

DATE IN 9/13/2016	SUSPENSE	ENGINEER	LOGGED IN 9/14/2016	TYPE SAD	APP NO. DyAm 162595024
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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



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.

Preston Stein

Print or Type Name

Preston Stein

Signature

Vice President

Title

8/30/2016

Date

Preston@delawareenergyllc.com
 e-mail Address

Delaware Energy, LLC
3001 W. Loop 250 North, Suite C-105-318
Midland, TX 79705
(214) 558-1371
preston@delawareenergyllc.com
August 30, 2016

Mr. Phillip Goetze
Engineering & Geological Services Bureau
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Phillip Goetze:

Enclosed please find Delaware Energy's Application for Injection/SWD for the Paloma Fed Com #1 wellbore, API # 30-015-32090. Please feel free to contact me should you have any questions, etc. Please note the amended changes to reflect adequate protection of the entire Capitan Reef in the well as indicated an issue by Mr. Michael McMillan as reason for original denial of the Paloma Fed Com #1 in an e-mail dated July 14, 2016. Thank you in advance for your consideration.

Sincerely,



Preston M. Stein
Delaware Energy, LLC

cc: New Mexico Oil Conservation Division
811 S. First Street
Artesia, NM 88210

Delaware Energy, LLC
Application for Injection/SWD

Paloma Fed Com #1, API # 30-015-32090

UL L, Sec. 10, T-22-S, R-26-E, 1980' FSL & 660' FWL, Eddy Co., NM

August 29, 2016

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 Taken on 4/10/2015 from T24S, R28E, Eddy Co., NM
6. Chemical Analysis of Wolfcamp Formation Water Sample Taken on 7/15/2015 from Section 2, T24S, R27E, Eddy Co., NM
7. Chemical Analysis of Delaware Formation Water Sample Taken on 5/7/2015 from T24S, R28E, Eddy Co., NM
8. Wellbore Diagram of Paloma Fed Com #1 as Plugged
9. Wellbore Diagram of Paloma Fed Com #1 as Proposed
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. Legal Notice that will be run as required in the Carlsbad Current-Argus
14. Formation Tops
15. Old Regulatory Documents for Paloma Fed Com #1

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: Preston Stein PHONE: 214-558-1371
- 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: Preston Stein TITLE: Vice President
SIGNATURE: _____ DATE: 8/30/2016
E-MAIL ADDRESS: preston@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.

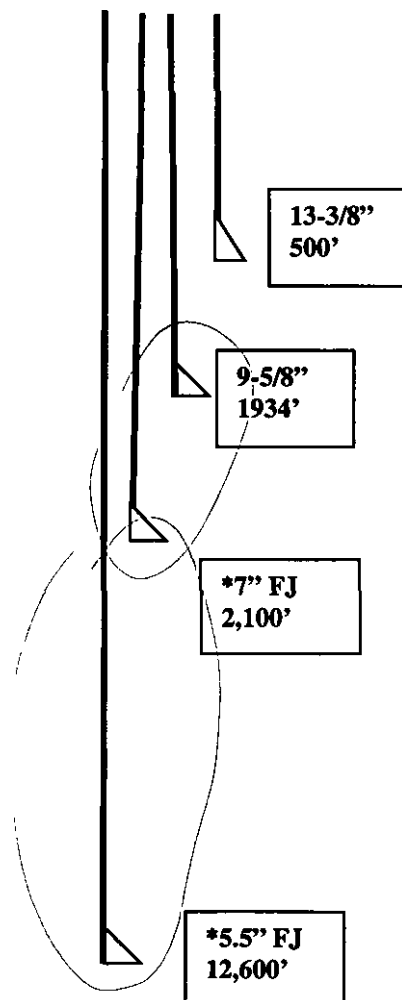
Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (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: Paloma Fed Com #1WELL LOCATION: 1980' FSL, 660' FWL L 10 22S 26E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17-1/2" Casing Size: 13-3/8"Cemented with: 550 sx. or ft³Top of Cement: SURFACE Method Determined: Circulated 200sxTotal Depth: 500'Intermediate Casing ()Hole Size: 12-1/4" Casing Size: 9-5/8"Cemented with: 900 sx. or ft³Top of Cement: Surface Method Determined: Circulated 212sxTotal Depth: 2700' 1934' E well file2nd Intermediate Casing*Hole Size: 7-7/8" Casing Size: 7"Cemented with: 1100 sx. or ft³Top of Cement: Surface Method Determined: CalculatedTotal Depth: 2,100'*

Production Casing*

Hole size: 7.875"

Top of cement: surface

Total Depth: 12,600'

Casing Size: 5.5"

method determined: Calculated**Injection Interval**12,600' to 13,600'**Open Hole****INJECTION WELL DATA SHEET**Tubing Size: 3.5" Lining Material: Internally plastic coatedType of Packer: Weatherford Arrow Set 1X Injection PackerPacker Setting Depth: 50-100ft above perforationsOther Type of Tubing/Casing Seal (if applicable): NONE**Additional Data**

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

If no, for what purpose was the well originally drilled? The well was originally drilled as a vertical Morrow test. The well was found to be unproductive of commercial hydrocarbons.

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.

No, production pipe was not run

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: Morrow 10,970'-11,495', Atoka 10,316'-10,970', Strawn 9,910'-10,316', Wolfcamp 8,620'-9,910', Bone Springs 4,814'-8,620'.

Additional Questions on C-108

VII.

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

Average 3,000-10,000 BWPD, Max 15,000 BWPD

2. Whether the system is open or closed;

Open System, Commercial SWD

3. Proposed average and maximum injection pressure;

Average 600-1,200 PSI, Max 2,520 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. Water is compatible with Devonian formation and is used as a disposal interval throughout the Delaware Basin for Wolfcamp, Bone Springs, and Delaware produced water. No incompatibility exists. 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 is barren and does not produce.

***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 12,600'-13,600' (estimated top and base of disposal interval) There are no fresh water zones underlying the proposed injection zone. Devonian is an impermeable Shale at the very top (Woodford Shale, est. top 12,500') 100' thick followed by permeable dolomite. Usable water depth is from surface to +/-300', the water source is Capitan Reef. Surface rock is eroded quaternary alluvium transitioning to Artesia Group. Average depth of fresh water is 90ft in section 10. All offset sections have Capitan water wells with usable water depths from 100-300. Following drilling operations Delaware Energy LLC will report the actual top of the Woodford Shale and the Devonian Dolomite with electric logs and mud logs along with all other important geologic markers below the intermediate 9-5/8" casing.

IX. Describe the proposed stimulation program, if any.

20,000 gallons 15% HCL acid job with packer

X. All previous logs were submitted to the OCD by the previous operator. Delaware Energy will submit logs following drilling operations.

XI. Water samples for two wells are included, a sample from section 10 & 14 of T22S, R26E

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 Paloma Fed Com #1 SWD and have found no evidence of faults or other hydrologic connections between the Devonian disposal zones and the underground sources of drinking water, there are many impervious intervals between the disposal interval and the ground water.

Preston Stein Vice-President 5/12/2016
Title _____ Date _____

III. WELL DATA

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

Paloma Fed Com #1, Sec. 10-T22S-R26E, 1980' FSL & 660' FWL, UL L, 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
13-3/8"	500'	550	17-1/2"	Surface	CIRC 200 sx
9-5/8"	1934'	900	12-1/4"	Surface	CIRC 212 sx
*7" flush joint	2,100'	1100	7.875"	Surface	Plan to circulate
*5-1/2" flush joint	12,600'	1600	7.875"	Surface	Plan to circulate

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

3-1/2" 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 Formation

Pool Name: SWD (Devonian)

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

12,600' to 13,600' (OH)

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

The well was originally drilled as a vertical Morrow test. The well was found to be unproductive of hydrocarbons.

