

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

220 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

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 _____

Delaware Energy, LLC
371195

Pardue 21 Farms #1
30-015-23809

SWD; Devonian
96101

[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.

Mike McCurdy

Print or Type Name

Signature

Operations Engineer

Title

07/25/2017

Date

mmccurdy@delawareenergyllc.com
e-mail Address

Delaware Energy, LLC

Application for Injection/SWD

Pardue Farms 21 #1, API # 30-015-23809

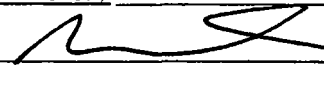
UL B, Sec. 21, T-24-S, R-28-E, 990' FNL & 1980' FEL, Eddy Co., NM

July 2017

Contents:

1. Administrative Application Checklist
2. Form C-108: Application for Authority to Inject
3. Form C-108 Additional Questions Answered
4. Form C-102
5. Chemical Analysis of Bone Springs Formation Water Sample from T25S, R28E, Eddy Co., NM
6. Chemical Analysis of Wolfcamp Formation Water Sample from T26S, R29E, Eddy Co., NM
7. Chemical Analysis of Delaware Formation Water Sample from T23S, R28E, Eddy Co., NM
8. Wellbore diagram as Plugged
9. Wellbore diagram as Planned
10. ~~Tabular Data on All Wells of Public Record within the Area of Review which Penetrate the Proposed Injection Zone~~ (No applicable wells)
11. Map Identifying 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
12. Sample of Letter Sent with This Application Packet to Owner of 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
13. Ground water information and water sample from Efren Collins (closest active water well ~1.1 miles from Pardue Farms 21 #1)
14. Legal Notice that will be run as required in the Hobbs News-Sun
15. Formation Tops
16. Old Regulatory Documents

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: 3001 W. LOOP 250 N. SUITE C-105-318 MIDLAND TX 79705
CONTACT PARTY: Mike 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: Mike McCurdy TITLE: Operations Engineer
SIGNATURE:  DATE: 07/25/2017
E-MAIL ADDRESS: mmccurdy@Delawareenergyllc.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: _____

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.

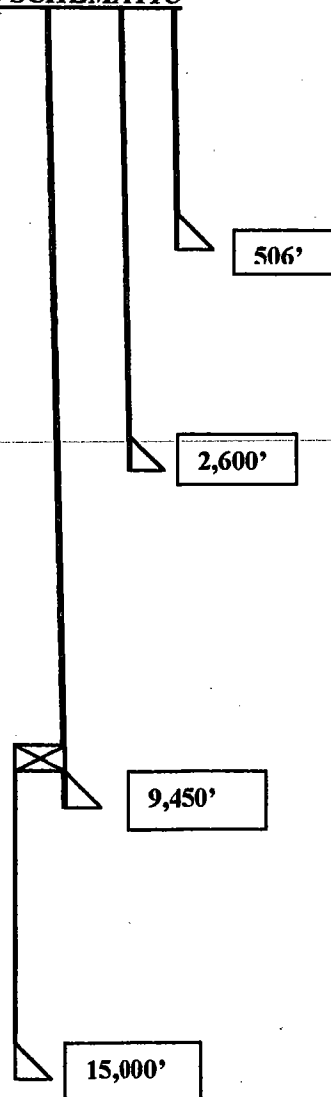
INJECTION WELL DATA SHEET

OPERATOR: DELAWARE ENERGY, LLCWELL NAME & NUMBER: PARDUE 21 FARMS #1 API 30-015-23809WELL LOCATION: 990' FNL, 1980' FEL B 21 24S 28E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 26" Casing Size: 20"Cemented with: 1,100 sx. or ft³Top of Cement: SURFACE Method Determined: CIRCULATEDIntermediate CasingHole Size: 17.5" Casing Size: 9-5/8"Cemented with: 3550 sx. or ft³Top of Cement: SURFACE Method Determined: CIRCULATEProduction CasingHole Size: 12-1/4" Casing Size: 9-5/8"Cemented with: 3100 sx. or ft³Top of Cement: 1000' Method Determined: CBL/tempTotal Depth: 9,450'Injection Interval14,000 feet to 15,000

PERFORATED

**** PROPOSED**7" 26# P110 liner 9,200' - 15,000',
~~600"~~ hole, cement to top of liner w/
600 H sacks, Top of liner is 9,200'

2.5



Pardue Farms 21 #1 SWD Wellbore Diagram

Devonian
Eddy County NM
API # 30-015-23809
AFE #

SL: 1650 ft FSL and 1980 ft FEL, UL 8, Sec. 21, T-24-S, R 28-E
Eddy County NM

KB elev = 3038
GL elev = 3023
KB-GL: 15
SPUD: 6/4/81
TD: 7/25/81

30" conductor 0-30' plug 0-50'

26" hole to 506'
Surf. CSG 20" 106.5# K-55 BTC 0-505'
Cement: 1100 sx class C, 14.8 PPG, 1.32 yield
Circulated 120 sacks to surface

17-1/2" Hole to 2600'
INTER CSG: 63 joints 13-3/8" 61# K-55 STC : 0' - 2600'
CMT: 3200 sacks halliburton lite, and 300 sacks class C neat
TOC: Surface, circulated 260 sacks to surface

12-1/4" hole to 9450' - Casing cut at approx. 1000ft May 2006
INT CSG: 9-5/8" 47# N95 LTC 0 - 9,9450' DV tool at 5498'
CMT: 1st stage 1000 sx lite and 300 sacks class H, circ. 2nd stage 1400 sx lite with 600 sacks class H

Delaware perms (squeezed) 6,125 - 6,478

Perfs: 7,240 - 7,264

550'
60 SX
1050'
60 SX
2650'
35 SX

11.3#
WBM

5,548'
35sx

DV 5498'

6,075
35 sx

7,060- 7,214
40 SX

9,341' - 9,541'

11,420' - 11,720

TD = 11,850' MD

8 1/2" Hole to 11,850
PROD CSG: None

Plan 2 C-B-L
(1) After clean-out from submer to
(2) C-B-L line
(3) Lock @ 2600' pipe to seal off

BB 11" to sub problem
11 May 81

INJECTION WELL DATA SHEETTubing Size: 4.5", 12.75# L-80 Lining Material: Internally plastic coatedType of Packer: Weatherford Arrow Set 1X Injection PackerPacker Setting Depth: 50ft to 100ft above top perfOther Type of Tubing/Casing Seal (if applicable): NONEAdditional Data

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

If no, for what purpose was the well originally drilled? ATOKA/STRAWN GAS TEST

TD 11,850 VERTICAL WELL

2. Name of the Injection Formation: DEVONIAN

3. Name of Field or Pool (if applicable): SWD DEVONIAN

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.

Delaware 6,125 – 6,478 (squeezed)

Bone Spring 7,240 – 7,264

CEMENT PLUGS: 100 sacks 11,720'; 85 sacks 9,541'; 50 sacks 7,214'; 45 sacks 6,069'; 50 sacks 5,561'; 50 sacks 2,669'; 75 sacks 1,048'; 80 sacks 572'; 40 sacks 0-60'

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

ABOVE: DELAWARE 4200' -6,400; BONE SPRING 7,100 -8500; WOLFCAMP 9,100 -10,970; ATOKA 11,100; MORROW 12,200

BELOW: NONE

Additional Questions on C-108

VII.

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

Average 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 1,000-2,000 PSI, Max 2,800 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 these produced water types and the Devonian. Devonian formation is used as a disposal interval in offset Townships 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.).

Disposal interval normally produces salt water. No Devonian receiving formation water samples directly offset, but a water analysis from a nearby well is included in the application.

***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 located in the Devonian formation, estimated top 14,000' to 15,000'. Devonian is an impermeable Shale at the very top (13,900', Woodford Shale) followed by permeable lime and dolomite. There are no fresh water zones underlying the proposed injection zone. Usable water depth is from surface to +/-240', the water source is older alluvium (Quaternary). All of the fresh water wells in the area have an average depth to water of 50' - 200' (Based on State Engineers Office).

IX. Describe the proposed stimulation program, if any.

20,000 gallons 15% HCL acid job with packer

X. Attach appropriate logging and test data on the well

Logs will be filed following re-entry operations. Cased hole CBL, Neutron, Gamma/CCL. Open hole Resistivity, neutron and gamma.

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.

The Efren Collins is the closest active fresh water well near the Pardue Farms 21 #1 (Pardue to Efren Collins: ~1.1 miles), attached is the Efren Collins water analysis. Average depth to water is 45ft, average well depth is 200ft. Did not find any active wells within one mile.

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 Pardue Farms 21 No 1 and have found no evidence of faults or other hydrologic connections between the Devonian disposal zone and the underground sources of drinking water.

