

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 273600

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
4. Property Code 325948		3. API Number 30-025-46470
5. Property Name WOOL HEAD 20 STATE COM		6. Well No. 509H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
O	20	21S	33E	O	350	S	2013	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
J	17	21S	33E	J	2540	S	1590	E	Lea

9. Pool Information

WC-025 G-08 S213304D;BONE SPRING	97895
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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 3723
16. Multiple N	17. Proposed Depth 19270	18. Formation Bone Spring	19. Contractor	20. Spud Date 10/21/2019
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

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

Casing/Cement Program: Additional Comments

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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. Signature:	OIL CONSERVATION DIVISION
Printed Name: Electronically filed by David C Harwell	Approved By: Paul F Kautz
Title: VP Engineering	Title: Geologist
Email Address: dharwell@advanceenergypartners.com	Approved Date: 10/28/2019 Expiration Date: 10/28/2021
Date: 10/21/2019 Phone: 832-672-4604	Conditions of Approval Attached

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Phone (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 4, 2011

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
97895	WC-025 G-08 S213304D ; BONE SPRING	
Property Code	Property Name	Well Number
325948	WOOL HEAD 20 STATE COM	509H
OGRID No.	Operator Name	Elevation
372417	ADVANCE ENERGY PARTNERS HAT MESA	3723'

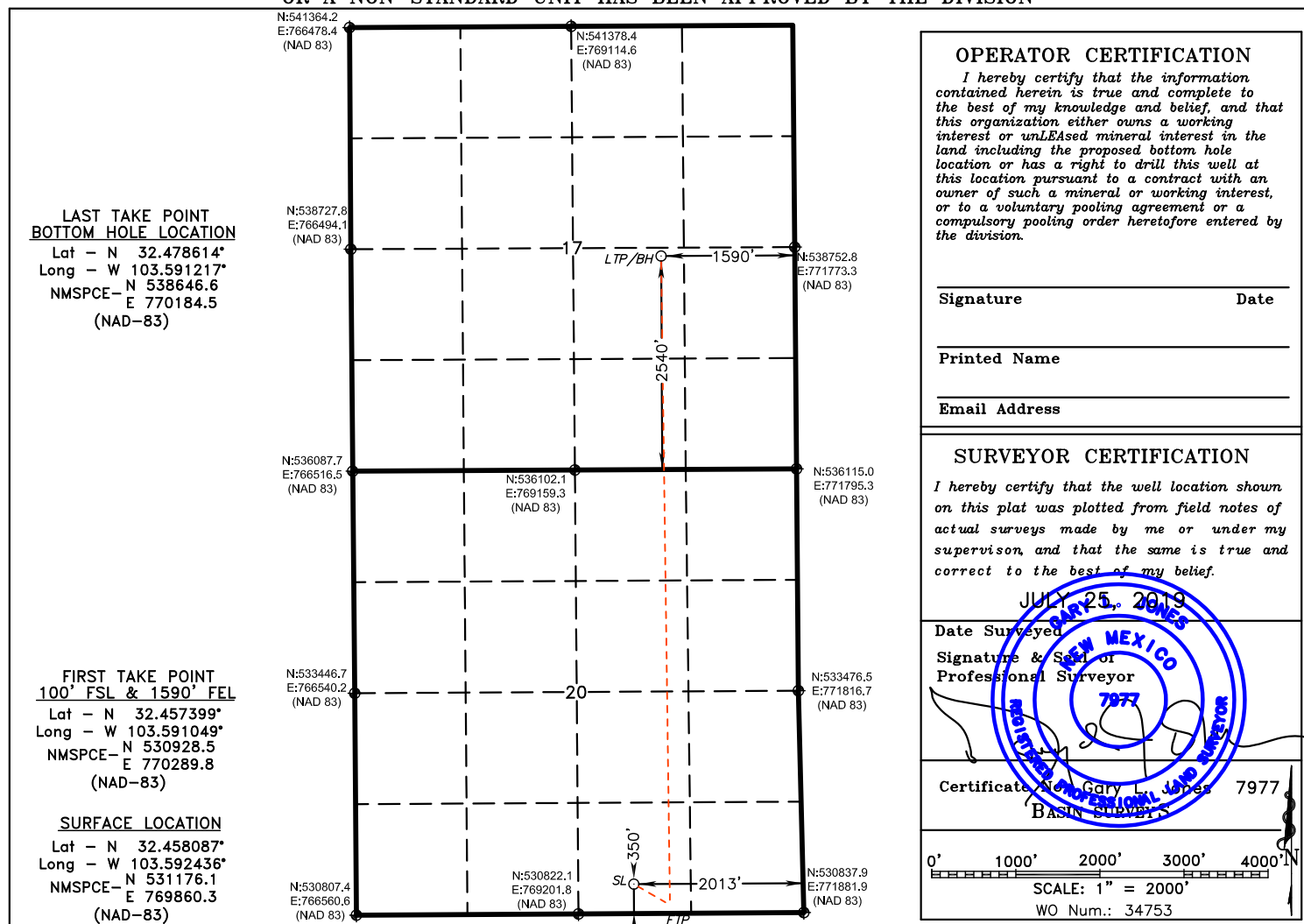
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
0	20	21 S	33 E		350	SOUTH	2013	EAST	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
J	17	21 S	33 E		2540	SOUTH	1590	EAST	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 20, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**

Proposed Lease Road

Existing Lease Road

State Hwy 176

EOG FRUIT LOOP 502H

WELL LOCATIONS:

- 507H
- 553H
- 508H
- 509H
- 703H
- 605H
- 606H

ADVANCE ENERGY PARTNERS HAT MESA
WOOL HEAD 20 STATE COM 509H
ELEV. - 3723'

Lat - N 32.458087°
 Long - W 103.592436°
 NADSPCE - N 531176.1
 E 769860.3
 (NAD-83)

Scale: 1" = 200'

North Arrow: N

DIRECTIONS TO LOCATION:
 FROM THE JUNCTION OF STATE 176 AND US
 HWY 62/180, EAST FOR ±7 MILES TO LEASE
 ROAD. THEN SOUTH ON LEASE ROAD FOR ±4.5
 MILES. THEN EASTERLY ON LEASE ROAD FOR 1.5
 MILES TO PROPOSED LEASE ROAD.

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241

(575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

ADVANCE ENERGY PARTNERS HAT MESA	
REF: WOOL HEAD 20 STATE COM 509H / WELL PAD TOPO	
THE WOOL HEAD 20 STATE COM 509H LOCATED 350' FROM THE SOUTH LINE AND 2013' FROM THE EAST LINE OF SECTION 20, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M., LEA COUNTY, NEW MEXICO.	

W.O. Number: 34753	Drawn By: K. GOAD	Date: 07-26-2019	Survey Date: 07-25-2019	Sheet 1 of 1 Sheets
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in the oilfield