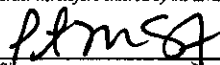
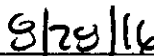
(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

None

(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: Morrow 10,550'-11,900', Atoka 10,316'-10,550', Strawn 9,910'-10,316', Wolfcamp 8,620'-9,910', Bone Springs 4,814'-8,620'.

Next Lower: None

16					17 OPERATOR CERTIFICATION <i>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.</i>  Signature  Date
					Preston Stein Printed Name Prestonms@gmail.com E-mail Address
660'					18 SURVEYOR CERTIFICATION <i>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.</i> SEE ORIGINAL C-102
1979'					Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Lab Ref #: 15-apr-w68267
Formation: Bone Springs
Location:
Date Run: 4/21/2015

Sample Temp: 70
Date Sampled: 4/10/2015
Sampled by: Sherry Hogue
Analyzed by: GR

		Mg/L	Eq. Wt.	MEq/L
Hydrogen Sulfide	(H ₂ S)	3.40	16.00	.21
Carbon Dioxide	(CO ₂)	230.00	22.00	10.45
Dissolved Oxygen	(O ₂)	NOT ANALYZED		

Calcium	(Ca++)	10,886.16	20.10	541.60
Magnesium	(Mg++)	1,742.16	12.20	142.80
Sodium	(Na+)	56,575.73	23.00	2,459.81
Barium	(Ba++)	NOT ANALYZED		
Manganese	(Mn+)	1.53	27.50	.06
Strontium	(Sr++)	NOT ANALYZED		

Hydroxyl	(OH-)	.00	17.00	.00
Carbonate	(CO3=)	.00	30.00	.00
BiCarbonate	(HCO3-)	146.64	61.10	2.40
Sulfate	(SO4=)	320.00	48.80	6.56
Chloride	(Cl-)	111,021.99	35.50	3,127.38

Total Iron (Fe)	46.91	18.60	2.52
Total Dissolved Solids	180,974.52		
Total Hardness as CaCO3	34,358.26		
Conductivity MICROMHOS/CM	209.000		

pH	5.200	Specific Gravity 60/60 F.	1.126
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CaSO₄ Solubility @ 80 F. **21.88MEq/L,** **CaSO₄ scale is unlikely**

70.0	-.704	100.0	-.304	130.0	.446
80.0	-.604	110.0	.016	140.0	.446
90.0	-.304	120.0	.016	150.0	.876

Impact Chemical

Formation: Wolfcamp

Impact Water Analysis Analytical Report



Company:
Source : Wellhead
Number : 45813
County:

Location:
Date Sampled: July 15, 2015
Account Manager: David Garcia
Foreman:

ANALYSIS	mg/L	EQ. WT.	MEQ/L
1. pH	8.70		
2. Specific Gravity 60/60 F	1.087		
3. Hydrogen Sulfide	10.2 PPM		
4. Carbon Dioxide	120.0 PPM		
5. Dissolved Oxygen	ND		
6. Hydroxyl (OH ⁻)	0	/ 17.0 =	0.00
7. Carbonate (CO ₃ ⁻²)	0	/ 30.0 =	0.00
8. Bicarbonate (HCO ₃ ⁻)	244	/ 61.1 =	3.99
9. Chloride (Cl ⁻)	57,987	/ 35.5 =	1,633.44
10. Sulfate (SO ₄ ⁻²)	604	/ 48.8 =	13.61
11. Calcium (Ca ⁺²)	2,792	/ 20.1 =	138.91
12. Magnesium (Mg ⁺²)	389	/ 12.2 =	31.92
13. Sodium (Na ⁺)	34,045	/ 23.0 =	1,480.21
14. Barium (Ba ⁺²)	2.71		
15. Total Iron (Fe)	7.92		
16. Manganese	0.51		
17. Strontium	594.40		

18. Total Dissolved Solids

98,727

19. Resistivity @ 75 °F (calculated)

0.082 Ω-m

20. CaCO₃ Saturation Index

@ 80 °F	-0.3041
@ 100 °F	0.0059
@ 120 °F	0.2659
@ 140 °F	0.6259
@ 160 °F	0.9759

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO ₃) ₂	81.04		3.99	323
CaSO ₄	68.07		13.61	926
CaCl ₂	55.50		121.31	6,733
Mg(HCO ₃) ₂	73.17		0.00	0
MgSO ₄	60.19		0.00	0
MgCl ₂	47.62		31.92	1,520
NaHCO ₃	84.00		0.00	0
NaSO ₄	71.03		0.00	0
NaCl	58.46		1,480.21	86,533

21. CaSO₄ Supersaturation Ratio

@ 70 °F	0.2391
@ 80 °F	0.2384
@ 110 °F	0.2406
@ 130 °F	0.2438
@ 150 °F	0.2469

Analyst: Sylvia Garcia

Date: July 17, 2015

Formation: Delaware

Impact Water Analysis Analytical Report



Company:
Source : WH
Number : 43546
County:

Location: Mosaic 34 Federal 1
Date Sampled: May 7, 2015
Account Manager: David Garcia
Foreman:

ANALYSIS	mg/L	EQ. WT.	MEQ/L
1. pH	5.74		
2. Specific Gravity 60/60 F	1.212		
3. Hydrogen Sulfide	3.4 PPM		
4. Carbon Dioxide	720.0 PPM		
5. Dissolved Oxygen	ND		
6. Hydroxyl (OH ⁻)	0 /	17.0 =	0.00
7. Carbonate (CO ₃ ²⁻)	0 /	30.0 =	0.00
8. Bicarbonate (HCO ₃ ⁻)	49 /	61.1 =	0.80
9. Chloride (Cl ⁻)	179,959 /	35.5 =	5,069.27
10. Sulfate (SO ₄ ²⁻)	140 /	48.8 =	2.87
11. Calcium (Ca ²⁺)	28,720 /	20.1 =	1,428.86
12. Magnesium (Mg ²⁺)	4,529 /	12.2 =	371.23
13. Sodium (Na ⁺)	75,276 /	23.0 =	3,272.85
14. Barium (Ba ²⁺)	1.75		
15. Total Iron (Fe)	18.61		
16. Manganese	9.55		
17. Strontium	1,105.00		
18. Total Dissolved Solids	289,808		
19. Resistivity @ 75 °F (calculated)	0.027 Ω-m		

20. CaCO₃ Saturation Index

@ 80 °F	-0.9490
@ 100 °F	-0.6390
@ 120 °F	-0.3790
@ 140 °F	-0.0190
@ 160 °F	0.3310

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO ₃) ₂	81.04		0.80	65
CaSO ₄	68.07		2.87	195
CaCl ₂	55.50		1,425.19	79,098
Mg(HCO ₃) ₂	73.17		0.00	0
MgSO ₄	60.19		0.00	0
MgCl ₂	47.62		371.23	17,678
NaHCO ₃	84.00		0.00	0
NaSO ₄	71.03		0.00	0
NaCl	58.46		3,272.85	191,331

