

DATE IN: _____	SUSPENSE _____	ENGINEER _____	LOGGED IN _____	TYPE _____	APP NO. _____
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ABOVE THIS LINE FOR DIVISION USE ONLY

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



Case 18158

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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD
 Check One Only for [B] or [C]
 [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
 [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
 [D] Other: Specify _____
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply
 [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☒ Offset Operators, Leaseholders or Surface Owner
 [C] ☒ Application is One Which Requires Published Legal Notice
 [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☒ Waivers are attached
- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**
- [4] **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.

Michael McCurdy

Print or Type Name

Signature

Vice-President

Title

1/11/2018

Date

m.mccurdy@delawareenergy.com
 e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance xxx Disposal Storage
Application qualifies for administrative approval? xxx Yes No
- II. OPERATOR: Delaware Energy LLC
ADDRESS: 405 N. Marienfeld St. Suite 250, Midland TX 79701
CONTACT PARTY: Michael McCurdy PHONE: 432-312-5251
- 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? Yes XXX No
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: Michael McCurdy TITLE: Vice-President
SIGNATURE: [Signature] DATE: 1/11/2018
E-MAIL ADDRESS: m.mccurdy@Delawareenergy.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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Delaware Energy LLC

WELL NAME & NUMBER: Moomaw SWD #1

WELL LOCATION: 1,646' FNL, 2,294' FEL G 25 24S 34E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC See Attached Wellbore schematic

WELL CONSTRUCTION DATA Surface Casing

Hole Size: _____

Casing Size: _____

Cemented with: _____ sx.

or _____ ft³

Top of Cement: _____

Method Determined: _____

Total Depth: 420'

Intermediate Casing

Hole Size: _____

Casing Size: _____

Cemented with: _____ sx.

or _____ ft³

Top of Cement: _____

Method Determined: _____

Total Depth: _____

Liner

Hole Size: _____

Casing Size: _____

Cemented with: _____ sx.

or _____ ft³

Top of Cement: _____

Method Determined: _____

Total Depth: _____

Production Casing

Hole Size: _____

Casing Size: _____

Cemented with: _____

or _____ ft³

Top of Cement: _____

Method Determined: _____

Total Depth: _____

Injection Interval

17,400'

feet to

19,200'

Open Hole

INJECTION WELL DATA SHEET

Tubing Size: 5.5" & 5.0" Lining Material: Internally plastic coated
Type of Packer: Weatherford Arrow Set 1X Injection Packer
Packer Setting Depth: 50-100ft above perforations
Other Type of Tubing/Casing Seal (if applicable): NONE

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-Fusselman
3. Name of Field or Pool (if applicable): SWD: Devonian-Fusselman
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.

N/A

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

BELOW: None

ABOVE: Wolfcamp 12,000'-12,500', Morrow 13,500'-13,700', Bone Springs 10,800'-12,000', Delaware 9,000'-9,500'

Additional Questions on C-108

VII.

1. Proposed average and maximum daily rate and volume of fluids to be injected;

Average 15,000-20,000 BWPD, Max 25,000 BWPD

2: Whether the system is open or closed;

Open System, Commercial SWD

3. Proposed average and maximum injection pressure;

Average 1,800 PSI, Max 3,480 PSI

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,

Bone Spring, Delaware, and Wolfcamp produced water. no known incompatibility exists with injected water into the Devonian. Water is compatible with Devonian formation and is used as a disposal interval through the Delaware Basin for Wolfcamp, Bone Springs, and Delaware produced water. See attached water analysis from Bone Spring, Wolfcamp, and Delaware produced water.

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.).

See attached Lea County Devonian water samples:

***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.**

The proposed disposal interval is in the Devonian-Fusselman formations 17,400'-19,200'. There are no fresh water zones underlying the proposed injection zone. Devonian is an impermeable Shale at the very top (Woodford Shale) followed by permeable dolomite and Lime. Mud logs and Electric logs will be used to confirm the estimated depths of the Woodford and Devonian Dolomite along with other significant tops. Usable water depth is from surface to a max of +/- 300ft based on data from State Engineers office. No water wells are present in section 25, one well is present in section 30 for T24S, R35E, to a depth of 175'. Source rock for fresh water in this area is Santa Rosa.

X. A mud log and Gamma/Neutron log will be run to confirm the estimated depths of the Woodford Shale and Devonian Dolomite. These logs and cased hole logs will be filed with the commission following drilling operations.

XI. No Active water wells exist in section 25. 1 water wells are known in section 30, T24S, R35E, to a depth of 175'. Could not located fresh water well in section 30, so no water well was taken.

IX. Describe the proposed stimulation program, if any.

60,000 gallons 20% HCL acid job with packer

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.

Delaware Energy, L.L.C. has reviewed and examined available geologic and engineering data in the area of interest for the Moomaw SWD #1 and have found no evidence of faults or other hydrologic connections between Devonian disposal zones and the underground sources of drinking water.

Mike McCurdy

Title VP Operations

Date 2/27/2018

III. WELL DATA

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

Moomaw SWD #1, Sec. 25-T24S-R34E, 1,646' FNL & 2,294' FEL, UL G, Lea County, New Mexico

(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.