Furthermore, there exist many impermeable intervals between the injection interval and the fresh ground water in the 14,000' feet of lithology between the top of the Devonian and the base of the ground water.

Mike McCurdy

Operations Engineer

7/25/2017

Title

Date

III. WELL DATA

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

Pardue Farms 21 No 1, Sec. 21-T24S-R28E, 990' FNL & 1908' FEL, UL B, Eddy 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
20"	506'	1100	26"	Surface	Circ June-1981
13-3/8"	2,600'	3550	17-1/2"	Surface	CIRC June-1981
9-5/8"	9,450'	3100	12-1/4"	1,000'	CBL or Temp
7" *	9,200-15,000*	600*	8-1/2"*	Top of liner*	CIRC*

* proposed

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

4-1/2" OD, Internally Plastic Coated Tubing set 50 to 100ft above perforations

(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 Formation

Pool Name: SWD (Devonian)

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

14,000' to 15,000' (perforated)

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

Well was drilled to 11,850, deepest test was the Atoka, well produced from the Brushy Canyon and 1st Bone Spring Sand but was not in economic volumes.

(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.

Delaware 6,125 – 6,478 (squeezed)

Bone Spring 7,240 – 7,264 (will squeeze)

CEMENT PLUGS:

100 sacks 11,720'; 85 sacks 9,541'; 50 sacks 7,214'; 45 sacks 6,069'; 50 sacks 5,561'; 50 sacks 2,669'; 75 sacks 1,048'; 80 sacks 572'; 40 sacks 0-60'

(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: DELAWARE 4200'-6,400; BONE SPRING 7,100 -8500; WOLFCAMP 9,100 -10,970; ATOKA 11,100; MORROW +/- 12,200

Next Lower: None

N MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-122
Supersedes C-128
Effective 1-1-81

All distances must be from the outer boundaries of the Section.

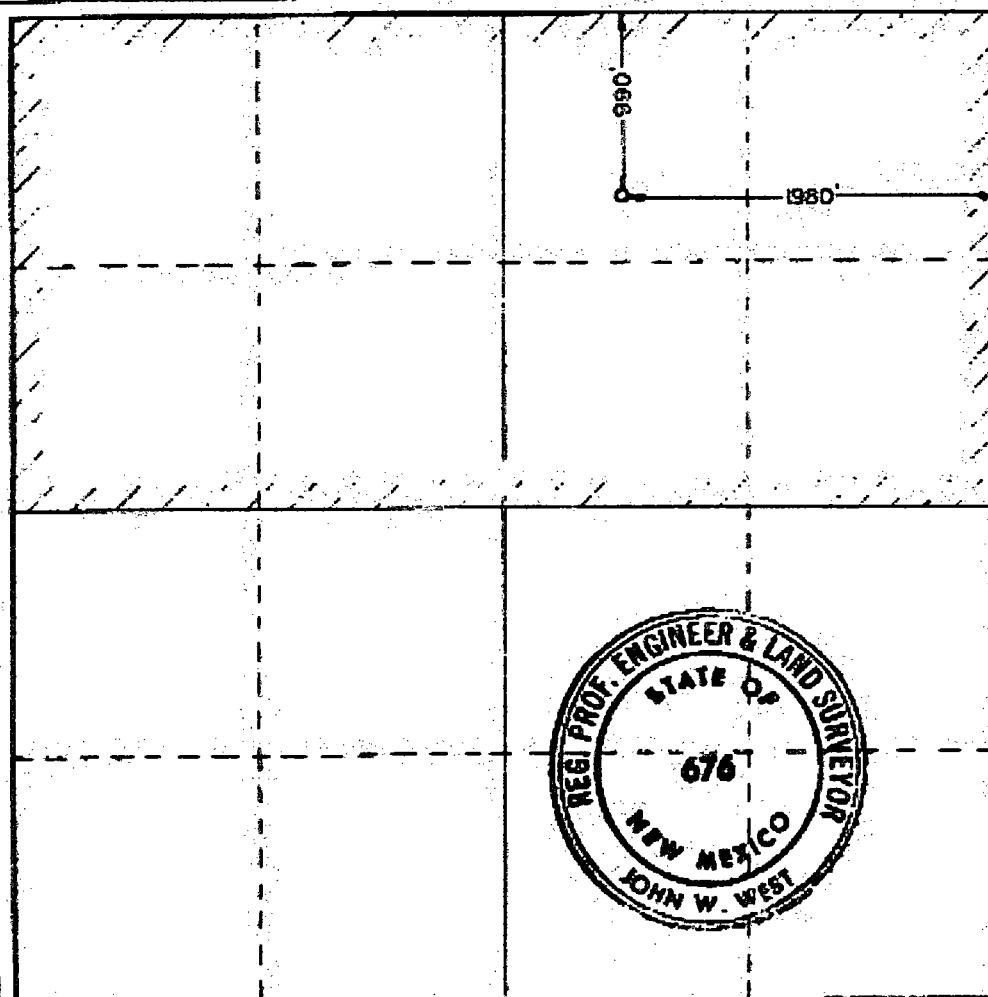
Operator Maddox Energy Corporation			Lease Pardue Farms 21		Well # 1
Tract Letter B	Section 21	Township 24 South	Range 28 East	County Eddy	
Actual Fracture Location of Well: 990 feet from the north line and 1980 feet from the east line					
Ground Level Elev. 3022.0	Producing Formation Morrow		Pool Malaga (Aboka-Morrow)		Medicated Average: 320

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name *Quinta B. Cany*
Position _____
Operations Manager
Company _____
Maddox Energy Corp.
Date _____
May 27, 1981

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 knowledge and belief.

Date Surveyed _____
May 18, 1981
Registered Professional Engineer
and/or Land Surveyor

John W. West
Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6243
Ronald J. Eidson 3239



Sec 22, T25S, R28E

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(806) 228-8121
Lab Team Leader - Shella Hernandez
(432) 495-7240

Bone Spring

Water Analysis Report by Baker Petrolite

Company:		Sales RDT:	33514.1
Region:	PERMIAN BASIN	Account Manager:	TONY HERNANDEZ (575) 910-7135
Area:	ARTESIA, NM	Sample #:	534665
Lease/Platform:	PINOCHLE 'BPN' STATE COM	Analysis ID #:	106795
Entity (or well #):	2 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 534665 @ 75 F					
Sampling Date:	03/10/11	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	03/18/11	Chloride:	109618.0	3091.92	Sodium:	70275.7	3056.82
Analyst:	SANDRA GOMEZ	Bicarbonate:	2135.0	34.99	Magnesium:	195.0	18.04
TDS (mg/l or g/m3):	184911.1	Carbonate:	0.0	0.	Calcium:	844.0	42.12
Density (g/cm3, tonne/m3):	1.113	Sulfate:	747.0	15.55	Strontium:	220.0	5.02
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.8	0.01
		Borate:			Iron:	6.5	0.23
		Silicate:			Potassium:	869.0	22.22
Carbon Dioxide:	0.50 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		7	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		7	Lead:		
					Manganese:	0.100	0.
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	1.08	188.52	-1.20	0.00	-1.18	0.00	-0.11	0.00	0.56	0.29	1.72
100	0	1.10	208.05	-1.29	0.00	-1.20	0.00	-0.15	0.00	0.35	0.29	2.35
120	0	1.12	224.17	-1.36	0.00	-1.19	0.00	-0.17	0.00	0.16	0.00	3.17
140	0	1.13	243.17	-1.42	0.00	-1.18	0.00	-0.18	0.00	0.00	0.00	4.21

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

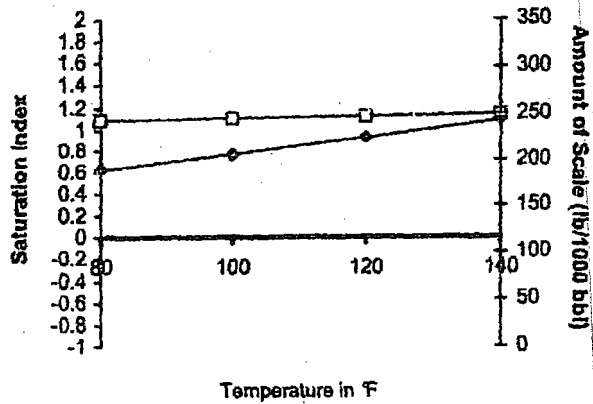
Note 3: The reported CO₂ pressure is actually the calculated CO₂ fugacity. It is usually nearly the same as the CO₂ partial pressure.

