

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF ADVANCE ENERGY
PARTNERS HAT MESA LLC
FOR APPROVAL OF A PRODUCED WATER
DISPOSAL WELL, LEA COUNTY,
NEW MEXICO**

Case No. 20827

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Application

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APPLICATION

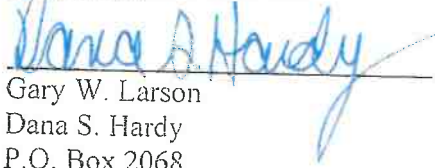
Pursuant to 19.15.26.8(A) NMAC, Advance Energy Partners Hat Mesa LLC ("Advance") applies for an order approving a produced water disposal well in Lea County, New Mexico. In support of its application, Advance states:

1. Advance (OGRID No. 372417) proposes to drill the Quick Shot Unit SWD No. 1 well in Unit H in Section 6, Township 22 South, Range 33 East, NMPM, in Lea County, New Mexico for the purpose of operating a commercial produced water disposal well.
2. Advance seeks authorization to inject produced water into the Devonian, Silurian, and Upper Ordovician Formation at a depth of 16,502 to 17,500 feet.
3. Advance requests that the Division approve a maximum injection pressure of 3,285 psi.
4. A Division Form C-108 is attached hereto as Exhibit A.
5. The granting of this application will prevent waste and protect correlative rights.

WHEREFORE, Advance requests that this application be set for hearing on November 14, 2019 and that, after notice and hearing, the Division enter an order approving this application and authorizing Advance to inject produced water into the Quick Shot Unit SWD No. 1 well for disposal.

Respectfully submitted,

HINKLE SHANOR LLP



Gary W. Larson

Dana S. Hardy

P.O. Box 2068

Santa Fe, NM 87504-2068

Phone: (505) 982-4554

Facsimile: (505) 982-8623

glarson@hinklelawfirm.com

dhardy@hinklelawfirm.com

*Counsel for Advance Energy Partners Hat Mesa
LLC*

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND
 REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: Advance Energy Partners Hot Mesa LLC OGRID Number: 372417
 Well Name: Quick Shot Unit SWD No. 1 API: _____
 Pool: Devonian - Silurian Pool Code: 97869

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION
 INDICATED BELOW**

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
 A. Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD
 B. Check one only for [I] or [II]
 [I] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
 [II] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

2) **NOTIFICATION REQUIRED TO:** Check those which apply.

- A. ☒ Offset operators or lease holders
 B. ☒ Royalty, overriding royalty owners, revenue owners
 C. ☐ Application requires published notice
 D. ☐ Notification and/or concurrent approval by SLO
 E. ☐ Notification and/or concurrent approval by BLM
 F. ☒ Surface owner
 G. ☒ For all of the above, proof of notification or publication is attached, and/or,
 H. ☐ No notice required

FOR OCD ONLY

<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	Application Content Complete

- 3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

6/6/2019

David Harwell

Date

Print or Type Name

832-672-4604

Phone Number

David Harwell

DHarwell@advanceenergypartners.com

e-mail Address

Signature

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

5/30/2019

Attn: Ms. Heather Riley, Director

Re Application of Advance Energy Partners Hat Mesa LLC to permit for salt water disposal the proposed Quick Shot Unit SWD Well No.1 to be located in is 370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East, NMPM, Lea County, New Mexico.

Dear Ms. Riley,

Please find enclosed Form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for **commercial disposal**, the Quick Shot Unit SWD No 1. The well (370' FEL & 2667' FNL Section 6,, Township 22 South, Range 33 East) is on a drill island. Attached is plat defining the drill island and the location of the Advance Energy Partners Hat Mesa LLC "Quick Shot Unit No. 1" within the island.

Advance Energy Partners seeks to optimize efficiency, both economically and operationally, of its operation in the southeast New Mexico. Advance Energy Partners respectfully requests administrative approval, without hearing, to dispose produced water into the Devonian - Silurian Formation. In support of this request please find the following documentation:

- Administrative Application Checklist
- Form C-108 with miscellaneous data attached
- An Injection Well Data Sheet with Wellbore Schematic
- Area of Review and Data Table of Surrounding Wells
- Publication
- Service List with Proof of Certified Mailing attached

Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran or about June 9, 2019 in the Hobbs News-Sun and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded when received. This application also includes a wellbore schematic, area of review maps, leaseholder plats and other required information for a complete Form C-108.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

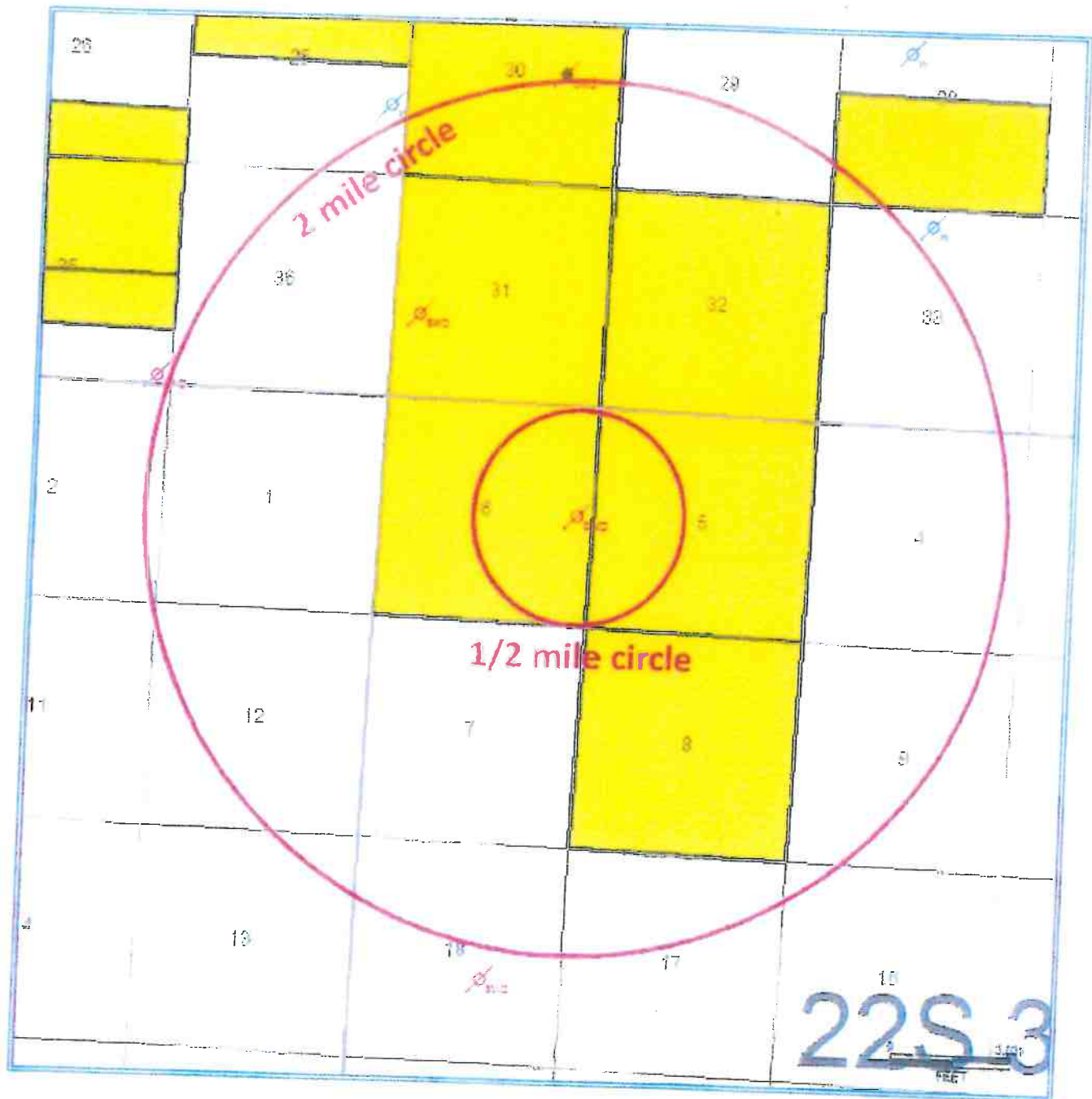
Best regards,



David Harwell

Attachment

The Quick Shot Unit SWD Well No.1 in Sec 2
(370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East)



APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance **XXX** Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No
- II. OPERATOR: **Advance Energy Partners Hat Mesa LLC**
ADDRESS: **11490 Westheimer Rd. Suite 950, Houston, Texas 77077**
CONTACT PARTY: **David Harwell** PHONE: **832-672-4604 (o) 281-235-3431 ©**
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? **XXX No (This is not an expansion of an existing project)**
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: **David Harwell** TITLE: **Vice President**
SIGNATURE: *David A. Harwell* DATE: **6-25-19**
E-MAIL ADDRESS: **DHarwell@advanceenergypartners.com**
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

WELL NAME & NUMBER: Quick Shot Unit No. 1

FOOTAGE LOCATION

WELLBORE SCHEMATIC (Also Attached)

UNIT LETTER	6	SECTION	22S	TOWNSHIP	33E	RANGE

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 30" & 24"

Casing Size: 26" & 20"

Cemented with: per vendor proposal

10 _____ 9.3

Top of Cement: Surface & Surface

Method Determined: Designed

Intermediate Casing

Hole Size: 17.5" & 12.25"

Casing Size:13.625"
& 9.875"

Top of Cement: Surface & Surface

Method Determined: Circulation

Production Casing

Hole Size: 8.75"

Casing Size: 7.625', 39# P-110 Csg.

Cemented with: per vendor proposal

— 2 —

Top of Cement: Top of Liner

Method Determined: Circulation

Total Depth: 17500

Injection Interval

Open Hole 16502 feet To 17,500 feet
(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 5 ½" HCP-110 x 5" HCP-110

Lining Material: Plastic Coated

Type of Packer: Nickel plated 10K double grip retrievable or 10K nickel plate permanent or Weatherford Arrow Set
Injection Packer

Packer Setting Depth: +/-16225'

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? XXX Yes No

If no, for what purpose was the well originally drilled?

2. Name of the Injection Formation: **Devonian - Silurian**

3. Name of Field or Pool (if applicable): No

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

T / Brushy Canyon 8,450 - 8,500
T / 2nd Bone Sand 10,400- 10,550
T / 3rd Bone Sand 11,600 - 11,700
T Wolfcamp: 11,900 - 12,950
T / Penn: 12,700 -12,900
T / Morrow 13,700 - 14,000

WELLBORE SCHEMATIC



Quick Shot Unit SWD #1

SWD WELL

SWL: Sec. 6, T-22S, R-55E, 370' FEL & 2667' FINL

BNL: Sec. 6, T-22S, R-55E, 370' FEL & 2667' FINL

APF:

REGULATORY: UNREG
APF:

FIG:
BR: 9.770
GL:

NAD 83

HOLE SIZE	MD	FORMATION	TVD	SAID	CASING	CEMENT	SPECIAL INSTRUCTIONS
30"	2,635	Rustler	1,035	DRILL MW 0.4 ppg FRESH	20"	Top of Lead: Surface 50% OH excess	Circ cement to surface is a NMOCD requirement
	3,690	SURF CSG PT	1,650	TD MW 10.0 ppg	12" Bowstrings 1 joint shoe track	Top of Tail: 1320' 20% excess	Casing must be set 20' into the Rustler
24"	3,550	Base of Salt	3,550	DRILL MW 10.0 ppg BRINE	20"	Top of Lead: Surface 50% OH excess	Circ cement to surface is a NMOCD requirement
	3,600	INTRM 1 CSG PT	3,600	TD MW 10.5 ppg	17" Bowstrings 1 joint shoe track	Top of Tail: 2000' 20% excess	
17-1/2"	3,700	OV TOOL & PACKER	3,700	DRILL MW 10.0 ppg BRINE	15-5/8"	2 STAGE CEMENT 1st Stage Top of Lead: 2600' 50% excess Top of Tail: 4200' 20% excess	Circ cement to surface is a NMOCD requirement
	5,150	INTRM 2 CSG PT	5,250	TD MW 10.5 ppg	OV Tool & Packer @ +/- 3,700' 1 joint shoe track	2nd Stage Top of Lead: Surface 50% excess (OH only) Tail: 100 sls no excess	
12-1/4"	12,035	Wolfcamp	12,035	DRILL MW 9.0 ppg CUT BRINE	9-5/8"	Top of Lead: Surface 50% excess (OH only)	
	12,135	TOP OF LINER	12,135	TD MW 9.2 ppg	17" Bowstrings 1 joint shoe track	Top of Tail: 8750' 20% excess	
	12,235	INTRM 3 CSG PT	12,235	DRILL MW 11.5 ppg WEIGHTED CUT BRINE	7-5/8"	Top of Tail: 12998' 20% excess	
8-5/8"	16,225	PERM PACKER	16,225	TD MW 12.5 ppg	23" Bowstrings 1 joint shoe track		
	16,225	Woodford	16,225	DRILL MW 8.4 ppg FRESH	OPEN HOLE		
	16,245	LINER CSG PT	16,425	TD MW 9.6 ppg	INJECTION STRING		
	16,425	Devonian	16,425		3-1/2"	PACKER FLUID	
6-3/4"	17,065	Fuselman	17,065				
	17,595	Montoya	17,595				
	17,695	TD	17,695				

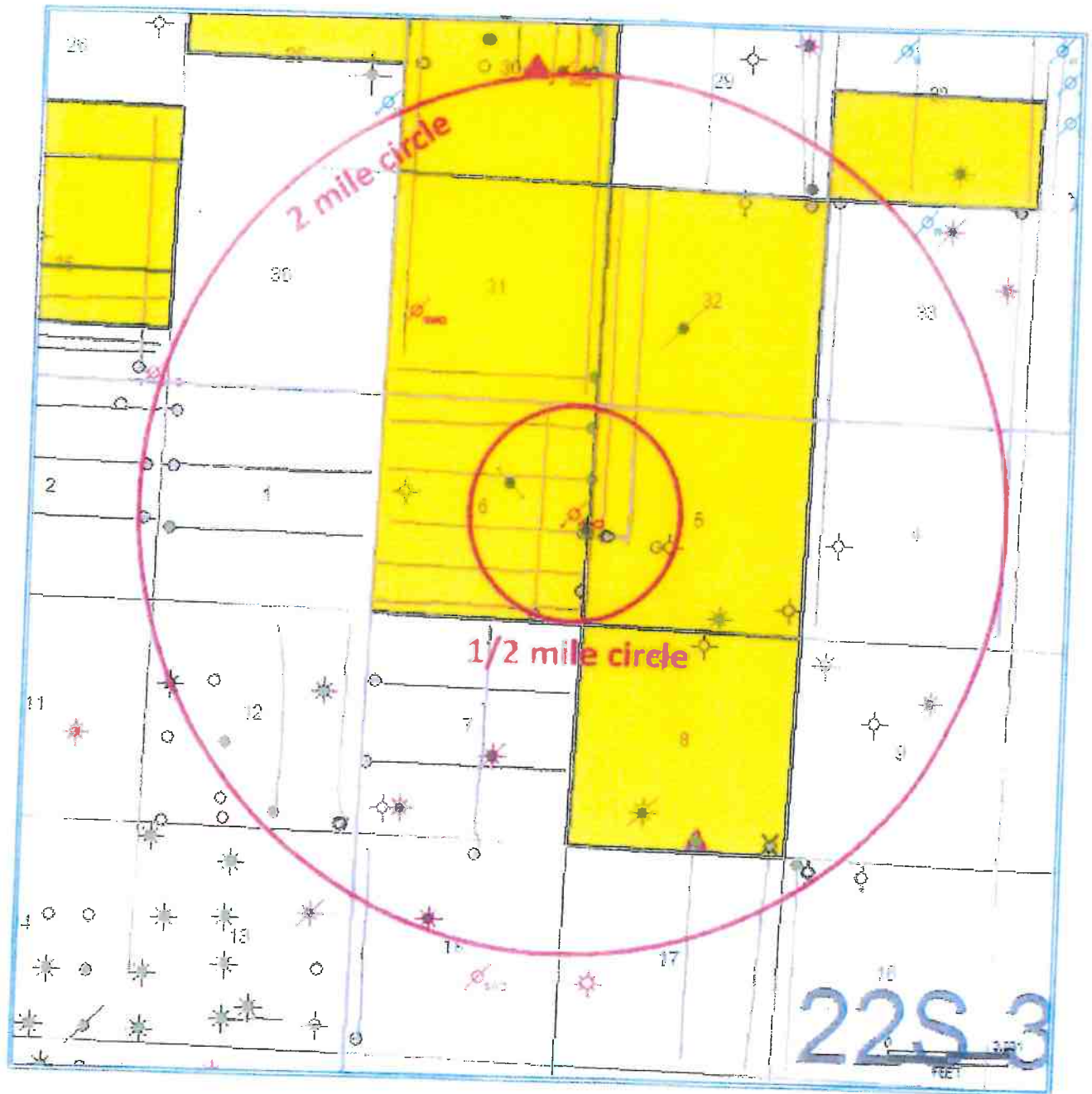
Est BHV = 250' F

DIRECTIONS TO LOCATION:

Drilling Engineer: Braden Harris (406) 609-5310

Date: 05/30/2019

Part V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.



VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

No wells penetrate the proposed disposal interval within a half or 1 mile area of review

Part VII. Operations Plan

1. Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 2 – 3 months. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval but at a different location from the well. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. The operator has negotiated a Surface Use Agreement for the facility and well site.
2. Prior to commencing any work, an NOI sundry(ies.) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.
3. The SWD facility will not be fenced so that trucks may access for load disposal 24/7.
4. The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.
5. The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.
6. Proposed Maximum injection pressure = ~ 3285 psi (0.2 psi/ft. \times $16,425'$)
7. Proposed average daily injection rate = $18,000$ BWPD
Proposed maximum daily injection rate = $25,000$ BWPD
8. Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbl. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as necessary and appropriate.

VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

Quick Shot Unit SWD No. 1 Estimated Tops:

Formation	Depth
Rustler	1565'
Delaware	5335'
Bone Spring	8795'
Wolfcamp	12,035'
Strawn	13,425'
Mississippian Lime	15,630'
Woodford	16,225'
Devonian	16,425'
Silurian	16,869'

The injection zone is the Devonian/Silurian/Upper Ordovician, a mixture of non-hydrocarbon bearing limestones and dolomites estimated from 16,425' to 18,150'. Any underground drinking water sources will be shallower than 1565', the estimated top of the Rustler Anhydrite.

Geoscience Validation

NAME: Donald E. Glover

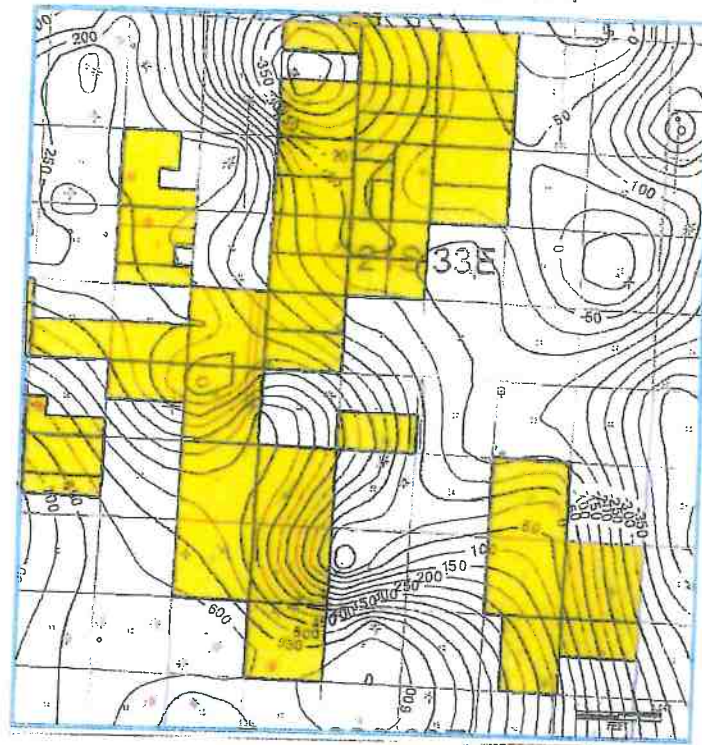
TITLE: President of MVG America LLC

SIGNATURE: 

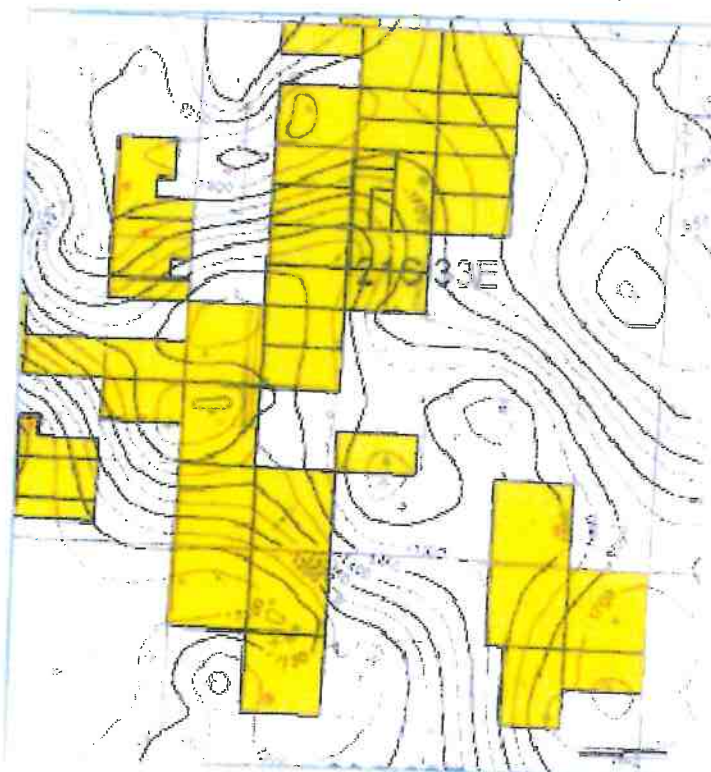
DATE: 6/25/19

Capitan Reef Basement

Top Capitan Reef SSTVD Structure Map



Base Capitan Reef SSTVD Structure Map



IX. Describe the proposed stimulation program, if any.

20 to 40 Gallons per feet of 20% HCL acid.
The estimated open hole footage is between
1000' – 1500'.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

**No Log Available Across Proposed
Devonian/Silurian/Upper
Ordovician Injection Interval.
Well logs will be filed with the
Division.**

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken

No Fresh water wells are with the 2 miles radius. Attached is potential disposed water samples:

SOURCE ZONE

WOLFCAMP

Lab ID

SOURCE ZONE

BONE SPRING

APINo	3002502429	Lab ID	
Well Name	LEA UNIT	Sample ID	4916
	005	Sample No	
Location	ULSTR 12 20 S 34 E	Lat / Long	32.58504 -103.51106
	1980 S 1980 E	County	Lea
Operator (when sampled)			
	Field LEA	Unit	J
Sample Date		Analysis Date	
	Sample Source DST	Depth (if known)	
	Water Typ		
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
ids_mgL	202606	resistivity_ohm_cm_temp_	
ids_mgL_180C		conductivity	
chloride_mgL	118100	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	5196
iron_mgL		sulfate_mgL	992
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
Remarks			

SOURCE ZONE

DELAWARE

API No	3002508367	Lab ID	
Well Name	BELL LAKE UNIT	Sample ID	4347
	007	Sample No	
Location	ULSTR 01 24 S 33 E	Lat / Long	32.25143 -103.51924
	660 N 660 E	County	Lea
Operator (when sampled)			
Field	SWD	Unit	1
Sample Date		Analysis Date	
Sample Source	UNKNOWN	Depth (if known)	
Water Typ			
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	87686	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	53920	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	391
iron_mgL		sulfate_mgL	749
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
Remarks			

DISPOSAL ZONE

DEVONIAN

API No.	3002506483	Lab ID	
Well Name	BELL LAKE UNIT	Sample ID	5733
	006	Sample No	
Location	ULSTR 06 23 S 34 E	Lat / Long	32.32621 -103.50663
	660 S 1980 E	County	Lea
Operator (when sampled)		Unit	O
Field	BELL LAKE NORTH		
Sample Date		Analysis Date	
Sample Source	HEATER/TREATER	Depth (if known)	
Water Type			
ph	7	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	71078	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	42200	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	500
iron_mgL		sulfate_mgL	1000
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
Remarks			

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

Advance Energy Partners Hat Mesa LLC has examined available geologic and engineering data and find no obvious evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

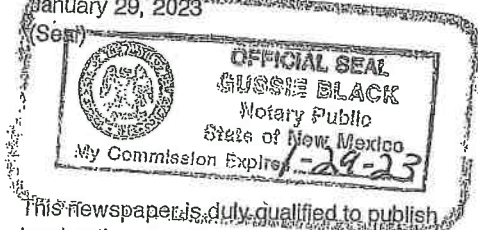
Beginning with the issue dated
June 09, 2019
and ending with the issue dated
June 09, 2019.


Publisher

Sworn and subscribed to before me this
9th day of June 2019.


Business Manager

My commission expires
January 29, 2023



This newspaper is duly qualified to publish
legal notices or advertisements within the
meaning of Section 3, Chapter 167, Laws of
1937 and payment of fees for said



LEGAL NOTICE
JUNE 9, 2019

Notice for Quick Shot SWD

Advance Energy Partners
Hat Mesa LLC, 11490
Westheimer RD, STE 950
Houston, TX, 77077, is filing
Form C-108 (Application for
Authority to Inject) with the
New Mexico Oil
Conservation Division
seeking administrative
approval for a salt water
disposal well. The proposed
well, the Quick Shot SWD
No. 1 will be located 370'
FEL & 2667' FNL, Section 6,
Township 22 South, Range
33 East, Lea County, New
Mexico. Produced water
from the area production will
be commercially disposed
into the Devonian, Silurian,
and Upper Ordovician
formation at a depth of +/-
16,000' to 17,500' at a
maximum surface pressure
of 3285 psi and rate limited
only by pressure.

Interested parties wishing to
object to the proposed
application must file with the
New Mexico Oil
Conservation Division 1220
St. Francis Dr. Santa Fe, NM
87505, (505) 476-3460
within 15 days of the date of
this notice. Additional
information may be obtained
from Advance Energy
Partners Vice President of
Engineering 832-672-4700
#34259

67115359

00229400

PAUL BURDICK
ADVANCE ENERGY PARTNERS
11490 WESTHEIMER RD, STE 950
HOUSTON, TX 77077

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
■ Print your name and address on the reverse so that we can return the card to you.
■ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, NM 88220

Quick Shot SWD



9590 9402 4165 8092 9752 08

2. Article Number (Transfer from service label)
7019 0160 0000 0273 5175

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X *[Signature]* ☐ Agent
☐ Addressee
B. Received by (Printed Name) *Theresa Cabezual* C. Date of Delivery *6/10/15*
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (over \$500)
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☒ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
■ Print your name and address on the reverse so that we can return the card to you.
■ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Occidental Permian Ltd.
5 Greenway Plaza
Houston, Texas 77046

Quick Shot SWD



9590 9402 4165 8092 9752 22

2. Article Number (Transfer from service label)
7019 0160 0000 0273 5182

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X *[Signature]* ☐ Agent
☐ Addressee
B. Received by (Printed Name) *Superior* C. Date of Delivery *6/29*
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (over \$500)
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☒ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
■ Print your name and address on the reverse so that we can return the card to you.
■ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
State of New Mexico
State Land Office
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504

Quick Shot SWD



9590 9402 4165 8092 9752 15

2. Article Number (Transfer from service label)
7019 0160 0000 0273 5168

PS Form 3811, July 2015 PSN 7530-02-000-9053

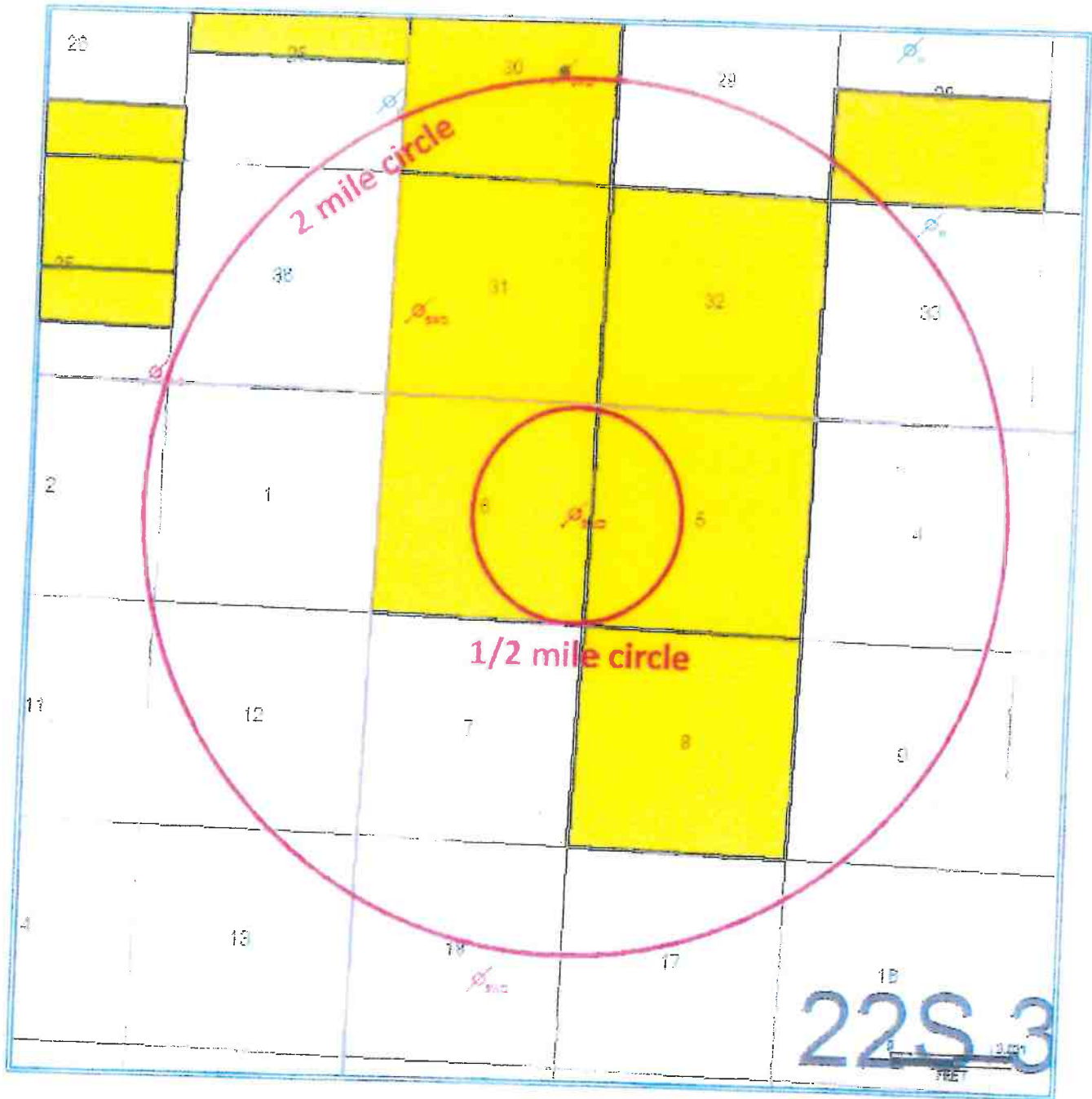
COMPLETE THIS SECTION ON DELIVERY

A. Signature
X *[Signature]* ☐ Agent
☐ Addressee
B. Received by (Printed Name) C. Date of Delivery
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (over \$500)
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☒ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.



**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF ADVANCE ENERGY
PARTNERS HAT MESA LLC
FOR APPROVAL OF A PRODUCED WATER
DISPOSAL WELL, LEA COUNTY,
NEW MEXICO**

Case No. 20827

SELF-AFFIRMED STATEMENT OF PAUL BURDICK

1. I am over 18 years of age and am competent to provide this Self-Affirmed Statement. I have personal knowledge of the matters addressed herein.
2. I am employed by Advance Energy Partners, LLC, as a Land Advisor. I have previously testified before the New Mexico Oil Conservation Division ("Division") and my qualifications as an expert in petroleum land matters were accepted.
3. I am familiar with the application filed by Advance Energy Partners Hat Mesa LLC ("Advance") in this case, and I am familiar with the status of the lands in the subject area.
4. In this application, Advance seeks authorization to inject produced water for purposes of disposal through its Quick Shot Unit SWD No. 1 well, which will be located 370 feet from the east line and 2,667 feet from the north line in Unit H in Section 6, Township 22 South, Range 33 East, NMPM, in Lea County, New Mexico. Advance seeks authorization to inject produced water into the Devonian and Silurian Formations approximately at a depth of 16,300 to 17,500 feet. Initially, the well shall only be operated to dispose of produced water from wells located on Advance's oil and gas leases. When Advance acquires the required permits from the New Mexico State Land Office, Advance may utilize the well to dispose of produced water from third parties' wells.

Case No. 20827

**ADVANCE ENERGY
Exhibit #1**

5. This application was originally filed for administrative approval but was protested by Merchant Livestock Company (“Merchant”), a grazing lessee, during the administrative review period. Merchant does not own the surface where the proposed Quick Shot Unit SWD #1 well will be located and does not own mineral rights within two miles of the proposed well. As a result of Merchant’s protest, Advance requested that the application be set for hearing. Since the application was set for hearing, Merchant has not entered an appearance.

6. NGL Water Solutions Permian, LLC entered an appearance on January 15, 2020 but does not oppose presentation of this case by affidavit. As a result, I do not expect any opposition at hearing.

