

State of New Mexico  
Energy, Minerals and Natural Resources Department

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Michelle Lujan Grisham  
Governor

Sarah Cottrell Propst  
Cabinet Secretary

Todd E. Leahy, JD, PhD  
Deputy Secretary

Gabriel Wade, Acting Director  
Oil Conservation Division



Administrative Order SWD-1787  
February 26, 2019

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Pursuant to the provisions of Division Rule 19.15.26.8(B) NMAC, Advance Energy Partners Hat Mesa LLC (the "operator") seeks an administrative order for its Dagger State SWD Well No. 1 (the "proposed well") with a location of 2625 feet from the North line and 1330 feet from the East line, Unit letter G of Section 16, Township 25 South, Range 33 East, NMPM, Lea County, New Mexico, for the purpose of produced water disposal only from leases and related production of the operator.

**THE DIVISION DIRECTOR FINDS THAT:**

The application has been duly filed under the provisions of Division Rule 19.15.26.8(B) NMAC and satisfactory information has been provided that affected parties have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Division Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Division Rule 19.15.5.9 NMAC.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Advance Energy Partners Hat Mesa LLC (OGRID 372417), is hereby authorized to utilize its Dagger State SWD Well No. 1 (API 30-025-Pending) with a location of 2625 feet from the North line and 1330 feet from the East line, Unit letter G of Section 16, Township 25 South, Range 33 East, NMPM, Lea County, for disposal of oil field produced water (UIC Class II only) through open-hole completion into an interval consisting of the Devonian and Silurian formations from approximately 16425 feet to approximately 17695 feet. Injection will occur through internally-coated, 5-inch or smaller tubing within the 7 $\frac{3}{4}$ -inch (39 pound per foot) liner and a packer set within 100 feet of the top of the disposal interval. This permit does not allow disposal into:

1. The Woodford Shale and formations above the lower contact of the Woodford Shale;
2. Formations below the Silurian formations including the Montoya formation and the Ellenburger formation (lower Ordovician); and
3. Any lost circulation intervals directly on top and obviously connected to these formations.

*Prior to commencing disposal, the operator shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Engineering Bureau, showing evidence agreeable that only the permitted formation is open for disposal including a summary of depths (picks) for contacts of the formations which the Division shall use to amend this order for a final description of the depth for the injection interval. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's District I and the operator shall be required to receive written permission prior to commencing disposal.*

*If cement does not circulate on any casing string, the operator shall run a cement bond log (CBL) or other log to determine top of cement and shall notify the Hobbs District with the top of cement on the emergency phone number prior to continuing with any further cement activity with the proposed well. If cement did not tie back in to next higher casing shoe, the operator shall perform remedial cement action to bring cement, at a minimum, 200 feet above the next higher casing shoe.*

*The operator shall set the shoe for the 7 $\frac{5}{8}$ -inch liner to a depth no shallower than the base of the Woodford Shale (this being the contact between the Woodford Shale and the deeper Devonian formation).*

*The operator shall set the top of the 7 $\frac{5}{8}$ -inch liner a minimum of 300 feet above the shoe of the 9 $\frac{5}{8}$ -inch casing string. Further, the operator shall run a CBL (or equivalent) for the 7 $\frac{5}{8}$ -inch liner to demonstrate placement cement and the cement bond with the tie-in with 9 $\frac{5}{8}$ -inch casing string. The operator shall provide a copy of the CBL to the Division's District I prior to commencing disposal.*

*Prior to commencing disposal, the operator shall obtain a bottom-hole pressure measurement representative of the open-hole completion. This information shall be provided with the written notice of the date of commencement of disposal.*

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the completion and construction of the well as described in the application and, if necessary, as modified by the District Supervisor.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11(A) NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's District I office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

If the disposal well fails a MIT or if there is evidence that the mechanical integrity of said well is impacting correlative rights, the public health, any underground sources of fresh water, or the environment, the Division Director shall require the well to be shut-in within 24 hours of discovery and the operator shall redirect all disposal waters to another facility. The operator shall take the necessary actions to address the impacts resulting from the mechanical integrity issues in accordance with Division Rule 19.15.26.10 NMAC, and the well shall be tested pursuant to Rule 19.15.26.11 NMAC prior to returning to injection.

