

09/04/2010 DATE IN	SUSPENSE	PRG ENGINEER	05/09/2016 LOGGED IN	SWD TYPE	PMAM161303437 APP NO
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### 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

*Pam. Ste*

Vice-President

5/3/2016

Print or Type Name

Signature

Title

Date

Prestonms@gmail.com  
 e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance xxx Disposal Storage  
Application qualifies for administrative approval? xxx Yes No
- II. OPERATOR: Delaware Energy LLC  
ADDRESS: 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: 4/26/2016  
E-MAIL ADDRESS: Prestonms@gmail.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.

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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.

**Delaware Energy, LLC**  
**Application for Injection/SWD**  
**Herren Federal Gas Com #1, API # 30-015-21033**

UL K, Sec. 7, T-24-S, R-27-E, 1980' FSL & 1980' FWL, Eddy Co., NM

May 03, 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 Herren Federal Gas Com #1 as Plugged
9. Wellbore Diagram of Herren Federal Gas 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 within Area of Review)~~
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 Herren Federal Gas Com #1

*Not Included*  
*See McMillan*  
*e-mail 05/04/16 on other*  
*notice issues*

C-108 Item VI - no statement included; inspection of OGD GIS database shows no wells with 1/2 mile radius that penetrates proposed interval 5/30/16

C-108 Item XI - no submittal of fresh-water well data 07/14/16 See

Additional Questions on C-108

VII.

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

Average 2500 BWPD, Max 10,000 BWPD

2. Whether the system is open or closed;

Open System, Commercial SWD

3. Proposed average and maximum injection pressure;

Average 300 PSI, Max 578 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 (Willow Lake and Hay Hollow Pools) and Wolfcamp produced water. Water is compatible. Many Delaware SWD wells in the area dispose of water from these horizons, no known incapability exist. See attached water analysis from Bone Spring and Wolfcamp produced water.

5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

See attached water analysis from nearby Delaware producing well. T24S, R28E

\*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 Delaware Mountain Group 2,200' - 5,250' (Bell Canyon to Cherry Canyon Formations). Bell Canyon contains fine grain sandstone and siltstones. Cherry Canyon consists of fine grained sandstones. There are no fresh water zones underlying the proposed injection zone. Usable water depth is from surface to the base of the Rustler at 350'; however no known water wells exist in the vicinity.

IX. Describe the proposed stimulation program, if any.

10,000 gallons 15% HCL acid job with packer

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

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

Preston Stein

Vice-President

5/3/2016

Title

Date

III. WELL DATA

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

Herren Fed Gas Com #1, Sec. 7-T24S-R27E, 1980' FSL & 1980' FWL, UL K, 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"	417'	550	17-1/2"	Surface	Circulate
8-5/8"	5,618'	1200	11"	240'	Free point & cut
*7" UFJ	2,842'	150	7.825"	Surface	Circulate, CBL
* 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 50ft above uppermost perforation

(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

Depth?

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.

Delaware – Bell Canyon to Cherry Canyon

Pool Name: SWD (Delaware)

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

2,892' to 5,250 (perforated)

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

The well was originally drilled to test Wolfcamp, Bone Springs, and Delaware Sands. The well was found 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.

Perforations 10,026'-10,134', Plugged with CIBP set @ 10,000' w/ 35 sx cmt

Perforations 5,230'-5,270', Plugged with CIBP set @ 5,215'

Perforations 5,140'-5,160', Plugged with CIBP set @ 5,120'

Perforations 417'-2,914', Plugged with 100 sx cmt spotted from 372'-472'

(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.

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Bravos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-21033		<sup>2</sup> Pool Code	<sup>3</sup> Pool Name SWD: DELAWARE
<sup>4</sup> Property Code	<sup>5</sup> Property Name Herren Fed Gas Com		<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 371195	<sup>8</sup> Operator Name Delaware Energy, LLC		<sup>9</sup> Elevation 3,226.9'

<sup>10</sup> Surface Location

UL or lot no. K	Section 7	Township 24S	Range 27E	Lot Idn 18E	Feet from the 1980	North/South line SOUTH	Feet from the 1980	East/West line WEST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres <sup>13</sup> Joint or Infill <sup>14</sup> Consolidation Code <sup>15</sup> Order No.									

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<sup>16</sup>				<sup>17</sup> 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 that 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> <u>Preston Stein</u> 5/3/16 Signature      Date	
				<u>Preston Stein</u> Printed Name  <u>Prestonstei@gmail.com</u> E-mail Address	
				<sup>18</sup> 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 Date of Survey Signature and Seal of Professional Surveyor:	
				Certificate Number	

# MITCHELL ANALYTICAL LABORATORY

2638 Faudree  
Odessa, Texas 79765-8538  
561-5579

Company: **Impact Chemical**

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

## Dissolved Gases

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

## Cations

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		

## Anions

Hydroxyl	(OH-)	.00	17.00	.00
Carbonate	(CO <sub>3</sub> =)	.00	30.00	.00
BiCarbonate	(HCO <sub>3</sub> -)	146.64	61.10	2.40
Sulfate	(SO <sub>4</sub> =)	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 CaCO <sub>3</sub>		34,358.26		
Conductivity MICROMHOS/CM		209,000		

pH 5.200 Specific Gravity 60/60 F. 1.126

CaSO<sub>4</sub> Solubility @ 80 F. 21.88MEq/L, CaSO<sub>4</sub> scale is unlikely