21. CaSO₄ Supersaturation Ratio

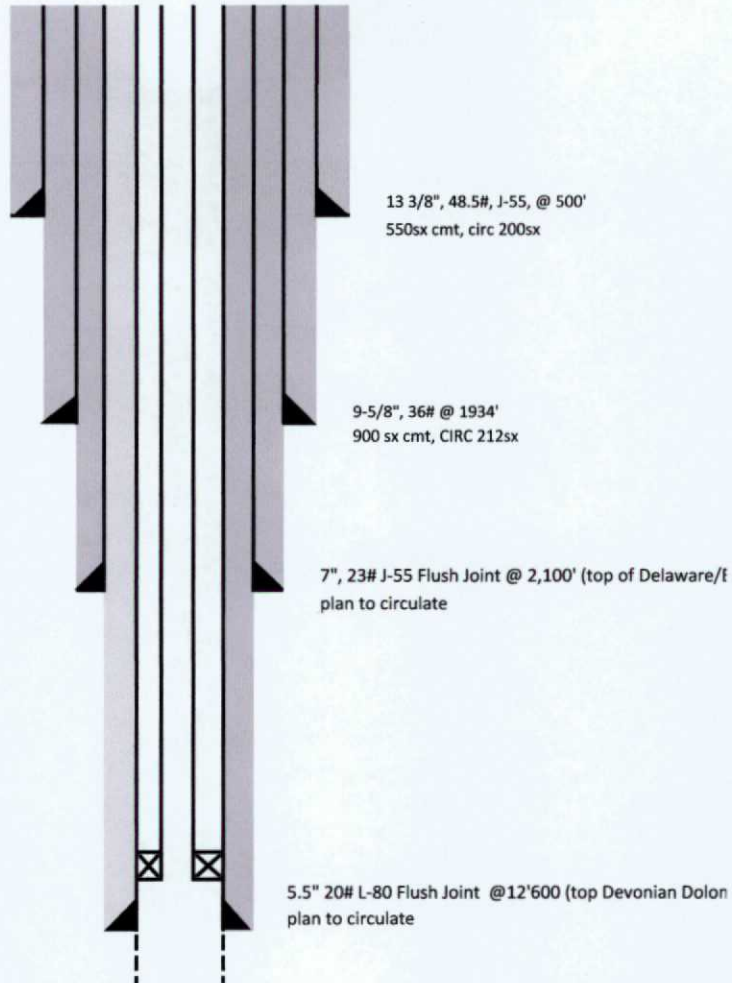
@ 70 °F	0.4092
@ 90 °F	0.5418
@ 110 °F	0.3990
@ 130 °F	0.3898
@ 150 °F	0.3893

Analyst: Tamara Davault

Date: May 8, 2015

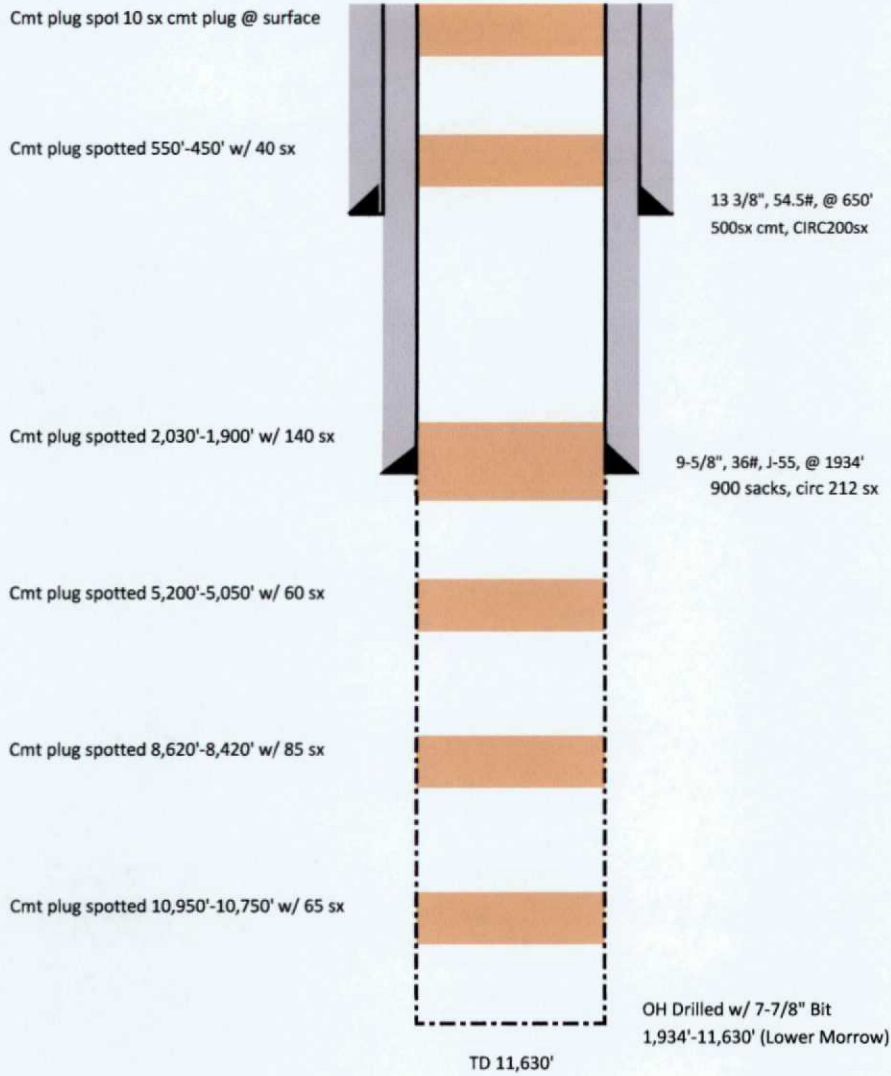
Paloma Fed Com #1
1980' FSL & 660' FWL, UL L, SEC. 10, T-22S R-26E, Eddy County, NM
API # 30-015-32090

