

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 296225

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 30-025-48899
4. Property Code 319601	5. Property Name DAGGER STATE COM	6. Well No. 516H

7. Surface Location

UL - Lot L	Section 30	Township 21S	Range 33E	Lot Idn L	Feet From 2620	N/S Line S	Feet From 800	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 1210	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 3815
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: 5/17/2021	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	97929	Pool Code	WC-025-G-06 S213326D; BONE SPRING
Property Code	319601	Property Name	DAGGER STATE COM
OGRID No.	372417	Operator Name	ADVANCE ENERGY PARTNERS HAT MESA
		Well Number	516H
		Elevation	3815'

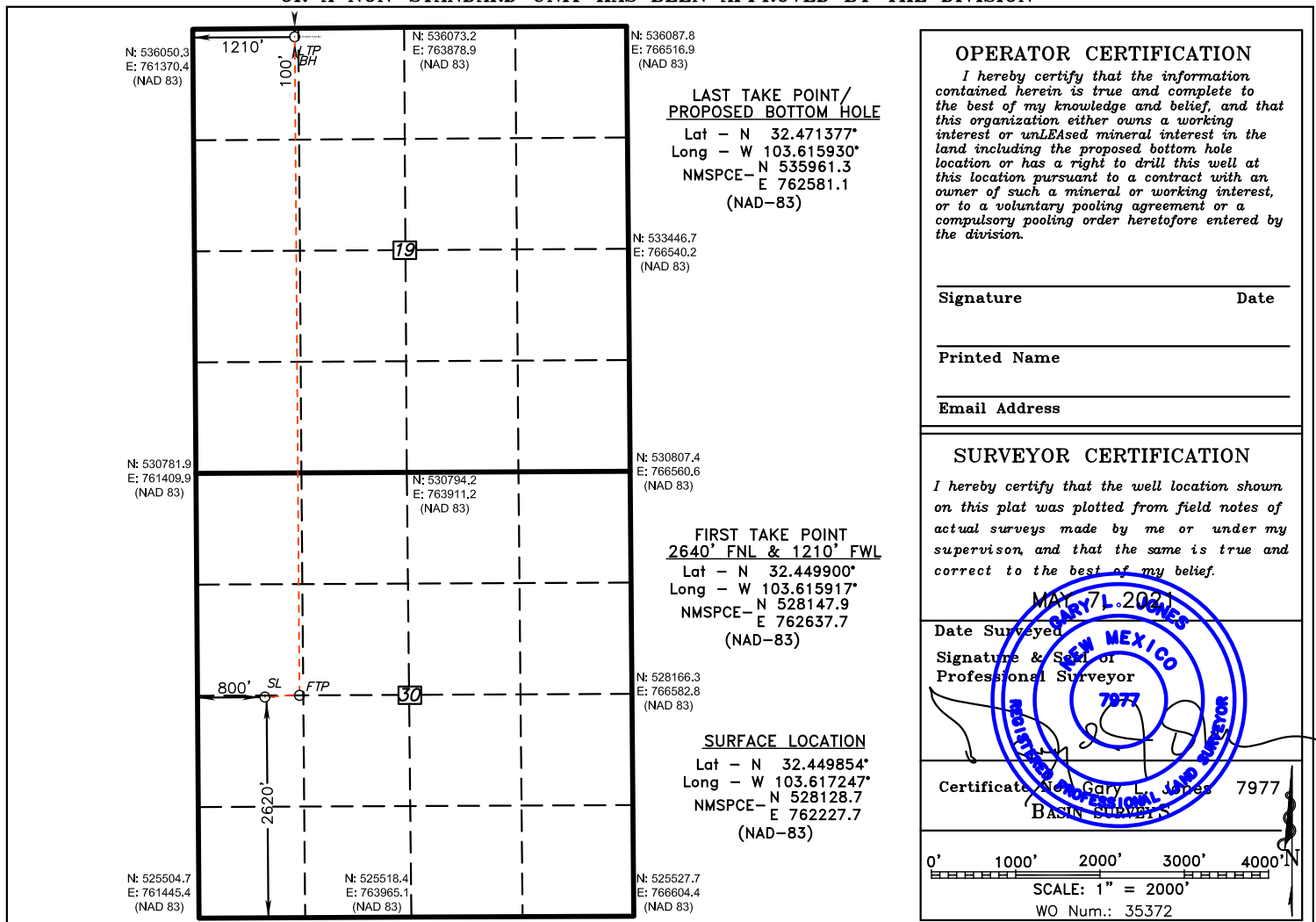
Surface Location

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		2620	SOUTH	800	WEST	LEA

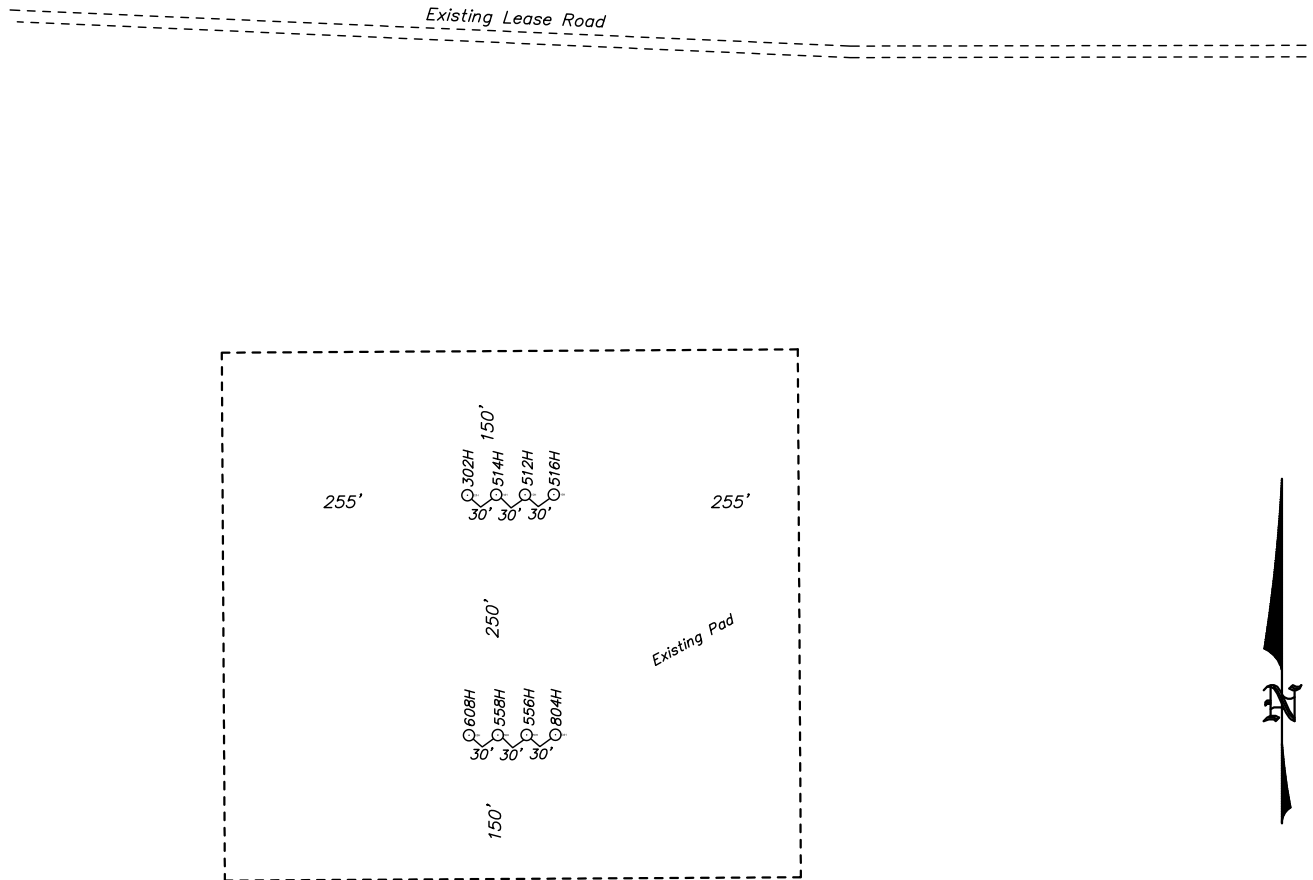
Bottom Hole Location If Different From Surface

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	1210	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



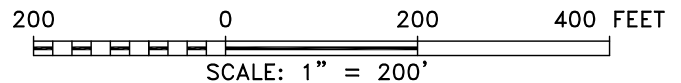
**SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



**ADVANCE ENERGY PARTNERS HAT MESA
DAGGER STATE COM #516H
ELEV. - 3815'**

Lat - N 32.449854°
Long - W 103.617247°
NMSPCE - N 528128.7
E 762227.7
(NAD-83)

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



ADVANCE ENERGY PARTNERS HAT MESA

REF: DAGGER STATE COM #516H / WELL PAD TOPO

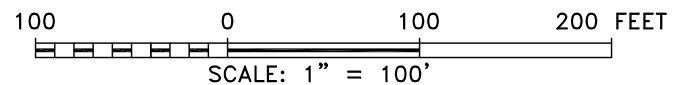
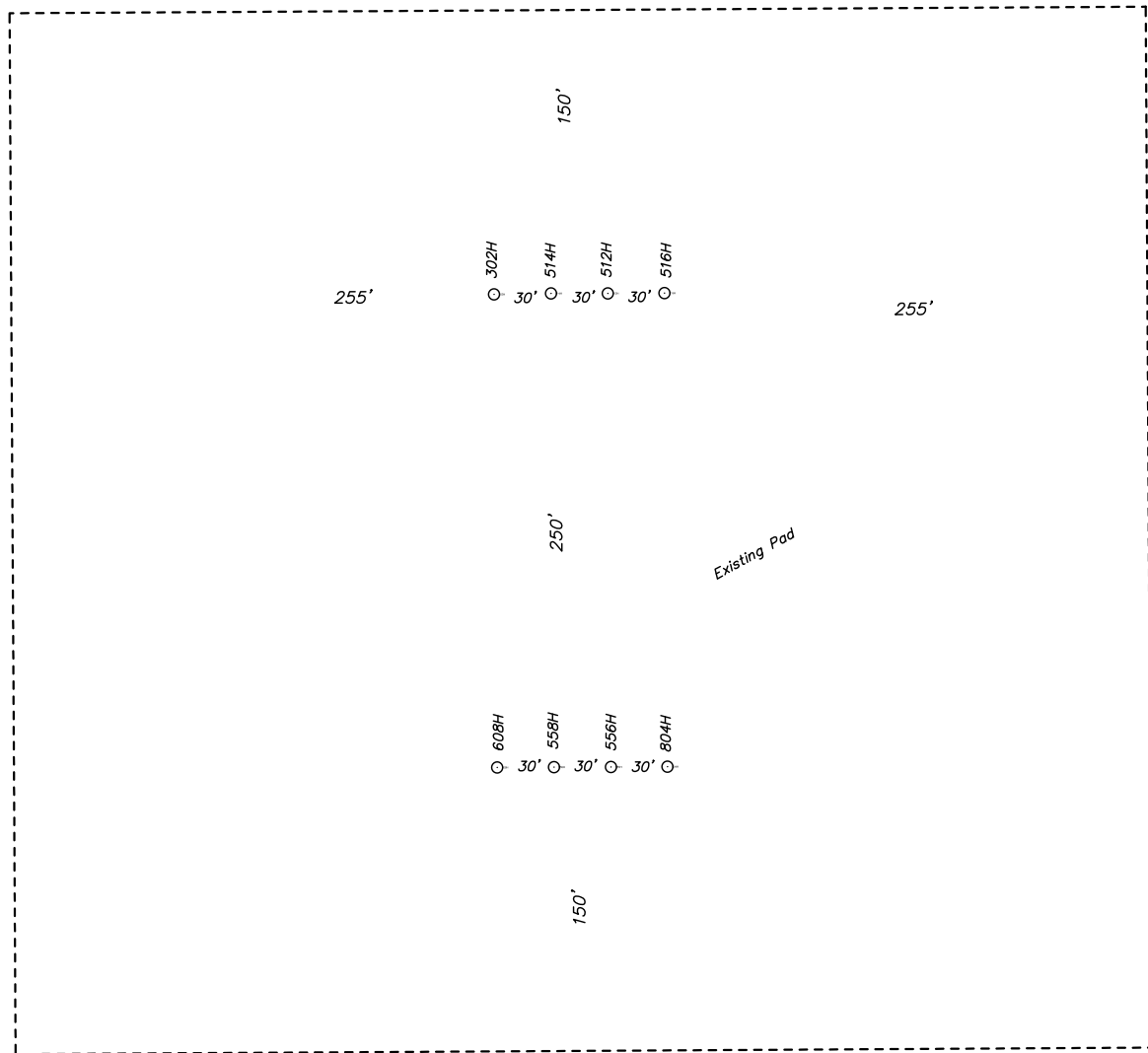
THE DAGGER STATE COM #516H LOCATED 2620' FROM
THE SOUTH LINE AND 800' FROM THE WEST LINE OF
SECTION 30, TOWNSHIP 21 SOUTH, RANGE 33 EAST.

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

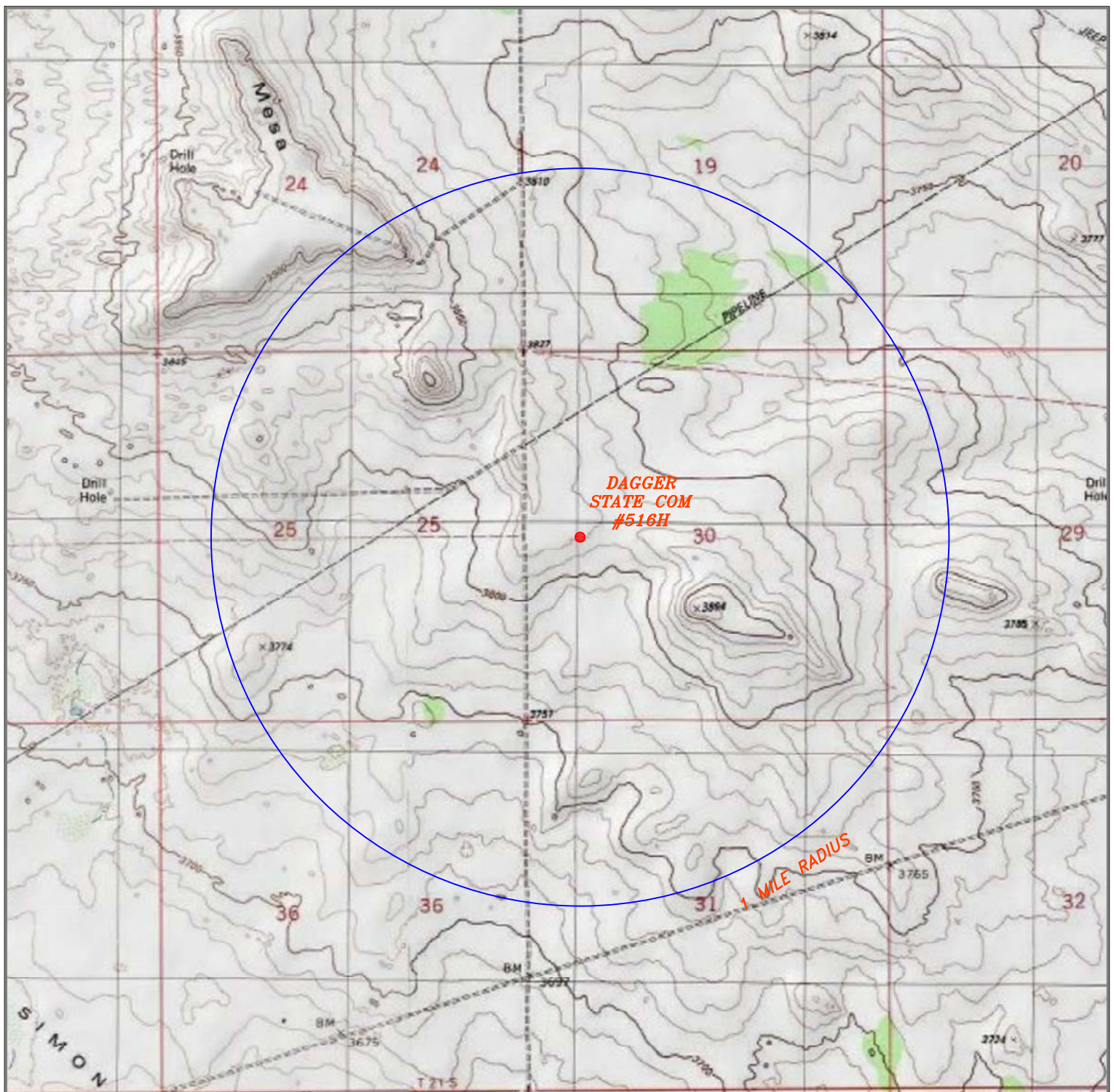
REF: DAGGER STATE COM #516H / WELL PAD TOPO

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DAGGER STATE COM #516H

Located 2620' FSL and 800' 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'

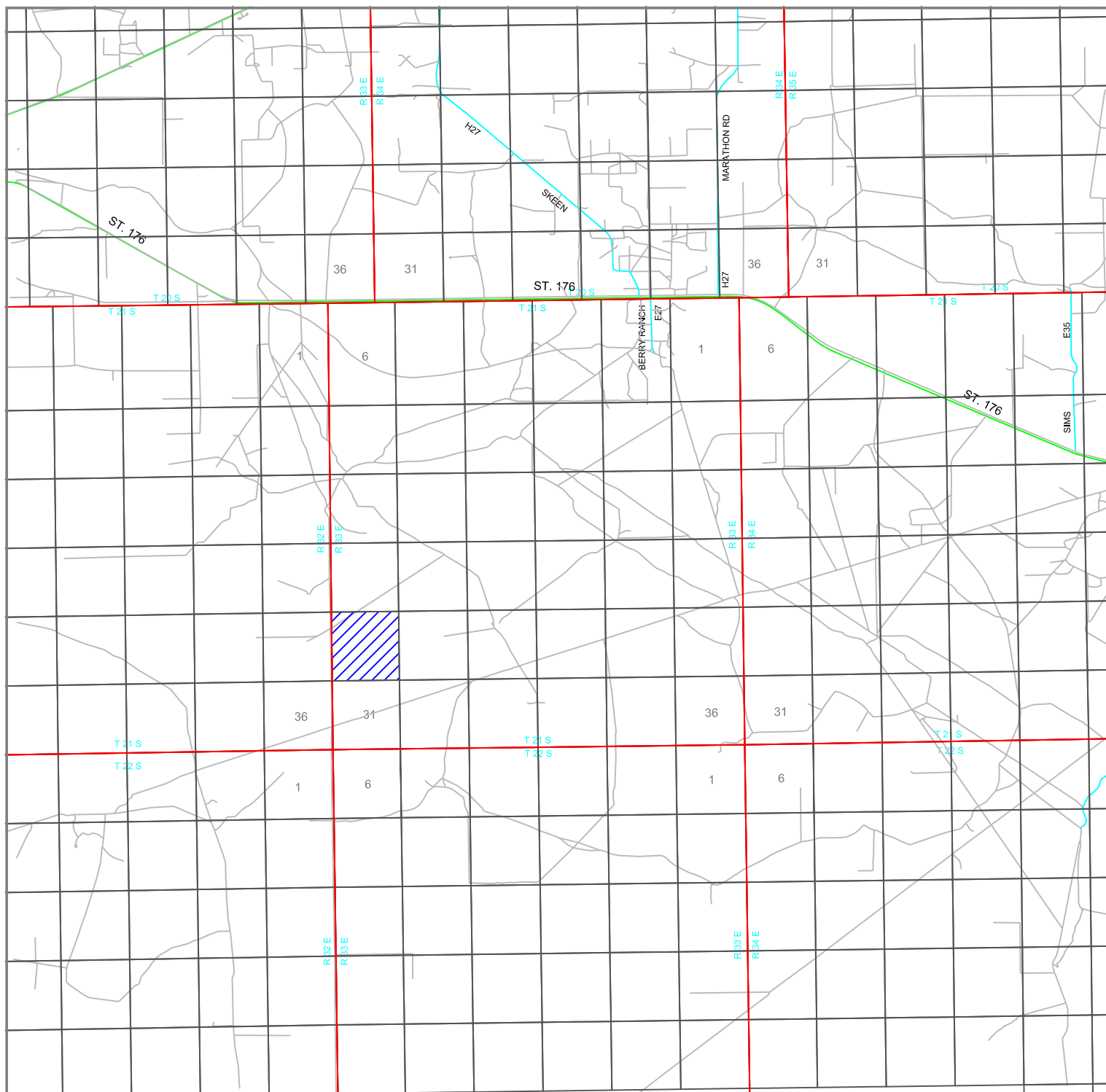
W.O. Number: KJG 35372

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 #516H

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 Section 30, Township 21 South, Range 33 East,
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0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

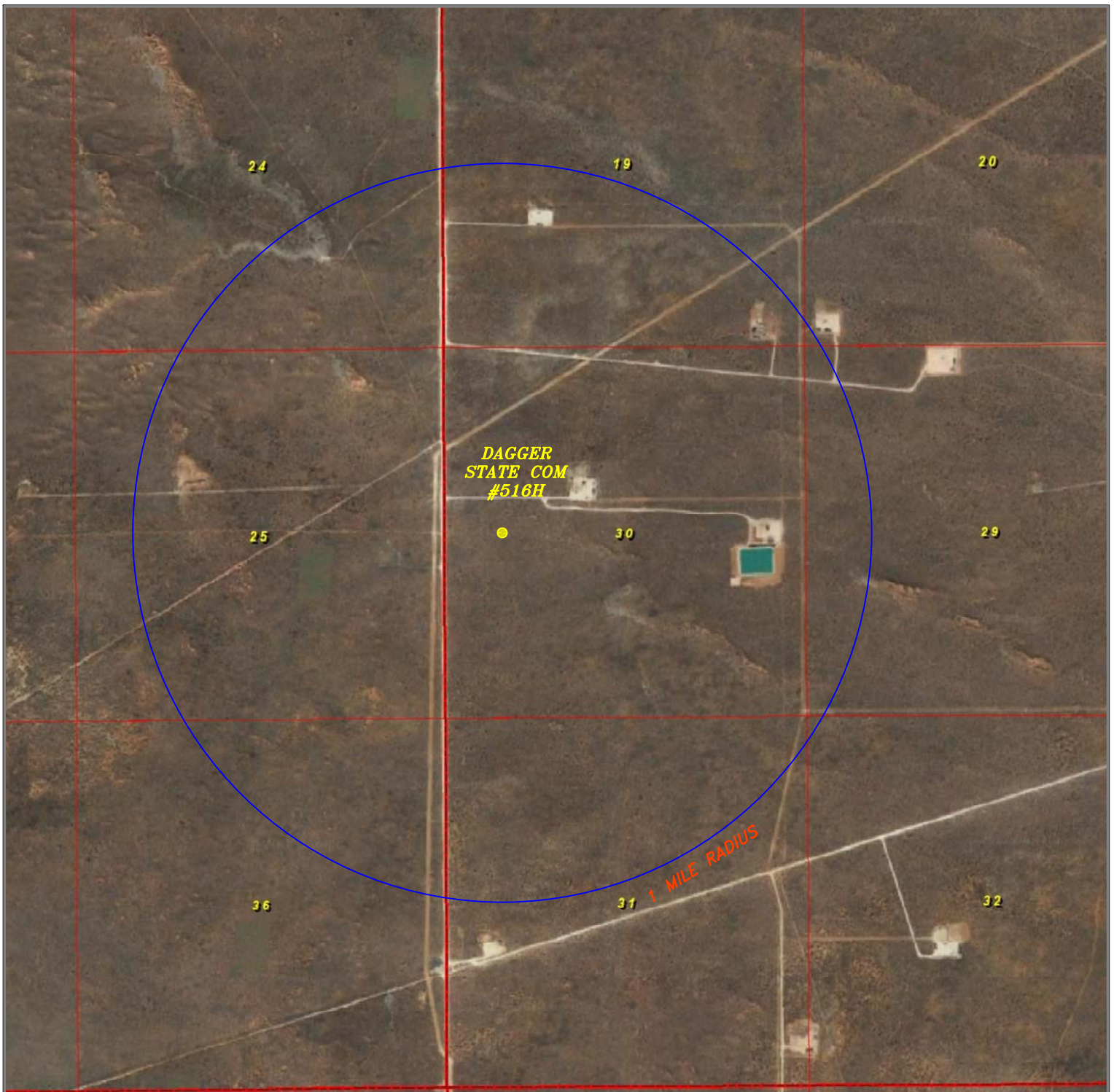
W.O. Number: KJG 35372

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**ADVANCE
 ENERGY
 PARTNERS
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DAGGER STATE COM #516H

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 Section 30, Township 21 South, Range 33 East,
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0' 1000' 2000' 3000' 1500'
 SCALE: 1" = 2000'

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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 #516H	30-025-48899	L-30-21S-33E	2620S 0800W	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 250' 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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Santa Fe, NM 87505

Form APD Conditions

Permit 296225

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: 30-025-48899
	Well: DAGGER STATE COM #516H

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	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	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 #516H

PROPOSED LOCATION: U/L L Sec 30 T21S R33E 2620 FSL 800 FWL

Lat. 32.449854 Long. -103.617247 NAD83

PROPOSED DEPTH: 18427' MD 10310' 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 S. RUTLEY

Representing BLM-CFO

ON DAGGER DRAW DI w/ DAGGER DA



Advance Energy Partners

Hat Mesa

Dagger State

Dagger State Com 516H

Dagger State Com 516H

Dagger State Com 516H - Prelim 1

Anticollision Report

17 May, 2021



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference	Dagger State Com 516H - 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	5/17/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,426.8	Dagger State Com 516H - 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 302H - Dagger State Com 302H - Da	5,000.0	5,000.0	89.8	63.6	3.436	CC, ES
Dagger State Com 302H - Dagger State Com 302H - Da	18,427.4	18,125.3	929.9	615.3	2.955	SF
Dagger State Com 512H - Dagger State Com 512H - Da	5,000.0	5,000.0	29.9	3.8	1.145	Level 3, CC, ES, SF
Dagger State Com 514H - Dagger State Com 514H - Da	5,000.0	5,000.0	59.8	33.7	2.291	CC, ES, SF
Dagger State Com 556H - Dagger State Com 556H - Da	9,975.0	9,953.6	143.5	89.6	2.663	SF
Dagger State Com 556H - Dagger State Com 556H - Da	10,025.0	10,001.3	140.8	88.7	2.705	ES
Dagger State Com 556H - Dagger State Com 556H - Da	10,052.1	10,026.4	140.3	89.6	2.769	CC
Dagger State Com 558H - Dagger State Com 558H - Da	5,524.2	5,512.7	251.3	224.1	9.246	CC, ES
Dagger State Com 558H - Dagger State Com 558H - Da	5,906.8	5,886.6	257.0	228.9	9.167	SF
Dagger State Com 608H - Dagger State Com 608H - Da	4,916.3	4,917.3	265.6	239.7	10.269	CC
Dagger State Com 608H - Dagger State Com 608H - Da	5,000.0	5,000.0	265.6	239.4	10.166	ES
Dagger State Com 608H - Dagger State Com 608H - Da	5,300.0	5,290.3	267.9	241.3	10.053	SF
Dagger State Com 804H - Dagger State Com 804H - Da	10,025.0	9,999.0	87.5	31.4	1.558	ES, SF
Dagger State Com 804H - Dagger State Com 804H - Da	10,072.0	10,042.2	85.2	32.9	1.629	CC
Dagger State Unit #003 - Dagger State Unit #003 - Dagg	15,162.6	10,271.5	169.6	45.2	1.364	Level 3, CC, ES, SF