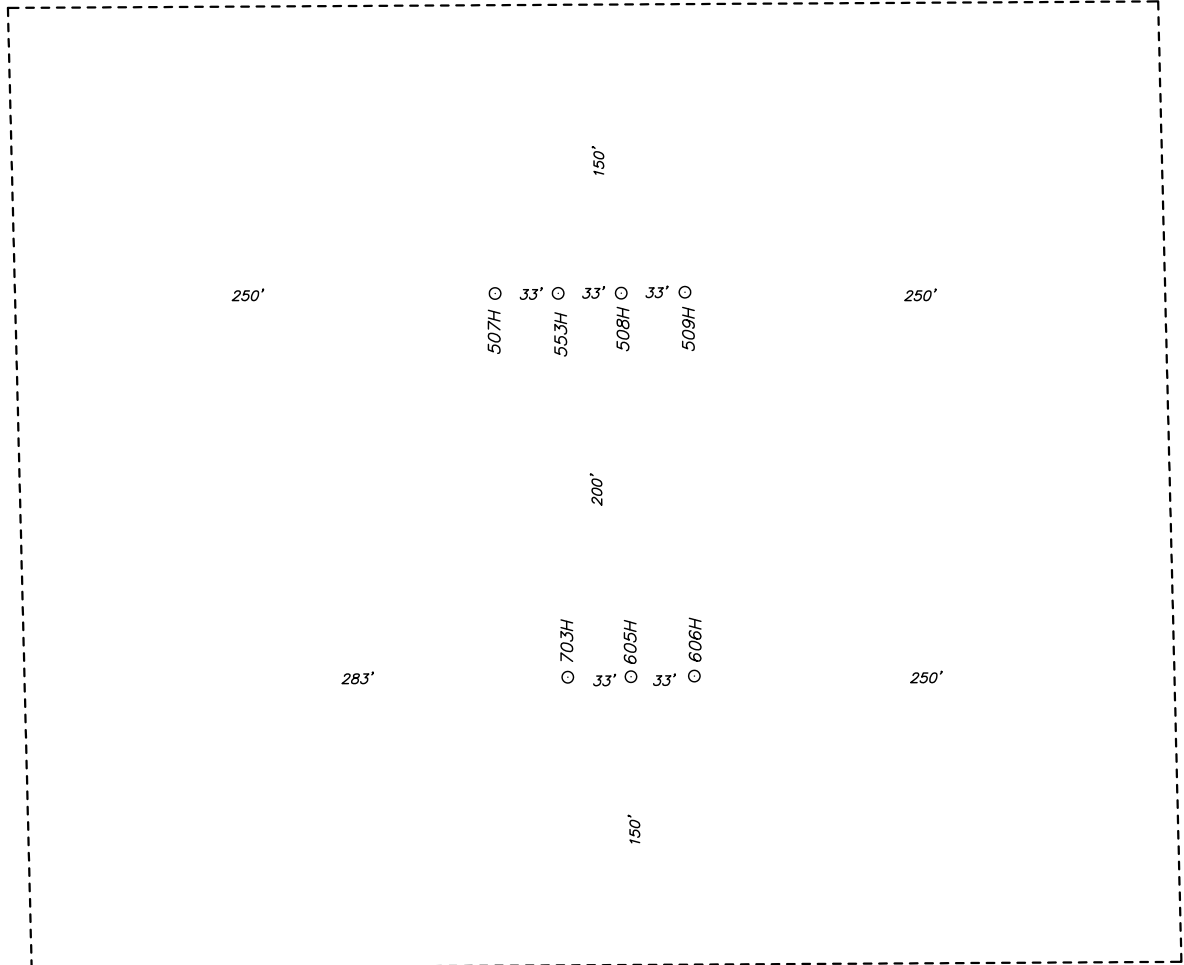
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1120 N. West County Rd. (575) 392-2206 - Fax
Hobbs, New Mexico 88241 basinsurveys.com

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

**SECTION 20, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**

N32.458501°
W103.593576°
ELEV = 3721.3'

N32.458499°
W103.591634°
ELEV = 3740.2'



N32.457126°
W103.593547°
ELEV = 3714.9'

N32.457124°
W103.591606°
ELEV = 3713.6'



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

ADVANCE ENERGY PARTNERS HAT MESA

REF: WOOL HEAD 20 STATE COM 509H / WELL PAD TOPO

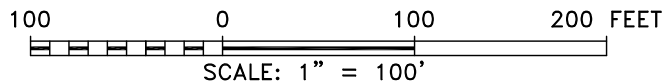
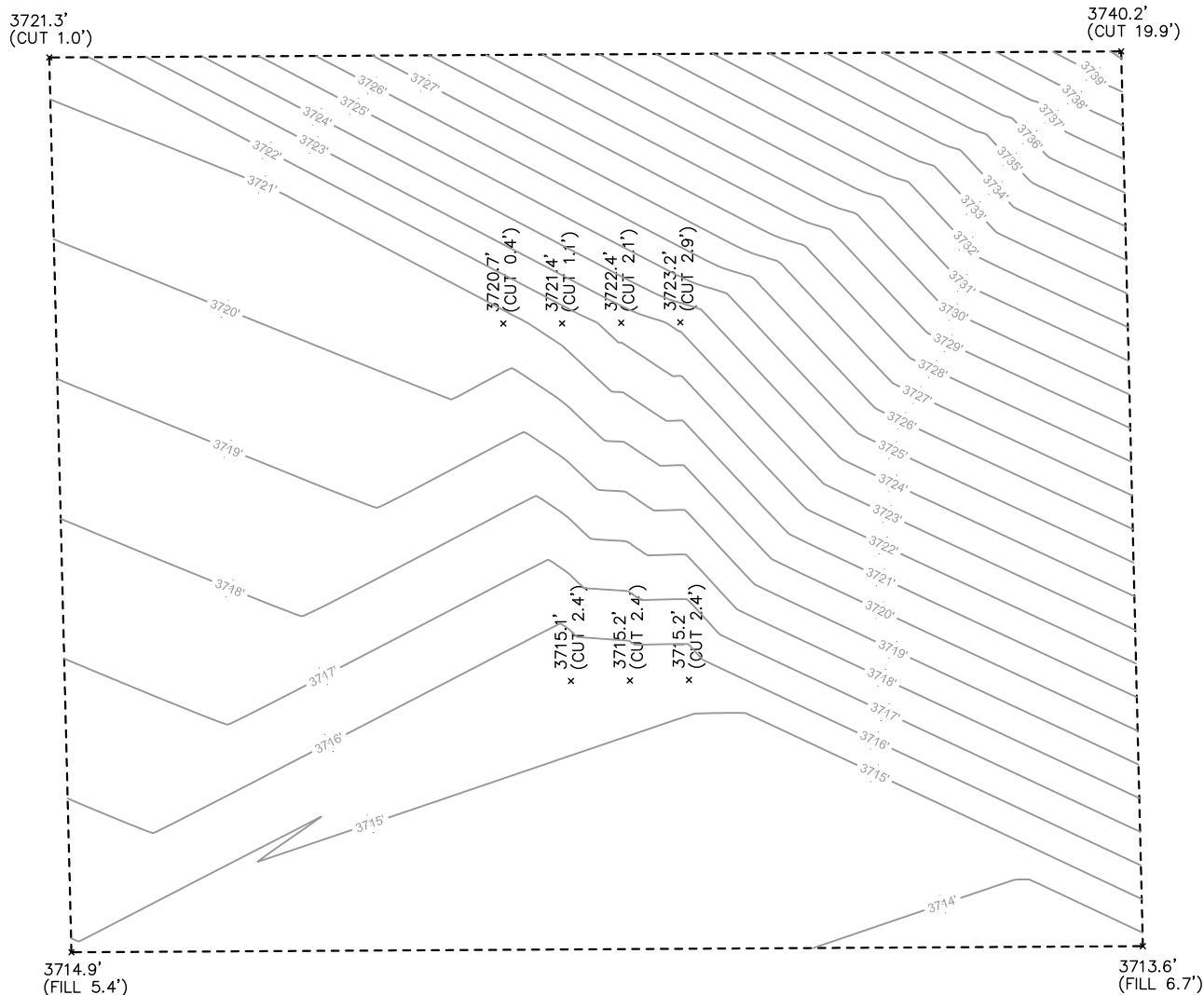
THE WOOL HEAD 20 STATE COM 509H LOCATED 350' FROM
THE SOUTH LINE AND 2013' FROM THE EAST LINE OF
SECTION 20, TOWNSHIP 21 SOUTH, RANGE 33 EAST.