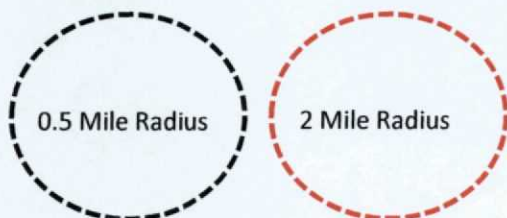
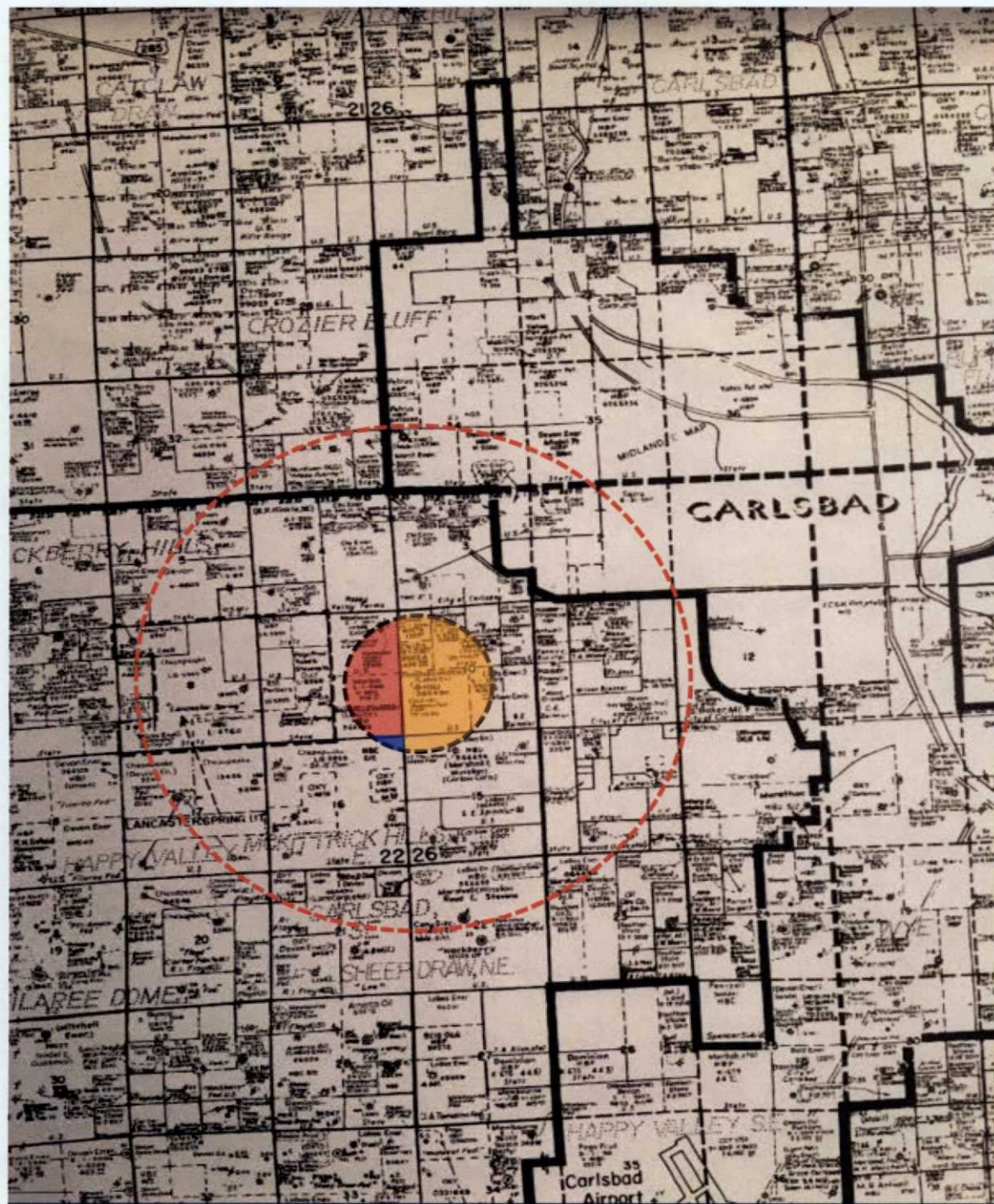
3.5" 9.3# L-80 IPC tubing flush joint
at 12,550'



Proposed Injection Packer @ 12,550'

Paloma Fed Com #1
1980' FSL & 660' FWL, UL L, SEC. 10, T-22S R-26E, Eddy County, NM
API # 30-015-32090





Mewbourne Oil Co.

Chevron USA, Inc.

J. Cleo Thompson

Delaware Energy, L.L.C.
3001 W. Loop 250 N., Suite C-105-318
Midland, TX 79705
Office: (214) 558-1371

August 29, 2016

Surface Owner / Offset Operators

Re: Notification of Application for Authorization to Inject into the
Paloma Fed Com #1 Well

Ladies and Gentlemen:

Delaware Energy, LLC is seeking administrative approval to utilize the Paloma Fed Com #1 (API – 30-015-32090) 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>	Paloma Fed Com #1 SWD
<u>Proposed Disposal Zone:</u>	Devonian Formation (from 12,600'-13,600')
<u>Location:</u>	1980' FSL & 660' FWL, Sec. 10, UL L, T22S, R26E, 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 Preston Stein with Delaware Energy, LLC if you have any questions at 214-558-1371.

Sincerely,

Preston Stein
Vice President
Delaware Energy, LLC
preston@delawareenergyllc.com

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 Paloma Fed Com #1 (API – 30-015-32090) as a Salt Water Disposal well.

The Paloma Fed Com #1 is located at 1980' FSL and 660' FWL, Unit Letter L, Section 10, Township 22 South, Range 26 East, Eddy County, New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian Formations from 12,600' to 13,600' at a maximum rate of 15,000 barrels of water per day at a maximum pressure of 2,520 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 (214) 558-1371.

Paloma Fed Com #1
API#: 30-015-32090
Location: Sec. 10, T-22S, R-26E, UL L

Formation Tops

Eroded Quaternary Alluvium and Artesia Group (Capitan Reef) at surface

Cherry Canyon	2,240'
Bone Springs	4,814'
Wolfcamp	8,620'
Strawn	9,910'
Atoka	10,316'
Morrow	10,970'
Barnett	11,495'
Mississippian	12,300'
Woodford Shale	12,500'
Devonian	12,600'

Sheet 1
 5025 N. French Dr., Hobbs, NM 88240
 Sheet 2
 514 South First, Aramark, NM 88210
 Sheet 3
 1600 E. 1st Street NE, Alamogordo, NM 88310
 Sheet 4
 2040 South Pecos, Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals & Natural Resources
OIL CONSERVATION DIVISION
 2040 South Pecos
 Santa Fe, NM 87505

Form C-102
 Revised March 17, 1999

Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APN Number		Pool Code		Well Name	
				Undesignated Carlsbad Morrow So.	
Property Code		Property Name		Well Number	
PALOMA FEDERAL COM				1	
OCRID No.		Operator Name		Elevation	
CHI OPERATING INC.				3261.	

10 Surface Location									
UL or lot no.	Section	Township	Range	Lot No.	Foot from the	North/South line	Foot from the	East/West line	County
L	10	22-S	26-E		1980	SOUTH	660	WEST	SODI

11 Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot No.	Foot from the	North/South line	Foot from the	East/West line	County
Dedicated Acres		Subst or Well		Consolidation Code		Order No.			
320				Com.					

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

16 NMLC-064490 660' 1980'				17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>George R. Smith</i> Signature George R. Smith, agent for: Printed Name Chi Operating, Inc. Date July 9, 2001	
				18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was selected 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. FEBRUARY 5, 2001 Date of Survey Signature N. K. REDDY Registered Professional Engineer NEW MEXICO 5412 REGISTERED PROFESSIONAL ENGINEER	

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Oil Ins.
N.M. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

FORM APPROVED

Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	7. If Unit or GA, Agreement Designation
2. Name of Operator CHI OPERATING, INC.	8. Well Name and No. Paloma Federal Com. #1
3. Address and Telephone No. P.O. BOX 1799 MIDLAND, TEXAS 79702	9. API Well No. 30-015-32090
4. Location of Well (Footage, T., R., M., or Survey Description) 1980' FSL & 660' FWL Sec. 10 T22S-R26E	10. Field and Pool, or Exploratory Area Undes Carlsbad Morrow S
	11. County or Parish, State EDDY

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other	<input type="checkbox"/> Dispose Water/ <small>(Note: Report results of multiple completion on well Completion or Abandonment Report and Log form.)</small>

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give substantial locations and measured and true vertical depths for all mandrels and zones pertinent to this work.)