## CaCO<sub>3</sub> Scale Index

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: 45513  
County:

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

ANALYSIS	mg/L	EQ. WT.	MEQ/L
1. pH	6.75		
2. Specific Gravity @ 60 F	1.087		
3. Hydrogen Sulfide	10.2 PPM		
4. Carbon Dioxide	120.5 PPM		
5. Dissolved Oxygen	ND		
6. Hydroxyl (OH <sup>-</sup> )	0	17.0	0.00
7. Carbonate (CO <sub>3</sub> <sup>-2</sup> )	0	30.0	0.00
8. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	244	61.1	3.69
9. Chloride (Cl <sup>-</sup> )	57,937	35.5	1,833.44
10. Sulfate (SO <sub>4</sub> <sup>-2</sup> )	854	49.6	12.51
11. Calcium (Ca <sup>+2</sup> )	2,792	20.1	135.61
12. Magnesium (Mg <sup>+2</sup> )	359	12.2	31.92
13. Sodium (Na <sup>+</sup> )	34,045	23.0	1,450.21
14. Barium (Ba <sup>+2</sup> )	2.71		
15. Total Iron (Fe)	7.52		
16. Manganese	0.51		
17. Strontium	594.40		
18. Total Dissolved Solids	66,727		
19. Resistivity @ 75 °F (calculated)	0.032 Ω-m		
20. CaCO <sub>3</sub> Saturation Index			
@ 60 °F	-0.5041		
@ 100 °F	0.0059		
@ 120 °F	0.2659		
@ 140 °F	0.6259		
@ 160 °F	0.9759		
21. CaSO <sub>4</sub> Supersaturation Ratio			
@ 70 °F	0.2391		
@ 80 °F	0.2354		
@ 110 °F	0.2496		
@ 130 °F	0.2438		
@ 150 °F	0.2459		

PROBABLE MINERAL COMPOSITION				
COMPCUND	EQ. WT.	X	MEQ/L	= mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	51.04		3.69	323
CaSO <sub>4</sub>	58.07		13.51	926
CaCl <sub>2</sub>	55.50		121.31	6,733
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17		0.00	0
MgSO <sub>4</sub>	60.10		0.00	0
MgCl <sub>2</sub>	47.62		31.92	1,520
NaHCO <sub>3</sub>	54.90		0.00	0
NaSO <sub>4</sub>	71.53		0.00	0
NaCl	58.46		1,450.21	86,533

Analyst: Sylvia Garcia Date: July 17, 2015

Formation: Delaware

# Impact Water Analysis Analytical Report



Company:  
Source: WH  
Number: 43548  
County:

Location:  
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 PFM		
4. Carbon Dioxide	720.0 PFM		
5. Dissolved Oxygen	ND		
6. Hydroxyl (OH <sup>-</sup> )	0 /	17.0 =	0.00
7. Carbonate (CO <sub>3</sub> <sup>-2</sup> )	0 /	30.0 =	0.00
9. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	49 /	61.1 =	0.80
9. Chloride (Cl <sup>-</sup> )	179,659 /	35.5 =	5,969.27
10. Sulfate (SO <sub>4</sub> <sup>-2</sup> )	140 /	48.8 =	2.87
11. Calcium (Ca <sup>+2</sup> )	28,720 /	20.1 =	1,428.86
12. Magnesium (Mg <sup>+2</sup> )	4,529 /	12.2 =	371.23
13. Sodium (Na <sup>+</sup> )	75,276 /	23.0 =	3,272.85
14. Barium (Ba <sup>+2</sup> )	1.75		
15. Total Iron (Fe)	18.61		
16. Manganese	9.55		
17. Strontium	1,105.00		

18. Total Dissolved Solids 289,859  
19. Resistivity @ 75 °F (calculated) 0.027 Ω-cm

## 20. CaCO<sub>3</sub> Saturation Index

@ 60 °F	-0.2490
@ 100 °F	-0.9390
@ 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 <sub>3</sub> ) <sub>2</sub>	81.04		0.80	65
CaSO <sub>4</sub>	60.07		2.87	195
CaCl <sub>2</sub>	55.50		1,425.19	79,098
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17		0.00	0
MgSO <sub>4</sub>	60.19		0.00	0
MgCl <sub>2</sub>	47.92		371.23	17,678
NaHCO <sub>3</sub>	84.00		0.00	0
NaSO <sub>4</sub>	71.03		0.00	0
NaCl	58.46		3,272.85	191,331