Offset Design:	Dagger State - Dagger State Com 302H - Dagger State Com 302H - Dagger State Com 302H - Prelim 1											Offset Site Error:	0.0 usft
Survey Program:	0-MWD+HRGM											Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	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	-90.38	-0.6	-89.8	89.8				
100.0	100.0	100.0	100.0	0.5	0.5	-90.38	-0.6	-89.8	89.8	88.7	1.06	84.663	
200.0	200.0	200.0	200.0	1.7	1.7	-90.38	-0.6	-89.8	89.8	86.3	3.42	26.221	
300.0	300.0	300.0	300.0	2.4	2.4	-90.38	-0.6	-89.8	89.8	84.9	4.82	18.613	
400.0	400.0	400.0	400.0	3.0	3.0	-90.38	-0.6	-89.8	89.8	83.9	5.91	15.194	
500.0	500.0	500.0	500.0	3.4	3.4	-90.38	-0.6	-89.8	89.8	82.9	6.83	13.143	
600.0	600.0	600.0	600.0	3.8	3.8	-90.38	-0.6	-89.8	89.8	82.1	7.65	11.736	
700.0	700.0	700.0	700.0	4.2	4.2	-90.38	-0.6	-89.8	89.8	81.4	8.39	10.694	
800.0	800.0	800.0	800.0	4.5	4.5	-90.38	-0.6	-89.8	89.8	80.7	9.08	9.882	
900.0	900.0	900.0	900.0	4.9	4.9	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-89.8	89.8	78.3	11.48	7.820	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 302H - Dagger State Com 302H - Dagger State Com 302H - 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)			
1,300.0	1,300.0	1,300.0	1,300.0	6.0	6.0	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-89.8	89.8	75.3	14.45	6.212	
1,900.0	1,900.0	1,900.0	1,900.0	7.4	7.4	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-89.8	89.8	68.3	21.50	4.175	
3,700.0	3,700.0	3,700.0	3,700.0	10.9	10.9	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-89.8	89.8	64.9	24.85	3.612	
4,700.0	4,700.0	4,700.0	4,700.0	12.6	12.6	-90.38	-0.6	-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	-90.38	-0.6	-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	-90.38	-0.6	-89.8	89.8	64.0	25.81	3.478	
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	-90.38	-0.6	-89.8	89.8	63.6	26.12	3.436 CC, ES	
5,100.0	5,100.0	5,099.0	5,099.0	13.2	13.2	132.25	-1.3	-90.3	90.9	64.6	26.31	3.456	
5,200.0	5,200.0	5,197.9	5,197.9	13.2	13.2	132.20	-3.2	-91.9	94.3	67.9	26.45	3.566	
5,300.0	5,299.9	5,296.7	5,296.5	13.3	13.3	132.11	-6.5	-94.6	100.0	73.4	26.61	3.758	
5,400.0	5,399.7	5,395.2	5,394.9	13.5	13.4	132.00	-11.1	-98.4	108.0	81.2	26.79	4.031	
5,500.0	5,499.4	5,493.4	5,492.8	13.6	13.6	131.87	-17.0	-103.3	118.2	91.2	26.99	4.380	
5,600.0	5,598.9	5,591.3	5,590.2	13.8	13.7	131.73	-24.1	-109.1	130.7	103.5	27.20	4.804	
5,700.0	5,698.3	5,688.7	5,687.0	14.0	13.9	131.59	-32.5	-116.0	145.4	118.0	27.45	5.297	
5,800.0	5,797.4	5,785.6	5,783.1	14.2	14.1	131.45	-42.1	-123.9	162.3	134.6	27.72	5.856	
5,906.8	5,903.0	5,888.4	5,884.8	14.4	14.4	131.29	-53.7	-133.4	182.8	154.8	28.05	6.518	
6,000.0	5,995.1	5,977.9	5,973.2	14.7	14.6	131.15	-64.9	-142.6	202.3	174.0	28.32	7.143	
6,100.0	6,093.8	6,075.7	6,069.6	15.0	14.8	130.91	-77.5	-153.0	223.5	194.8	28.67	7.797	
6,200.0	6,192.6	6,173.4	6,165.9	15.3	15.1	130.72	-90.1	-163.4	244.7	215.6	29.06	8.420	
6,300.0	6,291.3	6,271.1	6,262.2	15.6	15.4	130.56	-102.8	-173.8	265.9	236.4	29.49	9.017	
6,400.0	6,390.1	6,368.8	6,358.6	15.9	15.8	130.42	-115.4	-184.1	287.1	257.2	29.94	9.589	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 302H - Dagger State Com 302H - Dagger State Com 302H - 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	
6,500.0	6,488.8	6,466.6	6,454.9	16.3	16.1	130.30	-128.0	-194.5	308.3	277.9	30.42	10.137	
6,600.0	6,587.6	6,564.3	6,551.3	16.7	16.5	130.20	-140.6	-204.9	329.5	298.6	30.92	10.659	
6,700.0	6,686.3	6,662.0	6,647.6	17.0	16.9	130.11	-153.2	-215.3	350.7	319.3	31.44	11.157	
6,800.0	6,785.1	6,759.7	6,744.0	17.5	17.2	130.03	-165.9	-225.6	372.0	340.0	31.98	11.631	
6,900.0	6,883.8	6,857.5	6,840.3	17.9	17.7	129.96	-178.5	-236.0	393.2	360.6	32.54	12.081	
7,000.0	6,982.6	6,955.2	6,936.7	18.3	18.1	129.89	-191.1	-246.4	414.4	381.3	33.13	12.510	
7,100.0	7,081.3	7,052.9	7,033.0	18.7	18.5	129.83	-203.7	-256.8	435.6	401.9	33.72	12.916	
7,200.0	7,180.1	7,150.6	7,129.4	19.2	18.9	129.78	-216.4	-267.2	456.8	422.5	34.34	13.302	
7,300.0	7,278.8	7,248.3	7,225.7	19.6	19.4	129.73	-229.0	-277.5	478.0	443.1	34.97	13.668	
7,400.0	7,377.6	7,346.1	7,322.1	20.1	19.9	129.69	-241.6	-287.9	499.2	463.6	35.62	14.015	
7,500.0	7,476.3	7,443.8	7,418.4	20.6	20.3	129.65	-254.2	-298.3	520.5	484.2	36.29	14.343	
7,600.0	7,575.1	7,541.5	7,514.8	21.1	20.8	129.61	-266.8	-308.7	541.7	504.7	36.96	14.655	
7,700.0	7,673.8	7,639.2	7,611.1	21.6	21.3	129.57	-279.5	-319.0	562.9	525.2	37.65	14.950	
7,800.0	7,772.6	7,737.0	7,707.5	22.0	21.8	129.54	-292.1	-329.4	584.1	545.7	38.35	15.229	
7,900.0	7,871.3	7,834.7	7,803.8	22.6	22.3	129.51	-304.7	-339.8	605.3	566.3	39.07	15.494	
8,000.0	7,970.1	7,932.4	7,900.2	23.1	22.8	129.48	-317.3	-350.2	626.5	586.7	39.79	15.746	
8,100.0	8,068.8	8,030.1	7,996.5	23.6	23.3	129.46	-329.9	-360.6	647.8	607.2	40.53	15.983	
8,200.0	8,167.6	8,127.9	8,092.8	24.1	23.8	129.43	-342.6	-370.9	669.0	627.7	41.27	16.209	
8,300.0	8,266.3	8,225.6	8,189.2	24.6	24.3	129.41	-355.2	-381.3	690.2	648.2	42.03	16.423	
8,400.0	8,365.1	8,323.3	8,285.5	25.2	24.8	129.39	-367.8	-391.7	711.4	668.6	42.79	16.626	
8,500.0	8,463.8	8,421.0	8,381.9	25.7	25.4	129.37	-380.4	-402.1	732.6	689.1	43.56	16.820	
8,600.0	8,562.6	8,522.3	8,481.8	26.2	25.9	129.36	-393.4	-412.7	753.7	709.4	44.33	17.003	
8,700.0	8,661.3	8,629.8	8,588.1	26.8	26.5	129.44	-405.9	-423.0	773.9	728.8	45.14	17.144	
8,800.0	8,760.1	8,737.8	8,695.1	27.3	27.0	129.62	-417.0	-432.1	792.8	746.9	45.95	17.255	
8,837.4	8,797.0	8,778.4	8,735.4	27.5	27.2	129.72	-420.7	-435.2	799.6	753.3	46.23	17.295	
8,900.0	8,858.9	8,846.3	8,802.9	27.8	27.6	129.97	-426.5	-440.0	810.3	763.6	46.71	17.349	
9,000.0	8,957.9	8,955.4	8,911.5	28.4	28.1	130.36	-434.5	-446.5	825.5	778.0	47.46	17.393	
9,100.0	9,057.2	9,065.0	9,020.7	28.9	28.6	130.72	-440.9	-451.8	838.4	790.2	48.18	17.399	
9,200.0	9,156.6	9,175.0	9,130.6	29.4	29.1	131.07	-445.7	-455.7	848.9	800.0	48.87	17.372	
9,300.0	9,256.3	9,285.3	9,240.8	29.9	29.6	131.40	-448.9	-458.4	857.0	807.5	49.50	17.315	
9,400.0	9,356.0	9,395.8	9,351.3	30.3	29.9	131.72	-450.4	-459.6	862.7	812.7	50.06	17.234	
9,500.0	9,455.9	9,500.4	9,455.9	30.8	30.0	132.01	-450.6	-459.8	866.3	815.9	50.42	17.180	
9,600.0	9,555.8	9,600.3	9,555.8	31.2	30.0	132.23	-450.0	-459.8	868.6	817.8	50.73	17.122	
9,700.0	9,655.8	9,697.4	9,651.6	31.5	29.7	133.27	-435.5	-459.9	869.8	818.9	50.92	17.082	
9,744.2	9,700.0	9,737.7	9,690.1	31.6	29.6	-88.61	-423.8	-460.0	870.3	819.4	50.94	17.086	
9,800.0	9,755.8	9,785.4	9,734.3	31.6	29.4	-87.43	-405.9	-460.1	871.3	820.4	50.91	17.112	
9,876.7	9,832.5	9,844.3	9,786.0	31.6	29.2	-85.58	-377.8	-460.4	874.2	823.3	50.90	17.174	
9,900.0	9,855.8	9,860.8	9,799.9	31.6	29.1	-84.47	-368.7	-460.4	875.5	824.6	50.89	17.204	
9,925.0	9,880.7	9,878.4	9,814.3	31.5	29.1	-83.70	-358.6	-460.5	877.1	826.2	50.87	17.242	
9,950.0	9,905.5	9,895.7	9,828.1	31.5	29.0	-82.93	-348.1	-460.6	878.7	827.9	50.84	17.286	
9,975.0	9,930.1	9,912.9	9,841.4	31.4	28.9	-82.18	-337.3	-460.7	880.6	829.8	50.80	17.334	
10,000.0	9,954.4	9,929.9	9,854.1	31.3	28.9	-81.43	-326.1	-460.8	882.5	831.7	50.76	17.386	
10,025.0	9,978.4	9,946.7	9,866.3	31.2	28.8	-80.71	-314.5	-460.9	884.5	833.8	50.71	17.441	
10,050.0	10,002.0	9,963.3	9,878.1	31.1	28.8	-79.99	-302.7	-461.0	886.5	835.9	50.66	17.498	
10,075.0	10,025.2	9,979.9	9,889.3	31.0	28.7	-79.29	-290.5	-461.1	888.7	838.0	50.61	17.557	
10,100.0	10,047.8	9,996.3	9,899.9	30.9	28.7	-78.62	-278.1	-461.2	890.8	840.2	50.56	17.617	
10,125.0	10,069.8	10,012.6	9,910.1	30.8	28.6	-77.96	-265.4	-461.3	893.0	842.5	50.52	17.677	
10,150.0	10,091.1	10,025.0	9,917.6	30.7	28.6	-77.41	-255.4	-461.3	895.2	844.7	50.47	17.735	
10,175.0	10,111.8	10,044.9	9,929.0	30.6	28.6	-76.71	-239.2	-461.5	897.3	846.9	50.42	17.795	
10,200.0	10,131.7	10,060.9	9,937.7	30.6	28.5	-76.12	-225.8	-461.6	899.4	849.1	50.38	17.852	
10,225.0	10,150.7	10,075.0	9,945.0	30.5	28.5	-75.60	-213.6	-461.7	901.5	851.2	50.35	17.906	
10,250.0	10,168.9	10,092.6	9,953.6	30.4	28.5	-75.03	-198.3	-461.8	903.6	853.3	50.32	17.958	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 302H - Dagger State Com 302H - Dagger State Com 302H - 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	
10,275.0	10,186.2	10,108.4	9,960.8	30.3	28.5	-74.53	-184.2	-461.9	905.5	855.3	50.29	18.005	
10,300.0	10,202.5	10,125.0	9,967.9	30.3	28.5	-74.04	-169.2	-462.0	907.4	857.2	50.27	18.049	
10,325.0	10,217.8	10,139.8	9,973.7	30.2	28.4	-73.61	-155.6	-462.1	909.2	859.0	50.27	18.088	
10,350.0	10,232.0	10,155.4	9,979.5	30.1	28.4	-73.20	-141.1	-462.3	910.9	860.7	50.27	18.122	
10,375.0	10,245.2	10,175.0	9,986.0	30.1	28.4	-72.77	-122.6	-462.4	912.5	862.3	50.27	18.151	
10,400.0	10,257.2	10,186.5	9,989.5	30.1	28.4	-72.48	-111.7	-462.5	914.0	863.7	50.29	18.173	
10,425.0	10,268.0	10,200.0	9,993.2	30.0	28.4	-72.19	-98.7	-462.6	915.3	865.0	50.32	18.190	
10,450.0	10,277.7	10,217.4	9,997.5	30.0	28.4	-71.90	-81.8	-462.7	916.5	866.1	50.36	18.200	
10,475.0	10,286.1	10,232.9	10,000.7	30.0	28.5	-71.66	-66.7	-462.9	917.6	867.2	50.41	18.204	
10,500.0	10,293.3	10,250.0	10,003.8	30.0	28.5	-71.44	-49.9	-463.0	918.5	868.0	50.46	18.200	
10,525.0	10,299.2	10,263.7	10,005.8	30.0	28.5	-71.29	-36.3	-463.1	919.2	868.7	50.53	18.191	
10,550.0	10,303.8	10,275.0	10,007.2	30.1	28.5	-71.17	-25.1	-463.2	919.8	869.2	50.60	18.178	
10,575.0	10,307.2	10,294.4	10,008.9	30.1	28.6	-71.06	-5.8	-463.4	920.3	869.6	50.70	18.152	
10,600.0	10,309.3	10,309.8	10,009.7	30.2	28.6	-71.00	9.6	-463.5	920.5	869.7	50.80	18.122	
10,626.7	10,310.0	10,327.0	10,010.0	30.2	28.6	-70.98	26.8	-463.6	920.6	869.7	50.91	18.082	
10,627.1	10,310.0	10,327.0	10,010.0	30.2	28.6	-70.98	26.8	-463.6	920.6	869.7	50.91	18.082	
10,700.0	10,310.0	10,398.9	10,010.0	30.5	28.8	-70.98	98.7	-464.2	920.7	869.3	51.42	17.906	
10,800.0	10,310.0	10,498.9	10,010.0	30.8	29.2	-70.99	198.7	-465.0	920.8	868.5	52.35	17.590	
10,900.0	10,310.0	10,598.9	10,010.0	31.3	29.7	-70.99	298.7	-465.8	921.0	867.4	53.55	17.198	
11,000.0	10,310.0	10,698.9	10,010.0	31.8	30.2	-70.99	398.7	-466.6	921.1	866.1	55.00	16.748	
11,100.0	10,310.0	10,798.9	10,010.0	32.5	30.9	-70.99	498.7	-467.4	921.2	864.5	56.67	16.254	
11,200.0	10,310.0	10,898.9	10,010.0	33.2	31.6	-71.00	598.7	-468.2	921.3	862.8	58.56	15.733	
11,300.0	10,310.0	10,998.9	10,010.0	34.0	32.5	-71.00	698.7	-469.0	921.4	860.8	60.63	15.197	
11,400.0	10,310.0	11,098.9	10,010.0	35.0	33.4	-71.00	798.7	-469.8	921.6	858.7	62.88	14.655	
11,500.0	10,310.0	11,198.9	10,010.0	36.0	34.5	-71.00	898.7	-470.7	921.7	856.4	65.28	14.118	
11,600.0	10,310.0	11,298.9	10,010.0	37.1	35.6	-71.01	998.7	-471.5	921.8	854.0	67.82	13.592	
11,700.0	10,310.0	11,398.9	10,010.0	38.2	36.8	-71.01	1,098.7	-472.3	921.9	851.4	70.48	13.080	
11,800.0	10,310.0	11,498.9	10,010.0	39.5	38.2	-71.01	1,198.7	-473.1	922.0	848.8	73.25	12.587	
11,900.0	10,310.0	11,598.9	10,010.0	40.8	39.5	-71.01	1,298.7	-473.9	922.1	846.0	76.12	12.114	
12,000.0	10,310.0	11,698.9	10,010.0	42.2	41.0	-71.02	1,398.7	-474.7	922.3	843.2	79.08	11.663	
12,100.0	10,310.0	11,798.9	10,010.0	43.7	42.5	-71.02	1,498.7	-475.5	922.4	840.3	82.11	11.233	
12,200.0	10,310.0	11,898.9	10,010.0	45.2	44.0	-71.02	1,598.7	-476.3	922.5	837.3	85.21	10.826	
12,300.0	10,310.0	11,998.9	10,010.0	46.7	45.6	-71.02	1,698.7	-477.1	922.6	834.2	88.38	10.440	
12,400.0	10,310.0	12,098.9	10,010.0	48.3	47.3	-71.03	1,798.7	-477.9	922.7	831.1	91.60	10.074	
12,500.0	10,310.0	12,198.9	10,010.0	49.9	48.9	-71.03	1,898.6	-478.7	922.9	828.0	94.87	9.728	
12,600.0	10,310.0	12,298.9	10,010.0	51.6	50.6	-71.03	1,998.6	-479.5	923.0	824.8	98.18	9.401	
12,700.0	10,310.0	12,398.9	10,010.0	53.3	52.3	-71.03	2,098.6	-480.3	923.1	821.6	101.54	9.091	
12,800.0	10,310.0	12,498.9	10,010.0	55.0	54.1	-71.04	2,198.6	-481.1	923.2	818.3	104.93	8.799	
12,900.0	10,310.0	12,598.9	10,010.0	56.7	55.8	-71.04	2,298.6	-481.9	923.3	815.0	108.35	8.522	
13,000.0	10,310.0	12,698.9	10,010.0	58.5	57.6	-71.04	2,398.6	-482.8	923.5	811.7	111.80	8.260	
13,100.0	10,310.0	12,798.9	10,010.0	60.2	59.4	-71.05	2,498.6	-483.6	923.6	808.3	115.29	8.011	
13,200.0	10,310.0	12,898.9	10,010.0	62.0	61.2	-71.05	2,598.6	-484.4	923.7	804.9	118.79	7.776	
13,300.0	10,310.0	12,998.9	10,010.0	63.8	63.1	-71.05	2,698.6	-485.2	923.8	801.5	122.32	7.552	
13,400.0	10,310.0	13,098.9	10,010.0	65.6	64.9	-71.05	2,798.6	-486.0	923.9	798.1	125.87	7.340	
13,500.0	10,310.0	13,198.9	10,010.0	67.4	66.7	-71.06	2,898.6	-486.8	924.1	794.6	129.44	7.139	
13,600.0	10,310.0	13,298.9	10,010.0	69.3	68.6	-71.06	2,998.6	-487.6	924.2	791.1	133.03	6.947	
13,700.0	10,310.0	13,398.9	10,010.0	71.1	70.5	-71.06	3,098.6	-488.4	924.3	787.7	136.63	6.765	
13,800.0	10,310.0	13,498.9	10,010.0	73.0	72.4	-71.06	3,198.6	-489.2	924.4	784.2	140.25	6.591	
13,900.0	10,310.0	13,598.9	10,010.0	74.9	74.2	-71.07	3,298.6	-490.0	924.5	780.7	143.88	6.426	
14,000.0	10,310.0	13,698.9	10,010.0	76.7	76.1	-71.07	3,398.6	-490.8	924.6	777.1	147.52	6.268	
14,100.0	10,310.0	13,798.9	10,010.0	78.6	78.0	-71.07	3,498.6	-491.6	924.8	773.6	151.18	6.117	
14,200.0	10,310.0	13,898.9	10,010.0	80.5	79.9	-71.07	3,598.6	-492.4	924.9	770.0	154.85	5.973	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 302H - Dagger State Com 302H - Dagger State Com 302H - 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	
14,300.0	10,310.0	13,998.9	10,010.0	82.4	81.9	-71.08	3,698.6	-493.2	925.0	766.5	158.52	5.835		
14,400.0	10,310.0	14,098.9	10,010.0	84.3	83.8	-71.08	3,798.6	-494.0	925.1	762.9	162.21	5.703		
14,500.0	10,310.0	14,198.9	10,010.0	86.2	85.7	-71.08	3,898.6	-494.9	925.2	759.3	165.91	5.577		
14,600.0	10,310.0	14,298.9	10,010.0	88.1	87.6	-71.08	3,998.6	-495.7	925.4	755.8	169.61	5.456		
14,700.0	10,310.0	14,398.9	10,010.0	90.1	89.6	-71.09	4,098.6	-496.5	925.5	752.2	173.32	5.340		
14,800.0	10,310.0	14,498.9	10,010.0	92.0	91.5	-71.09	4,198.6	-497.3	925.6	748.6	177.04	5.228		
14,900.0	10,310.0	14,598.9	10,010.0	93.9	93.4	-71.09	4,298.6	-498.1	925.7	745.0	180.77	5.121		
15,000.0	10,310.0	14,698.9	10,010.0	95.8	95.4	-71.09	4,398.6	-498.9	925.8	741.3	184.50	5.018		
15,100.0	10,310.0	14,798.9	10,010.0	97.8	97.3	-71.10	4,498.6	-499.7	926.0	737.7	188.24	4.919		
15,200.0	10,310.0	14,898.9	10,010.0	99.7	99.3	-71.10	4,598.6	-500.5	926.1	734.1	191.99	4.824		
15,300.0	10,310.0	14,998.9	10,010.0	101.6	101.2	-71.10	4,698.6	-501.3	926.2	730.5	195.74	4.732		
15,400.0	10,310.0	15,098.9	10,010.0	103.6	103.2	-71.10	4,798.6	-502.1	926.3	726.8	199.49	4.643		
15,500.0	10,310.0	15,198.9	10,010.0	105.5	105.1	-71.11	4,898.5	-502.9	926.4	723.2	203.25	4.558		
15,600.0	10,310.0	15,298.9	10,010.0	107.5	107.1	-71.11	4,998.5	-503.7	926.6	719.5	207.02	4.476		
15,700.0	10,310.0	15,398.9	10,010.0	109.4	109.1	-71.11	5,098.5	-504.5	926.7	715.9	210.78	4.396		
15,800.0	10,310.0	15,498.9	10,010.0	111.4	111.0	-71.11	5,198.5	-505.3	926.8	712.2	214.56	4.320		
15,900.0	10,310.0	15,598.9	10,010.0	113.4	113.0	-71.12	5,298.5	-506.1	926.9	708.6	218.33	4.245		
16,000.0	10,310.0	15,698.9	10,010.0	115.3	114.9	-71.12	5,398.5	-507.0	927.0	704.9	222.12	4.174		
16,100.0	10,310.0	15,798.9	10,010.0	117.3	116.9	-71.12	5,498.5	-507.8	927.1	701.2	225.90	4.104		
16,200.0	10,310.0	15,898.9	10,010.0	119.2	118.9	-71.12	5,598.5	-508.6	927.3	697.6	229.69	4.037		
16,300.0	10,310.0	15,998.9	10,010.0	121.2	120.9	-71.13	5,698.5	-509.4	927.4	693.9	233.48	3.972		
16,400.0	10,310.0	16,098.9	10,010.0	123.2	122.8	-71.13	5,798.5	-510.2	927.5	690.2	237.27	3.909		
16,500.0	10,310.0	16,198.9	10,010.0	125.1	124.8	-71.13	5,898.5	-511.0	927.6	686.6	241.07	3.848		
16,600.0	10,310.0	16,298.9	10,010.0	127.1	126.8	-71.13	5,998.5	-511.8	927.7	682.9	244.87	3.789		
16,700.0	10,310.0	16,398.9	10,010.0	129.1	128.8	-71.14	6,098.5	-512.6	927.9	679.2	248.67	3.731		
16,800.0	10,310.0	16,498.9	10,010.0	131.0	130.7	-71.14	6,198.5	-513.4	928.0	675.5	252.48	3.676		
16,900.0	10,310.0	16,598.9	10,010.0	133.0	132.7	-71.14	6,298.5	-514.2	928.1	671.8	256.28	3.621		
17,000.0	10,310.0	16,698.9	10,010.0	135.0	134.7	-71.14	6,398.5	-515.0	928.2	668.1	260.09	3.569		
17,100.0	10,310.0	16,798.9	10,010.0	137.0	136.7	-71.15	6,498.5	-515.8	928.3	664.4	263.90	3.518		
17,200.0	10,310.0	16,898.9	10,010.0	139.0	138.7	-71.15	6,598.5	-516.6	928.5	660.7	267.72	3.468		
17,300.0	10,310.0	16,998.9	10,010.0	140.9	140.6	-71.15	6,698.5	-517.4	928.6	657.0	271.53	3.420		
17,400.0	10,310.0	17,098.9	10,010.0	142.9	142.6	-71.15	6,798.5	-518.2	928.7	653.3	275.35	3.373		
17,500.0	10,310.0	17,198.9	10,010.0	144.9	144.6	-71.16	6,898.5	-519.1	928.8	649.6	279.17	3.327		
17,600.0	10,310.0	17,298.9	10,010.0	146.9	146.6	-71.16	6,998.5	-519.9	928.9	645.9	282.99	3.283		
17,700.0	10,310.0	17,398.9	10,010.0	148.9	148.6	-71.16	7,098.5	-520.7	929.1	642.2	286.82	3.239		
17,800.0	10,310.0	17,498.9	10,010.0	150.8	150.6	-71.16	7,198.5	-521.5	929.2	638.5	290.64	3.197		
17,900.0	10,310.0	17,598.9	10,010.0	152.8	152.6	-71.17	7,298.5	-522.3	929.3	634.8	294.47	3.156		
18,000.0	10,310.0	17,698.9	10,010.0	154.8	154.6	-71.17	7,398.5	-523.1	929.4	631.1	298.29	3.116		
18,100.0	10,310.0	17,798.9	10,010.0	156.8	156.5	-71.17	7,498.5	-523.9	929.5	627.4	302.12	3.077		
18,200.0	10,310.0	17,898.9	10,010.0	158.8	158.5	-71.17	7,598.5	-524.7	929.7	623.7	305.96	3.039		
18,300.0	10,310.0	17,998.9	10,010.0	160.8	160.5	-71.18	7,698.5	-525.5	929.8	620.0	309.79	3.001		
18,400.0	10,310.0	18,098.9	10,010.0	162.8	162.5	-71.18	7,798.5	-526.3	929.9	616.3	313.62	2.965		
18,427.4	10,310.0	18,125.3	10,010.0	163.3	163.1	-71.18	7,824.9	-526.5	929.9	615.3	314.66	2.955 SF		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 512H - Dagger State Com 512H - Dagger State Com 512H - 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	-90.38	-0.2	-29.9	29.9				
100.0	100.0	100.0	100.0	0.5	0.5	-90.38	-0.2	-29.9	29.9	28.9	1.06	28.221	
200.0	200.0	200.0	200.0	1.7	1.7	-90.38	-0.2	-29.9	29.9	26.5	3.42	8.740	
300.0	300.0	300.0	300.0	2.4	2.4	-90.38	-0.2	-29.9	29.9	25.1	4.82	6.204	
400.0	400.0	400.0	400.0	3.0	3.0	-90.38	-0.2	-29.9	29.9	24.0	5.91	5.065	
500.0	500.0	500.0	500.0	3.4	3.4	-90.38	-0.2	-29.9	29.9	23.1	6.83	4.381	
600.0	600.0	600.0	600.0	3.8	3.8	-90.38	-0.2	-29.9	29.9	22.3	7.65	3.912	
700.0	700.0	700.0	700.0	4.2	4.2	-90.38	-0.2	-29.9	29.9	21.5	8.39	3.565	
800.0	800.0	800.0	800.0	4.5	4.5	-90.38	-0.2	-29.9	29.9	20.8	9.08	3.294	
900.0	900.0	900.0	900.0	4.9	4.9	-90.38	-0.2	-29.9	29.9	20.2	9.73	3.075	
1,000.0	1,000.0	1,000.0	1,000.0	5.2	5.2	-90.38	-0.2	-29.9	29.9	19.6	10.34	2.894	
1,100.0	1,100.0	1,100.0	1,100.0	5.5	5.5	-90.38	-0.2	-29.9	29.9	19.0	10.92	2.739	
1,200.0	1,200.0	1,200.0	1,200.0	5.7	5.7	-90.38	-0.2	-29.9	29.9	18.4	11.48	2.607	
1,300.0	1,300.0	1,300.0	1,300.0	6.0	6.0	-90.38	-0.2	-29.9	29.9	17.9	12.01	2.490	
1,400.0	1,400.0	1,400.0	1,400.0	6.3	6.3	-90.38	-0.2	-29.9	29.9	17.4	12.53	2.388	
1,500.0	1,500.0	1,500.0	1,500.0	6.5	6.5	-90.38	-0.2	-29.9	29.9	16.9	13.03	2.296	
1,600.0	1,600.0	1,600.0	1,600.0	6.8	6.8	-90.38	-0.2	-29.9	29.9	16.4	13.52	2.214	
1,700.0	1,700.0	1,700.0	1,700.0	7.0	7.0	-90.38	-0.2	-29.9	29.9	15.9	13.99	2.139	
1,800.0	1,800.0	1,800.0	1,800.0	7.2	7.2	-90.38	-0.2	-29.9	29.9	15.5	14.45	2.071	
1,900.0	1,900.0	1,900.0	1,900.0	7.4	7.4	-90.38	-0.2	-29.9	29.9	15.0	14.90	2.008	
2,000.0	2,000.0	2,000.0	2,000.0	7.7	7.7	-90.38	-0.2	-29.9	29.9	14.6	15.34	1.951	
2,100.0	2,100.0	2,100.0	2,100.0	7.9	7.9	-90.38	-0.2	-29.9	29.9	14.2	15.77	1.897	
2,200.0	2,200.0	2,200.0	2,200.0	8.1	8.1	-90.38	-0.2	-29.9	29.9	13.7	16.19	1.848	
2,300.0	2,300.0	2,300.0	2,300.0	8.3	8.3	-90.38	-0.2	-29.9	29.9	13.3	16.61	1.802	
2,400.0	2,400.0	2,400.0	2,400.0	8.5	8.5	-90.38	-0.2	-29.9	29.9	12.9	17.02	1.759	
2,500.0	2,500.0	2,500.0	2,500.0	8.7	8.7	-90.38	-0.2	-29.9	29.9	12.5	17.42	1.718	
2,600.0	2,600.0	2,600.0	2,600.0	8.9	8.9	-90.38	-0.2	-29.9	29.9	12.1	17.81	1.680	
2,700.0	2,700.0	2,700.0	2,700.0	9.1	9.1	-90.38	-0.2	-29.9	29.9	11.7	18.20	1.644	
2,800.0	2,800.0	2,800.0	2,800.0	9.3	9.3	-90.38	-0.2	-29.9	29.9	11.3	18.59	1.610	
2,900.0	2,900.0	2,900.0	2,900.0	9.5	9.5	-90.38	-0.2	-29.9	29.9	11.0	18.96	1.578	
3,000.0	3,000.0	3,000.0	3,000.0	9.7	9.7	-90.38	-0.2	-29.9	29.9	10.6	19.34	1.547	
3,100.0	3,100.0	3,100.0	3,100.0	9.9	9.9	-90.38	-0.2	-29.9	29.9	10.2	19.71	1.518	
3,200.0	3,200.0	3,200.0	3,200.0	10.0	10.0	-90.38	-0.2	-29.9	29.9	9.8	20.07	1.491 Level 3	
3,300.0	3,300.0	3,300.0	3,300.0	10.2	10.2	-90.38	-0.2	-29.9	29.9	9.5	20.44	1.464 Level 3	
3,400.0	3,400.0	3,400.0	3,400.0	10.4	10.4	-90.38	-0.2	-29.9	29.9	9.1	20.79	1.439 Level 3	
3,500.0	3,500.0	3,500.0	3,500.0	10.6	10.6	-90.38	-0.2	-29.9	29.9	8.8	21.15	1.415 Level 3	
3,600.0	3,600.0	3,600.0	3,600.0	10.7	10.7	-90.38	-0.2	-29.9	29.9	8.4	21.50	1.392 Level 3	
3,700.0	3,700.0	3,700.0	3,700.0	10.9	10.9	-90.38	-0.2	-29.9	29.9	8.1	21.85	1.370 Level 3	
3,800.0	3,800.0	3,800.0	3,800.0	11.1	11.1	-90.38	-0.2	-29.9	29.9	7.7	22.19	1.348 Level 3	
3,900.0	3,900.0	3,900.0	3,900.0	11.3	11.3	-90.38	-0.2	-29.9	29.9	7.4	22.53	1.328 Level 3	
4,000.0	4,000.0	4,000.0	4,000.0	11.4	11.4	-90.38	-0.2	-29.9	29.9	7.1	22.87	1.308 Level 3	
4,100.0	4,100.0	4,100.0	4,100.0	11.6	11.6	-90.38	-0.2	-29.9	29.9	6.7	23.21	1.289 Level 3	
4,200.0	4,200.0	4,200.0	4,200.0	11.8	11.8	-90.38	-0.2	-29.9	29.9	6.4	23.54	1.271 Level 3	
4,300.0	4,300.0	4,300.0	4,300.0	11.9	11.9	-90.38	-0.2	-29.9	29.9	6.1	23.87	1.254 Level 3	
4,400.0	4,400.0	4,400.0	4,400.0	12.1	12.1	-90.38	-0.2	-29.9	29.9	5.7	24.20	1.237 Level 3	
4,500.0	4,500.0	4,500.0	4,500.0	12.3	12.3	-90.38	-0.2	-29.9	29.9	5.4	24.53	1.220 Level 3	
4,600.0	4,600.0	4,600.0	4,600.0	12.4	12.4	-90.38	-0.2	-29.9	29.9	5.1	24.85	1.204 Level 3	
4,700.0	4,700.0	4,700.0	4,700.0	12.6	12.6	-90.38	-0.2	-29.9	29.9	4.8	25.17	1.189 Level 3	
4,800.0	4,800.0	4,800.0	4,800.0	12.7	12.7	-90.38	-0.2	-29.9	29.9	4.4	25.49	1.174 Level 3	
4,900.0	4,900.0	4,900.0	4,900.0	12.9	12.9	-90.38	-0.2	-29.9	29.9	4.1	25.81	1.159 Level 3	
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	-90.38	-0.2	-29.9	29.9	3.8	26.12	1.145 Level 3, CC, ES, SF	
5,100.0	5,100.0	5,100.0	5,100.0	13.2	13.2	133.48	-0.2	-29.9	30.5	4.1	26.37	1.157 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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 512H - Dagger State Com 512H - Dagger State Com 512H - Prelim 1													Offset Site Error: 0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.0	5,200.0	5,200.0	5,200.0	13.2	13.4	136.83	-0.2	-29.9	32.4	5.8	26.61	1.217	Level 3
5,300.0	5,299.9	5,300.2	5,300.2	13.3	13.5	140.50	-1.0	-29.5	35.2	8.4	26.78	1.313	Level 3
5,400.0	5,399.7	5,400.6	5,400.5	13.5	13.5	143.15	-3.3	-28.2	38.3	11.4	26.95	1.423	Level 3
5,500.0	5,499.4	5,500.9	5,500.8	13.6	13.6	144.94	-7.1	-26.1	41.9	14.7	27.13	1.543	
5,600.0	5,598.9	5,601.4	5,601.1	13.8	13.7	146.05	-12.5	-23.2	45.7	18.4	27.35	1.671	
5,700.0	5,698.3	5,701.9	5,701.2	14.0	13.9	146.60	-19.5	-19.3	49.8	22.2	27.60	1.806	
5,800.0	5,797.4	5,802.4	5,801.3	14.2	14.0	146.71	-27.9	-14.7	54.2	26.3	27.87	1.945	
5,906.8	5,903.0	5,909.4	5,907.6	14.4	14.2	146.67	-38.4	-8.9	59.4	31.2	28.16	2.109	
6,000.0	5,995.1	6,002.4	6,000.1	14.7	14.3	146.96	-47.6	-3.9	64.5	36.0	28.48	2.265	
6,100.0	6,093.8	6,102.3	6,099.3	15.0	14.5	147.23	-57.6	1.6	70.0	41.1	28.86	2.425	
6,200.0	6,192.6	6,202.1	6,198.5	15.3	14.8	147.47	-67.5	7.0	75.5	46.2	29.28	2.578	
6,300.0	6,291.3	6,302.0	6,297.7	15.6	15.0	147.66	-77.4	12.5	81.0	51.3	29.73	2.724	
6,400.0	6,390.1	6,401.8	6,396.9	15.9	15.3	147.84	-87.3	18.0	86.5	56.3	30.21	2.863	
6,500.0	6,488.8	6,501.7	6,496.1	16.3	15.6	147.99	-97.3	23.4	92.0	61.3	30.72	2.995	
6,600.0	6,587.6	6,601.5	6,595.3	16.7	15.9	148.13	-107.2	28.9	97.5	66.2	31.25	3.120	
6,700.0	6,686.3	6,701.4	6,694.5	17.0	16.2	148.25	-117.1	34.3	103.0	71.2	31.81	3.238	
6,800.0	6,785.1	6,801.2	6,793.7	17.5	16.6	148.36	-127.0	39.8	108.5	76.1	32.39	3.350	
6,900.0	6,883.8	6,901.1	6,892.9	17.9	16.9	148.46	-137.0	45.2	114.0	81.0	32.99	3.456	
7,000.0	6,982.6	7,000.9	6,992.1	18.3	17.3	148.55	-146.9	50.7	119.5	85.9	33.61	3.555	
7,100.0	7,081.3	7,100.8	7,091.3	18.7	17.6	148.63	-156.8	56.1	125.0	90.7	34.25	3.649	
7,200.0	7,180.1	7,200.6	7,190.5	19.2	18.0	148.70	-166.7	61.6	130.5	95.6	34.91	3.738	
7,300.0	7,278.8	7,300.5	7,289.7	19.6	18.4	148.77	-176.7	67.0	136.0	100.4	35.59	3.821	
7,400.0	7,377.6	7,400.3	7,388.9	20.1	18.8	148.83	-186.6	72.5	141.5	105.2	36.29	3.900	
7,500.0	7,476.3	7,500.2	7,488.1	20.6	19.2	148.89	-196.5	77.9	147.0	110.0	37.00	3.973	
7,600.0	7,575.1	7,600.0	7,587.3	21.1	19.6	148.95	-206.4	83.4	152.5	114.8	37.72	4.043	
7,700.0	7,673.8	7,699.9	7,686.5	21.6	20.1	149.00	-216.3	88.8	158.0	119.5	38.46	4.108	
7,800.0	7,772.6	7,799.7	7,785.7	22.0	20.5	149.05	-226.3	94.3	163.5	124.3	39.21	4.170	
7,900.0	7,871.3	7,899.6	7,884.9	22.6	20.9	149.09	-236.2	99.7	169.0	129.0	39.98	4.228	
8,000.0	7,970.1	7,999.4	7,984.1	23.1	21.4	149.13	-246.1	105.2	174.5	133.8	40.75	4.282	
8,100.0	8,068.8	8,099.3	8,083.4	23.6	21.8	149.17	-256.0	110.7	180.0	138.5	41.54	4.333	
8,200.0	8,167.6	8,199.1	8,182.6	24.1	22.3	149.21	-266.0	116.1	185.5	143.2	42.34	4.382	
8,300.0	8,266.3	8,299.0	8,281.8	24.6	22.8	149.24	-275.9	121.6	191.0	147.9	43.15	4.427	
8,400.0	8,365.1	8,398.8	8,381.0	25.2	23.2	149.27	-285.8	127.0	196.5	152.6	43.97	4.470	
8,500.0	8,463.8	8,498.7	8,480.2	25.7	23.7	149.30	-295.7	132.5	202.0	157.2	44.79	4.510	
8,600.0	8,562.6	8,598.5	8,579.4	26.2	24.2	149.33	-305.7	137.9	207.5	161.9	45.63	4.549	
8,700.0	8,661.3	8,698.3	8,678.6	26.8	24.7	149.36	-315.6	143.4	213.0	166.6	46.47	4.585	
8,800.0	8,760.1	8,798.2	8,777.8	27.3	25.2	149.39	-325.5	148.8	218.5	171.2	47.32	4.618	
8,837.4	8,797.0	8,835.6	8,814.9	27.5	25.3	149.40	-329.2	150.9	220.6	173.0	47.62	4.632	
8,900.0	8,858.9	8,898.1	8,877.0	27.8	25.6	149.38	-335.4	154.3	223.7	175.6	48.13	4.649	
9,000.0	8,957.9	8,998.0	8,976.3	28.4	26.1	149.18	-345.4	159.7	227.6	178.7	48.91	4.653	
9,100.0	9,057.2	9,097.9	9,075.6	28.9	26.6	148.74	-355.3	165.2	229.9	180.3	49.61	4.634	
9,200.0	9,156.6	9,197.9	9,174.9	29.4	27.1	148.08	-365.2	170.7	230.7	180.5	50.23	4.594	
9,300.0	9,256.3	9,297.8	9,274.2	29.9	27.6	147.19	-375.2	176.1	230.2	179.4	50.75	4.535	
9,400.0	9,356.0	9,397.7	9,373.4	30.3	28.1	146.04	-385.1	181.6	228.2	177.0	51.15	4.461	
9,500.0	9,455.9	9,497.5	9,472.6	30.8	28.7	144.61	-395.0	187.0	224.9	173.5	51.41	4.374	
9,600.0	9,555.8	9,597.2	9,571.6	31.2	29.2	142.86	-404.9	192.5	220.3	168.8	51.50	4.278	
9,700.0	9,655.8	9,696.7	9,670.5	31.5	29.7	140.74	-414.8	197.9	214.6	163.2	51.37	4.178	
9,744.2	9,700.0	9,740.6	9,714.1	31.6	29.9	-82.98	-419.2	200.3	211.8	160.6	51.18	4.138	
9,800.0	9,755.8	9,795.7	9,768.8	31.6	30.2	-84.37	-424.6	203.3	208.1	157.3	50.84	4.093	
9,876.7	9,832.5	9,870.5	9,843.2	31.6	30.5	-86.18	-431.4	207.0	203.7	153.3	50.41	4.041	
9,900.0	9,855.8	9,893.2	9,865.8	31.6	30.7	-86.60	-433.3	208.1	202.5	152.3	50.21	4.033	
9,925.0	9,880.7	9,917.4	9,889.9	31.5	30.8	-87.81	-435.3	209.1	201.2	151.3	49.87	4.035	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 512H - Dagger State Com 512H - Dagger State Com 512H - 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	
9,950.0	9,905.5	9,941.4	9,913.9	31.5	30.9	-89.33	-437.1	210.1	200.0	150.6	49.39	4.050	
9,975.0	9,930.1	9,965.2	9,937.6	31.4	31.0	-91.16	-438.8	211.1	199.0	150.3	48.77	4.081	
10,000.0	9,954.4	9,988.7	9,961.0	31.3	31.1	-93.26	-440.4	212.0	198.4	150.3	48.03	4.130	
10,023.6	9,977.1	10,010.5	9,982.8	31.2	31.2	-95.45	-441.9	212.8	198.1	150.9	47.23	4.195	
10,025.0	9,978.4	10,011.9	9,984.1	31.2	31.2	-95.59	-442.0	212.8	198.1	150.9	47.18	4.199	
10,050.0	10,002.0	10,034.6	10,006.8	31.1	31.3	-98.10	-443.4	213.6	198.5	152.2	46.24	4.292	
10,075.0	10,025.2	10,056.9	10,029.0	31.0	31.4	-100.75	-444.7	214.3	199.6	154.3	45.26	4.409	
10,100.0	10,047.8	10,078.6	10,050.7	30.9	31.5	-103.45	-445.9	214.9	201.6	157.3	44.29	4.552	
10,125.0	10,069.8	10,100.0	10,072.0	30.8	31.6	-106.19	-447.0	215.6	204.7	161.3	43.37	4.719	
10,150.0	10,091.1	10,120.4	10,092.4	30.7	31.7	-108.81	-448.0	216.1	208.9	166.4	42.56	4.909	
10,175.0	10,111.8	10,140.3	10,112.3	30.6	31.8	-111.33	-448.9	216.6	214.5	172.6	41.91	5.118	
10,200.0	10,131.7	10,159.5	10,131.5	30.6	31.9	-113.67	-449.7	217.0	221.5	180.0	41.47	5.341	
10,225.0	10,150.7	10,178.0	10,149.9	30.5	32.0	-115.80	-450.4	217.4	229.9	188.7	41.24	5.575	
10,250.0	10,168.9	10,195.6	10,167.5	30.4	32.1	-117.66	-451.1	217.8	239.8	198.6	41.23	5.817	
10,275.0	10,186.2	10,212.4	10,184.3	30.3	32.1	-119.24	-451.6	218.1	251.2	209.8	41.39	6.068	
10,300.0	10,202.5	10,228.2	10,200.1	30.3	32.2	-120.50	-452.1	218.4	264.0	222.2	41.71	6.328	
10,325.0	10,217.8	10,243.1	10,215.0	30.2	32.2	-121.41	-452.6	218.6	278.1	235.9	42.14	6.598	
10,350.0	10,232.0	10,257.0	10,228.9	30.1	32.3	-121.96	-453.0	218.8	293.5	250.8	42.65	6.881	
10,375.0	10,245.2	10,269.9	10,241.7	30.1	32.3	-122.12	-453.3	219.0	310.1	266.9	43.21	7.177	
10,400.0	10,257.2	10,281.6	10,253.5	30.1	32.4	-121.84	-453.6	219.2	327.8	284.0	43.78	7.487	
10,425.0	10,268.0	10,292.3	10,264.1	30.0	32.4	-121.09	-453.8	219.3	346.5	302.1	44.35	7.812	
10,450.0	10,277.7	10,301.7	10,273.6	30.0	32.5	-119.81	-454.0	219.4	366.0	321.1	44.91	8.151	
10,475.0	10,286.1	10,310.0	10,281.9	30.0	32.5	-117.92	-454.1	219.5	386.4	341.0	45.44	8.504	
10,500.0	10,293.3	10,317.0	10,288.9	30.0	32.5	-115.35	-454.3	219.6	407.5	361.5	45.94	8.870	
10,525.0	10,299.2	10,322.8	10,294.6	30.0	32.5	-111.98	-454.4	219.6	429.2	382.8	46.41	9.247	
10,550.0	10,303.8	10,327.2	10,299.1	30.1	32.5	-107.70	-454.4	219.7	451.4	404.5	46.85	9.634	
10,575.0	10,307.2	10,330.4	10,302.2	30.1	32.6	-102.44	-454.5	219.7	474.0	426.7	47.26	10.028	
10,600.0	10,309.3	10,332.1	10,304.0	30.2	32.6	-96.13	-454.5	219.7	496.9	449.3	47.64	10.430	
10,626.7	10,310.0	10,332.5	10,304.4	30.2	32.6	-88.31	-454.5	219.7	521.7	473.7	48.02	10.864	
10,700.0	10,310.0	10,331.3	10,303.2	30.5	32.6	-87.96	-454.5	219.7	590.5	541.6	48.91	12.074	
10,800.0	10,310.0	11,496.2	10,990.0	30.8	32.2	-176.59	212.1	365.0	681.2	618.2	63.06	10.803	
10,900.0	10,310.0	11,594.0	10,990.0	31.3	32.7	-177.78	308.9	378.5	680.5	616.9	63.63	10.695	
11,000.0	10,310.0	11,692.6	10,990.0	31.8	33.2	-178.70	407.1	388.7	680.2	615.9	64.28	10.581	
11,100.0	10,310.0	11,791.9	10,990.0	32.5	33.9	-179.33	506.1	395.6	680.0	615.0	65.04	10.457	
11,200.0	10,310.0	11,891.6	10,990.0	33.2	34.6	-179.68	605.8	399.0	680.0	614.1	65.90	10.319	
11,300.0	10,310.0	11,991.6	10,990.0	34.0	35.3	-179.75	705.7	399.2	680.0	613.1	66.88	10.168	
11,400.0	10,310.0	12,091.6	10,990.0	35.0	36.0	-179.75	805.7	398.6	680.0	612.1	67.93	10.011	
11,500.0	10,310.0	12,191.6	10,990.0	36.0	36.9	-179.76	905.7	397.9	680.0	611.0	69.03	9.850	
11,600.0	10,310.0	12,291.6	10,990.0	37.1	37.8	-179.76	1,005.7	397.3	680.0	609.8	70.19	9.688	
11,700.0	10,310.0	12,391.6	10,990.0	38.2	38.9	-179.76	1,105.7	396.6	680.0	608.6	71.40	9.524	
11,800.0	10,310.0	12,491.6	10,990.0	39.5	40.0	-179.77	1,205.7	396.0	680.0	607.4	72.65	9.360	
11,900.0	10,310.0	12,591.6	10,990.0	40.8	41.2	-179.77	1,305.7	395.4	680.0	606.1	73.95	9.196	
12,000.0	10,310.0	12,691.6	10,990.0	42.2	42.5	-179.77	1,405.7	394.7	680.0	604.7	75.29	9.032	
12,100.0	10,310.0	12,791.6	10,990.0	43.7	43.9	-179.78	1,505.7	394.1	680.0	603.3	76.66	8.870	
12,200.0	10,310.0	12,891.6	10,990.0	45.2	45.3	-179.78	1,605.7	393.4	680.0	601.9	78.08	8.709	
12,300.0	10,310.0	12,991.6	10,990.0	46.7	46.8	-179.79	1,705.7	392.8	680.0	600.5	79.53	8.551	
12,400.0	10,310.0	13,091.6	10,990.0	48.3	48.3	-179.79	1,805.7	392.2	680.0	599.0	81.01	8.394	
12,500.0	10,310.0	13,191.6	10,990.0	49.9	49.9	-179.79	1,905.7	391.5	680.0	597.5	82.52	8.240	
12,600.0	10,310.0	13,291.6	10,990.0	51.6	51.5	-179.80	2,005.7	390.9	680.0	595.9	84.06	8.089	
12,700.0	10,310.0	13,391.6	10,990.0	53.3	53.1	-179.80	2,105.7	390.2	680.0	594.4	85.63	7.941	
12,800.0	10,310.0	13,491.6	10,990.0	55.0	54.8	-179.80	2,205.7	389.6	680.0	592.8	87.23	7.795	
12,900.0	10,310.0	13,591.6	10,990.0	56.7	56.5	-179.81	2,305.7	389.0	680.0	591.2	88.85	7.653	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 512H - Dagger State Com 512H - Dagger State Com 512H - 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	
13,000.0	10,310.0	13,691.6	10,990.0	58.5	58.2	-179.81	2,405.7	388.3	680.0	589.5	90.50	7.514	
13,100.0	10,310.0	13,791.6	10,990.0	60.2	60.0	-179.81	2,505.7	387.7	680.0	587.8	92.17	7.378	
13,200.0	10,310.0	13,891.6	10,990.0	62.0	61.8	-179.82	2,605.7	387.1	680.0	586.1	93.86	7.245	
13,300.0	10,310.0	13,991.6	10,990.0	63.8	63.5	-179.82	2,705.7	386.4	680.0	584.4	95.57	7.115	
13,400.0	10,310.0	14,091.6	10,990.0	65.6	65.3	-179.82	2,805.7	385.8	680.0	582.7	97.30	6.989	
13,500.0	10,310.0	14,191.6	10,990.0	67.4	67.2	-179.83	2,905.7	385.1	680.0	581.0	99.04	6.866	
13,600.0	10,310.0	14,291.6	10,990.0	69.3	69.0	-179.83	3,005.7	384.5	680.0	579.2	100.81	6.745	
13,700.0	10,310.0	14,391.6	10,990.0	71.1	70.8	-179.83	3,105.6	383.9	680.0	577.4	102.59	6.628	
13,800.0	10,310.0	14,491.6	10,990.0	73.0	72.7	-179.84	3,205.6	383.2	680.0	575.6	104.39	6.514	
13,900.0	10,310.0	14,591.6	10,990.0	74.9	74.5	-179.84	3,305.6	382.6	680.0	573.8	106.20	6.403	
14,000.0	10,310.0	14,691.6	10,990.0	76.7	76.4	-179.84	3,405.6	381.9	680.0	572.0	108.02	6.295	
14,100.0	10,310.0	14,791.6	10,990.0	78.6	78.3	-179.85	3,505.6	381.3	680.0	570.1	109.86	6.190	
14,200.0	10,310.0	14,891.6	10,990.0	80.5	80.2	-179.85	3,605.6	380.7	680.0	568.3	111.71	6.087	
14,300.0	10,310.0	14,991.6	10,990.0	82.4	82.1	-179.86	3,705.6	380.0	680.0	566.4	113.57	5.987	
14,400.0	10,310.0	15,091.6	10,990.0	84.3	84.0	-179.86	3,805.6	379.4	680.0	564.6	115.45	5.890	
14,500.0	10,310.0	15,191.6	10,990.0	86.2	85.9	-179.86	3,905.6	378.7	680.0	562.7	117.33	5.796	
14,600.0	10,310.0	15,291.6	10,990.0	88.1	87.8	-179.87	4,005.6	378.1	680.0	560.8	119.23	5.703	
14,700.0	10,310.0	15,391.6	10,990.0	90.1	89.7	-179.87	4,105.6	377.5	680.0	558.9	121.13	5.614	
14,800.0	10,310.0	15,491.6	10,990.0	92.0	91.6	-179.87	4,205.6	376.8	680.0	557.0	123.05	5.526	
14,900.0	10,310.0	15,591.6	10,990.0	93.9	93.5	-179.88	4,305.6	376.2	680.0	555.0	124.97	5.441	
15,000.0	10,310.0	15,691.6	10,990.0	95.8	95.5	-179.88	4,405.6	375.5	680.0	553.1	126.90	5.358	
15,100.0	10,310.0	15,791.6	10,990.0	97.8	97.4	-179.88	4,505.6	374.9	680.0	551.2	128.84	5.278	
15,200.0	10,310.0	15,891.6	10,990.0	99.7	99.3	-179.89	4,605.6	374.3	680.0	549.2	130.79	5.199	
15,300.0	10,310.0	15,991.6	10,990.0	101.6	101.3	-179.89	4,705.6	373.6	680.0	547.3	132.75	5.123	
15,400.0	10,310.0	16,091.6	10,990.0	103.6	103.2	-179.89	4,805.6	373.0	680.0	545.3	134.71	5.048	
15,500.0	10,310.0	16,191.6	10,990.0	105.5	105.2	-179.90	4,905.6	372.4	680.0	543.3	136.68	4.975	
15,600.0	10,310.0	16,291.6	10,990.0	107.5	107.1	-179.90	5,005.6	371.7	680.0	541.3	138.65	4.904	
15,700.0	10,310.0	16,391.6	10,990.0	109.4	109.1	-179.90	5,105.6	371.1	680.0	539.4	140.64	4.835	
15,800.0	10,310.0	16,491.6	10,990.0	111.4	111.0	-179.91	5,205.6	370.4	680.0	537.4	142.62	4.768	
15,900.0	10,310.0	16,591.6	10,990.0	113.4	113.0	-179.91	5,305.6	369.8	680.0	535.4	144.62	4.702	
16,000.0	10,310.0	16,691.6	10,990.0	115.3	114.9	-179.91	5,405.6	369.2	680.0	533.4	146.62	4.638	
16,100.0	10,310.0	16,791.6	10,990.0	117.3	116.9	-179.92	5,505.6	368.5	680.0	531.4	148.62	4.575	
16,200.0	10,310.0	16,891.6	10,990.0	119.2	118.9	-179.92	5,605.6	367.9	680.0	529.4	150.63	4.514	
16,300.0	10,310.0	16,991.6	10,990.0	121.2	120.8	-179.93	5,705.6	367.2	680.0	527.4	152.65	4.455	
16,400.0	10,310.0	17,091.6	10,990.0	123.2	122.8	-179.93	5,805.6	366.6	680.0	525.3	154.67	4.397	
16,500.0	10,310.0	17,191.6	10,990.0	125.1	124.8	-179.93	5,905.6	366.0	680.0	523.3	156.69	4.340	
16,600.0	10,310.0	17,291.6	10,990.0	127.1	126.7	-179.94	6,005.6	365.3	680.0	521.3	158.72	4.284	
16,700.0	10,310.0	17,391.6	10,990.0	129.1	128.7	-179.94	6,105.6	364.7	680.0	519.2	160.75	4.230	
16,800.0	10,310.0	17,491.6	10,990.0	131.0	130.7	-179.94	6,205.6	364.0	680.0	517.2	162.79	4.177	
16,900.0	10,310.0	17,591.6	10,990.0	133.0	132.7	-179.95	6,305.6	363.4	680.0	515.2	164.83	4.126	
17,000.0	10,310.0	17,691.6	10,990.0	135.0	134.6	-179.95	6,405.6	362.8	680.0	513.1	166.87	4.075	
17,100.0	10,310.0	17,791.6	10,990.0	137.0	136.6	-179.95	6,505.6	362.1	680.0	511.1	168.92	4.026	
17,200.0	10,310.0	17,891.6	10,990.0	139.0	138.6	-179.96	6,605.6	361.5	680.0	509.0	170.97	3.977	
17,300.0	10,310.0	17,991.6	10,990.0	140.9	140.6	-179.96	6,705.6	360.8	680.0	507.0	173.02	3.930	
17,400.0	10,310.0	18,091.6	10,990.0	142.9	142.5	-179.96	6,805.6	360.2	680.0	504.9	175.08	3.884	
17,500.0	10,310.0	18,191.6	10,990.0	144.9	144.5	-179.97	6,905.6	359.6	680.0	502.9	177.14	3.839	
17,600.0	10,310.0	18,291.6	10,990.0	146.9	146.5	-179.97	7,005.6	358.9	680.0	500.8	179.21	3.794	
17,700.0	10,310.0	18,391.6	10,990.0	148.9	148.5	-179.97	7,105.6	358.3	680.0	498.7	181.27	3.751	
17,800.0	10,310.0	18,491.6	10,990.0	150.8	150.5	-179.98	7,205.6	357.6	680.0	496.7	183.34	3.709	
17,900.0	10,310.0	18,591.6	10,990.0	152.8	152.5	-179.98	7,305.6	357.0	680.0	494.6	185.42	3.667	
18,000.0	10,310.0	18,691.6	10,990.0	154.8	154.4	-179.99	7,405.6	356.4	680.0	492.5	187.49	3.627	
18,100.0	10,310.0	18,791.6	10,990.0	156.8	156.4	-179.99	7,505.6	355.7	680.0	490.4	189.57	3.587	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 512H - Dagger State Com 512H - Dagger State Com 512H - Prelim 1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+HRGM													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
18,200.0	10,310.0	18,891.6	10,990.0	158.8	158.4	-179.99	7,605.6	355.1	680.0	488.4	191.65	3.548		
18,300.0	10,310.0	18,991.6	10,990.0	160.8	160.4	-180.00	7,705.6	354.5	680.0	486.3	193.73	3.510		
18,400.0	10,310.0	19,091.6	10,990.0	162.8	162.4	-180.00	7,805.6	353.8	680.0	484.2	195.81	3.473		
18,427.4	10,310.0	19,119.0	10,990.0	163.3	162.9	180.00	7,832.9	353.6	680.0	483.6	196.38	3.463		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 514H - Dagger State Com 514H - Dagger State Com 514H - 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	
0.0	0.0	0.0	0.0	0.0	0.0	-90.04	0.0	-59.8	59.8				
100.0	100.0	100.0	100.0	0.5	0.5	-90.04	0.0	-59.8	59.8	58.8	1.06	56.443	
200.0	200.0	200.0	200.0	1.7	1.7	-90.04	0.0	-59.8	59.8	56.4	3.42	17.481	
300.0	300.0	300.0	300.0	2.4	2.4	-90.04	0.0	-59.8	59.8	55.0	4.82	12.409	
400.0	400.0	400.0	400.0	3.0	3.0	-90.04	0.0	-59.8	59.8	53.9	5.91	10.130	
500.0	500.0	500.0	500.0	3.4	3.4	-90.04	0.0	-59.8	59.8	53.0	6.83	8.762	
600.0	600.0	600.0	600.0	3.8	3.8	-90.04	0.0	-59.8	59.8	52.2	7.65	7.824	
700.0	700.0	700.0	700.0	4.2	4.2	-90.04	0.0	-59.8	59.8	51.5	8.39	7.130	
800.0	800.0	800.0	800.0	4.5	4.5	-90.04	0.0	-59.8	59.8	50.8	9.08	6.588	
900.0	900.0	900.0	900.0	4.9	4.9	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-59.8	59.8	46.3	13.52	4.428	
1,700.0	1,700.0	1,700.0	1,700.0	7.0	7.0	-90.04	0.0	-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	-90.04	0.0	-59.8	59.8	45.4	14.45	4.142	
1,900.0	1,900.0	1,900.0	1,900.0	7.4	7.4	-90.04	0.0	-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	-90.04	0.0	-59.8	59.8	44.5	15.34	3.902	
2,100.0	2,100.0	2,100.0	2,100.0	7.9	7.9	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-59.8	59.8	43.2	16.61	3.604	
2,400.0	2,400.0	2,400.0	2,400.0	8.5	8.5	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-59.8	59.8	40.1	19.71	3.037	
3,200.0	3,200.0	3,200.0	3,200.0	10.0	10.0	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	-90.04	0.0	-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	133.22	0.0	-59.8	60.4	34.1	26.37	2.292	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 514H - Dagger State Com 514H - Dagger State Com 514H - 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)			
5,200.0	5,200.0	5,200.0	5,200.0	13.2	13.4	134.97	0.0	-59.8	62.3	35.7	26.61	2.340	
5,300.0	5,299.9	5,299.5	5,299.5	13.3	13.5	136.92	-0.8	-60.2	65.7	38.9	26.78	2.454	
5,400.0	5,399.7	5,398.9	5,398.9	13.5	13.5	138.27	-3.2	-61.2	71.1	44.1	26.93	2.639	
5,500.0	5,499.4	5,498.3	5,498.1	13.6	13.6	139.03	-7.1	-63.0	78.3	51.2	27.11	2.888	
5,600.0	5,598.9	5,597.4	5,597.1	13.8	13.7	139.30	-12.6	-65.4	87.4	60.1	27.30	3.200	
5,700.0	5,698.3	5,696.4	5,695.8	14.0	13.8	139.19	-19.7	-68.6	98.2	70.7	27.50	3.572	
5,800.0	5,797.4	5,795.0	5,794.0	14.2	14.0	138.82	-28.2	-72.4	111.0	83.2	27.73	4.001	
5,906.8	5,903.0	5,900.0	5,898.3	14.4	14.2	138.25	-39.1	-77.2	126.5	98.5	27.99	4.520	
6,000.0	5,995.1	5,992.1	5,989.7	14.7	14.3	137.88	-49.2	-81.7	141.0	112.8	28.23	4.995	
6,100.0	6,093.8	6,090.9	6,087.8	15.0	14.5	137.56	-60.1	-86.5	156.5	128.0	28.52	5.488	
6,200.0	6,192.6	6,189.7	6,185.9	15.3	14.8	137.29	-71.0	-91.4	172.0	143.2	28.84	5.966	
6,300.0	6,291.3	6,288.5	6,283.9	15.6	15.0	137.07	-81.8	-96.2	187.6	158.4	29.18	6.428	
6,400.0	6,390.1	6,387.3	6,382.0	15.9	15.3	136.89	-92.7	-101.0	203.1	173.6	29.54	6.876	
6,500.0	6,488.8	6,486.1	6,480.0	16.3	15.6	136.73	-103.6	-105.9	218.6	188.7	29.92	7.308	
6,600.0	6,587.6	6,584.8	6,578.1	16.7	15.9	136.59	-114.5	-110.7	234.2	203.9	30.31	7.725	
6,700.0	6,686.3	6,683.6	6,676.2	17.0	16.2	136.47	-125.3	-115.5	249.7	219.0	30.73	8.127	
6,800.0	6,785.1	6,782.4	6,774.2	17.5	16.5	136.36	-136.2	-120.4	265.3	234.1	31.16	8.513	
6,900.0	6,883.8	6,881.2	6,872.3	17.9	16.9	136.27	-147.1	-125.2	280.8	249.2	31.61	8.884	
7,000.0	6,982.6	6,980.0	6,970.4	18.3	17.2	136.18	-158.0	-130.0	296.3	264.3	32.07	9.240	
7,100.0	7,081.3	7,078.8	7,068.4	18.7	17.6	136.10	-168.9	-134.9	311.9	279.3	32.55	9.582	
7,200.0	7,180.1	7,177.5	7,166.5	19.2	18.0	136.04	-179.7	-139.7	327.4	294.4	33.04	9.910	
7,300.0	7,278.8	7,276.3	7,264.6	19.6	18.4	135.97	-190.6	-144.5	342.9	309.4	33.54	10.224	
7,400.0	7,377.6	7,375.1	7,362.6	20.1	18.8	135.91	-201.5	-149.4	358.5	324.4	34.06	10.525	
7,500.0	7,476.3	7,473.9	7,460.7	20.6	19.2	135.86	-212.4	-154.2	374.0	339.4	34.59	10.813	
7,600.0	7,575.1	7,572.7	7,558.8	21.1	19.6	135.81	-223.2	-159.0	389.6	354.4	35.13	11.088	
7,700.0	7,673.8	7,671.5	7,656.8	21.6	20.0	135.77	-234.1	-163.9	405.1	369.4	35.69	11.352	
7,800.0	7,772.6	7,770.3	7,754.9	22.0	20.5	135.73	-245.0	-168.7	420.7	384.4	36.25	11.604	
7,900.0	7,871.3	7,869.0	7,853.0	22.6	20.9	135.69	-255.9	-173.5	436.2	399.4	36.82	11.846	
8,000.0	7,970.1	7,967.8	7,951.0	23.1	21.4	135.65	-266.7	-178.4	451.7	414.3	37.41	12.077	
8,100.0	8,068.8	8,066.6	8,049.1	23.6	21.8	135.62	-277.6	-183.2	467.3	429.3	38.00	12.297	
8,200.0	8,167.6	8,165.4	8,147.1	24.1	22.3	135.59	-288.5	-188.1	482.8	444.2	38.60	12.508	
8,300.0	8,266.3	8,264.2	8,245.2	24.6	22.7	135.56	-299.4	-192.9	498.4	459.2	39.21	12.710	
8,400.0	8,365.1	8,363.0	8,343.3	25.2	23.2	135.53	-310.3	-197.7	513.9	474.1	39.83	12.903	
8,500.0	8,463.8	8,461.7	8,441.3	25.7	23.7	135.50	-321.1	-202.6	529.5	489.0	40.45	13.088	
8,600.0	8,562.6	8,560.5	8,539.4	26.2	24.2	135.48	-332.0	-207.4	545.0	503.9	41.09	13.265	
8,700.0	8,661.3	8,659.3	8,637.5	26.8	24.6	135.46	-342.9	-212.2	560.5	518.8	41.73	13.434	
8,800.0	8,760.1	8,758.1	8,735.5	27.3	25.1	135.43	-353.8	-217.1	576.1	533.7	42.37	13.596	
8,837.4	8,797.0	8,795.1	8,772.2	27.5	25.3	135.43	-357.8	-218.9	581.9	539.3	42.60	13.660	
8,900.0	8,858.9	8,856.9	8,833.6	27.8	25.6	135.46	-364.6	-221.9	591.4	548.4	42.99	13.757	
9,000.0	8,957.9	8,955.9	8,931.9	28.4	26.1	135.41	-375.5	-226.7	605.5	561.9	43.62	13.882	
9,100.0	9,057.2	9,055.0	9,030.3	28.9	26.6	135.24	-386.5	-231.6	618.5	574.2	44.24	13.980	
9,200.0	9,156.6	9,154.3	9,128.8	29.4	27.1	134.96	-397.4	-236.4	630.2	585.4	44.85	14.053	
9,300.0	9,256.3	9,253.6	9,227.4	29.9	27.6	134.58	-408.3	-241.3	640.7	595.3	45.42	14.106	
9,400.0	9,356.0	9,356.0	9,329.1	30.3	28.1	134.11	-419.2	-246.1	650.0	604.0	45.98	14.137	
9,500.0	9,455.9	9,460.1	9,432.7	30.8	28.6	133.66	-428.7	-250.3	657.3	610.8	46.51	14.133	
9,600.0	9,555.8	9,564.6	9,536.9	31.2	29.1	133.24	-436.4	-253.8	662.9	615.9	47.01	14.100	
9,700.0	9,655.8	9,669.3	9,641.3	31.5	29.6	132.86	-442.4	-256.5	666.5	619.1	47.45	14.047	
9,744.2	9,700.0	9,715.6	9,687.6	31.6	29.8	-89.96	-444.5	-257.4	667.5	619.9	47.58	14.030	
9,800.0	9,755.8	9,774.1	9,746.1	31.6	30.0	-90.15	-446.7	-258.4	668.4	620.7	47.70	14.013	
9,876.7	9,832.5	9,854.7	9,826.6	31.6	30.3	-90.33	-448.8	-259.3	669.3	621.5	47.87	13.983	
9,900.0	9,855.8	9,879.1	9,851.0	31.6	30.4	-90.00	-449.3	-259.5	669.5	621.6	47.91	13.975	
9,925.0	9,880.7	9,905.3	9,877.2	31.5	30.5	-90.18	-449.6	-259.7	669.7	621.7	47.94	13.969	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 514H - Dagger State Com 514H - Dagger State Com 514H - 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
9,950.0	9,905.5	9,931.3	9,903.2	31.5	30.6	-90.47	-449.9	-259.8	669.8	621.9	47.95	13.969
9,975.0	9,930.1	9,957.2	9,929.1	31.4	30.6	-90.86	-450.0	-259.8	669.9	622.0	47.95	13.970
10,000.0	9,954.4	9,982.5	9,954.4	31.3	30.6	-91.35	-450.0	-259.8	670.1	622.1	47.95	13.974
10,025.0	9,978.4	10,006.5	9,978.4	31.2	30.6	-91.90	-450.0	-259.8	670.3	622.3	47.93	13.984
10,050.0	10,002.0	10,030.1	10,002.0	31.1	30.7	-92.52	-450.0	-259.8	670.6	622.7	47.92	13.995
10,075.0	10,025.2	10,053.3	10,025.2	31.0	30.7	-93.21	-450.0	-259.8	671.1	623.2	47.91	14.009
10,100.0	10,047.8	10,075.9	10,047.8	30.9	30.7	-93.94	-450.0	-259.8	671.9	624.0	47.89	14.028
10,125.0	10,069.8	10,097.9	10,069.8	30.8	30.7	-94.71	-450.0	-259.8	672.9	625.0	47.88	14.053
10,150.0	10,091.1	10,116.3	10,088.2	30.7	30.7	-95.34	-449.8	-259.9	674.3	626.4	47.86	14.087
10,175.0	10,111.8	10,134.5	10,106.4	30.6	30.6	-95.91	-448.9	-260.1	676.1	628.3	47.85	14.130
10,200.0	10,131.7	10,152.9	10,124.7	30.6	30.6	-96.46	-447.3	-260.6	678.5	630.6	47.84	14.183
10,225.0	10,150.7	10,171.6	10,143.3	30.5	30.5	-96.98	-444.9	-261.2	681.3	633.5	47.82	14.245
10,250.0	10,168.9	10,190.6	10,162.0	30.4	30.5	-97.46	-441.9	-262.0	684.6	636.8	47.81	14.318
10,275.0	10,186.2	10,209.9	10,180.9	30.3	30.4	-97.91	-438.0	-263.0	688.4	640.6	47.80	14.400
10,300.0	10,202.5	10,229.6	10,199.9	30.3	30.3	-98.33	-433.3	-264.2	692.7	644.9	47.79	14.493
10,325.0	10,217.8	10,249.6	10,219.1	30.2	30.3	-98.72	-427.7	-265.6	697.4	649.6	47.78	14.595
10,350.0	10,232.0	10,270.1	10,238.4	30.1	30.2	-99.07	-421.2	-267.3	702.6	654.9	47.78	14.707
10,375.0	10,245.2	10,291.0	10,257.9	30.1	30.1	-99.39	-413.8	-269.2	708.3	660.6	47.77	14.828
10,400.0	10,257.2	10,312.4	10,277.5	30.1	30.0	-99.69	-405.3	-271.4	714.5	666.7	47.77	14.958
10,425.0	10,268.0	10,334.5	10,297.1	30.0	29.9	-99.95	-395.7	-273.9	721.0	673.3	47.77	15.096
10,450.0	10,277.7	10,357.2	10,316.9	30.0	29.8	-100.19	-384.9	-276.7	728.0	680.3	47.77	15.241
10,475.0	10,286.1	10,380.6	10,336.7	30.0	29.7	-100.41	-372.8	-279.8	735.4	687.6	47.78	15.393
10,500.0	10,293.3	10,404.8	10,356.6	30.0	29.7	-100.61	-359.3	-283.2	743.2	695.4	47.79	15.550
10,525.0	10,299.2	10,430.0	10,376.4	30.0	29.6	-100.79	-344.3	-287.1	751.3	703.5	47.82	15.711
10,550.0	10,303.8	10,456.2	10,396.2	30.1	29.5	-100.97	-327.6	-291.4	759.7	711.9	47.86	15.875
10,575.0	10,307.2	10,483.7	10,415.8	30.1	29.4	-101.13	-309.1	-296.2	768.4	720.5	47.91	16.040
10,600.0	10,309.3	10,512.5	10,435.2	30.2	29.3	-101.30	-288.4	-301.5	777.4	729.4	47.98	16.203
10,626.7	10,310.0	10,545.0	10,455.5	30.2	29.2	-101.48	-263.8	-307.9	787.2	739.1	48.08	16.373
10,700.0	10,310.0	10,650.6	10,508.7	30.5	29.1	-105.06	-175.8	-330.6	813.4	764.9	48.53	16.762
10,800.0	10,310.0	10,833.1	10,549.7	30.8	29.3	-107.05	-4.7	-374.7	843.0	793.3	49.72	16.956
10,900.0	10,310.0	10,973.8	10,550.0	31.3	29.8	-106.44	132.2	-407.4	864.6	813.5	51.16	16.899
11,000.0	10,310.0	11,113.0	10,550.0	31.8	30.5	-105.98	268.9	-433.2	881.8	828.6	53.22	16.569
11,100.0	10,310.0	11,254.3	10,550.0	32.5	31.5	-105.65	408.9	-452.6	894.3	838.6	55.77	16.035
11,200.0	10,310.0	11,397.2	10,550.0	33.2	32.6	-105.45	551.2	-465.1	902.1	843.5	58.64	15.384
11,300.0	10,310.0	11,540.8	10,550.0	34.0	33.8	-105.38	694.7	-470.5	905.1	843.4	61.72	14.664
11,400.0	10,310.0	11,645.0	10,550.0	35.0	34.7	-105.37	798.9	-471.3	905.2	841.0	64.19	14.103
11,500.0	10,310.0	11,745.0	10,550.0	36.0	35.7	-105.37	898.9	-472.1	905.3	838.6	66.72	13.569
11,600.0	10,310.0	11,845.0	10,550.0	37.1	36.8	-105.37	998.8	-472.9	905.4	836.0	69.39	13.048
11,700.0	10,310.0	11,945.0	10,550.0	38.2	38.0	-105.37	1,098.8	-473.7	905.5	833.3	72.18	12.546
11,800.0	10,310.0	12,045.0	10,550.0	39.5	39.3	-105.37	1,198.8	-474.5	905.6	830.6	75.07	12.064
11,900.0	10,310.0	12,145.0	10,550.0	40.8	40.6	-105.37	1,298.8	-475.2	905.7	827.7	78.05	11.605
12,000.0	10,310.0	12,245.0	10,550.0	42.2	42.0	-105.36	1,398.8	-476.0	905.8	824.7	81.11	11.168
12,100.0	10,310.0	12,345.0	10,550.0	43.7	43.5	-105.36	1,498.8	-476.8	905.9	821.7	84.24	10.754
12,200.0	10,310.0	12,445.0	10,550.0	45.2	45.0	-105.36	1,598.8	-477.6	906.0	818.6	87.44	10.362
12,300.0	10,310.0	12,544.9	10,550.0	46.7	46.6	-105.36	1,698.8	-478.4	906.1	815.4	90.70	9.991
12,400.0	10,310.0	12,644.9	10,550.0	48.3	48.2	-105.36	1,798.8	-479.2	906.2	812.2	94.01	9.640
12,500.0	10,310.0	12,744.9	10,550.0	49.9	49.9	-105.36	1,898.8	-480.0	906.3	809.0	97.36	9.309
12,600.0	10,310.0	12,844.9	10,550.0	51.6	51.6	-105.35	1,998.8	-480.7	906.4	805.7	100.76	8.996
12,700.0	10,310.0	12,944.9	10,550.0	53.3	53.3	-105.35	2,098.8	-481.5	906.5	802.3	104.19	8.701
12,800.0	10,310.0	13,044.9	10,550.0	55.0	55.0	-105.35	2,198.8	-482.3	906.6	799.0	107.66	8.421
12,900.0	10,310.0	13,144.9	10,550.0	56.7	56.8	-105.35	2,298.8	-483.1	906.7	795.6	111.16	8.157
13,000.0	10,310.0	13,244.9	10,550.0	58.5	58.6	-105.35	2,398.8	-483.9	906.8	792.2	114.69	7.907