7. A true and correct copy of the Form C-108 filed by Advance is attached as Exhibit A. Advance provided additional information regarding notice on August 6, 2019. That information is attached as Exhibit B.

8. Page 8 of the Form C-108 includes a map that depicts wells within two miles of the proposed well and within the one-half mile area of review. Advance’s leasehold interest is shown in yellow and includes the entirety of the area within one half-mile of the proposed well. Advance operates the wells located in this area. Advance also operates the salt-water disposal well shown in Section 31, which is located approximately one-mile northwest of the proposed well. That well disposes of produced water in the Bell Canyon formation (at depths of 5634’ to 5648’). No wells within one mile of the proposed well penetrate the injection interval.

9. An updated map of the wells located within the half-mile area of review is attached as Exhibit C. Advance’s leasehold interest is shown in yellow, and all of the active wells shown on the map are operated by Advance.

10. A map that depicts all leases within two miles of the proposed well is attached as Exhibit D.

11. The State of New Mexico owns both the surface and the minerals at the location of the proposed well. Advance will obtain all necessary permits and authorizations from the New Mexico State Land Office prior to disposing of off-lease produced water. Advance has entered into a surface use agreement with Merchant, the grazing lessee at the location of the proposed well.

12. Advance provided notice of its application to the surface owner, surface lessee, and oil and gas lessees and operators of record within one mile of the proposed well. Copies of the certified mail return receipts are included in Exhibits A and B.

13. Notice of the application was also published in the Hobbs News-Sun on June 9, 2019. A copy of the Affidavit of Publication is included in Exhibits A and B.

14. Notice of Advance's application and the Division hearing was provided to Merchant Livestock and the affected parties by certified mail. A sample of the notice letter and the associated return receipt cards are attached as Exhibit E.

15. It is my opinion that Advance undertook a good faith effort to locate and identify the correct parties and valid addresses required for notice within the well's area of review. There were no unlocatable parties.

16. The attached exhibits were either prepared by me or under my supervision, or were compiled from company business records.

17. In my opinion, the granting of Advance's application would serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

18. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 17 above is true and correct and is

made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

Paul Burdick
Paul Burdick

1-22-2020
Date

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: Advance Energy Partners Hat Mesa LLC **OGRID Number:** 372417

Well Name: Quick Shot Unit SWD No. 1

API:

Pool: Devonian - Silurian

Pool Code: 97869

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) TYPE OF APPLICATION: Check those which apply for [A]

A. Location - Spacing Unit - Simultaneous Dedication

☐ NSL

☐ NSP (PROJECT AREA)

☐ NSP (PRORATION UNIT)

☐ SD

B. Check one only for [I] or [II]

[I] Commingling - Storage - Measurement

☐ DHC

☐ CTB

☐ PLC

☐ PC

☐ OLS

☐ OLM

[II] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX

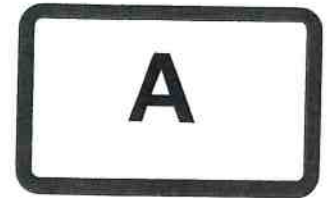
☐ PMX

☒ SWD

☐ IPI

☐ EOR

☐ PPR



2) NOTIFICATION REQUIRED TO: Check those which apply.

A. ☒ Offset operators or lease holders

B. ☒ Royalty, overriding royalty owners, revenue owners

C. ☐ Application requires published notice

D. ☐ Notification and/or concurrent approval by SLO

E. ☐ Notification and/or concurrent approval by BLM

F. ☒ Surface owner

G. ☒ For all of the above, proof of notification or publication is attached, and/or,

H. ☐ No notice required

FOR OCD ONLY

☐ Notice Complete

☐ Application

Content

Complete

3) CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

David Harwell

Print or Type Name

David Harwell

Signature

6/6/2019

Date

832-672-4604

Phone Number

DHarwell@advanceenergypartners.com

e-mail Address

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

5/30/2019

Attn: Ms. Heather Riley, Director

Re Application of Advance Energy Partners Hat Mesa LLC to permit for salt water disposal the proposed **Quick Shot Unit SWD Well No.1** to be located in is **370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East, NMPM, Lea County, New Mexico.**

Dear Ms. Riley,

Please find enclosed Form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for **commercial disposal**, the Quick Shot Unit SWD No 1. The well (**370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East**) is on a drill island. Attached is plat defining the drill island and the location of the Advance Energy Partners Hat Mesa LLC "Quick Shot Unit No. 1" within the island.

Advance Energy Partners seeks to optimize efficiency, both economically and operationally, of its operation in the southeast New Mexico. Advance Energy Partners respectfully requests administrative approval, without hearing, to dispose produced water into the Devonian – Silurian Formation. In support of this request please find the following documentation:

- Administrative Application Checklist
- Form C-108 with miscellaneous data attached
- An Injection Well Data Sheet with Wellbore Schematic
- Area of Review and Data Table of Surrounding Wells
- Publication
- Service List with Proof of Certified Mailing attached

Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran or about June 9, 2019 in the Hobbs News-Sun and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded when received. This application also includes a wellbore schematic, area of review maps, leaseholder plats and other required information for a complete Form C-108.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,



David Harwell

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance **XXX** Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No
- II. OPERATOR: **Advance Energy Partners Hat Mesa LLC**
ADDRESS: **11490 Westheimer Rd. Suite 950, Houston, Texas 77077**
CONTACT PARTY: **David Harwell** PHONE: **832-672-4604 (o) 281-235-3431 ©**
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? **XXX No (This is not an expansion of an existing project)**
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: **David Harwell** TITLE: **Vice President**
SIGNATURE: *David Harwell* DATE: **6-25-19**
E-MAIL ADDRESS: **DHarwell@advanceenergypartners.com**
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

OPERATOR: Advance Energy Partners Hat Mesa LLC

WELL NAME & NUMBER: Quick Shot Unit No. 1

WELL LOCATION: 370' FEL & 2667' FNL
FOOTAGE LOCATION

WELLBORE SCHEMATIC (Also Attached)

UNIT LETTER: 6 SECTION: 22S TOWNSHIP: 33E RANGE: 33E

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 30" & 24"

Cemented with: per vendor proposal

Top of Cement: Surface & Surface

Method Determined: Designed

Intermediate Casing

Hole Size: 17.5" & 12.25"

Casing Size: 13.625" & 9.875"

Top of Cement: Surface & Surface

Method Determined: Circulation

Production Casing

Hole Size: 8.75"

Cemented with: per vendor proposal

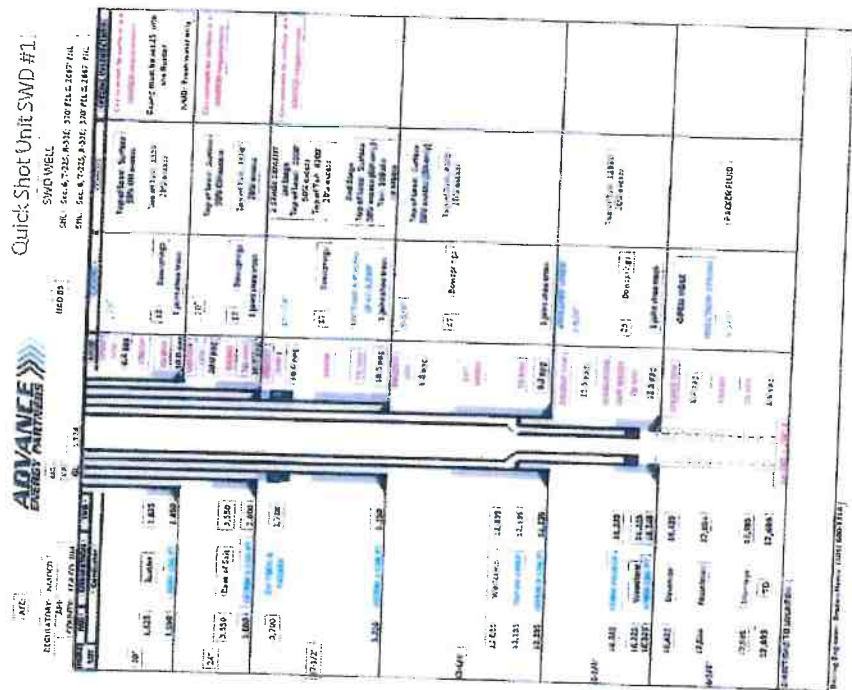
Top of Cement: Top of Liner

Method Determined: Circulation

Total Depth: 17500

Injection Interval

Open Hole 16502 feet To 17,500 feet
(Perforated or Open Hole; indicate which)



INJECTION WELL DATA SHEET

Tubing Size: 5 ½" HCP-110 x 5" HCP-110

Lining Material: Plastic Coated

Type of Packer: Nickel plated 10K double grip retrievable or 10K nickel plate permanent or Weatherford Arrow Set Injection Packer

Packer Setting Depth: +/-16225'

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? XXX Yes No

If no, for what purpose was the well originally drilled?

2. Name of the Injection Formation: Devonian - Silurian

3. Name of Field or Pool (if applicable): No

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

T / Brushy Canyon 8,450 - 8,500
 T / 2nd Bone Sand 10,400 - 10,550
 T / 3rd Bone Sand 11,600 - 11,700
 T Wolfcamp: 11,900 - 12,950
 T / Penn: 12,700 - 12,900
 T / Morrow 13,700 - 14,000

WELLBORE SCHEMATIC



Quick Shot Unit SWD #1

AFE:

REGISTRATION: 11/10/2018

API:

COUNTY: LEA CO. NM

RIG:

VR:

GL: 3775

NAD 83

SWD WELL

SHL: Sec. 8, T-22S, R-33E, 370 FEL 8, 2667 PNL

BHL: Sec. 8, T-22S, R-33E, 370 FEL 8, 2667 PNL

HOLE SIZE	MD	FORMATION	TVD	LOG	LOG	CEMENT	SPECIAL INSTRUCTIONS
30"	1,625	Rustler	1,625	DRILLING LIQUOR	20'	Top of Lead: Surface 50% OH excess	Circ cement to surface in a NMACO requirement
	1,650	SURE CSG PT	1,650	DRILLING LIQUOR	12'	Top of Tail: 1530' 20% excess	Casing must be set 25' into the Rustler
24"	3,550	Base of Salt	3,550	DRILLING LIQUOR	20'	Top of Lead: Surface 50% OH excess	Circ cement to surface in a NMACO requirement
	3,600	INTRM 1 CSG PT	3,600	DRILLING LIQUOR	17'	Top of Tail: 7840' 20% excess	
17-1/2"	3,700	GV TOOL & PACKER	3,700	DRILLING LIQUOR	13 3/4'	2 STAGE CEMENT 1st Stage Top of Lead: 2600' 50% excess Top of Tail: 4200' 20% excess	Circ cement to surface in a NMACO requirement
	5,250	INTRM 2 CSG PT	5,250	DRILLING LIQUOR	17'	2nd Stage Top of Lead: Surface 50% excess (OH only) Tail: 100' sh no excess	
12-1/4"	12,035	Wolfcamp	12,035	DRILLING LIQUOR	9-5/8"	Top of Lead: Surface 50% excess (OH only)	
	12,135	TOP OF LINER	12,135	DRILLING LIQUOR	47'	Top of Tail: 9746' 20% excess	
	12,235	INTRM 1 CSG PT	12,235	DRILLING LIQUOR	9-2 ppg		
8-3/4"	16,225	PERM PACKER	16,225	DRILLING LIQUOR	11.5 ppg	Top of Tail: 12996' 20% excess	
	16,225	Woodford	16,225	DRILLING LIQUOR	15'		
	16,245	LINER CSG PT	16,245	DRILLING LIQUOR	11.5 ppg		
	16,425	Devonian	16,425	DRILLING LIQUOR	11.5 ppg		
6-3/4"	17,004	Fossilman	17,004	DRILLING LIQUOR	8-4 ppg		
	17,595	Montoya	17,595	DRILLING LIQUOR	5.6 ppg		
	17,695	TD	17,695	DRILLING LIQUOR	5.6 ppg		

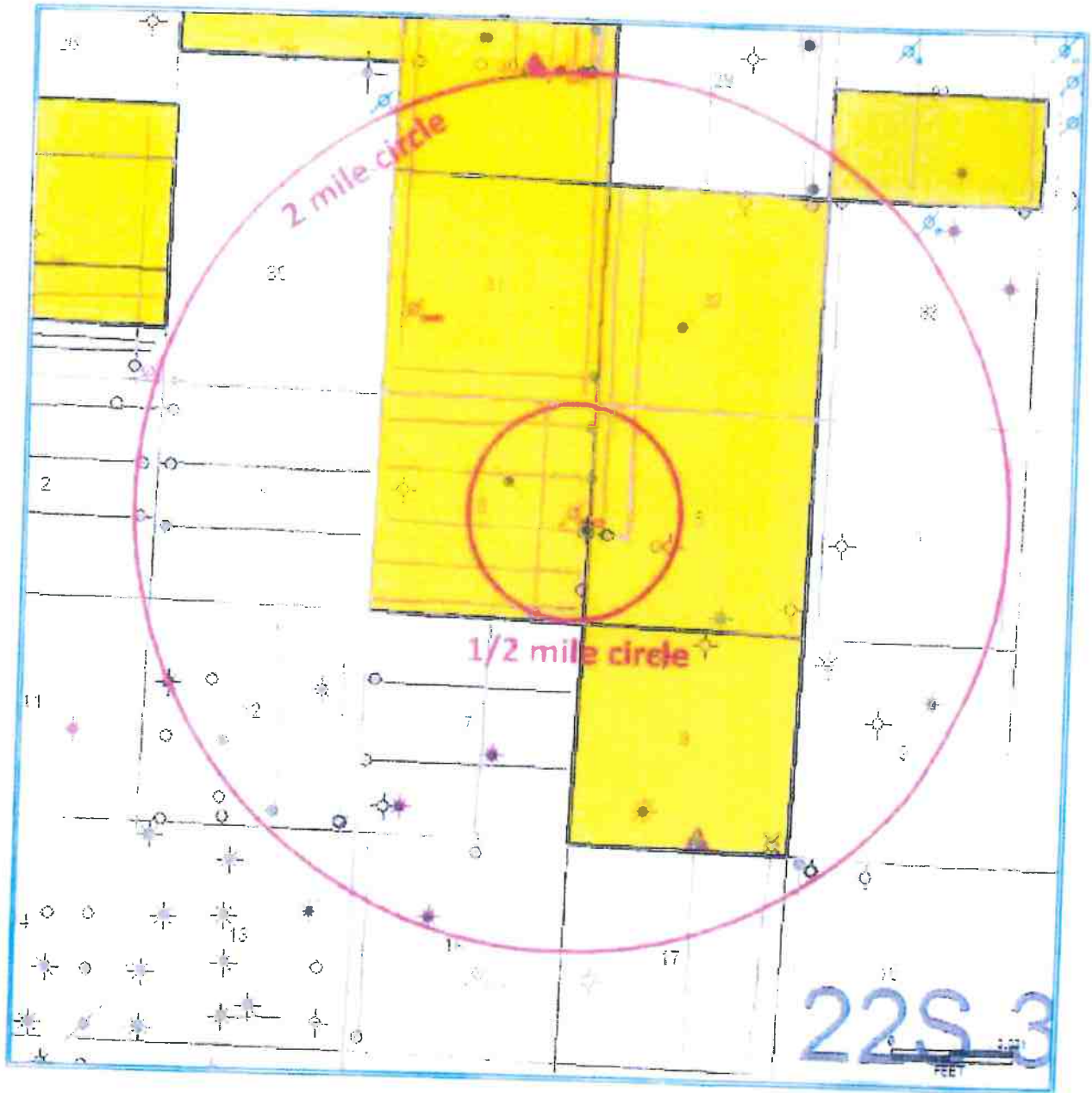
Est BHT = 250° F

DIRECTIONS TO LOCATION:

Drilling Engineer: Braden Harris (206) 600-5310

Date: 05/30/2019

Part V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.



VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

No wells penetrate the proposed disposal interval within a half or 1 mile area of review

Part VII. Operations Plan

1. Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 2 – 3 months. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval but at a different location from the well. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. The operator has negotiated a Surface Use Agreement for the facility and well site.
2. Prior to commencing any work, an NOI sundry(ies.) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.
3. The SWD facility will not be fenced so that trucks may access for load disposal 24/7.
4. The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.
5. The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.
6. Proposed Maximum injection pressure = $\sim 3285 \text{ psi}$ ($0.2 \text{ psi/ft.} \times 16,425'$)
7. Proposed average daily injection rate = 18,000 BWP
Proposed maximum daily injection rate = 25,000 BWP
8. Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbl. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as necessary and appropriate.

- VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

Quick Shot Unit SWD No. 1 Estimated Tops:

Formation	Depth
Rustler	1565'
Delaware	5335'
Bone Spring	8795'
Wolfcamp	12,035'
Strawn	13,425'
Mississippian Lime	15,630'
Woodford	16,225'
Devonian	16,425'
Silurian	16,869'

The injection zone is the Devonian/Silurian/Upper Ordovician, a mixture of non-hydrocarbon bearing limestones and dolomites estimated from 16,425' to 18,150'. Any underground drinking water sources will be shallower than 1565', the estimated top of the Rustler Anhydrite.