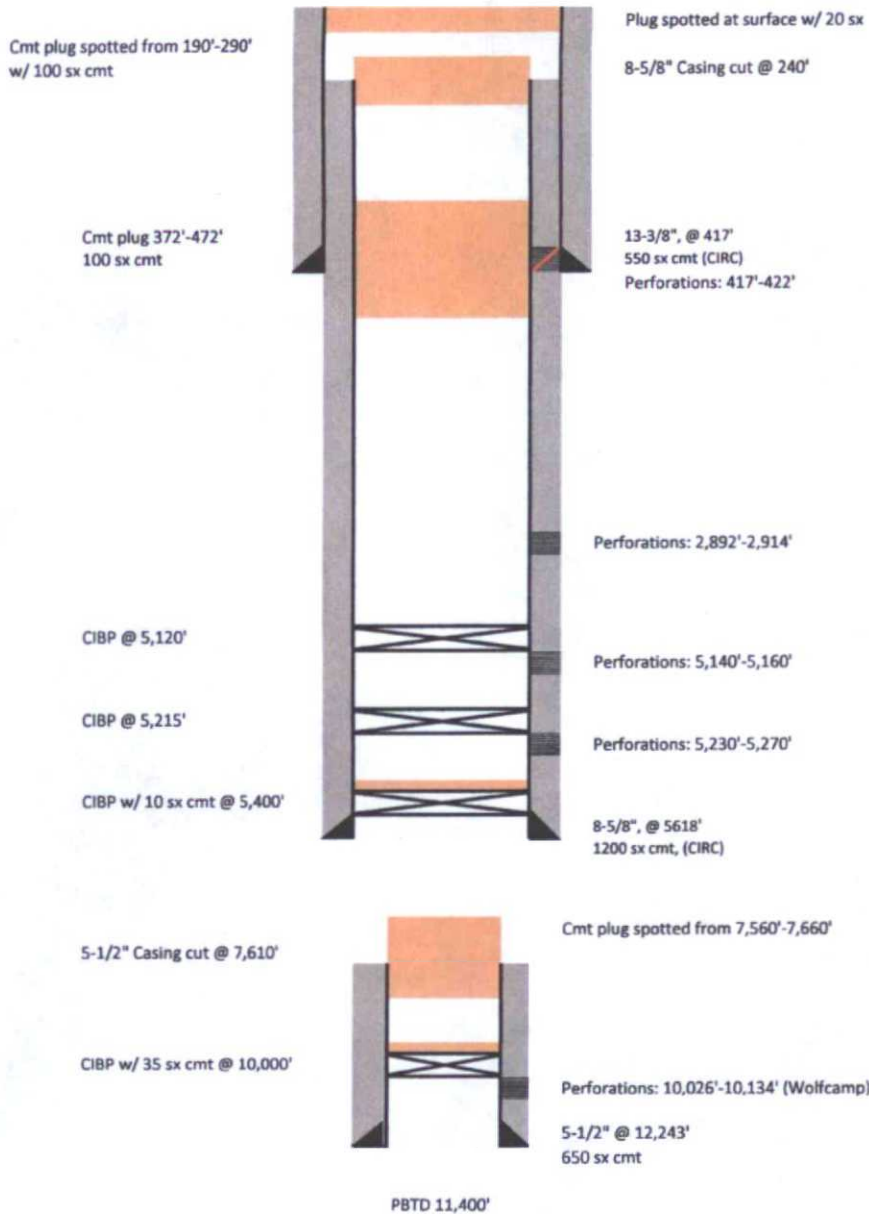
## 21. CaSO<sub>4</sub> Supersaturation Ratio

@ 70 °F	0.4092
@ 90 °F	0.5418
@ 110 °F	0.3890
@ 130 °F	0.3898
@ 150 °F	0.3893

Analyst: Tamara Devault

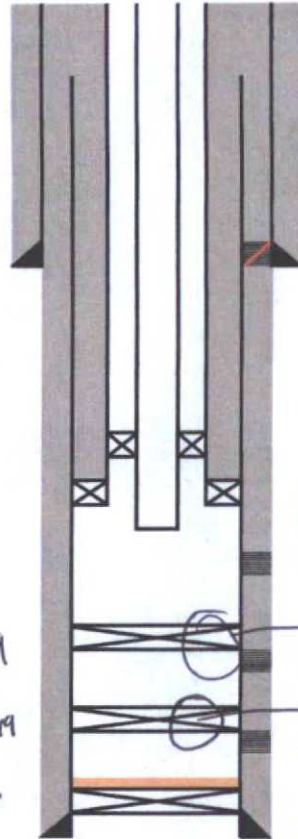
Date: May 8, 2015

Herren Federal Gas Com No 1  
 1980 'FSL & 1980' FWL, UL K, SEC. 7, T-24S R-27E, Eddy County, NM  
 API # 30-015-21033



Herren Federal Gas Com No 1  
 1980 'FSL & 1980' FWL, UL K, SEC. 7, T-24S R-27E, Eddy County, NM  
 API # 30-015-21033

4.5" IPC tubing



13-3/8", @ 417'  
 550 sx cmt (CIRC)  
 Perforations: 417'-422'

7" UFJ Csg Liner, Surface - 2,842'  
 Cmt'd to surface

Perforations: 2,892'-5,250'

*well test 3/19/79*

Perforations: 5,140'-5,160'

Perforations: 5,230'-5,270'

*12/20/1978 swab test for interval 1/8/1979*

CIBP @ 5,120' *set 3/19/79*

CIBP @ 5,215' *set 2/28/79*

CIBP w/ 10 sx cmt @ 5,400'

8-5/8", @ 5618'  
 1200 sx cmt, (CIRC)

5-1/2" Casing cut @ 7,610'