Casing Size	Setting Depth	Sacks of Cement	Hole Size	Top of Cement	Determined
13-3/8"	1,000'	1,000	17.5"	Surface	CIRC
9-5/8"	12,700'	3,000	12-1/4"	Surface	CIRC
7-5/8" FJ	12,500'-17,400'	1,000	8-1/2"	12,500'	CIRC

(3) A description of the tubing to be used including its size, lining material, and setting depth.

5.5" (0-12,300') X 5.0" (12,300-17,350) OD, Internally Plastic Coated Tubing set 50 to 100ft above Open

Hole

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Weatherford Arrow set 1X injection packer, nickel plated with on/off tool

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.

Devonian-Fusselman Formations

Pool Name: SWD (Devonian-Fusselman)

(2) The injection interval and whether it is perforated or open-hole.

17,400' to 19,200' (OH)

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

New well drilled for injection

(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.

N/A

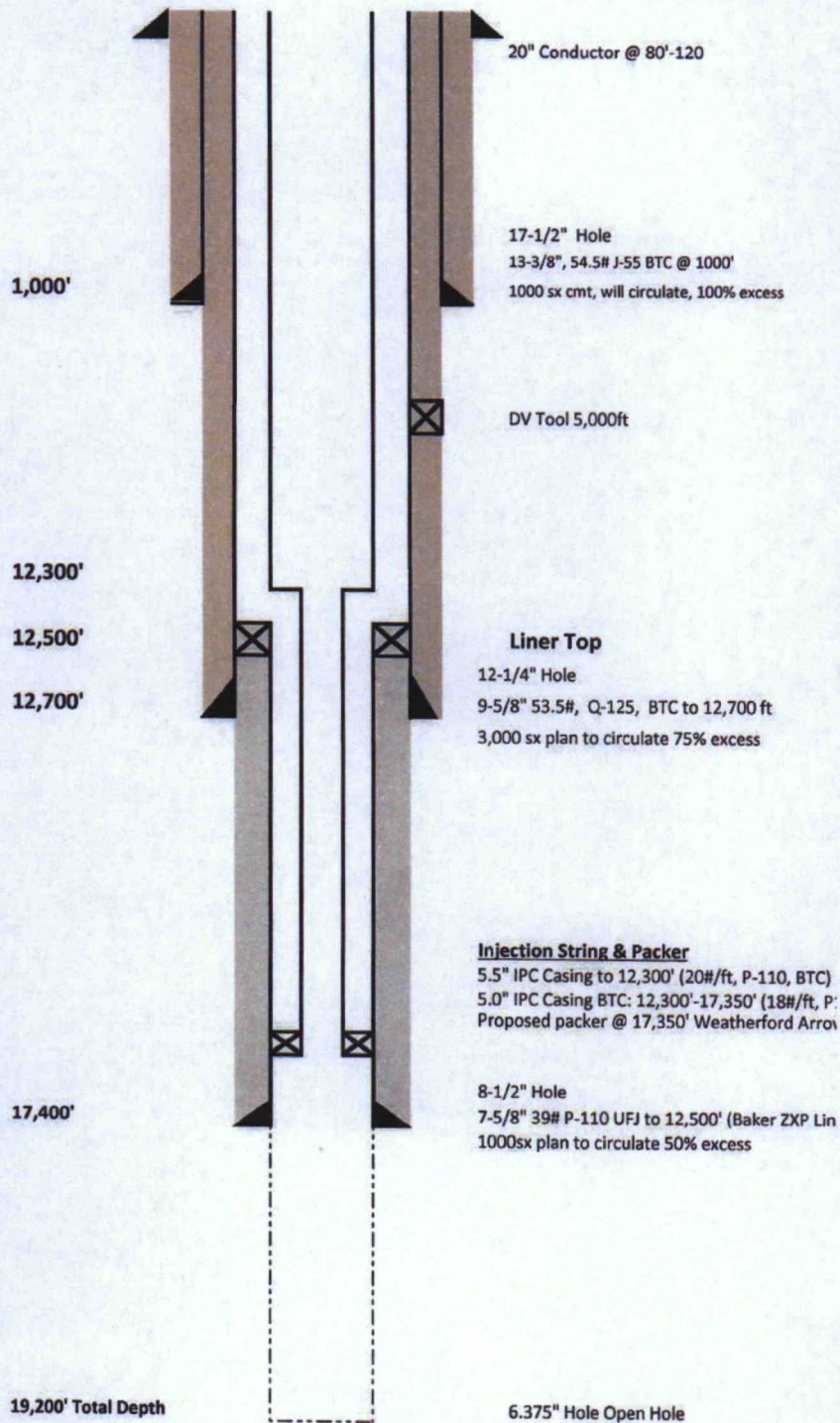
(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