Geoscience Validation

NAME: Donald E. Glover

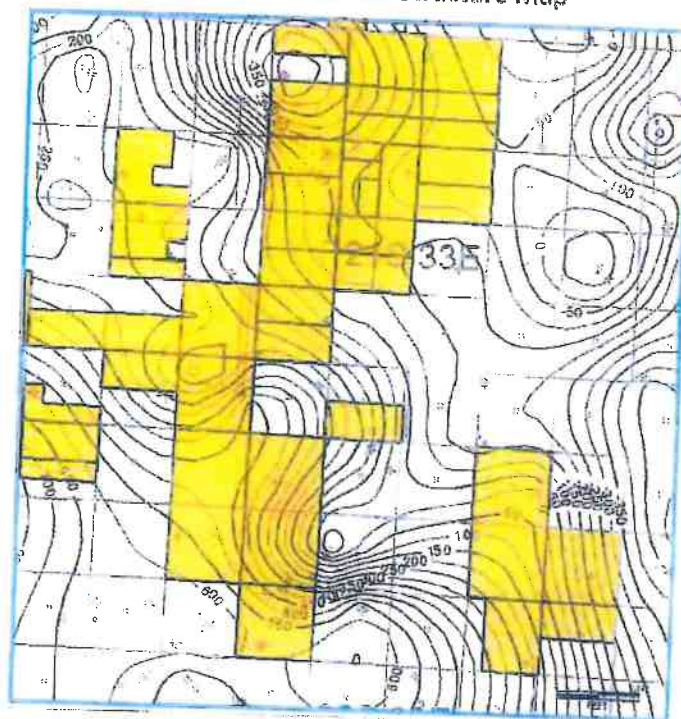
TITLE: President of MVG America LLC

SIGNATURE: 

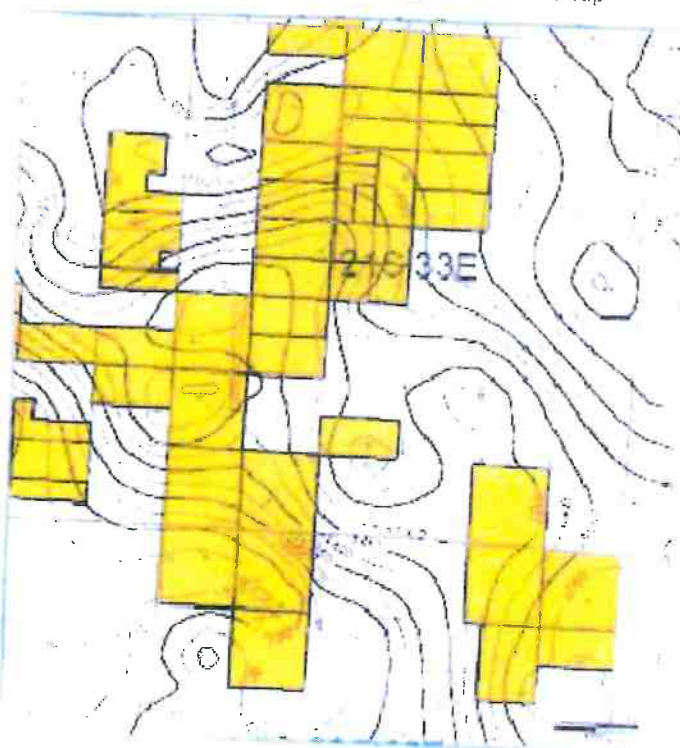
DATE: 6/25/19

Capitan Reef Basement

Top Capitan Reef SSTVD Structure Map



Base Capitan Reef SSTVD Structure Map



IX. Describe the proposed stimulation program, if any.

20 to 40 Gallons per feet of 20% HCL acid.
The estimated open hole footage is between
1000' – 1500'.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

**No Log Available Across Proposed
Devonian/Silurian/Upper
Ordovician Injection Interval.
Well logs will be filed with the
Division.**

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken

No Fresh water wells are with the 2 miles radius. Attached is potential disposed water samples:

SOURCE ZONE

WOLFCAMP

Lab ID

SOURCE ZONE

BONE SPRING

API No	3002502429	Lab ID	
Well Name	LEA UNIT	Sample ID	4916
	005	Sample No	
Location	ULSTR 12 20 S 34 E	Lat / Long	32.58504 -103.51106
	1980 S 1980 E	County	Lea
Operator (when sampled)		Unit	J
Field	LEA		
Sample Date		Analysis Date	
Sample Source	DST	Depth (if known)	
Water Type			
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
lds_mgL	202606	resistivity_phm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	118100	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	5196
iron_mgL		sulfate_mgL	992
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
Remarks			

SOURCE ZONE

DELAWARE

API No	3002508367	Lab ID	
Well Name	BELL LAKE UNIT	Sample ID	4347
	007	Sample No	
Location	UL STR 01 24 S 33 E	Lat / Long	32.25143 -103.51924
	660 N 660 E	County	Lea
Operator (when sampled)			
	Field SWD	Unit	1
Sample Date		Analysis Date	
	Sample Source UNKNOWN	Depth (if known)	
	Water Typ		
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	87686	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	53920	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	391
iron_mgL		sulfate_mgL	749
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
Remarks			

DISPOSAL ZONE

DEVONIAN

API No.	3002508483	Lab ID	
Well Name	BELL LAKE UNIT	Sample ID	5733
	006	Sample No	
Location	ULSTR 06 23 S 34 E	Lat / Long	32.32821 -103.50663
	660 S 1980 E	County	Lea
Operator (when sampled)		Unit	Q
Field	BELL LAKE NORTH		
Sample Date		Analysis Date	
Sample Source	HEATER/TREATER	Depth (if known)	
Water Type			
pH	7	alkalinity_as_caco3_mgL	
pH_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	71078	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	42200	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		blcarbonate_mgL	500
iron_mgL		sulfate_mgL	1000
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
Remarks			

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

Advance Energy Partners Hat Mesa LLC has examined available geologic and engineering data and find no obvious evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

Affidavit of Publication

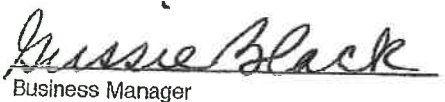
STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

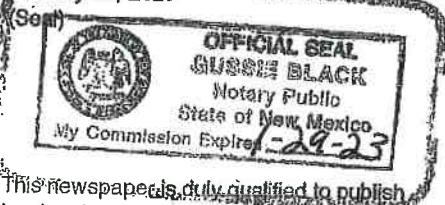
Beginning with the issue dated
June 09, 2019
and ending with the issue dated
June 09, 2019.


Publisher

Sworn and subscribed to before me this
9th day of June 2019.


Business Manager

My commission expires
January 29, 2023



This newspaper is duly qualified to publish
legal notices or advertisements within the
meaning of Section 3, Chapter 167, Laws of
1937 and payment of fees for said

LEGAL NOTICE JUNE 9, 2019

Notice for Quick Shot SWD

Advance Energy Partners
Hill Mesa LLC, 11490
Westheimer RD, STE 950
Houston, TX, 77077, is filing
Form C-108 (Application for
Authority to Inject) with the
New Mexico Oil
Conservation Division
seeking administrative
approval for a salt water
disposal well. The proposed
well, the Quick Shot SWD
No. 1 will be located 370'
FEL & 2667' FNL, Section 6,
Township 22 South, Range
33 East, Lea County, New
Mexico. Produced water
from the area production will
be commercially disposed
into the Devonian, Silurian,
and Upper Ordovician
formation at a depth of +/-
16,000' to 17,500' at a
maximum surface pressure
of 3285 psi and rate limited
only by pressure.

Interested parties wishing to
object to the proposed
application must file with the
New Mexico Oil
Conservation Division 1220
St. Francis Dr. Santa Fe, NM
87505, (505) 476-3460
within 15 days of the date of
this notice. Additional
information may be obtained
from Advance Energy
Partners Vice President of
Engineering 832-672-4700
#34259

67115359

00229400

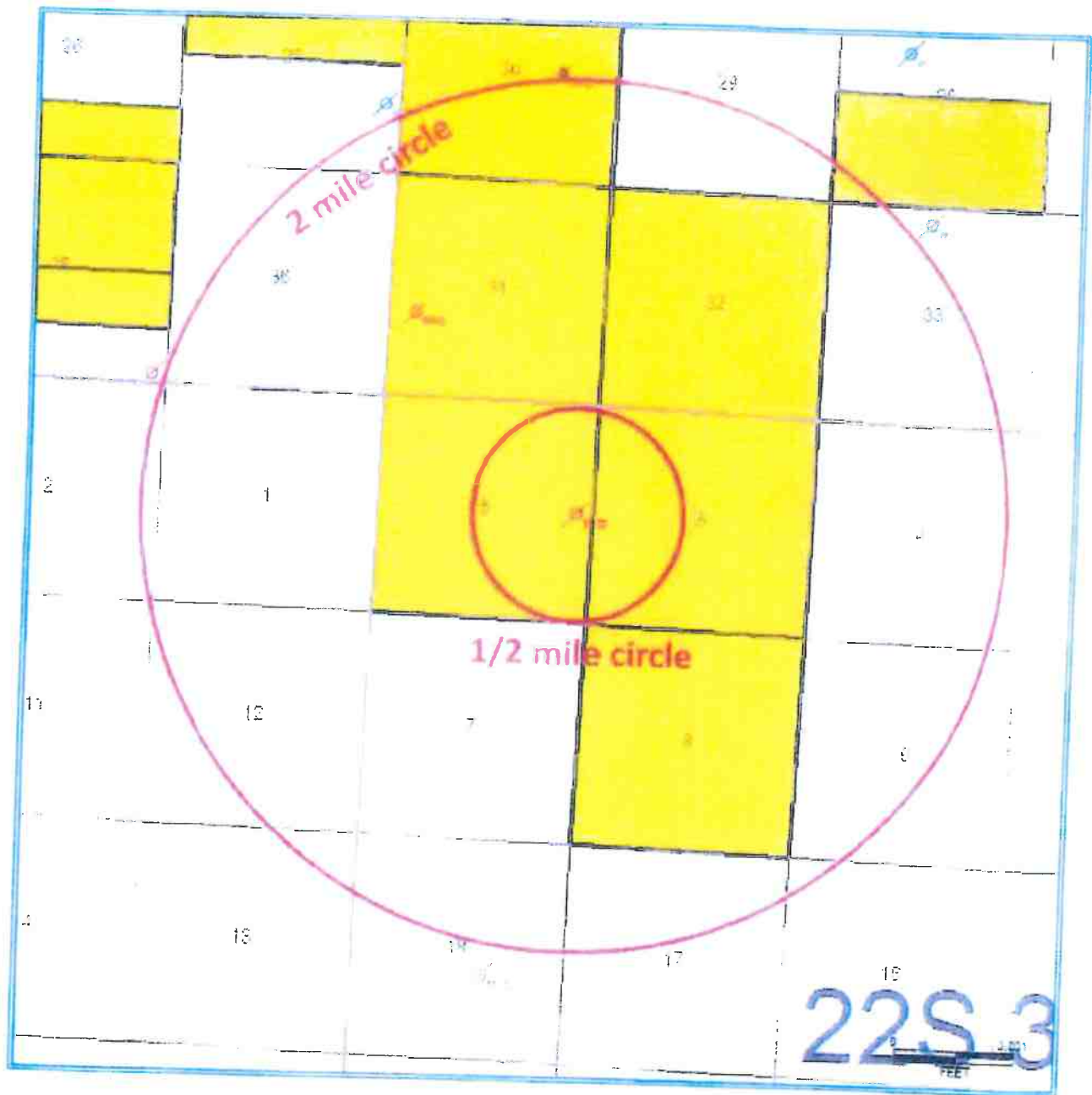
PAUL BURDICK
ADVANCE ENERGY PARTNERS
11490 WESTHEIMER RD, STE 950
HOUSTON, TX 77077

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>Article Addressed to:</p> <p>Bureau of Land Management Carlsbad Field Office 620 East Greene Street Carlsbad, NM 88220</p> <p>Quick Shot SWD</p> <p>9590 9402 4165 8092 9752 08</p> <p>2. Article Number (Transfer from service label) 7019 0160 0000 0273 5175</p>		<p>A. Signature X <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <i>Marissa Cabral</i></p> <p>C. Date of Delivery <i>6/16/19</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p>	
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>Domestic Return Receipt</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
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<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>Domestic Return Receipt</p>	

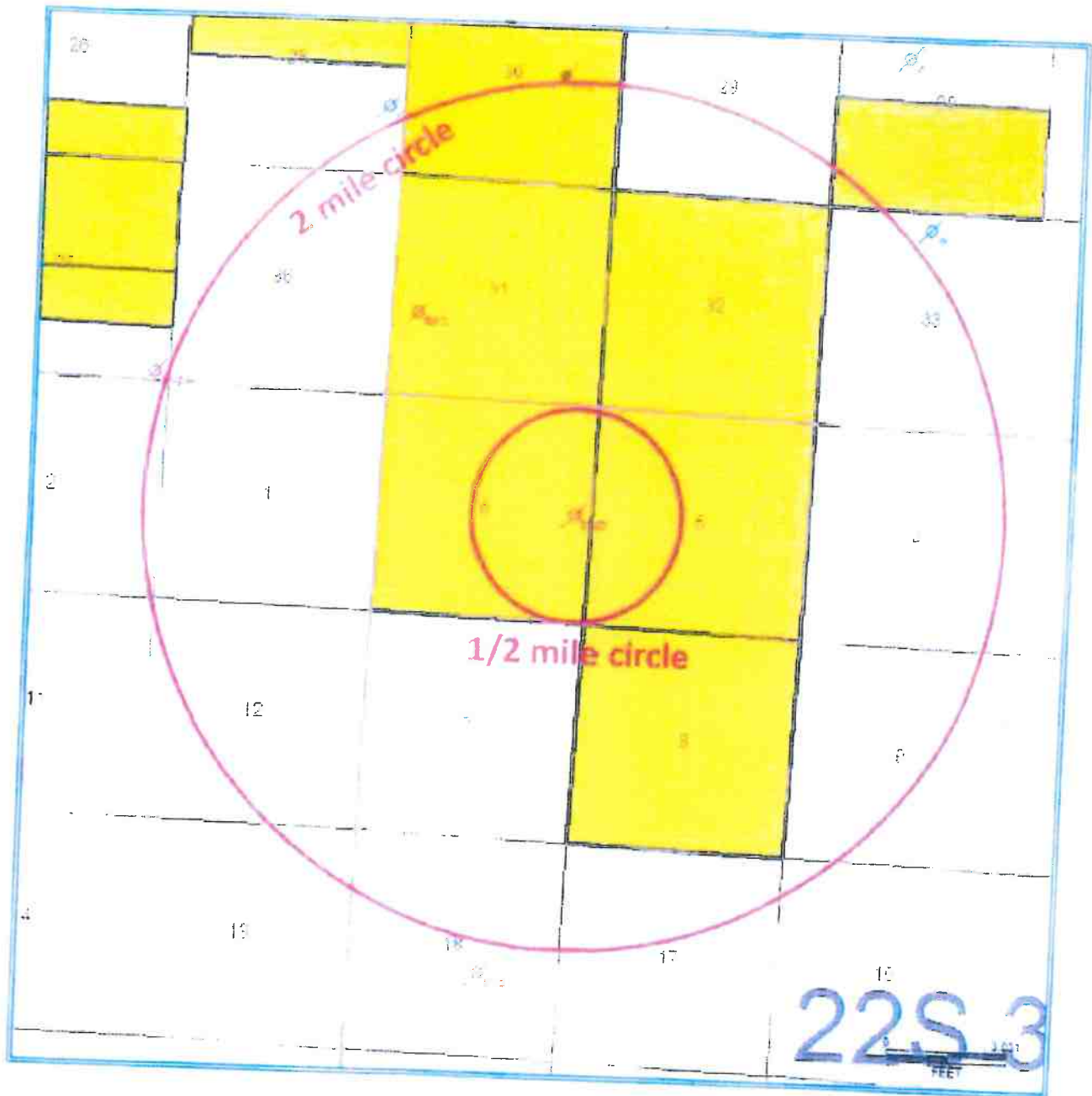
SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
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<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>Domestic Return Receipt</p>	

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.



Attachment

The Quick Shot Unit SWD Well No.1 in Sec 2
(370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East)



New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

8/6/2019

Attn: Ms. Heather Riley, Director

Re Application of Advance Energy Partners Hat Mesa LLC to permit for salt water disposal the proposed **Quick Shot Unit SWD Well No.1** to be located in is **370' FEL & 2667' FNL Section 6,, Township 22 South, Range 33 East**, NMPM, Lea County, New Mexico.