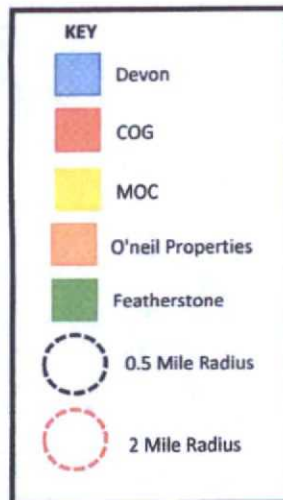
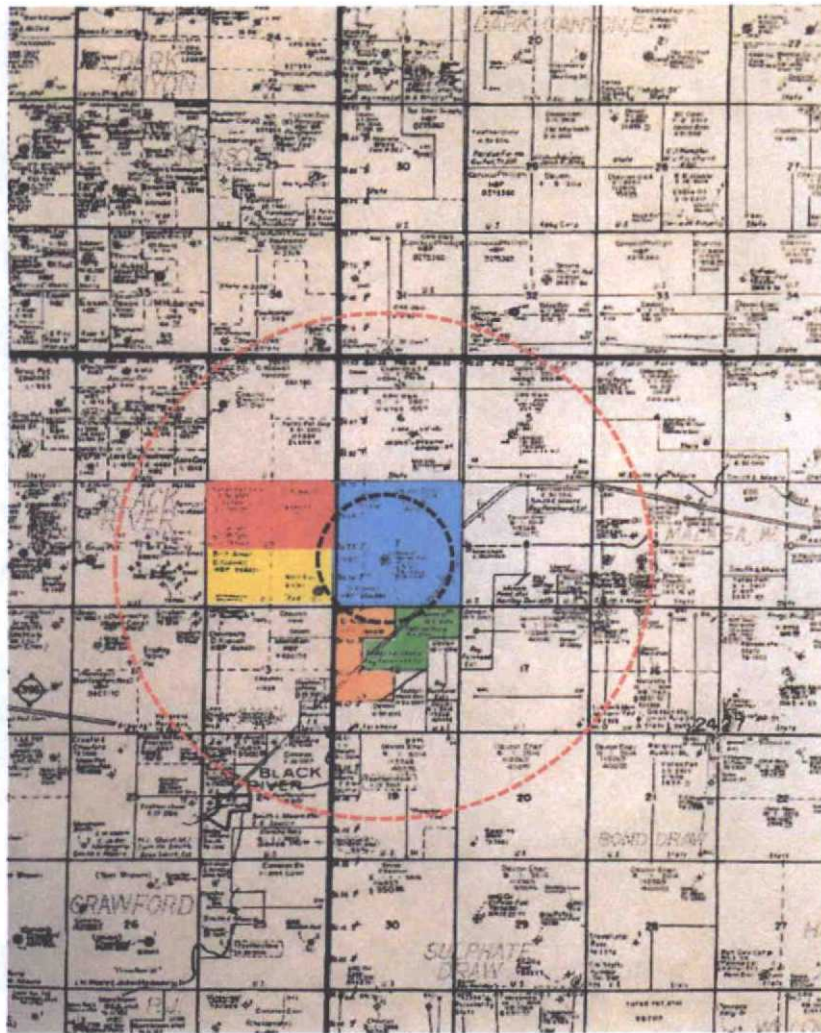
Cmt plug spotted from 7,560'-7,660'

CIBP w/ 35 sx cmt @ 10,000'

Perforations: 10,026'-10,134' (Wolfcamp)

5-1/2" @ 12,243'  
 650 sx cmt

P8TD 11,400'



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

May 03, 2016

**Surface Owner / Offset Operators**

Re: Notification of Application for Authorization to Inject  
Herren Fed Gas Com #1 SWD Well

Ladies and Gentlemen:

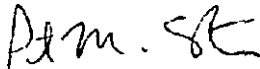
Delaware Energy, LLC is seeking administrative approval to utilize the Herren Fed Gas #1 (API – 30-015-21033) as a Salt Water Disposal well. As required by the New Mexico Oil Conservation Division Rules, we are notifying you of the following proposed salt water disposal well. This letter is a notice only. No action is required unless you have questions or objections.

<u>Well:</u>	Herren Fed Gas #1 SWD
<u>Proposed Disposal Zone:</u>	Delaware Formation (from 2,892' - 5,250')
<u>Location:</u>	1980' FSL & 1980' FWL, Sec. 7, T24S, R27E, 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

---

#### **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 Herren Fed Gas Com #1 (API – 30-015-21033) as a Salt Water Disposal well.

The Herren Fed Gas Com #1 is located at 1980' FSL and 1980' FWL, Unit Letter K, Section 7, Township 24 South, Range 27 East, Eddy County, New Mexico. The well will dispose of water produced from oil and gas wells into the Delaware Formation at 2,892' to 5,250' at a maximum rate of 10,000 barrels of water per day at a maximum pressure of 578 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.

Herren Fed Gas No 1  
API#: 30-015-21033  
Location: Sec. 7, T24S, R27E, UL K

Formation Tops

Top Salt	900'
Base Salt	1,900'
Lamar Limestone	2,000'
Delaware Sands	2,080'
Bone Spring	5,620'
Wolfcamp	8,718'
Strawn	10,710'
Atoka	10,955'
Morrow	11,440'
Barnett	12,170'

