III. Well Data

A. 1) Lease name: **Big Eddy Unit 17 Federal SWD**
Well #: **1** **API # TBA**
Section: **17**
Township: **22S**
Range: **29E**
Footage: **1091' FNL & 1958' FEL**

2) Casing Info:

Casing size	Set depth	Sacks cmt	Hole size	TOC	Method
18-5/8", 87.5# J-55 BTC	290'	660 sx C	24"	Surf	Circ
13-3/8" 68# HCL-80 BTC	3030'	1730 sx Poz/C 685 sx C	17-1/2"	Surf	Circ
9-5/8" 53.5# HCP-110 BTC	10400'	Stage 1: 670 sx Poz/C 285 sx C Stage 2:	12-1/4"	Surf	Circ
DV Tool	3233'	1955 Sx Poz/H			
7" 32# HCP-110 BTC	10,000'-14,240'	720 sx Poz/H	8-1/2"	10,000'	Circ

3) Tubing to be used (size, lining material, setting depth):
Tapered String
5-1/2" , 17#, P-110 IPC to 9,500"
4-1/2", 13.65#, P-110 IPC tubing @ 9,500'-14,165'

4) Name, model, and depth of packer to be used:
Baker Series F nickle plated permanent packer @ 14,165'

B. 1) Name of the injection formation and, if applicable, the field or pool name:
SWD; Devonian

2) The injection interval and whether it is perforated or open hole:
Open hole, 14,231'-14,975' (or to the base of the Fusselman as determined by mud logs)

3) State if the well was drilled for injection or, if not, the original purpose of the well:
This well is being drilled for the purpose of injection

4) Give the depths of any other perforated intervals and detail on the sacks of cement or BPs used to seal off such perforations:
N/A

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:
Higher: Brushy Canyon (+/-5552'), Avalon/Bone Spring (+/-6895'),
Wolfcamp (+/-10,149'), Atoka (I+/-11,927'), Morrow (+/-14,743')
Lower: None

C-108 DATA

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.
Map attached.

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 wells type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
There are no wells penetrating the proposed injection zone within the one mile area of review

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected:
20,000 average, 40,000 maximum BWPD
2. Whether the system is open or closed: **closed**
3. Proposed average and maximum injection pressure: **2,000 psi average, 2,848 psi maximum**
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water: **Well will be part of a multi-well SWD system taking Permian waters. The majority of the produced water will come from Delaware, Bone Spring and Wolfcamp formations with minor amounts from Atoka and Morrow.**
An analysis of water to be disposed is attached

5. If injection is for disposal purposes into a zone not productive of oil & gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water:
No disposal wells within 1 mile of proposed well

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 TDS 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:

Lithologic Detail:	**Carbonate (Dolomites and Limestones)**
Geological Name:	**Devonian to Fusselman**
Thickness:	**Est. 969'**
Depth:	**Est.14,231'/15,200'**

The Capitan Reef a known drinking water aquifer is not present in this area based on published maps

The Dewey Lake Red Beds consists of alluvial siltstones, shales and sandstones which are present at the surface to the top of the Rustler Anhydrite. The top of the Rustler Anhydrite is estimated to be at 176 feet below the surface in this proposed Big Eddy Unit 17 Federal SWD 1 well. These Dewey Lake Red Beds may contain fresh water throughout this geographic area, but it is not likely of drinking water quality (TDS of 10,000 mg/L or less).