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

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**SECTION 20, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



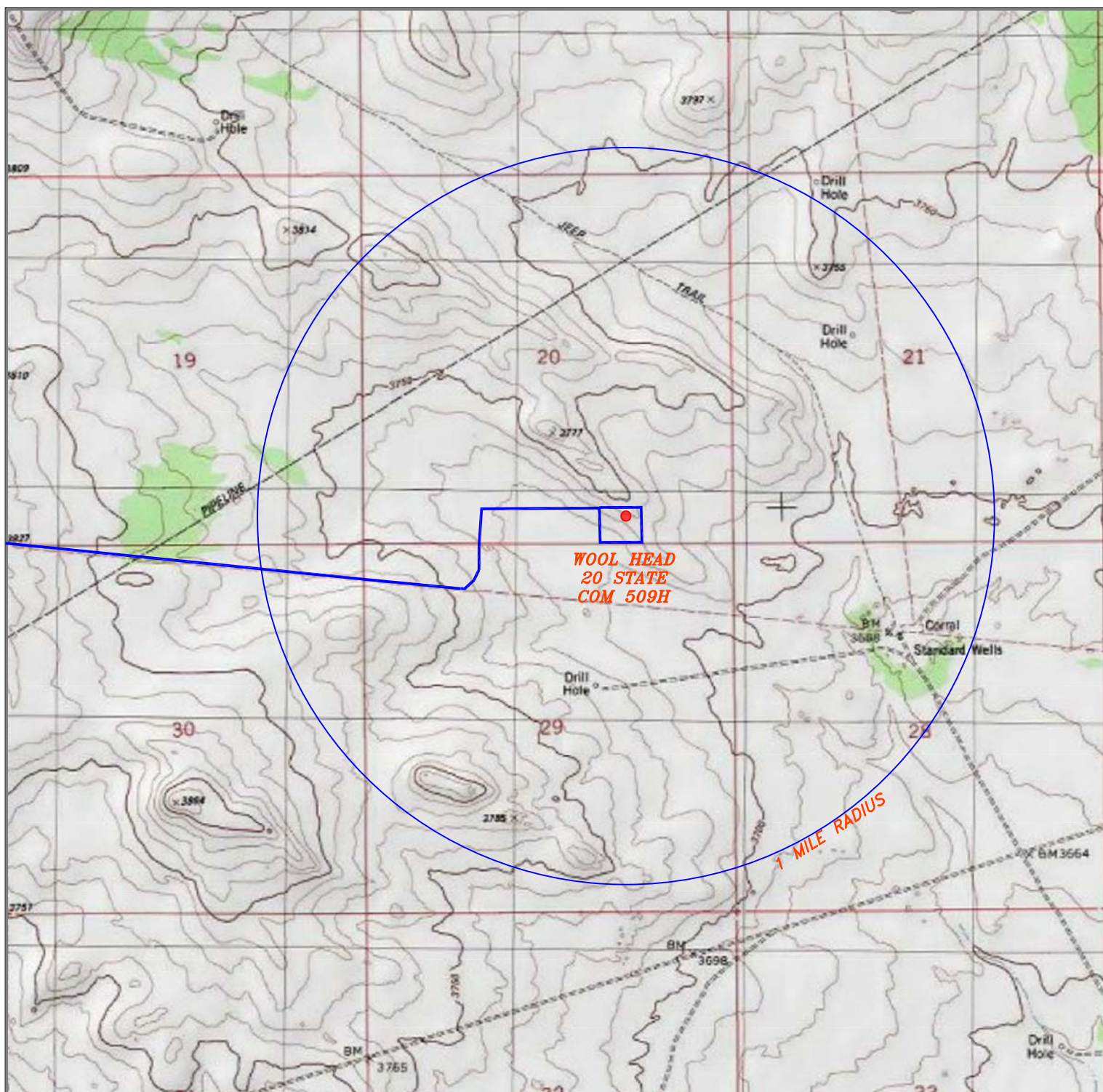
ADVANCE ENERGY PARTNERS HAT MESA

REF: WOOL HEAD 20 STATE COM WELL PAD B / CUT & FILL

THE WOOL HEAD 20 STATE COM WELL PAD
SECTION 20, TOWNSHIP 21 SOUTH, RANGE 33 EAST.
N.M.P.M., LEA COUNTY, NEW MEXICO.



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WOOL HEAD 20 STATE COM 509H

Located 350' FSL and 2013' FEL
 Section 20, Township 21 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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0' 1000' 2000' 3000' 4000'
 SCALE: 1" = 2000'

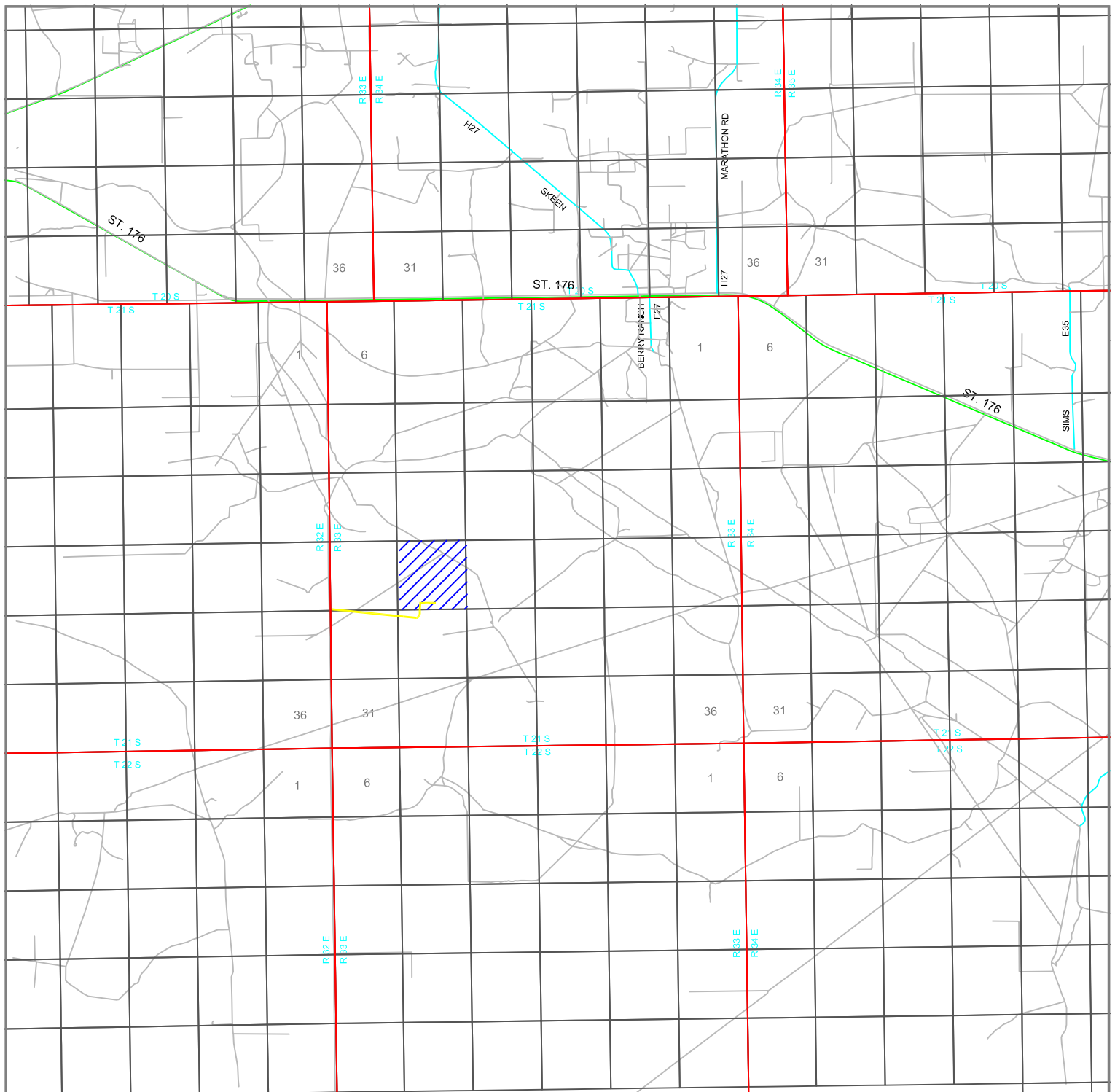
W.O. Number: KJG 34752

Survey Date: 07-26-2019

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



**ADVANCE
 ENERGY
 PARTNERS
 HAT MESA**



WOOL HEAD 20 STATE COM 509H

Located 350' FSL and 2013' FEL
Section 20, Township 21 South, Range 33 East,
N.M.P.M., Lea County, New Mexico.