*Beil*



**N MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form 1-1973  
Superseded 6-1-74  
1116 (Rev. 10-1-73)

All distances must be from the outer boundaries of the Section

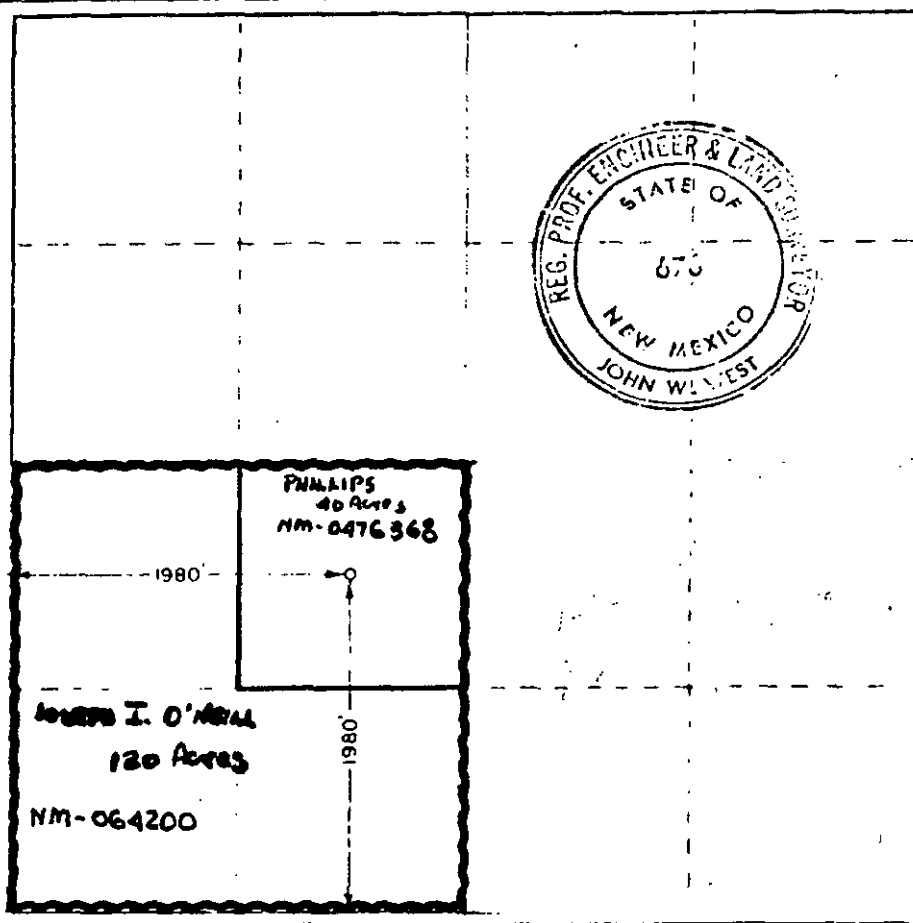
AMOCO PRODUCTION COMPANY			HERREN FEDERAL GAS COM		Well No. <b>1</b>
K	7	24 South	27 East	Eddy	
1980      Section      South      Line and      1980      Section      West					
3226.9		MORROW		BLACK RIVER PENN (Eddy)	160

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.

*Ray R. Lyman*

**ADMINISTRATIVE ASSISTANT**

**Amoco Production Company**

**NOV 28 1973**

**RECEIVED**

I hereby certify that the information shown on this plat was obtained from the U.S. GEOLOGICAL SURVEY, ARTESIA, NEW MEXICO, and is true and correct to the best of my knowledge and belief.

**November 24, 1973**

Registered Professional Land Surveyor  
No. 10,101, State of New Mexico

*John W. West*

**676**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ well gas ☐ well other ☐ P x A
2. NAME OF OPERATOR  
Amoco Production Company ✓
3. ADDRESS OF OPERATOR  
P. O. Box 68, Hobbs, NM 88240
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) 1980' FSL x 1980' FWL, Sec. 7  
AT SURFACE: (Unit K, NE/4 SW/4)  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF ☐  
FRACTURE TREAT ☐  
SHOOT OR ACIDIZE ☐  
REPAIR WELL ☐  
PULL OR ALTER CASING ☐  
MULTIPLE COMPLETE ☐  
CHANGE ZONES ☐  
ABANDON\* ☐  
(other) ☐

SUBSEQUENT REPORT OF:

- ☐  
☐  
☐  
☐  
☐  
☐  
☐  
☒

RECEIVED

JAN 17 1980

U.S. GEOLOGICAL SURVEY  
ARTESIA, NEW MEXICO

5. LEASE  
NM-0476368 RECEIVED
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME NOV 10 1980
8. FARM OR LEASE NAME  
Heeren Federal Gas Com. ARTESIA, OFFICE
9. WELL NO.  
1
10. FIELD OR WILDCAT NAME  
Und. Black River Delaware
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
7-24-27
12. COUNTY OR PARISH Eddy 13. STATE NM
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)  
3246 RDB

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. 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 subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Perforated 8-5/8" casing 417'-422' with 2 JSPF. Ran tubing to 441'. Spotted 100 sx Class H cement down tubing with 50' above 8-5/8" casing perfs. Closed in bottom hole and squeezed cement with 650#. Raised tubing to 290' and spotted 100 sx Class H cement plug 50' in and 50' out of 8-5/8" casing stub at 240'. Spotted a 20 sx Class H cement surface plug. Welded on cap and erected permanent P x A marker. Will notify when location is ready for final inspection.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

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

SIGNED Bob Lewis TITLE Assist. Admin. Ana DATE 1-16-80

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE DISTRICT ENGINEER DATE 1-16-80  
CONDITIONS OF APPROVAL, IF ANY:

0+4 USGS-A, 1-Hou, 1-Susp, 1-BD

N. M. G. &amp; C. COPY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other in-  
structions on  
reverse side)Copy to S-  
NM 04 76368  
Form approved,  
Budget Bureau No. 42-R355.8.  
5. LEASE DESIGNATION AND SERIAL NO.  
NM-064200