Dear Ms. Riley,

Please find enclosed Form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for **commercial disposal**, the Quick Shot Unit SWD No 1. The well (**370' FEL & 2667' FNL Section 6,, Township 22 South, Range 33 East**) is on a drill island. Attached is plat defining the drill island and the location of the Advance Energy Partners Hat Mesa LLC "Quick Shot Unit No. 1" within the island.

Advance Energy Partners seeks to optimize efficiency, both economically and operationally, of its operation in the southeast New Mexico. Advance Energy Partners respectfully requests administrative approval, without hearing, to dispose produced water into the Devonian – Silurian Formation. In support of this request please find the following documentation:

- Administrative Application Checklist
- Form C-108 with miscellaneous data attached
- An Injection Well Data Sheet with Wellbore Schematic
- Area of Review and Data Table of Surrounding Wells
- Publication
- Service List with Proof of Certified Mailing attached

Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran or about June 9, 2019 in the Hobbs News-Sun and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded when received. This application also includes a wellbore schematic, area of review maps, leaseholder plats and other required information for a complete Form C-108.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

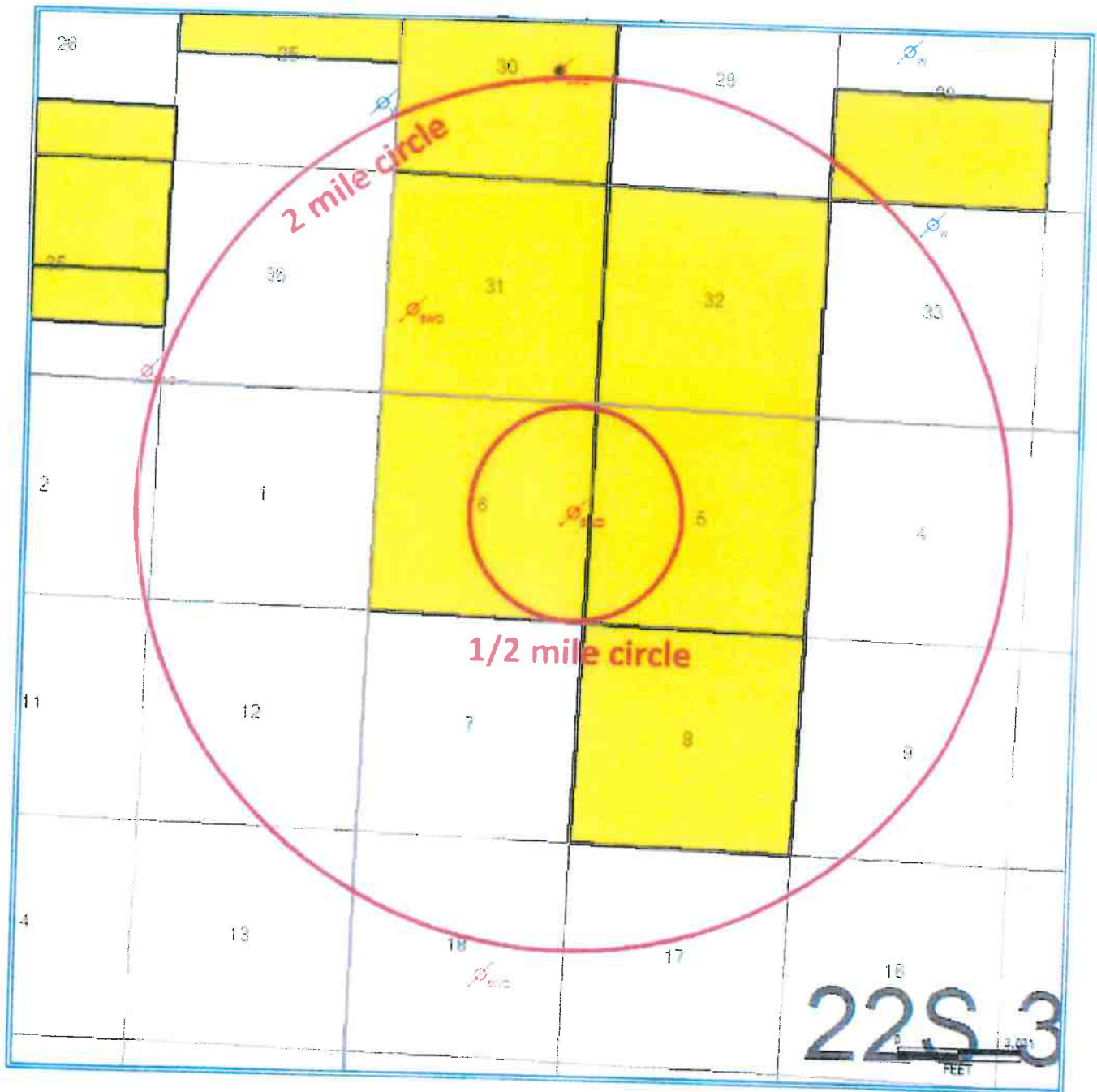
Best regards,

David Harwell

B

Attachment

The Quick Shot Unit SWD Well No.1 in Sec 2
(370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East)



XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

Advance Energy Partners Hat Mesa LLC has examined available geologic and engineering data and find no obvious evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

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Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

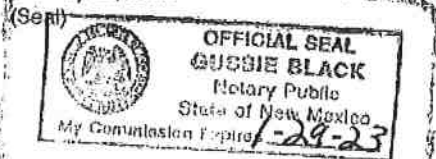
Beginning with the issue dated
June 09, 2019
and ending with the issue dated
June 09, 2019.


Publisher

Sworn and subscribed to before me this
9th day of June 2019.


Business Manager

My commission expires
January 29, 2023



This newspaper is duly qualified to publish
legal notices or advertisements within the
meaning of Section 3, Chapter 167, Laws of
1937 and payment of fees for said

LEGAL NOTICE
JUNE 9, 2019

Notice for Quick Shot SWD

Advance Energy Partners
Hill Mesa LLC, 11490
Westheimer RD, STE 950
Houston, TX 77077, is filing
Form C-109 (Application for
Authority to Inject) with the
New Mexico Oil
Conservation Division
seeking administrative
approval for a salt water
disposal well. The proposed
well, the Quick Shot SWD
No. 1 will be located 370'
FEL & 2867' FNL, Section 6,
Township 22 South, Range
23 East, Lea County, New
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from the area production will
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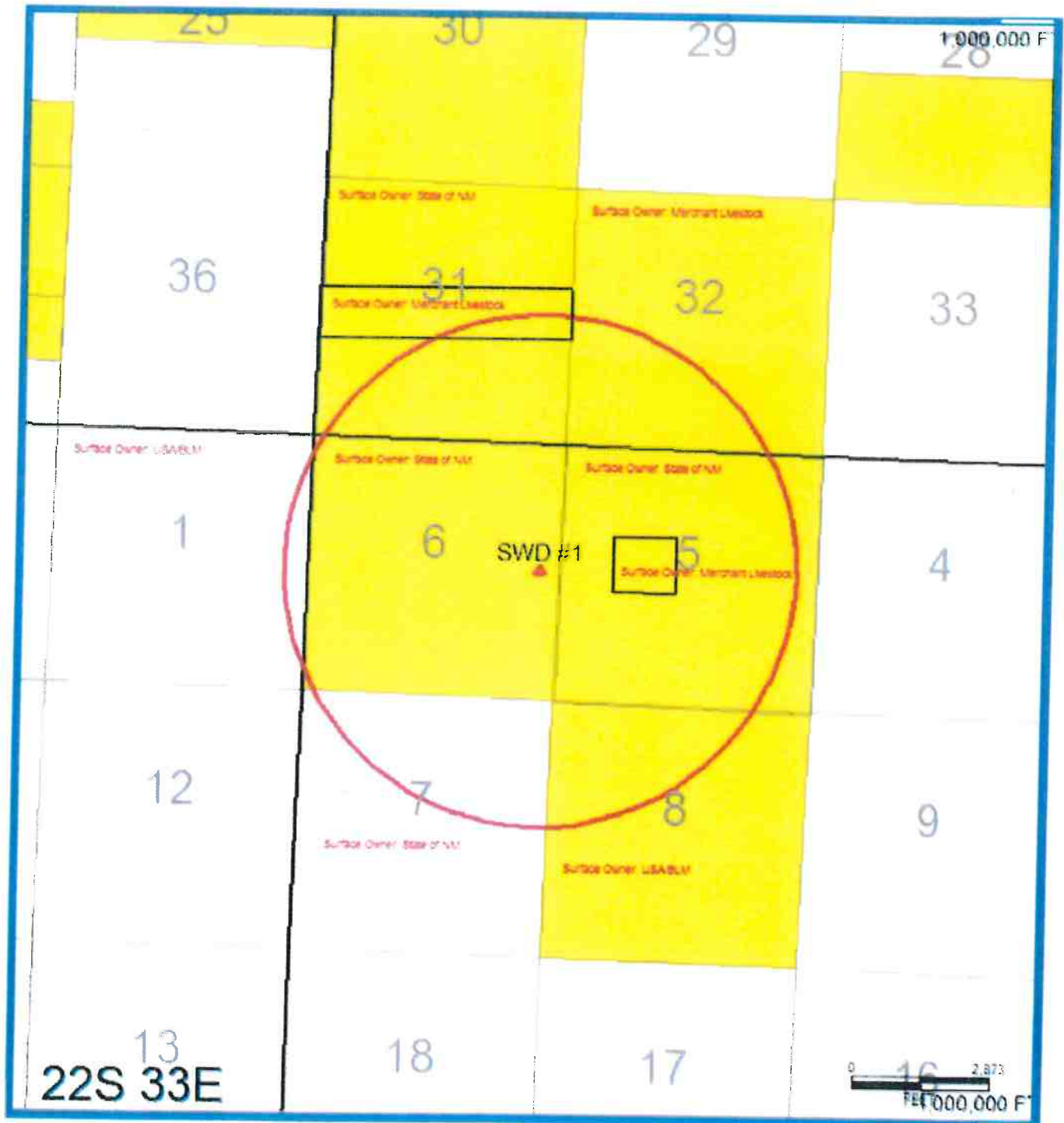
Interested parties wishing to
object to the proposed
application must file with the
New Mexico Oil
Conservation Division 1220
St. Francis Dr, Santa Fe, NM
87505, (505) 476-3480
within 15 days of the date of
this notice. Additional
information may be obtained
from Advance Energy
Partners Vice President of
Engineering 832-672-4700
#34269

67115359

00229400

PAUL BURDICK
ADVANCE ENERGY PARTNERS
11490 WESTHEIMER RD, STE 950
HOUSTON, TX 77077

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SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
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- Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:
Occidental Permian Ltd.,
5 Greenway Plaza
Houston, Texas 77045

Quick Shot SWD



9590 9402 4165 8092 9752 22

2. Article Number (Transfer from service label)
7019 0160 0000 0273 5162

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☐ Adult Signature☐ Adult Signature Restricted Delivery☒ Certified Mail☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Insured Mail☐ Insured Mail Restricted Delivery

over \$500

☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☒ Return Receipt for Merchandise☐ Signature Confirmation®☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:
Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, NM 88220

Quick Shot SWD



9590 9402 4165 8092 9752 08

2. Article Number (Transfer from service label)
7019 0160 0000 0273 5175

PS Form 3811, July 2016 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☐ Adult Signature☐ Adult Signature Restricted Delivery☒ Certified Mail☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Insured Mail☐ Insured Mail Restricted Delivery

over \$500

☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☒ Return Receipt for Merchandise☐ Signature Confirmation®☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

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Article Addressed to:
State of New Mexico
State Land Office
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504

Quick Shot SWD



9590 9402 4165 8092 9752 15

2. Article Number (Transfer from service label)
7019 0160 0000 0273 5168

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☐ Adult Signature☐ Adult Signature Restricted Delivery☒ Certified Mail☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Insured Mail☐ Insured Mail Restricted Delivery

over \$500

☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☒ Return Receipt for Merchandise☐ Signature Confirmation®☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Merchant Livestock Co., Inc
P. O. Box 1105
Eunice, New Mexico 88231



9590 9602 4165 8092 9750 55

2. State (Show on label) (Number form number 1-500)

7018 3830 0000 0360 1059

COMPLETE THIS SECTION ON DELIVERY

A. Signature

[Signature]

- ☐ Agent
- ☐ Address

B. Received by (Printed Name)

Clara R. S. [Signature]

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

AUG 22 2015

USPS

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery
- ☐ Registered Mail
- ☐ Registered Mail Restricted Delivery
- ☒ Return Receipt for Merchandise
- ☐ Signature Confirmation
- ☐ Signature Confirmation Restricted Delivery

(over \$500)

PS Form 3811, July 2015 PSN 7520-02-000-9053

Domestic Return Receipt

31

32

6

5

1/2 mile radius

C

DAGGER LAKE 5 STATE COM
501H
DAGGER LAKE 5 STATE COM
601H

DAGGER LAKE 5 STATE
507H
DAGGER LAKE 5 STATE COM
503H
DAGGER LAKE 5 STATE COM
603H

DAGGER LAKE 5 STATE
001H
DAGGER LAKE 5 STATE ST01
551H ST01

COOP 6 STATE
1H

COOP 6 STATE
2H

DAGGER LAKE 6 STATE 2
1

DAGGER LAKE 6 STATE
2

Dagger Lake 6 SWD
1

QUICK SHOT UNIT
SWD #1

AO 6 STATE
1H

AO 6 STATE
1H

DAGGER LAKE 5 STATE COM
551H

DAGGER LAKE 5 STATE COM
507H

DAGGER LAKE 5 STATE COM
805H

DAGGER 5 STATE COM
1

DAGGER LAKE 5 STATE COM
607H

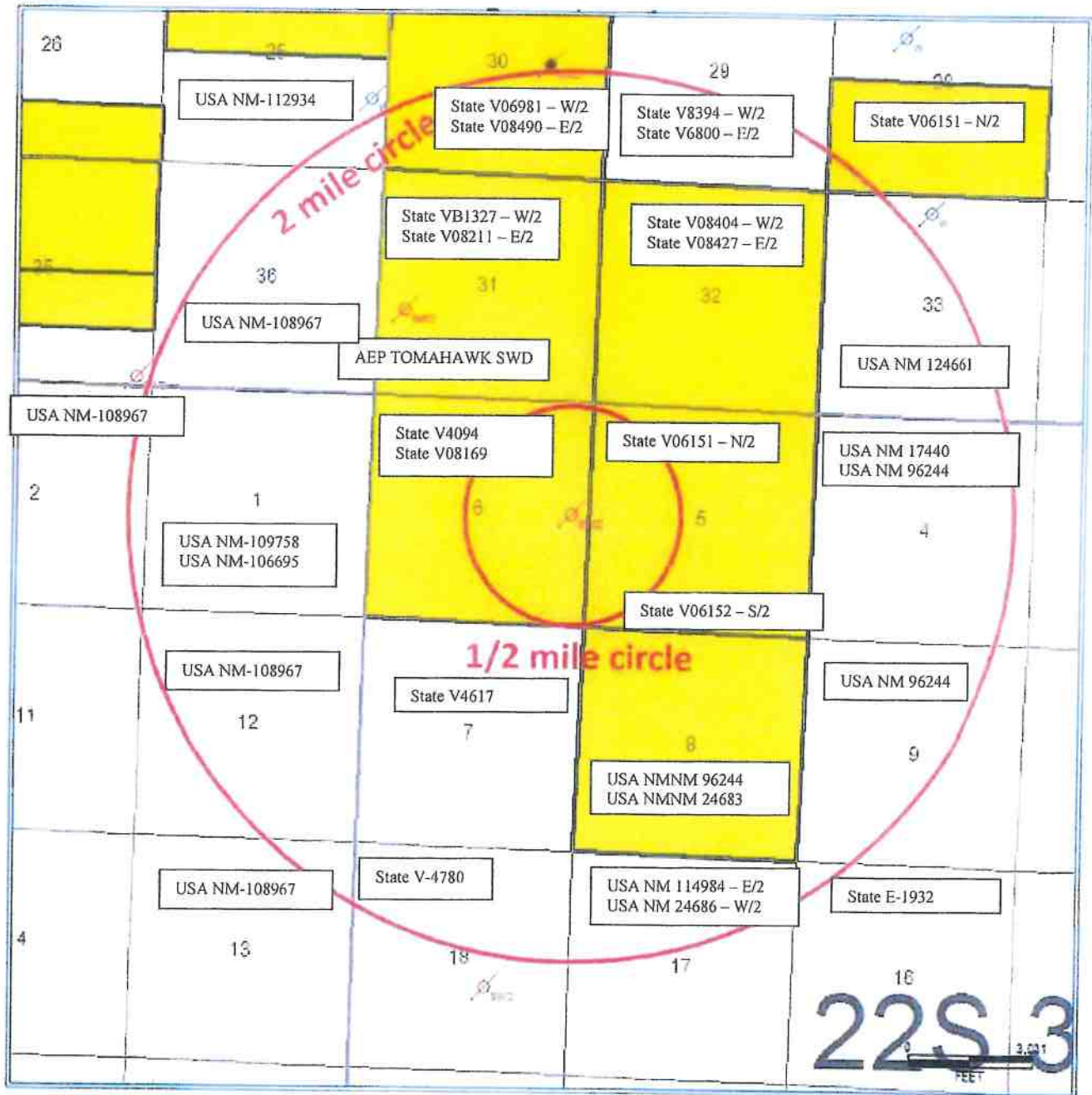
STATE
DAGGER LAKE 5 STATE COM
803H

6 STATE COM
501H

AO 6
502H

Attachment

The Quick Shot Unit SWD Well No.1 in Sec 2
(370' FEL & 2667' FNL Section 6, Township 22 South, Range 33 East)



ADVANCE ENERGY PARTNERS HAT MESA, LLC

D



hinklelawfirm.com

HINKLE SHANOR LLP

ATTORNEYS AT LAW

PO BOX 2068

SANTA FE, NEW MEXICO 87504

505-982-4554 (FAX) 505-982-8623

WRITER

Dana Hardy,
Partner

dhardy@hinklelawfirm.com

October 2, 2019

VIA CERTIFIED MAIL

Occidental Permian Ltd.
5 Greenway Plaza., #110
Houston, TX 77046-0521

Re: Advance Energy Partners Hat Mesa LLC NMOCD Application

Dear Sir or Madam:

Enclosed is a copy of an application for approval of a produced water disposal well that Advance Energy Partners Hat Mesa LLC ("Advance") has filed with the New Mexico Oil Conservation Division ("the Division"). Advance's application seeks authorization to inject produced water for disposal into the proposed Quick Shot Unit SWD No. 1 well, which will be drilled in Unit H in Section 6, Township 22 South, Range 33 East, NMPM, in Lea County, New Mexico.