Scale Predictions from Baker Petrolite

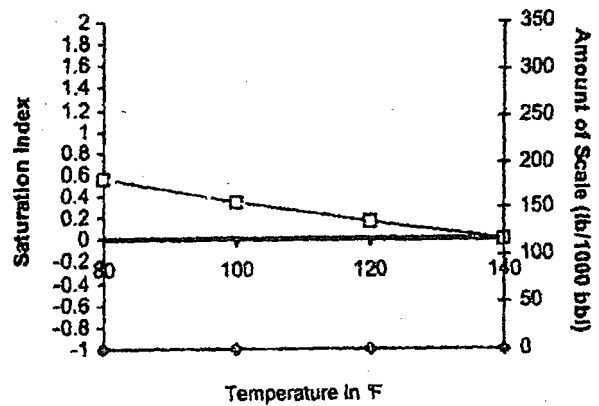
Analysis of Sample 534865 @ 75 °F for

03/18/11

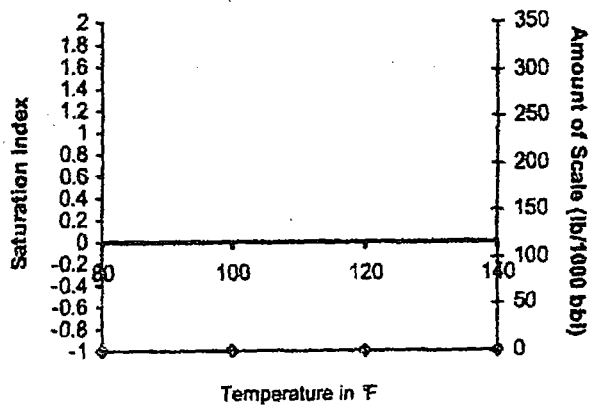
Calcite - CaCO_3



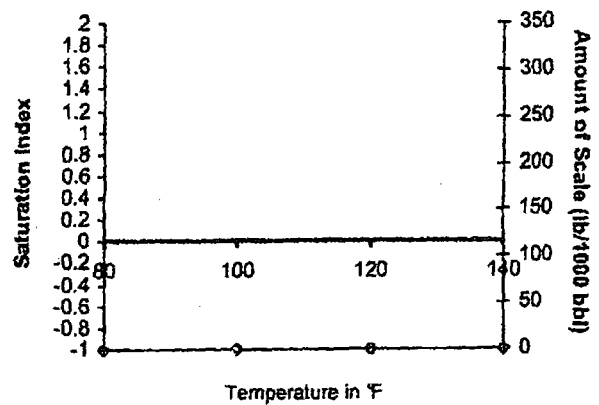
Barite - BaSO_4



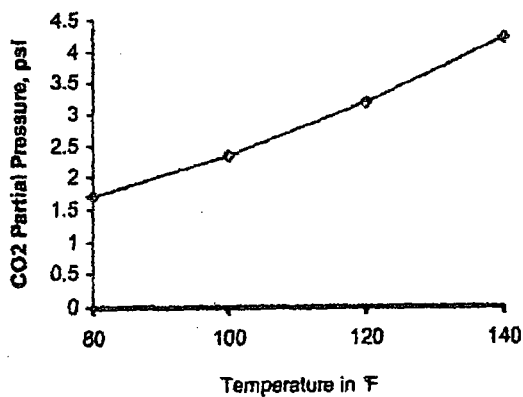
Gypsum - $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$



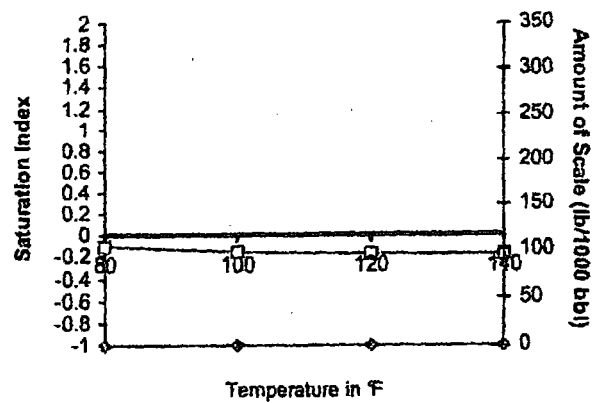
Anhydrite - CaSO_4



Carbon Dioxide Partial Pressure



Celestite - SrSO_4



Woltcamp



Water Analysis

Date: 23-Aug-11

2708 West County Road, Hobbs NM 88240

Phone (575) 392-5556 Fax (575) 392-7307

Analyzed For

Brushy Draw 1#1

Company	Well Name	County	State
	BD	Lea	New Mexico

Sample Source Swab Sample Sample # *Eddy* *1-265-29E*
1

Formation

Depth

Specific Gravity	1.170	SG @ 60 °F	1.172
pH	6.30	Sulfides	Absent
Temperature (°F)	70	Reducing Agents	

Cations

Sodium (Calc)	in Mg/L	77,962	in PPM	66,520
Calcium	in Mg/L	4,000	in PPM	3,413
Magnesium	in Mg/L	1,200	in PPM	1,024
Soluble Iron (FE2)	in Mg/L	10.0	in PPM	9

Anions

Chlorides	in Mg/L	130,000	in PPM	110,922
Sulfates	in Mg/L	250	in PPM	213
Bicarbonates	in Mg/L	127	in PPM	108

Total Hardness (as CaCO3)	in Mg/L	15,000	in PPM	12,799
Total Dissolved Solids (Calc)	in Mg/L	213,549	in PPM	182,209
Equivalent NaCl Concentration	in Mg/L	182,868	in PPM	156,031

Scaling Tendencies

*Calcium Carbonate Index 507,520

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 1,000,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

*This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks RW=.048@70F

Report # 3188

Sec 16, T23S, R28E



PRODUCTION DEPARTMENT

MILLER CHEMICALS, INC.

Post Office Box 298
Artesia, N.M. 88211-0298
(505) 748-1919 Artesia Office
(505) 392-2893 Hobbs Office
(505) 748-1918 Fax
mci@plateautel.net

Delaware Brushy Canyon

WATER ANALYSIS REPORT

Company :
Address :
Lease : LOVING "AIB"
Well : #15
Sample Pt. : WELLHEAD

Date : MARCH 17, 2008
Date Sampled : MARCH 17, 2008
Analysis No. :

ANALYSIS		mg/L	* meq/L
1. pH	6.0		
2. H2S	0		
3. Specific Gravity	1.070		
4. Total Dissolved Solids		304684.9	
5. Suspended Solids		NR	
6. Dissolved Oxygen		NR	
7. Dissolved CO2		NR	
8. Oil In Water		NR	
9. Phenolphthalein Alkalinity (CaCO3)			
10. Methyl Orange Alkalinity (CaCO3)			
11. Bicarbonate	HCO3	927.0	HCO3 15.2
12. Chloride	Cl	187440.0	Cl 5287.4
13. Sulfate	SO4	500.0	SO4 10.4
14. Calcium	Ca	37200.0	Ca 1856.3
15. Magnesium	Mg	996.3	Mg 82.0
16. Sodium (calculated)	Na	77586.6	Na 3374.8
17. Iron	Fe	35.0	
18. Barium	Ba	NR	
19. Strontium	Sr	NR	
20. Total Hardness (CaCO3)		97000.0	