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0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

W.O. Number: KJG 34752

Survey Date: 07-26-2019

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



**ADVANCE
ENERGY
PARTNERS
HAT MESA**

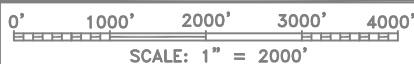


WOOL HEAD 20 STATE COM 509H

Located 350' FSL and 2013' FEL
 Section 20, Township 21 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
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W.O. Number: KJG 34752
 Survey Date: 07-26-2019
 YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



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

GAS CAPTURE PLAN

Date: 10/28/2019

☒ 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
WOOL HEAD 20 STATE COM #509H	30-025-46470	O-20-21S-33E	0350S 2013E	1000	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 1500' 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. 36, Twn. 19S, Rng. 36E, 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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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 273600

PERMIT COMMENTS

Operator Name and Address: ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417] 11490 Westheimer Rd., Ste 950 Houston, TX 77077	API Number: 30-025-46470
	Well: WOOL HEAD 20 STATE COM #509H

Created By	Comment	Comment Date
pkautz	Sent email sent to Debbie Moughon with Advance Energy requesting info on potash leases within 1 mile. Sent on 10/23/2019	10/23/2019
pkautz	Letters of inquiry were sent to James Rutley with the BLM and Niranjn Khalsa with SLO concerning Potash LMR and Buffer Zone. Sent on 10/23/2019.	10/23/2019
pkautz	Received 10/23/2019 from James Rutley with BLM well is not in a LMR and not in a Buffer Zone	10/23/2019
pkautz	Received 10/23/2019 from Niranjn Khalsa with SLO well is not in a LMR and not in a Buffer Zone	10/23/2019

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Santa Fe, NM 87505

Form APD Conditions
 Permit 273600

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: 30-025-46470
		Well: WOOL HEAD 20 STATE COM #509H
OCD Reviewer	Condition	
pkautz	Will require a directional survey with the C-104	
pkautz	Potash Area - Three String Casing Program - In accordance with R-111-P all strings shall be cemented to surface. 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	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 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.	

Advance Energy Partners, LLC



Wool Head 20 State Com 509H
Lea County, New Mexico
H&P 620
Plan 0.1



Azimuths to Grid North
True North: -0.40°
Magnetic North: 6.22°

Magnetic Field
Strength: 48078.4nT
Dip Angle: 60.24°
Date: 10/18/2019
Model: MVHD

Magnetic North: 6.22° to Grid North

SITE DETAILS: Wool Head 20 State Com 509H

Site Centre Northing: 531176.10
Easting: 769860.30

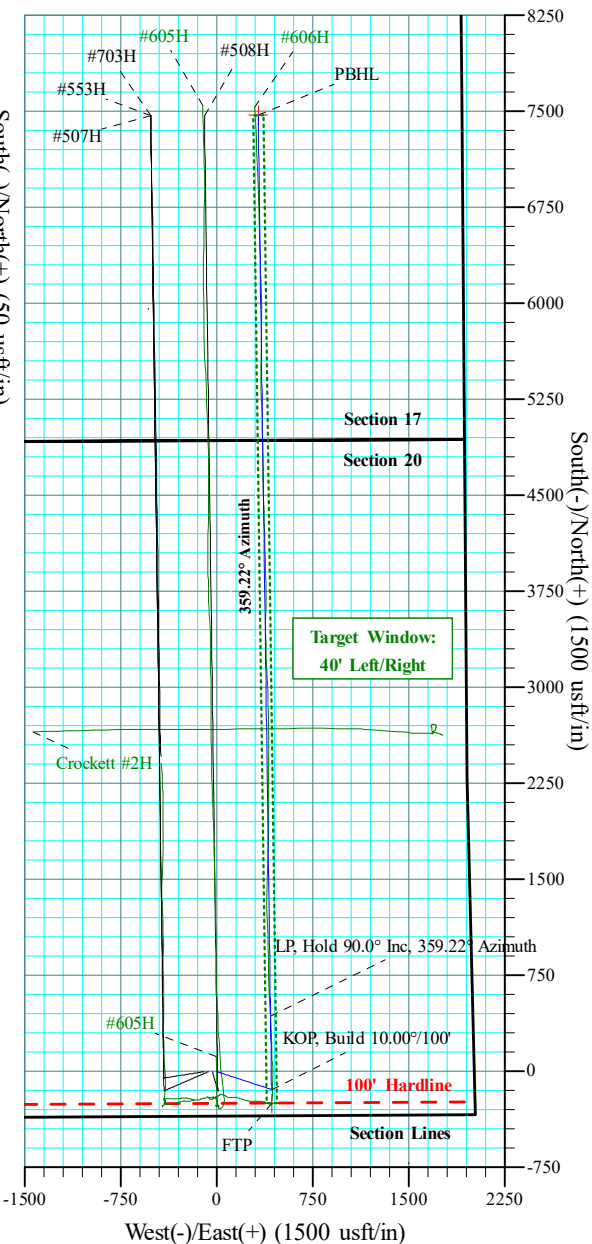
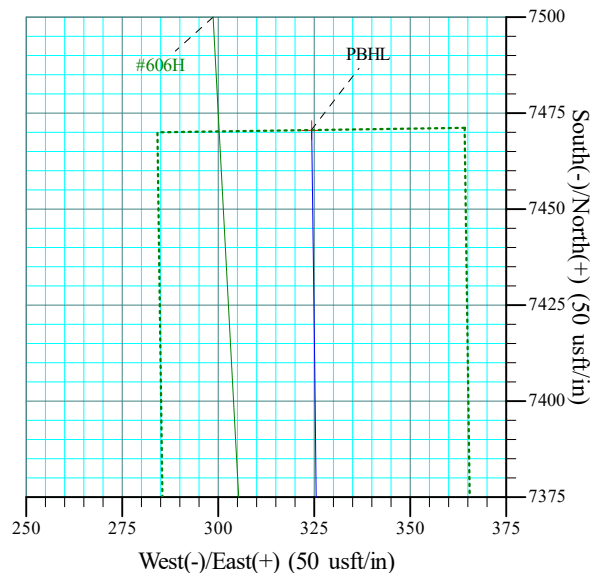
Positional Uncertainty: 0.00
Convergence: 0.40
Local North: Grid

PROJECT DETAILS: Lea County, New Mexico

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

System Datum: Mean Sea Level

Depth Reference:
3723'GL+26.5 @ 3749.50usft (H&P 620)