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 514H - Dagger State Com 514H - Dagger State Com 514H - 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	
13,100.0	10,310.0	13,344.9	10,550.0	60.2	60.4	-105.34	2,498.8	-484.7	906.9	788.7	118.24	7.670	
13,200.0	10,310.0	13,444.9	10,550.0	62.0	62.2	-105.34	2,598.8	-485.5	907.0	785.2	121.82	7.446	
13,300.0	10,310.0	13,544.9	10,550.0	63.8	64.0	-105.34	2,698.8	-486.2	907.1	781.7	125.41	7.233	
13,400.0	10,310.0	13,644.9	10,550.0	65.6	65.8	-105.34	2,798.8	-487.0	907.2	778.2	129.03	7.031	
13,500.0	10,310.0	13,744.9	10,550.0	67.4	67.7	-105.34	2,898.8	-487.8	907.3	774.7	132.67	6.839	
13,600.0	10,310.0	13,844.9	10,550.0	69.3	69.6	-105.34	2,998.8	-488.6	907.4	771.1	136.32	6.657	
13,700.0	10,310.0	13,944.9	10,550.0	71.1	71.4	-105.33	3,098.8	-489.4	907.5	767.6	139.99	6.483	
13,800.0	10,310.0	14,044.9	10,550.0	73.0	73.3	-105.33	3,198.8	-490.2	907.6	764.0	143.67	6.318	
13,900.0	10,310.0	14,144.9	10,550.0	74.9	75.2	-105.33	3,298.8	-491.0	907.7	760.4	147.36	6.160	
14,000.0	10,310.0	14,244.9	10,550.0	76.7	77.1	-105.33	3,398.8	-491.7	907.9	756.8	151.07	6.010	
14,100.0	10,310.0	14,344.9	10,550.0	78.6	79.0	-105.33	3,498.8	-492.5	908.0	753.2	154.79	5.866	
14,200.0	10,310.0	14,444.9	10,550.0	80.5	80.9	-105.33	3,598.8	-493.3	908.1	749.5	158.51	5.729	
14,300.0	10,310.0	14,544.9	10,550.0	82.4	82.8	-105.32	3,698.8	-494.1	908.2	745.9	162.25	5.597	
14,400.0	10,310.0	14,644.9	10,550.0	84.3	84.7	-105.32	3,798.8	-494.9	908.3	742.3	166.00	5.471	
14,500.0	10,310.0	14,744.9	10,550.0	86.2	86.7	-105.32	3,898.8	-495.7	908.4	738.6	169.75	5.351	
14,600.0	10,310.0	14,844.9	10,550.0	88.1	88.6	-105.32	3,998.8	-496.5	908.5	734.9	173.52	5.236	
14,700.0	10,310.0	14,944.9	10,550.0	90.1	90.5	-105.32	4,098.8	-497.2	908.6	731.3	177.29	5.125	
14,800.0	10,310.0	15,044.9	10,550.0	92.0	92.4	-105.31	4,198.7	-498.0	908.7	727.6	181.07	5.018	
14,900.0	10,310.0	15,144.9	10,550.0	93.9	94.4	-105.31	4,298.7	-498.8	908.8	723.9	184.85	4.916	
15,000.0	10,310.0	15,244.9	10,550.0	95.8	96.3	-105.31	4,398.7	-499.6	908.9	720.2	188.64	4.818	
15,100.0	10,310.0	15,344.9	10,550.0	97.8	98.3	-105.31	4,498.7	-500.4	909.0	716.5	192.44	4.723	
15,200.0	10,310.0	15,444.9	10,550.0	99.7	100.2	-105.31	4,598.7	-501.2	909.1	712.8	196.24	4.632	
15,300.0	10,310.0	15,544.9	10,550.0	101.6	102.2	-105.31	4,698.7	-502.0	909.2	709.1	200.05	4.545	
15,400.0	10,310.0	15,644.9	10,550.0	103.6	104.1	-105.30	4,798.7	-502.7	909.3	705.4	203.86	4.460	
15,500.0	10,310.0	15,744.9	10,550.0	105.5	106.1	-105.30	4,898.7	-503.5	909.4	701.7	207.67	4.379	
15,600.0	10,310.0	15,844.9	10,550.0	107.5	108.1	-105.30	4,998.7	-504.3	909.5	698.0	211.49	4.300	
15,700.0	10,310.0	15,944.9	10,550.0	109.4	110.0	-105.30	5,098.7	-505.1	909.6	694.3	215.32	4.224	
15,800.0	10,310.0	16,044.9	10,550.0	111.4	112.0	-105.30	5,198.7	-505.9	909.7	690.5	219.15	4.151	
15,900.0	10,310.0	16,144.9	10,550.0	113.4	113.9	-105.30	5,298.7	-506.7	909.8	686.8	222.98	4.080	
16,000.0	10,310.0	16,244.9	10,550.0	115.3	115.9	-105.29	5,398.7	-507.5	909.9	683.1	226.81	4.012	
16,100.0	10,310.0	16,344.9	10,550.0	117.3	117.9	-105.29	5,498.7	-508.2	910.0	679.3	230.65	3.945	
16,200.0	10,310.0	16,444.9	10,550.0	119.2	119.8	-105.29	5,598.7	-509.0	910.1	675.6	234.50	3.881	
16,300.0	10,310.0	16,544.9	10,550.0	121.2	121.8	-105.29	5,698.7	-509.8	910.2	671.8	238.34	3.819	
16,400.0	10,310.0	16,644.9	10,550.0	123.2	123.8	-105.29	5,798.7	-510.6	910.3	668.1	242.19	3.759	
16,500.0	10,310.0	16,744.9	10,550.0	125.1	125.8	-105.29	5,898.7	-511.4	910.4	664.3	246.04	3.700	
16,600.0	10,310.0	16,844.9	10,550.0	127.1	127.7	-105.28	5,998.7	-512.2	910.5	660.6	249.89	3.643	
16,700.0	10,310.0	16,944.9	10,550.0	129.1	129.7	-105.28	6,098.7	-513.0	910.6	656.8	253.75	3.588	
16,800.0	10,310.0	17,044.9	10,550.0	131.0	131.7	-105.28	6,198.7	-513.7	910.7	653.1	257.61	3.535	
16,900.0	10,310.0	17,144.9	10,550.0	133.0	133.7	-105.28	6,298.7	-514.5	910.8	649.3	261.47	3.483	
17,000.0	10,310.0	17,244.9	10,550.0	135.0	135.7	-105.28	6,398.7	-515.3	910.9	645.6	265.33	3.433	
17,100.0	10,310.0	17,344.9	10,550.0	137.0	137.6	-105.27	6,498.7	-516.1	911.0	641.8	269.20	3.384	
17,200.0	10,310.0	17,444.9	10,550.0	139.0	139.6	-105.27	6,598.7	-516.9	911.1	638.0	273.07	3.337	
17,300.0	10,310.0	17,544.9	10,550.0	140.9	141.6	-105.27	6,698.7	-517.7	911.2	634.3	276.93	3.290	
17,400.0	10,310.0	17,644.9	10,550.0	142.9	143.6	-105.27	6,798.7	-518.5	911.3	630.5	280.81	3.245	
17,500.0	10,310.0	17,744.9	10,550.0	144.9	145.6	-105.27	6,898.7	-519.2	911.4	626.7	284.68	3.201	
17,600.0	10,310.0	17,844.9	10,550.0	146.9	147.6	-105.27	6,998.7	-520.0	911.5	622.9	288.55	3.159	
17,700.0	10,310.0	17,944.9	10,550.0	148.9	149.6	-105.26	7,098.7	-520.8	911.6	619.2	292.43	3.117	
17,800.0	10,310.0	18,044.9	10,550.0	150.8	151.6	-105.26	7,198.7	-521.6	911.7	615.4	296.31	3.077	
17,900.0	10,310.0	18,144.9	10,550.0	152.8	153.5	-105.26	7,298.7	-522.4	911.8	611.6	300.19	3.037	
18,000.0	10,310.0	18,244.9	10,550.0	154.8	155.5	-105.26	7,398.6	-523.2	911.9	607.8	304.07	2.999	
18,100.0	10,310.0	18,344.9	10,550.0	156.8	157.5	-105.26	7,498.6	-524.0	912.0	604.1	307.95	2.962	
18,200.0	10,310.0	18,444.9	10,550.0	158.8	159.5	-105.26	7,598.6	-524.7	912.1	600.3	311.83	2.925	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 514H - Dagger State Com 514H - Dagger State Com 514H - 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		
18,300.0	10,310.0	18,544.9	10,550.0	160.8	161.5	-105.25	7,698.6	-525.5	912.2	596.5	315.72	2.889		
18,400.0	10,310.0	18,644.9	10,550.0	162.8	163.5	-105.25	7,798.6	-526.3	912.3	592.7	319.60	2.854		
18,427.4	10,310.0	18,671.5	10,550.0	163.3	164.0	-105.25	7,825.2	-526.5	912.3	591.7	320.65	2.845		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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		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	1.0	1.0	0.0	0.0	-173.56	-250.1	-28.2	251.7				
100.0	100.0	101.0	101.0	0.5	0.5	-173.56	-250.1	-28.2	251.7	250.7	1.07	234.791	
200.0	200.0	201.0	201.0	1.7	1.7	-173.56	-250.1	-28.2	251.7	248.3	3.43	73.378	
300.0	300.0	301.0	301.0	2.4	2.4	-173.56	-250.1	-28.2	251.7	246.9	4.83	52.135	
400.0	400.0	401.0	401.0	3.0	3.0	-173.56	-250.1	-28.2	251.7	245.8	5.91	42.574	
500.0	500.0	501.0	501.0	3.4	3.4	-173.56	-250.1	-28.2	251.7	244.9	6.83	36.833	
600.0	600.0	601.0	601.0	3.8	3.8	-173.56	-250.1	-28.2	251.7	244.1	7.65	32.895	
700.0	700.0	701.0	701.0	4.2	4.2	-173.56	-250.1	-28.2	251.7	243.3	8.40	29.977	
800.0	800.0	801.0	801.0	4.5	4.5	-173.56	-250.1	-28.2	251.7	242.6	9.09	27.702	
900.0	900.0	901.0	901.0	4.9	4.9	-173.56	-250.1	-28.2	251.7	242.0	9.73	25.862	
1,000.0	1,000.0	1,001.0	1,001.0	5.2	5.2	-173.56	-250.1	-28.2	251.7	241.4	10.34	24.335	
1,100.0	1,100.0	1,101.0	1,101.0	5.5	5.5	-173.56	-250.1	-28.2	251.7	240.8	10.93	23.040	
1,200.0	1,200.0	1,201.0	1,201.0	5.7	5.7	-173.56	-250.1	-28.2	251.7	240.2	11.48	21.923	
1,300.0	1,300.0	1,301.0	1,301.0	6.0	6.0	-173.56	-250.1	-28.2	251.7	239.7	12.02	20.946	
1,400.0	1,400.0	1,401.0	1,401.0	6.3	6.3	-173.56	-250.1	-28.2	251.7	239.2	12.53	20.083	
1,500.0	1,500.0	1,501.0	1,501.0	6.5	6.5	-173.56	-250.1	-28.2	251.7	238.7	13.03	19.313	
1,600.0	1,600.0	1,601.0	1,601.0	6.8	6.8	-173.56	-250.1	-28.2	251.7	238.2	13.52	18.620	
1,700.0	1,700.0	1,701.0	1,701.0	7.0	7.0	-173.56	-250.1	-28.2	251.7	237.7	13.99	17.991	
1,800.0	1,800.0	1,801.0	1,801.0	7.2	7.2	-173.56	-250.1	-28.2	251.7	237.3	14.45	17.418	
1,900.0	1,900.0	1,901.0	1,901.0	7.4	7.5	-173.56	-250.1	-28.2	251.7	236.8	14.90	16.892	
2,000.0	2,000.0	2,001.0	2,001.0	7.7	7.7	-173.56	-250.1	-28.2	251.7	236.4	15.34	16.408	
2,100.0	2,100.0	2,101.0	2,101.0	7.9	7.9	-173.56	-250.1	-28.2	251.7	236.0	15.77	15.960	
2,200.0	2,200.0	2,201.0	2,201.0	8.1	8.1	-173.56	-250.1	-28.2	251.7	235.5	16.19	15.543	
2,300.0	2,300.0	2,301.0	2,301.0	8.3	8.3	-173.56	-250.1	-28.2	251.7	235.1	16.61	15.155	
2,400.0	2,400.0	2,401.0	2,401.0	8.5	8.5	-173.56	-250.1	-28.2	251.7	234.7	17.02	14.792	
2,500.0	2,500.0	2,501.0	2,501.0	8.7	8.7	-173.56	-250.1	-28.2	251.7	234.3	17.42	14.451	
2,600.0	2,600.0	2,601.0	2,601.0	8.9	8.9	-173.56	-250.1	-28.2	251.7	233.9	17.81	14.131	
2,700.0	2,700.0	2,701.0	2,701.0	9.1	9.1	-173.56	-250.1	-28.2	251.7	233.5	18.20	13.828	
2,800.0	2,800.0	2,801.0	2,801.0	9.3	9.3	-173.56	-250.1	-28.2	251.7	233.1	18.59	13.543	
2,900.0	2,900.0	2,901.0	2,901.0	9.5	9.5	-173.56	-250.1	-28.2	251.7	232.8	18.97	13.272	
3,000.0	3,000.0	3,001.0	3,001.0	9.7	9.7	-173.56	-250.1	-28.2	251.7	232.4	19.34	13.015	
3,100.0	3,100.0	3,101.0	3,101.0	9.9	9.9	-173.56	-250.1	-28.2	251.7	232.0	19.71	12.771	
3,200.0	3,200.0	3,201.0	3,201.0	10.0	10.0	-173.56	-250.1	-28.2	251.7	231.6	20.08	12.538	
3,300.0	3,300.0	3,301.0	3,301.0	10.2	10.2	-173.56	-250.1	-28.2	251.7	231.3	20.44	12.317	
3,400.0	3,400.0	3,401.0	3,401.0	10.4	10.4	-173.56	-250.1	-28.2	251.7	230.9	20.80	12.105	
3,500.0	3,500.0	3,501.0	3,501.0	10.6	10.6	-173.56	-250.1	-28.2	251.7	230.6	21.15	11.902	
3,600.0	3,600.0	3,601.0	3,601.0	10.7	10.8	-173.56	-250.1	-28.2	251.7	230.2	21.50	11.708	
3,700.0	3,700.0	3,701.0	3,701.0	10.9	10.9	-173.56	-250.1	-28.2	251.7	229.9	21.85	11.522	
3,800.0	3,800.0	3,801.0	3,801.0	11.1	11.1	-173.56	-250.1	-28.2	251.7	229.5	22.19	11.343	
3,900.0	3,900.0	3,901.0	3,901.0	11.3	11.3	-173.56	-250.1	-28.2	251.7	229.2	22.53	11.171	
4,000.0	4,000.0	4,001.0	4,001.0	11.4	11.4	-173.56	-250.1	-28.2	251.7	228.9	22.87	11.006	
4,100.0	4,100.0	4,101.0	4,101.0	11.6	11.6	-173.56	-250.1	-28.2	251.7	228.5	23.21	10.846	
4,200.0	4,200.0	4,201.0	4,201.0	11.8	11.8	-173.56	-250.1	-28.2	251.7	228.2	23.54	10.693	
4,300.0	4,300.0	4,301.0	4,301.0	11.9	11.9	-173.56	-250.1	-28.2	251.7	227.9	23.87	10.545	
4,400.0	4,400.0	4,401.0	4,401.0	12.1	12.1	-173.56	-250.1	-28.2	251.7	227.5	24.20	10.401	
4,500.0	4,500.0	4,501.0	4,501.0	12.3	12.3	-173.56	-250.1	-28.2	251.7	227.2	24.53	10.263	
4,600.0	4,600.0	4,601.0	4,601.0	12.4	12.4	-173.56	-250.1	-28.2	251.7	226.9	24.85	10.129	
4,700.0	4,700.0	4,701.0	4,701.0	12.6	12.6	-173.56	-250.1	-28.2	251.7	226.6	25.17	10.000	
4,800.0	4,800.0	4,801.0	4,801.0	12.7	12.7	-173.56	-250.1	-28.2	251.7	226.2	25.49	9.874	
4,900.0	4,900.0	4,901.0	4,901.0	12.9	12.9	-173.56	-250.1	-28.2	251.7	225.9	25.81	9.753	
5,000.0	5,000.0	5,001.0	5,001.0	13.1	13.1	-173.56	-250.1	-28.2	251.7	225.6	26.13	9.635	
5,100.0	5,100.0	5,101.0	5,101.0	13.2	13.2	49.25	-250.1	-28.2	251.2	224.8	26.38	9.522	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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)			
5,200.0	5,200.0	5,200.9	5,200.9	13.2	13.4	49.72	-250.1	-28.2	249.5	222.8	26.61	9.374	
5,300.0	5,299.9	5,299.1	5,299.1	13.3	13.5	50.32	-250.6	-27.5	247.0	220.2	26.79	9.220	
5,400.0	5,399.7	5,397.4	5,397.3	13.5	13.6	50.88	-251.9	-25.4	244.2	217.2	26.97	9.054	
5,500.0	5,499.4	5,495.6	5,495.5	13.6	13.7	51.41	-254.1	-21.8	240.9	213.8	27.16	8.872	
5,600.0	5,598.9	5,594.0	5,593.7	13.8	13.8	51.90	-257.3	-16.7	237.3	209.9	27.36	8.673	
5,700.0	5,698.3	5,693.2	5,692.6	14.0	13.9	52.43	-261.1	-10.4	233.2	205.6	27.53	8.469	
5,800.0	5,797.4	5,793.0	5,792.1	14.2	14.0	53.29	-265.2	-3.9	228.1	200.3	27.76	8.216	
5,906.8	5,903.0	5,899.4	5,898.2	14.4	14.2	54.66	-269.4	3.0	221.6	193.5	28.03	7.904	
6,000.0	5,995.1	5,992.3	5,990.8	14.7	14.4	56.07	-273.2	9.0	215.5	187.2	28.26	7.625	
6,100.0	6,093.8	6,091.9	6,090.2	15.0	14.6	57.67	-277.2	15.5	209.2	180.6	28.52	7.334	
6,200.0	6,192.6	6,191.5	6,189.5	15.3	14.8	59.37	-281.2	22.0	203.0	174.2	28.77	7.054	
6,300.0	6,291.3	6,291.2	6,288.8	15.6	15.1	61.18	-285.2	28.5	197.0	168.0	29.03	6.786	
6,400.0	6,390.1	6,390.8	6,388.1	15.9	15.3	63.09	-289.2	35.0	191.2	161.9	29.28	6.531	
6,500.0	6,488.8	6,490.4	6,487.5	16.3	15.6	65.12	-293.2	41.4	185.7	156.1	29.52	6.289	
6,600.0	6,587.6	6,590.0	6,586.8	16.7	15.9	67.28	-297.2	47.9	180.3	150.6	29.76	6.060	
6,700.0	6,686.3	6,689.6	6,686.1	17.0	16.2	69.56	-301.2	54.4	175.3	145.3	29.99	5.845	
6,800.0	6,785.1	6,789.3	6,785.5	17.5	16.5	71.97	-305.2	60.9	170.6	140.3	30.22	5.643	
6,900.0	6,883.8	6,888.9	6,884.8	17.9	16.8	74.51	-309.2	67.4	166.1	135.7	30.46	5.455	
7,000.0	6,982.6	6,988.5	6,984.1	18.3	17.1	77.18	-313.2	73.8	162.1	131.4	30.70	5.279	
7,100.0	7,081.3	7,088.1	7,083.5	18.7	17.5	79.99	-317.2	80.3	158.4	127.4	30.96	5.116	
7,200.0	7,180.1	7,187.8	7,182.8	19.2	17.8	82.92	-321.2	86.8	155.1	123.8	31.24	4.963	
7,300.0	7,278.8	7,287.4	7,282.1	19.6	18.2	85.97	-325.2	93.3	152.2	120.6	31.57	4.821	
7,400.0	7,377.6	7,387.0	7,381.4	20.1	18.5	89.13	-329.2	99.8	149.7	117.8	31.94	4.688	
7,500.0	7,476.3	7,486.6	7,480.8	20.6	18.9	92.38	-333.2	106.2	147.8	115.4	32.39	4.563	
7,600.0	7,575.1	7,586.2	7,580.1	21.1	19.3	95.70	-337.2	112.7	146.3	113.4	32.92	4.445	
7,700.0	7,673.8	7,685.9	7,679.4	21.6	19.7	99.09	-341.2	119.2	145.4	111.8	33.55	4.333	
7,800.0	7,772.6	7,785.5	7,778.8	22.0	20.0	102.50	-345.2	125.7	144.9	110.6	34.27	4.228	
7,835.7	7,807.8	7,821.0	7,814.2	22.2	20.2	103.72	-346.6	128.0	144.9	110.3	34.56	4.192	
7,900.0	7,871.3	7,885.1	7,878.1	22.6	20.4	105.92	-349.2	132.2	145.0	109.9	35.10	4.130	
8,000.0	7,970.1	7,984.7	7,977.4	23.1	20.8	109.33	-353.2	138.7	145.6	109.5	36.04	4.039	
8,100.0	8,068.8	8,084.3	8,076.8	23.6	21.2	112.70	-357.2	145.1	146.7	109.6	37.08	3.956	
8,200.0	8,167.6	8,184.0	8,176.1	24.1	21.7	116.01	-361.2	151.6	148.3	110.1	38.22	3.881	
8,300.0	8,266.3	8,283.6	8,275.4	24.6	22.1	119.23	-365.2	158.1	150.4	111.0	39.43	3.815	
8,400.0	8,365.1	8,383.2	8,374.7	25.2	22.5	122.36	-369.2	164.6	153.0	112.3	40.70	3.758	
8,500.0	8,463.8	8,482.8	8,474.1	25.7	22.9	125.38	-373.2	171.1	156.0	113.9	42.03	3.711	
8,600.0	8,562.6	8,582.5	8,573.4	26.2	23.3	128.27	-377.2	177.5	159.4	116.0	43.39	3.674	
8,700.0	8,661.3	8,682.1	8,672.7	26.8	23.8	131.04	-381.2	184.0	163.2	118.4	44.77	3.645	
8,800.0	8,760.1	8,781.7	8,772.1	27.3	24.2	133.68	-385.2	190.5	167.4	121.2	46.17	3.625	
8,837.4	8,797.0	8,819.0	8,809.2	27.5	24.4	134.63	-386.7	192.9	169.0	122.4	46.68	3.621	
8,900.0	8,858.9	8,881.3	8,871.4	27.8	24.7	136.12	-389.2	197.0	171.6	124.1	47.51	3.613	
9,000.0	8,957.9	8,981.1	8,970.9	28.4	25.1	138.10	-393.3	203.5	175.0	126.2	48.79	3.587	
9,100.0	9,057.2	9,081.0	9,070.5	28.9	25.5	139.63	-397.3	210.0	177.2	127.2	49.97	3.547	
9,200.0	9,156.6	9,180.9	9,170.1	29.4	26.0	140.77	-401.3	216.5	178.2	127.1	51.06	3.490	
9,300.0	9,256.3	9,280.9	9,269.8	29.9	26.4	141.53	-405.3	223.0	177.9	125.8	52.05	3.417	
9,400.0	9,356.0	9,380.9	9,369.5	30.3	26.9	141.95	-409.3	229.5	176.2	123.3	52.95	3.328	
9,500.0	9,455.9	9,480.8	9,469.1	30.8	27.4	142.01	-413.3	236.0	173.2	119.5	53.74	3.223	
9,600.0	9,555.8	9,580.7	9,568.7	31.2	27.8	141.70	-417.3	242.5	168.8	114.4	54.41	3.102	
9,700.0	9,655.8	9,680.5	9,668.3	31.5	28.3	140.99	-421.4	249.0	163.0	108.1	54.91	2.969	
9,744.2	9,700.0	9,724.6	9,712.2	31.6	28.5	-82.13	-423.1	251.8	160.1	105.0	55.02	2.909	
9,800.0	9,755.8	9,780.2	9,767.7	31.6	28.7	-82.76	-425.4	255.5	156.2	101.1	55.10	2.835	
9,876.7	9,832.5	9,856.7	9,844.0	31.6	29.1	-83.68	-428.4	260.4	150.8	95.7	55.18	2.734	
9,900.0	9,855.8	9,879.9	9,867.1	31.6	29.2	-84.00	-429.4	261.9	149.2	94.1	55.12	2.706	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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		
9,925.0	9,880.7	9,904.7	9,891.8	31.5	29.3	-85.27	-430.4	263.5	147.3	92.4	54.90	2.683		
9,950.0	9,905.5	9,929.3	9,916.3	31.5	29.4	-87.06	-431.3	265.1	145.4	90.9	54.50	2.667		
9,975.0	9,930.1	9,953.6	9,940.6	31.4	29.6	-89.37	-432.3	266.7	143.5	89.6	53.90	2.663 SF		
10,000.0	9,954.4	9,977.7	9,964.5	31.3	29.7	-92.17	-433.3	268.3	141.9	88.9	53.09	2.674		
10,025.0	9,978.4	10,001.3	9,988.1	31.2	29.8	-95.40	-434.2	269.8	140.8	88.7	52.05	2.705 ES		
10,050.0	10,002.0	10,024.5	10,011.2	31.1	29.9	-98.98	-435.2	271.3	140.3	89.5	50.79	2.762		
10,052.1	10,004.0	10,026.4	10,013.1	31.1	29.9	-99.29	-435.3	271.5	140.3	89.6	50.68	2.769 CC		
10,075.0	10,025.2	10,047.2	10,033.8	31.0	30.0	-102.82	-436.1	272.8	140.7	91.4	49.34	2.852		
10,100.0	10,047.8	10,069.3	10,055.9	30.9	30.1	-106.80	-437.0	274.3	142.3	94.6	47.75	2.980		
10,125.0	10,069.8	10,090.7	10,077.3	30.8	30.2	-110.79	-437.8	275.6	145.3	99.2	46.11	3.151		
10,150.0	10,091.1	10,111.5	10,098.0	30.7	30.3	-114.66	-438.7	277.0	149.8	105.3	44.54	3.364		
10,175.0	10,111.8	10,131.5	10,117.9	30.6	30.4	-118.32	-439.5	278.3	156.1	113.0	43.16	3.618		
10,200.0	10,131.7	10,150.7	10,137.1	30.6	30.5	-121.67	-440.2	279.6	164.2	122.2	42.03	3.907		
10,225.0	10,150.7	10,169.1	10,155.4	30.5	30.6	-124.66	-441.0	280.7	174.1	132.9	41.22	4.223		
10,250.0	10,168.9	10,186.5	10,172.8	30.4	30.7	-127.25	-441.7	281.9	185.7	145.0	40.71	4.562		
10,275.0	10,186.2	10,203.0	10,189.2	30.3	30.7	-129.42	-442.3	283.0	199.0	158.5	40.48	4.916		
10,300.0	10,202.5	10,218.5	10,204.7	30.3	30.8	-131.14	-443.0	284.0	213.8	173.4	40.46	5.285		
10,325.0	10,217.8	10,232.9	10,219.1	30.2	30.9	-132.42	-443.5	284.9	230.1	189.5	40.60	5.668		
10,350.0	10,232.0	10,246.3	10,232.4	30.1	30.9	-133.23	-444.1	285.8	247.6	206.8	40.84	6.063		
10,375.0	10,245.2	10,258.5	10,244.6	30.1	31.0	-133.55	-444.6	286.6	266.3	225.2	41.15	6.472		
10,400.0	10,257.2	10,269.6	10,255.6	30.1	31.1	-133.35	-445.0	287.3	286.0	244.5	41.48	6.895		
10,425.0	10,268.0	10,279.5	10,265.5	30.0	31.1	-132.57	-445.4	287.9	306.6	264.8	41.83	7.330		
10,450.0	10,277.7	10,288.2	10,274.1	30.0	31.1	-131.10	-445.8	288.5	328.1	285.9	42.18	7.778		
10,475.0	10,286.1	10,295.6	10,281.6	30.0	31.2	-128.83	-446.1	289.0	350.2	307.6	42.51	8.237		
10,500.0	10,293.3	10,301.8	10,287.7	30.0	31.2	-125.55	-446.3	289.4	372.8	330.0	42.82	8.707		
10,525.0	10,299.2	10,306.7	10,292.7	30.0	31.2	-121.03	-446.5	289.7	396.0	352.9	43.12	9.185		
10,550.0	10,303.8	10,310.4	10,296.3	30.1	31.2	-114.94	-446.7	289.9	419.6	376.2	43.39	9.670		
10,575.0	10,307.2	10,312.7	10,298.6	30.1	31.3	-106.97	-446.8	290.1	443.4	399.8	43.64	10.160		
10,600.0	10,309.3	10,313.7	10,299.6	30.2	31.3	-96.98	-446.8	290.2	467.5	423.6	43.88	10.655		
10,626.7	10,310.0	10,313.4	10,299.3	30.2	31.3	-84.42	-446.8	290.1	493.4	449.3	44.11	11.186		
10,700.0	10,310.0	10,310.4	10,296.3	30.5	31.2	-83.03	-446.7	289.9	564.7	520.0	44.65	12.647		
10,800.0	10,310.0	10,306.4	10,292.3	30.8	31.2	-81.16	-446.5	289.7	662.7	617.5	45.24	14.648		
10,900.0	10,310.0	10,302.3	10,288.2	31.3	31.2	-79.31	-446.3	289.4	761.2	715.5	45.71	16.655		
11,000.0	10,310.0	10,298.2	10,284.2	31.8	31.2	-77.49	-446.2	289.1	860.1	814.0	46.08	18.663		
11,100.0	10,310.0	10,294.2	10,280.1	32.5	31.2	-75.70	-446.0	288.9	959.1	912.7	46.40	20.672		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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		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	-166.92	-250.3	-58.2	257.0				
100.0	100.0	100.0	100.0	0.5	0.5	-166.92	-250.3	-58.2	257.0	255.9	1.06	242.388	
200.0	200.0	200.0	200.0	1.7	1.7	-166.92	-250.3	-58.2	257.0	253.6	3.42	75.070	
300.0	300.0	300.0	300.0	2.4	2.4	-166.92	-250.3	-58.2	257.0	252.2	4.82	53.288	
400.0	400.0	400.0	400.0	3.0	3.0	-166.92	-250.3	-58.2	257.0	251.1	5.91	43.501	
500.0	500.0	500.0	500.0	3.4	3.4	-166.92	-250.3	-58.2	257.0	250.2	6.83	37.628	
600.0	600.0	600.0	600.0	3.8	3.8	-166.92	-250.3	-58.2	257.0	249.4	7.65	33.601	
700.0	700.0	700.0	700.0	4.2	4.2	-166.92	-250.3	-58.2	257.0	248.6	8.39	30.618	
800.0	800.0	800.0	800.0	4.5	4.5	-166.92	-250.3	-58.2	257.0	247.9	9.08	28.293	
900.0	900.0	900.0	900.0	4.9	4.9	-166.92	-250.3	-58.2	257.0	247.3	9.73	26.413	
1,000.0	1,000.0	1,000.0	1,000.0	5.2	5.2	-166.92	-250.3	-58.2	257.0	246.7	10.34	24.852	
1,100.0	1,100.0	1,100.0	1,100.0	5.5	5.5	-166.92	-250.3	-58.2	257.0	246.1	10.92	23.529	
1,200.0	1,200.0	1,200.0	1,200.0	5.7	5.7	-166.92	-250.3	-58.2	257.0	245.5	11.48	22.388	
1,300.0	1,300.0	1,300.0	1,300.0	6.0	6.0	-166.92	-250.3	-58.2	257.0	245.0	12.01	21.390	
1,400.0	1,400.0	1,400.0	1,400.0	6.3	6.3	-166.92	-250.3	-58.2	257.0	244.5	12.53	20.509	
1,500.0	1,500.0	1,500.0	1,500.0	6.5	6.5	-166.92	-250.3	-58.2	257.0	244.0	13.03	19.722	
1,600.0	1,600.0	1,600.0	1,600.0	6.8	6.8	-166.92	-250.3	-58.2	257.0	243.5	13.52	19.013	
1,700.0	1,700.0	1,700.0	1,700.0	7.0	7.0	-166.92	-250.3	-58.2	257.0	243.0	13.99	18.372	
1,800.0	1,800.0	1,800.0	1,800.0	7.2	7.2	-166.92	-250.3	-58.2	257.0	242.6	14.45	17.786	
1,900.0	1,900.0	1,900.0	1,900.0	7.4	7.4	-166.92	-250.3	-58.2	257.0	242.1	14.90	17.249	
2,000.0	2,000.0	2,000.0	2,000.0	7.7	7.7	-166.92	-250.3	-58.2	257.0	241.7	15.34	16.755	
2,100.0	2,100.0	2,100.0	2,100.0	7.9	7.9	-166.92	-250.3	-58.2	257.0	241.2	15.77	16.297	
2,200.0	2,200.0	2,200.0	2,200.0	8.1	8.1	-166.92	-250.3	-58.2	257.0	240.8	16.19	15.872	
2,300.0	2,300.0	2,300.0	2,300.0	8.3	8.3	-166.92	-250.3	-58.2	257.0	240.4	16.61	15.475	
2,400.0	2,400.0	2,400.0	2,400.0	8.5	8.5	-166.92	-250.3	-58.2	257.0	240.0	17.02	15.104	
2,500.0	2,500.0	2,500.0	2,500.0	8.7	8.7	-166.92	-250.3	-58.2	257.0	239.6	17.42	14.756	
2,600.0	2,600.0	2,600.0	2,600.0	8.9	8.9	-166.92	-250.3	-58.2	257.0	239.2	17.81	14.429	
2,700.0	2,700.0	2,700.0	2,700.0	9.1	9.1	-166.92	-250.3	-58.2	257.0	238.8	18.20	14.120	
2,800.0	2,800.0	2,800.0	2,800.0	9.3	9.3	-166.92	-250.3	-58.2	257.0	238.4	18.59	13.828	
2,900.0	2,900.0	2,900.0	2,900.0	9.5	9.5	-166.92	-250.3	-58.2	257.0	238.0	18.96	13.552	
3,000.0	3,000.0	3,000.0	3,000.0	9.7	9.7	-166.92	-250.3	-58.2	257.0	237.7	19.34	13.289	
3,100.0	3,100.0	3,100.0	3,100.0	9.9	9.9	-166.92	-250.3	-58.2	257.0	237.3	19.71	13.040	
3,200.0	3,200.0	3,200.0	3,200.0	10.0	10.0	-166.92	-250.3	-58.2	257.0	236.9	20.07	12.802	
3,300.0	3,300.0	3,300.0	3,300.0	10.2	10.2	-166.92	-250.3	-58.2	257.0	236.6	20.44	12.576	
3,400.0	3,400.0	3,400.0	3,400.0	10.4	10.4	-166.92	-250.3	-58.2	257.0	236.2	20.79	12.360	
3,500.0	3,500.0	3,500.0	3,500.0	10.6	10.6	-166.92	-250.3	-58.2	257.0	235.9	21.15	12.153	
3,600.0	3,600.0	3,600.0	3,600.0	10.7	10.7	-166.92	-250.3	-58.2	257.0	235.5	21.50	11.954	
3,700.0	3,700.0	3,700.0	3,700.0	10.9	10.9	-166.92	-250.3	-58.2	257.0	235.2	21.85	11.764	
3,800.0	3,800.0	3,800.0	3,800.0	11.1	11.1	-166.92	-250.3	-58.2	257.0	234.8	22.19	11.582	
3,900.0	3,900.0	3,900.0	3,900.0	11.3	11.3	-166.92	-250.3	-58.2	257.0	234.5	22.53	11.406	
4,000.0	4,000.0	4,000.0	4,000.0	11.4	11.4	-166.92	-250.3	-58.2	257.0	234.1	22.87	11.237	
4,100.0	4,100.0	4,100.0	4,100.0	11.6	11.6	-166.92	-250.3	-58.2	257.0	233.8	23.21	11.075	
4,200.0	4,200.0	4,200.0	4,200.0	11.8	11.8	-166.92	-250.3	-58.2	257.0	233.5	23.54	10.918	
4,300.0	4,300.0	4,300.0	4,300.0	11.9	11.9	-166.92	-250.3	-58.2	257.0	233.1	23.87	10.766	
4,400.0	4,400.0	4,400.0	4,400.0	12.1	12.1	-166.92	-250.3	-58.2	257.0	232.8	24.20	10.620	
4,500.0	4,500.0	4,500.0	4,500.0	12.3	12.3	-166.92	-250.3	-58.2	257.0	232.5	24.53	10.479	
4,600.0	4,600.0	4,600.0	4,600.0	12.4	12.4	-166.92	-250.3	-58.2	257.0	232.2	24.85	10.342	
4,700.0	4,700.0	4,700.0	4,700.0	12.6	12.6	-166.92	-250.3	-58.2	257.0	231.8	25.17	10.210	
4,800.0	4,800.0	4,800.0	4,800.0	12.7	12.7	-166.92	-250.3	-58.2	257.0	231.5	25.49	10.082	
4,900.0	4,900.0	4,900.0	4,900.0	12.9	12.9	-166.92	-250.3	-58.2	257.0	231.2	25.81	9.958	
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	-166.92	-250.3	-58.2	257.0	230.9	26.12	9.838	
5,100.0	5,100.0	5,100.0	5,100.0	13.2	13.2	55.90	-250.3	-58.2	256.5	230.1	26.37	9.726	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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)			
5,200.0	5,200.0	5,200.0	5,200.0	13.2	13.4	56.40	-250.3	-58.2	255.1	228.4	26.61	9.586	
5,300.0	5,299.9	5,296.7	5,296.6	13.3	13.5	57.33	-250.8	-58.8	253.3	226.5	26.78	9.457	
5,400.0	5,399.7	5,393.2	5,393.1	13.5	13.6	58.84	-252.2	-60.9	252.0	225.0	26.95	9.350	
5,500.0	5,499.4	5,489.4	5,489.3	13.6	13.7	60.91	-254.4	-64.2	251.3	224.2	27.13	9.264	
5,524.2	5,523.5	5,512.7	5,512.5	13.6	13.7	61.49	-255.1	-65.2	251.3	224.1	27.18	9.246 CC, ES	
5,600.0	5,598.9	5,585.3	5,585.0	13.8	13.8	63.51	-257.6	-68.9	251.6	224.3	27.33	9.208	
5,700.0	5,698.3	5,682.8	5,682.2	14.0	13.9	66.66	-261.6	-74.8	253.0	225.5	27.50	9.197	
5,800.0	5,797.4	5,781.5	5,780.7	14.2	14.0	70.17	-265.7	-80.8	254.6	226.9	27.74	9.180	
5,906.8	5,903.0	5,886.6	5,885.5	14.4	14.2	74.24	-270.1	-87.3	257.0	228.9	28.03	9.167 SF	
6,000.0	5,995.1	5,978.3	5,976.9	14.7	14.4	77.92	-273.9	-93.0	259.9	231.6	28.30	9.185	
6,100.0	6,093.8	6,076.6	6,074.9	15.0	14.6	81.76	-278.0	-99.0	264.2	235.6	28.61	9.236	
6,200.0	6,192.6	6,174.9	6,173.0	15.3	14.8	85.46	-282.1	-105.1	269.8	240.8	28.95	9.318	
6,300.0	6,291.3	6,273.2	6,271.0	15.6	15.0	89.00	-286.2	-111.1	276.4	247.1	29.32	9.428	
6,400.0	6,390.1	6,371.5	6,369.0	15.9	15.3	92.37	-290.3	-117.2	284.0	254.3	29.71	9.560	
6,500.0	6,488.8	6,469.8	6,467.1	16.3	15.5	95.56	-294.4	-123.2	292.7	262.5	30.13	9.712	
6,600.0	6,587.6	6,568.1	6,565.1	16.7	15.8	98.56	-298.5	-129.2	302.1	271.6	30.58	9.879	
6,700.0	6,686.3	6,666.4	6,663.1	17.0	16.1	101.38	-302.6	-135.3	312.4	281.4	31.06	10.058	
6,800.0	6,785.1	6,764.7	6,761.2	17.5	16.4	104.01	-306.7	-141.3	323.4	291.8	31.57	10.245	
6,900.0	6,883.8	6,863.0	6,859.2	17.9	16.7	106.47	-310.8	-147.4	335.0	302.9	32.10	10.439	
7,000.0	6,982.6	6,961.3	6,957.2	18.3	17.0	108.77	-314.9	-153.4	347.2	314.6	32.65	10.636	
7,100.0	7,081.3	7,059.6	7,055.3	18.7	17.3	110.91	-319.0	-159.5	360.0	326.8	33.22	10.835	
7,200.0	7,180.1	7,157.9	7,153.3	19.2	17.7	112.90	-323.1	-165.5	373.2	339.4	33.82	11.034	
7,300.0	7,278.8	7,256.2	7,251.3	19.6	18.0	114.76	-327.2	-171.6	386.8	352.4	34.44	11.232	
7,400.0	7,377.6	7,354.5	7,349.3	20.1	18.4	116.49	-331.3	-177.6	400.8	365.7	35.07	11.428	
7,500.0	7,476.3	7,452.8	7,447.4	20.6	18.7	118.10	-335.4	-183.7	415.1	379.4	35.72	11.622	
7,600.0	7,575.1	7,551.1	7,545.4	21.1	19.1	119.60	-339.5	-189.7	429.8	393.4	36.39	11.811	
7,700.0	7,673.8	7,649.4	7,643.4	21.6	19.4	121.01	-343.6	-195.8	444.7	407.6	37.07	11.997	
7,800.0	7,772.6	7,747.7	7,741.5	22.0	19.8	122.33	-347.7	-201.8	459.9	422.1	37.76	12.179	
7,900.0	7,871.3	7,846.0	7,839.5	22.6	20.2	123.56	-351.8	-207.9	475.2	436.8	38.46	12.356	
8,000.0	7,970.1	7,944.3	7,937.5	23.1	20.6	124.72	-355.9	-213.9	490.8	451.7	39.18	12.528	
8,100.0	8,068.8	8,042.6	8,035.6	23.6	21.0	125.80	-360.0	-220.0	506.6	466.7	39.90	12.696	
8,200.0	8,167.6	8,140.9	8,133.6	24.1	21.4	126.82	-364.1	-226.0	522.6	481.9	40.64	12.858	
8,300.0	8,266.3	8,239.3	8,231.6	24.6	21.8	127.78	-368.2	-232.1	538.7	497.3	41.38	13.016	
8,400.0	8,365.1	8,337.6	8,329.7	25.2	22.2	128.68	-372.3	-238.1	554.9	512.8	42.13	13.170	
8,500.0	8,463.8	8,435.9	8,427.7	25.7	22.6	129.53	-376.4	-244.2	571.3	528.4	42.89	13.318	
8,600.0	8,562.6	8,534.2	8,525.7	26.2	23.0	130.34	-380.4	-250.2	587.7	544.1	43.66	13.462	
8,700.0	8,661.3	8,632.5	8,623.8	26.8	23.5	131.10	-384.5	-256.3	604.3	559.9	44.43	13.602	
8,800.0	8,760.1	8,730.8	8,721.8	27.3	23.9	131.82	-388.6	-262.3	621.0	575.8	45.21	13.737	
8,837.4	8,797.0	8,767.5	8,758.5	27.5	24.0	132.08	-390.2	-264.6	627.3	581.8	45.48	13.791	
8,900.0	8,858.9	8,829.1	8,819.9	27.8	24.3	132.56	-392.7	-268.4	637.6	591.6	45.95	13.874	
9,000.0	8,957.9	8,927.7	8,918.2	28.4	24.7	133.20	-396.9	-274.5	653.1	606.4	46.72	13.980	
9,100.0	9,057.2	9,026.6	9,016.8	28.9	25.2	133.69	-401.0	-280.5	667.5	620.0	47.47	14.062	
9,200.0	9,156.6	9,125.7	9,115.6	29.4	25.6	134.05	-405.1	-286.6	680.7	632.5	48.21	14.121	
9,300.0	9,256.3	9,224.9	9,214.6	29.9	26.1	134.29	-409.2	-292.7	692.7	643.8	48.92	14.159	
9,400.0	9,356.0	9,324.3	9,313.7	30.3	26.5	134.42	-413.4	-298.9	703.5	653.9	49.62	14.179	
9,500.0	9,455.9	9,423.9	9,413.0	30.8	27.0	134.43	-417.5	-305.0	713.2	662.9	50.29	14.180	
9,600.0	9,555.8	9,523.5	9,512.3	31.2	27.4	134.33	-421.7	-311.1	721.5	670.6	50.94	14.166	
9,700.0	9,655.8	9,623.2	9,611.7	31.5	27.9	134.13	-425.8	-317.3	728.7	677.2	51.53	14.141	
9,744.2	9,700.0	9,667.2	9,655.7	31.6	28.1	-88.64	-427.7	-320.0	731.5	679.8	51.74	14.140	
9,800.0	9,755.8	9,722.9	9,711.2	31.6	28.3	-88.83	-430.0	-323.4	734.9	682.9	51.96	14.144	
9,876.7	9,832.5	9,799.4	9,787.5	31.6	28.7	-89.08	-433.2	-328.1	739.6	687.3	52.27	14.148	
9,900.0	9,855.8	9,822.6	9,810.6	31.6	28.8	-88.64	-434.2	-329.5	741.0	688.6	52.36	14.152	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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				Rule Assigned:					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		
9,925.0	9,880.7	9,847.4	9,835.3	31.5	28.9	-88.69	-435.2	-331.1	742.5	690.0	52.44	14.158		
9,950.0	9,905.5	9,872.0	9,859.8	31.5	29.0	-88.83	-436.2	-332.6	743.9	691.4	52.52	14.166		
9,975.0	9,930.1	9,896.3	9,884.1	31.4	29.1	-89.07	-437.2	-334.1	745.4	692.8	52.58	14.176		
10,000.0	9,954.4	9,920.3	9,908.1	31.3	29.2	-89.39	-438.2	-335.5	746.9	694.3	52.64	14.189		
10,025.0	9,978.4	9,944.0	9,931.6	31.2	29.4	-89.78	-439.2	-337.0	748.5	695.8	52.69	14.205		
10,050.0	10,002.0	9,967.2	9,954.8	31.1	29.5	-90.23	-440.2	-338.4	750.2	697.4	52.74	14.225		
10,075.0	10,025.2	9,989.8	9,977.4	31.0	29.6	-90.74	-441.1	-339.8	752.0	699.2	52.77	14.249		
10,100.0	10,047.8	10,011.9	9,999.4	30.9	29.7	-91.28	-442.1	-341.2	753.9	701.1	52.80	14.278		
10,125.0	10,069.8	10,033.4	10,020.8	30.8	29.8	-91.84	-442.9	-342.5	756.1	703.3	52.83	14.313		
10,150.0	10,091.1	10,054.2	10,041.5	30.7	29.9	-92.41	-443.8	-343.8	758.6	705.8	52.84	14.356		
10,175.0	10,111.8	10,074.2	10,061.5	30.6	30.0	-92.98	-444.6	-345.0	761.4	708.5	52.85	14.407		
10,200.0	10,131.7	10,093.4	10,080.6	30.6	30.1	-93.52	-445.4	-346.2	764.5	711.7	52.85	14.466		
10,225.0	10,150.7	10,111.7	10,098.9	30.5	30.1	-94.01	-446.2	-347.3	768.1	715.3	52.84	14.536		
10,250.0	10,168.9	10,129.2	10,116.3	30.4	30.2	-94.45	-446.9	-348.4	772.2	719.4	52.83	14.617		
10,275.0	10,186.2	10,145.6	10,132.7	30.3	30.3	-94.81	-447.6	-349.4	776.7	723.9	52.80	14.710		
10,300.0	10,202.5	10,161.1	10,148.2	30.3	30.4	-95.09	-448.3	-350.4	781.9	729.1	52.77	14.816		
10,325.0	10,217.8	10,175.6	10,162.6	30.2	30.4	-95.26	-448.9	-351.2	787.6	734.8	52.73	14.936		
10,350.0	10,232.0	10,188.9	10,175.9	30.1	30.5	-95.31	-449.4	-352.1	793.9	741.2	52.68	15.070		
10,375.0	10,245.2	10,201.1	10,188.1	30.1	30.6	-95.23	-449.9	-352.8	800.8	748.2	52.62	15.219		
10,400.0	10,257.2	10,212.2	10,199.1	30.1	30.6	-95.01	-450.4	-353.5	808.5	755.9	52.56	15.383		
10,425.0	10,268.0	10,222.1	10,209.0	30.0	30.7	-94.63	-450.8	-354.1	816.8	764.3	52.48	15.563		
10,450.0	10,277.7	10,230.7	10,217.6	30.0	30.7	-94.08	-451.2	-354.6	825.7	773.3	52.40	15.757		
10,475.0	10,286.1	10,238.3	10,225.2	30.0	30.7	-93.37	-451.5	-355.1	835.3	783.0	52.32	15.966		
10,500.0	10,293.3	10,245.6	10,232.4	30.0	30.8	-92.55	-451.8	-355.6	845.6	793.3	52.23	16.189		
10,525.0	10,299.2	10,251.3	10,238.2	30.0	30.8	-91.52	-452.0	-355.9	856.4	804.3	52.14	16.425		
10,550.0	10,303.8	10,255.6	10,242.4	30.1	30.8	-90.29	-452.2	-356.2	867.9	815.9	52.05	16.674		
10,575.0	10,307.2	10,258.4	10,245.2	30.1	30.8	-88.85	-452.3	-356.3	879.9	828.0	51.95	16.937		
10,600.0	10,309.3	10,259.7	10,246.5	30.2	30.8	-87.21	-452.4	-356.4	892.4	840.6	51.85	17.211		
10,626.7	10,310.0	10,259.3	10,246.1	30.2	30.8	-85.24	-452.3	-356.4	906.3	854.6	51.74	17.516		
10,700.0	10,310.0	10,255.9	10,242.7	30.5	30.8	-84.98	-452.2	-356.2	947.2	895.7	51.48	18.398		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 608H - Dagger State Com 608H - Dagger State Com 608H - 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)			
0.0	0.0	1.0	1.0	0.0	0.0	-160.63	-250.5	-88.1	265.6				
100.0	100.0	101.0	101.0	0.5	0.5	-160.63	-250.5	-88.1	265.6	264.5	1.07	247.707	
200.0	200.0	201.0	201.0	1.7	1.7	-160.63	-250.5	-88.1	265.6	262.1	3.43	77.414	
300.0	300.0	301.0	301.0	2.4	2.4	-160.63	-250.5	-88.1	265.6	260.7	4.83	55.003	
400.0	400.0	401.0	401.0	3.0	3.0	-160.63	-250.5	-88.1	265.6	259.7	5.91	44.916	
500.0	500.0	501.0	501.0	3.4	3.4	-160.63	-250.5	-88.1	265.6	258.7	6.83	38.859	
600.0	600.0	601.0	601.0	3.8	3.8	-160.63	-250.5	-88.1	265.6	257.9	7.65	34.704	
700.0	700.0	701.0	701.0	4.2	4.2	-160.63	-250.5	-88.1	265.6	257.2	8.40	31.626	
800.0	800.0	801.0	801.0	4.5	4.5	-160.63	-250.5	-88.1	265.6	256.5	9.09	29.225	
900.0	900.0	901.0	901.0	4.9	4.9	-160.63	-250.5	-88.1	265.6	255.8	9.73	27.285	
1,000.0	1,000.0	1,001.0	1,001.0	5.2	5.2	-160.63	-250.5	-88.1	265.6	255.2	10.34	25.674	
1,100.0	1,100.0	1,101.0	1,101.0	5.5	5.5	-160.63	-250.5	-88.1	265.6	254.6	10.93	24.307	
1,200.0	1,200.0	1,201.0	1,201.0	5.7	5.7	-160.63	-250.5	-88.1	265.6	254.1	11.48	23.129	
1,300.0	1,300.0	1,301.0	1,301.0	6.0	6.0	-160.63	-250.5	-88.1	265.6	253.6	12.02	22.099	
1,400.0	1,400.0	1,401.0	1,401.0	6.3	6.3	-160.63	-250.5	-88.1	265.6	253.0	12.53	21.188	
1,500.0	1,500.0	1,501.0	1,501.0	6.5	6.5	-160.63	-250.5	-88.1	265.6	252.5	13.03	20.375	
1,600.0	1,600.0	1,601.0	1,601.0	6.8	6.8	-160.63	-250.5	-88.1	265.6	252.1	13.52	19.644	
1,700.0	1,700.0	1,701.0	1,701.0	7.0	7.0	-160.63	-250.5	-88.1	265.6	251.6	13.99	18.981	
1,800.0	1,800.0	1,801.0	1,801.0	7.2	7.2	-160.63	-250.5	-88.1	265.6	251.1	14.45	18.376	
1,900.0	1,900.0	1,901.0	1,901.0	7.4	7.5	-160.63	-250.5	-88.1	265.6	250.7	14.90	17.822	
2,000.0	2,000.0	2,001.0	2,001.0	7.7	7.7	-160.63	-250.5	-88.1	265.6	250.2	15.34	17.311	
2,100.0	2,100.0	2,101.0	2,101.0	7.9	7.9	-160.63	-250.5	-88.1	265.6	249.8	15.77	16.838	
2,200.0	2,200.0	2,201.0	2,201.0	8.1	8.1	-160.63	-250.5	-88.1	265.6	249.4	16.19	16.399	
2,300.0	2,300.0	2,301.0	2,301.0	8.3	8.3	-160.63	-250.5	-88.1	265.6	249.0	16.61	15.989	
2,400.0	2,400.0	2,401.0	2,401.0	8.5	8.5	-160.63	-250.5	-88.1	265.6	248.6	17.02	15.606	
2,500.0	2,500.0	2,501.0	2,501.0	8.7	8.7	-160.63	-250.5	-88.1	265.6	248.2	17.42	15.246	
2,600.0	2,600.0	2,601.0	2,601.0	8.9	8.9	-160.63	-250.5	-88.1	265.6	247.8	17.81	14.908	
2,700.0	2,700.0	2,701.0	2,701.0	9.1	9.1	-160.63	-250.5	-88.1	265.6	247.4	18.20	14.589	
2,800.0	2,800.0	2,801.0	2,801.0	9.3	9.3	-160.63	-250.5	-88.1	265.6	247.0	18.59	14.287	
2,900.0	2,900.0	2,901.0	2,901.0	9.5	9.5	-160.63	-250.5	-88.1	265.6	246.6	18.97	14.002	
3,000.0	3,000.0	3,001.0	3,001.0	9.7	9.7	-160.63	-250.5	-88.1	265.6	246.2	19.34	13.731	
3,100.0	3,100.0	3,101.0	3,101.0	9.9	9.9	-160.63	-250.5	-88.1	265.6	245.9	19.71	13.473	
3,200.0	3,200.0	3,201.0	3,201.0	10.0	10.0	-160.63	-250.5	-88.1	265.6	245.5	20.08	13.228	
3,300.0	3,300.0	3,301.0	3,301.0	10.2	10.2	-160.63	-250.5	-88.1	265.6	245.1	20.44	12.994	
3,400.0	3,400.0	3,401.0	3,401.0	10.4	10.4	-160.63	-250.5	-88.1	265.6	244.8	20.80	12.770	
3,500.0	3,500.0	3,501.0	3,501.0	10.6	10.6	-160.63	-250.5	-88.1	265.6	244.4	21.15	12.557	
3,600.0	3,600.0	3,601.0	3,601.0	10.7	10.8	-160.63	-250.5	-88.1	265.6	244.1	21.50	12.352	
3,700.0	3,700.0	3,701.0	3,701.0	10.9	10.9	-160.63	-250.5	-88.1	265.6	243.7	21.85	12.155	
3,800.0	3,800.0	3,801.0	3,801.0	11.1	11.1	-160.63	-250.5	-88.1	265.6	243.4	22.19	11.967	
3,900.0	3,900.0	3,901.0	3,901.0	11.3	11.3	-160.63	-250.5	-88.1	265.6	243.0	22.53	11.785	
4,000.0	4,000.0	4,001.0	4,001.0	11.4	11.4	-160.63	-250.5	-88.1	265.6	242.7	22.87	11.611	
4,100.0	4,100.0	4,101.0	4,101.0	11.6	11.6	-160.63	-250.5	-88.1	265.6	242.4	23.21	11.443	
4,200.0	4,200.0	4,201.0	4,201.0	11.8	11.8	-160.63	-250.5	-88.1	265.6	242.0	23.54	11.281	
4,300.0	4,300.0	4,301.0	4,301.0	11.9	11.9	-160.63	-250.5	-88.1	265.6	241.7	23.87	11.125	
4,400.0	4,400.0	4,401.0	4,401.0	12.1	12.1	-160.63	-250.5	-88.1	265.6	241.4	24.20	10.974	
4,500.0	4,500.0	4,501.0	4,501.0	12.3	12.3	-160.63	-250.5	-88.1	265.6	241.0	24.53	10.828	
4,600.0	4,600.0	4,601.0	4,601.0	12.4	12.4	-160.63	-250.5	-88.1	265.6	240.7	24.85	10.687	
4,700.0	4,700.0	4,701.0	4,701.0	12.6	12.6	-160.63	-250.5	-88.1	265.6	240.4	25.17	10.550	
4,800.0	4,800.0	4,801.0	4,801.0	12.7	12.7	-160.63	-250.5	-88.1	265.6	240.1	25.49	10.418	
4,900.0	4,900.0	4,901.0	4,901.0	12.9	12.9	-160.63	-250.5	-88.1	265.6	239.8	25.81	10.289	
4,916.3	4,916.3	4,917.3	4,917.3	12.9	12.9	-160.63	-250.5	-88.1	265.6	239.7	25.86	10.269 CC	
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	-160.63	-250.5	-88.1	265.6	239.4	26.12	10.166 ES	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 608H - Dagger State Com 608H - Dagger State Com 608H - 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)			
5,100.0	5,100.0	5,097.6	5,097.6	13.2	13.2	62.30	-250.9	-88.8	265.8	239.5	26.32	10.101	
5,200.0	5,200.0	5,194.0	5,194.0	13.2	13.3	63.12	-252.2	-90.9	266.6	240.1	26.48	10.068	
5,300.0	5,299.9	5,290.3	5,290.2	13.3	13.4	64.46	-254.2	-94.5	267.9	241.3	26.65	10.053 SF	
5,400.0	5,399.7	5,386.3	5,386.0	13.5	13.5	66.31	-257.0	-99.4	270.1	243.2	26.84	10.063	
5,500.0	5,499.4	5,484.3	5,483.8	13.6	13.6	68.64	-260.5	-105.5	273.0	246.0	27.01	10.107	
5,600.0	5,598.9	5,583.4	5,582.6	13.8	13.7	71.30	-264.1	-111.8	275.9	248.7	27.24	10.128	
5,700.0	5,698.3	5,682.3	5,681.2	14.0	13.9	74.22	-267.8	-118.1	279.0	251.4	27.50	10.143	
5,800.0	5,797.4	5,781.0	5,779.6	14.2	14.1	77.40	-271.4	-124.4	282.3	254.6	27.79	10.161	
5,906.8	5,903.0	5,886.0	5,884.4	14.4	14.3	81.06	-275.2	-131.1	286.6	258.5	28.13	10.190	
6,000.0	5,995.1	5,977.6	5,975.7	14.7	14.6	84.35	-278.5	-136.9	291.3	262.8	28.44	10.243	
6,100.0	6,093.8	6,075.8	6,073.7	15.0	14.8	87.75	-282.1	-143.2	297.3	268.5	28.80	10.324	
6,200.0	6,192.6	6,174.1	6,171.7	15.3	15.0	91.02	-285.7	-149.4	304.4	275.2	29.19	10.428	
6,300.0	6,291.3	6,272.3	6,269.6	15.6	15.3	94.13	-289.3	-155.7	312.4	282.8	29.60	10.553	
6,400.0	6,390.1	6,370.5	6,367.6	15.9	15.6	97.08	-292.9	-161.9	321.4	291.3	30.05	10.695	
6,500.0	6,488.8	6,468.7	6,465.5	16.3	15.9	99.87	-296.4	-168.2	331.1	300.6	30.52	10.850	
6,600.0	6,587.6	6,567.0	6,563.5	16.7	16.2	102.49	-300.0	-174.4	341.6	310.6	31.01	11.016	
6,700.0	6,686.3	6,665.2	6,661.5	17.0	16.5	104.96	-303.6	-180.6	352.8	321.3	31.53	11.189	
6,800.0	6,785.1	6,763.4	6,759.4	17.5	16.8	107.28	-307.2	-186.9	364.6	332.5	32.08	11.367	
6,900.0	6,883.8	6,861.7	6,857.4	17.9	17.1	109.45	-310.8	-193.1	377.0	344.3	32.64	11.549	
7,000.0	6,982.6	6,959.9	6,955.4	18.3	17.5	111.48	-314.4	-199.4	389.9	356.6	33.23	11.732	
7,100.0	7,081.3	7,058.1	7,053.3	18.7	17.8	113.38	-317.9	-205.6	403.2	369.4	33.84	11.914	
7,200.0	7,180.1	7,156.3	7,151.3	19.2	18.2	115.17	-321.5	-211.9	417.0	382.5	34.47	12.096	
7,300.0	7,278.8	7,254.6	7,249.3	19.6	18.5	116.83	-325.1	-218.1	431.1	396.0	35.12	12.276	
7,400.0	7,377.6	7,352.8	7,347.2	20.1	18.9	118.40	-328.7	-224.4	445.6	409.8	35.78	12.452	
7,500.0	7,476.3	7,451.0	7,445.2	20.6	19.3	119.86	-332.3	-230.6	460.3	423.9	36.46	12.626	
7,600.0	7,575.1	7,549.3	7,543.1	21.1	19.7	121.23	-335.8	-236.9	475.4	438.2	37.15	12.795	
7,700.0	7,673.8	7,647.5	7,641.1	21.6	20.1	122.52	-339.4	-243.1	490.7	452.9	37.86	12.961	
7,800.0	7,772.6	7,745.7	7,739.1	22.0	20.4	123.73	-343.0	-249.4	506.3	467.7	38.58	13.122	
7,900.0	7,871.3	7,843.9	7,837.0	22.6	20.8	124.87	-346.6	-255.6	522.0	482.7	39.31	13.279	
8,000.0	7,970.1	7,942.2	7,935.0	23.1	21.2	125.95	-350.2	-261.9	538.0	497.9	40.05	13.431	
8,100.0	8,068.8	8,040.4	8,033.0	23.6	21.7	126.96	-353.8	-268.1	554.1	513.3	40.80	13.579	
8,200.0	8,167.6	8,138.6	8,130.9	24.1	22.1	127.91	-357.3	-274.4	570.4	528.8	41.56	13.722	
8,300.0	8,266.3	8,236.8	8,228.9	24.6	22.5	128.82	-360.9	-280.6	586.8	544.5	42.33	13.861	
8,400.0	8,365.1	8,335.1	8,326.9	25.2	22.9	129.67	-364.5	-286.9	603.4	560.2	43.11	13.996	
8,500.0	8,463.8	8,433.3	8,424.8	25.7	23.3	130.48	-368.1	-293.1	620.0	576.1	43.89	14.126	
8,600.0	8,562.6	8,531.5	8,522.8	26.2	23.8	131.24	-371.7	-299.4	636.8	592.2	44.68	14.253	
8,700.0	8,661.3	8,629.8	8,620.7	26.8	24.2	131.97	-375.3	-305.6	653.7	608.3	45.48	14.375	
8,800.0	8,760.1	8,728.0	8,718.7	27.3	24.6	132.66	-378.8	-311.9	670.8	624.5	46.28	14.493	
8,837.4	8,797.0	8,764.7	8,755.4	27.5	24.8	132.91	-380.2	-314.2	677.1	630.6	46.57	14.541	
8,900.0	8,858.9	8,826.3	8,816.7	27.8	25.1	133.37	-382.4	-318.1	687.6	640.6	47.05	14.614	
9,000.0	8,957.9	8,924.8	8,915.0	28.4	25.5	134.00	-386.0	-324.4	703.4	655.6	47.84	14.704	
9,100.0	9,057.2	9,023.6	9,013.5	28.9	25.9	134.49	-389.6	-330.7	718.1	669.5	48.62	14.770	
9,200.0	9,156.6	9,122.6	9,112.3	29.4	26.4	134.86	-393.2	-337.0	731.6	682.2	49.38	14.815	
9,300.0	9,256.3	9,221.9	9,211.3	29.9	26.8	135.12	-396.8	-343.3	743.9	693.8	50.13	14.840	
9,400.0	9,356.0	9,321.2	9,310.4	30.3	27.3	135.26	-400.5	-349.6	754.9	704.1	50.85	14.847	
9,500.0	9,455.9	9,420.8	9,409.6	30.8	27.7	135.31	-404.1	-355.9	764.8	713.2	51.55	14.836	
9,600.0	9,555.8	9,520.4	9,509.0	31.2	28.2	135.25	-407.7	-362.3	773.4	721.1	52.22	14.810	
9,700.0	9,655.8	9,620.1	9,608.4	31.5	28.7	135.10	-411.4	-368.6	780.7	727.9	52.84	14.775	
9,744.2	9,700.0	9,664.1	9,652.3	31.6	28.9	-87.65	-413.0	-371.4	783.6	730.5	53.05	14.769	
9,800.0	9,755.8	9,719.8	9,707.8	31.6	29.1	-87.81	-415.0	-375.0	787.1	733.8	53.29	14.770	
9,876.7	9,832.5	9,796.3	9,784.2	31.6	29.5	-88.03	-417.8	-379.8	791.8	738.2	53.62	14.768	
9,900.0	9,855.8	9,819.5	9,807.3	31.6	29.6	-87.57	-418.6	-381.3	793.3	739.6	53.71	14.770	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Com 608H - Dagger State Com 608H - Dagger State Com 608H - Prelim 1													Offset Site Error:	0.0 usft
Survey Program:		0-MWD+HRGM							Rule Assigned:				Offset Well Error:	0.0 usft
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
9,925.0	9,880.7	9,844.3	9,832.0	31.5	29.7	-87.60	-419.5	-382.9	794.7	741.0	53.80	14.773		
9,950.0	9,905.5	9,868.9	9,856.5	31.5	29.8	-87.71	-420.4	-384.4	796.2	742.3	53.87	14.779		
9,975.0	9,930.1	9,893.3	9,880.9	31.4	29.9	-87.92	-421.3	-386.0	797.6	743.7	53.94	14.786		
10,000.0	9,954.4	9,917.3	9,904.8	31.3	30.1	-88.21	-422.2	-387.5	799.0	745.0	54.00	14.796		
10,025.0	9,978.4	9,941.0	9,928.5	31.2	30.2	-88.57	-423.1	-389.0	800.5	746.4	54.06	14.808		
10,050.0	10,002.0	9,964.2	9,951.6	31.1	30.3	-89.00	-423.9	-390.5	802.0	747.9	54.10	14.823		
10,075.0	10,025.2	9,987.0	9,974.3	31.0	30.4	-89.48	-424.7	-391.9	803.6	749.5	54.14	14.842		
10,100.0	10,047.8	10,009.1	9,996.4	30.9	30.5	-89.99	-425.6	-393.4	805.3	751.2	54.17	14.866		
10,125.0	10,069.8	10,030.6	10,017.8	30.8	30.6	-90.54	-426.3	-394.7	807.3	753.1	54.20	14.895		
10,150.0	10,091.1	10,051.5	10,038.6	30.7	30.7	-91.09	-427.1	-396.1	809.4	755.2	54.21	14.931		
10,175.0	10,111.8	10,071.6	10,058.7	30.6	30.8	-91.64	-427.8	-397.3	811.8	757.6	54.22	14.974		
10,200.0	10,131.7	10,090.8	10,077.9	30.6	30.9	-92.17	-428.5	-398.6	814.6	760.3	54.21	15.025		
10,225.0	10,150.7	10,109.3	10,096.3	30.5	31.0	-92.67	-429.2	-399.7	817.7	763.5	54.20	15.085		
10,250.0	10,168.9	10,126.8	10,113.8	30.4	31.0	-93.12	-429.8	-400.8	821.2	767.0	54.18	15.156		
10,275.0	10,186.2	10,143.4	10,130.3	30.3	31.1	-93.50	-430.5	-401.9	825.2	771.0	54.15	15.238		
10,300.0	10,202.5	10,159.0	10,145.8	30.3	31.2	-93.80	-431.0	-402.9	829.6	775.5	54.11	15.332		
10,325.0	10,217.8	10,173.5	10,160.3	30.2	31.3	-94.01	-431.6	-403.8	834.7	780.6	54.06	15.439		
10,350.0	10,232.0	10,186.9	10,173.7	30.1	31.3	-94.11	-432.0	-404.7	840.3	786.3	54.00	15.559		
10,375.0	10,245.2	10,199.3	10,186.0	30.1	31.4	-94.09	-432.5	-405.5	846.4	792.5	53.93	15.694		
10,400.0	10,257.2	10,210.5	10,197.2	30.1	31.4	-93.94	-432.9	-406.2	853.2	799.4	53.86	15.842		
10,425.0	10,268.0	10,220.5	10,207.2	30.0	31.5	-93.64	-433.3	-406.8	860.7	806.9	53.77	16.006		
10,450.0	10,277.7	10,229.3	10,215.9	30.0	31.5	-93.19	-433.6	-407.4	868.7	815.0	53.68	16.184		
10,475.0	10,286.1	10,236.8	10,223.5	30.0	31.6	-92.58	-433.9	-407.8	877.4	823.8	53.58	16.377		
10,500.0	10,293.3	10,243.1	10,229.8	30.0	31.6	-91.81	-434.1	-408.2	886.7	833.2	53.47	16.584		
10,525.0	10,299.2	10,248.2	10,234.8	30.0	31.6	-90.86	-434.3	-408.6	896.6	843.3	53.36	16.805		
10,550.0	10,303.8	10,251.9	10,238.5	30.1	31.6	-89.73	-434.4	-408.8	907.1	853.9	53.24	17.039		
10,575.0	10,307.2	10,254.4	10,241.0	30.1	31.6	-88.42	-434.5	-409.0	918.1	865.0	53.11	17.286		
10,600.0	10,309.3	10,255.5	10,242.1	30.2	31.7	-86.94	-434.5	-409.0	929.7	876.7	52.99	17.545		
10,626.7	10,310.0	10,255.3	10,241.9	30.2	31.7	-85.18	-434.5	-409.0	942.5	889.7	52.85	17.834		
10,700.0	10,310.0	10,252.6	10,239.3	30.5	31.6	-84.99	-434.4	-408.8	980.5	928.0	52.51	18.672		



Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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		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)			
0.0	0.0	1.0	1.0	0.0	0.0	179.62	-250.3	1.7	250.3				
100.0	100.0	101.0	101.0	0.5	0.5	179.62	-250.3	1.7	250.3	249.2	1.07	233.466	
200.0	200.0	201.0	201.0	1.7	1.7	179.62	-250.3	1.7	250.3	246.9	3.43	72.963	
300.0	300.0	301.0	301.0	2.4	2.4	179.62	-250.3	1.7	250.3	245.5	4.83	51.840	
400.0	400.0	401.0	401.0	3.0	3.0	179.62	-250.3	1.7	250.3	244.4	5.91	42.334	
500.0	500.0	501.0	501.0	3.4	3.4	179.62	-250.3	1.7	250.3	243.5	6.83	36.625	
600.0	600.0	601.0	601.0	3.8	3.8	179.62	-250.3	1.7	250.3	242.7	7.65	32.709	
700.0	700.0	701.0	701.0	4.2	4.2	179.62	-250.3	1.7	250.3	241.9	8.40	29.808	
800.0	800.0	801.0	801.0	4.5	4.5	179.62	-250.3	1.7	250.3	241.2	9.09	27.545	
900.0	900.0	901.0	901.0	4.9	4.9	179.62	-250.3	1.7	250.3	240.6	9.73	25.716	
1,000.0	1,000.0	1,001.0	1,001.0	5.2	5.2	179.62	-250.3	1.7	250.3	240.0	10.34	24.198	
1,100.0	1,100.0	1,101.0	1,101.0	5.5	5.5	179.62	-250.3	1.7	250.3	239.4	10.93	22.910	
1,200.0	1,200.0	1,201.0	1,201.0	5.7	5.7	179.62	-250.3	1.7	250.3	238.8	11.48	21.799	
1,300.0	1,300.0	1,301.0	1,301.0	6.0	6.0	179.62	-250.3	1.7	250.3	238.3	12.02	20.828	
1,400.0	1,400.0	1,401.0	1,401.0	6.3	6.3	179.62	-250.3	1.7	250.3	237.8	12.53	19.970	
1,500.0	1,500.0	1,501.0	1,501.0	6.5	6.5	179.62	-250.3	1.7	250.3	237.3	13.03	19.204	
1,600.0	1,600.0	1,601.0	1,601.0	6.8	6.8	179.62	-250.3	1.7	250.3	236.8	13.52	18.514	
1,700.0	1,700.0	1,701.0	1,701.0	7.0	7.0	179.62	-250.3	1.7	250.3	236.3	13.99	17.890	
1,800.0	1,800.0	1,801.0	1,801.0	7.2	7.2	179.62	-250.3	1.7	250.3	235.9	14.45	17.320	
1,900.0	1,900.0	1,901.0	1,901.0	7.4	7.5	179.62	-250.3	1.7	250.3	235.4	14.90	16.797	
2,000.0	2,000.0	2,001.0	2,001.0	7.7	7.7	179.62	-250.3	1.7	250.3	235.0	15.34	16.316	
2,100.0	2,100.0	2,101.0	2,101.0	7.9	7.9	179.62	-250.3	1.7	250.3	234.5	15.77	15.870	
2,200.0	2,200.0	2,201.0	2,201.0	8.1	8.1	179.62	-250.3	1.7	250.3	234.1	16.19	15.456	
2,300.0	2,300.0	2,301.0	2,301.0	8.3	8.3	179.62	-250.3	1.7	250.3	233.7	16.61	15.070	
2,400.0	2,400.0	2,401.0	2,401.0	8.5	8.5	179.62	-250.3	1.7	250.3	233.3	17.02	14.708	
2,500.0	2,500.0	2,501.0	2,501.0	8.7	8.7	179.62	-250.3	1.7	250.3	232.9	17.42	14.370	
2,600.0	2,600.0	2,601.0	2,601.0	8.9	8.9	179.62	-250.3	1.7	250.3	232.5	17.81	14.051	
2,700.0	2,700.0	2,701.0	2,701.0	9.1	9.1	179.62	-250.3	1.7	250.3	232.1	18.20	13.750	
2,800.0	2,800.0	2,801.0	2,801.0	9.3	9.3	179.62	-250.3	1.7	250.3	231.7	18.59	13.466	
2,900.0	2,900.0	2,901.0	2,901.0	9.5	9.5	179.62	-250.3	1.7	250.3	231.3	18.97	13.197	
3,000.0	3,000.0	3,001.0	3,001.0	9.7	9.7	179.62	-250.3	1.7	250.3	231.0	19.34	12.942	
3,100.0	3,100.0	3,101.0	3,101.0	9.9	9.9	179.62	-250.3	1.7	250.3	230.6	19.71	12.699	
3,200.0	3,200.0	3,201.0	3,201.0	10.0	10.0	179.62	-250.3	1.7	250.3	230.2	20.08	12.468	
3,300.0	3,300.0	3,301.0	3,301.0	10.2	10.2	179.62	-250.3	1.7	250.3	229.9	20.44	12.247	
3,400.0	3,400.0	3,401.0	3,401.0	10.4	10.4	179.62	-250.3	1.7	250.3	229.5	20.80	12.036	
3,500.0	3,500.0	3,501.0	3,501.0	10.6	10.6	179.62	-250.3	1.7	250.3	229.2	21.15	11.835	
3,600.0	3,600.0	3,601.0	3,601.0	10.7	10.8	179.62	-250.3	1.7	250.3	228.8	21.50	11.642	
3,700.0	3,700.0	3,701.0	3,701.0	10.9	10.9	179.62	-250.3	1.7	250.3	228.5	21.85	11.457	
3,800.0	3,800.0	3,801.0	3,801.0	11.1	11.1	179.62	-250.3	1.7	250.3	228.1	22.19	11.279	
3,900.0	3,900.0	3,901.0	3,901.0	11.3	11.3	179.62	-250.3	1.7	250.3	227.8	22.53	11.108	
4,000.0	4,000.0	4,001.0	4,001.0	11.4	11.4	179.62	-250.3	1.7	250.3	227.4	22.87	10.943	
4,100.0	4,100.0	4,101.0	4,101.0	11.6	11.6	179.62	-250.3	1.7	250.3	227.1	23.21	10.785	
4,200.0	4,200.0	4,201.0	4,201.0	11.8	11.8	179.62	-250.3	1.7	250.3	226.8	23.54	10.632	
4,300.0	4,300.0	4,301.0	4,301.0	11.9	11.9	179.62	-250.3	1.7	250.3	226.4	23.87	10.485	
4,400.0	4,400.0	4,401.0	4,401.0	12.1	12.1	179.62	-250.3	1.7	250.3	226.1	24.20	10.343	
4,500.0	4,500.0	4,501.0	4,501.0	12.3	12.3	179.62	-250.3	1.7	250.3	225.8	24.53	10.205	
4,600.0	4,600.0	4,601.0	4,601.0	12.4	12.4	179.62	-250.3	1.7	250.3	225.5	24.85	10.072	
4,700.0	4,700.0	4,701.0	4,701.0	12.6	12.6	179.62	-250.3	1.7	250.3	225.1	25.17	9.943	
4,800.0	4,800.0	4,801.0	4,801.0	12.7	12.7	179.62	-250.3	1.7	250.3	224.8	25.49	9.819	
4,900.0	4,900.0	4,901.0	4,901.0	12.9	12.9	179.62	-250.3	1.7	250.3	224.5	25.81	9.698	
5,000.0	5,000.0	5,000.0	5,000.0	13.1	13.1	179.62	-250.3	1.7	250.3	224.2	26.12	9.581	
5,016.8	5,016.8	5,017.5	5,017.5	13.1	13.1	42.27	-250.3	1.7	250.3	224.1	26.16	9.569	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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		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)			
5,100.0	5,100.0	5,099.0	5,099.0	13.2	13.2	42.23	-250.7	2.4	250.1	223.7	26.32	9.501	
5,200.0	5,200.0	5,197.0	5,196.9	13.2	13.3	42.12	-251.9	4.7	249.3	222.8	26.49	9.414	
5,300.0	5,299.9	5,295.0	5,294.8	13.3	13.4	41.93	-253.8	8.4	248.1	221.4	26.67	9.304	
5,400.0	5,399.7	5,392.9	5,392.6	13.5	13.5	41.67	-256.5	13.6	246.4	219.5	26.87	9.171	
5,500.0	5,499.4	5,492.1	5,491.5	13.6	13.6	41.38	-259.9	20.2	244.1	217.0	27.04	9.027	
5,600.0	5,598.9	5,592.0	5,591.1	13.8	13.8	41.33	-263.4	26.9	240.5	213.2	27.27	8.818	
5,700.0	5,698.3	5,691.9	5,690.7	14.0	13.9	41.57	-266.8	33.6	235.6	208.1	27.54	8.555	
5,800.0	5,797.4	5,791.7	5,790.2	14.2	14.1	42.12	-270.3	40.3	229.5	201.6	27.83	8.245	
5,906.8	5,903.0	5,898.1	5,896.3	14.4	14.4	43.09	-274.0	47.4	221.5	193.3	28.16	7.865	
6,000.0	5,995.1	5,990.9	5,988.9	14.7	14.6	44.10	-277.2	53.6	214.0	185.5	28.45	7.521	
6,100.0	6,093.8	6,090.5	6,088.2	15.0	14.8	45.27	-280.7	60.3	205.9	177.2	28.76	7.160	
6,200.0	6,192.6	6,190.1	6,187.5	15.3	15.1	46.53	-284.2	67.0	198.0	169.0	29.09	6.809	
6,300.0	6,291.3	6,289.7	6,286.8	15.6	15.4	47.89	-287.6	73.7	190.2	160.8	29.41	6.469	
6,400.0	6,390.1	6,389.3	6,386.1	15.9	15.7	49.37	-291.1	80.4	182.5	152.8	29.73	6.141	
6,500.0	6,488.8	6,488.9	6,485.4	16.3	16.0	50.98	-294.6	87.1	175.0	144.9	30.04	5.825	
6,600.0	6,587.6	6,588.5	6,584.7	16.7	16.3	52.73	-298.0	93.8	167.6	137.2	30.34	5.523	
6,700.0	6,686.3	6,688.0	6,684.0	17.0	16.6	54.65	-301.5	100.4	160.3	129.7	30.62	5.236	
6,800.0	6,785.1	6,787.6	6,783.3	17.5	16.9	56.74	-305.0	107.1	153.3	122.4	30.89	4.962	
6,900.0	6,883.8	6,887.2	6,882.6	17.9	17.3	59.02	-308.4	113.8	146.5	115.3	31.14	4.704	
7,000.0	6,982.6	6,986.8	6,981.9	18.3	17.6	61.53	-311.9	120.5	139.9	108.5	31.37	4.460	
7,100.0	7,081.3	7,086.4	7,081.2	18.7	18.0	64.28	-315.4	127.2	133.6	102.1	31.58	4.232	
7,200.0	7,180.1	7,186.0	7,180.5	19.2	18.3	67.28	-318.8	133.9	127.7	95.9	31.78	4.019	
7,300.0	7,278.8	7,285.6	7,279.9	19.6	18.7	70.57	-322.3	140.6	122.1	90.2	31.97	3.820	
7,400.0	7,377.6	7,385.2	7,379.2	20.1	19.1	74.16	-325.8	147.2	117.0	84.9	32.19	3.636	
7,500.0	7,476.3	7,484.7	7,478.5	20.6	19.5	78.05	-329.2	153.9	112.4	80.0	32.44	3.465	
7,600.0	7,575.1	7,584.3	7,577.8	21.1	19.9	82.26	-332.7	160.6	108.4	75.6	32.78	3.307	
7,700.0	7,673.8	7,683.9	7,677.1	21.6	20.3	86.76	-336.2	167.3	105.0	71.7	33.23	3.159	
7,800.0	7,772.6	7,783.5	7,776.4	22.0	20.7	91.53	-339.6	174.0	102.3	68.4	33.83	3.022	
7,900.0	7,871.3	7,883.1	7,875.7	22.6	21.1	96.52	-343.1	180.7	100.3	65.6	34.64	2.895	
8,000.0	7,970.1	7,982.7	7,975.0	23.1	21.5	101.67	-346.6	187.3	99.1	63.4	35.66	2.779	
8,092.7	8,061.6	8,075.0	8,067.0	23.5	21.9	106.52	-349.8	193.5	98.7	61.9	36.80	2.684	
8,100.0	8,068.8	8,082.3	8,074.3	23.6	21.9	106.90	-350.0	194.0	98.7	61.9	36.90	2.676	
8,200.0	8,167.6	8,181.9	8,173.6	24.1	22.4	112.12	-353.5	200.7	99.2	60.9	38.33	2.589	
8,300.0	8,266.3	8,281.4	8,272.9	24.6	22.8	117.25	-357.0	207.4	100.5	60.6	39.92	2.518	
8,400.0	8,365.1	8,381.0	8,372.2	25.2	23.2	122.22	-360.4	214.1	102.6	61.0	41.62	2.465	
8,500.0	8,463.8	8,480.6	8,471.5	25.7	23.6	126.95	-363.9	220.8	105.4	62.1	43.37	2.431	
8,600.0	8,562.6	8,580.2	8,570.8	26.2	24.1	131.41	-367.4	227.5	108.9	63.8	45.12	2.415	
8,700.0	8,661.3	8,679.8	8,670.1	26.8	24.5	135.57	-370.8	234.1	113.1	66.2	46.84	2.414	
8,800.0	8,760.1	8,779.4	8,769.4	27.3	25.0	139.42	-374.3	240.8	117.8	69.2	48.51	2.428	
8,837.4	8,797.0	8,816.6	8,806.5	27.5	25.1	140.78	-375.6	243.3	119.6	70.5	49.10	2.437	
8,900.0	8,858.9	8,879.0	8,868.7	27.8	25.4	142.88	-377.8	247.5	122.7	72.6	50.06	2.450	
9,000.0	8,957.9	8,978.7	8,968.2	28.4	25.9	145.67	-381.2	254.2	126.6	75.2	51.48	2.460	
9,100.0	9,057.2	9,078.6	9,067.7	28.9	26.3	147.87	-384.7	260.9	129.4	76.6	52.78	2.452	
9,200.0	9,156.6	9,178.5	9,167.4	29.4	26.8	149.59	-388.2	267.6	130.8	76.9	53.98	2.424	
9,300.0	9,256.3	9,278.4	9,267.0	29.9	27.2	150.90	-391.7	274.3	130.9	75.8	55.09	2.376	
9,400.0	9,356.0	9,378.4	9,366.7	30.3	27.7	151.84	-395.2	281.0	129.4	73.3	56.11	2.307	
9,500.0	9,455.9	9,478.4	9,466.4	30.8	28.2	152.43	-398.6	287.7	126.5	69.4	57.06	2.216	
9,600.0	9,555.8	9,578.3	9,566.0	31.2	28.6	152.68	-402.1	294.5	122.0	64.1	57.93	2.106	
9,700.0	9,655.8	9,678.1	9,665.5	31.5	29.1	152.54	-405.6	301.2	115.9	57.3	58.67	1.976	
9,744.2	9,700.0	9,722.1	9,709.5	31.6	29.3	-70.31	-407.1	304.1	112.8	53.9	58.90	1.915	
9,800.0	9,755.8	9,777.8	9,764.9	31.6	29.6	-70.61	-409.1	307.8	108.6	49.5	59.12	1.837	
9,876.7	9,832.5	9,854.3	9,841.2	31.6	29.9	-71.06	-411.7	313.0	102.9	43.4	59.42	1.731	