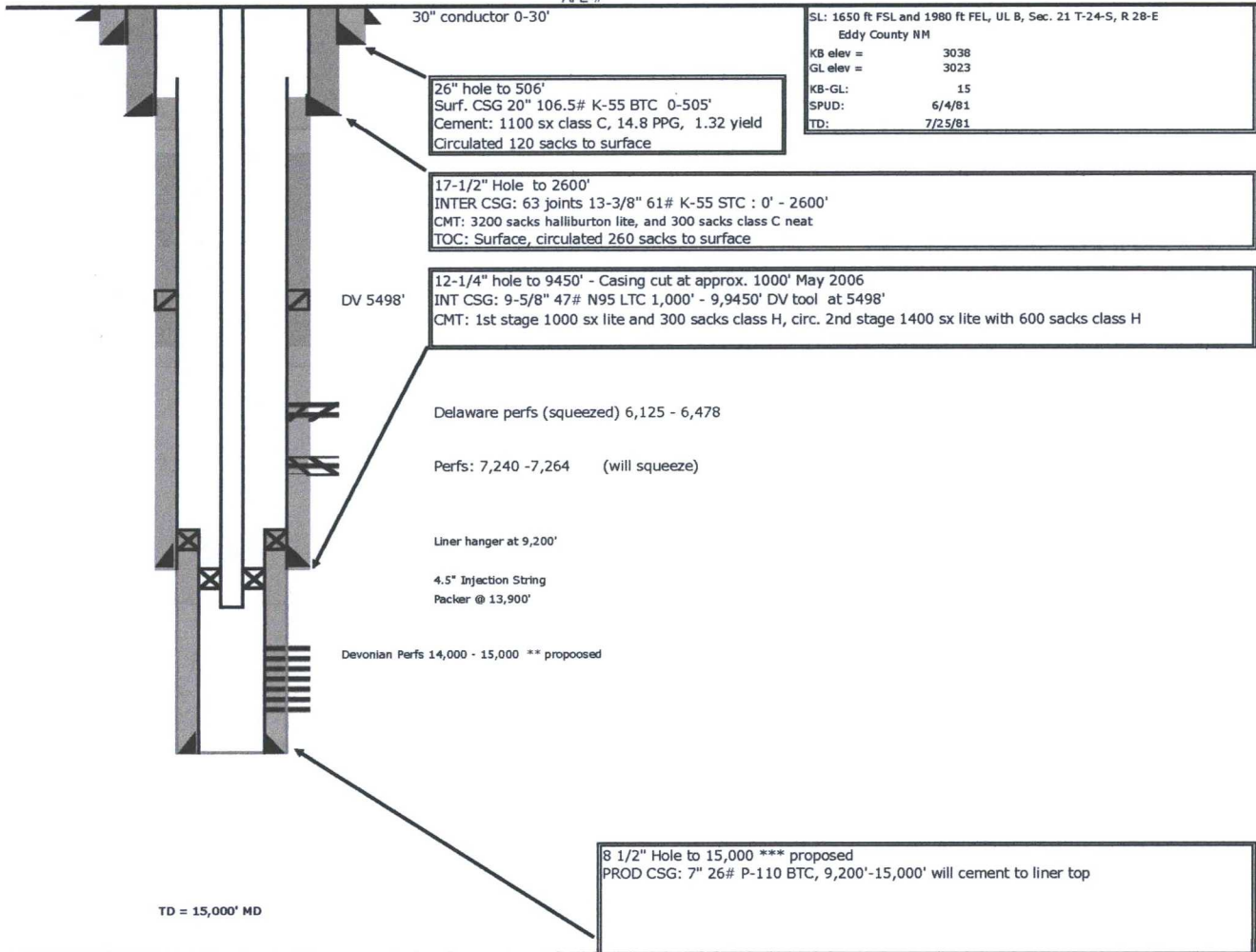
PROBABLE MINERAL COMPOSITION

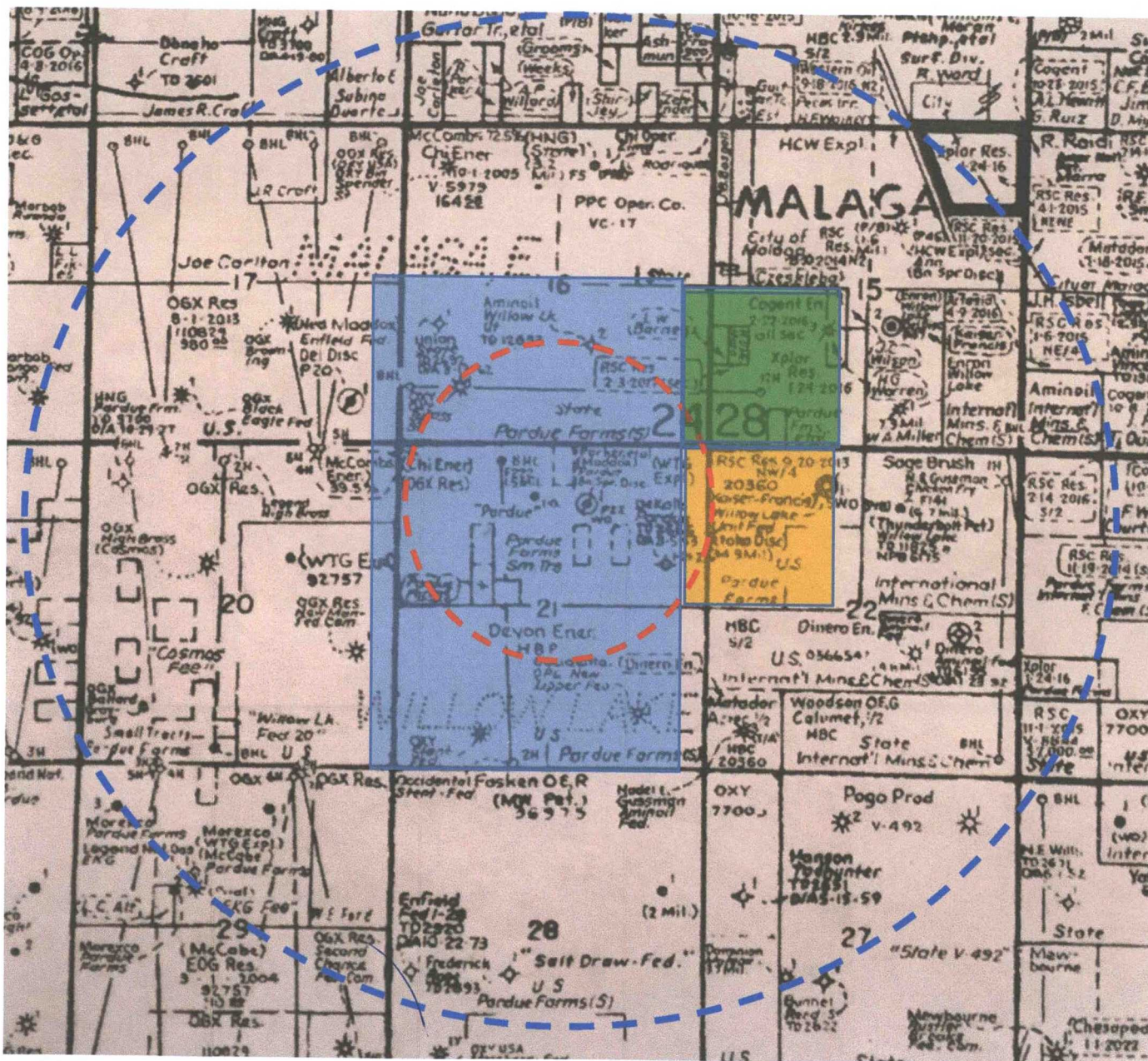
*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
18561 *Ca <----- *HCO3	Ca(HCO3)2	81.0 15.2	1231
821 *Mg <----- *SO4	CaSO4	68.1 10.4	709
33751 *Na <----- *Cl	CaCl2	55.5 1830.7	101584
	Mg(HCO3)2	73.2	
	MgSO4	60.2	
	MgCl2	47.6 82.0	3902
	NaHCO3	84.0	
	Na2SO4	71.0	
	NaCl	58.4 3374.8	197223

REMARKS:

Pardue Farms 21 #1 SWD Wellbore Diagram

Devonian
Eddy County NM
API # 30-015-23809
AFE #





 Kaiser-Francis

 Oxy

 Marathon Oil

 2 Mile Radius

 0.5 Mile Radius

Delaware Energy, L.L.C.
3001 W. Loop 250 N., Suite C-105-318
Midland, TX 79705
Office: (432) 312-5251

July 25, 2017

Surface Owner / Offset Operators

Re: Notification of Application for Authorization to Inject into the
Pardue Farms 21 #1 Well

Ladies and Gentlemen:

Delaware Energy, LLC is seeking administrative approval to utilize the Pardue Farms 21 #1 (API – 30-015-23809) 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>	Pardue Farms 21 #1 SWD
<u>Proposed Disposal Zone:</u>	Devonian Formation (from 14,000'-15,000')
<u>Location:</u>	990' FSL & 1980' FEL, Sec. 21, UL B, T24S, R28E, Eddy Co., NM
<u>Applicants Name:</u>	Delaware Energy, L.L.C.
<u>Applicants Address:</u>	3001 W. Loop 250 N., Suite C-105-318, Midland, TX 79705

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:

Affected Lease Operators:

Occidental Permian LTD
6001 Deauville Blvd
Midland, TX 79706

Kaiser-Francis Oil Company
6733 South Yale Avenue
Tulsa, OK 74136

Marathon Oil Corporation.
5555 San Felipe St.,
Houston, TX 77056

New Mexico OCD:

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

New Mexico Oil Conservation Division - District 2 Artesia
811 S. First St.
Artesia, NM 88210

Surface Owner:

Pecos Valley Artesian Conservancy District
2303 E. 2nd St.
Roswell, NM 88201

Impact Water Analysis Report



SYSTEM IDENTIFICATION

Company: Delaware Energy
Location: Effen Collins
Sample Source: Wellhead
Salesman: David Garcia

Sample ID#: 81684

Sample Date: 07-06-2017
Report Date: 07-11-2017

WATER CHEMISTRY

CATIONS

Calcium(as Ca)	738.60
Magnesium(as Mg)	266.40
Barium(as Ba)	0.00
Strontium(as Sr)	12.76
Iron(as Fe)	0.00
Manganese(as Mn)	0.00