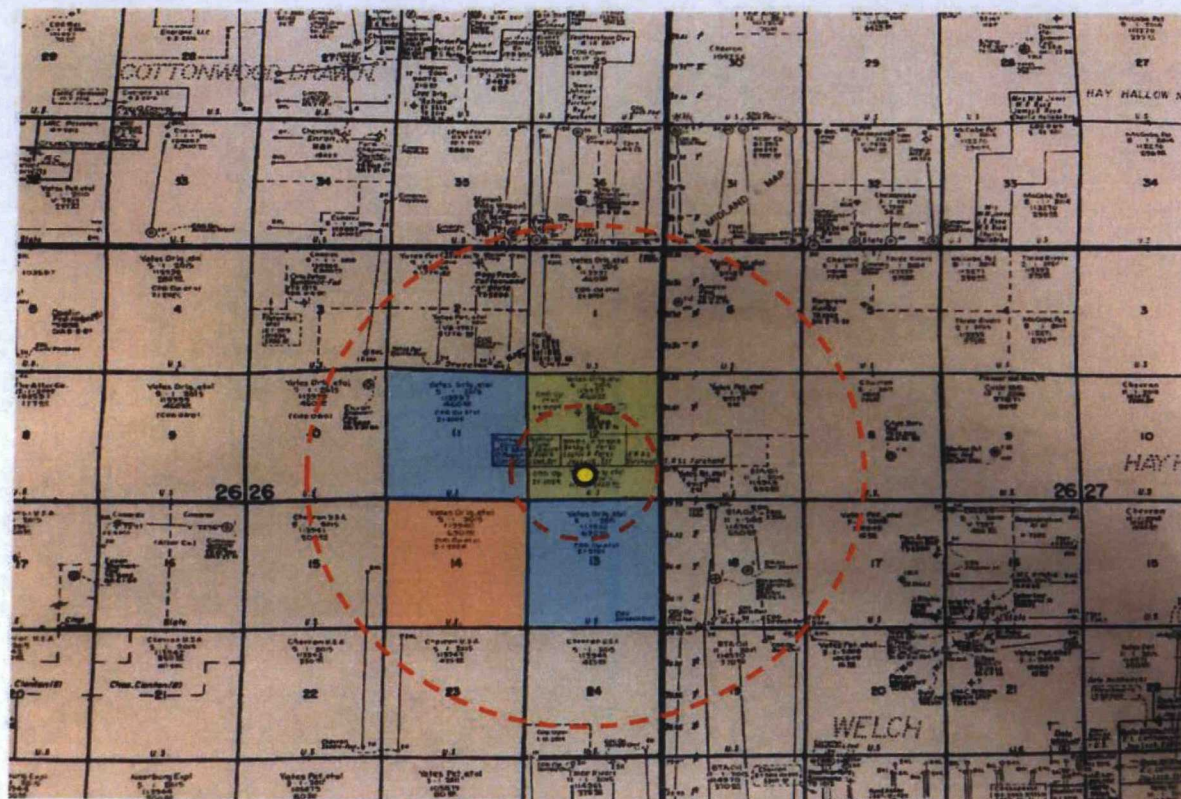
Next Higher: Wolfcamp 12,000'-12,500', Morrow 13,500'-13,700', Bone Springs/Avalon 10,800'-12,000', Delaware 9,000'-9,500'