Spud well on 12/15/01. Drilled 17 1/2" hole to 500'. Ran 13 3/8" 48.5# J-55 & set @ 500'. Cemented with 350 sks "C"+4% gel+2% CaCl2+2 pps Gils & 200 ske "C"+2% CaCl2+.25 pps CF. Circ. 200 sks. WOC. NU & tested annular to 1000#. Drilled 12 1/4" to 1934'. Ran 9 5/8" 36 J-55 csg. Set @ 1934'. Cemented w/200 sks "H"+10% gyp+1% CaCl2, 500 sks "C" lite+2 PPS Gils+5% salt & 200 sks "C" +2% CaCl2+.25 pps CF. Circ 212 sks. WOC, NUBOP, choke manifold kill lines etc etc to 5000#. Drilled 7 7/8" hole to 11630'. Logged, evaluated and decided to P&A. Contacted BLM & got plugging procedure. P&A'd as follows: 1st plug @ 10950'-10750'-65 sks "H", 2nd plug @ 8620-420-85 sks "H". 3rd plug @ 5200-5050'-60 sks "H". 4th plug @ 2030-1880'-70 sks "H"+21% CaCl2, tagged. Respot 4th plug w/70 sks "H"+4% CaCl2. Tagged @ 1900'-ok by BLM. 5th plug @ 550-450'-40 sks "C". 6th plug @ 60'-20 sks "C". RD & released rig 12:00 hrs on 1/30/02. Set Dry hole marker 2/7/02. Will reclaim pits & location as soon as possible

14. I hereby certify that the foregoing is true and correct

Signed [Signature] Title [Signature] Date 2/20/2002

(This space for Federal or State office use)

Approved by

Conditions of approval

Accepted for record

only MAR 5 2002

Title 18 U.S.C. §
statements or reports

Penalty to make to any department or agency of the United States any false, fictitious or fraudulent

*See Instructions on Reverse Side

This well is to be plugged if the well owner
considers it unsafe. It is retained until
surface restoration is completed.

Paloma I/III

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com

CAUTION: FOR OFFICIAL USE

7016 1370 0000 6293 9044

Postage and Fees: \$3.30

0708 06

09/06/2016

Postage: \$1.78

Total Postage and Fees: \$7.78

Send to:

BLM
620 E. Greene St.
Chesapeake, NM 88220 - Arizona

PS Form 3811, July 2015 PSN 7530-02-000-9044

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Bureau of Land Management
620 E. Greene St.
Chesapeake, NM 88220

9590 9402 2082 6132 2485 76

2. Article Number (Transfer from service label)

7016 1370 0000 6293 9044

PS Form 3811, July 2015 PSN 7530-02-000-9044

COMPLETE THIS SECTION ON DELIVERY

A. Signature: *[Signature]*

B. Recipient's Printed Name: *[Name]*

C. Date of Delivery: *[Date]*

D. Is delivery address different from item 1? ☐ Yes ☐ No

E. Signature: *[Signature]*

F. Date of Delivery: *[Date]*

G. Recipient's Printed Name: *[Name]*

H. Date of Delivery: *[Date]*

I. Signature: *[Signature]*

J. Date of Delivery: *[Date]*

K. Recipient's Printed Name: *[Name]*

L. Date of Delivery: *[Date]*

M. Signature: *[Signature]*

N. Date of Delivery: *[Date]*

O. Recipient's Printed Name: *[Name]*

P. Date of Delivery: *[Date]*

Domestic Return Receipt

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com

CAUTION: FOR OFFICIAL USE

7016 1370 0000 6293 9044

Postage and Fees: \$3.30

0708 06

09/06/2016

Postage: \$1.78

Total Postage and Fees: \$7.78

Send to:

BLM
620 E. Greene St.
Chesapeake, NM 88220 - Arizona

PS Form 3811, July 2015 PSN 7530-02-000-9044

SENDER: COMPLETE THIS SECTION

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A. Signature: *[Signature]*

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C. Date of Delivery: *[Date]*

D. Is delivery address different from item 1? ☐ Yes ☐ No

E. Signature: *[Signature]*

F. Date of Delivery: *[Date]*

G. Recipient's Printed Name: *[Name]*

H. Date of Delivery: *[Date]*

I. Signature: *[Signature]*

J. Date of Delivery: *[Date]*

K. Recipient's Printed Name: *[Name]*

L. Date of Delivery: *[Date]*

M. Signature: *[Signature]*

N. Date of Delivery: *[Date]*

O. Recipient's Printed Name: *[Name]*

P. Date of Delivery: *[Date]*

Domestic Return Receipt

U.S. Postal Service
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Domestic Mail Only

For delivery information, visit our website at www.usps.com

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0708 06

09/06/2016

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Total Postage and Fees: \$7.78

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PS Form 3811, July 2015 PSN 7530-02-000-9044

COMPLETE THIS SECTION ON DELIVERY

A. Signature: *[Signature]*

B. Recipient's Printed Name: *[Name]*

C. Date of Delivery: *[Date]*

D. Is delivery address different from item 1? ☐ Yes ☐ No

E. Signature: *[Signature]*

F. Date of Delivery: *[Date]*

G. Recipient's Printed Name: *[Name]*

H. Date of Delivery: *[Date]*

I. Signature: *[Signature]*

J. Date of Delivery: *[Date]*

K. Recipient's Printed Name: *[Name]*

L. Date of Delivery: *[Date]*

M. Signature: *[Signature]*

N. Date of Delivery: *[Date]*

O. Recipient's Printed Name: *[Name]*

P. Date of Delivery: *[Date]*

Domestic Return Receipt

Paloma II/III

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com

HOUSTON, TX 77002

Certified Mail Fee: 03.30
 Return Receipt (hardcopy): 02.70
 Return Receipt (electronic): 00.00
 Certified Mail Restricted Delivery: 00.00
 Restricted Delivery: 00.00
 Signature Required: 00.00

Postmark: SEP 6 2016
 09/06/2016

Signature: [Signature]
 Signature of Addressee: [Signature]
 Signature of Sender: [Signature]

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

9/30/2016

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Tracking Number: 7016137000062939020

Product & Tracking Information

Postal Product:
 First-Class Mail®

Features:

Certified Mail™

Return Receipt

See tracking for related item: 9590940220826132248477

DATE & TIME

September 26, 2016, 1:27
 pm

STATUS OF ITEM

Delivered

LOCATION

HOUSTON, TX 77002

Your item was delivered at 1:27 pm on September 26, 2016 in HOUSTON, TX 77002.

September 16, 2016, 8:41
 am

Out for Delivery

HOUSTON, TX 77002

Available Actions

Text Updates

Email Updates



October 20, 2016

Dear Customer:

The following is the proof-of-delivery for tracking number **784403088868**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	S.JUAREZ	Delivery location:	CARLSBAD, NM
Service type:	FedEx Priority Overnight	Delivery date:	Oct 20, 2016 11:25
Special Handling:	Deliver Weekday		
	No Signature Required		

NO SIGNATURE REQUIRED

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment because a signature was not required.

Shipping Information:

Tracking number:	784403088868	Ship date:	Oct 19, 2016
		Weight:	0.5 lbs/0.2 kg

Recipient:
CARLSBAD, NM US

Shipper:
MIDLAND, TX US

Thank you for choosing FedEx.

9/30/2016

USPS.com® - USPS Tracking®

DATE & TIME	STATUS OF ITEM	LOCATION
September 16, 2016, 8:31 am	Sorting Complete	HOUSTON, TX 77002
September 15, 2016, 1:17 pm	Arrived at Unit	HOUSTON, TX 77002
September 15, 2016, 12:00 am	Departed USPS Destination Facility	NORTH HOUSTON, TX 77315
September 14, 2016, 10:51 am	Arrived at USPS Destination Facility	NORTH HOUSTON, TX 77315
September 14, 2016, 8:08 am	Departed USPS Facility	NORTH TEXAS PROCESSING AND DISTRIBUTION CENTER
September 13, 2016, 3:44 pm	Arrived at USPS Facility	NORTH TEXAS PROCESSING AND DISTRIBUTION CENTER
September 13, 2016, 4:38 am	Departed USPS Facility	DALLAS, TX 75260
September 12, 2016, 2:24 pm	Arrived at USPS Facility	DALLAS, TX 75260
September 6, 2016, 1:14 pm	Acceptance	MIDLAND, TX 79707

Palom
III/III

Track Another Package

Tracking (or receipt) number

Track It

Manage Incoming Packages

Track all your packages from a dashboard.
No tracking numbers necessary.