ANIONS

Chloride(as Cl)	200
Sulfate(as SO ₄)	1776
Dissolved CO ₂ (as CO ₂)	ND
Bicarbonate(as HCO ₃)	232.03
H ₂ S (as H ₂ S)	ND
Boron(as B)	6.35

PARAMETERS

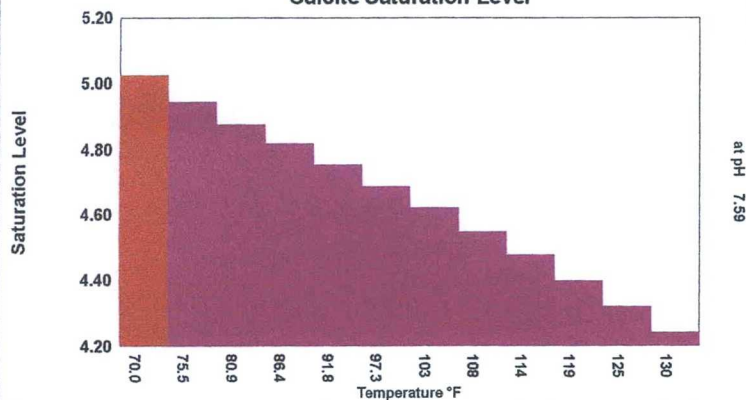
Temperature(°F)	77.00	Sample pH	7.53
Conductivity	6465	Sp.Gr.(g/mL)	1.00
Resistivity	154.69		
T.D.S.	5952		

SCALE AND CORROSION POTENTIAL

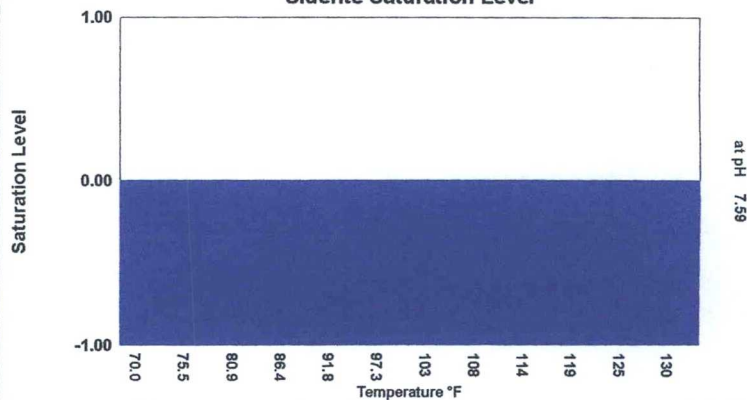
Temp. (°F)	Press. (atm)	Calcite CaCO ₃		Anhydrite CaSO ₄		Gypsum CaSO ₄ *2H ₂ O		Barite BaSO ₄		Celestite SrSO ₄		Siderite FeCO ₃		Mackawenite FeS		CO ₂ (mpy)	pCO ₂ (atm)
70.00	1.00	5.02	0.956	0.485	-757.17	0.827	-195.57	0.00	-0.0144	0.933	-1.90	0.00	-0.128	0.00	-0.291	0.0262	0.0114
75.45	10.00	4.94	0.916	0.474	-776.15	0.792	-240.77	0.00	-0.0168	0.909	-2.65	0.00	-0.123	0.00	-0.308	0.0439	0.0629
80.91	19.00	4.87	0.879	0.467	-786.07	0.760	-282.64	0.00	-0.0195	0.890	-3.26	0.00	-0.118	0.00	-0.324	0.0421	0.114
86.36	28.00	4.82	0.848	0.463	-787.19	0.732	-321.00	0.00	-0.0224	0.876	-3.74	0.00	-0.114	0.00	-0.340	0.0388	0.166
91.82	37.00	4.75	0.816	0.462	-780.33	0.706	-356.26	0.00	-0.0256	0.865	-4.13	0.00	-0.110	0.00	-0.356	0.0361	0.217
97.27	46.00	4.68	0.785	0.465	-766.03	0.684	-388.45	0.00	-0.0290	0.856	-4.44	0.00	-0.106	0.00	-0.373	0.0342	0.269
102.73	55.00	4.62	0.756	0.469	-745.06	0.663	-417.83	0.00	-0.0327	0.849	-4.69	0.00	-0.102	0.00	-0.389	0.0330	0.320
108.18	64.00	4.55	0.726	0.477	-717.87	0.673	-397.43	0.00	-0.0366	0.843	-4.90	0.00	-0.0991	0.00	-0.405	0.0296	0.372
113.64	73.00	4.47	0.699	0.487	-685.24	0.686	-372.08	0.00	-0.0410	0.837	-5.14	0.00	-0.0960	0.00	-0.422	0.0262	0.423
119.09	82.00	4.40	0.671	0.501	-647.84	0.698	-348.57	0.00	-0.0459	0.830	-5.39	0.00	-0.0933	0.00	-0.440	0.0234	0.475
124.55	91.00	4.32	0.645	0.517	-606.32	0.711	-326.82	0.00	-0.0512	0.823	-5.67	0.00	-0.0907	0.00	-0.458	0.0209	0.526
130.00	100.00	4.24	0.621	0.536	-561.33	0.722	-306.78	0.00	-0.0571	0.815	-5.96	0.00	-0.0882	0.00	-0.476	0.0187	0.578
		xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L		

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO₃}/K_{sp}. pCO₂ (atm) is the partial pressure of CO₂ in the gas phase.
mg/L scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.

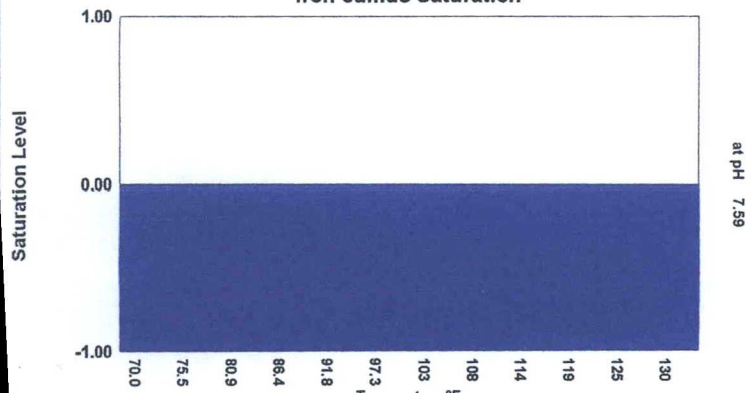
Calcite Saturation Level



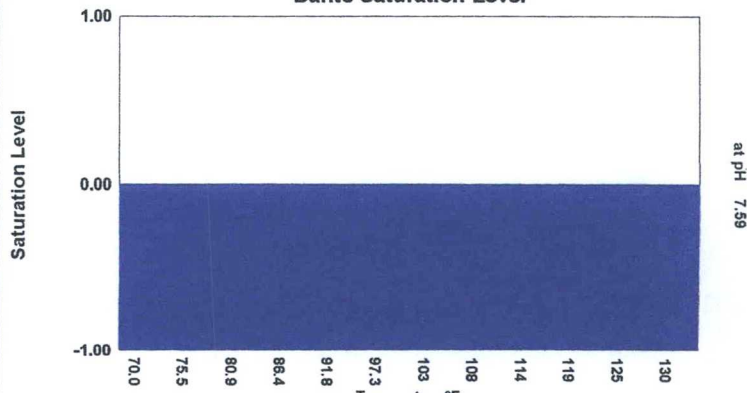
Siderite Saturation Level



Iron sulfide Saturation



Barite Saturation Level





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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Range	X	Y	Depth Well	Depth Water	Water Column
C 00513 S	C	ED		1	3	3	16	24S	28E	584802	3564432	161	42	119
C 00709	C	ED		3	3	3	16	24S	28E	584802	3564232*			
C 02836	C	ED		2	2	2	16	24S	28E	586203	3565676*		15	
C 03824 POD1	CUB	ED		4	1	2	16	24S	28E	585770	3565578	290	60	230

Average Depth to Water: 39 feet

Minimum Depth: 15 feet

Maximum Depth: 60 feet

Record Count: 4

PLSS Search:

Section(s): 16

Township: 24S

Range: 28E

*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.

12/18/16 5:35 PM

Page 1 of 1

WATER COLUMN/ AVERAGE



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Range	X	Y	Depth Well	Depth Water	Water Column
<u>C 00346</u>	C		ED	2	2	15	24S	28E		587715	3565591*	90	32	58
<u>C 00488</u>	C		ED	2	1	2	15	24S	28E	587412	3565688*	64	8	56
<u>C 02524 POD2</u>	C		ED	2	2	2	15	24S	28E	587814	3565690*	90	11	79
<u>C 03132</u>	C		ED	1	2	4	15	24S	28E	587616	3564877*	90	19	71

Average Depth to Water: 17 feet

Minimum Depth: 8 feet

Maximum Depth: 32 feet

Record Count: 4

PLSS Search:

Section(s): 15

Township: 24S

Range: 28E

*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.