Next Lower: None

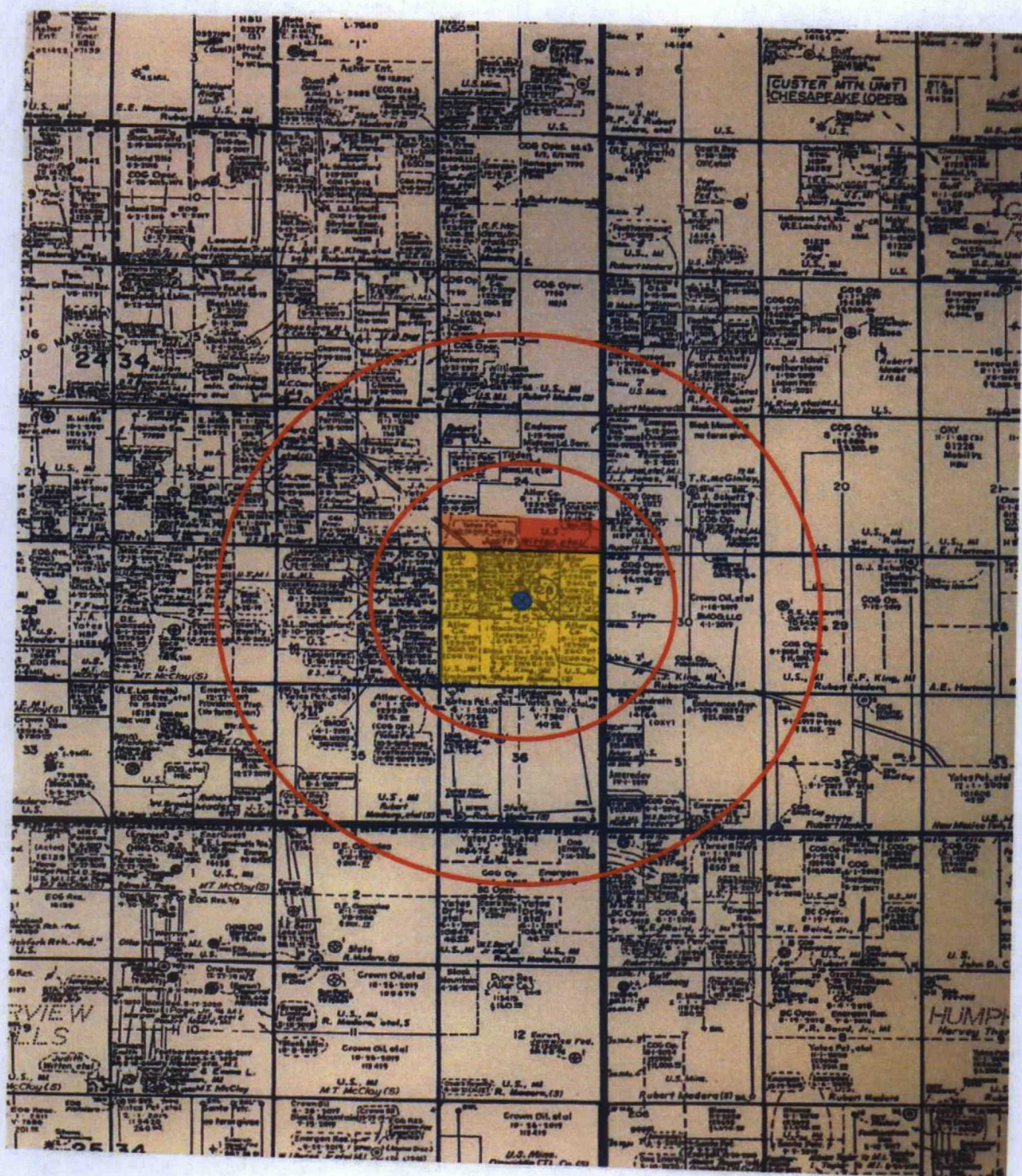
Moomaw SWD No 1
1,646' FNL & 2,294 FEL, UL G, SEC. 25, T-24S R-34E, Lea County, NM
API # 30-025-

GL 3380
 KB
 KB+GL 3380





- COG Production, LLC
- EOG Resources
- COG Production, LLC and EOG Resources Jointly Owned Leasholders



 COG Operating

 Endeavor Energy

 Allar Co.



Delaware Energy, L.L.C.
405 N. Marienfeld St. Suite 250
Midland, TX 79701
Office: (432) 312-5251

December 26, 2017

Surface Owner / Offset Operators

Re: Notification of Application for Authorization to Inject into the
Moomaw SWD #1 Well

Ladies and Gentlemen:

Delaware Energy, LLC is seeking administrative approval to utilize the Moomaw SWD #1 (new drill) as a Salt Water Disposal well. As required by the New Mexico Oil Conservation Division Rules, we are notifying you of the following proposed salt water disposal well. This letter is a notice only. No action is required unless you have questions or objections.

<u>Well:</u>	Moomaw #1 SWD
<u>Proposed Disposal Zone:</u>	Devonian Formation (from 17,400'-19,200')
<u>Location:</u>	1,646' FNL & 2,294' FEL, Sec. 25, UL G, T24S, R34E, Lea Co., NM
<u>Applicants Name:</u>	Delaware Energy, L.L.C.
<u>Applicants Address:</u>	405 N. Marienfeld, Suite 250, Midland, TX 79701

This application for water disposal well will be filed with the New Mexico Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. And their phone number is 505-476-3460.

Please call Mike McCurdy with Delaware Energy, LLC if you have any questions at 432-312-5251.

Sincerely,

Mike McCurdy

DISTRIBUTION LIST

Surface Owner:
James Moomaw
PO BOX 341
Tremonton, UT 84337

New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

New Mexico Oil Conservation Division – Hobbs Field Office
1625 N. French Drive
Hobbs, NM 88240

COG Operating, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701

Endeavor Energy Resource LP
110 N. Marienfeld Suite 200
Midland, TX 79701

Allar Company
P.O. Box 1567
Graham, TX

Delaware Energy, L.L.C., 405 N. Marlenfeld St. Suite 250, Midland, TX 79701, has filed a form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to utilize the Moomaw SWD #1 as a Salt Water Disposal well.

The Moomaw SWD #1 is located at 1,646' FNL and 2,294' FEL, Unit Letter G, Section 25, Township 24 South, Range 34 East, Lea County, New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian-Fusselman Formations from 17,400' to 19,200' at a maximum rate of 30,000 barrels of water per day at a maximum pressure of 3,480 psi.

Interested parties must file objections or requests for hearing with the Oil Conservations Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

Additional information can be obtained by contacting Delaware Energy, L.L.C., at (432) 685-7005.