This matter (Division Case No. 20827) is scheduled for hearing at 8:15 a.m. on November 14, 2019 in Porter Hall at the Division's offices located at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by Advance's application, you may appear at the hearing and present testimony. If you do not appear at that time and become a party of record, you will be precluded from contesting the matter at a later date.

A party appearing in a Division case is required by the Division's Rules to file a Pre-Hearing Statement, which in this matter must be filed no later than Thursday, November 7, 2019. The Pre-Hearing Statement must be filed with the Division's Santa Fe office at the address above, and should include: the name of the party and the party's attorney; a concise statement of the case; the name(s) of the witness(es) the party will call to testify at the hearing; the approximate amount of time the party will need to present the party's case; and an identification of any procedural matters that need to be resolved prior to the hearing. The Pre-Hearing Statement must also be provided to me.

Thank you for your attention to this matter.

Very truly yours,

Dana Hardy

Dana Hardy

E

DH:kkk
Enclosure

PO BOX 10
ROSWELL, NEW MEXICO 88202
575-622-6510
(FAX) 575-623-9332

PO BOX 1720
ARTESIA, NEW MEXICO 88210
575-622-6510
(FAX) 575-746-6316

PO BOX 2068
SANTA FE, NEW MEXICO 87504
505-982-4554
(FAX) 505-982-8623

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<p>1. Article Addressed to:</p> <p>Occidental Permian Ltd. 5 Greenway Plaza., #110 Houston, TX 77046-0521</p>		<p>B. Received by (Printed Name)</p> <p><i>[Signature]</i></p>	<p>C. Date of Delivery</p>
<p>2. Article Addressed to:</p> <p>Occidental Permian Ltd. 5 Greenway Plaza., #110 Houston, TX 77046-0521</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p>	
<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express®</p> <p><input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™</p> <p><input type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery</p> <p><input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™</p> <p><input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>		<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express®</p> <p><input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™</p> <p><input type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery</p> <p><input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™</p> <p><input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	
<p>9590 9402 4582 8278 5982 93</p> <p>7018 3090 0001 4741 6759</p>		<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	

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<p>1. Article Addressed to:</p> <p>Merchant Livestock Co., Inc. P.O. Box 1105 Eunice, NM 88231</p>		<p>B. Received by (Printed Name)</p> <p><i>[Signature]</i></p>	<p>C. Date of Delivery</p> <p>11/12/19</p>
<p>2. Article Addressed to:</p> <p>Merchant Livestock Co., Inc. P.O. Box 1105 Eunice, NM 88231</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p>	
<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express®</p> <p><input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™</p> <p><input type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery</p> <p><input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™</p> <p><input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>		<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express®</p> <p><input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™</p> <p><input type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery</p> <p><input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™</p> <p><input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	
<p>9590 9402 4582 8278 6038 74</p> <p>7018 2290 0000 3427 7952</p>		<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	

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1. Article Addressed to:
Bureau of Land Management
Carlsbad Office
620 E. Green Street
Carlsbad, NM 88220



9590 9402 4582 8278 5983 16

7018 3090 0001 4741 6735

PS Form 3811, July 2015 PSN 7530-02-000-9053

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A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
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3. Service Type

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- ☐ Collect on Delivery Restricted Delivery

- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

all
all Restricted Delivery

(over \$500)

Quick Shot

Domestic Return Receipt

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1. Article Addressed to:
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501



9590 9402 4582 8278 5983 09

2 7018 3090 0001 4741 6742

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

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all Restricted Delivery

Quick Shot

Domestic Return Receipt

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF ADVANCE ENERGY
PARTNERS HAT MESA LLC
FOR APPROVAL OF A PRODUCED WATER
DISPOSAL WELL, LEA COUNTY,
NEW MEXICO**

Case No. 20827

SELF-AFFIRMED STATEMENT OF DONALD E. GLOVER

1. I am over 18 years of age and am competent to provide this Self-Affirmed Statement. I have personal knowledge of the matters addressed herein.
2. I am employed by Advance Energy Partners, LLC as Facility Engineer. I have not previously testified before the New Mexico Oil Conservation Division ("Division"). I have 31 years of experience in petroleum engineering working in oil and gas operations for various operators. A copy of my curriculum vitae is attached as Exhibit A.
3. I am familiar with the application filed by Advance Energy Partners Hat Mesa LLC ("Advance") in this case, and I am familiar with the matters addressed in Advance's Form C-108.
4. In this application, Advance seeks authorization to inject produced water for purposes of disposal through its Quick Shot Unit SWD No. 1 well. The proposed injection disposal interval will be within the Devonian and Silurian Formations at a depth of approximately 16,300 to 17,500 feet. The proposed injection well is a new project.
5. Well data and operational information for the proposed well are provided on pages 5-6 and 10 of the C-108. The proposed well design is provided on pages 5 and 7 of the C-108.

Case No. 20827

**ADVANCE ENERGY
Exhibit #2**

6. The well's cement job on the production casing will be confirmed with a cement bond log or an equivalent cement integrity log to establish the top of the cement and the quality of the bonding to the casing.
7. The well's annular space will be filled with an inert packer fluid to protect both the casing and the tubing. The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.
8. The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters.
9. The disposal interval will be an open hole completion at approximately 16,300 to 17,500 feet.
10. The surface injection pressure is expected to be on a vacuum initial and increase to a maximum surface injection pressure of 3,285 psi over a period of 30 years. Advance proposes to inject an average of 20,000 barrels per day up to a maximum of 25,000 barrels per day.
11. Page 8 of the C-108 depicts a map of oil and gas wells located within two miles of the proposed well. An updated map that shows wells within the half-mile area of review is attached to my affidavit as Exhibit B. Nineteen wells are located within the one-half mile area of review. Of those wells, fifteen are active producers, one is a plugged well, one is a shut in well, and one is a permitted well operated by Advance. There is also one dry and abandoned well. None of the wells located within one-half mile of the proposed well penetrate the injection interval.
12. None of the wells within the half-mile area of review require corrective action to contain injection fluids within the injection interval. Additionally, none of the wells within the half-mile area of review create a potential conduit for the migration of injection fluids outside of the injection zone.

13. The well design and cement plan will protect freshwater and underground sources of drinking water and protect correlative rights.

14. In my opinion, the granting of Advance's application would serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

15. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 14 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.


Donald E. Glover

1/22/2020
Date

CAREER SUMMARY

Oil & Gas Executive with a solid track record of building and managing teams across diverse disciplines to achieve positive business results. MBA (Rice University), US Army veteran (1st Lieutenant) with a solid working knowledge of unconventional and conventional onshore operations from the technical, commercial, operational, and land / legal vantages, with a strong emphasis on increasing Net Asset Valuation (NAV) value of the company's portfolio. Additionally, managed major acquisitions and divestitures efforts in unconventional (shale) and conventional reservoirs. Record of enhancing the base production through infill drilling, artificial lift optimization, EHS, well life cycle management, winterization, and portfolio rationalization. Skilled in:

- EHS Management
- Operation P / L Management
- Planning and Budgeting (Capex & Opex)
- Field Development Planning
- Asset Acquisition and Divestures
- Strategy, Vision, and Priorities Development
- Using Influence to Drive Targeted Results
- Leadership Development and Practices
- Negotiating Yes
- Developing and Maintaining Partner Relationships

PROFESSIONAL EXPERIENCE

MVG ENERGY SOLUTIONS

President

Oct 2015 – PRESENT

Oil and Gas Management Consultation.

- Transactional service – Land, Legal, HSE, Geology, and Engineering
- Turn around services – poor asset performance, bankruptcy, exploration, appraisal, and pre-sales or divestures
- Develops short and long-term budget and operations plans
- Manages the heads of all departments of the company and oversees their functions
- Develops strategies, objectives, priorities, initiatives and scorecards for the heads of departments
- Management of client relations

TRINITY RIVER ENERGY

CHIEF OPERATING OFFICER

APRIL 2016 – MAR 2018

Plans and directs all aspects of an organization's operational policies, objectives, initiatives. Responsible for the attainment of short- and long-term financial and operational goals. Directs the development of the organization to ensure future growth. Lowered LOE by 40%, cut base decline in half, increased free cash flow by \$72 MM, lower EBITDAX to Debt ratio to 3, and increased market value by \$150MM

- Make decisions regarding the budget of the company keeping in view the developments plans
- Prepares short and long term operations plan
- Overseeing the day to day functioning of the company
- Manages the heads of all departments of the company and overseeing their functions
- Develops strategies for the functioning of the company along with the chief executive officer
- Aides in the development of all objectives, priorities, and initiatives for the heads of departments
- Prepare investment plans and plan acquisitions
- Develops all score cards
- Ensures the development of all human capital

CHESAPEAKE ENERGY

May 2015 – Dec 2015

Vice President Mid Con South

Directed all engineering, geological, legal, operations and land support for the Mid Con South Business Unit 12M BOPD, 600 MMCFD and 400 Chesapeake Employees. Managed a multi-disciplinary team (Production, Facility, and Reservoir Engineering, Planning budgeting, Geology and Geophysics) to develop a strategy for the asset – Shrink to Grow. Identified and evaluated divestiture opportunities (8 assets \$0.6 - \$0.8 Billion), enabling Mid Con South and North to become Mid Con - a 5 billion dollar NAV asset.

- Management of the joint venture and A&D process
- Management of companies core values and EHS Policy
- Management of the capital and expense budgeting process and implementation

A

- Identify need for and manage special studies.
- Management of the capital and expense budgeting process
- Career management of all employees (400+)
- Management of direct and indirect reports (Drilling, Completion, Production, Operation, Finance, A&D and EHS Managers, and Legal)

CHESAPEAKE ENERGY

May 2014 – May 2015

Production Manager

Directed the production and facility engineering, WTS, EDS, and operations for the Mid Con South Business Unit 33MBLLS, 400MMCFD and 380 Chesapeake Employees to the lowest base decline asset and highest rate of return play inside of Chesapeake.

- Management of Production and Facility Engineering and Field Operations for the Mississippi Lime, Meramec, and Oswego Formation.
- Seven direct reports – 380 in the organization
- Established EHS improvement policy, practices and leadership training
- Management of production from Turn In Line to plug abandonment
- Management and determination of operating, remedial and recompletion budget
- Management of the water transfer system
- Co-Champion Chesapeake Operational Excellence Initiative –Base 2020

SK INNOVATION - E&P COMPANY

2011 – May 2014

Global Engineering Manager

Directed a multi nationality organization in new play generation of ideas, evaluation of publicly-marketed producing properties, computer-based financial modeling, and mapping to predict future drilling, recompletion, and remedial results in North America. In charge of drilling and equip to flow, reservoir forecasting, reserves booking, and capital allocation for new play five explorations block in Colombia.

- Closed a transaction of a \$400MM deal: managed a multi-disciplinary team, identified and evaluated M&A opportunities (\$0.5 - \$2 Billion), led Engineering and G&G support to Exploration, Development, and Production assets, and performed all Risk and value assessments.
- M&A strategy enhancement.
- Managed operation in Colombia over 5 exploration blocks
- Identified need for and manage special studies.
- Oversaw and participated in technical and operating committee meetings, driving innovation.
- Managed interactions with investment banks and advisors.
- Set goals, KPI's and conducted performance reviews of staff.
- Identified and filled personnel gaps with contractors or employees to optimize human capital profile.
- Mentored staff in international locations, fostering professional development.
- Built, maintained and leveraged extensive industry networks to create business opportunities.
- Collaborated with the Exploration and Commercial Managers on strategic and tactical issues in the L48, Latin America, and Africa.

CONOCOPHILLIPS

1989 – 2011

New Ventures Engineering Specialist (2009 – 2011)

Oversaw generation of new play ideas, screening of external prospects and deals, evaluation of publicly-marketed producing properties, computer-based modeling, and mapping to predict future drilling, recompletion, and remedial results. In charge of reservoir forecasting, reserves booking, and capital allocation for new plays and existing producing assets.

- Performed quarterly drilling and completion benchmark studies on US Unconventional Shale Plays and Players.
- Provided insight into industry acquisition, divestures, and announcements.
- Provided cost estimates for drilling, completion, facility, and pipeline operations.

Director for Lower 48 Business Development (2006 – 2009)

Directed all business development activities, including: generation of new play ideas, screening of external prospects and deals, evaluation of publicly-marketed producing properties, computer-based modeling and mapping to predict future drilling, recompletion, and remedial results. In charge of reservoir forecasting and reserves

booking. Gained expertise in: prospect generation and evaluation, producing property evaluation, risk analysis, computer-based geologic mapping, project coordination, cost analysis and team building of multi discipline groups.

- Spearheaded a multi-disciplinary team to generate and evaluate opportunities to grow reserves and production within the US Lower 48. This led to 50 acquisition evaluations ranging for \$50MM to \$5 Billion.
- Served as member of partner operating committee, collaborating between partner organizations and internal stakeholders in line of responsibility, keeping lines of communications open and functional for all.
- Performed quarterly drilling and completion benchmark studies on US Unconventional Shale Plays / Players.

South Texas Lead Production Engineer (2003 – 2006)

Directed all aspects of the asset investment and operations management. Accountable for safe, efficient operations. Coordinated with technical, commercial, legal, HSE and land to support assets.

- Coordinated, assessed and prioritized the South Texas Field opportunities / assets to support departmental goals, budgets and portfolio management objectives for financial performance.
- Assisted in developing the South Texas Spill Management Plan and field exit plans.
- Applied various well flow analysis techniques to evaluate and optimize South Texas field operation and well performance.
- Developed a decision tree for down hole completions in Lobo to address corrosion, liquid loading and well life cycle management.
- Evaluated field-wide performance of artificial lift systems and selection technique to improve performance.
- Analyzed, evaluated, budgeted, and performed remedial well work programs.

Business Improvement Specialist (2002 – 2003)

Contributed to optimization of asset by providing direction and support to Senior Management in identifying and implementing operational improvements across the L48, through leveraging of best practices and collaboration, such that ConocoPhillips L48 operations realized significant Post Merger synergy cost reduction.

- Assisted L48 Management in developing plan to deliver top quartile L48 unit of production cost.
- Assisted the L48 BU's in developing their 2003 operating plans. Provided analysis of gaps between ConocoPhillips core areas (South Texas, San Juan, Panhandle, and Permian) and our Best In Class Peers.
- Provided technical support to procurement on L48 compression and pumping services.

Asset Team Manager for California and Canada Properties (2000 – 2002)

Directed engineering, geological, and land support for partnership operation of Point Arguello Unit (3 platforms offshore in 600 feet water) California offshore assets produced 20M BOPD and the Canadian assets consisted of 10 onshore fields of varying production.

- Performed Reservoir and Production Engineering support for all budgeting, reserves management, \$500 MM decommissioning efforts, AFE projects, and \$55 MM in operation and expense work.
- Improved asset value of the L48, adding \$0.13 per BOE by providing engineering support for sale of the Point Arguello Unit in 2002.
- Directed the transfer efforts of Canada assets to the ConocoPhillips office in Calgary following the Phillips and Conoco merger.

Engineering Technical Lead for Property Acquisitions & Trades (2000 – 2002)

Provided drilling, production and reservoir engineering support to Business Development Group for the purchase/ swap of the Kelly properties in North Louisiana, El Paso East Texas assets, Marathon Asset Swap in North LA, and Barrett Resources Inc., contributing to increased asset valuation. Maintained safe working environment.

