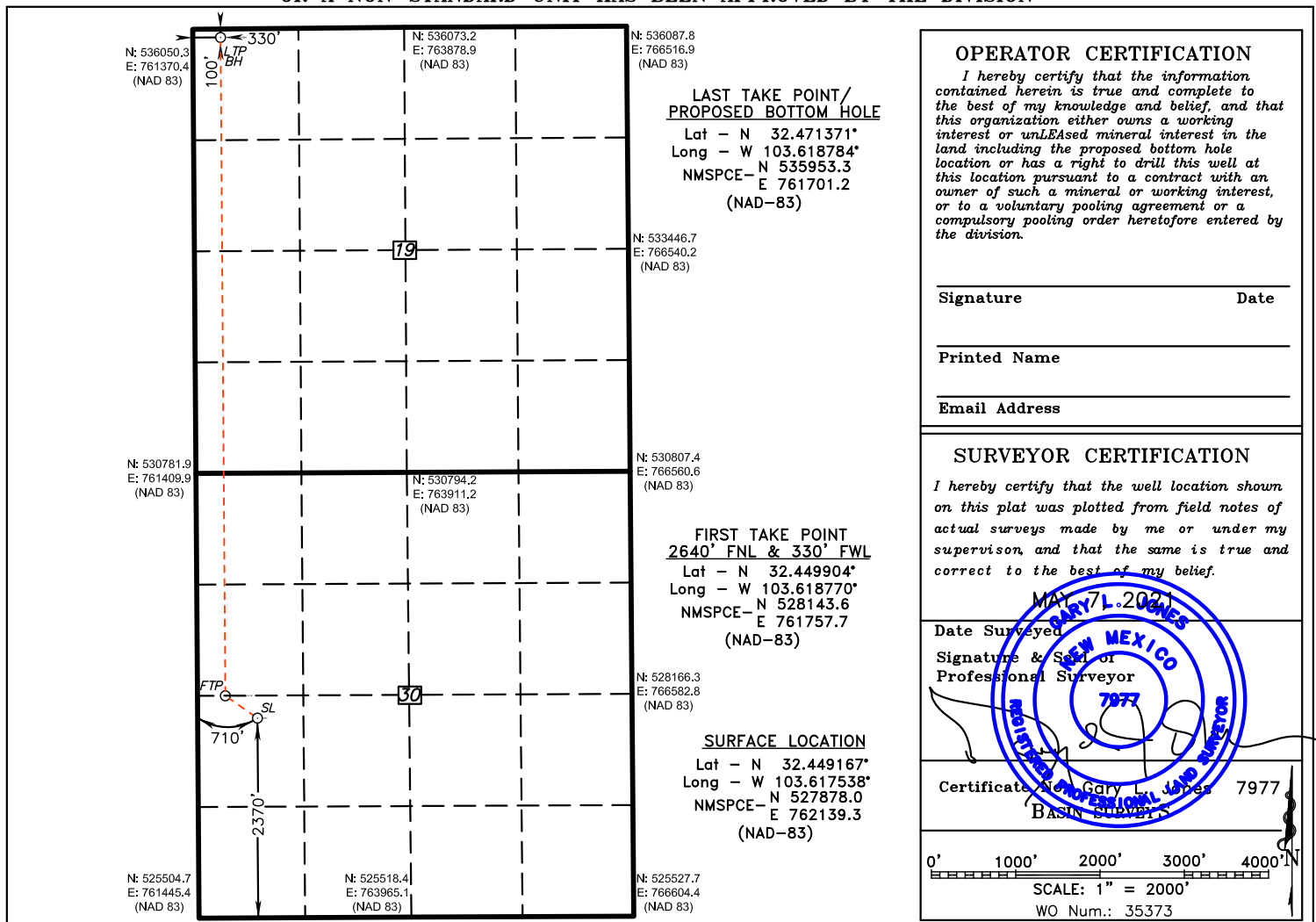
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	30	21 S	33 E		2370	SOUTH	710	WEST	LEA

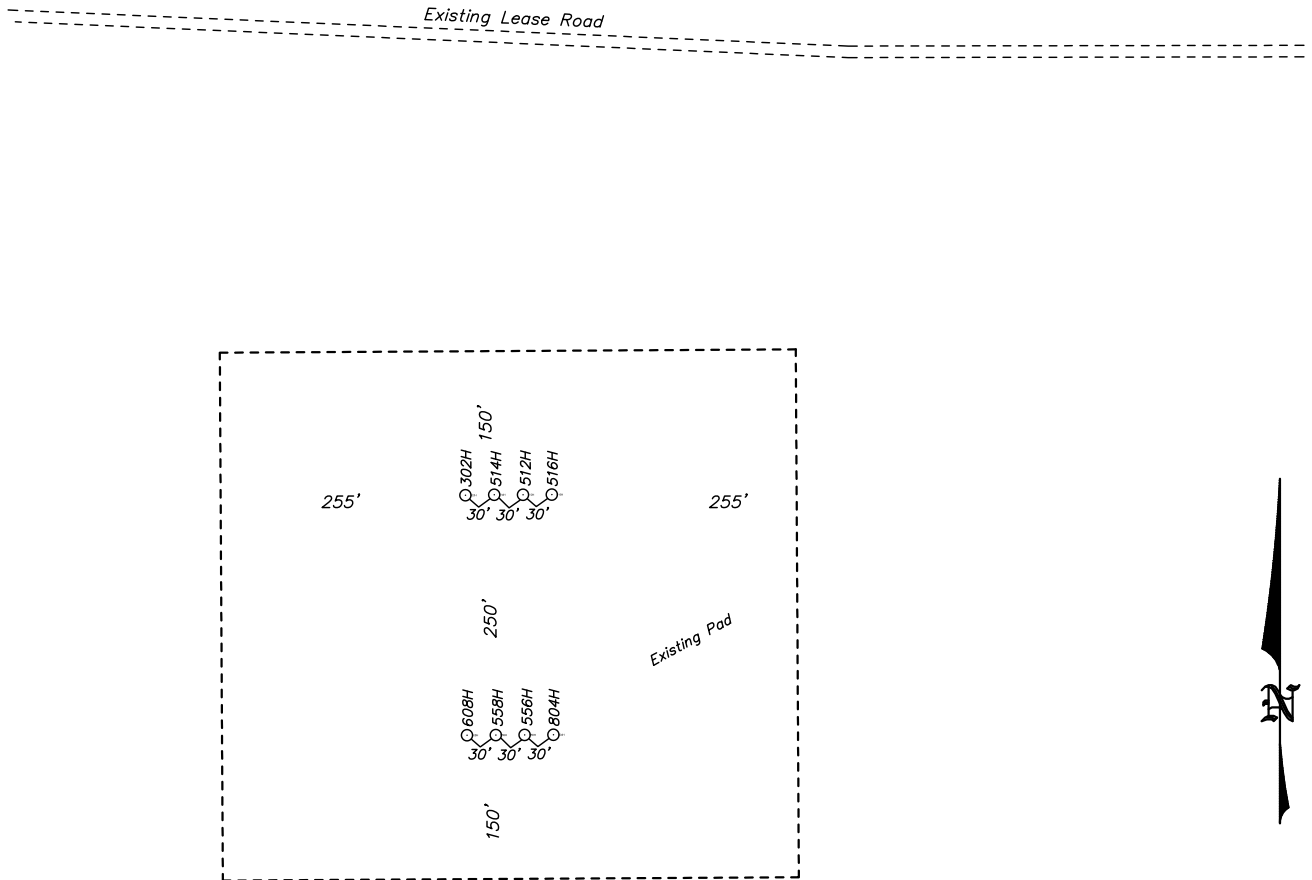
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
D	19	21 S	33 E		100	NORTH	330	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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



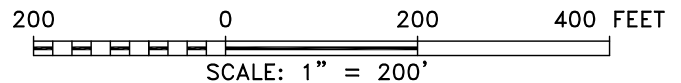
**SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



**ADVANCE ENERGY PARTNERS HAT MESA
DAGGER STATE COM #608H
ELEV. - 3816**

Lat - N 32.449167°
Long - W 103.617538°
NMSPCE - N 527878.0
E 762139.3
(NAD-83)

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



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER STATE COM #608H / WELL PAD TOPO

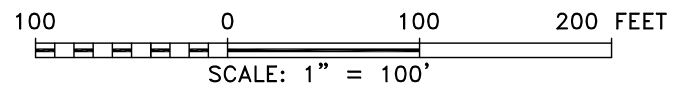
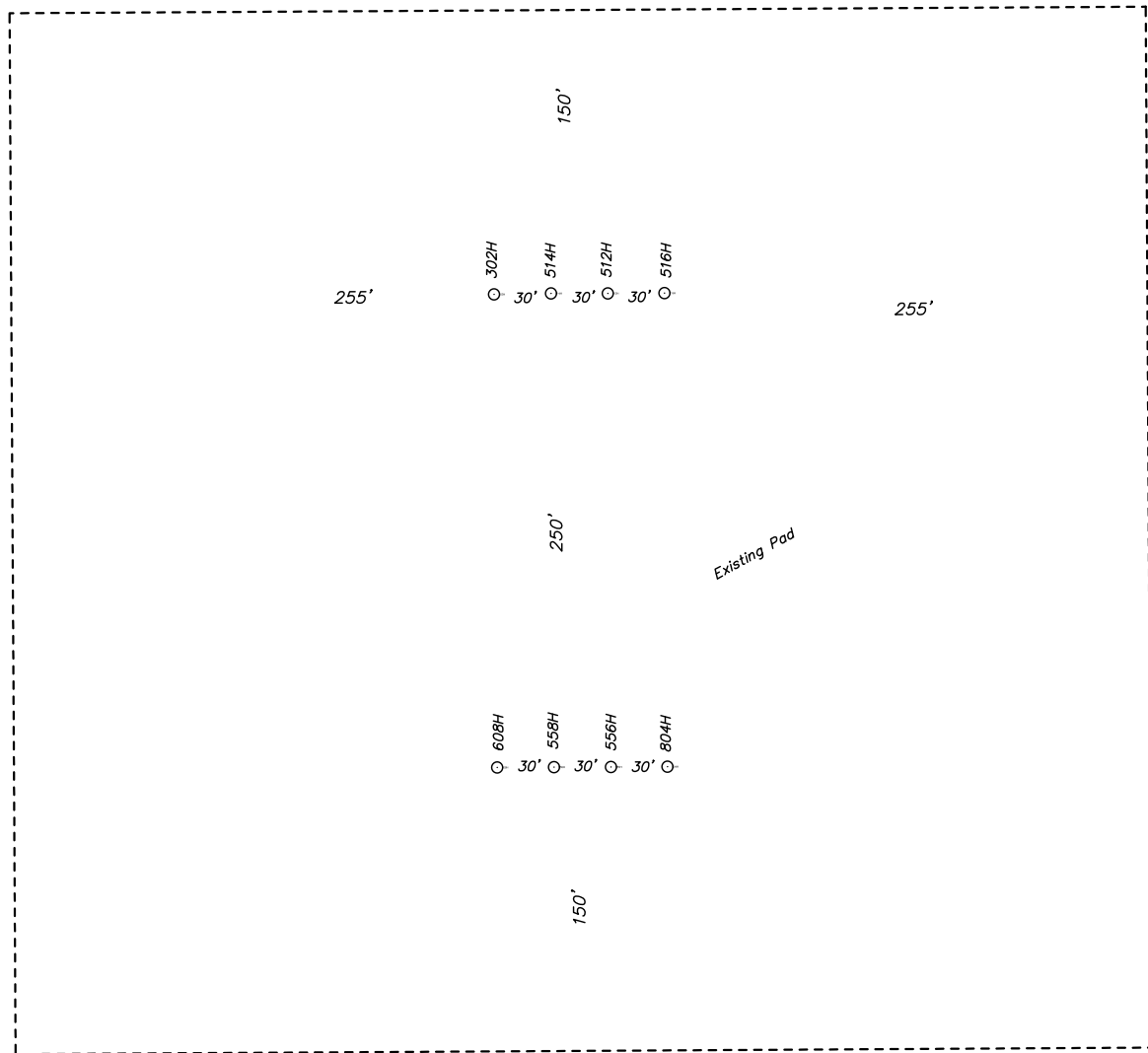
THE DAGGER STATE COM #608H LOCATED 2370' FROM
THE SOUTH LINE AND 710' FROM THE WEST LINE OF
SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST.

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

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P.O. Box 1786 (575) 393-7316 - Office
1120 N. West County Rd. (575) 392-2206 - Fax
Hobbs, New Mexico 88241 basin-surveys.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 #608H / WELL PAD TOPO

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DAGGER STATE COM #608H

Located 2370' FSL and 710' 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'

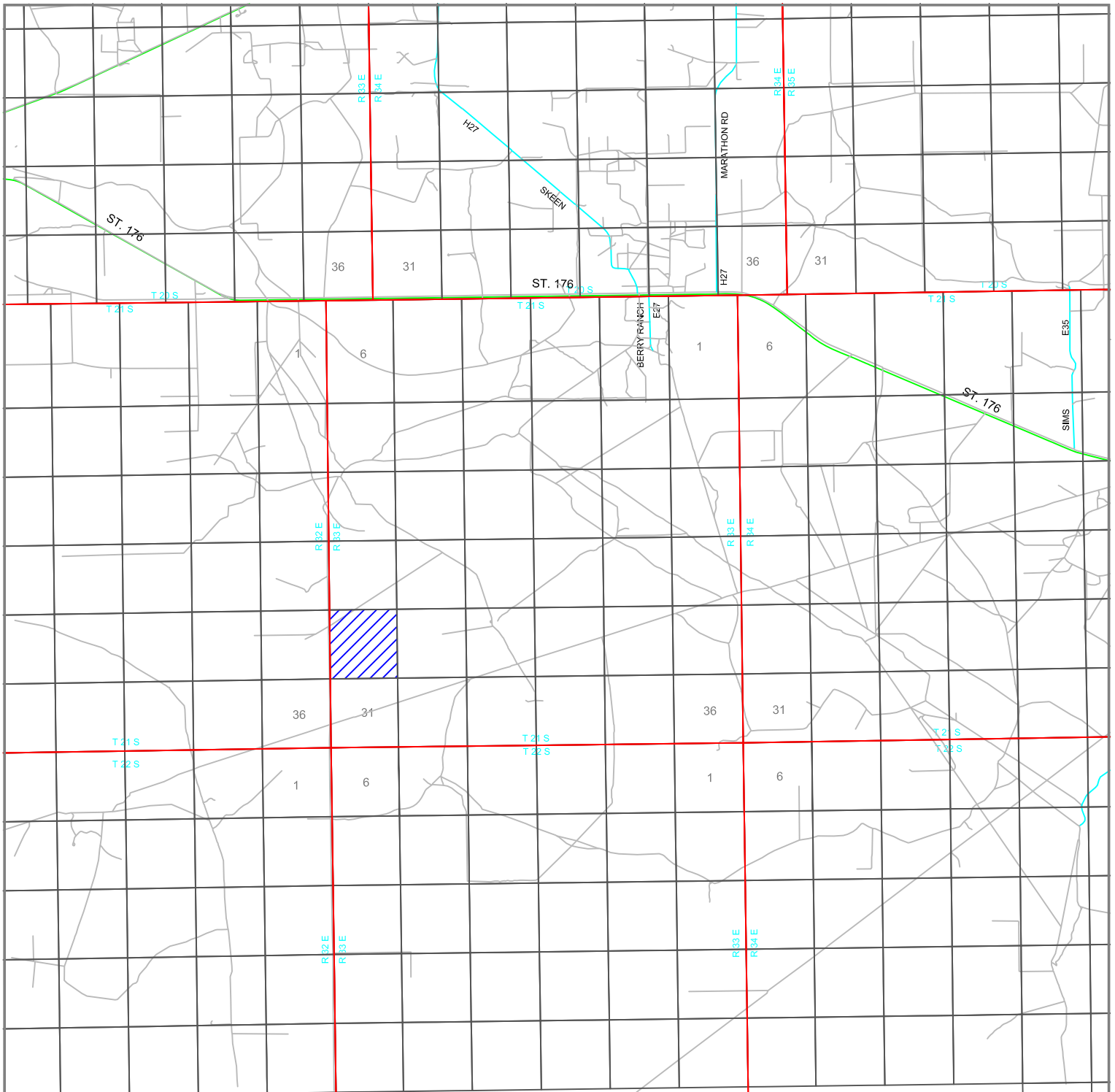
W.O. Number: KJG 35373

Survey Date: 05-07-2021

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



DAGGER STATE COM #608H

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0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

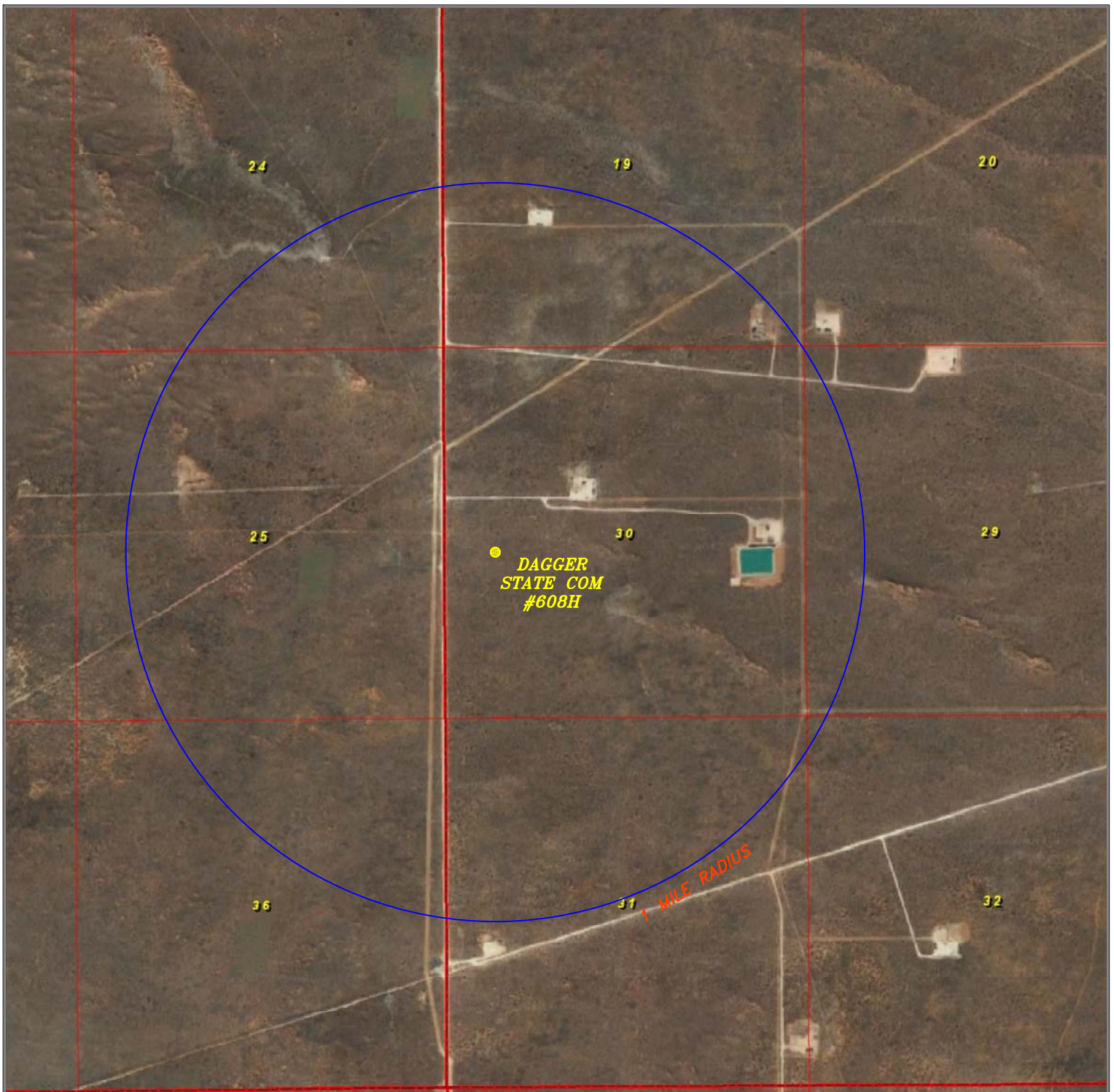
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0' 1000' 2000' 3000' 1500'
 SCALE: 1" = 2000'

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

GAS CAPTURE PLAN

Date: 5/21/2021

☒ 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 #608H	30-025-48902	L-30-21S-33E	2370S 0710W	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 200' 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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Form APD Conditions

Permit 296181

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: 30-025-48902
	Well: DAGGER STATE COM #608H

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	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Three String Casing Program - In accordance with R-111-P all strings shall be cemented to surface.
pkautz	Salt Protection String - If the cement fails to reach the surface or the bottom of the cellar, where required, the top of the cement shall be located by a temperature or other survey and additional cementing shall be done until the cement is brought to the surface.
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
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	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary Designate

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



May 20, 2021

BUREAU OF LAND MANAGEMENT
ATT: James S. Rutley
620 E Greene Street
Carlsbad, NM 88220

STATE LAND OFFICE
ATT: Niranjana Khalsa
PO BOX 1148
Santa Fe, NM 87505

RE: APPLICATION FOR PERMIT TO DRILL IN POTASH AREA

OPERATOR: ADVANCE ENERGY PARTNERS HAT MESA, LLC

LEASE NAME: DAGGER STATE COMT #558H

PROPOSED LOCATION: U/L L Sec 30 T21S R33E 2370 FSL 740 FWL

Lat. 32.449167 Long. -103.617441 NAD83

PROPOSED DEPTH: 19386' MD 11265' TVD

Gentleman:

The application for permit to drill identified above has been filed with this office of the New Mexico Oil Conservation Division. Pursuant to the provisions of Oil Conservation Division Order R – 111 - P, please advise this office whether the location is within an established Life-of-Mine-Reserve that are filed with and approved by your office. If not, please advise whether it is within the buffer zone established by the order.