Water Analysis - Disposal Zone - DEVONIAN

NM WAIDS DATA				
S-T-R	FIELD	FORMATION	TDS	CHLRD
24-23S-29E	REMUDA	DEVONIAN	64582	37500
24-23S-29E	REMUDA	DEVONIAN	56922	29000
06-23S-34E	BELL LAKE NORTH	DEVONIAN	71078	42200
34-23S-34E	ANTELOPE RIDGE	DEVONIAN	80187	47900

Water Analysis - Source Zone - BONE SPRING

Biotech
Laboratory Analysis
Endurance
Jazzmaster 17 State #4H
Sample Date: 1/31/2014
Lee Co. NM

Requested by: T. Ratliff

Parameter	Unit	Value	Parameter	Unit	Value
Chloride (mg/L)	mg/L	105	Calcium (Ca)	mg/L	0
Carbonate (mg/L)	mg/L	230.18	Calcium (Ca)	mg/L	18.465
Hydrogen Sulfide (mg/L)	mg/L	0.0	Magnesium (Mg)	mg/L	383
pH		5.7	Sulfate (SO ₄)	mg/L	118.525
Temperature (°F)	°F	72	Iron (Fe)	mg/L	3.03
			Manganese (Mn)	mg/L	0.02

Water Analysis - Source Zone - DELAWARE

Martin Water Laboratories, Inc.
Result of Water Analysis

LABORATORY NO. 00293
SAMPLE RECEIVED: 9-18-03
RESULTS REPORTED: 9-18-03

TO: Mr. Joe Smith
P.O. Box 31810, Midland, TX 79710

COUNTY: Harrison Oil Company
LEAST: Digger Lake #1

FIELD OR POOL: HILLDALE
SECTION: BLACK SURVEY
COUNTY: JAS
STATE: KS

SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1: BUCKEYEA #1 MAJOR - taken from Digger Lake #1 8-9-03

NO. 2:
NO. 3:
NO. 4:

REPORTED: Delaware

Parameter	Unit	Value
Alkalinity (as CaCO ₃)	mg/L	1,196.2
Calcium (Ca)	mg/L	6.24
Chloride (Cl)	mg/L	148
Cyanide (CN)	mg/L	
Fluoride (F)	mg/L	39.308
Iron (Fe)	mg/L	18.503
Magnesium (Mg)	mg/L	5.118
Manganese (Mn)	mg/L	68.483
Nitrate (NO ₃)	mg/L	84.7
Sulfate (SO ₄)	mg/L	140.418
Total Solids (TSS)	mg/L	90.0
Urea Nitrogen	mg/L	
Vanadium	mg/L	270.111
Zinc (Zn)	mg/L	
Barium (Ba)	mg/L	0.0
Cadmium (Cd)	mg/L	0.001
Copper (Cu)	mg/L	
Lead (Pb)	mg/L	
Nickel (Ni)	mg/L	
Selenium (Se)	mg/L	
Silver (Ag)	mg/L	
Total Dissolved Solids (TDS)	mg/L	154.361



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Section(s): 25

Township: 24S

Range: 34E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

12/26/17 2:24 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW#### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has been
replaced,
O=orphaned,
C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number

CP-00839-POD1

Code	Sub-basin	County	Q	Q	Q	Sec	Twp	Rng	X	Y	Depth Well	Depth Water	Water Column
CP	LE		4	3	30	24S	35E		650017	3561833*	175		

Average Depth to Water:

Minimum Depth:

Maximum Depth:

Record Count: 1

PLSS Search:

Section(s): 30

Township: 24S

Range: 35E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

12/26/17 2:25 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER



New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag		POD Number		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
		CP 00839 POD1		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
				4	3	30	24S	35E		650017	3561833*
Driller License:		122		Driller Company:		UNKNOWN					
Driller Name:		OTIS PRUIT									
Drill Start Date:				Drill Finish Date:		01/01/1963		Plug Date:			
Log File Date:				PCW Rcv Date:				Source:		Shallow	
Pump Type:				Pipe Discharge Size:				Estimated Yield:		9 GPM	
Casing Size:		6.00		Depth Well:		175 feet		Depth Water:			