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - 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			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		
9,900.0	9,855.8	9,877.5	9,864.3	31.6	30.0	-71.34	-412.5	314.5	100.9	41.5	59.44	1.698		
9,925.0	9,880.7	9,902.3	9,889.1	31.5	30.2	-72.83	-413.4	316.2	98.5	39.2	59.29	1.661		
9,950.0	9,905.5	9,926.9	9,913.6	31.5	30.3	-75.14	-414.2	317.9	95.7	36.8	58.96	1.624		
9,975.0	9,930.1	9,951.2	9,937.9	31.4	30.4	-78.34	-415.1	319.5	92.8	34.5	58.38	1.590		
10,000.0	9,954.4	9,975.3	9,961.9	31.3	30.5	-82.46	-415.9	321.1	90.0	32.5	57.48	1.566		
10,025.0	9,978.4	9,999.0	9,985.5	31.2	30.6	-87.46	-416.8	322.7	87.5	31.4	56.16	1.558 ES, SF		
10,050.0	10,002.0	10,022.2	10,008.7	31.1	30.7	-93.26	-417.6	324.3	85.8	31.5	54.35	1.579		
10,072.0	10,022.4	10,042.2	10,028.6	31.0	30.8	-98.87	-418.3	325.6	85.2	32.9	52.34	1.629 CC		
10,075.0	10,025.2	10,044.9	10,031.3	31.0	30.8	-99.66	-418.4	325.8	85.2	33.2	52.04	1.638		
10,100.0	10,047.8	10,067.1	10,053.4	30.9	30.9	-106.37	-419.1	327.3	86.3	37.0	49.37	1.749		
10,125.0	10,069.8	10,088.6	10,074.9	30.8	31.0	-113.06	-419.9	328.7	89.4	42.8	46.65	1.917		
10,150.0	10,091.1	10,109.5	10,095.7	30.7	31.1	-119.40	-420.6	330.1	94.8	50.5	44.28	2.141		
10,175.0	10,111.8	10,129.6	10,115.7	30.6	31.2	-125.16	-421.3	331.5	102.5	59.9	42.52	2.410		
10,200.0	10,131.7	10,148.9	10,135.0	30.6	31.3	-130.21	-422.0	332.8	112.4	70.9	41.48	2.710		
10,225.0	10,150.7	10,167.3	10,153.3	30.5	31.4	-134.51	-422.6	334.0	124.4	83.4	41.04	3.031		
10,250.0	10,168.9	10,184.8	10,170.8	30.4	31.5	-138.09	-423.2	335.2	138.3	97.2	41.04	3.369		
10,275.0	10,186.2	10,201.4	10,187.4	30.3	31.6	-140.99	-423.8	336.3	153.7	112.4	41.31	3.722		
10,300.0	10,202.5	10,217.0	10,202.9	30.3	31.7	-143.27	-424.3	337.3	170.7	129.0	41.71	4.092		
10,325.0	10,217.8	10,231.6	10,217.4	30.2	31.7	-144.98	-424.8	338.3	188.9	146.7	42.17	4.479		
10,350.0	10,232.0	10,245.0	10,230.8	30.1	31.8	-146.17	-425.3	339.2	208.2	165.5	42.63	4.883		
10,375.0	10,245.2	10,257.4	10,243.2	30.1	31.9	-146.83	-425.7	340.0	228.5	185.4	43.07	5.305		
10,400.0	10,257.2	10,268.6	10,254.3	30.1	31.9	-146.96	-426.1	340.8	249.6	206.1	43.48	5.741		
10,425.0	10,268.0	10,278.6	10,264.3	30.0	32.0	-146.52	-426.5	341.5	271.5	227.7	43.84	6.193		
10,450.0	10,277.7	10,287.4	10,273.1	30.0	32.0	-145.40	-426.8	342.1	294.1	249.9	44.17	6.657		
10,475.0	10,286.1	10,295.0	10,280.7	30.0	32.0	-143.42	-427.1	342.6	317.2	272.7	44.46	7.133		
10,500.0	10,293.3	10,301.3	10,287.0	30.0	32.1	-140.29	-427.3	343.0	340.8	296.0	44.72	7.619		
10,525.0	10,299.2	10,306.4	10,292.0	30.0	32.1	-135.52	-427.4	343.3	364.7	319.8	44.95	8.113		
10,550.0	10,303.8	10,310.1	10,295.7	30.1	32.1	-128.28	-427.6	343.6	389.0	343.8	45.16	8.614		
10,575.0	10,307.2	10,312.6	10,298.2	30.1	32.1	-117.33	-427.7	343.7	413.5	368.2	45.35	9.119		
10,600.0	10,309.3	10,313.8	10,299.4	30.2	32.1	-101.43	-427.7	343.8	438.2	392.6	45.51	9.628		
10,626.7	10,310.0	10,313.6	10,299.2	30.2	32.1	-79.85	-427.7	343.8	464.6	418.9	45.67	10.173		
10,700.0	10,310.0	10,311.0	10,296.6	30.5	32.1	-77.73	-427.6	343.6	537.2	491.2	46.04	11.669		
10,800.0	10,310.0	10,307.4	10,293.1	30.8	32.1	-74.92	-427.5	343.4	636.5	590.1	46.42	13.713		
10,900.0	10,310.0	10,303.9	10,289.6	31.3	32.1	-72.19	-427.4	343.2	736.0	689.3	46.71	15.756		
11,000.0	10,310.0	10,300.4	10,286.0	31.8	32.1	-69.56	-427.2	342.9	835.6	788.6	46.95	17.798		
11,100.0	10,310.0	10,296.9	10,282.5	32.5	32.0	-67.04	-427.1	342.7	935.3	888.1	47.15	19.837		