Thank you for your assistance. Please Return as soon as possible.

Very truly yours,

OIL CONSERVATION DIVISION

P. Kautz
Paul Kautz

Hobbs District Geologist, District I

RESPONSE:

The above referenced location is in LMR (2021 year) ----- Yes ☒ No ☐

The above referenced location is within the Buffer Zone ----- Yes ☒ No ☐

Signed _____

Printed Signature JAMES RUTLEY

Representing BLM/ICD

ON DAGGER DI w/in approved Dagger Draw DA



Advance Energy Partners

Hat Mesa

Dagger State

Dagger State Com 608H

Dagger State Com 608H

Dagger State Com 608H - Prelim 1

Anticollision Report

14 May, 2021



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference	Dagger State Com 608H - 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 5/14/2021				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	20,021.2	Dagger State Com 608H - Prelim 1 (Dagge	MWD+HRGM	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 556H - Dagger State Com 556H - Da	5,000.0	5,000.0	59.8	33.7	2.291	CC, ES, SF
Dagger State Com 558H - Dagger State Com 558H - Da	5,000.0	4,999.0	29.9	3.8	1.145	Level 3, CC, ES
Dagger State Com 558H - Dagger State Com 558H - Da	10,300.0	10,300.9	56.1	6.0	1.120	Level 3, SF
Dagger State Com 804H - Dagger State Com 804H - Da	5,000.0	5,000.0	89.8	63.6	3.436	CC, ES
Dagger State Com 804H - Dagger State Com 804H - Da	20,021.2	20,162.9	891.3	559.2	2.684	SF
Dagger State Unit #003 - Dagger State Unit #003 - Dagg						Out of range

Offset Design:	Dagger State - Dagger State Com 556H - Dagger State Com 556H - Dagger State Com 556H - 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		Rule Assigned:				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		
0.0	0.0	0.0	0.0	0.0	0.0	89.62	0.4	59.8	59.8					
100.0	100.0	100.0	100.0	0.5	0.5	89.62	0.4	59.8	59.8	58.8	1.06	56.442		
200.0	200.0	200.0	200.0	1.7	1.7	89.62	0.4	59.8	59.8	56.4	3.42	17.481		
300.0	300.0	300.0	300.0	2.4	2.4	89.62	0.4	59.8	59.8	55.0	4.82	12.409		
400.0	400.0	400.0	400.0	3.0	3.0	89.62	0.4	59.8	59.8	53.9	5.91	10.130		
500.0	500.0	500.0	500.0	3.4	3.4	89.62	0.4	59.8	59.8	53.0	6.83	8.762		
524.8	524.8	524.8	524.8	3.5	3.5	89.62	0.4	59.8	59.8	52.8	7.03	8.509		
600.0	600.0	600.0	600.0	3.8	3.8	89.62	0.4	59.8	59.8	52.2	7.65	7.824		
633.3	633.3	633.3	633.3	3.9	3.9	89.62	0.4	59.8	59.8	51.9	7.90	7.578		
700.0	700.0	700.0	700.0	4.2	4.2	89.62	0.4	59.8	59.8	51.5	8.39	7.130		
800.0	800.0	800.0	800.0	4.5	4.5	89.62	0.4	59.8	59.8	50.8	9.08	6.588		
900.0	900.0	900.0	900.0	4.9	4.9	89.62	0.4	59.8	59.8	50.1	9.73	6.151		
1,000.0	1,000.0	1,000.0	1,000.0	5.2	5.2	89.62	0.4	59.8	59.8	49.5	10.34	5.787		
1,100.0	1,100.0	1,100.0	1,100.0	5.5	5.5	89.62	0.4	59.8	59.8	48.9	10.92	5.479		
1,200.0	1,200.0	1,200.0	1,200.0	5.7	5.7	89.62	0.4	59.8	59.8	48.4	11.48	5.213		
1,300.0	1,300.0	1,300.0	1,300.0	6.0	6.0	89.62	0.4	59.8	59.8	47.8	12.01	4.981		
1,400.0	1,400.0	1,400.0	1,400.0	6.3	6.3	89.62	0.4	59.8	59.8	47.3	12.53	4.776		
1,500.0	1,500.0	1,500.0	1,500.0	6.5	6.5	89.62	0.4	59.8	59.8	46.8	13.03	4.592		
1,600.0	1,600.0	1,600.0	1,600.0	6.8	6.8	89.62	0.4	59.8	59.8	46.3	13.52	4.427		
1,700.0	1,700.0	1,700.0	1,700.0	7.0	7.0	89.62	0.4	59.8	59.8	45.9	13.99	4.278		
1,800.0	1,800.0	1,800.0	1,800.0	7.2	7.2	89.62	0.4	59.8	59.8	45.4	14.45	4.142		

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 556H - Dagger State Com 556H - Dagger State Com 556H - 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)			
1,900.0	1,900.0	1,900.0	1,900.0	7.4	7.4	89.62	0.4	59.8	59.8	44.9	14.90	4.017	
2,000.0	2,000.0	2,000.0	2,000.0	7.7	7.7	89.62	0.4	59.8	59.8	44.5	15.34	3.901	
2,100.0	2,100.0	2,100.0	2,100.0	7.9	7.9	89.62	0.4	59.8	59.8	44.1	15.77	3.795	
2,200.0	2,200.0	2,200.0	2,200.0	8.1	8.1	89.62	0.4	59.8	59.8	43.7	16.19	3.696	
2,300.0	2,300.0	2,300.0	2,300.0	8.3	8.3	89.62	0.4	59.8	59.8	43.2	16.61	3.603	
2,400.0	2,400.0	2,400.0	2,400.0	8.5	8.5	89.62	0.4	59.8	59.8	42.8	17.02	3.517	
2,500.0	2,500.0	2,500.0	2,500.0	8.7	8.7	89.62	0.4	59.8	59.8	42.4	17.42	3.436	
2,600.0	2,600.0	2,600.0	2,600.0	8.9	8.9	89.62	0.4	59.8	59.8	42.0	17.81	3.360	
2,700.0	2,700.0	2,700.0	2,700.0	9.1	9.1	89.62	0.4	59.8	59.8	41.6	18.20	3.288	
2,800.0	2,800.0	2,800.0	2,800.0	9.3	9.3	89.62	0.4	59.8	59.8	41.3	18.59	3.220	
2,900.0	2,900.0	2,900.0	2,900.0	9.5	9.5	89.62	0.4	59.8	59.8	40.9	18.96	3.156	
3,000.0	3,000.0	3,000.0	3,000.0	9.7	9.7	89.62	0.4	59.8	59.8	40.5	19.34	3.095	
3,100.0	3,100.0	3,100.0	3,100.0	9.9	9.9	89.62	0.4	59.8	59.8	40.1	19.71	3.036	
3,200.0	3,200.0	3,200.0	3,200.0	10.0	10.0	89.62	0.4	59.8	59.8	39.8	20.07	2.981	
3,300.0	3,300.0	3,300.0	3,300.0	10.2	10.2	89.62	0.4	59.8	59.8	39.4	20.44	2.928	
3,400.0	3,400.0	3,400.0	3,400.0	10.4	10.4	89.62	0.4	59.8	59.8	39.1	20.79	2.878	
3,500.0	3,500.0	3,500.0	3,500.0	10.6	10.6	89.62	0.4	59.8	59.8	38.7	21.15	2.830	
3,600.0	3,600.0	3,600.0	3,600.0	10.7	10.7	89.62	0.4	59.8	59.8	38.3	21.50	2.784	
3,700.0	3,700.0	3,700.0	3,700.0	10.9	10.9	89.62	0.4	59.8	59.8	38.0	21.85	2.739	
3,800.0	3,800.0	3,800.0	3,800.0	11.1	11.1	89.62	0.4	59.8	59.8	37.7	22.19	2.697	
3,900.0	3,900.0	3,900.0	3,900.0	11.3	11.3	89.62	0.4	59.8	59.8	37.3	22.53	2.656	
4,000.0	4,000.0	4,000.0	4,000.0	11.4	11.4	89.62	0.4	59.8	59.8	37.0	22.87	2.617	
4,100.0	4,100.0	4,100.0	4,100.0	11.6	11.6	89.62	0.4	59.8	59.8	36.6	23.21	2.579	
4,200.0	4,200.0	4,200.0	4,200.0	11.8	11.8	89.62	0.4	59.8	59.8	36.3	23.54	2.542	
4,300.0	4,300.0	4,300.0	4,300.0	11.9	11.9	89.62	0.4	59.8	59.8	36.0	23.87	2.507	
4,400.0	4,400.0	4,400.0	4,400.0	12.1	12.1	89.62	0.4	59.8	59.8	35.6	24.20	2.473	
4,500.0	4,500.0	4,500.0	4,500.0	12.3	12.3	89.62	0.4	59.8	59.8	35.3	24.53	2.440	
4,600.0	4,600.0	4,600.0	4,600.0	12.4	12.4	89.62	0.4	59.8	59.8	35.0	24.85	2.408	
4,700.0	4,700.0	4,700.0	4,700.0	12.6	12.6	89.62	0.4	59.8	59.8	34.7	25.17	2.378	
4,800.0	4,800.0	4,800.0	4,800.0	12.7	12.7	89.62	0.4	59.8	59.8	34.4	25.49	2.348	
4,900.0	4,900.0	4,900.0	4,900.0	12.9	12.9	89.62	0.4	59.8	59.8	34.0	25.81	2.319	
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	89.62	0.4	59.8	59.8	33.7	26.12	2.291 CC, ES, SF	
5,100.0	5,100.0	5,100.0	5,100.0	13.2	13.2	-150.96	0.4	59.8	60.6	34.2	26.38	2.297	
5,200.0	5,200.0	5,200.0	5,200.0	13.3	13.4	-152.11	0.4	59.8	62.9	36.3	26.63	2.362	
5,300.0	5,299.9	5,298.9	5,298.9	13.4	13.5	-153.40	0.0	60.6	67.5	40.7	26.83	2.516	
5,400.0	5,399.7	5,397.6	5,397.6	13.5	13.6	-154.31	-1.4	62.7	75.1	48.0	27.04	2.777	
5,420.5	5,420.1	5,417.8	5,417.8	13.5	13.6	-154.45	-1.8	63.4	77.0	49.9	27.07	2.845	
5,500.0	5,499.4	5,496.0	5,495.9	13.6	13.7	-154.73	-3.6	66.3	85.1	57.9	27.22	3.128	
5,600.0	5,599.1	5,594.1	5,593.8	13.8	13.8	-154.47	-6.7	71.4	96.6	69.1	27.47	3.517	
5,700.0	5,698.9	5,692.7	5,692.1	14.0	13.9	-153.82	-10.6	77.6	109.3	81.6	27.70	3.945	
5,800.0	5,798.6	5,791.8	5,790.9	14.2	14.0	-153.26	-14.6	84.1	122.0	94.0	28.00	4.359	
5,900.0	5,898.3	5,891.0	5,889.8	14.4	14.2	-152.80	-18.6	90.5	134.9	106.5	28.34	4.759	
6,000.0	5,998.1	5,990.2	5,988.7	14.6	14.4	-152.42	-22.5	97.0	147.7	119.0	28.70	5.145	
6,100.0	6,097.8	6,089.3	6,087.6	14.9	14.6	-152.10	-26.5	103.4	160.5	131.4	29.09	5.516	
6,200.0	6,197.5	6,188.5	6,186.5	15.1	14.8	-151.83	-30.5	109.9	173.3	143.8	29.51	5.874	
6,300.0	6,297.3	6,287.7	6,285.4	15.4	15.1	-151.60	-34.5	116.3	186.1	156.2	29.94	6.217	
6,400.0	6,397.0	6,386.9	6,384.2	15.7	15.3	-151.40	-38.5	122.8	199.0	168.6	30.40	6.545	
6,500.0	6,496.7	6,486.0	6,483.1	16.0	15.6	-151.22	-42.5	129.2	211.8	180.9	30.87	6.860	
6,600.0	6,596.4	6,585.2	6,582.0	16.3	15.9	-151.06	-46.4	135.7	224.6	193.2	31.37	7.160	
6,700.0	6,696.2	6,684.4	6,680.9	16.6	16.2	-150.92	-50.4	142.1	237.4	205.6	31.89	7.447	
6,800.0	6,795.9	6,783.5	6,779.8	16.9	16.5	-150.79	-54.4	148.6	250.3	217.9	32.42	7.720	
6,900.0	6,895.6	6,882.7	6,878.6	17.3	16.8	-150.68	-58.4	155.1	263.1	230.1	32.97	7.981	

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 556H - Dagger State Com 556H - Dagger State Com 556H - 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	
7,000.0	6,995.4	6,981.9	6,977.5	17.6	17.1	-150.57	-62.4	161.5	276.0	242.4	33.54	8.229	
7,100.0	7,095.1	7,081.1	7,076.4	18.0	17.4	-150.48	-66.4	168.0	288.8	254.7	34.12	8.465	
7,200.0	7,194.8	7,180.2	7,175.3	18.3	17.8	-150.39	-70.4	174.4	301.6	266.9	34.71	8.689	
7,300.0	7,294.6	7,279.4	7,274.2	18.7	18.1	-150.31	-74.3	180.9	314.5	279.1	35.32	8.903	
7,400.0	7,394.3	7,378.6	7,373.0	19.1	18.5	-150.24	-78.3	187.3	327.3	291.4	35.95	9.106	
7,500.0	7,494.0	7,477.7	7,471.9	19.5	18.9	-150.17	-82.3	193.8	340.1	303.6	36.58	9.298	
7,600.0	7,593.8	7,576.9	7,570.8	19.9	19.2	-150.11	-86.3	200.2	353.0	315.8	37.23	9.482	
7,700.0	7,693.5	7,676.1	7,669.7	20.3	19.6	-150.05	-90.3	206.7	365.8	327.9	37.89	9.656	
7,800.0	7,793.2	7,775.3	7,768.6	20.7	20.0	-150.00	-94.3	213.1	378.7	340.1	38.55	9.821	
7,900.0	7,892.9	7,874.4	7,867.5	21.1	20.4	-149.95	-98.3	219.6	391.5	352.3	39.23	9.979	
8,000.0	7,992.7	7,973.6	7,966.3	21.5	20.8	-149.90	-102.2	226.0	404.3	364.4	39.92	10.128	
8,100.0	8,092.4	8,072.8	8,065.2	21.9	21.2	-149.85	-106.2	232.5	417.2	376.6	40.62	10.270	
8,200.0	8,192.1	8,171.9	8,164.1	22.3	21.6	-149.81	-110.2	238.9	430.0	388.7	41.33	10.406	
8,300.0	8,291.9	8,271.1	8,263.0	22.8	22.0	-149.77	-114.2	245.4	442.9	400.8	42.04	10.534	
8,400.0	8,391.6	8,370.3	8,361.9	23.2	22.4	-149.74	-118.2	251.8	455.7	412.9	42.76	10.656	
8,500.0	8,491.3	8,469.5	8,460.7	23.6	22.9	-149.70	-122.2	258.3	468.5	425.1	43.49	10.773	
8,600.0	8,591.1	8,568.6	8,559.6	24.1	23.3	-149.67	-126.1	264.7	481.4	437.2	44.23	10.884	
8,700.0	8,690.8	8,667.8	8,658.5	24.5	23.7	-149.64	-130.1	271.2	494.2	449.3	44.97	10.989	
8,800.0	8,790.5	8,767.0	8,757.4	24.9	24.1	-149.61	-134.1	277.6	507.1	461.4	45.72	11.090	
8,900.0	8,890.3	8,866.1	8,856.3	25.4	24.6	-149.58	-138.1	284.1	519.9	473.4	46.48	11.186	
9,000.0	8,990.0	8,965.3	8,955.1	25.8	25.0	-149.55	-142.1	290.5	532.8	485.5	47.24	11.277	
9,100.0	9,089.7	9,064.5	9,054.0	26.3	25.5	-149.52	-146.1	297.0	545.6	497.6	48.01	11.365	
9,200.0	9,189.4	9,163.7	9,152.9	26.7	25.9	-149.50	-150.1	303.4	558.4	509.7	48.78	11.448	
9,300.0	9,289.2	9,262.8	9,251.8	27.2	26.4	-149.48	-154.0	309.9	571.3	521.7	49.56	11.527	
9,400.0	9,388.9	9,362.0	9,350.7	27.7	26.8	-149.45	-158.0	316.3	584.1	533.8	50.34	11.603	
9,500.0	9,488.6	9,461.2	9,449.6	28.1	27.3	-149.43	-162.0	322.8	597.0	545.8	51.13	11.676	
9,600.0	9,588.4	9,560.3	9,548.4	28.6	27.7	-149.41	-166.0	329.2	609.8	557.9	51.92	11.745	
9,700.0	9,688.1	9,659.5	9,647.3	29.0	28.2	-149.39	-170.0	335.7	622.7	569.9	52.72	11.812	
9,800.0	9,787.8	9,758.7	9,746.2	29.5	28.6	-149.37	-174.0	342.1	635.5	582.0	53.52	11.875	
9,900.0	9,887.6	9,857.9	9,845.1	30.0	29.1	-149.35	-177.9	348.6	648.3	594.0	54.32	11.936	
10,000.0	9,987.3	9,957.0	9,944.0	30.4	29.6	-149.34	-181.9	355.0	661.2	606.1	55.13	11.994	
10,100.0	10,087.0	10,056.2	10,042.8	30.9	30.0	-149.32	-185.9	361.5	674.0	618.1	55.94	12.050	
10,200.0	10,186.8	10,155.4	10,141.7	31.4	30.5	-149.30	-189.9	367.9	686.9	630.1	56.75	12.103	
10,300.0	10,286.5	10,254.5	10,240.6	31.9	31.0	-149.29	-193.9	374.4	699.7	642.2	57.57	12.155	
10,400.0	10,386.2	10,353.7	10,339.5	32.3	31.5	-149.27	-197.9	380.8	712.6	654.2	58.39	12.204	
10,500.0	10,485.9	10,456.1	10,441.6	32.8	31.9	-149.26	-201.9	387.4	725.4	666.1	59.21	12.251	
10,600.0	10,585.7	10,567.7	10,552.9	33.3	32.4	-149.31	-205.5	393.3	736.9	676.9	60.05	12.271	
10,700.0	10,685.4	10,679.6	10,664.7	33.8	32.9	-149.45	-208.0	397.3	746.8	686.0	60.88	12.268	
10,800.0	10,785.1	10,791.8	10,776.9	34.3	33.3	-149.67	-209.4	399.4	755.1	693.4	61.65	12.248	
10,895.0	10,879.9	10,894.8	10,879.9	34.7	33.4	-149.94	-209.6	399.8	761.5	699.3	62.17	12.248	
10,900.0	10,884.9	10,899.7	10,884.9	34.7	33.4	-149.95	-209.6	399.8	761.8	699.6	62.19	12.249	
11,000.0	10,984.7	10,997.4	10,982.5	35.2	33.5	-150.22	-209.5	399.9	767.3	704.7	62.64	12.251	
11,100.0	11,084.6	11,077.8	11,062.4	35.6	33.4	-151.00	-201.1	401.0	772.9	709.8	63.07	12.254	
11,200.0	11,184.5	11,153.1	11,134.9	36.0	33.2	-152.57	-181.4	403.7	779.9	716.5	63.48	12.287	
11,300.0	11,284.5	11,220.7	11,196.7	36.3	33.1	-154.61	-154.2	407.3	789.6	725.8	63.81	12.374	
11,315.5	11,300.0	11,230.4	11,205.2	36.3	33.1	85.23	-149.6	408.0	791.4	727.6	63.84	12.397	
11,400.0	11,384.5	11,279.6	11,246.9	36.4	33.0	83.38	-123.7	411.5	803.6	739.7	63.94	12.569	
11,458.0	11,442.5	11,309.8	11,271.0	36.4	32.9	82.12	-105.8	413.9	814.7	750.7	64.02	12.726	
11,475.0	11,459.5	11,318.2	11,277.5	36.4	32.9	81.75	-100.5	414.6	818.3	754.3	64.04	12.779	
11,500.0	11,484.5	11,330.6	11,286.9	36.3	32.9	80.57	-92.5	415.7	823.9	759.8	64.06	12.860	
11,525.0	11,509.3	11,343.0	11,296.2	36.3	32.9	79.39	-84.3	416.8	829.7	765.6	64.09	12.945	
11,550.0	11,533.9	11,355.4	11,305.2	36.2	32.9	78.21	-75.9	418.0	835.6	771.5	64.12	13.031	