*UTM location was derived from PLSS - see Help

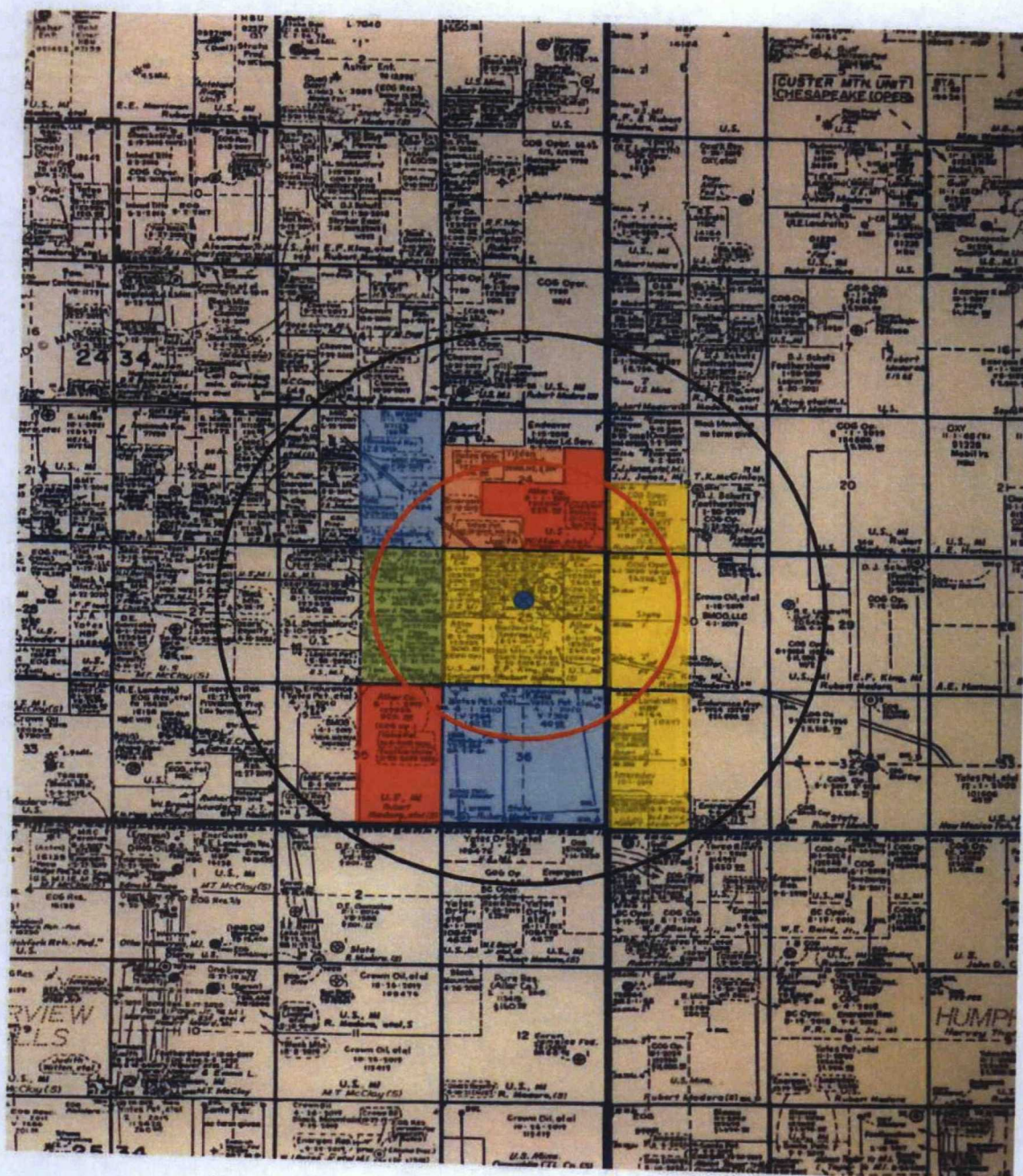
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

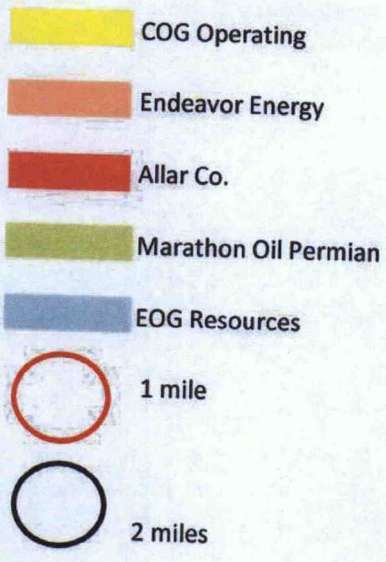
12/26/17 2:26 PM

POINT OF DIVERSION SUMMARY

Moomaw SWD #1**Location: Sec. 25, T-24S, R-34E, UL G****Estimated Pre-Drill Formation Tops**

Rustler	915'
Top of Salt	1,412'
Base Salt	5,210'
Delaware sands	5,550'
Cherry Canyon	6,500'
Bone Springs Lime	9,425'
Wolfcamp	12,700'
Strawn	13,200'
Atoka	13,600'
Morrow	14,000'
Mississippian Lime	15,240'
Woodford Shale	17,100'
Devonian	17,350'
Montoya	19,100'





Statement Regarding Seismicity and Well Location (MooMaw SWD #1)