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other ☐  
1b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVAL. ☐ Other ☐

2. NAME OF OPERATOR: Amoco Production Company

3. ADDRESS OF OPERATOR: BOX 68, HOBBS, N. M. 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):  
At surface 1980 FSL x 1980 FWL Sec 27 T10N R10E NE1/4 SW1/4

At top prod. interval reported below

At total depth

14. PERMIT NO. DATE ISSUED MAY 2 1974

15. DATE SPUDDED 12-13-73

16. DATE T.D. REACHED 3-1-74

17. DATE COMPL. (Ready to prod.) 4-4-74

18. ELEVATIONS (OF, RKB, RT, GR, ETC.) 3246 RDB

20. TOTAL DEPTH, MD &amp; TVD 12245'

21. PLUG, BACK T.D., MD &amp; TVD 11400'

22. IF MULTIPLE COMPL., HOW MANY?

23. INTERVALS DRILLED BY 10-TD

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)

25. TYPE ELECTRIC AND OTHER LOGS RUN 10026-10134 WOLF CAMP

26. CASING RECORD (Report all strings set in well)

27. WAS WELL CORED No

28. LINER RECORD

29. TUBING RECORD

30. PRODUCTION RECORD (Interval, size and number)

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

32. DATE FIRST PRODUCTION 4-4-74

33. PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) FLW

34. WELL STATUS (Producing or shut-in) SI

35. DATE OF TEST 4-4-74

36. HOURS TESTED 4

37. CHOKER SIZE VARIOUS

38. PROD'N. FOR TEST PERIOD

39. OIL—BBL. 243

40. GAS—MCF. 0

41. WATER—BBL. 0

42. GAS-OIL RATIO

43. FLOW TUBING PRESS. 2501

44. CASING PRESSURE 2009

45. CALCULATED 24-HOUR RATE

46. OIL—BBL.

47. GAS—MCF.

48. WATER—BBL.

49. OIL GRAVITY-API (CORR.)

50. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

51. TEST WITNESSED BY

52. LIST OF ATTACHMENTS

53. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

54. SIGNED Roy R. Johnson

55. TITLE ADMINISTRATIVE ASSISTANT

56. DATE MAY 24 1974

04 3-USGS-AR-  
F-DIV  
1-W9  
1-RR

\* (See Instructions and Spaces for Additional Data on Reverse Side)

## INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 18:** Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

**Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

**Item 29: "Sacks Cement":** Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

**Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

### 37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Maycamp	10026	10058	Gas producing zone
Upper - Penn	11564	11603	Dry
Lower - Penn	11742	11756	Dry

### 38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
LAMAR	2000	
DEL	2080	
BONE SP.	5620	
34 " "	8370	
WOLF	8718	
STRAWN	10710	
ATOKA	10955	
MORROW	11440	
MID- "	11710	
LOW "	12020	
BARNETT	12170	

RECEIVED OCD

2016 MAY -5 P 2:44

Delaware Energy, LLC  
3001 W. Loop 250 North, Suite C-105-318  
Midland, TX 79705  
(214) 558-1371  
Prestonms@gmail.com  
May 4, 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 Herren Federal Gas Com #1 wellbore, API # 30-015-21033. Please feel free to contact me should you have any questions, etc.

Sincerely,



Preston M. Stein  
Delaware Energy, LLC

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

## **McMillan, Michael, EMNRD**

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Monday, May 09, 2016 10:01 AM  
**To:** 'Preston Stein'  
**Subject:** Herren Federal Gas Com. SWD Well No.1

Preston:

The OCD received your administrative application for the Herren Federal Gas Com. SWD Well No.1 on May 5, 2016.

The OCD will require the following information:

Notice of publication in the newspaper of general circulation in which the proposed SWD well is located.

Proof of certified mailing to the surface owner

Proof of mailing to the affected parties

Injection well data sheet

As a result, your application has been suspended on May 9, 2016..

Thank You

### **Michael A. McMillan**

Engineering and Geological Services Bureau, Oil Conservation Division

1220 South St. Francis Dr., Santa Fe NM 87505

O: 505.476.3448 F: 505.476.3462

Michael.mcmillan@state.nm.us

---

Next Higher: None. Next Lower: Bone Spring 5,620', Wolfcamp 8,718', Strawn 10,710', Atoka 10,955', Morrow 11,440', Barnett 12,170'

**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 6 2016

That the cost of publication is \$66.82  
and that payment thereof has been  
made and will be assessed as court  
costs.

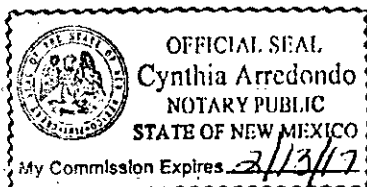
*Erin CoatsSmith*

Subscribed and sworn to before me  
this 20 day of May  
2016

*Cynthia Arredondo*

My commission Expires  
2/13/17

Notary Public



May 6, 2016  
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 Herren Fed Gas  
Com #1 (API - 30-015-  
21033) as a Salt Wa-  
ter Disposal well.  
The Herren Fed Gas  
Com #1 is located at  
1980' FSL and 1980'  
FWL, Unit Letter K,  
Section 7, Township  
24' South, Range 27  
East, Eddy County,  
New Mexico. The well  
will dispose of water  
produced from oil and  
gas wells into the Del-  
aware Formation at  
2,892' to 5,250' at a  
maximum rate of  
10,000 barrels of wa-  
ter per day at a maxi-  
mum pressure of 578  
psi.  
Interested parties  
must file objections or  
requests for hearing  
with the Oil  
Conservations Divi-  
sion, 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.