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

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& 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	POD Sub-Code	basin	County	Q 1	Q 2	Q 3	Q 4	Sec	Tws	Range	X	Y	Depth Well	Depth Water	Water Column
C 02244	C	LE		3	1	2	22	24S	28E		587224	3563865*	260		

Average Depth to Water: -

Minimum Depth: -

Maximum Depth: -

Record Count: 1

PLSS Search:

Section(s): 22

Township: 24S

Range: 28E

*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.

12/18/16 6:03 PM

Page 1 of 1

WATER COLUMN/ AVERAGE

LEGAL NOTICE

Delaware Energy, L.L.C., 3001 W. Loop 250N, Suite C-105-318, Midland, TX 79705, has filed a form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to utilize the Pardue Farms 21 #1 (API – 30-015-23809) as a Salt Water Disposal well.

The Pardue Farms 21 #1 is located at 990' FNL and 1980' FEL, Unit Letter B, Section 21, Township 24 South, Range 28 East, Eddy County, New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian Formations from 14,000' to 15,000' at a maximum rate of 25,000 barrels of water per day at a maximum pressure of 2,800 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) 312-5251.

Pardue Farms 21 #1

API# 30-015-23089

UL B, Sec. 21, T-24-S, R-28-E, 990' FNL & 1980' FEL, Eddy Co., NM

Formation Tops



Rustler	400
T/Salado	1,020'
Base Salt, T/ Lamar lime	2,550'
Delaware Mountain Group / Bell Canyon	2,605'
Bone Spring Lime	6,500'
Wolfcamp	9,250'
Atoka	11,700'
Morrow	12,300
Mississippi	13,600
Woodford Shale	13,900
Devonian	14,000

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

NO. OF COPIES RECEIVED	
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FILE	
U.S.O.G.	
LAND OFFICE	
OPERATOR	

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

30. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
31. State Oil & Gas Lease No.

A. TYPE OF WELL OilOIL WELL ☒GAS WELL ☐DRY ☐

OTHER

RECEIVED

B. TYPE OF COMPLETION

NEW WELL ☒WORK OVER ☐DEEPEN ☐PLUG BACK ☐DIFF. REVS. ☐

OTHER

C. Name of Operator

Maddox Energy Corporation

D. Address of Operator

P. O. Box 217, Loving, New Mexico 88256

E. Location of Well

JAN 8 1982

O. C. D.

ARTECHA, OFFICE

7. Unit Agreement Name

8. Form or Lease Name

Pardue Farms 21

9. Well No.

10. Field and Pool, or Wildcat

Wildcat Bone Springs

12. County

Eddy

UNIT LETTER B LOCATED 1980 FEET FROM THE East LINE AND 990 FEET FROMTHE North LINE OF SEC. 21 TWP. 24-S REC. 28-E N.M.P.M.

13. Date Spudded

6-4-81

14. Date T.D. Reached

8-5-81

15. Date Compl. (Ready to Prod.)

12-11-81

16. Elevations (DF, RKB, RT, GR, etc.)

3022' GL

19. Elev. Casinghead

17. Total Depth

11,850'

20. Plug Back T.D.

6510'

21. If Multiple Compl., How

Many

22. Intervals Drilled By

Rotary Tools
0-11,850'

Cable Tools

23. Producing Interval(s), of this completion - Top, Bottom, Name

6125-6478' Bone Springs

24. Was Directional Survey

Made

No

25. Type Electric and Other Logs Run

Cement Evaluation Log,

Gamma Ray, Compensated Neutron-Formation Density, Dual Laterolog-Micro SFL

26. Was Well Cased

No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	106.50#	500'	26"	1100 sx Cls C w/2% KCL & 1/4 Flocc	
13-3/8"	61#	2600'	17-1/2"	3250 sx Hal Lite & 300sx Cls C Neat	
9-5/8"	47# & 43.50#	9450'	12-1/4"	1st stage: 1000 sx Trinity Lite & 300 sx	
Cls H; 2nd stage: 1400 sx Trinity Lite & 400 sx Hal Lite & 200 sx Cls H					

LINER RECORD				TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-7/8"	6377.87	
					6 7/8 N-80		

27. Perforation Record (Interval, size and number) 4" - 49 shots

6125, 28, 31, 33, 35, 45, 46, 50, 54, 58, 60,
75, 93, 97, 6203, 07, 11, 16, 41, 46, 60, 63,
70, 72, 78, 82, 84, 86, 88, 6318, 23, 28, 34,
40, 55, 61, 67, 70, 77, 6417, 21, 26, 35, 43,
48, 58, 62, 69 & 78'.

28. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
6125-6288	2000 gal 15% NE acid
6318-6478	2000 gal 15% NE acid
6125-6478	fracture - 134,400 gal gelled water & 2725 sx 20-40 sand

29. PRODUCTION

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
12-16-81		Pumping - 1-1/2" X 2" X 18' RHBC single valve pump				Prod.	
Date of Test	Hours Tested	Choke Size	Prod'n. Per Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
1-2-82	24	open		22	17	160	773
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Conn.)	
			22	17	160	46	

30. Disposition of Gas (Sold, used for fuel, vented, etc.)

vented

Test Witnessed By

Wayne Laufer

31. List of Attachments

Deviation Record & Logs

32. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

Walter Hughes

TITLE

Production Supervisor

DATE 1-7-82

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or completed well. It shall be accompanied by one copy of all electrical and radioactivity logs run on the well and a summary of all geologic tests conducted, including well stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 30 through 34 shall be reported for each zone. The form is to be filed in triplicate except on state land, where six copies are required. See Rule 1103.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy 600'	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt 1020'	T. Strawn 11,470'	T. Kirtland-Fruitland	T. Penn. "C"
T. Salt 2605'	T. Alaka 11,720'	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefee	T. Madison
T. Queen	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	T. Mancos	T. McCracken
T. San Andres	T. Simpson	T. Gallup	T. Ignacio Qm
T. Glorieta	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinberry	T. Gr. Wash	T. Morrison	T.
T. Tubb	T. Granite	T. Todilto	T.
T. Drinkard	T. Delaware Sand 2605'	T. Entrada	T.
T. Abo	T. Bone Springs 6145'	T. Wingate	T.
T. Wolfcamp 9250'	T.	T. Chisle	T.
T. Penn.	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Penn. "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from 6145' to 7220'	No. 4, from _____ to _____
No. 2, from _____ to _____	No. 5, from _____ to _____
No. 3, from _____ to _____	No. 6, from _____ to _____

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from none to _____ feet	_____
No. 2, from _____ to _____ feet	_____
No. 3, from _____ to _____ feet	_____
No. 4, from _____ to _____ feet	_____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	600	600	Caliche, lime & red shale				
600	1020	420	mostly anhydrite				
1020	2605	1585	salt & anhydrite				
2605	2638	33	black limestone				
2638	6145	3507	massive sand & thin shale				
6145	9250	3105	shale & lime				
9250	11470	2220	dolomite, shale & lime				
11470	11720	250	limestone				
11720	TD	126	shale, lime & sand				

JAN 20 1987

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10

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DISTRIBUTION	
SANTA FE	
FILE	
U.S.O.S.	
LAND OFFICE	
OPERATOR	

20. Indicate Type of Lease
State ☐ Fee ☐

21. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO OPERATE OR PLUG SALS TO A DIFFERENT ADEPTOIR.
USE "APPLICATION FOR PERMIT" FORM C-1011 FOR SUCH PROPOSALS.

RECEIVED

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	2. Date of Notice AUG 11 1981	3. Unit Agreement Name
4. Name of Operator Maddox Energy Corporation /	5. Form of Lease Name Pardue Farms 21	6. Well No. 1
7. Address of Operator Suite 906 Blanks Building, Midland, Texas 79701	8. Field and Pool, or Well Unit Und. Malaga MORTON	9. County Eddy
10. Location of Well UNIT LETTER B 1980 FEET FROM THE East SIDE AND 990 FEET FROM north LINE, SECTION 21 TOWNSHIP 24S RANGE 28E	11. Elevation (Show whether DT, RT, CR, etc.) 3022' GL	

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: ☐ PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐ TEMPORARILY ABANDON ☐ FULL OR ALTER CASING ☐ OTHER ☐

SUBSEQUENT REPORT OF: ☐ REMEDIAL WORK ☐ COMMENCE DRILLING OPER. ☐ CASING TEST AND CEMENT JOBS ☐ PLUG AND ABANDONMENT

IN OTHER **PB, Perf & Test Bone Spring**

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE MILE 1103.