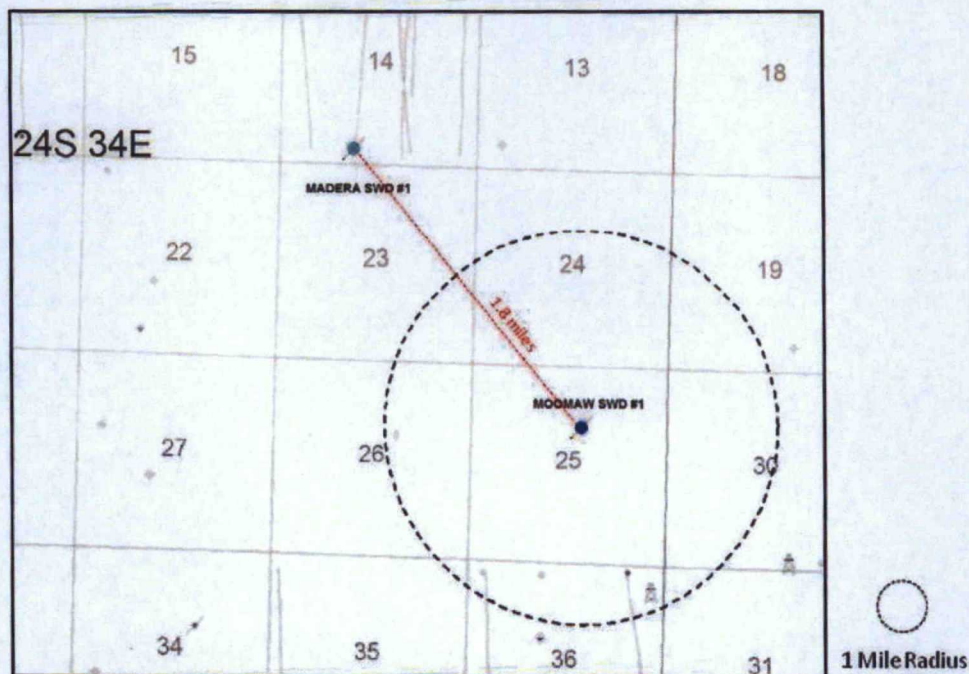
Historically, the area near the proposed MooMaw SWD has not seen any major seismic activity. There have been four seismic events (as per public data available on the USGS database) in the area. All events are over 10 miles from the proposed SWD location and occurred prior to 2005. The closest activity (10 miles to the NW) measured 2.9.

Delaware Energy does not own 2D or 3D seismic data near the proposed SWD location therefore the fault interpretations are based on data obtained from the USGS New Mexico Faults Database dated January 1, 2005. Based on these sources the closest fault would be approximately 2.15 miles north of the location. A recent technical paper written by Snee and Zoback, "State of Stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity", was published in the February 2018 edition of The Leading Edge. The study evaluates the strike-slip probability of known faults using FSP analysis. The study predicts that the fault activity nearest this well should have a low probability (<10%) of being critically stressed resulting in an induced seismicity event. This is due to the relationship of the strike of the faults and the regional Shmax orientation (approx. N 75 deg E) in the area.

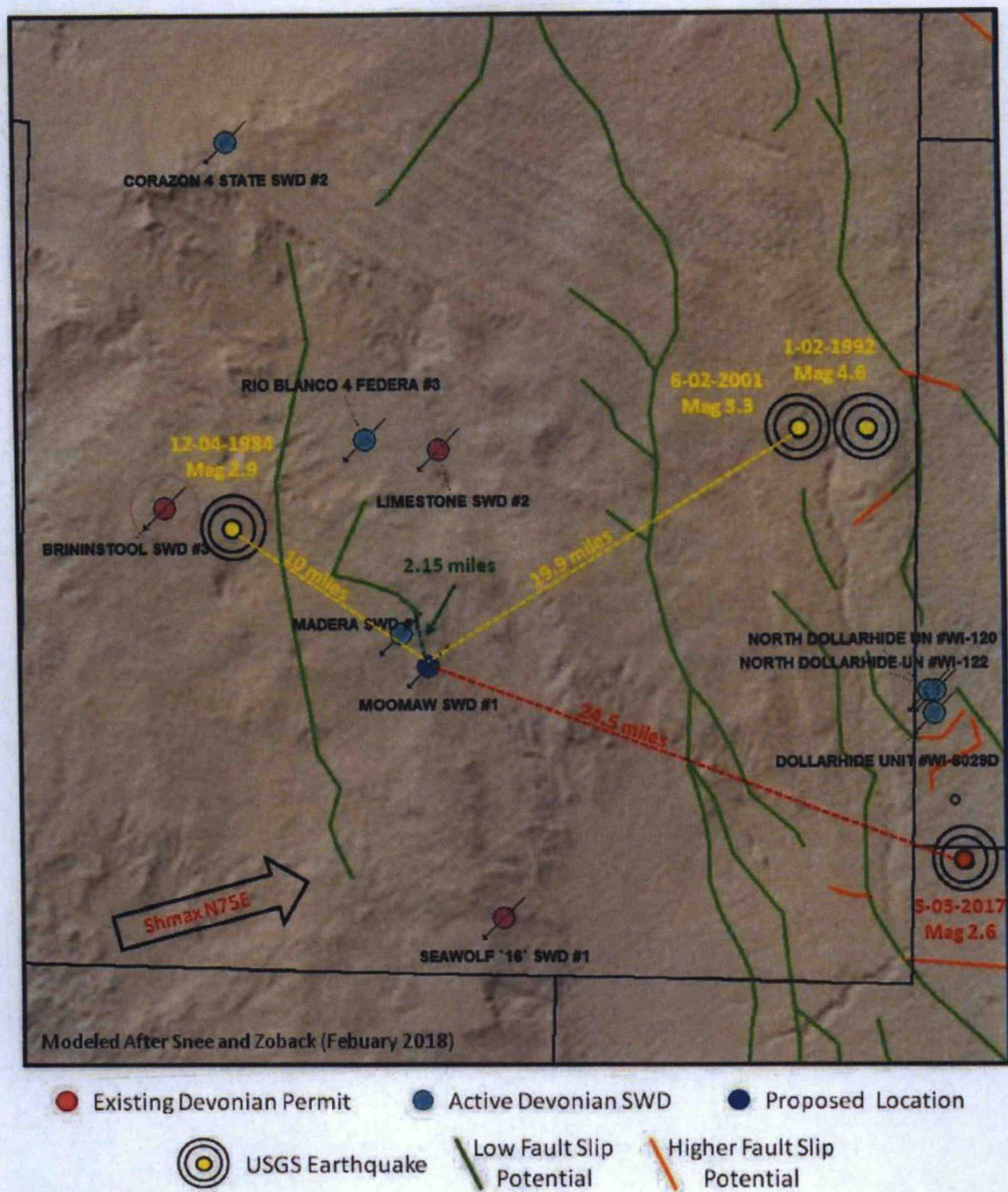
The proposed MooMaw SWD #1 location is located 1.8 miles away from the nearest active Devonian SWD well (see map below) and meets current OCD and Industry recommended practices.