Team Leader for North Louisiana Operations (1998 – 2000)

Ensured coordination between marketing, production, reservoir and drilling engineering for area projects. Provided facility, pipeline, completion, and production engineering support for the Ada and West Bryceland (Hosston, Poole, and Cotton Valley sands) fields.

Production Engineer for East Binger and West Cement Medrano Units (1996 – 1998)

Provided process, facility, completion and production engineering support to operations, maintenance, environmental and operation support groups for the East Binger Unit (tertiary recovery project with NGL extraction plant) and the West Cement Medrano (gravity drainage reservoir using horizontal wells with electrical submersible pump application).

- Provided technical support for Legal in preventing \$12MM in claims against the East Binger Unit.
- Managed the data room for the sale of East Binger Unit and other Oklahoma properties to Nielson & Associates and Lariat for \$80 MM.

Drilling and Completion Engineer (1995 – 1996)

Provided primary drilling and completion engineering support for the Oklahoma, Bastian Bay and Lake Washington, Louisiana properties. Responsible for designing and solving daily problems related to drilling and completions.

HCC Plant VI Polyethylene Process Engineer (1989 – 1995)

Held accountable for working safely, developing process conditions, process monitoring, failure analysis, small project design and installation, and site environmental compliance. Entrusted with responsibility for training operation personnel, equipment inspection, developing standard operation procedures, and ensuring the safe and efficient operation during 2 plant startups.

UNITED STATES ARMY

1983 - 1991

Commissioned 2nd Lieutenant 1988 - Retired 1st Lieutenant 1991

Supply and Training Officer for Alpha Company 95th Infantry Division Reserve Army. Responsible for identifying and accomplish training objectives for the 95th Infantry Division. Total active duty time ~3 years

EDUCATION / PROFESSIONAL DEVELOPMENT / AFFILIATIONS**Masters of Business Administration degree, Executive MBA Program**

RICE UNIVERSITY, JONES GRADUATE SCHOOL OF BUSINESS

Bachelor of Science in Chemical Engineering

OKLAHOMA STATE UNIVERSITY

FOUNDATION OF LEADERSHIP

2004

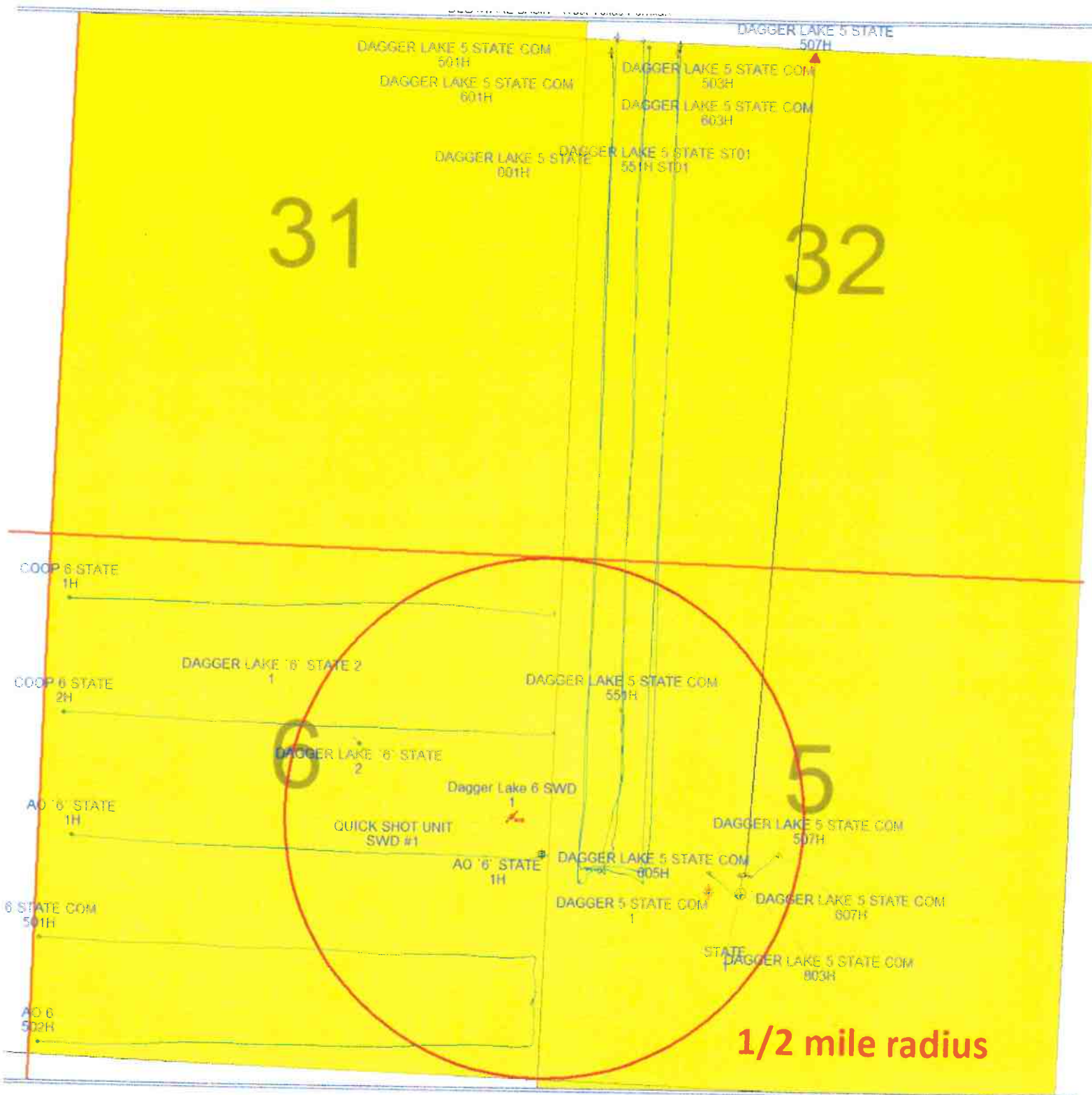
Center of Creative Leadership course in leadership development, leadership training, and executive coaching

- SPE (Society of Petroleum Engineers), Houston Chapter

INTERESTS**USA TRACK & FIELD COACH**

1991 - 2008

Coached 2 athletes in the 2000 Olympic Games



B

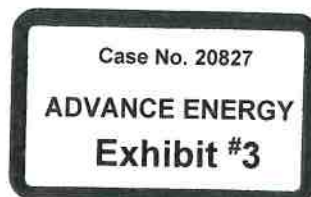
STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

APPLICATION OF ADVANCE ENERGY
PARTNERS HAT MESA LLC
FOR APPROVAL OF A PRODUCED WATER
DISPOSAL WELL, LEA COUNTY,
NEW MEXICO

Case No. 20827

SELF-AFFIRMED STATEMENT OF EDWARD CAAMANO

1. I am over 18 years of age and am competent to provide this Self-Affirmed Statement. I have personal knowledge of the matters addressed herein.
2. I am employed by Advance Energy Partners, LLC as the Vice President of Geoscience. I have previously testified before the New Mexico Oil Conservation Division ("Division") and my qualifications as an expert in petroleum geology were accepted.
3. I am familiar with the application filed by Advance Energy Partners Hat Mesa LLC ("Advance") in this case, and I am familiar with the matters addressed in Advance's Form C-108.
4. In this application, Advance seeks authorization to inject produced water for purposes of disposal through its Quick Shot Unit SWD No. 1 well. The proposed injection disposal interval will be within the Devonian and Silurian Formations at a depth of approximately 16,300 to 17,500 feet.
5. Page 11 of the C-108 includes an overview of the geology relating to the proposed well. The injection zone is the Devonian, a mixture of non-hydrocarbon bearing limestones and dolomites estimated from approximately 16,300 to 17,500 feet.
6. A structure map of the top of the Devonian formation is attached as Exhibit A. The map shows the position of the Quick Shot within a synclinal structure.



7. A structural cross section A-A', attached as Exhibit B, was constructed utilizing formation tops from three deep wells in the area. The proposed location of the Quick Shot SWD No. 1 is projected onto this cross section. Depth control is by correlation with two wells having open hole wireline logs to the Devonian. Formation tops for the Zeus SWD No.1 are those submitted by the operator on revised form C-105. In this area, the Devonian-Silurian is approximately 1,700 feet thick composed predominately of limestone with increasing dolomite towards the base, and the porosity is typically 0-2%. Regionally within the Devonian-Silurian interval there are 2-4 high porosity intervals each ranging in thickness between 40 – 120 feet. These intervals are the targeted disposal intervals. Each of these intervals is bounded above and below by thick, tight (0-2% porosity) intervals, thus providing top and bottom seals. Immediately overlying the Devonian are approximately 200 feet of Woodford Shale, which in turn is overlain by approximately 600 feet of Mississippi Limestone averaging 2% porosity, both of which provide additional seal capacity. Based on my examination and study of the geology in the area, it is my opinion that these geologic seals will effectively contain the injected fluids within the target injection zone.

8. Injection will not impair correlative rights and will not adversely affect the production of hydrocarbons because the proposed injection fluids will remain within the target injection zone. The proposed injection interval is not prospective for hydrocarbons within the area of the proposed injection well. The producing wells within a half-mile of the proposed well produce from the Bone Spring and Upper Wolfcamp formations.

9. I have evaluated available engineering and geologic data and have found no evidence of open faults or any other hydrologic connection between the disposal zone and any

underground sources of drinking water. Any underground sources of drinking water will be shallower than 1,565 feet, the estimated top of the Rustler Anhydrite.

10. Page 12 of the C-108 includes structure maps of the top and base of the Capitan Reef. The maps show regional dip to the northwest at the location of the Quick Shot SWD No.1 the prognosed top of the Capitan Reef is at approximately 3,165 TVD (510 SSD), the prognosed based is at approximately 4743 TVD (-1068 SSD) the anticipated thickness therefore is approximately 1,600 feet.

11. No freshwater wells are located within 2 miles of the proposed well.

12. Based on my review and analysis, it is my opinion that the geologic seals above and below the injection interval, and the significant vertical offset between the injection zone and shallow zones containing freshwater, will prevent the proposed injection from impacting any drinking water sources or zones of freshwater.

13. The proposed injection fluids will be derived from various formations, including the Wolfcamp, Bone Spring, and Delaware formations. Water chemistry analyses of representative samples of produced water are provided on pages 15-17 of the C-108. Based on this water chemistry analysis and prior experience, it is my opinion that there will not be a compatibility issue between the injection fluids and the fluids within the injection interval.

14. The area of the Quick Shot SWD No.1 is covered by 3D seismic. Exhibit C displays two seismic lines from the 3D volume, line "A" in the east-west direction and line "B" in the north – south direction. The lines intersect at the location of the Quick Shot SWD No. 1. Line "A" images 3 miles either side of the Quick Shot SWD No.1 and line "B" images 3 miles in the north direction and 1.5 miles to the south due to limitations on licensed data. Both seismic lines show all horizons below the Devonian and above the Devonian to the surface to be continuous without any breaks.

Thus, there is no evidence of faulting at any horizon. Exhibit D includes the results of my search of the U.S.G.S. Earthquake Database, which did not identify any earthquakes within 11 miles of the proposed well.

15. Based on my analysis and experience, it is my opinion that there is no probability of fault slip due to the proposed injection as no faults are interpreted or known to occur within a three-mile radius of the proposed well location.

16. In my opinion, the granting of Advance's application would serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

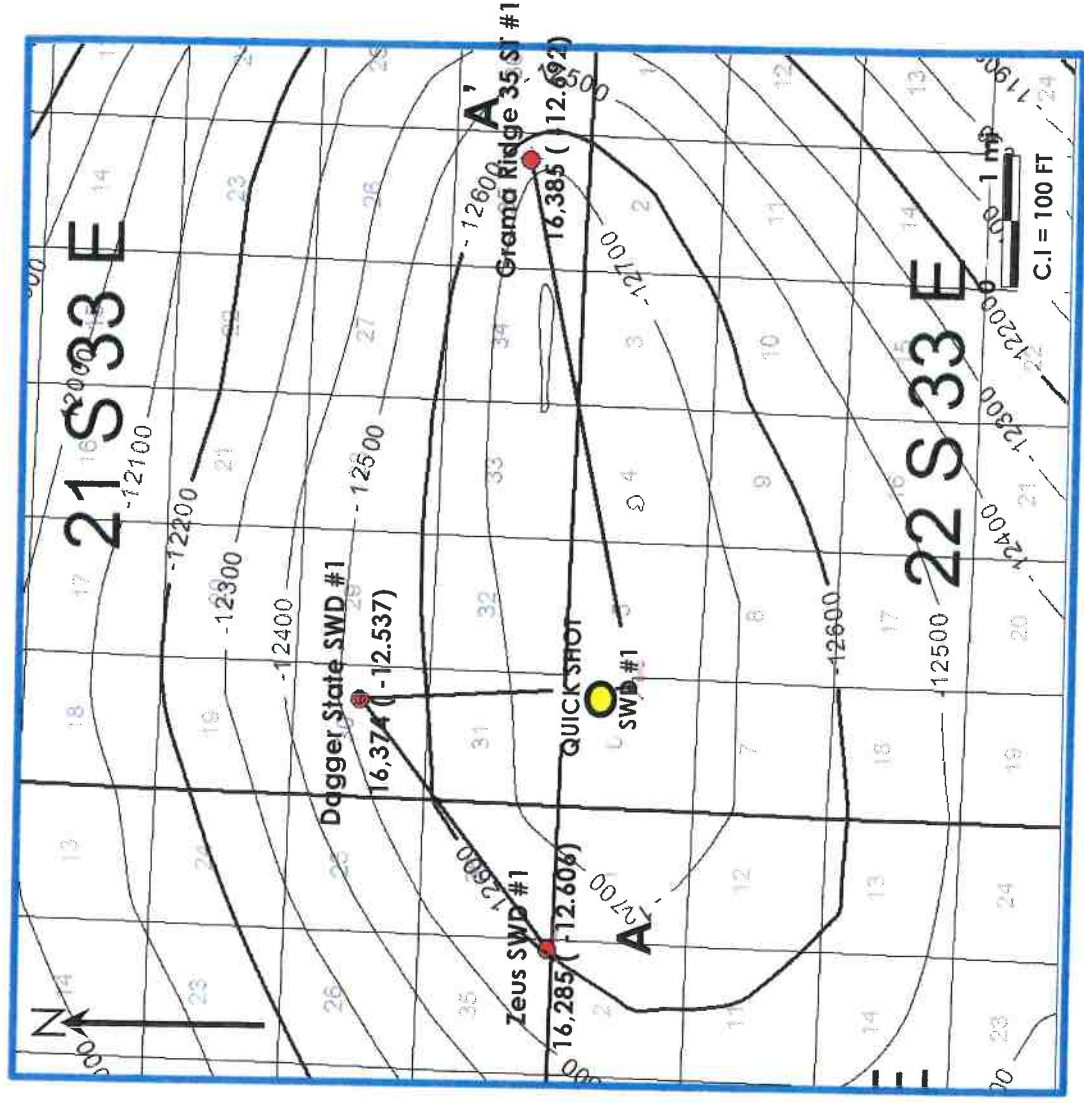
17. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 16 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.