Sign up for My USPS >


https://tools.usps.com/go/TrackConfirmAction?qt_c_tlLabels1=70161370000062939020

2/3

9/30/2016

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https://tools.usps.com/go/TrackConfirmAction?qt_c_tlLabels1=70161370000062939020

3/3

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Erin CoatsSmith, being first duly
sworn, on oath says:

That she 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:

May 15 2016

That the cost of publication is \$68.15
and that payment thereof has been
made and will be assessed as court
costs.

Erin CoatsSmith

Subscribed and sworn to before me
this 20 day of May

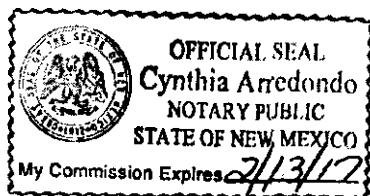
2016

Cynthia Arredondo

My commission Expires

2/13/17

Notary Public



May 15, 2016

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 Paloma Fed Com #1 (API - 30-015-32090) as a Salt Water Disposal well.

The Paloma Fed Com #1 is located at 1980' FSL and 660' FWL, Unit Letter L, Section 10, Township 22 South, Range 26 East, Eddy County, New Mexico. The well will dispose of water produced from oil and gas wells into the Mississippian-Devonian Formations from 11,545' to 13,000' at a maximum rate of 15,000 barrels of water per day at a maximum pressure of 2,299 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 (214) 558-1371.

**DELAWARE ENERGY, LLC
3001 W. LOOP 250 NORTH, SUITE C-105-318
MIDLAND, TX 79701
(214) 558-1371**

October 12, 2016

DELIVERY VIA E-MAIL: Michael.McMillan@state.nm.us

New Mexico Oil Conservation Division
ATTN: Michael McMillan

**RE: ACKNOWLEDGEMENT OF RECEIPT – DELAWARE ENERGY SWD
APPLICATION – PALOMA FED COM #1 – API # 30-015-32090**

To Whom It May Concern:

I, Kathy Brotherton, Land Manger of J. Cleo Thompson, Inc., hereby acknowledges receipt of Delaware Energy's Paloma Fed Com #1 Application both before and on October 3, 2016.

Respectfully,

A handwritten signature in cursive script that reads "Kathy Brotherton".

Kathy Brotherton

McMillan, Michael, EMNRD

From: Swartz, Paul <pswartz@blm.gov>
Sent: Wednesday, July 13, 2016 12:15 PM
To: Kautz, Paul, EMNRD
Cc: McMillan, Michael, EMNRD; Fernandez, Edward; Jones, William V, EMNRD; Goetze, Phillip, EMNRD; Lowe, Leonard, EMNRD; Bayliss, Randolph, EMNRD; Inge, Richard, EMNRD
Subject: Re: Delaware Energy LLC Paloma Federal SWD Well No. 1 API 30-015-32090

Michael,

Ed & I have looked at the location and it appears the well is has federal minerals and surface. That being the case a BLM APD should be filed to reenter the well and will need federal approval. BLM has concern for the Capitan Reef also, and is desirous of cooperation with NMOCD.

Generally BLM will require fresh water to be used when drilling through the Reef and that it be isolated with casing and cement.

pswartz
575-200-7902

On Wed, Jul 13, 2016 at 11:41 AM, Kautz, Paul, EMNRD <paul.kautz@state.nm.us> wrote:

The Capitan Reef is very complex and I have very little knowledge about the Reef in Eddy County. I do know that in Lea County that there are various water zones of different quality. There also are zones where the Capitan Reef is productive of oil.

I would suggest that the cement on the 7" casing be tied back into the 9 5/8 and a log run to determine the top of cement.

Paul Kautz

Hobbs District Geologist

NM Oil Conservation Div.

1625 N French Dr.

Hobbs, NM 88240

575-393-6161 Ext. 104



- ~ Home
- ~ Production Data ▶
- ~ Well Data ▶
- ~ NM Pricsheet
- ~ Water Data ▶
- ~ Projects ▶
- ~ Software ▶
- ~ Archive ▶
- ~ Other Links ▶
- ~ Help ▶

North
American Oil
and Gas
News

Dundee
Energy
announces
resignation
of Chief
Financial
Officer

Drill-Quip
agrees to
acquire
TIW
Corporation

Dakota
Access
protests
come to
Houston as
the light
crude
market
keeps
shifting

Cabot Oil
& Gas
provides
update on
Atlantic
Sunrise
Project

Source: Oil
Voice

NYMEX LS Crude 0

Navajo WTXI 0

Henry Hub 0

Updated : 10/14/2016

State Land Office Data Access

OCD well/log image files

PRRC NM-TECH NM-BGMR

NM WAIDS

Data

- Produced Water
- Ground Water
- Conversion Tools

Scale

- Scale details
- Stiff
- Oddo
- Probable Mineral Composition
- mix

Corrosion

Theory

- Uniform
- Galvanic
- Crevice

General Information About: Sample 27143

Section/ Township/Range	11 / 22S / 26E	Lat/Long	32.4064/-104.2633
Elevation	3155	Depth	200
Date Collected	5/7/1992 12:00:00 AM	Chlorides	173
Collector / Point of Collection	SEO/DP	Use	Irrigation Water
Formation	CAP	TDS	0



- ~ Home
- ~ Production Data ▶
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shifting

Cabot Oil
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Atlantic
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Source: Oil
Voice

NYMEX LS Crude 0

Navajo WTXI 0

Henry Hub 0

Updated: 10/14/2016

State Land Office Data Access

OCD well/log image files

PRRC NM-TECH NM-BGMR

[-] NM WAIDS

[-] Data

- Produced Water
- Ground Water
- Conversion Tools

[-] Scale

- Scale details
- Stiff
- Oddo
- Probable Mineral Composition mix

[-] Corrosion

[-] Theory

- Uniform
- Galvanic
- Crevice

General Information About: Sample 26963

Section/ Township/Range	15 / 22S / 26E	Lat/Long	32.3918/-104.2804
Elevation	3254	Depth	443
Date Collected	4/7/1955 12:00:00 AM	Chlorides	56
Collector / Point of Collection	USG/DP	Use	Exploratory
Formation	CAP	TDS	0



- ~ Home
- ~ Production Data ▶
- ~ Well Data ▶
- ~ NM Pricsheet
- ~ Water Data ▶
- ~ Projects ▶
- ~ Software ▶
- ~ Archive ▶
- ~ Other Links ▶
- ~ Help ▶

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Dril-Quip
agrees to
acquire
TIW
Corporation

Dakota
Access
protests
come to
Houston as
the light
crude
market
keeps
shifting

Cabot Oil
& Gas
provides
update on
Atlantic
Sunrise
Project

Source: Oil
Voice

NYMEX LS Crude 0

Navajo WTXI 0

Henry Hub 0

Updated: 10/14/2016

State Land Office Data Access

OCD well/log image files

PRRC NM-TECH NM-BGMR

☐-NM WAIDS

☐-Data

- Produced Water
- Ground Water
- Conversion Tools

☐-Scale

- Scale details
- Stiff
- Oddo
- Probable Mineral Composition
- mix

☐-Corrosion

☐-Theory

- Uniform
- Galvanic
- Crevice

General Information About: Sample 14158

Section/ Township/Range	09 / 22S / 26E	Lat/Long	32.4064/-104.2975
Elevation	3231.7	Depth	
Date Collected	9/12/1997 12:00:00 AM	Chlorides	82
Collector / Point of Collection	SEO/DP	Use	Stock
Formation	TNSL	TDS	