Kevin J. Schepel
Petrophysical Advisor
kevin.schepel@att.net
214-212-6540

Well Activity and Closest SWD



Proximity to Historic Earthquake Activity and Faults



Data and Interpretation Disclosure - Although care has been taken to ensure that these data are up to date and accurate, this information and data is being providing as is. The data are what is believed to be the best public data available based on published documents, reports, and information available through the USGS. The user assumes all responsibility and risk for use of the data and interpretations. Users of the data agree not to misuse, add to without permission, or misrepresent the data provided in any way. In no event will the provider of this document be liable to any party for any direct, indirect, incidental, consequential, special or exemplary damages, or lost profit resulting from any use or misuse of this data. Additionally, provider is not liable for any inaccurate data. No person, entity, or user shall use the information in a manner that is in violation of any federal, state, or local law or regulation.

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Midland, TX 79706

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December 30, 2017

Delaware Energy, L.L.C., 405 N. Marienfeld St. Suite 250, Midland, TX 79701, has filed a form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to utilize the Moomaw SWD #1 as a Salt Water Disposal well.

The Moomaw SWD #1 is located at 1,646' FNL and 2,294' FEL, Unit Letter G, Section 25, Township 24 South, Range 34 East, Lea County, New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian-Fuselman Formations from 17,400' to 19,200' at a maximum rate of 30,000 barrels of water per day at a maximum pressure of 3,480 psi.

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.

Additional information can be obtained by contacting Delaware Energy, L.L.C., at (432) 685-7005.



Payment Receipt

Thursday, December 28, 2017

Transaction Type: **Payment**

Ad Number: **0001228065**

Apply to Current Order: **Yes**

Payment Method: **Credit Card**

Bad Debt: **-**

Credit Card Number: *******3637 - Visa**

Credit Card Expire Date: **April 2021**

Payment Amount: **\$60.82**

Amount Due: **\$0.00**

Reference Number:

Charge to Company: **Carlsbad**

Category: **Classified**

Credit to Transaction Number:

Invoice Text:

Invoice Notes:

Customer Type: **Trans Priv Party**

Customer Category: **7099 Other**

Customer Status: **Active**

Customer Group: **Classified**

Customer Trade:

Account Number: **154904**

Phone Number: **2145581371**

Company / Individual: **Individual**

Customer Name: **DELAWARE ENERGY, LLC**

Customer Address: **3001 W. LOOP 250 N.
SUITE C-105-318**

MIDLAND, TX 79705 USA

Check Number:

Routing Number:

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (505) 393-6161 Fax: (505) 393-9720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1253 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3460 Fax: (505) 478-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 97869	Pool Name SWD; DEVONIAN-SILURIAN
Property Code	Property Name MOOMAW SWD	Well Number
OGRID No. 371195	Operator Name DELAWARE ENERGY	Elevation 3380'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	25	24 S	34 E		1646	NORTH	2294	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

N436118.2 E:820086.0 (NAD 83)	N436139.3 E:822722.3 (NAD 83)	N436159.7 E:825359.7 (NAD 83)
1646'		
2294'		
SURFACE LOCATION Lat - N 32.191228° Long - W 103.422569° NMSPCE- N 434496.3 E 823081.1 (NAD-83)		
N433477.4 E:820104.3 (NAD 83)	N433519.5 E:825383.6 (NAD 83)	N430794.7 E:825394.0 (NAD 83)
3380.0' 3378.3' 3380.5' 3381.8'		
OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. 3.21.18 Date Signature Sarah Presley Printed Name s.presley@delawareenergy.com Email Address		
SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. DECEMBER 2017 Date Surveyed Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 BRAIN SURVEYS 0' 1000' 2000' 3000' 4000' SCALE: 1" = 2000' WO Num.: 33432		