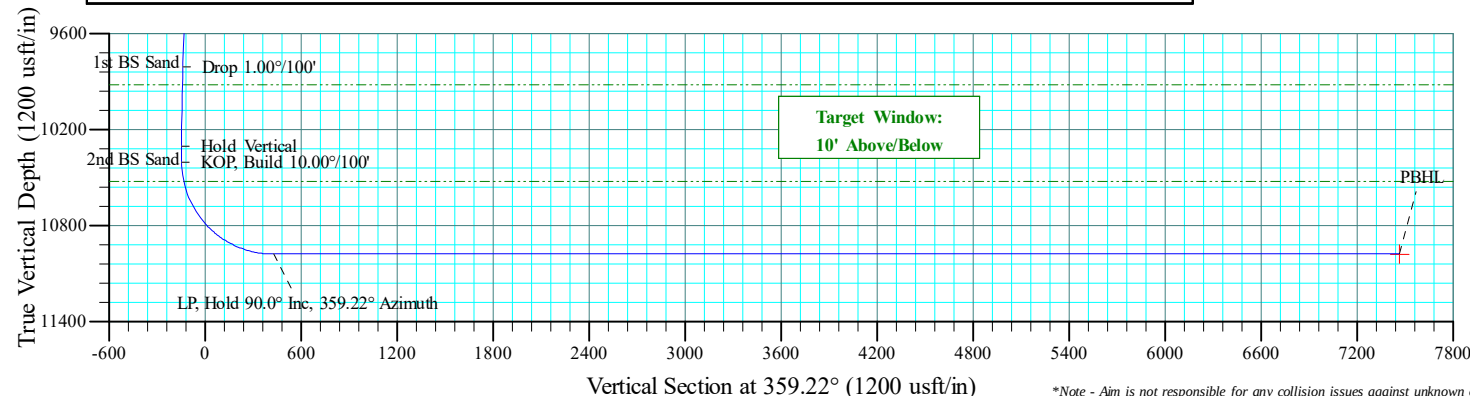


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4659.59	0.00	0.00	4659.59	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	5159.59	5.00	108.11	5158.96	-6.78	20.72	1.00	108.11	-7.06	Hold 5.0° Inc, 108.11° Azimuth
4	9826.07	5.00	108.11	9807.67	-133.22	407.28	0.00	0.00	-138.75	Drop 1.00°/100'
5	10326.07	0.00	0.00	10307.04	-140.00	428.00	1.00	180.00	-145.81	Hold Vertical
6	10426.07	0.00	0.00	10407.04	-140.00	428.00	0.00	0.00	-145.81	KOP, Build 10.00°/100'
7	11326.07	90.00	359.22	10980.00	432.90	420.19	10.00	359.22	427.14	LP, Hold 90.0° Inc, 359.22° Azimuth
8	18364.32	90.00	359.22	10980.00	7470.50	324.20	0.00	0.00	7465.39	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (WH509H)	0.00	-247.60	429.50	530928.50	770289.80	32° 27' 26.635 N	103° 35' 27.778 W
PBHL (WH509H)	10980.00	7470.50	324.20	538646.60	770184.50	32° 28' 43.012 N	103° 35' 28.380 W

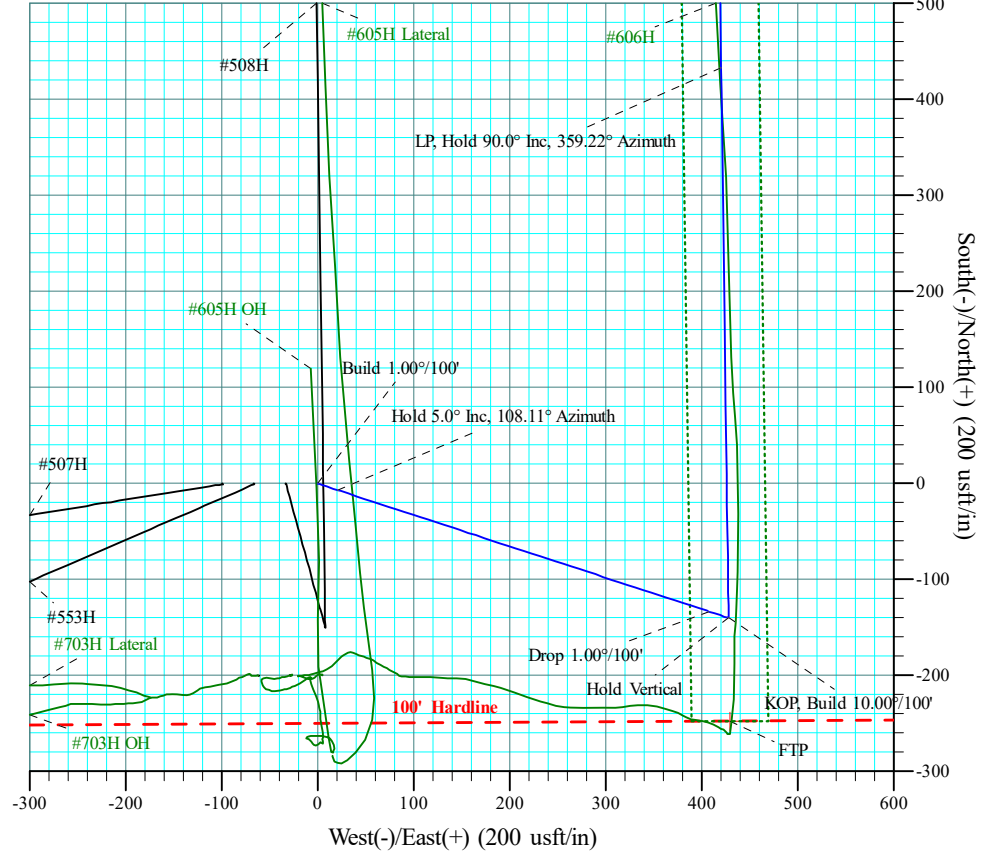
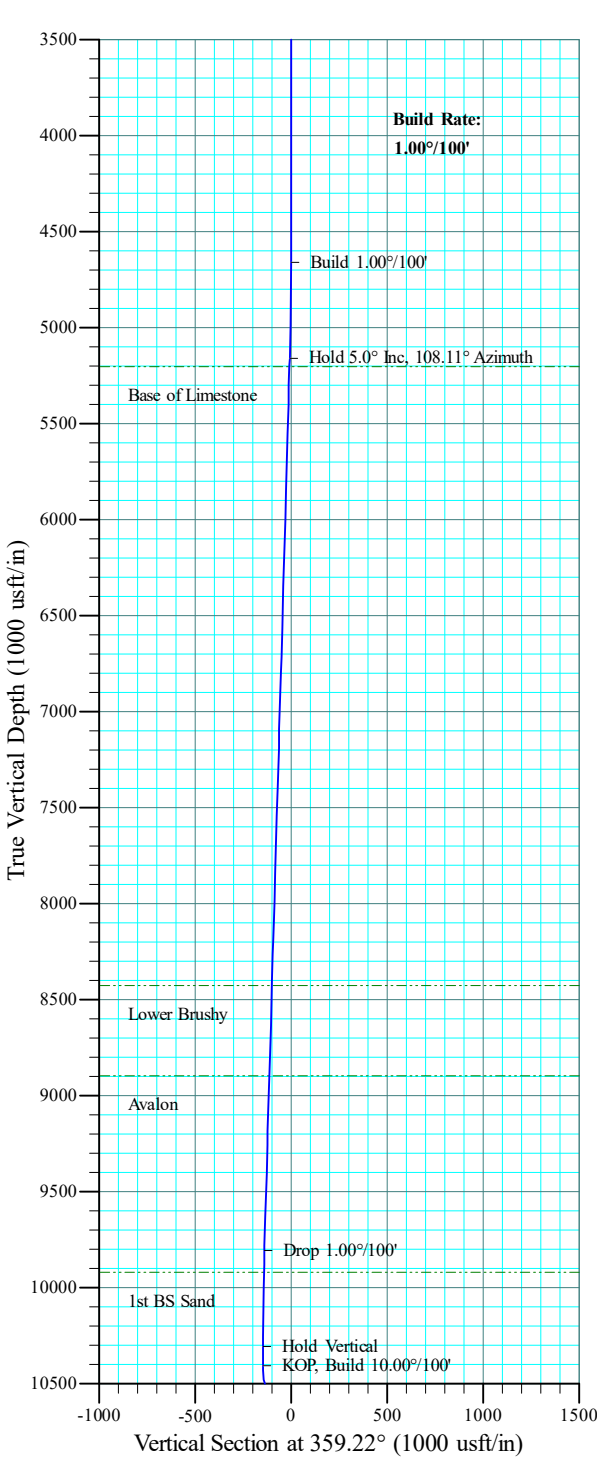


*Note - Aim is not responsible for any collision issues against unknown offset wells.