8/6/81 Reached TD 11,850', Ran open hole logs.
8/7/81 Spotted cement plugs at 11,720-11,420' (100 sacks), 9,541-9,341' (85 sacks), and 7,900-7,800' (35 sacks). WOC 24 hours.
8/8/81 Waiting on completion unit.

13. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Guido B. Carr TITLE Operations Manager DATE 8/10/81

APPROVED BY Mike Williams TITLE OIL AND GAS INSPECTOR DATE AUG 14 1981

CONDITIONS OF APPROVAL, IF ANY:

Ph.1

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Danny Fletcher, being first
duly sworn, on oath says:

That he is the Publisher of
the Carlsbad Current-Argus,
a newspaper published daily
at the City of Carlsbad, in
said county of Eddy, state of
New Mexico and of general
paid circulation in said
county; that the same is a
duly qualified newspaper
under the laws of the State
wherein legal notices and
advertisements may be
published; that the printed
notice attached hereto was
published in the regular and
entire edition of said
newspaper and not in
supplement thereof on the
date as follows, to wit:

July 26 2017

That the cost of publication is
\$62.15 and that payment
thereof has been made and
will be assessed as court
costs.

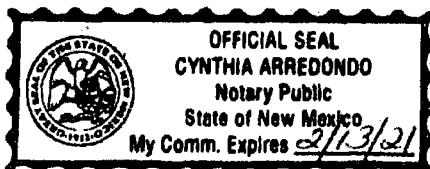
[Signature]

Subscribed and sworn to before me
this 28 day of July, 2017

[Signature]

My commission Expires on 2/13/21

Notary Public



LEGAL NOTICE
Delaware Energy,
L.L.C., 3001 W. Loop
250N, Suite C-105-
318, Midland, TX
79705, has filed a
form C-108 (Applica-
tion for Authorization
to Inject) with the Oil
Conservation Division
seeking administra-
tive approval to utilize
the Pardue Farms 21
#1 (API 30-015-
23809) as a Salt Wa-
ter Disposal well.
The Pardue Farms 21
#1 is located at 990'
FNL and 1980' FEL
Unit Letter B, Section
21, Township 24
South, Range 28 East,
Eddy County, New
Mexico. The well will
dispose of water pro-
duced from oil and
gas wells into the
Devonian Formations
from 14,000' to
15,000' at a maximum
rate of 25,000 barrels
of water per day at a
maximum pressure of
2,800 psi. Interested
parties must file ob-
jections or requests
for hearing with the
Oil Conservations Di-
vision, 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) 312-5251.

7037 1450 0000 5855 8635

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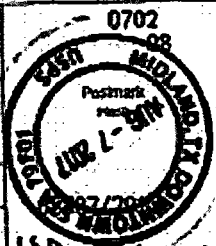
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HOUSTON, TX 77056

OFFICIAL USE

Certified Mail Fee **\$3.35**
Extra Services & Fees (check box, add fee)
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☐ Adult Signature Restricted Delivery \$0.00

Postage **\$2.03**
Total Postage and Fees **\$8.13**



Sent to **Marathon Paradise**
Street and Apt. No., or PO Box No.
5555 Seabreeze St
City, State, ZIP+4®
Houston, TX 77056
PS Form 3800, April 2013 PSN 7530-02-000-9047 See Reverse for Instructions

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MIDLAND TX 79701

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Postage \$2.03

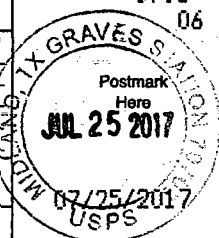
Total Postage and Fees \$8.13

Sent To Concho Pardue Farm 21
Street and Apt. No., or PO Box No.

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions



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TULSA OK 74134

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☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$2.03

Total Postage and Fees \$8.13

Sent To Kaiser-Francis Pardue Farm 4
Street and Apt. No., or PO Box No.

City, State, ZIP+4®

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MIDLAND TX 79701

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☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$2.03

Total Postage and Fees \$8.13

Sent To Oxy Pardue Farm 21
Street and Apt. No., or PO Box No.

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions



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ROSELIE NE 88201

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\$2.75
Extra Services & Fees (check box, add fee as appropriate)
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☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$2.03

Total Postage and Fees \$8.13

Sent To DVACD Pardue Farm 21
Street and Apt. No., or PO Box No.

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions



LEGAL NOTICE

Delaware Energy, LLC, 3001 W. Loop 250N, Suite C-105-318, Midland, TX 79705 has filed a form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to utilize the Pardue Farms 21 #1 (API - 30-015-23809) as a Salt Water Disposal well. The Pardue Farms 21 #1 is located at 990' FNL and 1980' FEL, Unit Letter B, Section 21, Township 24 South, Range 28 East, Eddy County, New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian Formations from 14,000' to 15,000' at a maximum rate of 25,000 barrels of water per day at a maximum pressure of 2,800 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, LLC, at (432) 312-5251.

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Friday, August 4, 2017 3:23 PM
To: 'Mike McCurdy'
Cc: Goetze, Phillip, EMNRD; Lowe, Leonard, EMNRD; Jones, William V, EMNRD
Subject: Delaware Energy Pardue 21 Farms SWD Well No. 1

Tracking:	Recipient	Delivery
	'Mike McCurdy'	
	Goetze, Phillip, EMNRD	Delivered: 8/4/2017 3:23 PM
	Lowe, Leonard, EMNRD	Delivered: 8/4/2017 3:23 PM
	Jones, William V, EMNRD	Delivered: 8/4/2017 3:23 PM

Mike:

In your proposed Pardue 21 Farms SWD Well No. 1, your affected lease operators are Oxy, Kaiser Francis, and Marathon Oil. Your ½ mile AOR map shows the same thing.

However, your proof of mailing has Oxy, Kaiser Francis, and **Concho**. I do not see that **Marathon Oil** was notified. The OCD will suspend your application until you provide proof of notice to Marathon Oil, or redo the affected parties list. If the proof of notice, or updated ½ mile AOR and corresponding list is not received by the OCD on Friday August 11, 2017 your application will be cancelled.

Thank You

Michael McMillan
1220 South St. Francis
Santa Fe, New Mexico
505-476-3448
Michael.mcmillan@state.nm.us

McMillan, Michael, EMNRD

From: Mike McCurdy <mmccurdy@delawareenergyllc.com>
Sent: Friday, August 4, 2017 3:34 PM
To: McMillan, Michael, EMNRD
Subject: Re: Delaware Energy Pardue 21 Farms SWD Well No. 1

Thank you Mike. I'll look into it.

Thanks, MM

From: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Sent: Friday, August 4, 2017 4:22:54 PM
To: Mike McCurdy
Cc: Goetze, Phillip, EMNRD; Lowe, Leonard, EMNRD; Jones, William V, EMNRD
Subject: Delaware Energy Pardue 21 Farms SWD Well No. 1

Mike:
In your proposed Pardue 21 Farms SWD Well No. 1, your affected lease operators are Oxy, Kaiser Francis, and Marathon Oil. Your ½ mile AOR map shows the same thing.
However, your proof of mailing has Oxy, Kaiser Francis, and **Concho**. I do not see that **Marathon Oil** was notified.
The OCD will suspend your application until you provide proof of notice to Marathon Oil, or redo the affected parties list
If the proof of notice, or updated ½ mile AOR and corresponding list is not received by the OCD on Friday August 11, 2017 your application will be cancelled.
Thank You

Michael McMillan
1220 South St. Francis
Santa Fe, New Mexico
505-476-3448
Michael.mcmillan@state.nm.us

⊕ New mail

<<

▲ Favorites

Inbox 1

Sent Items

Deleted Items

▲ McMillan, Michael, EMNRD

▶ Inbox 1

Drafts

▶ Sent Items

Deleted Items

Archive

Junk E-Mail

Notes

RSS Feeds

🔍 Search mail and people

SENT ITEMS

CONVERSATIONS BY DATE ▼

All Unread To me Flagged

✓ Mike McCurdy; Jones, Wi

✕ ▶

▲ Delaware Energy Pardue 21 Farms SWD Well No. 1 8:13a
 Mike: The 15-day clock will start 08-07-2017 Mike ...

Mike McCurdy

Inbox

McMillan, Michael, EMNRD

8:13a

✕ ▶

Mike McCurdy

Inbox

← 📎

Goetze, Phillip, EMNRD

Inbox

🔍

McMillan, Michael, EMNRD

Fri 8/4

Mike McCurdy

Inbox

→

Mike McCurdy

Inbox

🔍

Microsoft Outlook

Inbox

📎

Microsoft Outlook

Inbox

🔍 📎

Microsoft Outlook

Inbox

🔍 📎

Microsoft Outlook

Inbox

🔍 📎

McMillan, Michael, EMNRD

Fri 8/4

LAST WEEK

McMurry, Linda (LindaMcMurry);

▶ RE: MNA Resources Russell SWD Well No. 1 Fri 8/4
 Thanks for the contact information update. Chevron ...