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 556H - Dagger State Com 556H - Dagger State Com 556H - 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)			
11,575.0	11,558.3	11,367.8	11,313.9	36.2	32.9	77.05	-67.2	419.1	841.7	777.5	64.15	13.119	
11,600.0	11,582.4	11,375.0	11,318.9	36.1	32.8	76.06	-62.1	419.8	847.9	783.7	64.20	13.206	
11,625.0	11,606.1	11,392.5	11,330.8	36.0	32.8	74.77	-49.3	421.6	854.1	789.8	64.23	13.297	
11,650.0	11,629.4	11,400.0	11,335.7	36.0	32.8	73.80	-43.7	422.3	860.4	796.1	64.29	13.384	
11,675.0	11,652.1	11,417.3	11,346.6	35.9	32.8	72.60	-30.4	424.1	866.6	802.3	64.32	13.473	
11,700.0	11,674.3	11,425.0	11,351.4	35.9	32.8	71.67	-24.4	424.9	872.9	808.5	64.39	13.557	
11,725.0	11,695.8	11,442.0	11,361.5	35.8	32.8	70.56	-10.9	426.8	879.1	814.6	64.43	13.643	
11,750.0	11,716.6	11,450.0	11,366.1	35.7	32.8	69.68	-4.4	427.7	885.2	820.7	64.50	13.724	
11,775.0	11,736.7	11,466.7	11,375.3	35.7	32.8	68.67	9.5	429.5	891.2	826.7	64.56	13.805	
11,800.0	11,756.0	11,475.0	11,379.7	35.6	32.8	67.86	16.4	430.5	897.1	832.5	64.63	13.881	
11,825.0	11,774.4	11,491.4	11,388.0	35.6	32.8	66.96	30.4	432.4	902.9	838.2	64.70	13.956	
11,850.0	11,791.9	11,500.0	11,392.2	35.5	32.8	66.22	37.9	433.4	908.5	843.7	64.77	14.026	
11,875.0	11,808.5	11,516.1	11,399.6	35.5	32.8	65.44	52.0	435.3	913.9	849.0	64.84	14.094	
11,900.0	11,824.0	11,525.0	11,403.5	35.5	32.8	64.78	59.9	436.4	919.1	854.1	64.92	14.157	
11,925.0	11,838.5	11,540.8	11,410.1	35.5	32.9	64.12	74.1	438.3	924.0	859.0	64.99	14.218	
11,950.0	11,852.0	11,550.0	11,413.7	35.4	32.9	63.54	82.6	439.4	928.8	863.7	65.07	14.274	
11,975.0	11,864.3	11,565.4	11,419.4	35.4	32.9	62.99	96.8	441.4	933.2	868.1	65.14	14.326	
12,000.0	11,875.4	11,575.0	11,422.6	35.5	32.9	62.51	105.7	442.6	937.5	872.3	65.22	14.375	
12,025.0	11,885.3	11,590.1	11,427.4	35.5	32.9	62.07	119.8	444.5	941.4	876.1	65.29	14.418	
12,050.0	11,894.1	11,600.0	11,430.4	35.5	33.0	61.68	129.3	445.8	945.1	879.7	65.36	14.460	
12,075.0	11,901.6	11,614.7	11,434.3	35.5	33.0	61.36	143.3	447.7	948.5	883.1	65.44	14.494	
12,100.0	11,907.8	11,625.0	11,436.8	35.6	33.0	61.06	153.2	449.0	951.6	886.1	65.50	14.527	
12,125.0	11,912.8	11,639.3	11,440.0	35.6	33.1	60.84	167.0	450.9	954.4	888.8	65.58	14.553	
12,150.0	11,916.5	11,650.0	11,442.0	35.7	33.1	60.65	177.4	452.3	956.9	891.2	65.64	14.577	
12,175.0	11,918.9	11,663.9	11,444.3	35.8	33.1	60.53	191.0	454.1	959.0	893.3	65.71	14.594	
12,200.0	11,919.9	11,675.0	11,445.9	35.9	33.2	60.44	201.9	455.6	960.9	895.1	65.77	14.610	
12,208.0	11,920.0	11,675.0	11,445.9	35.9	33.2	60.38	201.9	455.6	961.5	895.7	65.76	14.620	
12,300.0	11,920.0	11,725.0	11,449.8	36.3	33.4	60.79	251.2	462.3	969.6	903.5	66.04	14.681	
12,400.0	11,920.0	11,843.0	11,450.0	36.8	34.0	61.23	368.4	476.4	980.8	913.7	67.08	14.621	
12,500.0	11,920.0	11,985.7	11,450.0	37.4	35.0	61.56	510.7	487.2	988.1	919.5	68.61	14.401	
12,600.0	11,920.0	12,129.4	11,450.0	38.1	36.2	61.69	654.3	490.8	991.0	920.7	70.30	14.097	
12,700.0	11,920.0	12,235.3	11,450.0	38.9	37.1	61.69	760.2	490.2	991.1	919.3	71.79	13.807	
12,800.0	11,920.0	12,335.3	11,450.0	39.8	37.9	61.69	860.2	489.5	991.2	917.8	73.39	13.507	
12,900.0	11,920.0	12,435.3	11,450.0	40.7	38.9	61.70	960.2	488.8	991.3	916.2	75.14	13.193	
13,000.0	11,920.0	12,535.3	11,450.0	41.7	40.0	61.70	1,060.2	488.2	991.4	914.4	77.03	12.871	
13,100.0	11,920.0	12,635.3	11,450.0	42.8	41.1	61.70	1,160.2	487.5	991.5	912.4	79.04	12.544	
13,200.0	11,920.0	12,735.3	11,450.0	43.9	42.2	61.71	1,260.2	486.9	991.6	910.4	81.18	12.215	
13,300.0	11,920.0	12,835.3	11,450.0	45.1	43.5	61.71	1,360.2	486.2	991.7	908.2	83.43	11.887	
13,400.0	11,920.0	12,935.3	11,450.0	46.4	44.8	61.71	1,460.2	485.5	991.8	906.0	85.77	11.563	
13,500.0	11,920.0	13,035.3	11,450.0	47.7	46.1	61.71	1,560.2	484.9	991.9	903.6	88.22	11.244	
13,600.0	11,920.0	13,135.3	11,450.0	49.1	47.5	61.72	1,660.2	484.2	991.9	901.2	90.74	10.931	
13,700.0	11,920.0	13,235.3	11,450.0	50.5	48.9	61.72	1,760.2	483.5	992.0	898.7	93.35	10.627	
13,800.0	11,920.0	13,335.3	11,450.0	51.9	50.4	61.72	1,860.2	482.9	992.1	896.1	96.03	10.331	
13,900.0	11,920.0	13,435.3	11,450.0	53.4	51.9	61.73	1,960.2	482.2	992.2	893.4	98.78	10.045	
14,000.0	11,920.0	13,535.3	11,450.0	54.9	53.5	61.73	2,060.2	481.6	992.3	890.7	101.59	9.768	
14,100.0	11,920.0	13,635.3	11,450.0	56.5	55.1	61.73	2,160.1	480.9	992.4	888.0	104.45	9.501	
14,200.0	11,920.0	13,735.3	11,450.0	58.1	56.7	61.73	2,260.1	480.2	992.5	885.1	107.37	9.244	
14,300.0	11,920.0	13,835.3	11,450.0	59.7	58.3	61.74	2,360.1	479.6	992.6	882.3	110.34	8.996	
14,400.0	11,920.0	13,935.3	11,450.0	61.3	60.0	61.74	2,460.1	478.9	992.7	879.3	113.34	8.758	
14,500.0	11,920.0	14,035.3	11,450.0	63.0	61.7	61.74	2,560.1	478.3	992.8	876.4	116.40	8.529	
14,600.0	11,920.0	14,135.3	11,450.0	64.7	63.4	61.75	2,660.1	477.6	992.9	873.4	119.48	8.310	
14,700.0	11,920.0	14,235.3	11,450.0	66.4	65.1	61.75	2,760.1	476.9	993.0	870.3	122.61	8.099	

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 556H - Dagger State Com 556H - Dagger State Com 556H - 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		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
14,800.0	11,920.0	14,335.3	11,450.0	68.1	66.8	61.75	2,860.1	476.3	993.0	867.3	125.76	7.896
14,900.0	11,920.0	14,435.3	11,450.0	69.8	68.6	61.75	2,960.1	475.6	993.1	864.2	128.94	7.702
15,000.0	11,920.0	14,535.3	11,450.0	71.6	70.4	61.76	3,060.1	475.0	993.2	861.1	132.16	7.516
15,100.0	11,920.0	14,635.3	11,450.0	73.3	72.1	61.76	3,160.1	474.3	993.3	857.9	135.39	7.336
15,200.0	11,920.0	14,735.3	11,450.0	75.1	73.9	61.76	3,260.1	473.6	993.4	854.8	138.66	7.165
15,300.0	11,920.0	14,835.3	11,450.0	76.9	75.7	61.77	3,360.1	473.0	993.5	851.6	141.94	7.000
15,400.0	11,920.0	14,935.3	11,450.0	78.7	77.6	61.77	3,460.1	472.3	993.6	848.4	145.24	6.841
15,500.0	11,920.0	15,035.3	11,450.0	80.5	79.4	61.77	3,560.1	471.6	993.7	845.1	148.57	6.688
15,600.0	11,920.0	15,135.3	11,450.0	82.3	81.2	61.77	3,660.1	471.0	993.8	841.9	151.91	6.542
15,700.0	11,920.0	15,235.3	11,450.0	84.2	83.1	61.78	3,760.1	470.3	993.9	838.6	155.27	6.401
15,800.0	11,920.0	15,335.3	11,450.0	86.0	84.9	61.78	3,860.1	469.7	994.0	835.3	158.64	6.266
15,900.0	11,920.0	15,435.3	11,450.0	87.9	86.8	61.78	3,960.1	469.0	994.1	832.0	162.03	6.135
16,000.0	11,920.0	15,535.3	11,450.0	89.7	88.7	61.79	4,060.1	468.3	994.1	828.7	165.43	6.009
16,100.0	11,920.0	15,635.3	11,450.0	91.6	90.5	61.79	4,160.1	467.7	994.2	825.4	168.84	5.888
16,200.0	11,920.0	15,735.3	11,450.0	93.5	92.4	61.79	4,260.1	467.0	994.3	822.1	172.27	5.772
16,300.0	11,920.0	15,835.3	11,450.0	95.3	94.3	61.79	4,360.1	466.4	994.4	818.7	175.71	5.659
16,400.0	11,920.0	15,935.3	11,450.0	97.2	96.2	61.80	4,460.1	465.7	994.5	815.3	179.16	5.551
16,500.0	11,920.0	16,035.3	11,450.0	99.1	98.1	61.80	4,560.1	465.0	994.6	812.0	182.62	5.446
16,600.0	11,920.0	16,135.3	11,450.0	101.0	100.0	61.80	4,660.1	464.4	994.7	808.6	186.09	5.345
16,700.0	11,920.0	16,235.3	11,450.0	102.9	101.9	61.81	4,760.1	463.7	994.8	805.2	189.57	5.248
16,800.0	11,920.0	16,335.3	11,450.0	104.8	103.8	61.81	4,860.1	463.0	994.9	801.8	193.06	5.153
16,900.0	11,920.0	16,435.3	11,450.0	106.7	105.7	61.81	4,960.1	462.4	995.0	798.4	196.55	5.062
17,000.0	11,920.0	16,535.3	11,450.0	108.6	107.6	61.81	5,060.1	461.7	995.1	795.0	200.06	4.974
17,100.0	11,920.0	16,635.3	11,450.0	110.5	109.6	61.82	5,160.1	461.1	995.1	791.6	203.57	4.889
17,200.0	11,920.0	16,735.3	11,450.0	112.4	111.5	61.82	5,260.1	460.4	995.2	788.2	207.08	4.806
17,300.0	11,920.0	16,835.3	11,450.0	114.4	113.4	61.82	5,360.1	459.7	995.3	784.7	210.61	4.726
17,400.0	11,920.0	16,935.3	11,450.0	116.3	115.4	61.83	5,460.1	459.1	995.4	781.3	214.14	4.648
17,500.0	11,920.0	17,035.3	11,450.0	118.2	117.3	61.83	5,560.1	458.4	995.5	777.8	217.68	4.573
17,600.0	11,920.0	17,135.3	11,450.0	120.1	119.2	61.83	5,660.1	457.8	995.6	774.4	221.22	4.501
17,700.0	11,920.0	17,235.3	11,450.0	122.1	121.2	61.83	5,760.1	457.1	995.7	770.9	224.77	4.430
17,800.0	11,920.0	17,335.3	11,450.0	124.0	123.1	61.84	5,860.1	456.4	995.8	767.5	228.32	4.361
17,900.0	11,920.0	17,435.3	11,450.0	126.0	125.1	61.84	5,960.1	455.8	995.9	764.0	231.88	4.295
18,000.0	11,920.0	17,535.3	11,450.0	127.9	127.0	61.84	6,060.1	455.1	996.0	760.5	235.44	4.230
18,100.0	11,920.0	17,635.3	11,450.0	129.8	129.0	61.85	6,160.1	454.4	996.1	757.1	239.01	4.168
18,200.0	11,920.0	17,735.3	11,450.0	131.8	130.9	61.85	6,260.1	453.8	996.2	753.6	242.58	4.107
18,300.0	11,920.0	17,835.3	11,450.0	133.7	132.9	61.85	6,360.1	453.1	996.2	750.1	246.15	4.047
18,400.0	11,920.0	17,935.3	11,450.0	135.7	134.8	61.85	6,460.1	452.5	996.3	746.6	249.73	3.990
18,500.0	11,920.0	18,035.3	11,450.0	137.6	136.8	61.86	6,560.1	451.8	996.4	743.1	253.32	3.934
18,600.0	11,920.0	18,135.3	11,450.0	139.6	138.7	61.86	6,660.0	451.1	996.5	739.6	256.91	3.879
18,700.0	11,920.0	18,235.3	11,450.0	141.5	140.7	61.86	6,760.0	450.5	996.6	736.1	260.50	3.826
18,800.0	11,920.0	18,335.3	11,450.0	143.5	142.7	61.86	6,860.0	449.8	996.7	732.6	264.09	3.774
18,900.0	11,920.0	18,435.3	11,450.0	145.5	144.6	61.87	6,960.0	449.2	996.8	729.1	267.69	3.724
19,000.0	11,920.0	18,535.3	11,450.0	147.4	146.6	61.87	7,060.0	448.5	996.9	725.6	271.29	3.675
19,100.0	11,920.0	18,635.3	11,450.0	149.4	148.6	61.87	7,160.0	447.8	997.0	722.1	274.89	3.627
19,200.0	11,920.0	18,735.3	11,450.0	151.4	150.5	61.88	7,260.0	447.2	997.1	718.6	278.50	3.580
19,300.0	11,920.0	18,835.3	11,450.0	153.3	152.5	61.88	7,360.0	446.5	997.2	715.1	282.11	3.535
19,400.0	11,920.0	18,935.3	11,450.0	155.3	154.5	61.88	7,460.0	445.9	997.3	711.5	285.72	3.490
19,500.0	11,920.0	19,035.3	11,450.0	157.3	156.4	61.88	7,560.0	445.2	997.3	708.0	289.33	3.447
19,600.0	11,920.0	19,135.3	11,450.0	159.2	158.4	61.89	7,660.0	444.5	997.4	704.5	292.95	3.405
19,700.0	11,920.0	19,235.3	11,450.0	161.2	160.4	61.89	7,760.0	443.9	997.5	701.0	296.57	3.364
19,800.0	11,920.0	19,335.3	11,450.0	163.2	162.4	61.89	7,860.0	443.2	997.6	697.4	300.19	3.323
19,900.0	11,920.0	19,435.3	11,450.0	165.1	164.3	61.90	7,960.0	442.5	997.7	693.9	303.82	3.284