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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Offset Design: Dagger State - Dagger State Unit #003 - Dagger State Unit #003 - Dagger State Unit #003												Offset Site Error:	0.0 usft
Survey Program: 14683-B001Mb. 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)			
14,200.0	10,310.0	10,271.5	10,271.5	80.5	25.6	90.00	4,569.4	545.5	977.4	925.0	52.41	18.649	
14,300.0	10,310.0	10,271.5	10,271.5	82.4	25.6	90.00	4,569.4	545.5	879.1	826.1	53.01	16.584	
14,400.0	10,310.0	10,271.5	10,271.5	84.3	25.6	90.00	4,569.4	545.5	781.2	727.3	53.89	14.496	
14,500.0	10,310.0	10,271.5	10,271.5	86.2	25.6	90.00	4,569.4	545.5	684.0	628.7	55.23	12.383	
14,600.0	10,310.0	10,271.5	10,271.5	88.1	25.6	90.00	4,569.4	545.5	587.6	530.3	57.33	10.249	
14,700.0	10,310.0	10,271.5	10,271.5	90.1	25.6	90.00	4,569.4	545.5	492.7	432.0	60.73	8.114	
14,800.0	10,310.0	10,271.5	10,271.5	92.0	25.6	90.00	4,569.4	545.5	400.3	333.9	66.39	6.029	
14,900.0	10,310.0	10,271.5	10,271.5	93.9	25.6	90.00	4,569.4	545.5	312.6	236.5	76.11	4.107	
15,000.0	10,310.0	10,271.5	10,271.5	95.8	25.6	90.00	4,569.4	545.5	235.0	142.3	92.62	2.537	
15,100.0	10,310.0	10,271.5	10,271.5	97.8	25.6	90.00	4,569.4	545.5	180.8	65.5	115.28	1.568	
15,162.6	10,310.0	10,271.5	10,271.5	99.0	25.6	90.00	4,569.4	545.5	169.6	45.2	124.37	1.364	Level 3, CC, ES, SF
15,200.0	10,310.0	10,271.5	10,271.5	99.7	25.6	90.00	4,569.4	545.5	173.7	49.3	124.40	1.396	Level 3
15,300.0	10,310.0	10,271.5	10,271.5	101.6	25.6	90.00	4,569.4	545.5	218.3	107.8	110.46	1.976	
15,400.0	10,310.0	10,271.5	10,271.5	103.6	25.6	90.00	4,569.4	545.5	291.8	196.8	94.94	3.073	
15,500.0	10,310.0	10,271.5	10,271.5	105.5	25.6	90.00	4,569.4	545.5	377.6	293.2	84.42	4.473	
15,600.0	10,310.0	10,271.5	10,271.5	107.5	25.6	90.00	4,569.4	545.5	469.1	391.5	77.64	6.043	
15,700.0	10,310.0	10,271.5	10,271.5	109.4	25.6	90.00	4,569.4	545.5	563.5	490.4	73.12	7.706	
15,800.0	10,310.0	10,271.5	10,271.5	111.4	25.6	90.00	4,569.4	545.5	659.6	589.6	70.01	9.422	
15,900.0	10,310.0	10,271.5	10,271.5	113.4	25.6	90.00	4,569.4	545.5	756.6	688.9	67.78	11.164	
16,000.0	10,310.0	10,271.5	10,271.5	115.3	25.6	90.00	4,569.4	545.5	854.4	788.3	66.13	12.920	
16,100.0	10,310.0	10,271.5	10,271.5	117.3	25.6	90.00	4,569.4	545.5	952.6	887.7	64.89	14.680	