Advance Energy Partners, LLC



Wool Head 20 State Com 509H
Lea County, New Mexico
H&P 620
Plan 0.1



Azimuths to Grid North
True North: -0.40°
Magnetic North: 6.22°

Magnetic Field
Strength: 48078.4nT
Dip Angle: 60.24°
Date: 10/18/2019
Model: MVHD

Magnetic North: 6.22° to Grid North

SLOTS		
Slot Name	+N/-S	+E/-W
507H	-0.70	-98.90
508H	-0.30	-33.10
509H	0.00	0.00
553H	-0.60	-66.10
605H	-200.30	-28.20
606H	-199.90	4.80
703H	-200.60	-61.10
Crockett 2H	2628.14	1763.69

SITE DETAILS: Wool Head 20 State Com 509H

Site Centre Northing: 531176.10
Easting: 769860.30

Positional Uncertainty: 0.00
Convergence: 0.40
Local North: Grid

Depth Reference:
3723'GL+26.5 @ 3749.50usft (H&P 620)

PROJECT DETAILS: Lea County, New Mexico

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

System Datum: Mean Sea Level

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

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (WH509H)	0.00	-247.60	429.50	530928.50	770289.80	32° 27' 26.635 N	103° 35' 27.778 W
PBHL (WH509H)	10980.00	7470.50	324.20	538646.60	770184.50	32° 28' 43.012 N	103° 35' 28.380 W

Drawn By: IG

Date Created: 10/19/2019

Date Revised: 10/19/2019

File: Advance Energy - Wool Head 20 State Com 509H Plan 0.1 Surface.wpc

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4659.59	0.00	0.00	4659.59	0.00	0.00	0.00	0.00	0.00	Build 1.00°/100'
3	5159.59	5.00	108.11	5158.96	-6.78	20.72	1.00	108.11	-7.06	Hold 5.0° Inc, 108.11° Azimuth
4	9826.07	5.00	108.11	9807.67	-133.22	407.28	0.00	0.00	-138.75	Drop 1.00°/100'
5	10326.07	0.00	0.00	10307.04	-140.00	428.00	1.00	180.00	-145.81	Hold Vertical
6	10426.07	0.00	0.00	10407.04	-140.00	428.00	0.00	0.00	-145.81	KOP, Build 10.00°/100'
7	11326.07	90.00	359.22	10980.00	432.90	420.19	10.00	359.22	427.14	LP, Hold 90.0° Inc, 359.22° Azimuth
8	18364.32	90.00	359.22	10980.00	7470.50	324.20	0.00	0.00	7465.39	PBHL

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

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

Site		Wool Head 20 State Com 509H			
Site Position:		Northing:	531,176.10 usft	Latitude:	32° 27' 29.114 N
From:	Map	Easting:	769,860.30 usft	Longitude:	103° 35' 32.770 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	#509H - Slot 509H					
Well Position	+N/-S	0.00 usft	Northing:	531,176.10 usft	Latitude:	32° 27' 29.114 N
	+E/-W	0.00 usft	Easting:	769,860.30 usft	Longitude:	103° 35' 32.770 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,723.00 usft

Wellbore	Lateral 1r0				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	10/18/2019	6.61	60.24	48,078.41901539

Design	Plan 0.1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.22	

Survey Tool Program	Date	10/20/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,364.32	Plan 0.1 (Lateral 1r0)	B001Mb_MWD+HRGM	OWSG MWD + HRGM	