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 556H - Dagger State Com 556H - Dagger State Com 556H - 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		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		
20,000.0	11,920.0	19,535.3	11,450.0	167.1	166.3	61.90	8,060.0	441.9	997.8	690.4	307.44	3.246		
20,021.2	11,920.0	19,556.5	11,450.0	167.5	166.7	61.90	8,081.2	441.7	997.8	689.6	308.21	3.237		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 558H - Dagger State Com 558H - Dagger State Com 558H - 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		Rule Assigned:		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
0.0	0.0	0.0	0.0	0.0	0.0	89.62	0.2	29.9	29.9			
100.0	100.0	99.0	99.0	0.5	0.5	89.62	0.2	29.9	29.9	28.9	1.06	28.363
200.0	200.0	199.0	199.0	1.7	1.7	89.62	0.2	29.9	29.9	26.5	3.41	8.771
300.0	300.0	299.0	299.0	2.4	2.4	89.62	0.2	29.9	29.9	25.1	4.82	6.213
400.0	400.0	399.0	399.0	3.0	2.9	89.62	0.2	29.9	29.9	24.0	5.90	5.069
500.0	500.0	499.0	499.0	3.4	3.4	89.62	0.2	29.9	29.9	23.1	6.83	4.384
600.0	600.0	599.0	599.0	3.8	3.8	89.62	0.2	29.9	29.9	22.3	7.64	3.914
700.0	700.0	699.0	699.0	4.2	4.2	89.62	0.2	29.9	29.9	21.5	8.39	3.566
800.0	800.0	799.0	799.0	4.5	4.5	89.62	0.2	29.9	29.9	20.8	9.08	3.295
900.0	900.0	899.0	899.0	4.9	4.9	89.62	0.2	29.9	29.9	20.2	9.73	3.076
1,000.0	1,000.0	999.0	999.0	5.2	5.2	89.62	0.2	29.9	29.9	19.6	10.34	2.894
1,100.0	1,100.0	1,099.0	1,099.0	5.5	5.5	89.62	0.2	29.9	29.9	19.0	10.92	2.740
1,200.0	1,200.0	1,199.0	1,199.0	5.7	5.7	89.62	0.2	29.9	29.9	18.4	11.48	2.607
1,300.0	1,300.0	1,299.0	1,299.0	6.0	6.0	89.62	0.2	29.9	29.9	17.9	12.01	2.491
1,400.0	1,400.0	1,399.0	1,399.0	6.3	6.3	89.62	0.2	29.9	29.9	17.4	12.53	2.388
1,500.0	1,500.0	1,499.0	1,499.0	6.5	6.5	89.62	0.2	29.9	29.9	16.9	13.03	2.297
1,600.0	1,600.0	1,599.0	1,599.0	6.8	6.8	89.62	0.2	29.9	29.9	16.4	13.51	2.214
1,700.0	1,700.0	1,699.0	1,699.0	7.0	7.0	89.62	0.2	29.9	29.9	15.9	13.99	2.139
1,800.0	1,800.0	1,799.0	1,799.0	7.2	7.2	89.62	0.2	29.9	29.9	15.5	14.45	2.071
1,900.0	1,900.0	1,899.0	1,899.0	7.4	7.4	89.62	0.2	29.9	29.9	15.0	14.90	2.009
2,000.0	2,000.0	1,999.0	1,999.0	7.7	7.7	89.62	0.2	29.9	29.9	14.6	15.34	1.951
2,100.0	2,100.0	2,099.0	2,099.0	7.9	7.9	89.62	0.2	29.9	29.9	14.2	15.77	1.898
2,200.0	2,200.0	2,199.0	2,199.0	8.1	8.1	89.62	0.2	29.9	29.9	13.7	16.19	1.848
2,300.0	2,300.0	2,299.0	2,299.0	8.3	8.3	89.62	0.2	29.9	29.9	13.3	16.61	1.802
2,400.0	2,400.0	2,399.0	2,399.0	8.5	8.5	89.62	0.2	29.9	29.9	12.9	17.01	1.759
2,500.0	2,500.0	2,499.0	2,499.0	8.7	8.7	89.62	0.2	29.9	29.9	12.5	17.42	1.718
2,600.0	2,600.0	2,599.0	2,599.0	8.9	8.9	89.62	0.2	29.9	29.9	12.1	17.81	1.680
2,700.0	2,700.0	2,699.0	2,699.0	9.1	9.1	89.62	0.2	29.9	29.9	11.7	18.20	1.644
2,800.0	2,800.0	2,799.0	2,799.0	9.3	9.3	89.62	0.2	29.9	29.9	11.3	18.58	1.610
2,900.0	2,900.0	2,899.0	2,899.0	9.5	9.5	89.62	0.2	29.9	29.9	11.0	18.96	1.578
3,000.0	3,000.0	2,999.0	2,999.0	9.7	9.7	89.62	0.2	29.9	29.9	10.6	19.34	1.547
3,100.0	3,100.0	3,099.0	3,099.0	9.9	9.9	89.62	0.2	29.9	29.9	10.2	19.71	1.518
3,200.0	3,200.0	3,199.0	3,199.0	10.0	10.0	89.62	0.2	29.9	29.9	9.9	20.07	1.491 Level 3
3,300.0	3,300.0	3,299.0	3,299.0	10.2	10.2	89.62	0.2	29.9	29.9	9.5	20.43	1.464 Level 3
3,400.0	3,400.0	3,399.0	3,399.0	10.4	10.4	89.62	0.2	29.9	29.9	9.1	20.79	1.439 Level 3
3,500.0	3,500.0	3,499.0	3,499.0	10.6	10.6	89.62	0.2	29.9	29.9	8.8	21.15	1.415 Level 3
3,600.0	3,600.0	3,599.0	3,599.0	10.7	10.7	89.62	0.2	29.9	29.9	8.4	21.50	1.392 Level 3
3,700.0	3,700.0	3,699.0	3,699.0	10.9	10.9	89.62	0.2	29.9	29.9	8.1	21.84	1.370 Level 3
3,800.0	3,800.0	3,799.0	3,799.0	11.1	11.1	89.62	0.2	29.9	29.9	7.7	22.19	1.349 Level 3
3,900.0	3,900.0	3,899.0	3,899.0	11.3	11.3	89.62	0.2	29.9	29.9	7.4	22.53	1.328 Level 3
4,000.0	4,000.0	3,999.0	3,999.0	11.4	11.4	89.62	0.2	29.9	29.9	7.1	22.87	1.308 Level 3
4,100.0	4,100.0	4,099.0	4,099.0	11.6	11.6	89.62	0.2	29.9	29.9	6.7	23.21	1.290 Level 3
4,200.0	4,200.0	4,199.0	4,199.0	11.8	11.8	89.62	0.2	29.9	29.9	6.4	23.54	1.271 Level 3
4,300.0	4,300.0	4,299.0	4,299.0	11.9	11.9	89.62	0.2	29.9	29.9	6.1	23.87	1.254 Level 3
4,400.0	4,400.0	4,399.0	4,399.0	12.1	12.1	89.62	0.2	29.9	29.9	5.7	24.20	1.237 Level 3
4,500.0	4,500.0	4,499.0	4,499.0	12.3	12.3	89.62	0.2	29.9	29.9	5.4	24.52	1.220 Level 3
4,600.0	4,600.0	4,599.0	4,599.0	12.4	12.4	89.62	0.2	29.9	29.9	5.1	24.85	1.204 Level 3
4,700.0	4,700.0	4,699.0	4,699.0	12.6	12.6	89.62	0.2	29.9	29.9	4.8	25.17	1.189 Level 3
4,800.0	4,800.0	4,799.0	4,799.0	12.7	12.7	89.62	0.2	29.9	29.9	4.4	25.49	1.174 Level 3
4,900.0	4,900.0	4,899.0	4,899.0	12.9	12.9	89.62	0.2	29.9	29.9	4.1	25.81	1.159 Level 3
5,000.0	5,000.0	4,999.0	4,999.0	13.1	13.1	89.62	0.2	29.9	29.9	3.8	26.12	1.145 Level 3, CC, ES
5,100.0	5,100.0	5,099.0	5,099.0	13.2	13.2	-151.35	0.2	29.9	30.7	4.3	26.38	1.163 Level 3

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 558H - Dagger State Com 558H - Dagger State Com 558H - Prelim 1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,200.0	5,200.0	5,199.0	5,199.0	13.3	13.4	-153.52	0.2	29.9	33.0	6.4	26.63	1.239	Level 3	
5,300.0	5,299.9	5,299.4	5,299.4	13.4	13.5	-155.91	-0.3	29.2	36.2	9.4	26.83	1.349	Level 3	
5,400.0	5,399.7	5,399.9	5,399.9	13.5	13.6	-157.72	-1.8	27.0	39.5	12.5	27.04	1.461	Level 3	
5,420.5	5,420.1	5,420.6	5,420.5	13.5	13.6	-158.03	-2.2	26.4	40.2	13.1	27.07	1.485	Level 3	
5,500.0	5,499.4	5,500.6	5,500.4	13.6	13.7	-158.83	-4.2	23.4	42.4	15.1	27.23	1.556		
5,600.0	5,599.1	5,601.2	5,600.9	13.8	13.8	-158.85	-7.7	18.3	43.7	16.2	27.48	1.589		
5,700.0	5,698.9	5,701.4	5,700.8	14.0	13.9	-158.16	-11.8	12.2	43.9	16.1	27.73	1.581		
5,800.0	5,798.6	5,801.4	5,800.5	14.2	14.0	-157.45	-16.0	6.0	44.0	15.9	28.05	1.568		
5,900.0	5,898.3	5,901.4	5,900.2	14.4	14.2	-156.75	-20.2	-0.1	44.1	15.7	28.40	1.554		
6,000.0	5,998.1	6,001.4	6,000.0	14.6	14.4	-156.05	-24.3	-6.3	44.3	15.5	28.78	1.539		
6,100.0	6,097.8	6,101.4	6,099.7	14.9	14.6	-155.35	-28.5	-12.4	44.4	15.3	29.18	1.523		
6,200.0	6,197.5	6,201.4	6,199.4	15.1	14.8	-154.66	-32.7	-18.6	44.6	15.0	29.59	1.507		
6,300.0	6,297.3	6,301.4	6,299.1	15.4	15.1	-153.97	-36.8	-24.7	44.8	14.7	30.02	1.491	Level 3	
6,400.0	6,397.0	6,401.4	6,398.8	15.7	15.3	-153.29	-41.0	-30.9	44.9	14.5	30.47	1.475	Level 3	
6,500.0	6,496.7	6,501.4	6,498.6	16.0	15.6	-152.61	-45.2	-37.1	45.1	14.2	30.94	1.459	Level 3	
6,600.0	6,596.4	6,601.4	6,598.3	16.3	15.9	-151.94	-49.3	-43.2	45.3	13.9	31.41	1.442	Level 3	
6,700.0	6,696.2	6,701.4	6,698.0	16.6	16.2	-151.28	-53.5	-49.4	45.5	13.6	31.90	1.426	Level 3	
6,800.0	6,795.9	6,801.4	6,797.7	16.9	16.5	-150.62	-57.7	-55.5	45.7	13.3	32.40	1.411	Level 3	
6,900.0	6,895.6	6,901.4	6,897.5	17.3	16.8	-149.97	-61.8	-61.7	45.9	13.0	32.90	1.395	Level 3	
7,000.0	6,995.4	7,001.4	6,997.2	17.6	17.1	-149.32	-66.0	-67.8	46.1	12.7	33.42	1.380	Level 3	
7,100.0	7,095.1	7,101.4	7,096.9	18.0	17.5	-148.68	-70.2	-74.0	46.3	12.4	33.93	1.366	Level 3	
7,200.0	7,194.8	7,201.4	7,196.6	18.3	17.8	-148.04	-74.4	-80.1	46.6	12.1	34.46	1.351	Level 3	
7,300.0	7,294.6	7,301.4	7,296.3	18.7	18.2	-147.41	-78.5	-86.3	46.8	11.8	34.99	1.337	Level 3	
7,400.0	7,394.3	7,401.4	7,396.1	19.1	18.5	-146.79	-82.7	-92.4	47.0	11.5	35.52	1.324	Level 3	
7,500.0	7,494.0	7,501.4	7,495.8	19.5	18.9	-146.17	-86.9	-98.6	47.3	11.2	36.05	1.311	Level 3	
7,600.0	7,593.8	7,601.4	7,595.5	19.9	19.3	-145.56	-91.0	-104.7	47.5	10.9	36.58	1.299	Level 3	
7,700.0	7,693.5	7,701.4	7,695.2	20.3	19.6	-144.96	-95.2	-110.9	47.8	10.6	37.12	1.287	Level 3	
7,800.0	7,793.2	7,801.4	7,795.0	20.7	20.0	-144.36	-99.4	-117.1	48.0	10.4	37.66	1.275	Level 3	
7,900.0	7,892.9	7,901.4	7,894.7	21.1	20.4	-143.77	-103.5	-123.2	48.3	10.1	38.19	1.264	Level 3	
8,000.0	7,992.7	8,001.4	7,994.4	21.5	20.8	-143.19	-107.7	-129.4	48.5	9.8	38.72	1.254	Level 3	
8,100.0	8,092.4	8,101.4	8,094.1	21.9	21.2	-142.61	-111.9	-135.5	48.8	9.6	39.26	1.244	Level 3	
8,200.0	8,192.1	8,201.4	8,193.8	22.3	21.6	-142.03	-116.0	-141.7	49.1	9.3	39.79	1.234	Level 3	
8,300.0	8,291.9	8,301.4	8,293.6	22.8	22.1	-141.47	-120.2	-147.8	49.4	9.1	40.31	1.225	Level 3	
8,400.0	8,391.6	8,401.4	8,393.3	23.2	22.5	-140.91	-124.4	-154.0	49.7	8.8	40.84	1.216	Level 3	
8,500.0	8,491.3	8,501.4	8,493.0	23.6	22.9	-140.36	-128.5	-160.1	50.0	8.6	41.36	1.208	Level 3	
8,600.0	8,591.1	8,601.4	8,592.7	24.1	23.3	-139.81	-132.7	-166.3	50.2	8.4	41.88	1.200	Level 3	
8,700.0	8,690.8	8,701.4	8,692.5	24.5	23.8	-139.27	-136.9	-172.4	50.5	8.2	42.39	1.192	Level 3	
8,800.0	8,790.5	8,801.3	8,792.2	24.9	24.2	-138.74	-141.1	-178.6	50.9	7.9	42.90	1.185	Level 3	
8,900.0	8,890.3	8,901.3	8,891.9	25.4	24.6	-138.21	-145.2	-184.7	51.2	7.7	43.41	1.179	Level 3	
9,000.0	8,990.0	9,001.3	8,991.6	25.8	25.1	-137.69	-149.4	-190.9	51.5	7.6	43.91	1.172	Level 3	
9,100.0	9,089.7	9,101.3	9,091.3	26.3	25.5	-137.18	-153.6	-197.1	51.8	7.4	44.41	1.166	Level 3	
9,200.0	9,189.4	9,201.3	9,191.1	26.7	26.0	-136.67	-157.7	-203.2	52.1	7.2	44.91	1.160	Level 3	
9,300.0	9,289.2	9,301.3	9,290.8	27.2	26.4	-136.17	-161.9	-209.4	52.4	7.0	45.40	1.155	Level 3	
9,400.0	9,388.9	9,401.3	9,390.5	27.7	26.9	-135.67	-166.1	-215.5	52.8	6.9	45.88	1.150	Level 3	
9,500.0	9,488.6	9,501.3	9,490.2	28.1	27.3	-135.18	-170.2	-221.7	53.1	6.7	46.36	1.145	Level 3	
9,600.0	9,588.4	9,601.3	9,589.9	28.6	27.8	-134.70	-174.4	-227.8	53.4	6.6	46.84	1.141	Level 3	
9,700.0	9,688.1	9,701.3	9,689.7	29.0	28.2	-134.22	-178.6	-234.0	53.8	6.5	47.31	1.137	Level 3	
9,800.0	9,787.8	9,801.3	9,789.4	29.5	28.7	-133.75	-182.7	-240.1	54.1	6.3	47.77	1.133	Level 3	
9,900.0	9,887.6	9,901.3	9,889.1	30.0	29.2	-133.29	-186.9	-246.3	54.5	6.2	48.23	1.129	Level 3	
10,000.0	9,987.3	10,001.3	9,988.8	30.4	29.6	-132.83	-191.1	-252.4	54.8	6.1	48.69	1.126	Level 3	
10,100.0	10,087.0	10,101.3	10,088.6	30.9	30.1	-132.37	-195.2	-258.6	55.2	6.0	49.14	1.123	Level 3	
10,200.0	10,186.8	10,201.3	10,188.3	31.4	30.6	-131.93	-199.4	-264.7	55.5	5.9	49.58	1.120	Level 3	

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 558H - Dagger State Com 558H - Dagger State Com 558H - 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	
10,300.0	10,286.5	10,300.9	10,287.6	31.9	31.0	-131.77	-203.4	-270.6	56.1	6.0	50.11	1.120 Level 3, SF	
10,400.0	10,386.2	10,400.3	10,386.9	32.3	31.4	-132.90	-206.4	-275.1	57.7	6.5	51.18	1.127 Level 3	
10,500.0	10,485.9	10,499.6	10,486.1	32.8	31.8	-135.22	-208.5	-278.1	60.4	7.6	52.78	1.145 Level 3	
10,600.0	10,585.7	10,598.7	10,585.2	33.3	32.2	-138.45	-209.6	-279.8	64.4	9.6	54.77	1.176 Level 3	
10,700.0	10,685.4	10,698.0	10,684.4	33.8	32.3	-142.21	-209.8	-280.1	69.8	13.0	56.82	1.228 Level 3	
10,800.0	10,785.1	10,797.7	10,784.1	34.3	32.3	-145.61	-209.8	-280.1	75.7	17.1	58.66	1.291 Level 3	
10,895.0	10,879.9	10,894.1	10,879.9	34.7	32.2	-154.74	-200.9	-281.4	80.5	18.1	62.42	1.289 Level 3	
10,900.0	10,884.9	10,899.0	10,884.7	34.7	32.2	-155.54	-199.9	-281.5	80.8	18.1	62.70	1.288 Level 3	
11,000.0	10,984.7	10,991.4	10,972.9	35.2	32.0	-174.97	-172.8	-285.5	90.9	24.2	66.69	1.363 Level 3	
11,100.0	11,084.6	11,070.7	11,043.0	35.6	31.9	166.12	-136.5	-290.9	118.3	52.9	65.39	1.809	
11,200.0	11,184.5	11,136.2	11,095.8	36.0	31.7	153.17	-98.2	-296.5	165.0	102.4	62.57	2.636	
11,300.0	11,284.5	11,189.5	11,134.5	36.3	31.7	145.28	-61.9	-301.9	225.8	164.6	61.18	3.691	
11,315.5	11,300.0	11,200.0	11,141.6	36.3	31.7	24.14	-54.3	-303.0	236.2	175.2	60.94	3.876	
11,400.0	11,384.5	11,232.8	11,162.8	36.4	31.7	20.23	-29.5	-306.6	296.3	235.3	60.98	4.859	
11,458.0	11,442.5	11,250.0	11,173.2	36.4	31.6	18.44	-15.9	-308.6	340.7	279.3	61.36	5.551	
11,475.0	11,459.5	11,260.0	11,179.0	36.4	31.6	17.17	-7.9	-309.8	353.8	292.5	61.30	5.771	
11,500.0	11,484.5	11,268.9	11,184.0	36.3	31.6	15.48	-0.6	-310.9	372.8	311.3	61.44	6.067	
11,525.0	11,509.3	11,275.0	11,187.4	36.3	31.6	14.21	4.4	-311.6	391.3	329.6	61.71	6.340	
11,550.0	11,533.9	11,287.1	11,193.8	36.2	31.7	12.76	14.5	-313.1	409.3	347.5	61.81	6.622	
11,575.0	11,558.3	11,300.0	11,200.5	36.2	31.7	11.49	25.5	-314.7	426.8	364.9	61.91	6.894	
11,600.0	11,582.4	11,300.0	11,200.5	36.1	31.7	10.95	25.5	-314.7	443.8	381.4	62.43	7.109	
11,625.0	11,606.1	11,315.3	11,207.9	36.0	31.7	9.86	38.7	-316.7	460.1	397.6	62.50	7.361	
11,650.0	11,629.4	11,325.0	11,212.5	36.0	31.7	9.11	47.2	-317.9	475.9	413.2	62.76	7.583	
11,675.0	11,652.1	11,334.6	11,216.8	35.9	31.7	8.45	55.7	-319.2	491.1	428.1	63.03	7.792	
11,700.0	11,674.3	11,350.0	11,223.3	35.9	31.7	7.69	69.5	-321.2	505.8	442.6	63.16	8.008	
11,725.0	11,695.8	11,350.0	11,223.3	35.8	31.7	7.43	69.5	-321.2	519.7	456.1	63.70	8.160	
11,750.0	11,716.6	11,364.2	11,228.9	35.7	31.7	6.84	82.3	-323.1	533.1	469.2	63.88	8.344	
11,775.0	11,736.7	11,375.0	11,232.9	35.7	31.7	6.39	92.3	-324.6	545.8	481.6	64.16	8.506	
11,800.0	11,756.0	11,384.2	11,236.1	35.6	31.8	6.01	100.8	-325.8	557.8	493.3	64.48	8.651	
11,825.0	11,774.4	11,400.0	11,241.3	35.6	31.8	5.54	115.6	-328.0	569.2	504.6	64.66	8.804	
11,850.0	11,791.9	11,400.0	11,241.3	35.5	31.8	5.40	115.6	-328.0	579.9	514.8	65.16	8.900	
11,875.0	11,808.5	11,414.7	11,245.6	35.5	31.8	5.02	129.4	-330.0	589.9	524.5	65.37	9.024	
11,900.0	11,824.0	11,425.0	11,248.5	35.5	31.9	4.74	139.3	-331.5	599.2	533.5	65.67	9.125	
11,925.0	11,838.5	11,435.1	11,251.0	35.5	31.9	4.49	149.0	-332.9	607.8	541.9	65.96	9.214	
11,950.0	11,852.0	11,450.0	11,254.3	35.4	31.9	4.18	163.3	-335.0	615.8	549.6	66.19	9.303	
11,975.0	11,864.3	11,450.0	11,254.3	35.4	31.9	4.11	163.3	-335.0	623.0	556.4	66.62	9.351	
12,000.0	11,875.4	11,466.1	11,257.5	35.5	32.0	3.82	179.0	-337.3	629.4	562.5	66.83	9.418	
12,025.0	11,885.3	11,475.0	11,259.0	35.5	32.0	3.65	187.6	-338.6	635.1	568.0	67.12	9.462	
12,050.0	11,894.1	11,486.9	11,260.7	35.5	32.1	3.45	199.2	-340.3	640.1	572.7	67.38	9.500	
12,075.0	11,901.6	11,500.0	11,262.3	35.5	32.1	3.25	212.1	-342.2	644.4	576.8	67.62	9.530	
12,100.0	11,907.8	11,507.7	11,263.0	35.6	32.1	3.12	219.7	-343.3	647.9	580.0	67.91	9.541	
12,125.0	11,912.8	11,525.0	11,264.3	35.6	32.2	2.88	236.8	-345.8	650.8	582.7	68.11	9.555	
12,150.0	11,916.5	11,525.0	11,264.3	35.7	32.2	2.87	236.8	-345.8	652.8	584.4	68.42	9.540	
12,175.0	11,918.9	11,539.0	11,264.8	35.8	32.3	2.69	250.6	-347.9	654.1	585.4	68.64	9.529	
12,200.0	11,919.9	11,551.1	11,265.0	35.9	32.3	2.54	262.6	-349.6	654.6	585.8	68.86	9.506	
12,208.0	11,920.0	11,555.2	11,265.0	35.9	32.4	2.49	266.6	-350.2	654.6	585.7	68.92	9.498	
12,300.0	11,920.0	11,645.7	11,265.0	36.3	32.9	1.52	356.4	-362.0	654.2	584.8	69.47	9.418	
12,400.0	11,920.0	11,744.9	11,265.0	36.8	33.6	0.75	455.1	-371.6	654.1	583.9	70.11	9.329	
12,500.0	11,920.0	11,844.5	11,265.0	37.4	34.5	0.27	554.6	-377.8	654.0	583.2	70.78	9.240	
12,600.0	11,920.0	11,944.5	11,265.0	38.1	35.3	0.10	654.4	-380.5	654.0	582.5	71.47	9.151	
12,639.7	11,920.0	11,984.2	11,265.0	38.4	35.7	0.10	694.1	-380.8	654.0	582.3	71.74	9.116	
12,700.0	11,920.0	12,044.4	11,265.0	38.9	36.2	0.10	754.4	-381.3	654.0	581.8	72.18	9.061	