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

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**OKLAHOMA CITY, OK 73102**

**POSTAL USE**

Domestic Mail Fee \$3.30

Extra Services & Fees (Add on to fee for each service selected)

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

Postage \$1.78

Total Postage and Fees \$7.78

Date of Delivery 05/04/2016

Signature of Addressee (Herein Fed)

Address of Addressee (Herein Fed)  
333 W. SAGEBROOK  
OKLAHOMA CITY, OK 73102

PS Form 3800, April 2015 PSN 7530-02-000-9003 See Reverse for Instructions

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

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**MIDLAND, TX 79701**

**POSTAL USE**

Domestic Mail Fee \$3.30

Extra Services & Fees (Add on to fee for each service selected)

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

Postage \$1.78

Total Postage and Fees \$7.78

Date of Delivery 05/04/2016

Signature of Addressee (Herein Fed)

Address of Addressee (Herein Fed)  
D. NEIL PROPERTIES LTD  
PO BOX 2040  
MIDLAND, TX 79702

PS Form 3800, April 2015 PSN 7530-02-000-9003 See Reverse for Instructions

**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.

Addressed to:  
ENERGY PRODUCTION CO  
333 W. SAGEBROOK AVE  
OKLAHOMA CITY, OK 73102

590 9402 1604 5362 6004 50  
Number (Transfer from service label)  
15 3010 0000 2209 1146  
PS Form 3811, July 2015 PSN 7530-02-000-9003 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X [Signature]  
B. Received by (Printed Name)  
C. Date of Delivery  
D. Is delivery address different from item 1? If YES, enter delivery address below.

3. Service Type  
☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery  
☐ Mail Restricted Delivery  
☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

**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.

Article Addressed to:  
D. NEIL PROPERTIES LTD  
PO BOX 2040  
MIDLAND, TX 79702

5950 9402 1604 5362 6013 27  
Article Number (Transfer from service label)  
7015 3010 0000 2209 1108  
PS Form 3811, July 2015 PSN 7530-02-000-9003 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X [Signature]  
B. Received by (Printed Name)  
C. Date of Delivery  
D. Is delivery address different from item 1? If YES, enter delivery address below.

3. Service Type  
☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery  
☐ Mail Restricted Delivery  
☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

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

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**CARLSBAD, NM 88220**

**POSTAL USE**

Domestic Mail Fee \$3.30

Extra Services & Fees (Add on to fee for each service selected)

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

Postage \$1.78

Total Postage and Fees \$7.78

Date of Delivery 05/04/2016

Signature of Addressee (Herein Fed)

Address of Addressee (Herein Fed)  
BLM - CARLSBAD (HEREIN FED)  
620 E. GREENE ST  
CARLSBAD, NM 88220

PS Form 3800, April 2015 PSN 7530-02-000-9003 See Reverse for Instructions

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

For delivery information, visit our website at [www.usps.com](http://www.usps.com)

**MIDLAND, TX 79701**

**POSTAL USE**

Domestic Mail Fee \$3.30

Extra Services & Fees (Add on to fee for each service selected)

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

Postage \$1.78

Total Postage and Fees \$7.78

Date of Delivery 05/04/2016

Signature of Addressee (Herein Fed)

Address of Addressee (Herein Fed)  
COG OP (HEREIN FED)  
600 W. ILLINOIS AVE  
MIDLAND, TX 79701

PS Form 3800, April 2015 PSN 7530-02-000-9003 See Reverse for Instructions

**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.

Article Addressed to:  
BLM - CARLSBAD (HEREIN FED)  
620 E. GREENE ST  
CARLSBAD, NM 88220

590 9402 1604 5362 6013 10  
Article Number (Transfer from service label)  
15 3010 0000 2209 1092  
PS Form 3811, July 2015 PSN 7530-02-000-9003 Domestic Return Receipt

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X [Signature]  
B. Received by (Printed Name)  
C. Date of Delivery  
D. Is delivery address different from item 1? If YES, enter delivery address below.

3. Service Type  
☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery  
☐ Mail Restricted Delivery  
☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

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600 W. ILLINOIS AVE  
MIDLAND, TX 79701

5950 9402 1604 5362 6013 34  
Article Number (Transfer from service label)  
7015 3010 0000 2209 1115  
PS Form 3811, July 2015 PSN 7530-02-000-9003 Domestic Return Receipt

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X [Signature]  
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 Adult Signature Restricted Delivery: \$0.00  
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Date: 05/04/2016

Article Addressed to:  
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 PO BOX 7692  
 TYLER TX 75711

PS Form 3811, April 2015 PSN 7530-02-000-9063

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 Adult Signature Restricted Delivery: \$0.00  
 Postage: \$1.78  
 Total Postage and Fees: \$7.78

Date: 05/04/2016

Article Addressed to:  
 FEATHERSTONE DEV CORP  
 PO BOX 429  
 ROSWELL NM 88202

PS Form 3811, April 2015 PSN 7530-02-000-9063

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 PO BOX 7692  
 TYLER TX 75711

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 9590 9402 1604 5362 6004 43

7015 3010 0000 2209 1139

Form 3811, July 2015 PSN 7530-02-000-9063

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature: *Nick Atkins*  
☐ Agent  
☒ Addressee