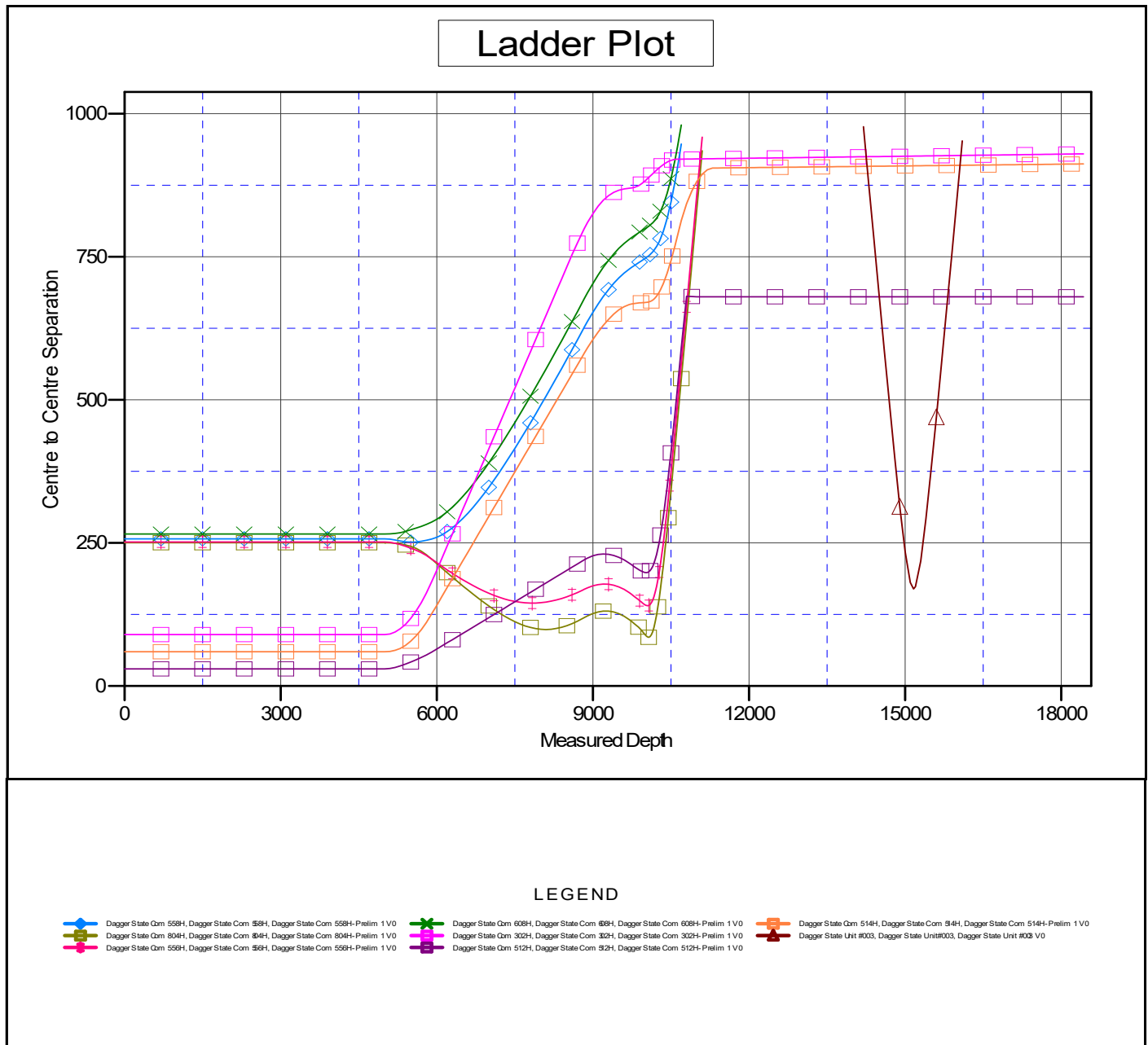


Anticollision Report

Company:	Advance Energy Partners	Local Co-ordinate Reference:	Well Dagger State Com 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3847.5usft (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 516H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 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 516H
Project:	Hat Mesa	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Reference Site:	Dagger State	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.79 sigma
Reference Wellbore	Dagger State Com 516H	Database:	EDM 5000.16 Single User Db
Reference Design:	Dagger State Com 516H - Prelim 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3847.5usft (Original Well Ele