- ~ Home
- ~ Production Data ▶
- ~ Well Data ▶
- ~ NM Pricsheet
- ~ Water Data ▶
- ~ Projects ▶
- ~ Software ▶
- ~ Archive ▶
- ~ Other Links ▶
- ~ Help ▶

North
American Oil
and Gas
News

Dundee
Energy
announces
resignation
of Chief
Financial
Officer

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- mix

Corrosion

Theory

- Uniform
- Galvanic
- Crevice

General Information About: Sample 27147

Section/ Township/Range	03 / 22S / 26E	Lat/Long	32.4209/-104.2804
Elevation	3183	Depth	360
Date Collected	5/13/1992 12:00:00 AM	Chlorides	800
Collector / Point of Collection	SEO/YT	Use	Stock
Formation	CAP	TDS	0



October 20, 2016

Dear Customer:

The following is the proof-of-delivery for tracking number **784403088868**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	S.JUAREZ	Delivery location:	CARLSBAD, NM
Service type:	FedEx Priority Overnight	Delivery date:	Oct 20, 2016 11:25
Special Handling:	Deliver Weekday		
	No Signature Required		

NO SIGNATURE REQUIRED

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment because a signature was not required.

Shipping Information:

Tracking number:	784403088868	Ship date:	Oct 19, 2016
		Weight:	0.5 lbs/0.2 kg

Recipient:
CARLSBAD, NM US

Shipper:
MIDLAND, TX US

Thank you for choosing FedEx.



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the
POD suffix indicates the
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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 Q Q						X	Y	Depth Well	Depth Water	Water Column
				64	16	4	Sec	Tws	Rng					
C 00047		CUB	ED	4	2	3	11	22S	26E	569146	3585507*	140		
C 00047 C		CUB	ED	1	2	3	11	22S	26E	568946	3585707*	90	60	30
C 00047 CLW204264	O		ED	4	2	3	11	22S	26E	569146	3585507*	140		
C 00118		CUB	ED	2	4	4	11	22S	26E	569948	3585309*	70		
C 00119		C	ED	4	2	4	11	22S	26E	569947	3585515*	127		
C 00126 AD		CUB	ED	1	3	4	11	22S	26E	569348	3585304*	150	60	90
C 00131		CUB	ED	3	2	2	11	22S	26E	569746	3586328*	126		
C 00180		C	ED	3	4	1	11	22S	26E	568943	3585915*	200		
C 00220		C	ED	2	2	4	11	22S	26E	569751	3585747	125		
C 00238		C	ED	4	2	11	22S	26E	569847	3586023*	117			
C 00253		C	ED	4	2	11	22S	26E	569847	3586023*	90			
C 00290		C	ED	2	4	11	22S	26E	569848	3585616*	60			
C 00411		C	ED	1	2	1	11	22S	26E	568940	3586522*	134		
C 00495		C	ED	1	2	3	11	22S	26E	568946	3585707*	124	80	44
C 00525 A	O		ED	4	2	4	11	22S	26E	569947	3585515*	125	40	85
C 00525 S		C	ED	4	2	4	11	22S	26E	569947	3585515*	130	45	85
C 00530		C	ED	4	4	11	22S	26E	569849	3585210*	166	65	101	
C 00560		C	ED	4	2	4	11	22S	26E	569947	3585515*	86	49	37
C 00560 POD2		C	ED	4	2	4	11	22S	26E	569947	3585515*	135	55	80
C 00569		C	ED	2	1	4	11	22S	26E	569546	3585711*	105	60	45
C 00583		C	ED	1	1	4	11	22S	26E	569346	3585711*	122	50	72
C 00602		C	ED	2	1	4	11	22S	26E	569546	3585711*	115	55	60
C 00630			ED	1	4	4	11	22S	26E	569748	3585309*	85	11	74
C 00715		C	ED	4	3	11	22S	26E	569050	3585200*	152	108	44	
C 00728		C	ED	4	2	3	11	22S	26E	569146	3585507*	115	72	43
C 00729		C	ED	4	3	4	11	22S	26E	569548	3585104*	92		

*UTM location was derived from PLSS - see Help

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

(In feet)

POD														
Sub-														
Q Q Q														
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 00835	C	ED		4	3	4	11	22S	26E	569548	3585104*	153	55	98
C 00837	C	ED		1	4	4	11	22S	26E	569748	3585309*	169	46	123
C 00865	C	ED		2	4	4	11	22S	26E	569948	3585309*	133	40	93
C 00893	C	ED		2	4	4	11	22S	26E	569948	3585309*	141	46	95
C 01030	C	ED		4	3	4	11	22S	26E	569548	3585104*	110	54	56
C 01123	C	ED		4	4	2	11	22S	26E	569946	3585922*	185	60	125
C 01167	C	ED		3	4	2	11	22S	26E	569746	3585922*	167	60	107
C 01171	C	ED		2	4	4	11	22S	26E	569948	3585309*	129	46	83
C 01401	C	ED		2	3	11	22S	26E	569047	3585608*	89	66	23	
C 01412	C	ED		2	2	4	11	22S	26E	569947	3585715*	132	44	88
C 01419	C	ED		4	3	4	11	22S	26E	569548	3585104*	112	56	56
C 01444	CUB	ED		4	3	11	22S	26E	569050	3585200*	133	83	50	
C 01475 POD2	C	ED		4	2	4	11	22S	26E	569947	3585515*	142	50	92
C 01556	C	ED		4	4	4	11	22S	26E	569948	3585109*	150	61	89
C 01557	C	ED		3	2	4	11	22S	26E	569747	3585515*	130	60	70
C 01703	C	ED		4	4	4	11	22S	26E	569948	3585109*	79	51	28
C 01729	C	ED		2	3	11	22S	26E	569047	3585608*	125	69	56	
C 01740	C	ED		4	3	4	11	22S	26E	569548	3585104*	232	57	175
C 01751	C	ED		3	4	4	11	22S	26E	569748	3585109*	110	60	50
C 01782	C	ED		2	2	3	11	22S	26E	569146	3585707*	86	61	25
C 01785	C	ED		2	4	11	22S	26E	569848	3585616*	96	40	56	
C 01792	C	ED		4	3	4	11	22S	26E	569548	3585104*	80	23	57
C 01813	C	ED		2	3	11	22S	26E	569047	3585608*	100	70	30	
C 01850	C	ED		2	4	4	11	22S	26E	569948	3585309*	150	50	100
C 01899	C	ED		4	2	3	11	22S	26E	569146	3585507*	92	77	15
C 01902	C	ED		4	2	4	11	22S	26E	569947	3585515*	130	45	85
C 01929	C	ED		2	1	11	22S	26E	569041	3586423*	145	64	81	
C 01941	C	ED		4	3	11	22S	26E	569050	3585200*	96	71	25	
C 01964	C	ED		4	4	11	22S	26E	569849	3585210*	100	75	25	