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FTP (WH509H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,801.00	0.00	0.00	1,801.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,659.59	0.00	0.00	4,659.59	0.00	0.00	0.00	0.00	0.00	0.00
Build 1.00°/100'									
4,700.00	0.40	108.11	4,700.00	-0.04	0.14	-0.05	1.00	1.00	0.00
4,800.00	1.40	108.11	4,799.99	-0.53	1.64	-0.56	1.00	1.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	2.40	108.11	4,899.93	-1.57	4.79	-1.63	1.00	1.00	0.00
5,000.00	3.40	108.11	4,999.80	-3.14	9.61	-3.27	1.00	1.00	0.00
5,100.00	4.40	108.11	5,099.57	-5.26	16.08	-5.48	1.00	1.00	0.00
5,159.59	5.00	108.11	5,158.96	-6.78	20.72	-7.06	1.00	1.00	0.00
Hold 5.0° Inc, 108.11° Azimuth									
5,200.00	5.00	108.11	5,199.21	-7.87	24.07	-8.20	0.00	0.00	0.00
5,204.81	5.00	108.11	5,204.00	-8.00	24.47	-8.34	0.00	0.00	0.00
Base of Limestone									
5,300.00	5.00	108.11	5,298.83	-10.58	32.35	-11.02	0.00	0.00	0.00
5,400.00	5.00	108.11	5,398.45	-13.29	40.64	-13.84	0.00	0.00	0.00
5,500.00	5.00	108.11	5,498.07	-16.00	48.92	-16.67	0.00	0.00	0.00
5,600.00	5.00	108.11	5,597.69	-18.71	57.20	-19.49	0.00	0.00	0.00
5,700.00	5.00	108.11	5,697.31	-21.42	65.49	-22.31	0.00	0.00	0.00
5,800.00	5.00	108.11	5,796.93	-24.13	73.77	-25.13	0.00	0.00	0.00
5,900.00	5.00	108.11	5,896.55	-26.84	82.06	-27.96	0.00	0.00	0.00
6,000.00	5.00	108.11	5,996.17	-29.55	90.34	-30.78	0.00	0.00	0.00
6,100.00	5.00	108.11	6,095.79	-32.26	98.62	-33.60	0.00	0.00	0.00
6,200.00	5.00	108.11	6,195.41	-34.97	106.91	-36.42	0.00	0.00	0.00
6,300.00	5.00	108.11	6,295.03	-37.68	115.19	-39.24	0.00	0.00	0.00
6,400.00	5.00	108.11	6,394.65	-40.39	123.47	-42.07	0.00	0.00	0.00
6,500.00	5.00	108.11	6,494.27	-43.10	131.76	-44.89	0.00	0.00	0.00
6,600.00	5.00	108.11	6,593.88	-45.81	140.04	-47.71	0.00	0.00	0.00
6,700.00	5.00	108.11	6,693.50	-48.52	148.32	-50.53	0.00	0.00	0.00
6,800.00	5.00	108.11	6,793.12	-51.23	156.61	-53.35	0.00	0.00	0.00
6,900.00	5.00	108.11	6,892.74	-53.94	164.89	-56.18	0.00	0.00	0.00
7,000.00	5.00	108.11	6,992.36	-56.65	173.18	-59.00	0.00	0.00	0.00
7,100.00	5.00	108.11	7,091.98	-59.36	181.46	-61.82	0.00	0.00	0.00
7,200.00	5.00	108.11	7,191.60	-62.07	189.74	-64.64	0.00	0.00	0.00
7,300.00	5.00	108.11	7,291.22	-64.78	198.03	-67.46	0.00	0.00	0.00
7,400.00	5.00	108.11	7,390.84	-67.48	206.31	-70.29	0.00	0.00	0.00
7,500.00	5.00	108.11	7,490.46	-70.19	214.59	-73.11	0.00	0.00	0.00
7,600.00	5.00	108.11	7,590.08	-72.90	222.88	-75.93	0.00	0.00	0.00
7,700.00	5.00	108.11	7,689.70	-75.61	231.16	-78.75	0.00	0.00	0.00
7,800.00	5.00	108.11	7,789.32	-78.32	239.44	-81.58	0.00	0.00	0.00
7,900.00	5.00	108.11	7,888.94	-81.03	247.73	-84.40	0.00	0.00	0.00
8,000.00	5.00	108.11	7,988.56	-83.74	256.01	-87.22	0.00	0.00	0.00
8,100.00	5.00	108.11	8,088.18	-86.45	264.30	-90.04	0.00	0.00	0.00
8,200.00	5.00	108.11	8,187.80	-89.16	272.58	-92.86	0.00	0.00	0.00
8,300.00	5.00	108.11	8,287.42	-91.87	280.86	-95.69	0.00	0.00	0.00
8,400.00	5.00	108.11	8,387.04	-94.58	289.15	-98.51	0.00	0.00	0.00
8,440.12	5.00	108.11	8,427.00	-95.67	292.47	-99.64	0.00	0.00	0.00
Lower Brushy									
8,500.00	5.00	108.11	8,486.65	-97.29	297.43	-101.33	0.00	0.00	0.00
8,600.00	5.00	108.11	8,586.27	-100.00	305.71	-104.15	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,700.00	5.00	108.11	8,685.89	-102.71	314.00	-106.97	0.00	0.00	0.00
8,800.00	5.00	108.11	8,785.51	-105.42	322.28	-109.80	0.00	0.00	0.00
8,900.00	5.00	108.11	8,885.13	-108.13	330.57	-112.62	0.00	0.00	0.00
8,911.91	5.00	108.11	8,897.00	-108.45	331.55	-112.96	0.00	0.00	0.00
Avalon									
9,000.00	5.00	108.11	8,984.75	-110.84	338.85	-115.44	0.00	0.00	0.00
9,100.00	5.00	108.11	9,084.37	-113.55	347.13	-118.26	0.00	0.00	0.00
9,200.00	5.00	108.11	9,183.99	-116.26	355.42	-121.09	0.00	0.00	0.00
9,300.00	5.00	108.11	9,283.61	-118.97	363.70	-123.91	0.00	0.00	0.00
9,400.00	5.00	108.11	9,383.23	-121.68	371.98	-126.73	0.00	0.00	0.00
9,500.00	5.00	108.11	9,482.85	-124.39	380.27	-129.55	0.00	0.00	0.00
9,600.00	5.00	108.11	9,582.47	-127.10	388.55	-132.37	0.00	0.00	0.00
9,700.00	5.00	108.11	9,682.09	-129.81	396.83	-135.20	0.00	0.00	0.00
9,800.00	5.00	108.11	9,781.71	-132.52	405.12	-138.02	0.00	0.00	0.00
9,826.07	5.00	108.11	9,807.67	-133.22	407.28	-138.75	0.00	0.00	0.00
Drop 1.00°/100'									
9,900.00	4.26	108.11	9,881.37	-135.08	412.95	-140.69	1.00	-1.00	0.00
9,938.73	3.87	108.11	9,920.00	-135.93	415.56	-141.58	1.00	-1.00	0.00
1st BS Sand									
10,000.00	3.26	108.11	9,981.15	-137.12	419.18	-142.81	1.00	-1.00	0.00
10,100.00	2.26	108.11	10,081.03	-138.61	423.76	-144.37	1.00	-1.00	0.00
10,200.00	1.26	108.11	10,180.98	-139.57	426.68	-145.36	1.00	-1.00	0.00
10,300.00	0.26	108.11	10,280.97	-139.98	427.94	-145.79	1.00	-1.00	0.00
10,326.07	0.00	0.00	10,307.04	-140.00	428.00	-145.81	1.00	-1.00	-414.77
Hold Vertical									
10,400.00	0.00	0.00	10,380.97	-140.00	428.00	-145.81	0.00	0.00	0.00
10,426.07	0.00	0.00	10,407.04	-140.00	428.00	-145.81	0.00	0.00	0.00
KOP, Build 10.00°/100'									
10,450.00	2.39	359.22	10,430.97	-139.50	427.99	-145.31	10.00	10.00	0.00
10,500.00	7.39	359.22	10,480.77	-135.24	427.94	-141.05	10.00	10.00	0.00
10,545.90	11.98	359.22	10,526.00	-127.52	427.83	-133.33	10.00	10.00	0.00
2nd BS Sand									
10,550.00	12.39	359.22	10,530.01	-126.65	427.82	-132.46	10.00	10.00	0.00
10,600.00	17.39	359.22	10,578.31	-113.80	427.64	-119.61	10.00	10.00	0.00
10,650.00	22.39	359.22	10,625.32	-96.80	427.41	-102.61	10.00	10.00	0.00
10,700.00	27.39	359.22	10,670.66	-75.76	427.12	-81.57	10.00	10.00	0.00
10,750.00	32.39	359.22	10,713.99	-50.85	426.78	-56.66	10.00	10.00	0.00
10,800.00	37.39	359.22	10,754.99	-22.26	426.39	-28.06	10.00	10.00	0.00
10,850.00	42.39	359.22	10,793.34	9.80	425.96	4.00	10.00	10.00	0.00
10,900.00	47.39	359.22	10,828.75	45.07	425.48	39.27	10.00	10.00	0.00
10,950.00	52.39	359.22	10,860.95	83.30	424.95	77.50	10.00	10.00	0.00
11,000.00	57.39	359.22	10,889.69	124.18	424.40	118.40	10.00	10.00	0.00
11,050.00	62.39	359.22	10,914.77	167.42	423.81	161.64	10.00	10.00	0.00
11,100.00	67.39	359.22	10,935.98	212.68	423.19	206.90	10.00	10.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,150.00	72.39	359.22	10,953.16	259.61	422.55	253.84	10.00	10.00	0.00
11,200.00	77.39	359.22	10,966.18	307.86	421.89	302.09	10.00	10.00	0.00
11,250.00	82.39	359.22	10,974.96	357.07	421.22	351.30	10.00	10.00	0.00
11,300.00	87.39	359.22	10,979.41	406.85	420.54	401.09	10.00	10.00	0.00
11,326.07	90.00	359.22	10,980.00	432.90	420.19	427.14	10.00	10.00	0.00
LP, Hold 90.0° Inc, 359.22° Azimuth									
11,400.00	90.00	359.22	10,980.00	506.83	419.18	501.08	0.00	0.00	0.00
11,500.00	90.00	359.22	10,980.00	606.82	417.81	601.08	0.00	0.00	0.00
11,600.00	90.00	359.22	10,980.00	706.81	416.45	701.08	0.00	0.00	0.00
11,700.00	90.00	359.22	10,980.00	806.80	415.09	801.08	0.00	0.00	0.00
11,800.00	90.00	359.22	10,980.00	906.79	413.72	901.08	0.00	0.00	0.00
11,900.00	90.00	359.22	10,980.00	1,006.79	412.36	1,001.08	0.00	0.00	0.00
12,000.00	90.00	359.22	10,980.00	1,106.78	411.00	1,101.08	0.00	0.00	0.00
12,100.00	90.00	359.22	10,980.00	1,206.77	409.63	1,201.08	0.00	0.00	0.00
12,200.00	90.00	359.22	10,980.00	1,306.76	408.27	1,301.08	0.00	0.00	0.00
12,300.00	90.00	359.22	10,980.00	1,406.75	406.90	1,401.08	0.00	0.00	0.00
12,400.00	90.00	359.22	10,980.00	1,506.74	405.54	1,501.08	0.00	0.00	0.00
12,500.00	90.00	359.22	10,980.00	1,606.73	404.18	1,601.08	0.00	0.00	0.00
12,600.00	90.00	359.22	10,980.00	1,706.72	402.81	1,701.08	0.00	0.00	0.00
12,700.00	90.00	359.22	10,980.00	1,806.71	401.45	1,801.08	0.00	0.00	0.00
12,800.00	90.00	359.22	10,980.00	1,906.70	400.08	1,901.08	0.00	0.00	0.00
12,900.00	90.00	359.22	10,980.00	2,006.69	398.72	2,001.08	0.00	0.00	0.00
13,000.00	90.00	359.22	10,980.00	2,106.68	397.36	2,101.08	0.00	0.00	0.00
13,100.00	90.00	359.22	10,980.00	2,206.67	395.99	2,201.08	0.00	0.00	0.00
13,200.00	90.00	359.22	10,980.00	2,306.66	394.63	2,301.08	0.00	0.00	0.00
13,300.00	90.00	359.22	10,980.00	2,406.65	393.27	2,401.08	0.00	0.00	0.00
13,400.00	90.00	359.22	10,980.00	2,506.65	391.90	2,501.08	0.00	0.00	0.00
13,500.00	90.00	359.22	10,980.00	2,606.64	390.54	2,601.08	0.00	0.00	0.00
13,600.00	90.00	359.22	10,980.00	2,706.63	389.17	2,701.08	0.00	0.00	0.00
13,700.00	90.00	359.22	10,980.00	2,806.62	387.81	2,801.08	0.00	0.00	0.00
13,800.00	90.00	359.22	10,980.00	2,906.61	386.45	2,901.08	0.00	0.00	0.00
13,900.00	90.00	359.22	10,980.00	3,006.60	385.08	3,001.08	0.00	0.00	0.00
14,000.00	90.00	359.22	10,980.00	3,106.59	383.72	3,101.08	0.00	0.00	0.00
14,100.00	90.00	359.22	10,980.00	3,206.58	382.36	3,201.08	0.00	0.00	0.00
14,200.00	90.00	359.22	10,980.00	3,306.57	380.99	3,301.08	0.00	0.00	0.00
14,300.00	90.00	359.22	10,980.00	3,406.56	379.63	3,401.08	0.00	0.00	0.00
14,400.00	90.00	359.22	10,980.00	3,506.55	378.26	3,501.08	0.00	0.00	0.00
14,500.00	90.00	359.22	10,980.00	3,606.54	376.90	3,601.08	0.00	0.00	0.00
14,600.00	90.00	359.22	10,980.00	3,706.53	375.54	3,701.08	0.00	0.00	0.00
14,700.00	90.00	359.22	10,980.00	3,806.52	374.17	3,801.08	0.00	0.00	0.00
14,800.00	90.00	359.22	10,980.00	3,906.52	372.81	3,901.08	0.00	0.00	0.00
14,900.00	90.00	359.22	10,980.00	4,006.51	371.45	4,001.08	0.00	0.00	0.00
15,000.00	90.00	359.22	10,980.00	4,106.50	370.08	4,101.08	0.00	0.00	0.00
15,100.00	90.00	359.22	10,980.00	4,206.49	368.72	4,201.08	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,200.00	90.00	359.22	10,980.00	4,306.48	367.35	4,301.08	0.00	0.00	0.00
15,300.00	90.00	359.22	10,980.00	4,406.47	365.99	4,401.08	0.00	0.00	0.00
15,400.00	90.00	359.22	10,980.00	4,506.46	364.63	4,501.08	0.00	0.00	0.00
15,500.00	90.00	359.22	10,980.00	4,606.45	363.26	4,601.08	0.00	0.00	0.00
15,600.00	90.00	359.22	10,980.00	4,706.44	361.90	4,701.08	0.00	0.00	0.00
15,700.00	90.00	359.22	10,980.00	4,806.43	360.54	4,801.08	0.00	0.00	0.00
15,800.00	90.00	359.22	10,980.00	4,906.42	359.17	4,901.08	0.00	0.00	0.00
15,900.00	90.00	359.22	10,980.00	5,006.41	357.81	5,001.08	0.00	0.00	0.00
16,000.00	90.00	359.22	10,980.00	5,106.40	356.44	5,101.08	0.00	0.00	0.00
16,100.00	90.00	359.22	10,980.00	5,206.39	355.08	5,201.08	0.00	0.00	0.00
16,200.00	90.00	359.22	10,980.00	5,306.39	353.72	5,301.08	0.00	0.00	0.00
16,300.00	90.00	359.22	10,980.00	5,406.38	352.35	5,401.08	0.00	0.00	0.00
16,400.00	90.00	359.22	10,980.00	5,506.37	350.99	5,501.08	0.00	0.00	0.00
16,500.00	90.00	359.22	10,980.00	5,606.36	349.63	5,601.08	0.00	0.00	0.00
16,600.00	90.00	359.22	10,980.00	5,706.35	348.26	5,701.08	0.00	0.00	0.00
16,700.00	90.00	359.22	10,980.00	5,806.34	346.90	5,801.08	0.00	0.00	0.00
16,800.00	90.00	359.22	10,980.00	5,906.33	345.53	5,901.08	0.00	0.00	0.00
16,900.00	90.00	359.22	10,980.00	6,006.32	344.17	6,001.08	0.00	0.00	0.00
17,000.00	90.00	359.22	10,980.00	6,106.31	342.81	6,101.08	0.00	0.00	0.00
17,100.00	90.00	359.22	10,980.00	6,206.30	341.44	6,201.08	0.00	0.00	0.00
17,200.00	90.00	359.22	10,980.00	6,306.29	340.08	6,301.08	0.00	0.00	0.00
17,300.00	90.00	359.22	10,980.00	6,406.28	338.71	6,401.08	0.00	0.00	0.00
17,400.00	90.00	359.22	10,980.00	6,506.27	337.35	6,501.08	0.00	0.00	0.00
17,500.00	90.00	359.22	10,980.00	6,606.26	335.99	6,601.08	0.00	0.00	0.00
17,600.00	90.00	359.22	10,980.00	6,706.26	334.62	6,701.08	0.00	0.00	0.00
17,700.00	90.00	359.22	10,980.00	6,806.25	333.26	6,801.08	0.00	0.00	0.00
17,800.00	90.00	359.22	10,980.00	6,906.24	331.90	6,901.08	0.00	0.00	0.00
17,900.00	90.00	359.22	10,980.00	7,006.23	330.53	7,001.08	0.00	0.00	0.00
18,000.00	90.00	359.22	10,980.00	7,106.22	329.17	7,101.08	0.00	0.00	0.00
18,100.00	90.00	359.22	10,980.00	7,206.21	327.80	7,201.08	0.00	0.00	0.00
18,200.00	90.00	359.22	10,980.00	7,306.20	326.44	7,301.08	0.00	0.00	0.00
18,300.00	90.00	359.22	10,980.00	7,406.19	325.08	7,401.08	0.00	0.00	0.00
18,364.32	90.00	359.22	10,980.00	7,470.50	324.20	7,465.39	0.00	0.00	0.00
PBHL - PBHL (WH509H)									