The wellhead injection pressure on the well shall be limited to **no more than 3285 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formations. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable step-rate test.

The operator shall notify the supervisor of the Division's District I office of the date and time of the installation of disposal equipment and of any MIT so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District I office. The operator shall submit monthly reports of the disposal operations that includes number of days of operation, injection volume, and injection pressure on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The Division may revoke this injection order after notice and hearing if the operator is in violation of Rule 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate one (1) year after the effective date of this Order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this Order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



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GABRIEL WADE  
Acting Director

GW/prg

cc: State Land Office – Oil, Gas and Minerals Division  
Oil Conservation Division – Hobbs District Office

Attachment: C-108 amended well completion diagram dated February 18, 2019

AFE: NM0038



## DAGGER STATE SWD #1

SWD WELL

1,330'

 REGULATORY: NMOC  
 API: LEA CO, NM

 RJG:  
 KB:  
 GL: 3,778

 NAD 83  
 Lat: 32.449929  
 Long: -103.607422

 SHL: Sec. 30, T-21S, R-33E; 2,625' FNL & 1,325' FEL  
 BHL: Sec. 30, T-21S, R-33E; 2,625' FNL & 1,325' FEL

HOLE SIZE	MD	FORMATION	TVD	MUD	CASING	CEMENT	SPECIAL INSTRUCTIONS
		Conductor					
30"	1,625	Rustler	1,625	SPUD MW 8.4 ppg FRESH	26"	Top of Lead: Surface 50% OH excess	Circ cement to surface is a NMOC requirement
	1,650	SURF CSG PT	1,650	TD B/W 10.0 ppg	12 Bowsprings 1 joint shoe track	Top of Tail: 1320' 20% excess	Casing must be set 25' into the Rustler MUD: Fresh water only
24"	3,550	Base of Salt	3,550	DRILOUT MW 10.0 ppg	20"	Top of Lead: Surface 50% OH excess	Circ cement to surface is a NMOC requirement
	3,600	INTRM 1 CSG PT	3,600	BRINE TD MW 10.5 ppg	17 Bowsprings 1 joint shoe track	Top of Tail: 2850' 20% excess	
17-1/2"	3,700	DV TOOL & PACKER	3,700	DRILOUT MW 10.0 ppg	13-3/8"	2 STAGE CEMENT 1st Stage Top of Lead: 2800' 50% excess Top of Tail: 4200' 20% excess	Circ cement to surface is a NMOC requirement
	5,250	INTRM 2 CSG PT	5,250	BRINE TD MW 10.5 ppg	17 Bowsprings DV Tool & Packer @ +/-3,700' 1 joint shoe track	2nd Stage Top of Lead: Surface 50% excess (OH only) Tail: 100 sks no excess	
12-1/4"	12,035	Wolfcamp	12,035	DRILOUT MW 9.0 ppg	9-5/8"	Top of Lead: Surface 50% excess (OH only)	
	12,135	TOP OF LINER	12,135	CUT BRINE TD MW 9.2 ppg	47 Bowsprings 1 joint shoe track	Top of Tail: 9766' 20% excess	
	12,235	INTRM 3 CSG PT	12,235	DRILOUT MW 11.5 ppg	DRILLING LINER 7-5/8"		
8-3/4"	16,225	PERM PACKER	16,225	WEIGHTED CUT BRINE TD MW 12.5 ppg	23 Bowsprings 1 joint shoe track	Top of Tail: 12996' 20% excess	
	16,225	Woodford	16,225				
	16,245	LINER CSG PT	16,245	DRILOUT MW 8.4 ppg	OPEN HOLE		
	16,425	Devonian	16,425	FRESH	INJECTION STRING 5-1/2"	PACKER FLUID	
6-3/4"	17,084	Fusselman	17,084	TD MW 8.6 ppg			
	17,595	Montoya	17,595				
	17,695	TD	17,695				

TOL: 11,935' (300' tie in)

Est BHT = 250° F

DIRECTIONS TO LOCATION:

Drilling Engineer: Braden Harris (406) 600-3310

Date: 02/18/2019

Revised PRG/OCD 02-26-2019