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(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	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02014	C	ED		1	3	4	11	22S	26E		569348	3585304*	96	87	9
C 02028	C	ED		1	4	11		22S	26E		569447	3585612*	90	65	25
C 02062	C	ED		2	4	11		22S	26E		569848	3585616*	98		
C 02098	C	ED		3	4	11		22S	26E		569449	3585205*	136	58	78
C 02105	C	ED		3	2	3	11	22S	26E		568946	3585507*	125	75	50
C 02119	C	ED		4	4	11		22S	26E		569849	3585210*	118	78	40
C 02128	C	ED		1	4	4	11	22S	26E		569748	3585309*	100	60	40
C 02147	C	ED		1	2	4	11	22S	26E		569747	3585715*	125	50	75
C 02187	C	ED		3	4	11		22S	26E		569449	3585205*	147	80	67
C 02192	C	ED		4	4	11		22S	26E		569849	3585210*	100	60	40
C 02194	C	ED		2	3	4	11	22S	26E		569548	3585304*	90	25	65
C 02194 CLW469096	O	ED		1	3	4	11	22S	26E		569348	3585304*	90	25	65
C 02204	C	ED		3	11			22S	26E		568851	3585397*	145	85	60
C 02403	C	ED		3	4	3	11	22S	26E		568949	3585099*	154	97	57
C 02434	C	ED		1	3	4	11	22S	26E		569348	3585304*	164	66	98
C 02435	C	ED		4	4	11		22S	26E		569849	3585210*	99	25	74
C 02454	C	ED		3	2	3	11	22S	26E		568946	3585507*	99	69	30
C 02513	C	ED		3	1	4	11	22S	26E		569346	3585511*	125	40	85
C 02547	C	ED		4	1	11		22S	26E		569044	3586016*	127	58	69
C 02582	C	ED		2	2	3	11	22S	26E		569146	3585707*	149	53	96
C 02585	C	ED		3	2	3	11	22S	26E		568946	3585507*	150	90	60
C 02586	C	ED		3	2	3	11	22S	26E		568946	3585507*	150	90	60
C 02610	C	ED		4	3	11		22S	26E		569050	3585200*	158	158	0
C 02630	C	ED		2	4	3	11	22S	26E		569149	3585299*	150	80	70
C 02852	C	ED		3	1	2	11	22S	26E		569343	3586325*	137	80	57
C 02886	C	ED		1	2	3	11	22S	26E		568946	3585707*	135	70	65
C 02957	C	ED		1	2	3	11	22S	26E		568946	3585707*	130	70	60
C 03296	C	ED		2	2	4	10	22S	26E		568343	3585692*	127	90	37
C 03305	C	ED		4	4	4	10	22S	26E		568009	3586120	170	95	75

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(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	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03336	C	ED		1	4	3	11	22S	26E	569002	3585414	130	79	51
C 03367 POD1	C	ED		1	2	3	11	22S	26E	569036	3585641	140	80	60
C 03370 POD1	C	ED		2	3	4	11	22S	26E	569464	3585395	150	58	92
C 03384 POD1	C	ED		3	1	4	11	22S	26E	569380	3585537	124	64	60
C 03398 POD1	C	ED		2	3	4	11	22S	26E	569513	3585258	134	40	94
C 03399 POD1	C	ED		2	3	4	11	22S	26E	569480	3585242	148	40	108

Average Depth to Water: 62 feet

Minimum Depth: 11 feet

Maximum Depth: 158 feet

Record Count: 90

PLSS Search:

Section(s): 9-11

Township: 22S

Range: 26E

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.

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: Morrow 10,970'-11,495', Atoka 10,316'-10,970', Strawn 9,910'-10,316', Wolfcamp 8,620'-9,910', Bone Springs 4,814'-8,620'.



C-108 Review Checklist: Received 9/13 Add. Request: 10/2/2016 Reply Date: 10/20/2016 Suspended: _____ [Ver 15]

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

Well No. 1 Well Name(s): Palomares Federal Can

API: 30-0 15-32-050 Spud Date: _____ New or Old: _____ (UIC Class II Primacy 03/07/1982)

Footages 1980 FSL Lot _____ or Unit L Sec 10 Tsp 22S Rge 26E County GLA

General Location: 2 1/2 miles west of Carlsbad Pool: SWD, DEVONIAN Pool No.: _____

BLM 100K Map: Carlsbad Operator: Delaware Energy, LLC OGRID: 371195 Contact: Preston Stein, Vice President

COMPLIANCE RULE 5.9: Total Wells: 0 Inactive: 0 Fincl Assur: OK Compl. Order: MA IS 5.9 OK? X Date: 11-08-2016

WELL FILE REVIEWED 0 Current Status: PA A

WELL DIAGRAMS: NEW: Proposed 0 or RE-ENTER: Before Conv. 0 After Conv. 0 Logs in Imaging: YLP&A portion

Planned Rehab Work to Well: _____

Well Construction Details		Sizes (in)	Setting	Cement	Cement Top and Determination Method
		Borehole / Pipe	Depths (ft)	(Ex) or (C)	
Planned ___ or Existing ___ Surface		<u>17 1/2 / 13 3/8</u>	<u>500</u>	<u>SSO</u>	<u>SURFCEM / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod		<u>12 1/4 / 11 5/8</u>	<u>1934</u>	<u>400</u>	<u>SURFCEM / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod		<u>7 7/8 / 7</u>	<u>2100</u>	<u>1100</u>	<u>SURFCEM / VISUAL</u> *
Planned ___ or Existing ___ Prod/Liner		<u>7 7/8 / 5 1/2</u>	<u>12600</u>	<u>1600</u>	<u>SURFCEM / VISUAL</u> *
Planned ___ or Existing ___ Liner					
Planned ___ or Existing <u>(OH)</u> PERF		<u>12600 / 136</u>			
				Inj Length	
				<u>1000'</u>	
Injection Lithostratigraphic Units:		Depths (ft)	Injection or Confining Units	Tops	
Adjacent Unit: Litho. Struc. Por.			<u>W&B</u>	<u>1250</u>	
Confining Unit: Litho. Struc. Por.			<u>DL</u>	<u>12600</u>	
Proposed Inj Interval TOP:					
Proposed Inj Interval BOTTOM:					
Confining Unit: Litho. Struc. Por.					
Adjacent Unit: Litho. Struc. Por.					

Completion/Operation Details:	
Drilled TD <u>1160</u>	PBTD _____
NEW TD <u>1360</u>	NEW PBTD _____
NEW Open Hole <u>0</u> or NEW Perfs <u>0</u>	
Tubing Size <u>3 1/2</u> in. Inter Coated? _____	
Proposed Packer Depth <u>1250</u> ft	
Min. Packer Depth <u>1250</u> (100-ft limit)	
Proposed Max. Surface Press. <u>1050</u> psi	
Admin. Inj. Press. <u>250</u> (0.2 psi per ft)	

AOR: Hydrologic and Geologic Information

POTASH: R-111-P _____ Noticed? _____ BLM Sec Ord 0 WIPP 0 Noticed? _____ Salt/Salado T: _____ B: _____ NW: Cliff House fm _____

FRESH WATER: Aquifer ARTESIAN Max Depth 155 HYDRO AFFIRM STATEMENT By Qualified Person 0

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

Disposal Fluid: Formation Source(s) W&B Analysis? _____ On Lease 0 Operator Only 0 or Commercial 0

Disposal Int: Inject Rate (Avg/Max BWPD): 10K/15K Protectable Waters? _____ Source: _____ System: Closed 0 or Open 0

HC Potential: Producing Interval? NA Formerly Producing? _____ Method: Logs/DST/P&A/Other NA 2-Mile Radius Pool Map 0

AOR Wells: 1/2-M Radius Map? 0 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 5-15-2016 Mineral Owner _____ Surface Owner BLM N. Date _____

RULE 26.7(A): Identified Tracts? _____ Affected Persons: City of Carlsbad, J. Leo Thompson N. Date _____

Order Conditions: Issues: _____

Add Order Cond: _____

Need H2O Sample, City of Carlsbad
2" & 5" CASINGS should be circulated to surface