Offset Depths are relative to Offset Datum

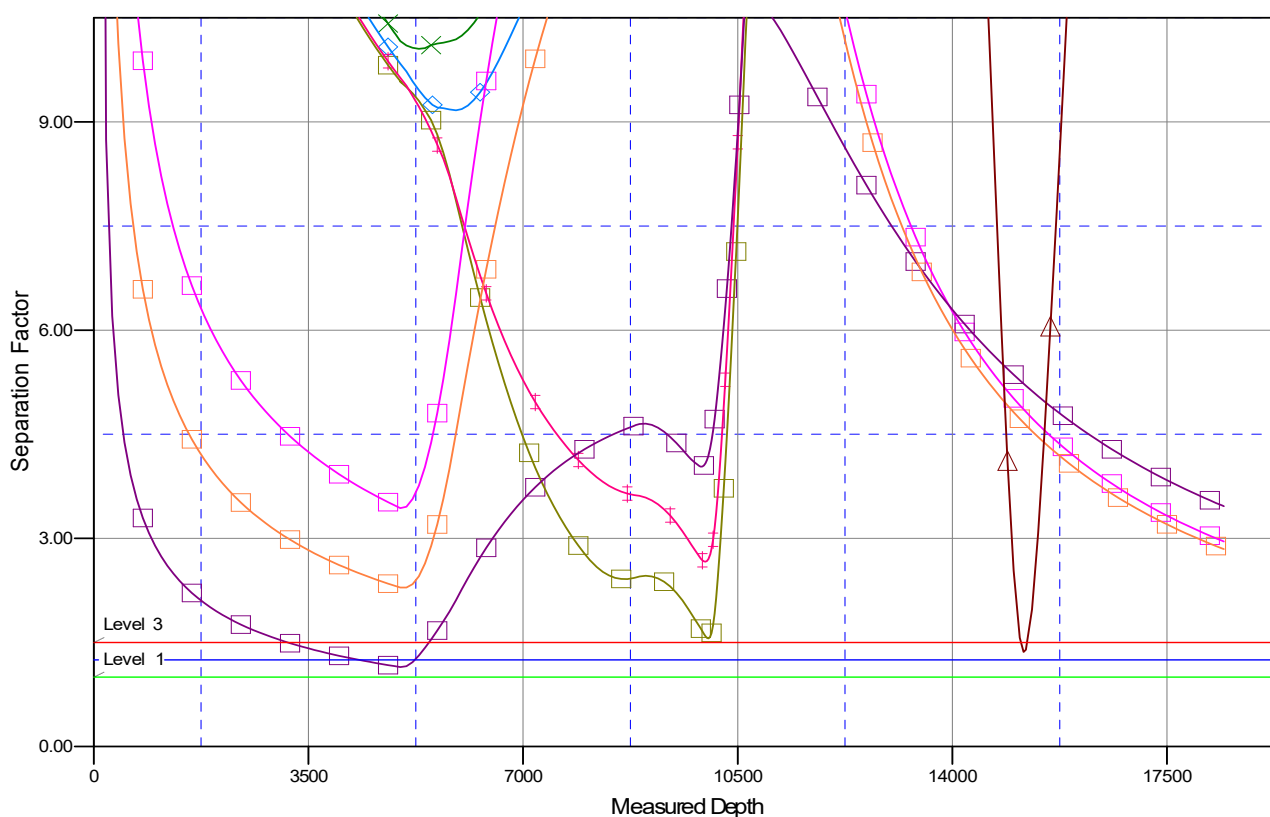
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Dagger State Com 516H

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 608H, Dagger State Com 608H, Dagger State Com 608H-Prelim 1 V0 Dagger State Com 556H, Dagger State Com 556H, Dagger State Com 556H-Prelim 1 V0	Dagger State Com 608H, Dagger State Com 608H, Dagger State Com 608H-Prelim 1 V0 Dagger State Com 302H, Dagger State Com 302H, Dagger State Com 302H-Prelim 1 V0 Dagger State Com 512H, Dagger State Com 512H, Dagger State Com 512H-Prelim 1 V0	Dagger State Com 514H, Dagger State Com 514H, Dagger State Com 514H-Prelim 1 V0 Dagger State Unit #003, Dagger State Unit #003, Dagger State Unit #003 V0
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Advance Energy Partners

Hat Mesa

Dagger State

Dagger State Com 516H

Dagger State Com 516H

Plan: Dagger State Com 516H - Prelim 1

Standard Planning Report

17 May, 2021



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 516H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 516H		
Design:	Dagger State Com 516H - 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 516H					
Well Position	+N/-S	0.0 usft	Northing:	528,128.54 usft	Latitude:	32° 26' 59.474 N
	+E/-W	0.0 usft	Easting:	762,227.54 usft	Longitude:	103° 37' 2.089 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,815.0 usft
Grid Convergence:		0.38 °				

Wellbore	Dagger State Com 516H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/3/2021	6.59	60.21	47,681.89434810

Design	Dagger State Com 516H - 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	2.59

Plan Survey Tool Program	Date	5/17/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,426.8	Dagger State Com 516H - 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	
5,906.8	9.07	137.34	5,903.0	-52.7	48.5	1.00	1.00	0.00	137.34	
8,837.4	9.07	137.34	8,797.0	-392.3	361.5	0.00	0.00	0.00	0.00	
9,744.2	0.00	0.00	9,700.0	-445.0	410.0	1.00	-1.00	0.00	180.00	
9,876.7	0.00	0.00	9,832.5	-445.0	410.0	0.00	0.00	0.00	0.00	
10,626.7	90.00	359.61	10,310.0	32.5	406.7	12.00	12.00	0.00	359.61	
18,427.4	90.00	359.61	10,310.0	7,832.9	353.6	0.00	0.00	0.00	0.00	Dagger State Com 51



Planning Report

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Project:	Hat Mesa	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 516H		
Design:	Dagger State Com 516H - 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	137.34	5,100.0	-0.6	0.6	-0.6	1.00	1.00	0.00
5,200.0	2.00	137.34	5,200.0	-2.6	2.4	-2.5	1.00	1.00	0.00



Planning Report

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Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 516H		
Design:	Dagger State Com 516H - 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	137.34	5,299.9	-5.8	5.3	-5.5	1.00	1.00	0.00
5,400.0	4.00	137.34	5,399.7	-10.3	9.5	-9.8	1.00	1.00	0.00
5,500.0	5.00	137.34	5,499.4	-16.0	14.8	-15.4	1.00	1.00	0.00
5,600.0	6.00	137.34	5,598.9	-23.1	21.3	-22.1	1.00	1.00	0.00
5,700.0	7.00	137.34	5,698.3	-31.4	28.9	-30.1	1.00	1.00	0.00
5,800.0	8.00	137.34	5,797.4	-41.0	37.8	-39.3	1.00	1.00	0.00
5,900.0	9.00	137.34	5,896.3	-51.9	47.8	-49.7	1.00	1.00	0.00
5,906.8	9.07	137.34	5,903.0	-52.7	48.5	-50.4	1.00	1.00	0.00
Start 2930.6 hold at 5906.8 MD									
6,000.0	9.07	137.34	5,995.1	-63.5	58.5	-60.8	0.00	0.00	0.00
6,100.0	9.07	137.34	6,093.8	-75.1	69.2	-71.9	0.00	0.00	0.00
6,200.0	9.07	137.34	6,192.6	-86.6	79.8	-83.0	0.00	0.00	0.00
6,300.0	9.07	137.34	6,291.3	-98.2	90.5	-94.1	0.00	0.00	0.00
6,400.0	9.07	137.34	6,390.1	-109.8	101.2	-105.2	0.00	0.00	0.00
6,500.0	9.07	137.34	6,488.8	-121.4	111.9	-116.2	0.00	0.00	0.00
6,600.0	9.07	137.34	6,587.6	-133.0	122.5	-127.3	0.00	0.00	0.00
6,700.0	9.07	137.34	6,686.3	-144.6	133.2	-138.4	0.00	0.00	0.00
6,800.0	9.07	137.34	6,785.1	-156.2	143.9	-149.5	0.00	0.00	0.00
6,900.0	9.07	137.34	6,883.8	-167.8	154.6	-160.6	0.00	0.00	0.00
7,000.0	9.07	137.34	6,982.6	-179.4	165.3	-171.7	0.00	0.00	0.00
7,100.0	9.07	137.34	7,081.3	-191.0	175.9	-182.8	0.00	0.00	0.00
7,200.0	9.07	137.34	7,180.1	-202.6	186.6	-193.9	0.00	0.00	0.00
7,300.0	9.07	137.34	7,278.8	-214.1	197.3	-205.0	0.00	0.00	0.00
7,400.0	9.07	137.34	7,377.6	-225.7	208.0	-216.1	0.00	0.00	0.00
7,500.0	9.07	137.34	7,476.3	-237.3	218.7	-227.2	0.00	0.00	0.00
7,600.0	9.07	137.34	7,575.1	-248.9	229.3	-238.3	0.00	0.00	0.00
7,700.0	9.07	137.34	7,673.8	-260.5	240.0	-249.4	0.00	0.00	0.00
7,800.0	9.07	137.34	7,772.6	-272.1	250.7	-260.5	0.00	0.00	0.00
7,900.0	9.07	137.34	7,871.3	-283.7	261.4	-271.6	0.00	0.00	0.00
8,000.0	9.07	137.34	7,970.1	-295.3	272.1	-282.7	0.00	0.00	0.00
8,100.0	9.07	137.34	8,068.8	-306.9	282.7	-293.8	0.00	0.00	0.00
8,200.0	9.07	137.34	8,167.6	-318.5	293.4	-304.9	0.00	0.00	0.00
8,300.0	9.07	137.34	8,266.3	-330.1	304.1	-316.0	0.00	0.00	0.00
8,400.0	9.07	137.34	8,365.1	-341.6	314.8	-327.1	0.00	0.00	0.00
8,500.0	9.07	137.34	8,463.8	-353.2	325.4	-338.2	0.00	0.00	0.00
8,600.0	9.07	137.34	8,562.6	-364.8	336.1	-349.3	0.00	0.00	0.00
8,700.0	9.07	137.34	8,661.3	-376.4	346.8	-360.4	0.00	0.00	0.00
8,800.0	9.07	137.34	8,760.1	-388.0	357.5	-371.5	0.00	0.00	0.00
8,837.4	9.07	137.34	8,797.0	-392.3	361.5	-375.6	0.00	0.00	0.00
Start Drop -1.00									
8,900.0	8.44	137.34	8,858.9	-399.3	367.9	-382.3	1.00	-1.00	0.00
9,000.0	7.44	137.34	8,957.9	-409.5	377.3	-392.1	1.00	-1.00	0.00
9,100.0	6.44	137.34	9,057.2	-418.4	385.5	-400.6	1.00	-1.00	0.00
9,200.0	5.44	137.34	9,156.6	-426.0	392.5	-407.9	1.00	-1.00	0.00
9,300.0	4.44	137.34	9,256.3	-432.3	398.3	-413.9	1.00	-1.00	0.00
9,400.0	3.44	137.34	9,356.0	-437.4	403.0	-418.8	1.00	-1.00	0.00
9,500.0	2.44	137.34	9,455.9	-441.2	406.5	-422.4	1.00	-1.00	0.00
9,600.0	1.44	137.34	9,555.8	-443.7	408.8	-424.8	1.00	-1.00	0.00
9,700.0	0.44	137.34	9,655.8	-444.9	409.9	-425.9	1.00	-1.00	0.00
9,744.2	0.00	0.00	9,700.0	-445.0	410.0	-426.1	1.00	-1.00	-310.83
Start 132.5 hold at 9744.2 MD									
9,800.0	0.00	0.00	9,755.8	-445.0	410.0	-426.1	0.00	0.00	0.00
9,876.7	0.00	0.00	9,832.5	-445.0	410.0	-426.1	0.00	0.00	0.00



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Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 516H		
Design:	Dagger State Com 516H - 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)
KOP #2 - Start Build 12.00									
9,900.0	2.79	359.61	9,855.8	-444.4	410.0	-425.5	12.00	12.00	0.00
10,000.0	14.79	359.61	9,954.4	-429.2	409.9	-410.3	12.00	12.00	0.00
10,100.0	26.79	359.61	10,047.8	-393.7	409.7	-374.9	12.00	12.00	0.00
10,200.0	38.79	359.61	10,131.7	-339.7	409.3	-320.9	12.00	12.00	0.00
10,300.0	50.79	359.61	10,202.5	-269.4	408.8	-250.6	12.00	12.00	0.00
10,400.0	62.79	359.61	10,257.2	-185.8	408.2	-167.2	12.00	12.00	0.00
10,500.0	74.79	359.61	10,293.3	-92.8	407.6	-74.3	12.00	12.00	0.00
10,600.0	86.79	359.61	10,309.3	5.7	406.9	24.1	12.00	12.00	0.00
10,613.7	88.44	359.61	10,309.8	19.5	406.8	37.8	12.00	12.00	0.00
Dagger State Com 516H LP									
10,626.7	90.00	359.61	10,310.0	32.5	406.7	50.8	12.00	12.00	0.00
LP - Start 7800.7 hold at 10626.7 MD									
10,700.0	90.00	359.61	10,310.0	105.7	406.3	123.9	0.00	0.00	0.00
10,800.0	90.00	359.61	10,310.0	205.7	405.6	223.8	0.00	0.00	0.00
10,900.0	90.00	359.61	10,310.0	305.7	404.9	323.7	0.00	0.00	0.00
11,000.0	90.00	359.61	10,310.0	405.7	404.2	423.5	0.00	0.00	0.00
11,100.0	90.00	359.61	10,310.0	505.7	403.5	523.4	0.00	0.00	0.00
11,200.0	90.00	359.61	10,310.0	605.7	402.8	623.3	0.00	0.00	0.00
11,300.0	90.00	359.61	10,310.0	705.7	402.2	723.1	0.00	0.00	0.00
11,400.0	90.00	359.61	10,310.0	805.7	401.5	823.0	0.00	0.00	0.00
11,500.0	90.00	359.61	10,310.0	905.7	400.8	922.9	0.00	0.00	0.00
11,600.0	90.00	359.61	10,310.0	1,005.7	400.1	1,022.7	0.00	0.00	0.00
11,700.0	90.00	359.61	10,310.0	1,105.7	399.4	1,122.6	0.00	0.00	0.00
11,800.0	90.00	359.61	10,310.0	1,205.7	398.8	1,222.5	0.00	0.00	0.00
11,900.0	90.00	359.61	10,310.0	1,305.7	398.1	1,322.3	0.00	0.00	0.00
12,000.0	90.00	359.61	10,310.0	1,405.7	397.4	1,422.2	0.00	0.00	0.00
12,100.0	90.00	359.61	10,310.0	1,505.7	396.7	1,522.1	0.00	0.00	0.00
12,200.0	90.00	359.61	10,310.0	1,605.7	396.0	1,621.9	0.00	0.00	0.00
12,300.0	90.00	359.61	10,310.0	1,705.7	395.4	1,721.8	0.00	0.00	0.00
12,400.0	90.00	359.61	10,310.0	1,805.7	394.7	1,821.7	0.00	0.00	0.00
12,500.0	90.00	359.61	10,310.0	1,905.7	394.0	1,921.5	0.00	0.00	0.00
12,600.0	90.00	359.61	10,310.0	2,005.7	393.3	2,021.4	0.00	0.00	0.00
12,700.0	90.00	359.61	10,310.0	2,105.7	392.6	2,121.3	0.00	0.00	0.00
12,800.0	90.00	359.61	10,310.0	2,205.7	392.0	2,221.1	0.00	0.00	0.00
12,900.0	90.00	359.61	10,310.0	2,305.7	391.3	2,321.0	0.00	0.00	0.00
13,000.0	90.00	359.61	10,310.0	2,405.7	390.6	2,420.8	0.00	0.00	0.00
13,100.0	90.00	359.61	10,310.0	2,505.7	389.9	2,520.7	0.00	0.00	0.00
13,200.0	90.00	359.61	10,310.0	2,605.7	389.2	2,620.6	0.00	0.00	0.00
13,300.0	90.00	359.61	10,310.0	2,705.7	388.5	2,720.4	0.00	0.00	0.00
13,400.0	90.00	359.61	10,310.0	2,805.7	387.9	2,820.3	0.00	0.00	0.00
13,500.0	90.00	359.61	10,310.0	2,905.7	387.2	2,920.2	0.00	0.00	0.00
13,600.0	90.00	359.61	10,310.0	3,005.7	386.5	3,020.0	0.00	0.00	0.00
13,700.0	90.00	359.61	10,310.0	3,105.7	385.8	3,119.9	0.00	0.00	0.00
13,800.0	90.00	359.61	10,310.0	3,205.7	385.1	3,219.8	0.00	0.00	0.00
13,900.0	90.00	359.61	10,310.0	3,305.7	384.5	3,319.6	0.00	0.00	0.00
14,000.0	90.00	359.61	10,310.0	3,405.7	383.8	3,419.5	0.00	0.00	0.00
14,100.0	90.00	359.61	10,310.0	3,505.7	383.1	3,519.4	0.00	0.00	0.00
14,200.0	90.00	359.61	10,310.0	3,605.6	382.4	3,619.2	0.00	0.00	0.00
14,300.0	90.00	359.61	10,310.0	3,705.6	381.7	3,719.1	0.00	0.00	0.00
14,400.0	90.00	359.61	10,310.0	3,805.6	381.1	3,819.0	0.00	0.00	0.00
14,500.0	90.00	359.61	10,310.0	3,905.6	380.4	3,918.8	0.00	0.00	0.00
14,600.0	90.00	359.61	10,310.0	4,005.6	379.7	4,018.7	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 516H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 516H		
Design:	Dagger State Com 516H - 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)	
14,700.0	90.00	359.61	10,310.0	4,105.6	379.0	4,118.6	0.00	0.00	0.00	
14,800.0	90.00	359.61	10,310.0	4,205.6	378.3	4,218.4	0.00	0.00	0.00	
14,900.0	90.00	359.61	10,310.0	4,305.6	377.7	4,318.3	0.00	0.00	0.00	
15,000.0	90.00	359.61	10,310.0	4,405.6	377.0	4,418.2	0.00	0.00	0.00	
15,100.0	90.00	359.61	10,310.0	4,505.6	376.3	4,518.0	0.00	0.00	0.00	
15,200.0	90.00	359.61	10,310.0	4,605.6	375.6	4,617.9	0.00	0.00	0.00	
15,300.0	90.00	359.61	10,310.0	4,705.6	374.9	4,717.7	0.00	0.00	0.00	
15,400.0	90.00	359.61	10,310.0	4,805.6	374.3	4,817.6	0.00	0.00	0.00	
15,500.0	90.00	359.61	10,310.0	4,905.6	373.6	4,917.5	0.00	0.00	0.00	
15,600.0	90.00	359.61	10,310.0	5,005.6	372.9	5,017.3	0.00	0.00	0.00	
15,700.0	90.00	359.61	10,310.0	5,105.6	372.2	5,117.2	0.00	0.00	0.00	
15,800.0	90.00	359.61	10,310.0	5,205.6	371.5	5,217.1	0.00	0.00	0.00	
15,900.0	90.00	359.61	10,310.0	5,305.6	370.8	5,316.9	0.00	0.00	0.00	
16,000.0	90.00	359.61	10,310.0	5,405.6	370.2	5,416.8	0.00	0.00	0.00	
16,100.0	90.00	359.61	10,310.0	5,505.6	369.5	5,516.7	0.00	0.00	0.00	
16,200.0	90.00	359.61	10,310.0	5,605.6	368.8	5,616.5	0.00	0.00	0.00	
16,300.0	90.00	359.61	10,310.0	5,705.6	368.1	5,716.4	0.00	0.00	0.00	
16,400.0	90.00	359.61	10,310.0	5,805.6	367.4	5,816.3	0.00	0.00	0.00	
16,500.0	90.00	359.61	10,310.0	5,905.6	366.8	5,916.1	0.00	0.00	0.00	
16,600.0	90.00	359.61	10,310.0	6,005.6	366.1	6,016.0	0.00	0.00	0.00	
16,700.0	90.00	359.61	10,310.0	6,105.6	365.4	6,115.9	0.00	0.00	0.00	
16,800.0	90.00	359.61	10,310.0	6,205.6	364.7	6,215.7	0.00	0.00	0.00	
16,900.0	90.00	359.61	10,310.0	6,305.6	364.0	6,315.6	0.00	0.00	0.00	
17,000.0	90.00	359.61	10,310.0	6,405.6	363.4	6,415.5	0.00	0.00	0.00	
17,100.0	90.00	359.61	10,310.0	6,505.6	362.7	6,515.3	0.00	0.00	0.00	
17,200.0	90.00	359.61	10,310.0	6,605.6	362.0	6,615.2	0.00	0.00	0.00	
17,300.0	90.00	359.61	10,310.0	6,705.6	361.3	6,715.0	0.00	0.00	0.00	
17,400.0	90.00	359.61	10,310.0	6,805.6	360.6	6,814.9	0.00	0.00	0.00	
17,500.0	90.00	359.61	10,310.0	6,905.6	360.0	6,914.8	0.00	0.00	0.00	
17,600.0	90.00	359.61	10,310.0	7,005.6	359.3	7,014.6	0.00	0.00	0.00	
17,700.0	90.00	359.61	10,310.0	7,105.6	358.6	7,114.5	0.00	0.00	0.00	
17,800.0	90.00	359.61	10,310.0	7,205.6	357.9	7,214.4	0.00	0.00	0.00	
17,900.0	90.00	359.61	10,310.0	7,305.6	357.2	7,314.2	0.00	0.00	0.00	
18,000.0	90.00	359.61	10,310.0	7,405.6	356.5	7,414.1	0.00	0.00	0.00	
18,100.0	90.00	359.61	10,310.0	7,505.6	355.9	7,514.0	0.00	0.00	0.00	
18,200.0	90.00	359.61	10,310.0	7,605.6	355.2	7,613.8	0.00	0.00	0.00	
18,300.0	90.00	359.61	10,310.0	7,705.6	354.5	7,713.7	0.00	0.00	0.00	
18,400.0	90.00	359.61	10,310.0	7,805.6	353.8	7,813.6	0.00	0.00	0.00	
18,427.4	90.00	359.61	10,310.0	7,832.9	353.6	7,840.9	0.00	0.00	0.00	
TD at 18427.4 - Dagger State Com 516H BHL										



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Dagger State Com 516H
Company:	Advance Energy Partners	TVD Reference:	WELL @ 3847.5usft (Original Well Elev)
Project:	Hat Mesa	MD Reference:	WELL @ 3847.5usft (Original Well Elev)
Site:	Dagger State	North Reference:	Grid
Well:	Dagger State Com 516H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dagger State Com 516H		
Design:	Dagger State Com 516H - Prelim 1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Dagger State Com 516H	0.00	0.00	10,310.0	19.5	410.2	528,148.03	762,637.70	32° 26' 59.640 N	103° 36' 57.301 W
- plan misses target center by 3.3usft at 10613.7usft MD (10309.8 TVD, 19.5 N, 406.8 E)									
- Point									
Dagger State Com 516H	0.00	0.00	10,310.0	7,832.9	353.6	535,961.48	762,581.18	32° 28' 16.957 N	103° 36' 57.348 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(usft)	(usft)		(")	(")	
10,626.7	10,310.0	LP	5-1/2	5-1/2	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
5,000.0	5,000.0	0.0	0.0	KOP - Start Build 1.00	
5,906.8	5,903.0	-52.7	48.5	Start 2930.6 hold at 5906.8 MD	
8,837.4	8,797.0	-392.3	361.5	Start Drop -1.00	
9,744.2	9,700.0	-445.0	410.0	Start 132.5 hold at 9744.2 MD	
9,876.7	9,832.5	-445.0	410.0	KOP #2 - Start Build 12.00	
10,626.7	10,310.0	32.5	406.7	LP - Start 7800.7 hold at 10626.7 MD	
18,427.4	10,310.0	7,832.9	353.6	TD at 18427.4	

**WELL DETAILS: Dagger State Com 516H**

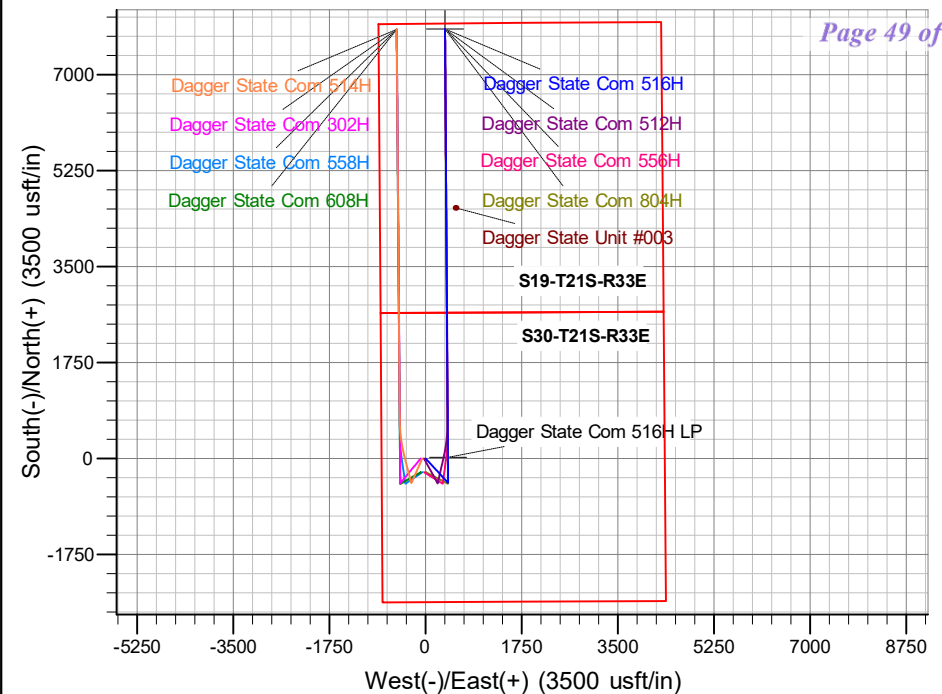
Ground Elev: 3815.0 KB: 3847.5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	528128.54	762227.54	32° 26' 59.474 N	103° 37' 2.089 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	5906.8	9.07	137.34	5903.0	-52.7	48.5	1.00	137.34	-50.4	Start 2930.6 hold at 5906.8 MD
4	8837.4	9.07	137.34	8797.0	-392.3	361.5	0.00	0.00	-375.6	Start Drop -1.00
5	9744.2	0.00	0.00	9700.0	-445.0	410.0	1.00	180.00	-426.1	Start 132.5 hold at 9744.2 MD
6	9876.7	0.00	0.00	9832.5	-445.0	410.0	0.00	0.00	-426.1	KOP #2 - Start Build 12.00
7	10626.7	90.00	359.61	10310.0	32.5	406.7	12.00	359.61	50.8	LP - Start 7800.7 hold at 10626.7 MD
8	18427.4	90.00	359.61	10310.0	7832.9	353.6	0.00	0.00	7840.9	TD at 18427.4