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 558H - Dagger State Com 558H - Dagger State Com 558H - 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)			
12,800.0	11,920.0	12,144.4	11,265.0	39.8	37.1	0.10	854.4	-382.1	654.0	581.1	72.95	8.965	
12,900.0	11,920.0	12,244.4	11,265.0	40.7	38.1	0.10	954.4	-382.8	654.0	580.2	73.78	8.864	
13,000.0	11,920.0	12,344.4	11,265.0	41.7	39.2	0.10	1,054.4	-383.6	654.0	579.3	74.67	8.759	
13,100.0	11,920.0	12,444.4	11,265.0	42.8	40.4	0.09	1,154.4	-384.4	654.0	578.4	75.61	8.650	
13,200.0	11,920.0	12,544.4	11,265.0	43.9	41.6	0.09	1,254.4	-385.2	654.0	577.4	76.60	8.538	
13,300.0	11,920.0	12,644.4	11,265.0	45.1	42.9	0.09	1,354.4	-386.0	654.0	576.4	77.64	8.424	
13,400.0	11,920.0	12,744.4	11,265.0	46.4	44.2	0.09	1,454.4	-386.7	654.0	575.3	78.72	8.308	
13,500.0	11,920.0	12,844.4	11,265.0	47.7	45.6	0.09	1,554.4	-387.5	654.0	574.1	79.86	8.190	
13,600.0	11,920.0	12,944.4	11,265.0	49.1	47.1	0.09	1,654.4	-388.3	654.0	573.0	81.03	8.071	
13,700.0	11,920.0	13,044.4	11,265.0	50.5	48.5	0.09	1,754.4	-389.1	654.0	571.8	82.25	7.952	
13,800.0	11,920.0	13,144.4	11,265.0	51.9	50.1	0.08	1,854.4	-389.9	654.0	570.5	83.51	7.832	
13,900.0	11,920.0	13,244.4	11,265.0	53.4	51.6	0.08	1,954.4	-390.7	654.0	569.2	84.80	7.712	
14,000.0	11,920.0	13,344.4	11,265.0	54.9	53.2	0.08	2,054.4	-391.4	654.0	567.9	86.13	7.593	
14,100.0	11,920.0	13,444.4	11,265.0	56.5	54.8	0.08	2,154.4	-392.2	654.0	566.5	87.50	7.475	
14,200.0	11,920.0	13,544.4	11,265.0	58.1	56.5	0.08	2,254.4	-393.0	654.0	565.1	88.90	7.357	
14,300.0	11,920.0	13,644.4	11,265.0	59.7	58.1	0.08	2,354.4	-393.8	654.0	563.7	90.33	7.240	
14,400.0	11,920.0	13,744.4	11,265.0	61.3	59.8	0.08	2,454.4	-394.6	654.0	562.2	91.79	7.125	
14,500.0	11,920.0	13,844.4	11,265.0	63.0	61.5	0.07	2,554.4	-395.3	654.0	560.7	93.27	7.012	
14,600.0	11,920.0	13,944.4	11,265.0	64.7	63.3	0.07	2,654.4	-396.1	654.0	559.2	94.79	6.899	
14,700.0	11,920.0	14,044.4	11,265.0	66.4	65.0	0.07	2,754.4	-396.9	654.0	557.7	96.33	6.789	
14,800.0	11,920.0	14,144.4	11,265.0	68.1	66.8	0.07	2,854.4	-397.7	654.0	556.1	97.90	6.680	
14,900.0	11,920.0	14,244.4	11,265.0	69.8	68.6	0.07	2,954.4	-398.5	654.0	554.5	99.49	6.574	
15,000.0	11,920.0	14,344.4	11,265.0	71.6	70.4	0.07	3,054.3	-399.2	654.0	552.9	101.10	6.469	
15,100.0	11,920.0	14,444.4	11,265.0	73.3	72.2	0.07	3,154.3	-400.0	654.0	551.3	102.74	6.366	
15,200.0	11,920.0	14,544.4	11,265.0	75.1	74.0	0.07	3,254.3	-400.8	654.0	549.6	104.39	6.265	
15,300.0	11,920.0	14,644.4	11,265.0	76.9	75.8	0.06	3,354.3	-401.6	654.0	547.9	106.06	6.166	
15,400.0	11,920.0	14,744.4	11,265.0	78.7	77.6	0.06	3,454.3	-402.4	654.0	546.2	107.76	6.069	
15,500.0	11,920.0	14,844.4	11,265.0	80.5	79.5	0.06	3,554.3	-403.1	654.0	544.5	109.47	5.974	
15,600.0	11,920.0	14,944.4	11,265.0	82.3	81.3	0.06	3,654.3	-403.9	654.0	542.8	111.19	5.882	
15,700.0	11,920.0	15,044.4	11,265.0	84.2	83.2	0.06	3,754.3	-404.7	654.0	541.1	112.94	5.791	
15,800.0	11,920.0	15,144.4	11,265.0	86.0	85.1	0.06	3,854.3	-405.5	654.0	539.3	114.69	5.702	
15,900.0	11,920.0	15,244.4	11,265.0	87.9	87.0	0.06	3,954.3	-406.3	654.0	537.5	116.47	5.615	
16,000.0	11,920.0	15,344.4	11,265.0	89.7	88.8	0.05	4,054.3	-407.0	654.0	535.7	118.25	5.530	
16,100.0	11,920.0	15,444.4	11,265.0	91.6	90.7	0.05	4,154.3	-407.8	654.0	533.9	120.05	5.448	
16,200.0	11,920.0	15,544.4	11,265.0	93.5	92.6	0.05	4,254.3	-408.6	654.0	532.1	121.87	5.366	
16,300.0	11,920.0	15,644.4	11,265.0	95.3	94.5	0.05	4,354.3	-409.4	654.0	530.3	123.69	5.287	
16,400.0	11,920.0	15,744.4	11,265.0	97.2	96.4	0.05	4,454.3	-410.2	654.0	528.5	125.53	5.210	
16,500.0	11,920.0	15,844.4	11,265.0	99.1	98.3	0.05	4,554.3	-410.9	654.0	526.6	127.38	5.134	
16,600.0	11,920.0	15,944.4	11,265.0	101.0	100.2	0.05	4,654.3	-411.7	654.0	524.8	129.24	5.060	
16,700.0	11,920.0	16,044.4	11,265.0	102.9	102.2	0.05	4,754.3	-412.5	654.0	522.9	131.11	4.988	
16,800.0	11,920.0	16,144.4	11,265.0	104.8	104.1	0.04	4,854.3	-413.3	654.0	521.0	132.98	4.918	
16,900.0	11,920.0	16,244.4	11,265.0	106.7	106.0	0.04	4,954.3	-414.1	654.0	519.1	134.87	4.849	
17,000.0	11,920.0	16,344.4	11,265.0	108.6	107.9	0.04	5,054.3	-414.9	654.0	517.2	136.77	4.782	
17,100.0	11,920.0	16,444.4	11,265.0	110.5	109.9	0.04	5,154.3	-415.6	654.0	515.3	138.68	4.716	
17,200.0	11,920.0	16,544.4	11,265.0	112.4	111.8	0.04	5,254.3	-416.4	654.0	513.4	140.59	4.652	
17,300.0	11,920.0	16,644.4	11,265.0	114.4	113.7	0.04	5,354.3	-417.2	654.0	511.5	142.51	4.589	
17,400.0	11,920.0	16,744.4	11,265.0	116.3	115.7	0.04	5,454.3	-418.0	654.0	509.6	144.44	4.528	
17,500.0	11,920.0	16,844.4	11,265.0	118.2	117.6	0.03	5,554.3	-418.8	654.0	507.6	146.38	4.468	
17,600.0	11,920.0	16,944.4	11,265.0	120.1	119.6	0.03	5,654.3	-419.5	654.0	505.7	148.32	4.409	
17,700.0	11,920.0	17,044.4	11,265.0	122.1	121.5	0.03	5,754.3	-420.3	654.0	503.7	150.27	4.352	
17,800.0	11,920.0	17,144.4	11,265.0	124.0	123.5	0.03	5,854.3	-421.1	654.0	501.8	152.23	4.296	
17,900.0	11,920.0	17,244.4	11,265.0	126.0	125.4	0.03	5,954.3	-421.9	654.0	499.8	154.19	4.241	

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 558H - Dagger State Com 558H - Dagger State Com 558H - 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)				
18,000.0	11,920.0	17,344.4	11,265.0	127.9	127.4	0.03	6,054.3	-422.7	654.0	497.8	156.16	4.188		
18,100.0	11,920.0	17,444.4	11,265.0	129.8	129.3	0.03	6,154.3	-423.4	654.0	495.9	158.14	4.136		
18,200.0	11,920.0	17,544.4	11,265.0	131.8	131.3	0.02	6,254.3	-424.2	654.0	493.9	160.12	4.084		
18,300.0	11,920.0	17,644.4	11,265.0	133.7	133.3	0.02	6,354.2	-425.0	654.0	491.9	162.11	4.034		
18,400.0	11,920.0	17,744.4	11,265.0	135.7	135.2	0.02	6,454.2	-425.8	654.0	489.9	164.10	3.985		
18,500.0	11,920.0	17,844.4	11,265.0	137.6	137.2	0.02	6,554.2	-426.6	654.0	487.9	166.10	3.937		
18,600.0	11,920.0	17,944.4	11,265.0	139.6	139.1	0.02	6,654.2	-427.3	654.0	485.9	168.10	3.891		
18,700.0	11,920.0	18,044.4	11,265.0	141.5	141.1	0.02	6,754.2	-428.1	654.0	483.9	170.10	3.845		
18,800.0	11,920.0	18,144.4	11,265.0	143.5	143.1	0.02	6,854.2	-428.9	654.0	481.9	172.11	3.800		
18,900.0	11,920.0	18,244.4	11,265.0	145.5	145.0	0.02	6,954.2	-429.7	654.0	479.9	174.13	3.756		
19,000.0	11,920.0	18,344.4	11,265.0	147.4	147.0	0.01	7,054.2	-430.5	654.0	477.9	176.15	3.713		
19,100.0	11,920.0	18,444.4	11,265.0	149.4	149.0	0.01	7,154.2	-431.2	654.0	475.8	178.17	3.671		
19,200.0	11,920.0	18,544.4	11,265.0	151.4	151.0	0.01	7,254.2	-432.0	654.0	473.8	180.20	3.629		
19,300.0	11,920.0	18,644.4	11,265.0	153.3	152.9	0.01	7,354.2	-432.8	654.0	471.8	182.23	3.589		
19,400.0	11,920.0	18,744.4	11,265.0	155.3	154.9	0.01	7,454.2	-433.6	654.0	469.7	184.26	3.549		
19,500.0	11,920.0	18,844.4	11,265.0	157.3	156.9	0.01	7,554.2	-434.4	654.0	467.7	186.30	3.510		
19,600.0	11,920.0	18,944.4	11,265.0	159.2	158.9	0.01	7,654.2	-435.1	654.0	465.7	188.34	3.472		
19,700.0	11,920.0	19,044.4	11,265.0	161.2	160.8	0.00	7,754.2	-435.9	654.0	463.6	190.39	3.435		
19,800.0	11,920.0	19,144.4	11,265.0	163.2	162.8	0.00	7,854.2	-436.7	654.0	461.6	192.44	3.399		
19,900.0	11,920.0	19,244.4	11,265.0	165.1	164.8	0.00	7,954.2	-437.5	654.0	459.5	194.49	3.363		
20,000.0	11,920.0	19,344.4	11,265.0	167.1	166.8	0.00	8,054.2	-438.3	654.0	457.5	196.54	3.328		
20,021.2	11,920.0	19,365.6	11,265.0	167.5	167.2	0.00	8,075.4	-438.4	654.0	457.0	196.98	3.320		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 804H - Dagger State Com 804H - Dagger State Com 804H - Prelim 1													Offset Site Error: 0.0 usft	
Survey Program: 0-MWD+HRGM		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned:				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	
0.0	0.0	0.0	0.0	0.0	0.0	89.85	0.2	89.8	89.8					
100.0	100.0	100.0	100.0	0.5	0.5	89.85	0.2	89.8	89.8	88.7	1.06	84.664		
200.0	200.0	200.0	200.0	1.7	1.7	89.85	0.2	89.8	89.8	86.3	3.42	26.221		
300.0	300.0	300.0	300.0	2.4	2.4	89.85	0.2	89.8	89.8	84.9	4.82	18.613		
400.0	400.0	400.0	400.0	3.0	3.0	89.85	0.2	89.8	89.8	83.9	5.91	15.195		
500.0	500.0	500.0	500.0	3.4	3.4	89.85	0.2	89.8	89.8	82.9	6.83	13.143		
524.7	524.7	524.7	524.7	3.5	3.5	89.85	0.2	89.8	89.8	82.7	7.03	12.765		
600.0	600.0	600.0	600.0	3.8	3.8	89.85	0.2	89.8	89.8	82.1	7.65	11.737		
633.3	633.3	633.3	633.3	3.9	3.9	89.85	0.2	89.8	89.8	81.9	7.90	11.367		
700.0	700.0	700.0	700.0	4.2	4.2	89.85	0.2	89.8	89.8	81.4	8.39	10.695		
800.0	800.0	800.0	800.0	4.5	4.5	89.85	0.2	89.8	89.8	80.7	9.08	9.882		
900.0	900.0	900.0	900.0	4.9	4.9	89.85	0.2	89.8	89.8	80.0	9.73	9.226		
1,000.0	1,000.0	1,000.0	1,000.0	5.2	5.2	89.85	0.2	89.8	89.8	79.4	10.34	8.681		
1,100.0	1,100.0	1,100.0	1,100.0	5.5	5.5	89.85	0.2	89.8	89.8	78.8	10.92	8.218		
1,200.0	1,200.0	1,200.0	1,200.0	5.7	5.7	89.85	0.2	89.8	89.8	78.3	11.48	7.820		
1,300.0	1,300.0	1,300.0	1,300.0	6.0	6.0	89.85	0.2	89.8	89.8	77.8	12.01	7.471		
1,400.0	1,400.0	1,400.0	1,400.0	6.3	6.3	89.85	0.2	89.8	89.8	77.2	12.53	7.163		
1,500.0	1,500.0	1,500.0	1,500.0	6.5	6.5	89.85	0.2	89.8	89.8	76.7	13.03	6.889		
1,600.0	1,600.0	1,600.0	1,600.0	6.8	6.8	89.85	0.2	89.8	89.8	76.3	13.52	6.641		
1,700.0	1,700.0	1,700.0	1,700.0	7.0	7.0	89.85	0.2	89.8	89.8	75.8	13.99	6.417		
1,800.0	1,800.0	1,800.0	1,800.0	7.2	7.2	89.85	0.2	89.8	89.8	75.3	14.45	6.213		
1,900.0	1,900.0	1,900.0	1,900.0	7.4	7.4	89.85	0.2	89.8	89.8	74.9	14.90	6.025		
2,000.0	2,000.0	2,000.0	2,000.0	7.7	7.7	89.85	0.2	89.8	89.8	74.4	15.34	5.852		
2,100.0	2,100.0	2,100.0	2,100.0	7.9	7.9	89.85	0.2	89.8	89.8	74.0	15.77	5.692		
2,200.0	2,200.0	2,200.0	2,200.0	8.1	8.1	89.85	0.2	89.8	89.8	73.6	16.19	5.544		
2,300.0	2,300.0	2,300.0	2,300.0	8.3	8.3	89.85	0.2	89.8	89.8	73.2	16.61	5.405		
2,400.0	2,400.0	2,400.0	2,400.0	8.5	8.5	89.85	0.2	89.8	89.8	72.8	17.02	5.276		
2,500.0	2,500.0	2,500.0	2,500.0	8.7	8.7	89.85	0.2	89.8	89.8	72.4	17.42	5.154		
2,600.0	2,600.0	2,600.0	2,600.0	8.9	8.9	89.85	0.2	89.8	89.8	72.0	17.81	5.040		
2,700.0	2,700.0	2,700.0	2,700.0	9.1	9.1	89.85	0.2	89.8	89.8	71.6	18.20	4.932		
2,800.0	2,800.0	2,800.0	2,800.0	9.3	9.3	89.85	0.2	89.8	89.8	71.2	18.59	4.830		
2,900.0	2,900.0	2,900.0	2,900.0	9.5	9.5	89.85	0.2	89.8	89.8	70.8	18.96	4.733		
3,000.0	3,000.0	3,000.0	3,000.0	9.7	9.7	89.85	0.2	89.8	89.8	70.4	19.34	4.642		
3,100.0	3,100.0	3,100.0	3,100.0	9.9	9.9	89.85	0.2	89.8	89.8	70.1	19.71	4.555		
3,200.0	3,200.0	3,200.0	3,200.0	10.0	10.0	89.85	0.2	89.8	89.8	69.7	20.07	4.472		
3,300.0	3,300.0	3,300.0	3,300.0	10.2	10.2	89.85	0.2	89.8	89.8	69.3	20.44	4.393		
3,400.0	3,400.0	3,400.0	3,400.0	10.4	10.4	89.85	0.2	89.8	89.8	69.0	20.79	4.317		
3,500.0	3,500.0	3,500.0	3,500.0	10.6	10.6	89.85	0.2	89.8	89.8	68.6	21.15	4.245		
3,600.0	3,600.0	3,600.0	3,600.0	10.7	10.7	89.85	0.2	89.8	89.8	68.3	21.50	4.176		
3,700.0	3,700.0	3,700.0	3,700.0	10.9	10.9	89.85	0.2	89.8	89.8	67.9	21.85	4.109		
3,800.0	3,800.0	3,800.0	3,800.0	11.1	11.1	89.85	0.2	89.8	89.8	67.6	22.19	4.045		
3,900.0	3,900.0	3,900.0	3,900.0	11.3	11.3	89.85	0.2	89.8	89.8	67.2	22.53	3.984		
4,000.0	4,000.0	4,000.0	4,000.0	11.4	11.4	89.85	0.2	89.8	89.8	66.9	22.87	3.925		
4,100.0	4,100.0	4,100.0	4,100.0	11.6	11.6	89.85	0.2	89.8	89.8	66.6	23.21	3.868		
4,200.0	4,200.0	4,200.0	4,200.0	11.8	11.8	89.85	0.2	89.8	89.8	66.2	23.54	3.813		
4,300.0	4,300.0	4,300.0	4,300.0	11.9	11.9	89.85	0.2	89.8	89.8	65.9	23.87	3.761		
4,400.0	4,400.0	4,400.0	4,400.0	12.1	12.1	89.85	0.2	89.8	89.8	65.6	24.20	3.710		
4,500.0	4,500.0	4,500.0	4,500.0	12.3	12.3	89.85	0.2	89.8	89.8	65.2	24.53	3.660		
4,600.0	4,600.0	4,600.0	4,600.0	12.4	12.4	89.85	0.2	89.8	89.8	64.9	24.85	3.613		
4,700.0	4,700.0	4,700.0	4,700.0	12.6	12.6	89.85	0.2	89.8	89.8	64.6	25.17	3.566		
4,800.0	4,800.0	4,800.0	4,800.0	12.7	12.7	89.85	0.2	89.8	89.8	64.3	25.49	3.522		
4,900.0	4,900.0	4,900.0	4,900.0	12.9	12.9	89.85	0.2	89.8	89.8	64.0	25.81	3.478		