Aim Directional Services, LLC

Survey Report

Company:	Advance Energy Partners, LLC	Local Co-ordinate Reference:	Site Wool Head 20 State Com 509H
Project:	Lea County, New Mexico	TVD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Site:	Wool Head 20 State Com 509H	MD Reference:	3723'GL+26.5 @ 3749.50usft (H&P 620)
Well:	#509H	North Reference:	Grid
Wellbore:	Lateral 1r0	Survey Calculation Method:	Minimum Curvature
Design:	Plan 0.1	Database:	EDM 5000.1 Aim Database

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (WH509H) - plan misses target center by 495.76usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-247.60	429.50	530,928.50	770,289.80	32° 27' 26.635 N	103° 35' 27.778 W
PBHL (WH509H) - plan hits target center - Point	0.00	0.00	10,980.00	7,470.50	324.20	538,646.60	770,184.50	32° 28' 43.012 N	103° 35' 28.380 W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,801.00	1,801.00	Rustler		0.00		
5,204.81	5,204.00	Base of Limestone		0.00		
8,440.12	8,427.00	Lower Brushy		0.00		
8,911.91	8,897.00	Avalon		0.00		
9,938.73	9,920.00	1st BS Sand		0.00		
10,545.90	10,526.00	2nd BS Sand		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
4660	4660	0	0	Build 1.00°/100'	
5160	5159	-7	21	Hold 5.0° Inc, 108.11° Azimuth	
9826	9808	-133	407	Drop 1.00°/100'	
10,326	10,307	-140	428	Hold Vertical	
10,426	10,407	-140	428	KOP, Build 10.00°/100'	
11,326	10,980	433	420	LP, Hold 90.0° Inc, 359.22° Azimuth	
18,364	10,980	7470	324	PBHL	