Jones, William V, EMNRD

📎

Quay county wells Fri 8/4
 Here are the Quay County wells, with comments Mik...

Kay Havenor

P-4 Thu 8/3
 I received it Mike From: Kay Havenor [mailto:kay.hav...]

Kautz, Paul, EMNRD

OXY USA WTP LIMITED PARTNERSHIP MJ Riley Thu 8/3
 Paul: can you check on the MJ Riley well No. 3 produ...

Sandra_Musallam@oxy.com

PLC-480 Oxy USA WTP Limited Partnership Frex Thu 8/3
 The following permit has been issued and will soon ...

Stan Wagner (Stan_Wagner@eog

PC-1309 EOG Resources, Inc. Streetcar 15 Well Thu 8/3
 The following permit has been issued and will soon ...

Kay Havenor

▶ Red Hills & Deep Purple Thu 8/3
 Kay: Look at wellbore diagram for the Deep Purple S...

Gary Bond; Kautz, Paul, EMNRD

▶ Wildcat pool code (Jenna #1-H) Thu 8/3
 It is not crucial to get a pool designation. It is Hobbs...

Loren Diede

▶ Santo SWD Thu 8/3
 Once the OCD received the EOG letter that states it ...

Jones, William V, EMNRD

▶ Water Disposal Workgroup Technical Meeting Thu 8/3
 No preview is available.

EMNRD ITO Help Desk, EMNRD; \

EMNRD ITO-New Service Request #18495 Tue 8/1
 I got back on Thanks for the help Mike From: EMNR...

Delaware Energy Pardue 21 Farms SWD Well No. 1 ^



Mike McCurdy <mmccurdy@delawa

Mon 8/7/2017 8:15 AM

Thank you, sir! From: "McMillan, Michael, EMNRD"...

← REPLY ← REPLY ALL → FORWARD ...



McMillan, Michael, EMNRD Mark as unread

Mon 8/7/2017 8:13 AM

To: Mike McCurdy <mmccurdy@delawareenergyllc.com>;

Mike:

The 15-day clock will start 08-07-2017

Mike

From: Mike McCurdy

<mmccurdy@delawareenergyllc.com>

Sent: Monday, August 7, 2017 8:07 AM

To: McMillan, Michael, EMNRD

Subject: Re: Delaware Energy Pardue 21 Farms SWD Well No. 1

Michael,

Please see the attached proof of notice for the Pardue 21 Farms SWD to Marathon.

Best Regards,

Mike McCurdy
 Delaware Energy, LLC
 405 N. Marienfeld, Suite 250
 Midland, TX 79701
 432-312-5251



Mike McCurdy <mmccurdy@delawa

Mon 8/7/2017 8:07 AM

Michael, Please see the attached proof of notice f...



Goetze, Phillip, EMNRD

Mon 8/7/2017 8:03 AM

Your message To: Goetze, Phillip, EMNRD Subject: ...



McMillan, Michael, EMNRD

Fri 8/4/2017 3:36 PM

FYI Mike From: Mike McCurdy [mailto:mmccurdy...]



Mike McCurdy <mmccurdy@delawa

Fri 8/4/2017 3:34 PM

Thank you Mike. I'll look into it. Thanks, MM From:...



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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
<u>C 00346</u>		C	ED	2	2	15	24S	28E		587715	3565591*	90	32	58
<u>C 00365</u>			ED	2	4	1	17	24S	28E	583791	3565226*	238	26	212
<u>C 00488</u>		C	ED	2	1	2	15	24S	28E	587412	3565688*	64	8	56
<u>C 00513 S</u>		C	ED	1	3	3	16	24S	28E	584802	3564432	161	42	119
<u>C 00648</u>		C	ED	2	2	2	17	24S	28E	584593	3565644*	96	58	38
<u>C 00709</u>		C	ED	3	3	3	16	24S	28E	584802	3564232*			
<u>C 02244</u>		C	LE	3	1	2	22	24S	28E	587224	3563865*	260		
<u>C 02524 POD2</u>		C	ED	2	2	2	15	24S	28E	587814	3565690*	90	11	79
<u>C 02836</u>		C	ED	2	2	2	16	24S	28E	586203	3565676*		15	
<u>C 03132</u>		C	ED	1	2	4	15	24S	28E	587616	3564877*	90	19	71
<u>C 03824 POD1</u>		CUB	ED	4	1	2	16	24S	28E	585770	3565578	290	60	230

Average Depth to Water: **30 feet**

Minimum Depth: **8 feet**

Maximum Depth: **60 feet**

Record Count: 11

PLSS Search:

Section(s): 15-17, 21-23 Township: 24S Range: 28E

*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.

8/22/17 4:39 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



C-108 Review Checklist: Received 7/28/2017 Add Request: 8/04/2017 Reply Date: _____ Suspended: _____ [Ver 15]

ORDER TYPE: WFX / PMX (SWD) Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No. 1 Well Name(s): Pondue Farms 2

API: 30-0 15-23809 Spud Date: 0-6-4/1981 New or Old: 0 (SURFACE FROM) NALINER (UIC Class II Primacy 03/07/1982)

Footages 1980 FEL Lot _____ or Unit 13 Sec 21 Tsp 24S Rge 28E County Ed

General Location: 2 miles SW MALAGA Pool: _____ Pool No.: _____

BLM 100K Map: CARLSBAD Operator: DELWANCE ENERGY LLC OGRID: 371195 Contact: MIKE M. CHADY

COMPLIANCE RULE 5.9: Total Wells: 2 Inactive: 0 Fincl Assur: OK Compl. Order? NA IS 5.9 OK? Y Date: 8-29-2017

WELL FILE REVIEWED ☐ Current Status: PFA

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☐ After Conv. ☒ Logs in Imaging: _____

Planned Rehab Work to Well: _____

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>26"/20"</u>	<u>506'</u>	<u>1100</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod	<u>17 1/2"/13 3/4"</u>	<u>2600</u>	<u>3550</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod	<u>12 1/4"/9 5/8"</u>	<u>9450</u>	<u>5498</u>	<u>1210 / CALC (P) (E)</u>
Planned ___ or Existing ___ Prod/Liner	<u>8.5"/7"</u>		<u>600</u>	<u>9200 / C-B-L* (B)</u>
Planned ___ or Existing ___ Liner				
Planned ___ or Existing ___ OH / PER	<u>14000/1500</u>		<u>1000</u>	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.				Drilled TD <u>11450</u> PBTD <u>9341</u>
Confining Unit: Litho. Struc. Por.				NEW TD <u>15000</u> NEW PBTD _____
Proposed Inj Interval TOP:				NEW Open Hole <input type="radio"/> or NEW Perfs <input type="radio"/>
Proposed Inj Interval BOTTOM:				Tubing Size _____ in. Inter Coated? _____
Confining Unit: Litho. Struc. Por.				Proposed Packer Depth _____ ft
Adjacent Unit: Litho. Struc. Por.				Min. Packer Depth _____ (100-ft limit)
				Proposed Max. Surface Press. _____ psi
				Admin. Inj. Press. _____ (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P _____ Noticed? _____ BLM Sec Ord ☐ WIPP ☐ Noticed? _____ Salt/Salado T: 1000 B: 2605 NW: Cliff House fm _____

FRESH WATER: Aquifer Quaternary Max Depth 60 HYDRO AFFIRM STATEMENT By Qualified Person ☐

NMOSE Basin: CARLSBAD CAPITAN REEF: thru adj NA No. Wells within 1-Mile Radius? _____ FW Analysis _____

Disposal Fluid: Formation Source(s) Bone Springs Analysis? Y On Lease ☐ Operator Only ☐ or Commercial ☒

Disposal Int: Inject Rate (Avg/Max BWPD): 200/250 Protectable Waters? _____ Source: _____ System: Closed or Open

HC Potential: Producing Interval? NA Formerly Producing? _____ Method: Logs/DST/P&A/Other ACSI 2-Mile Radius Pool Map ☐

AOR Wells: 1/2-M Radius Map? Y Well List? _____ Total No. Wells Penetrating Interval: _____ Horizontals? _____

Penetrating Wells: No. Active Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

NOTICE: Newspaper Date 7-26-2017 Mineral Owner _____ Surface Owner Delwance Energy LLC N. Date July 25, 2017

RULE 26.7(A): Identified Tracts? _____ Affected Persons: MAATHON, CONCHU, KRISER-FRANCIS N. Date July 25, 2017

Order Conditions: Issues: Run C-13-L from 500' - top liner to bottom liner
dd Order Cond: Run 9-9" Patch & Circulate Cement behind casing & surface