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 804H - Dagger State Com 804H - Dagger State Com 804H - Prelim 1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 0.0 usft
Reference	Offset	Rule Assigned:											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	89.85	0.2	89.8	89.8	63.6	26.12	3.436	CC, ES
5,100.0	5,100.0	5,098.6	5,098.6	13.2	13.2	-150.34	-0.2	90.5	91.3	65.0	26.33	3.468	
5,200.0	5,200.0	5,197.1	5,197.0	13.3	13.3	-150.38	-1.3	92.8	95.9	69.3	26.51	3.616	
5,300.0	5,299.9	5,295.3	5,295.1	13.4	13.4	-150.43	-3.3	96.5	103.4	76.7	26.71	3.873	
5,400.0	5,399.7	5,393.1	5,392.8	13.5	13.5	-150.48	-6.0	101.7	114.1	87.1	26.94	4.234	
5,420.5	5,420.1	5,413.1	5,412.7	13.5	13.5	-150.50	-6.6	103.0	116.6	89.6	26.96	4.324	
5,500.0	5,499.4	5,491.5	5,490.9	13.6	13.6	-150.53	-9.3	108.2	126.9	99.8	27.11	4.683	
5,600.0	5,599.1	5,590.7	5,589.8	13.8	13.7	-150.56	-12.8	114.9	140.0	112.6	27.39	5.111	
5,700.0	5,698.9	5,689.8	5,688.6	14.0	13.9	-150.58	-16.2	121.5	153.0	125.3	27.72	5.522	
5,800.0	5,798.6	5,788.9	5,787.5	14.2	14.1	-150.60	-19.7	128.2	166.1	138.0	28.07	5.917	
5,900.0	5,898.3	5,888.1	5,886.4	14.4	14.4	-150.62	-23.1	134.8	179.1	150.7	28.45	6.296	
6,000.0	5,998.1	5,987.2	5,985.2	14.6	14.6	-150.63	-26.6	141.5	192.2	163.3	28.86	6.660	
6,100.0	6,097.8	6,086.4	6,084.1	14.9	14.8	-150.65	-30.0	148.1	205.2	175.9	29.29	7.008	
6,200.0	6,197.5	6,185.5	6,183.0	15.1	15.1	-150.66	-33.5	154.8	218.3	188.5	29.74	7.340	
6,300.0	6,297.3	6,284.7	6,281.8	15.4	15.4	-150.67	-36.9	161.5	231.3	201.1	30.21	7.656	
6,400.0	6,397.0	6,383.8	6,380.7	15.7	15.7	-150.68	-40.4	168.1	244.4	213.7	30.71	7.957	
6,500.0	6,496.7	6,483.0	6,479.5	16.0	15.9	-150.68	-43.8	174.8	257.4	226.2	31.22	8.244	
6,600.0	6,596.4	6,582.1	6,578.4	16.3	16.3	-150.69	-47.3	181.4	270.5	238.7	31.76	8.516	
6,700.0	6,696.2	6,681.2	6,677.3	16.6	16.6	-150.70	-50.7	188.1	283.5	251.2	32.31	8.774	
6,800.0	6,795.9	6,780.4	6,776.1	16.9	16.9	-150.70	-54.2	194.7	296.5	263.7	32.88	9.019	
6,900.0	6,895.6	6,879.5	6,875.0	17.3	17.2	-150.71	-57.6	201.4	309.6	276.1	33.47	9.251	
7,000.0	6,995.4	6,978.7	6,973.8	17.6	17.6	-150.71	-61.1	208.0	322.6	288.6	34.07	9.470	
7,100.0	7,095.1	7,077.8	7,072.7	18.0	18.0	-150.72	-64.5	214.7	335.7	301.0	34.68	9.678	
7,200.0	7,194.8	7,177.0	7,171.6	18.3	18.3	-150.72	-68.0	221.4	348.7	313.4	35.31	9.875	
7,300.0	7,294.6	7,276.1	7,270.4	18.7	18.7	-150.73	-71.4	228.0	361.8	325.8	35.96	10.061	
7,400.0	7,394.3	7,375.3	7,369.3	19.1	19.1	-150.73	-74.9	234.7	374.8	338.2	36.61	10.238	
7,500.0	7,494.0	7,474.4	7,468.2	19.5	19.4	-150.73	-78.3	241.3	387.9	350.6	37.28	10.404	
7,600.0	7,593.8	7,573.6	7,567.0	19.9	19.8	-150.74	-81.8	248.0	400.9	363.0	37.96	10.562	
7,700.0	7,693.5	7,672.7	7,665.9	20.3	20.2	-150.74	-85.2	254.6	414.0	375.3	38.65	10.711	
7,800.0	7,793.2	7,771.8	7,764.7	20.7	20.6	-150.74	-88.7	261.3	427.0	387.7	39.35	10.852	
7,900.0	7,892.9	7,871.0	7,863.6	21.1	21.0	-150.75	-92.1	267.9	440.1	400.0	40.06	10.986	
8,000.0	7,992.7	7,970.1	7,962.5	21.5	21.5	-150.75	-95.6	274.6	453.1	412.3	40.77	11.113	
8,100.0	8,092.4	8,069.3	8,061.3	21.9	21.9	-150.75	-99.0	281.3	466.2	424.7	41.50	11.233	
8,200.0	8,192.1	8,168.4	8,160.2	22.3	22.3	-150.75	-102.5	287.9	479.2	437.0	42.24	11.346	
8,300.0	8,291.9	8,267.6	8,259.0	22.8	22.7	-150.76	-106.0	294.6	492.3	449.3	42.98	11.454	
8,400.0	8,391.6	8,366.7	8,357.9	23.2	23.1	-150.76	-109.4	301.2	505.3	461.6	43.73	11.556	
8,500.0	8,491.3	8,465.9	8,456.8	23.6	23.6	-150.76	-112.9	307.9	518.3	473.9	44.48	11.653	
8,600.0	8,591.1	8,565.0	8,555.6	24.1	24.0	-150.76	-116.3	314.5	531.4	486.1	45.25	11.744	
8,700.0	8,690.8	8,664.2	8,654.5	24.5	24.5	-150.76	-119.8	321.2	544.4	498.4	46.02	11.832	
8,800.0	8,790.5	8,763.3	8,753.4	24.9	24.9	-150.77	-123.2	327.8	557.5	510.7	46.79	11.914	
8,900.0	8,890.3	8,862.4	8,852.2	25.4	25.3	-150.77	-126.7	334.5	570.5	523.0	47.57	11.993	
9,000.0	8,990.0	8,961.6	8,951.1	25.8	25.8	-150.77	-130.1	341.1	583.6	535.2	48.36	12.068	
9,100.0	9,089.7	9,060.7	9,049.9	26.3	26.2	-150.77	-133.6	347.8	596.6	547.5	49.15	12.139	
9,200.0	9,189.4	9,159.9	9,148.8	26.7	26.7	-150.77	-137.0	354.5	609.7	559.7	49.95	12.206	
9,300.0	9,289.2	9,259.0	9,247.7	27.2	27.2	-150.77	-140.5	361.1	622.7	572.0	50.75	12.271	
9,400.0	9,388.9	9,358.2	9,346.5	27.7	27.6	-150.77	-143.9	367.8	635.8	584.2	51.55	12.332	
9,500.0	9,488.6	9,457.3	9,445.4	28.1	28.1	-150.77	-147.4	374.4	648.8	596.4	52.36	12.390	
9,600.0	9,588.4	9,556.5	9,544.2	28.6	28.5	-150.78	-150.8	381.1	661.9	608.7	53.18	12.446	
9,700.0	9,688.1	9,655.6	9,643.1	29.0	29.0	-150.78	-154.3	387.7	674.9	620.9	54.00	12.499	
9,800.0	9,787.8	9,754.8	9,742.0	29.5	29.5	-150.78	-157.7	394.4	688.0	633.1	54.82	12.550	
9,900.0	9,887.6	9,853.9	9,840.8	30.0	29.9	-150.78	-161.2	401.0	701.0	645.4	55.64	12.598	
10,000.0	9,987.3	9,953.0	9,939.7	30.4	30.4	-150.78	-164.6	407.7	714.0	657.6	56.47	12.644	

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



Anticollision Report

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Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
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Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 804H - Dagger State Com 804H - Dagger State Com 804H - Prelim 1													Offset Site Error: 0.0 usft	
Survey Program: 0-MWD+HRGM									Rule Assigned:				Offset Well Error: 0.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,100.0	10,087.0	10,052.2	10,038.6	30.9	30.9	-150.78	-168.1	414.4	727.1	669.8	57.30	12.688		
10,200.0	10,186.8	10,151.3	10,137.4	31.4	31.3	-150.78	-171.5	421.0	740.1	682.0	58.14	12.730		
10,300.0	10,286.5	10,250.5	10,236.3	31.9	31.8	-150.78	-175.0	427.7	753.2	694.2	58.98	12.771		
10,400.0	10,386.2	10,349.6	10,335.1	32.3	32.3	-150.78	-178.4	434.3	766.2	706.4	59.82	12.809		
10,500.0	10,485.9	10,448.8	10,434.0	32.8	32.8	-150.78	-181.9	441.0	779.3	718.6	60.66	12.846		
10,600.0	10,585.7	10,547.9	10,532.9	33.3	33.2	-150.79	-185.3	447.6	792.3	730.8	61.51	12.882		
10,700.0	10,685.4	10,647.1	10,631.7	33.8	33.7	-150.79	-188.8	454.3	805.4	743.0	62.36	12.915		
10,800.0	10,785.1	10,746.2	10,730.6	34.3	34.2	-150.79	-192.2	460.9	818.4	755.2	63.21	12.948		
10,895.0	10,879.9	10,840.4	10,824.5	34.7	34.7	-150.79	-195.5	467.3	830.8	766.8	64.02	12.978		
10,900.0	10,884.9	10,845.3	10,829.4	34.7	34.7	-150.79	-195.7	467.6	831.5	767.4	64.06	12.980		
11,000.0	10,984.7	10,944.6	10,928.4	35.2	35.2	-150.82	-199.1	474.3	843.7	778.8	64.89	13.001		
11,100.0	11,084.6	11,045.7	11,029.2	35.6	35.7	-150.78	-202.6	481.0	854.4	788.7	65.70	13.004		
11,200.0	11,184.5	11,160.5	11,143.8	36.0	36.2	-150.70	-206.0	487.5	862.5	796.0	66.52	12.967		
11,300.0	11,284.5	11,275.8	11,258.9	36.3	36.7	-150.61	-208.3	491.9	867.3	800.1	67.23	12.902		
11,315.5	11,300.0	11,293.6	11,276.8	36.3	36.8	89.57	-208.6	492.4	867.8	800.5	67.31	12.893		
11,400.0	11,384.5	11,391.2	11,374.4	36.4	37.1	89.64	-209.5	494.3	869.4	801.7	67.66	12.850		
11,458.0	11,442.5	11,458.2	11,441.4	36.4	37.2	89.65	-209.8	494.8	869.8	802.0	67.79	12.831		
11,475.0	11,459.5	11,476.4	11,459.5	36.4	37.3	90.11	-209.8	494.8	869.8	802.0	67.80	12.828		
11,500.0	11,484.5	11,501.3	11,484.5	36.3	37.3	90.21	-209.8	494.8	869.8	802.0	67.81	12.827		
11,525.0	11,509.3	11,526.1	11,509.3	36.3	37.3	90.40	-209.8	494.8	869.8	802.0	67.82	12.825		
11,550.0	11,533.9	11,550.8	11,533.9	36.2	37.3	90.66	-209.8	494.8	869.8	802.0	67.83	12.825		
11,575.0	11,558.3	11,575.2	11,558.3	36.2	37.3	91.00	-209.8	494.8	869.9	802.1	67.83	12.825		
11,600.0	11,582.4	11,599.3	11,582.4	36.1	37.3	91.41	-209.8	494.8	870.1	802.2	67.83	12.827		
11,625.0	11,606.1	11,624.5	11,607.6	36.0	37.3	91.87	-209.1	494.8	870.3	802.5	67.82	12.832		
11,650.0	11,629.4	11,650.1	11,633.2	36.0	37.2	92.33	-207.1	494.8	870.6	802.8	67.81	12.839		
11,675.0	11,652.1	11,676.2	11,659.0	35.9	37.2	92.78	-203.6	494.7	870.9	803.1	67.78	12.848		
11,700.0	11,674.3	11,702.8	11,685.1	35.9	37.1	93.24	-198.6	494.7	871.3	803.6	67.76	12.859		
11,725.0	11,695.8	11,729.8	11,711.3	35.8	37.1	93.69	-192.1	494.7	871.8	804.0	67.73	12.872		
11,750.0	11,716.6	11,757.3	11,737.6	35.7	37.0	94.13	-183.9	494.6	872.3	804.6	67.70	12.885		
11,775.0	11,736.7	11,785.3	11,763.8	35.7	36.9	94.57	-174.0	494.5	872.8	805.2	67.67	12.899		
11,800.0	11,756.0	11,813.9	11,789.9	35.6	36.9	95.00	-162.4	494.5	873.4	805.8	67.64	12.913		
11,825.0	11,774.4	11,843.0	11,815.7	35.6	36.8	95.42	-149.0	494.4	874.0	806.4	67.61	12.928		
11,850.0	11,791.9	11,872.6	11,841.1	35.5	36.7	95.82	-133.7	494.3	874.7	807.1	67.59	12.941		
11,875.0	11,808.5	11,902.8	11,866.0	35.5	36.7	96.22	-116.5	494.2	875.4	807.8	67.58	12.953		
11,900.0	11,824.0	11,933.6	11,890.1	35.5	36.6	96.60	-97.5	494.1	876.0	808.5	67.58	12.964		
11,925.0	11,838.5	11,964.9	11,913.4	35.5	36.5	96.96	-76.6	493.9	876.7	809.1	67.59	12.972		
11,950.0	11,852.0	11,996.7	11,935.6	35.4	36.5	97.30	-53.8	493.8	877.4	809.8	67.61	12.977		
11,975.0	11,864.3	12,029.1	11,956.5	35.4	36.5	97.62	-29.1	493.6	878.0	810.4	67.65	12.978		
12,000.0	11,875.4	12,062.0	11,976.1	35.5	36.4	97.91	-2.7	493.4	878.7	811.0	67.71	12.976		
12,025.0	11,885.3	12,095.4	11,994.0	35.5	36.4	98.18	25.5	493.3	879.2	811.5	67.79	12.970		
12,050.0	11,894.1	12,129.2	12,010.1	35.5	36.4	98.42	55.2	493.1	879.8	811.9	67.88	12.960		
12,075.0	11,901.6	12,163.4	12,024.2	35.5	36.4	98.63	86.4	492.9	880.3	812.3	68.00	12.945		
12,100.0	11,907.8	12,198.0	12,036.2	35.6	36.5	98.80	118.8	492.7	880.7	812.5	68.13	12.926		
12,125.0	11,912.8	12,232.8	12,045.8	35.6	36.5	98.94	152.3	492.5	881.0	812.7	68.28	12.903		
12,150.0	11,916.5	12,267.9	12,053.1	35.7	36.6	99.05	186.6	492.2	881.3	812.8	68.45	12.875		
12,175.0	11,918.9	12,303.1	12,057.8	35.8	36.7	99.11	221.5	492.0	881.5	812.8	68.64	12.843		
12,200.0	11,919.9	12,338.5	12,059.9	35.9	36.8	99.14	256.8	491.8	881.6	812.7	68.84	12.807		
12,208.0	11,920.0	12,349.9	12,060.0	35.9	36.9	99.14	268.2	491.7	881.6	812.7	68.90	12.794		
12,300.0	11,920.0	12,441.7	12,060.0	36.3	37.3	99.14	360.0	491.1	881.7	812.0	69.68	12.653		
12,400.0	11,920.0	12,541.7	12,060.0	36.8	37.8	99.14	460.0	490.5	881.8	811.1	70.73	12.467		
12,500.0	11,920.0	12,641.7	12,060.0	37.4	38.4	99.13	560.0	489.8	881.9	809.9	71.99	12.251		
12,600.0	11,920.0	12,741.7	12,060.0	38.1	39.1	99.13	660.0	489.2	882.1	808.6	73.44	12.010		