Edward Caamano

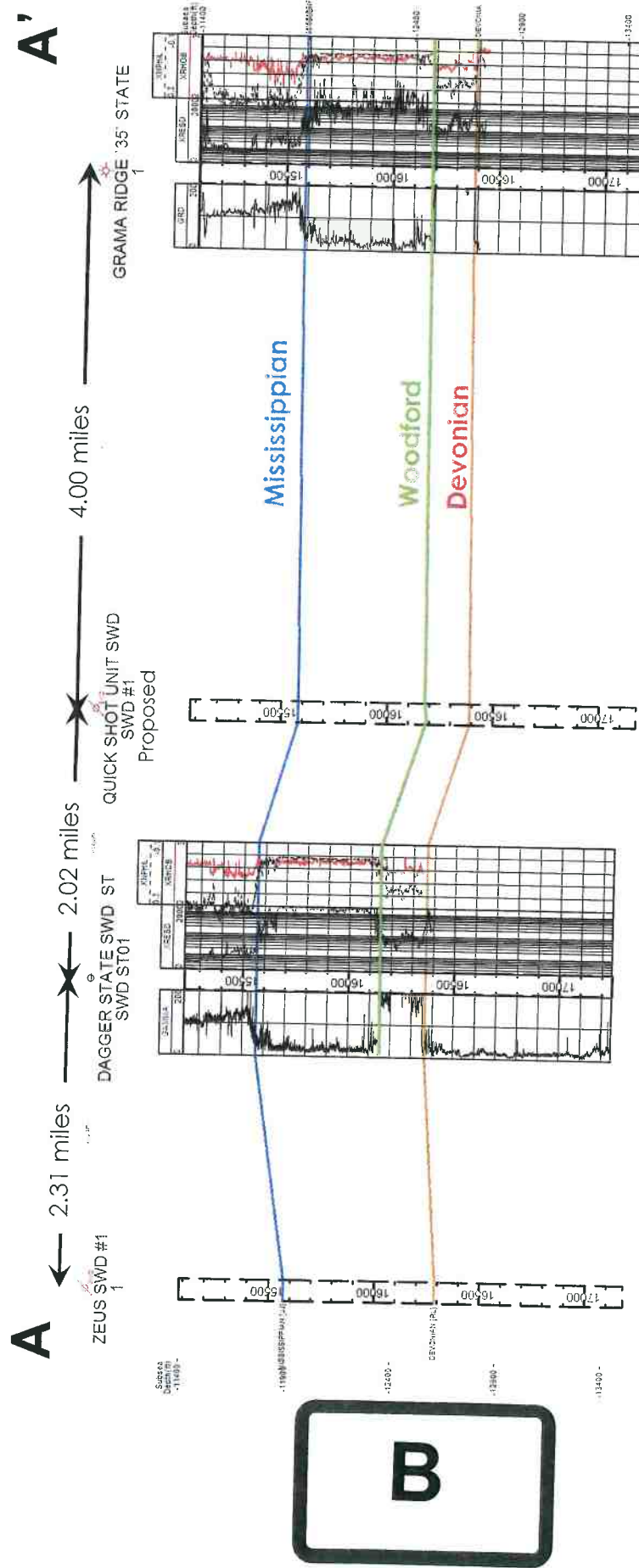
1/22/2020
Date

Top Devonian Structure (SSD TVD)

A



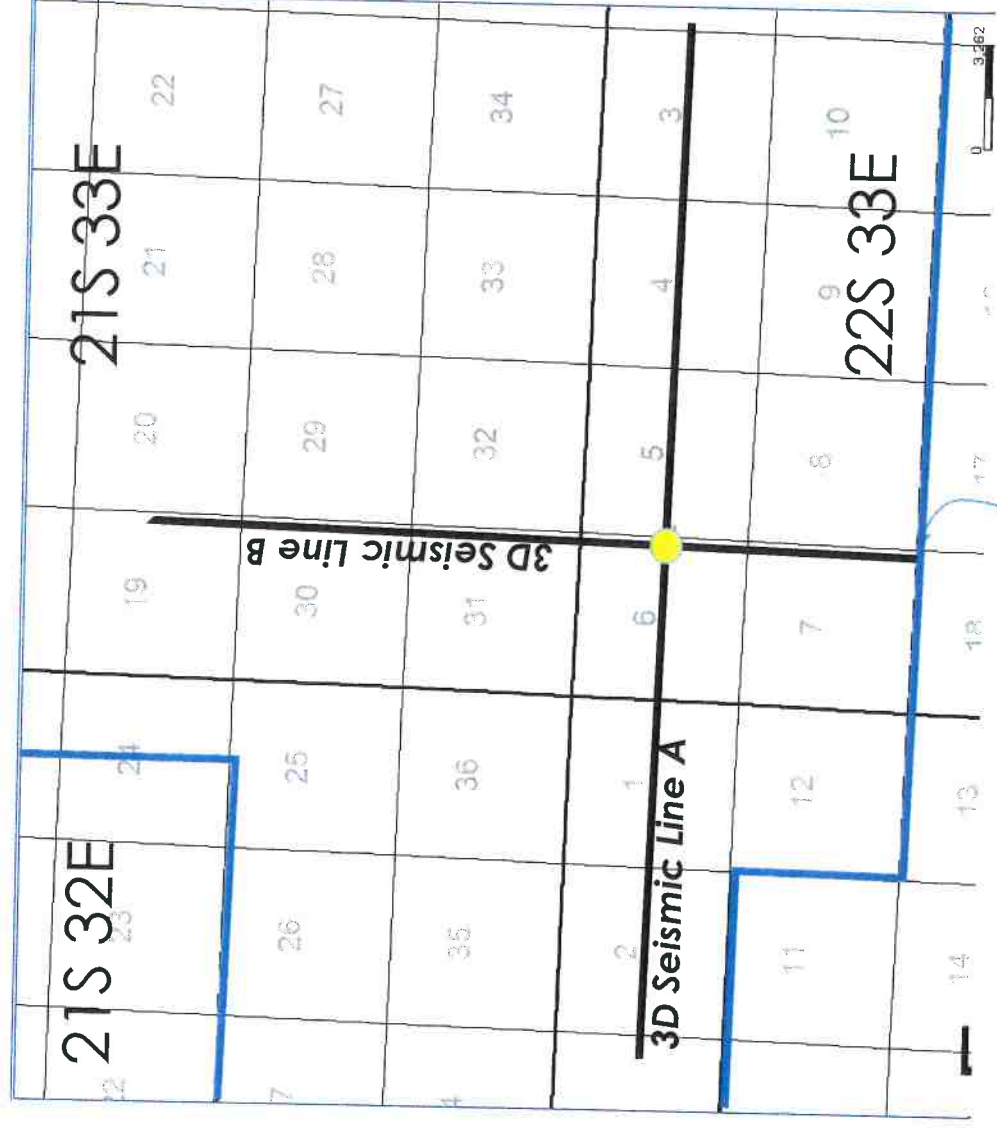
Cross Section A-A'



3D Seismic Offsetting Quick Shot

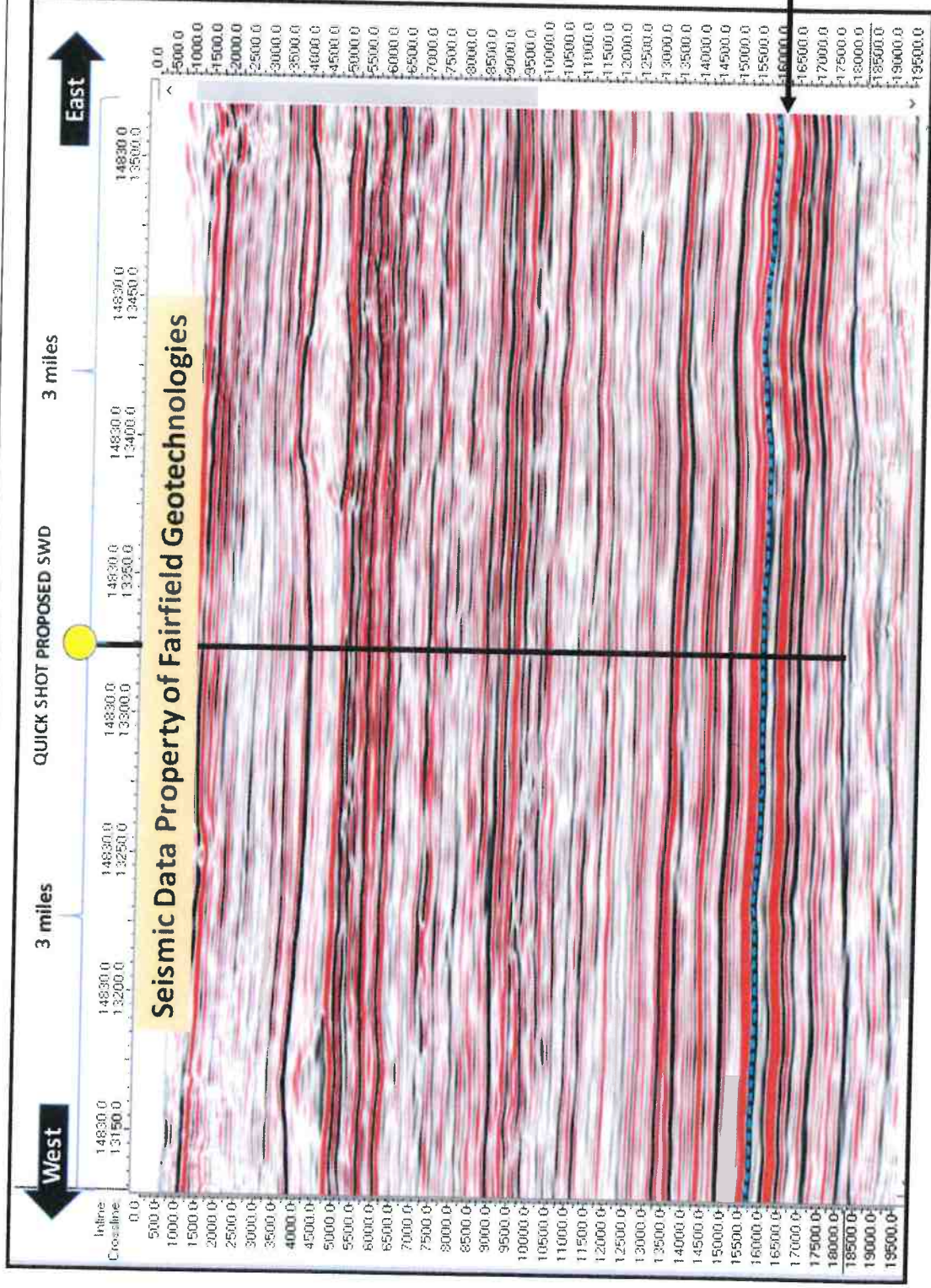


C



End of Data License

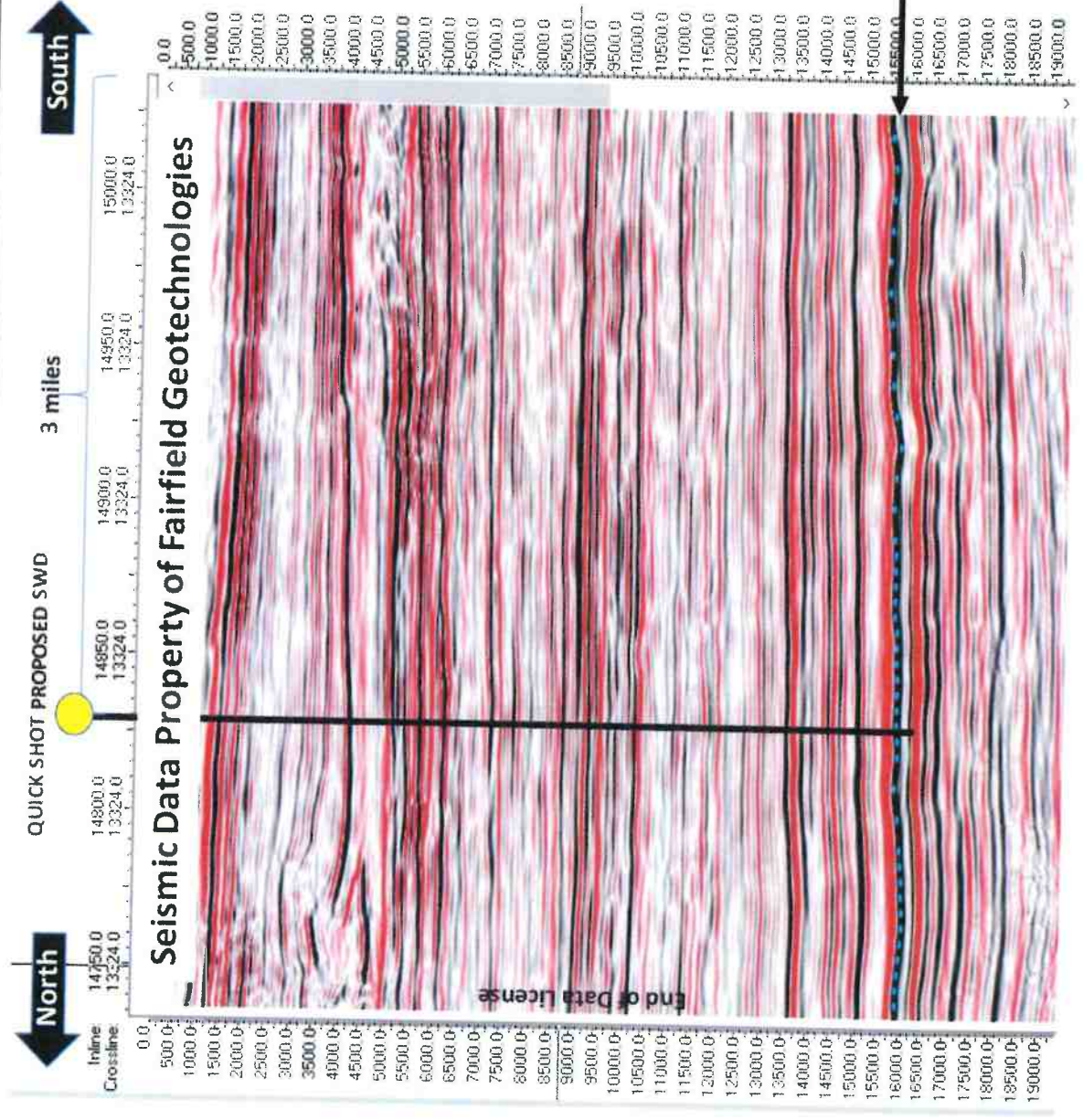
EAST – WEST 3D SEISMIC LINE “A”



All Horizons
Are Continuous

No Faults
Evident

NORTH – SOUTH 3D SEISMIC LINE “B”



All Horizons
are Continuous

No Faults Evident

USGS EARTHQUAKE DATABASE SEARCH

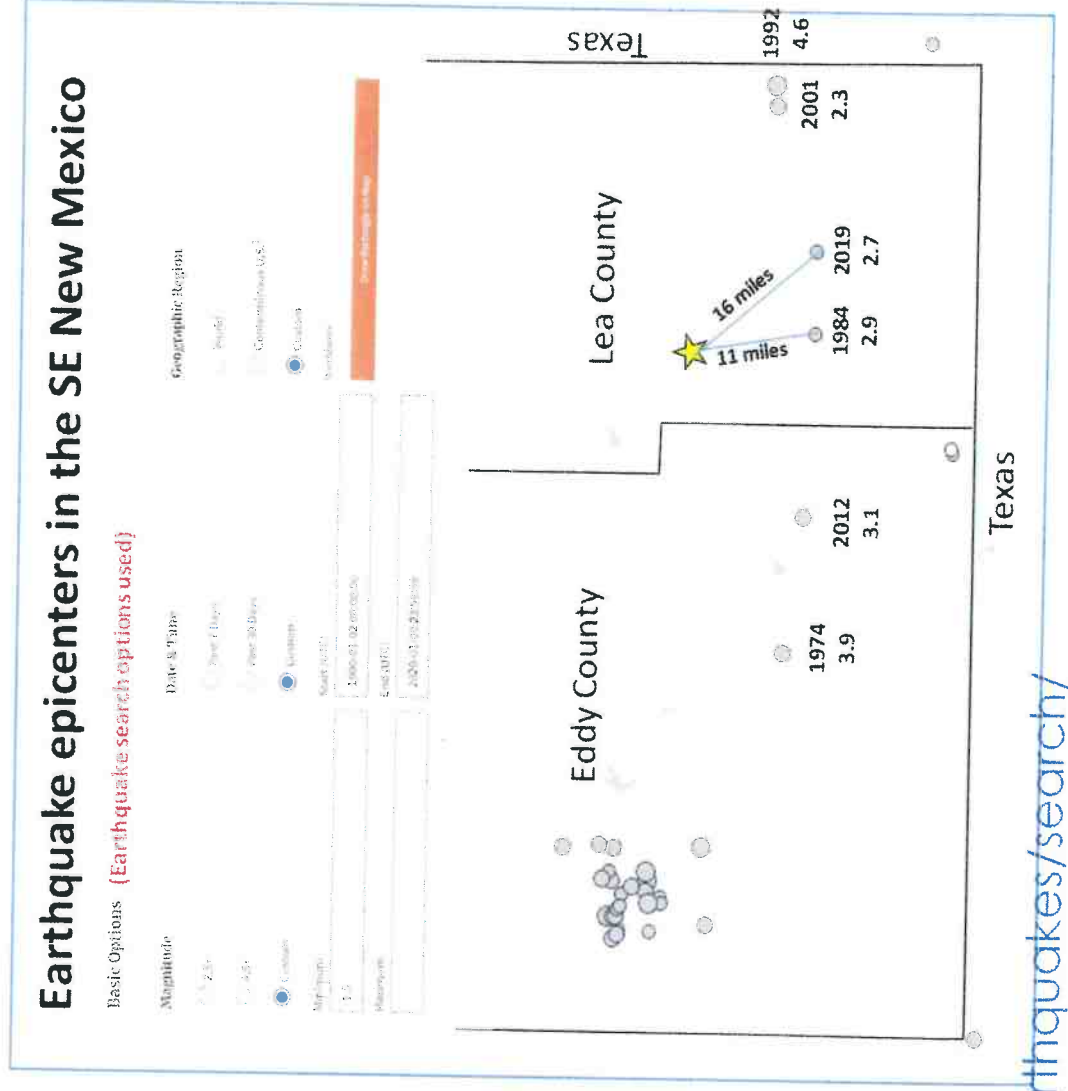


Search Parameters:

- Search Area:
 - ❖ Lea and Eddy Co.
- Minimum Magnitude:
 - ❖ 1.5
- Time Period:
 - ❖ 1/1/1900 – 1/1/2020

USGS Database Shows No Earthquakes Within 11 Miles of Quick Shot

D



<https://earthquake.usgs.gov/earthquakes/search/>