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 804H - Dagger State Com 804H - Dagger State Com 804H - 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		
12,700.0	11,920.0	12,841.7	12,060.0	38.9	39.9	99.13	760.0	488.6	882.2	807.1	75.08	11.749			
12,800.0	11,920.0	12,941.7	12,060.0	39.8	40.7	99.13	860.0	487.9	882.3	805.4	76.89	11.474			
12,900.0	11,920.0	13,041.7	12,060.0	40.7	41.6	99.13	960.0	487.3	882.4	803.6	78.87	11.189			
13,000.0	11,920.0	13,141.7	12,060.0	41.7	42.6	99.13	1,060.0	486.6	882.6	801.6	80.99	10.897			
13,100.0	11,920.0	13,241.7	12,060.0	42.8	43.7	99.13	1,160.0	486.0	882.7	799.4	83.25	10.603			
13,200.0	11,920.0	13,341.7	12,060.0	43.9	44.8	99.12	1,260.0	485.4	882.8	797.2	85.63	10.309			
13,300.0	11,920.0	13,441.7	12,060.0	45.1	46.0	99.12	1,360.0	484.7	882.9	794.8	88.14	10.018			
13,400.0	11,920.0	13,541.7	12,060.0	46.4	47.2	99.12	1,460.0	484.1	883.1	792.3	90.75	9.731			
13,500.0	11,920.0	13,641.7	12,060.0	47.7	48.5	99.12	1,560.0	483.5	883.2	789.7	93.46	9.450			
13,600.0	11,920.0	13,741.7	12,060.0	49.1	49.9	99.12	1,660.0	482.8	883.3	787.0	96.25	9.177			
13,700.0	11,920.0	13,841.7	12,060.0	50.5	51.2	99.12	1,760.0	482.2	883.4	784.3	99.13	8.911			
13,800.0	11,920.0	13,941.7	12,060.0	51.9	52.7	99.12	1,860.0	481.5	883.5	781.5	102.09	8.655			
13,900.0	11,920.0	14,041.7	12,060.0	53.4	54.1	99.12	1,960.0	480.9	883.7	778.6	105.11	8.407			
14,000.0	11,920.0	14,141.7	12,060.0	54.9	55.6	99.11	2,060.0	480.3	883.8	775.6	108.20	8.168			
14,100.0	11,920.0	14,241.7	12,060.0	56.5	57.2	99.11	2,160.0	479.6	883.9	772.6	111.35	7.938			
14,200.0	11,920.0	14,341.7	12,060.0	58.1	58.7	99.11	2,259.9	479.0	884.0	769.5	114.55	7.718			
14,300.0	11,920.0	14,441.7	12,060.0	59.7	60.3	99.11	2,359.9	478.3	884.2	766.4	117.80	7.506			
14,400.0	11,920.0	14,541.7	12,060.0	61.3	61.9	99.11	2,459.9	477.7	884.3	763.2	121.09	7.303			
14,500.0	11,920.0	14,641.7	12,060.0	63.0	63.6	99.11	2,559.9	477.1	884.4	760.0	124.42	7.108			
14,600.0	11,920.0	14,741.7	12,060.0	64.7	65.2	99.11	2,659.9	476.4	884.5	756.7	127.80	6.922			
14,700.0	11,920.0	14,841.7	12,060.0	66.4	66.9	99.11	2,759.9	475.8	884.7	753.5	131.20	6.743			
14,800.0	11,920.0	14,941.7	12,060.0	68.1	68.6	99.10	2,859.9	475.1	884.8	750.1	134.64	6.571			
14,900.0	11,920.0	15,041.7	12,060.0	69.8	70.3	99.10	2,959.9	474.5	884.9	746.8	138.11	6.407			
15,000.0	11,920.0	15,141.7	12,060.0	71.6	72.1	99.10	3,059.9	473.9	885.0	743.4	141.61	6.250			
15,100.0	11,920.0	15,241.7	12,060.0	73.3	73.8	99.10	3,159.9	473.2	885.2	740.0	145.13	6.099			
15,200.0	11,920.0	15,341.7	12,060.0	75.1	75.6	99.10	3,259.9	472.6	885.3	736.6	148.68	5.954			
15,300.0	11,920.0	15,441.7	12,060.0	76.9	77.4	99.10	3,359.9	471.9	885.4	733.2	152.25	5.815			
15,400.0	11,920.0	15,541.7	12,060.0	78.7	79.2	99.10	3,459.9	471.3	885.5	729.7	155.84	5.682			
15,500.0	11,920.0	15,641.7	12,060.0	80.5	81.0	99.10	3,559.9	470.7	885.7	726.2	159.45	5.554			
15,600.0	11,920.0	15,741.7	12,060.0	82.3	82.8	99.09	3,659.9	470.0	885.8	722.7	163.08	5.432			
15,700.0	11,920.0	15,841.7	12,060.0	84.2	84.6	99.09	3,759.9	469.4	885.9	719.2	166.72	5.314			
15,800.0	11,920.0	15,941.7	12,060.0	86.0	86.4	99.09	3,859.9	468.7	886.0	715.6	170.39	5.200			
15,900.0	11,920.0	16,041.7	12,060.0	87.9	88.2	99.09	3,959.9	468.1	886.2	712.1	174.06	5.091			
16,000.0	11,920.0	16,141.7	12,060.0	89.7	90.1	99.09	4,059.9	467.5	886.3	708.5	177.75	4.986			
16,100.0	11,920.0	16,241.7	12,060.0	91.6	91.9	99.09	4,159.9	466.8	886.4	704.9	181.45	4.885			
16,200.0	11,920.0	16,341.7	12,060.0	93.5	93.8	99.09	4,259.9	466.2	886.5	701.4	185.17	4.788			
16,300.0	11,920.0	16,441.7	12,060.0	95.3	95.7	99.08	4,359.9	465.5	886.6	697.8	188.89	4.694			
16,400.0	11,920.0	16,541.7	12,060.0	97.2	97.5	99.08	4,459.9	464.9	886.8	694.1	192.63	4.603			
16,500.0	11,920.0	16,641.7	12,060.0	99.1	99.4	99.08	4,559.9	464.3	886.9	690.5	196.38	4.516			
16,600.0	11,920.0	16,741.7	12,060.0	101.0	101.3	99.08	4,659.9	463.6	887.0	686.9	200.14	4.432			
16,700.0	11,920.0	16,841.7	12,060.0	102.9	103.2	99.08	4,759.9	463.0	887.1	683.2	203.90	4.351			
16,800.0	11,920.0	16,941.7	12,060.0	104.8	105.1	99.08	4,859.9	462.3	887.3	679.6	207.68	4.272			
16,900.0	11,920.0	17,041.7	12,060.0	106.7	107.0	99.08	4,959.9	461.7	887.4	675.9	211.46	4.196			
17,000.0	11,920.0	17,141.7	12,060.0	108.6	108.9	99.08	5,059.9	461.1	887.5	672.3	215.25	4.123			
17,100.0	11,920.0	17,241.7	12,060.0	110.5	110.8	99.07	5,159.9	460.4	887.6	668.6	219.05	4.052			
17,200.0	11,920.0	17,341.7	12,060.0	112.4	112.7	99.07	5,259.9	459.8	887.8	664.9	222.86	3.984			
17,300.0	11,920.0	17,441.7	12,060.0	114.4	114.6	99.07	5,359.9	459.1	887.9	661.2	226.67	3.917			
17,400.0	11,920.0	17,541.7	12,060.0	116.3	116.5	99.07	5,459.9	458.5	888.0	657.5	230.49	3.853			
17,500.0	11,920.0	17,641.7	12,060.0	118.2	118.5	99.07	5,559.9	457.9	888.1	653.8	234.31	3.790			
17,600.0	11,920.0	17,741.7	12,060.0	120.1	120.4	99.07	5,659.9	457.2	888.3	650.1	238.14	3.730			
17,700.0	11,920.0	17,841.7	12,060.0	122.1	122.3	99.07	5,759.9	456.6	888.4	646.4	241.97	3.671			
17,800.0	11,920.0	17,941.7	12,060.0	124.0	124.2	99.07	5,859.9	456.0	888.5	642.7	245.82	3.615			

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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 804H - Dagger State Com 804H - Dagger State Com 804H - 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			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)	Minimum Separation (usft)			
17,900.0	11,920.0	18,041.7	12,060.0	126.0	126.2	99.06	5,959.9	455.3	888.6	639.0	249.66	3.559		
18,000.0	11,920.0	18,141.7	12,060.0	127.9	128.1	99.06	6,059.9	454.7	888.8	635.2	253.51	3.506		
18,100.0	11,920.0	18,241.7	12,060.0	129.8	130.0	99.06	6,159.9	454.0	888.9	631.5	257.37	3.454		
18,200.0	11,920.0	18,341.7	12,060.0	131.8	132.0	99.06	6,259.9	453.4	889.0	627.8	261.22	3.403		
18,300.0	11,920.0	18,441.7	12,060.0	133.7	133.9	99.06	6,359.9	452.8	889.1	624.0	265.09	3.354		
18,400.0	11,920.0	18,541.7	12,060.0	135.7	135.9	99.06	6,459.9	452.1	889.3	620.3	268.95	3.306		
18,500.0	11,920.0	18,641.7	12,060.0	137.6	137.8	99.06	6,559.9	451.5	889.4	616.6	272.82	3.260		
18,600.0	11,920.0	18,741.7	12,060.0	139.6	139.8	99.06	6,659.9	450.8	889.5	612.8	276.70	3.215		
18,700.0	11,920.0	18,841.7	12,060.0	141.5	141.7	99.05	6,759.9	450.2	889.6	609.0	280.58	3.171		
18,800.0	11,920.0	18,941.7	12,060.0	143.5	143.7	99.05	6,859.9	449.6	889.7	605.3	284.46	3.128		
18,900.0	11,920.0	19,041.7	12,060.0	145.5	145.6	99.05	6,959.8	448.9	889.9	601.5	288.34	3.086		
19,000.0	11,920.0	19,141.7	12,060.0	147.4	147.6	99.05	7,059.8	448.3	890.0	597.8	292.23	3.046		
19,100.0	11,920.0	19,241.7	12,060.0	149.4	149.5	99.05	7,159.8	447.6	890.1	594.0	296.12	3.006		
19,200.0	11,920.0	19,341.7	12,060.0	151.4	151.5	99.05	7,259.8	447.0	890.2	590.2	300.01	2.967		
19,300.0	11,920.0	19,441.7	12,060.0	153.3	153.5	99.05	7,359.8	446.4	890.4	586.5	303.91	2.930		
19,400.0	11,920.0	19,541.7	12,060.0	155.3	155.4	99.05	7,459.8	445.7	890.5	582.7	307.81	2.893		
19,500.0	11,920.0	19,641.7	12,060.0	157.3	157.4	99.04	7,559.8	445.1	890.6	578.9	311.71	2.857		
19,600.0	11,920.0	19,741.7	12,060.0	159.2	159.4	99.04	7,659.8	444.4	890.7	575.1	315.61	2.822		
19,700.0	11,920.0	19,841.7	12,060.0	161.2	161.3	99.04	7,759.8	443.8	890.9	571.3	319.52	2.788		
19,800.0	11,920.0	19,941.7	12,060.0	163.2	163.3	99.04	7,859.8	443.2	891.0	567.6	323.43	2.755		
19,900.0	11,920.0	20,041.7	12,060.0	165.1	165.3	99.04	7,959.8	442.5	891.1	563.8	327.34	2.722		
20,000.0	11,920.0	20,141.7	12,060.0	167.1	167.2	99.04	8,059.8	441.9	891.2	560.0	331.25	2.691		
20,021.2	11,920.0	20,162.9	12,060.0	167.5	167.6	99.04	8,081.0	441.7	891.3	559.2	332.08	2.684 SF		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3848.5usft (Original Well Ele

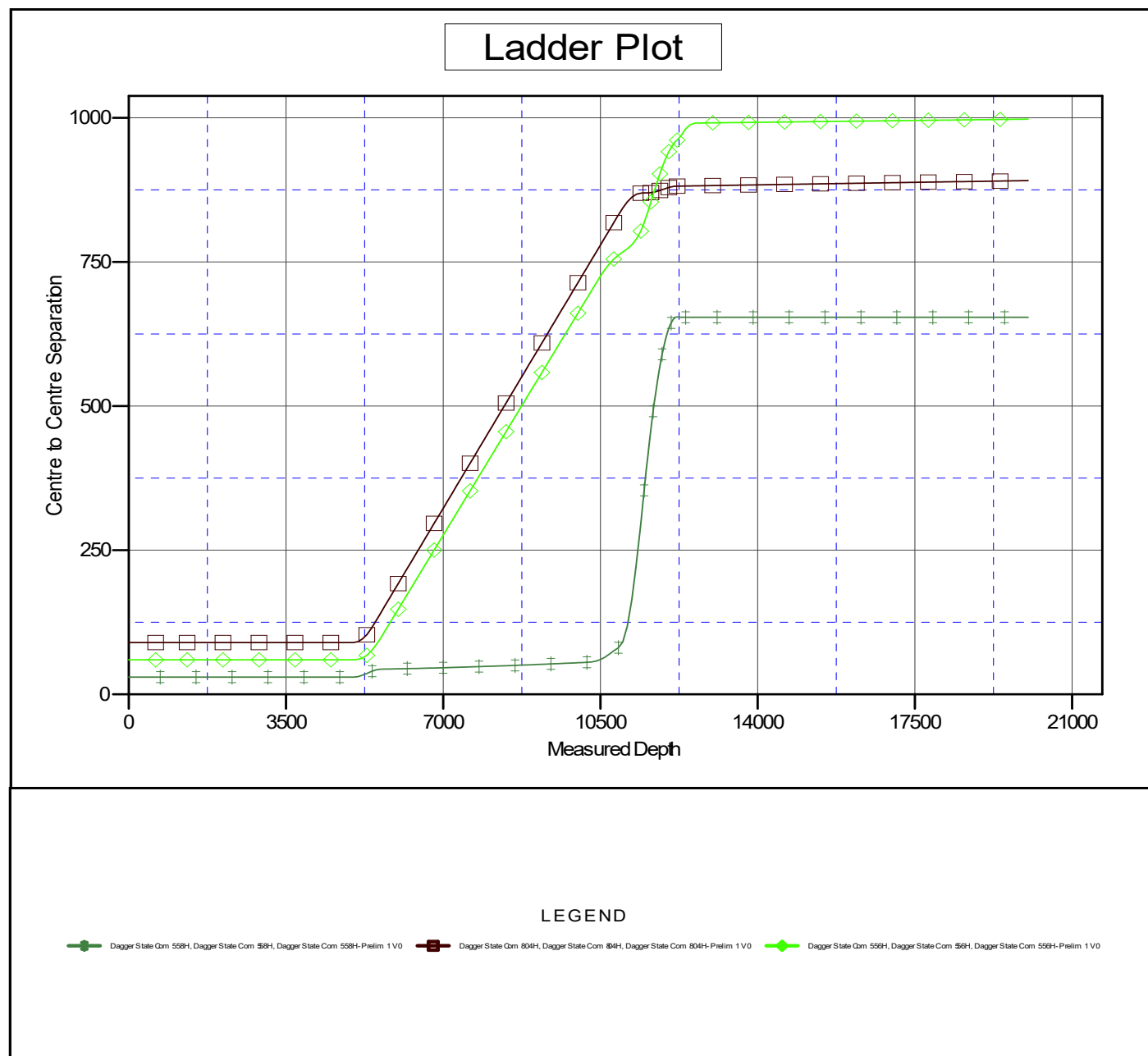
Coordinates are relative to: Dagger State Com 608H

Offset Depths are relative to Offset Datum

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

Central Meridian is 104° 20' 0.000 W

Grid Convergence at Surface is: 0.38°



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 608H
Project:	Hat Mesa	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 608H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 608H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3848.5usft (Original Well Ele

Offset Depths are relative to Offset Datum

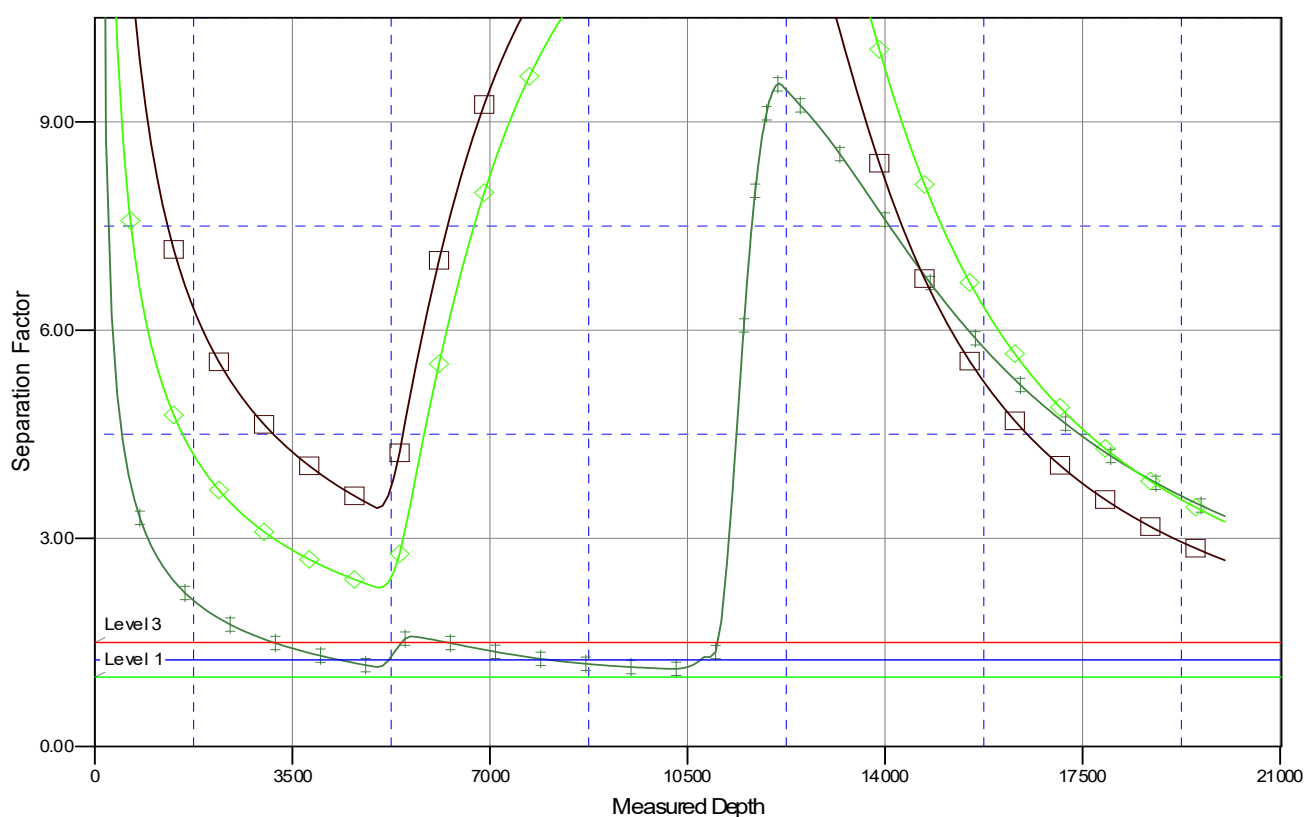
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Dagger State Com 608H

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

Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

—■— Dagger State Com 558H, Dagger State Com 558H, Dagger State Com 558H-Prelim 1 V0
 —◆— Dagger State Com 604H, Dagger State Com 604H, Dagger State Com 604H-Prelim 1 V0
 —+— Dagger State Com 558H, Dagger State Com 558H, Dagger State Com 558H-Prelim 1 V0



Advance Energy Partners

Hat Mesa

Dagger State

Dagger State Com 608H

Dagger State Com 608H

Plan: Dagger State Com 608H - Prelim 1

Standard Planning Report

14 May, 2021



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 608H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 608H		
Design:	Dagger State Com 608H - 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 608H					
Well Position	+N/-S	0.0 usft	Northing:	527,878.01 usft	Latitude:	32° 26' 57.001 N
	+E/-W	0.0 usft	Easting:	762,139.45 usft	Longitude:	103° 37' 3.137 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,816.0 usft
Grid Convergence:	0.38 °					

Wellbore	Dagger State Com 608H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/25/2021	6.60	60.21	47,691.90122745

Design	Dagger State Com 608H - 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	356.89	

Plan Survey Tool Program	Date	5/14/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	20,021.2	Dagger State Com 608H - Prelim	MWD+HRGM	
			OWSG MWD + HRGM		

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	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,420.5	4.20	240.17	5,420.1	-7.7	-13.4	1.00	1.00	0.00	240.17	
10,895.0	4.20	240.17	10,879.9	-207.3	-361.6	0.00	0.00	0.00	0.00	
11,315.5	0.00	0.00	11,300.0	-215.0	-375.0	1.00	-1.00	0.00	180.00	
11,458.0	0.00	0.00	11,442.5	-215.0	-375.0	0.00	0.00	0.00	0.00	
12,208.0	90.00	359.56	11,920.0	262.5	-378.7	12.00	12.00	0.00	359.56	
20,021.2	90.00	359.56	11,920.0	8,075.4	-438.4	0.00	0.00	0.00	0.00	Dagger State Com 60



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 608H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 608H		
Design:	Dagger State Com 608H - 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
1,600.0	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
KOP - Start Build 1.00									
5,100.0	1.00	240.17	5,100.0	-0.4	-0.8	-0.4	1.00	1.00	0.00
5,200.0	2.00	240.17	5,200.0	-1.7	-3.0	-1.6	1.00	1.00	0.00



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 608H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 608H		
Design:	Dagger State Com 608H - 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)
5,300.0	3.00	240.17	5,299.9	-3.9	-6.8	-3.5	1.00	1.00	0.00
5,400.0	4.00	240.17	5,399.7	-6.9	-12.1	-6.3	1.00	1.00	0.00
5,420.5	4.20	240.17	5,420.1	-7.7	-13.4	-6.9	1.00	1.00	0.00
Start 5474.5 hold at 5420.5 MD									
5,500.0	4.20	240.17	5,499.4	-10.6	-18.4	-9.6	0.00	0.00	0.00
5,600.0	4.20	240.17	5,599.1	-14.2	-24.8	-12.9	0.00	0.00	0.00
5,700.0	4.20	240.17	5,698.9	-17.9	-31.2	-16.1	0.00	0.00	0.00
5,800.0	4.20	240.17	5,798.6	-21.5	-37.5	-19.4	0.00	0.00	0.00
5,900.0	4.20	240.17	5,898.3	-25.2	-43.9	-22.7	0.00	0.00	0.00
6,000.0	4.20	240.17	5,998.1	-28.8	-50.2	-26.0	0.00	0.00	0.00
6,100.0	4.20	240.17	6,097.8	-32.5	-56.6	-29.3	0.00	0.00	0.00
6,200.0	4.20	240.17	6,197.5	-36.1	-63.0	-32.6	0.00	0.00	0.00
6,300.0	4.20	240.17	6,297.3	-39.7	-69.3	-35.9	0.00	0.00	0.00
6,400.0	4.20	240.17	6,397.0	-43.4	-75.7	-39.2	0.00	0.00	0.00
6,500.0	4.20	240.17	6,496.7	-47.0	-82.0	-42.5	0.00	0.00	0.00
6,600.0	4.20	240.17	6,596.4	-50.7	-88.4	-45.8	0.00	0.00	0.00
6,700.0	4.20	240.17	6,696.2	-54.3	-94.8	-49.1	0.00	0.00	0.00
6,800.0	4.20	240.17	6,795.9	-58.0	-101.1	-52.4	0.00	0.00	0.00
6,900.0	4.20	240.17	6,895.6	-61.6	-107.5	-55.7	0.00	0.00	0.00
7,000.0	4.20	240.17	6,995.4	-65.3	-113.9	-59.0	0.00	0.00	0.00
7,100.0	4.20	240.17	7,095.1	-68.9	-120.2	-62.3	0.00	0.00	0.00
7,200.0	4.20	240.17	7,194.8	-72.6	-126.6	-65.6	0.00	0.00	0.00
7,300.0	4.20	240.17	7,294.6	-76.2	-132.9	-68.9	0.00	0.00	0.00
7,400.0	4.20	240.17	7,394.3	-79.9	-139.3	-72.2	0.00	0.00	0.00
7,500.0	4.20	240.17	7,494.0	-83.5	-145.7	-75.5	0.00	0.00	0.00
7,600.0	4.20	240.17	7,593.8	-87.2	-152.0	-78.8	0.00	0.00	0.00
7,700.0	4.20	240.17	7,693.5	-90.8	-158.4	-82.1	0.00	0.00	0.00
7,800.0	4.20	240.17	7,793.2	-94.5	-164.7	-85.4	0.00	0.00	0.00
7,900.0	4.20	240.17	7,892.9	-98.1	-171.1	-88.7	0.00	0.00	0.00
8,000.0	4.20	240.17	7,992.7	-101.7	-177.5	-92.0	0.00	0.00	0.00
8,100.0	4.20	240.17	8,092.4	-105.4	-183.8	-95.3	0.00	0.00	0.00
8,200.0	4.20	240.17	8,192.1	-109.0	-190.2	-98.6	0.00	0.00	0.00
8,300.0	4.20	240.17	8,291.9	-112.7	-196.5	-101.9	0.00	0.00	0.00
8,400.0	4.20	240.17	8,391.6	-116.3	-202.9	-105.2	0.00	0.00	0.00
8,500.0	4.20	240.17	8,491.3	-120.0	-209.3	-108.5	0.00	0.00	0.00
8,600.0	4.20	240.17	8,591.1	-123.6	-215.6	-111.8	0.00	0.00	0.00
8,700.0	4.20	240.17	8,690.8	-127.3	-222.0	-115.1	0.00	0.00	0.00
8,800.0	4.20	240.17	8,790.5	-130.9	-228.4	-118.4	0.00	0.00	0.00
8,900.0	4.20	240.17	8,890.3	-134.6	-234.7	-121.6	0.00	0.00	0.00
9,000.0	4.20	240.17	8,990.0	-138.2	-241.1	-124.9	0.00	0.00	0.00
9,100.0	4.20	240.17	9,089.7	-141.9	-247.4	-128.2	0.00	0.00	0.00
9,200.0	4.20	240.17	9,189.4	-145.5	-253.8	-131.5	0.00	0.00	0.00
9,300.0	4.20	240.17	9,289.2	-149.2	-260.2	-134.8	0.00	0.00	0.00
9,400.0	4.20	240.17	9,388.9	-152.8	-266.5	-138.1	0.00	0.00	0.00
9,500.0	4.20	240.17	9,488.6	-156.5	-272.9	-141.4	0.00	0.00	0.00
9,600.0	4.20	240.17	9,588.4	-160.1	-279.2	-144.7	0.00	0.00	0.00
9,700.0	4.20	240.17	9,688.1	-163.7	-285.6	-148.0	0.00	0.00	0.00
9,800.0	4.20	240.17	9,787.8	-167.4	-292.0	-151.3	0.00	0.00	0.00
9,900.0	4.20	240.17	9,887.6	-171.0	-298.3	-154.6	0.00	0.00	0.00
10,000.0	4.20	240.17	9,987.3	-174.7	-304.7	-157.9	0.00	0.00	0.00
10,100.0	4.20	240.17	10,087.0	-178.3	-311.0	-161.2	0.00	0.00	0.00
10,200.0	4.20	240.17	10,186.8	-182.0	-317.4	-164.5	0.00	0.00	0.00
10,300.0	4.20	240.17	10,286.5	-185.6	-323.8	-167.8	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 608H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 608H		
Design:	Dagger State Com 608H - 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)
10,400.0	4.20	240.17	10,386.2	-189.3	-330.1	-171.1	0.00	0.00	0.00
10,500.0	4.20	240.17	10,485.9	-192.9	-336.5	-174.4	0.00	0.00	0.00
10,600.0	4.20	240.17	10,585.7	-196.6	-342.9	-177.7	0.00	0.00	0.00
10,700.0	4.20	240.17	10,685.4	-200.2	-349.2	-181.0	0.00	0.00	0.00
10,800.0	4.20	240.17	10,785.1	-203.9	-355.6	-184.3	0.00	0.00	0.00
10,895.0	4.20	240.17	10,879.9	-207.3	-361.6	-187.4	0.00	0.00	0.00
Start Drop -1.00									
10,900.0	4.15	240.17	10,884.9	-207.5	-361.9	-187.6	1.00	-1.00	0.00
11,000.0	3.15	240.17	10,984.7	-210.7	-367.5	-190.4	1.00	-1.00	0.00
11,100.0	2.15	240.17	11,084.6	-213.0	-371.5	-192.5	1.00	-1.00	0.00
11,200.0	1.15	240.17	11,184.5	-214.4	-374.0	-193.8	1.00	-1.00	0.00
11,300.0	0.15	240.17	11,284.5	-215.0	-375.0	-194.3	1.00	-1.00	0.00
11,315.5	0.00	0.00	11,300.0	-215.0	-375.0	-194.4	1.00	-1.00	0.00
Start 142.5 hold at 11315.5 MD									
11,400.0	0.00	0.00	11,384.5	-215.0	-375.0	-194.4	0.00	0.00	0.00
11,458.0	0.00	0.00	11,442.5	-215.0	-375.0	-194.4	0.00	0.00	0.00
KOP #2 - Start Build 12.00									
11,500.0	5.04	359.56	11,484.5	-213.2	-375.0	-192.5	12.00	12.00	0.00
11,600.0	17.04	359.56	11,582.4	-194.0	-375.2	-173.4	12.00	12.00	0.00
11,700.0	29.04	359.56	11,674.3	-155.0	-375.5	-134.4	12.00	12.00	0.00
11,800.0	41.04	359.56	11,756.0	-97.7	-375.9	-77.2	12.00	12.00	0.00
11,900.0	53.04	359.56	11,824.0	-24.6	-376.5	-4.2	12.00	12.00	0.00
12,000.0	65.04	359.56	11,875.4	60.9	-377.1	81.3	12.00	12.00	0.00
12,100.0	77.04	359.56	11,907.8	155.3	-377.8	175.6	12.00	12.00	0.00
12,200.0	89.04	359.56	11,919.9	254.4	-378.6	274.6	12.00	12.00	0.00
12,208.0	90.00	359.56	11,920.0	262.5	-378.7	282.6	12.00	12.00	0.00
LP - Start 7813.2 hold at 12208.0 MD									
12,211.2	90.00	359.56	11,920.0	265.6	-378.7	285.7	0.00	0.00	0.00
Dagger State Com 608H LP									
12,300.0	90.00	359.56	11,920.0	354.4	-379.4	374.5	0.00	0.00	0.00
12,400.0	90.00	359.56	11,920.0	454.4	-380.1	474.4	0.00	0.00	0.00
12,500.0	90.00	359.56	11,920.0	554.4	-380.9	574.2	0.00	0.00	0.00
12,600.0	90.00	359.56	11,920.0	654.4	-381.7	674.1	0.00	0.00	0.00
12,700.0	90.00	359.56	11,920.0	754.4	-382.4	774.0	0.00	0.00	0.00
12,800.0	90.00	359.56	11,920.0	854.4	-383.2	873.9	0.00	0.00	0.00
12,900.0	90.00	359.56	11,920.0	954.4	-383.9	973.8	0.00	0.00	0.00
13,000.0	90.00	359.56	11,920.0	1,054.4	-384.7	1,073.7	0.00	0.00	0.00
13,100.0	90.00	359.56	11,920.0	1,154.4	-385.5	1,173.6	0.00	0.00	0.00
13,200.0	90.00	359.56	11,920.0	1,254.4	-386.2	1,273.5	0.00	0.00	0.00
13,300.0	90.00	359.56	11,920.0	1,354.4	-387.0	1,373.4	0.00	0.00	0.00
13,400.0	90.00	359.56	11,920.0	1,454.4	-387.8	1,473.3	0.00	0.00	0.00
13,500.0	90.00	359.56	11,920.0	1,554.4	-388.5	1,573.2	0.00	0.00	0.00
13,600.0	90.00	359.56	11,920.0	1,654.4	-389.3	1,673.1	0.00	0.00	0.00
13,700.0	90.00	359.56	11,920.0	1,754.4	-390.1	1,772.9	0.00	0.00	0.00
13,800.0	90.00	359.56	11,920.0	1,854.4	-390.8	1,872.8	0.00	0.00	0.00
13,900.0	90.00	359.56	11,920.0	1,954.4	-391.6	1,972.7	0.00	0.00	0.00
14,000.0	90.00	359.56	11,920.0	2,054.4	-392.4	2,072.6	0.00	0.00	0.00
14,100.0	90.00	359.56	11,920.0	2,154.4	-393.1	2,172.5	0.00	0.00	0.00
14,200.0	90.00	359.56	11,920.0	2,254.4	-393.9	2,272.4	0.00	0.00	0.00
14,300.0	90.00	359.56	11,920.0	2,354.4	-394.7	2,372.3	0.00	0.00	0.00
14,400.0	90.00	359.56	11,920.0	2,454.4	-395.4	2,472.2	0.00	0.00	0.00
14,500.0	90.00	359.56	11,920.0	2,554.4	-396.2	2,572.1	0.00	0.00	0.00
14,600.0	90.00	359.56	11,920.0	2,654.4	-397.0	2,672.0	0.00	0.00	0.00
14,700.0	90.00	359.56	11,920.0	2,754.4	-397.7	2,771.9	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 608H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3848.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3848.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 608H		
Design:	Dagger State Com 608H - 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)
14,800.0	90.00	359.56	11,920.0	2,854.3	-398.5	2,871.8	0.00	0.00	0.00
14,900.0	90.00	359.56	11,920.0	2,954.3	-399.3	2,971.6	0.00	0.00	0.00
15,000.0	90.00	359.56	11,920.0	3,054.3	-400.0	3,071.5	0.00	0.00	0.00
15,100.0	90.00	359.56	11,920.0	3,154.3	-400.8	3,171.4	0.00	0.00	0.00
15,200.0	90.00	359.56	11,920.0	3,254.3	-401.5	3,271.3	0.00	0.00	0.00
15,300.0	90.00	359.56	11,920.0	3,354.3	-402.3	3,371.2	0.00	0.00	0.00
15,400.0	90.00	359.56	11,920.0	3,454.3	-403.1	3,471.1	0.00	0.00	0.00
15,500.0	90.00	359.56	11,920.0	3,554.3	-403.8	3,571.0	0.00	0.00	0.00
15,600.0	90.00	359.56	11,920.0	3,654.3	-404.6	3,670.9	0.00	0.00	0.00
15,700.0	90.00	359.56	11,920.0	3,754.3	-405.4	3,770.8	0.00	0.00	0.00
15,800.0	90.00	359.56	11,920.0	3,854.3	-406.1	3,870.7	0.00	0.00	0.00
15,900.0	90.00	359.56	11,920.0	3,954.3	-406.9	3,970.6	0.00	0.00	0.00
16,000.0	90.00	359.56	11,920.0	4,054.3	-407.7	4,070.5	0.00	0.00	0.00
16,100.0	90.00	359.56	11,920.0	4,154.3	-408.4	4,170.3	0.00	0.00	0.00
16,200.0	90.00	359.56	11,920.0	4,254.3	-409.2	4,270.2	0.00	0.00	0.00
16,300.0	90.00	359.56	11,920.0	4,354.3	-410.0	4,370.1	0.00	0.00	0.00
16,400.0	90.00	359.56	11,920.0	4,454.3	-410.7	4,470.0	0.00	0.00	0.00
16,500.0	90.00	359.56	11,920.0	4,554.3	-411.5	4,569.9	0.00	0.00	0.00
16,600.0	90.00	359.56	11,920.0	4,654.3	-412.3	4,669.8	0.00	0.00	0.00
16,700.0	90.00	359.56	11,920.0	4,754.3	-413.0	4,769.7	0.00	0.00	0.00
16,800.0	90.00	359.56	11,920.0	4,854.3	-413.8	4,869.6	0.00	0.00	0.00
16,900.0	90.00	359.56	11,920.0	4,954.3	-414.6	4,969.5	0.00	0.00	0.00
17,000.0	90.00	359.56	11,920.0	5,054.3	-415.3	5,069.4	0.00	0.00	0.00
17,100.0	90.00	359.56	11,920.0	5,154.3	-416.1	5,169.3	0.00	0.00	0.00
17,200.0	90.00	359.56	11,920.0	5,254.3	-416.8	5,269.1	0.00	0.00	0.00
17,300.0	90.00	359.56	11,920.0	5,354.3	-417.6	5,369.0	0.00	0.00	0.00
17,400.0	90.00	359.56	11,920.0	5,454.3	-418.4	5,468.9	0.00	0.00	0.00
17,500.0	90.00	359.56	11,920.0	5,554.3	-419.1	5,568.8	0.00	0.00	0.00
17,600.0	90.00	359.56	11,920.0	5,654.3	-419.9	5,668.7	0.00	0.00	0.00
17,700.0	90.00	359.56	11,920.0	5,754.3	-420.7	5,768.6	0.00	0.00	0.00
17,800.0	90.00	359.56	11,920.0	5,854.3	-421.4	5,868.5	0.00	0.00	0.00
17,900.0	90.00	359.56	11,920.0	5,954.3	-422.2	5,968.4	0.00	0.00	0.00
18,000.0	90.00	359.56	11,920.0	6,054.3	-423.0	6,068.3	0.00	0.00	0.00
18,100.0	90.00	359.56	11,920.0	6,154.3	-423.7	6,168.2	0.00	0.00	0.00
18,200.0	90.00	359.56	11,920.0	6,254.2	-424.5	6,268.1	0.00	0.00	0.00
18,300.0	90.00	359.56	11,920.0	6,354.2	-425.3	6,368.0	0.00	0.00	0.00
18,400.0	90.00	359.56	11,920.0	6,454.2	-426.0	6,467.8	0.00	0.00	0.00
18,500.0	90.00	359.56	11,920.0	6,554.2	-426.8	6,567.7	0.00	0.00	0.00
18,600.0	90.00	359.56	11,920.0	6,654.2	-427.6	6,667.6	0.00	0.00	0.00
18,700.0	90.00	359.56	11,920.0	6,754.2	-428.3	6,767.5	0.00	0.00	0.00
18,800.0	90.00	359.56	11,920.0	6,854.2	-429.1	6,867.4	0.00	0.00	0.00
18,900.0	90.00	359.56	11,920.0	6,954.2	-429.9	6,967.3	0.00	0.00	0.00
19,000.0	90.00	359.56	11,920.0	7,054.2	-430.6	7,067.2	0.00	0.00	0.00
19,100.0	90.00	359.56	11,920.0	7,154.2	-431.4	7,167.1	0.00	0.00	0.00
19,200.0	90.00	359.56	11,920.0	7,254.2	-432.2	7,267.0	0.00	0.00	0.00
19,300.0	90.00	359.56	11,920.0	7,354.2	-432.9	7,366.9	0.00	0.00	0.00
19,400.0	90.00	359.56	11,920.0	7,454.2	-433.7	7,466.8	0.00	0.00	0.00
19,500.0	90.00	359.56	11,920.0	7,554.2	-434.4	7,566.7	0.00	0.00	0.00
19,600.0	90.00	359.56	11,920.0	7,654.2	-435.2	7,666.5	0.00	0.00	0.00
19,700.0	90.00	359.56	11,920.0	7,754.2	-436.0	7,766.4	0.00	0.00	0.00
19,800.0	90.00	359.56	11,920.0	7,854.2	-436.7	7,866.3	0.00	0.00	0.00
19,900.0	90.00	359.56	11,920.0	7,954.2	-437.5	7,966.2	0.00	0.00	0.00
20,000.0	90.00	359.56	11,920.0	8,054.2	-438.3	8,066.1	0.00	0.00	0.00
20,021.2	90.00	359.56	11,920.0	8,075.4	-438.4	8,087.3	0.00	0.00	0.00



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Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 608H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 608H		
Design:	Dagger State Com 608H - 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)
TD at 20021.2 - Dagger State Com 608H BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Dagger State Com 608H-	0.00	0.00	11,920.0	265.6	-381.8	528,143.59	761,757.61	32° 26' 59.654 N	103° 37' 7.572 W
- plan misses target center by 3.2usft at 12211.2usft MD (11920.0 TVD, 265.6 N, -378.7 E)									
- Point									
Dagger State Com 608H-	0.00	0.00	11,920.0	8,075.4	-438.4	535,953.40	761,701.01	32° 28' 16.936 N	103° 37' 7.622 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
12,208.0	11,920.0	LP	5-1/2	5-1/2	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,000.0	5,000.0	0.0	0.0	KOP - Start Build 1.00
5,420.5	5,420.1	-7.7	-13.4	Start 5474.5 hold at 5420.5 MD
10,895.0	10,879.9	-207.3	-361.6	Start Drop -1.00
11,315.5	11,300.0	-215.0	-375.0	Start 142.5 hold at 11315.5 MD
11,458.0	11,442.5	-215.0	-375.0	KOP #2 - Start Build 12.00
12,208.0	11,920.0	262.5	-378.7	LP - Start 7813.2 hold at 12208.0 MD
20,021.2	11,920.0	8,075.4	-438.4	TD at 20021.2

**WELL DETAILS: Dagger State Com 608H**

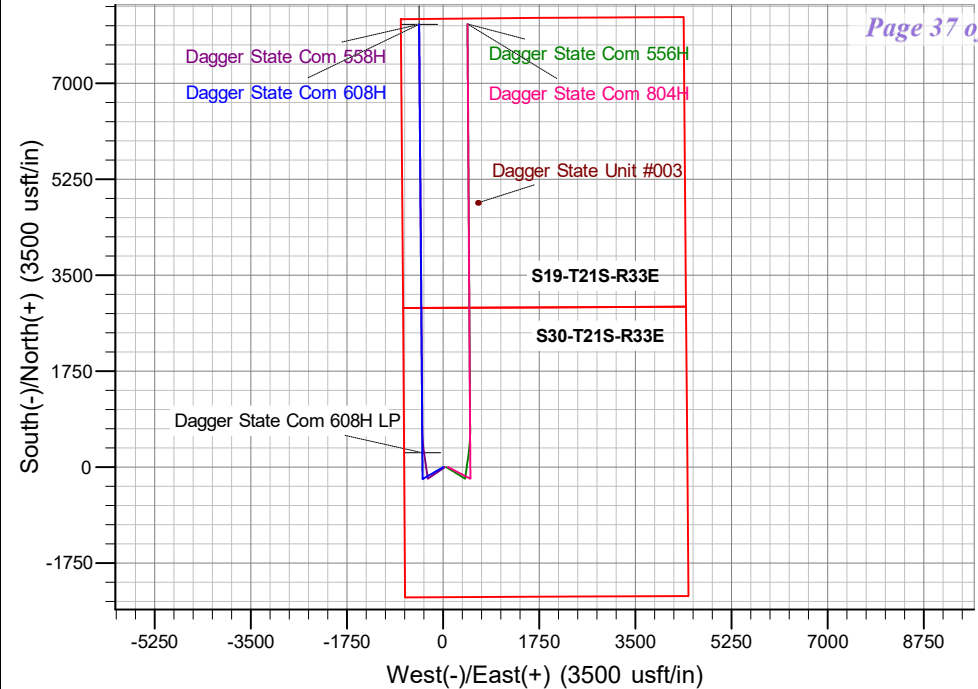
Ground Elev: 3816.0 KB: 3848.5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	527878.00	762139.45	32° 26' 57.001 N	103° 37' 3.137 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	Vsect	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5000.0	0.00	0.00	5000.0	0.0	0.0	0.00	0.00	0.0	KOP - Start Build 1.00
3	5420.5	4.20	240.17	5420.1	-7.7	-13.4	1.00	240.17	-6.9	Start 5474.5 hold at 5420.5 MD
4	10895.0	4.20	240.17	10879.9	-207.3	-361.6	0.00	0.00	-187.4	Start Drop -1.00
5	11315.5	0.00	0.00	11300.0	-215.0	-375.0	1.00	180.00	-194.4	Start 142.5 hold at 11315.5 MD
6	11458.0	0.00	0.00	11442.5	-215.0	-375.0	0.00	0.00	-194.4	KOP #2 - Start Build 12.00
7	12208.0	90.00	359.56	11920.0	262.5	-378.7	12.00	359.56	282.6	LP - Start 7813.2 hold at 12208.0 MD
8	20021.2	90.00	359.56	11920.0	8075.4	-438.4	0.00	0.00	8087.3	TD at 20021.2