B. Received by (Printed Name): *Nick Atkins*

C. Date of Delivery: *05/04/16*

D. Is delivery address different from item 1? ☐ Yes  
 If YES, enter delivery address below: ☐ No

3. Service Type  
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 P.O. Box 429  
 Roswell, NM 88202

Article Number (Transfer from service label)  
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7015 3010 0000 2209 1122

PS Form 3811, July 2015 PSN 7530-02-000-9063

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature: *James Turner*  
☐ Agent  
☒ Addressee

B. Received by (Printed Name): *James Turner*

C. Date of Delivery: *05/04/16*

D. Is delivery address different from item 1? ☐ Yes  
 If YES, enter delivery address below: ☐ No

3. Service Type  
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 Adult Signature Restricted Delivery: \$0.00  
 Postage: \$1.78  
 Total Postage and Fees: \$7.78

Date: 05/04/2016

Article Addressed to:  
 NM OIL CONGRESSION DIV  
 811 S. FIRST ST.  
 ARTESIA, NM 88210

PS Form 3811, April 2015 PSN 7530-02-000-9063

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Article Addressed to:  
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 811 S. FIRST ST.  
 ARTESIA, NM 88210

Article Number (Transfer from service label)  
 9590 9402 1604 5362 6013 03

7015 3010 0000 2209 1085

PS Form 3811, July 2015 PSN 7530-02-000-9063

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature: *Anna Tull*  
☐ Agent  
☒ Addressee

B. Received by (Printed Name): *Anna Tull*

C. Date of Delivery: *05/04/16*

D. Is delivery address different from item 1? ☐ Yes  
 If YES, enter delivery address below: ☐ No

3. Service Type  
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PS Form 3811, July 2015 PSN 7530-02-000-9063

## Goetze, Phillip, EMNRD

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**From:** Preston Stein <preston@delawareenergyllc.com>  
**Sent:** Friday, July 15, 2016 8:58 AM  
**To:** Goetze, Phillip, EMNRD  
**Subject:** RE: Status of Herren Fed Gas Com #1 & Paloma Fed Com #1  
**Attachments:** Herren Federal Gas Com No 1 WBD Proposed.xlsx; Herren Fed Gas Com No 1 SWD C-108 (1).rtf; C-108 Additional Questions Herren Fed Gas Com No 1.docx

Mr. Goetze,

Attached please find amended docs for Herren Fed to address OCD's concerns.

Best Regards,

Preston M. Stein  
Vice President  
Delaware Energy, LLC  
3001 W. Loop 250 N  
Suite C-105-318  
Midland, TX 79705  
(214) 558-1371

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**From:** Goetze, Phillip, EMNRD [mailto:Phillip.Goetze@state.nm.us]  
**Sent:** Tuesday, July 12, 2016 11:56 AM  
**To:** Preston Stein <preston@delawareenergyllc.com>  
**Cc:** Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>; McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>; Lowe, Leonard, EMNRD <Leonard.Lowe@state.nm.us>  
**Subject:** RE: Status of Herren Fed Gas Com #1 & Paloma Fed Com #1

Mr. Stein:

The application for the Herren Fed Gas Com No. 1 proposes a disposal interval of the Delaware Mountain Group (DMG) that includes all three formations (including the Brushy Canyon formation based on correlation of completed intervals in the area), not just the Bell Canyon and Cherry Canyon formations as submitted. The New Mexico Bureau of Geology and Mineral Resources (Broadhead, 2010) identified this portion of the basin as having moderate to high potential for development of the Brushy Canyon by horizontal drilling. The HC tests conducted on the two perforated intervals in the lower DMG (at 5230'-5270' and at 5140'-5160') along with the test of the shallower, historical intervals of the Bell Canyon formation are representative of vertical DMG play development of the 1980's. Since this proposed injection contains a strata with potential hydrocarbon development, Division is considering modification of the application to the upper two formations.

The application does note that usable water is from surface to the base of the Rustler and that there are no known water wells in the vicinity. Review of the State Engineer's Waters Database identifies at least three shallow water wells (less than 110 feet deep) in Section 8 and within one-mile of the SWD location. All of these wells are domestic sources. Please refer to Section XI of the C-108 for addressing this matter.

Finally, though your summary list of the application notes a completed C-108 form, this item was not include in the package received by OCD. Would you please provide a PDF copy when possible.

If can provide these items and any additional information in support of the lithologic units and hydrocarbon potential would assist in the processing of this application. Please contact me with regards to any questions on this request or additional concerns regarding the application. PRG

Phillip R. Goetze, PG  
Engineering Bureau  
Oil Conservation Division  
New Mexico Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, NM 87505  
Direct: 505.476.3466  
E-mail: [phillip.goetze@state.nm.us](mailto:phillip.goetze@state.nm.us)



---

**From:** Preston Stein [<mailto:preston@delawareenergyllc.com>]  
**Sent:** Monday, July 11, 2016 4:14 PM  
**To:** Goetze, Phillip, EMNRD <[Phillip.Goetze@state.nm.us](mailto:Phillip.Goetze@state.nm.us)>  
**Subject:** RE: Status of Herren Fed Gas Com #1 & Paloma Fed Com #1

Good Afternoon Mr. Goetze,

I'm just following up again as to the status of the Herren Fed Gas Com permit referenced below. I spoke with Mr. McMillan regarding the Paloma Fed but have not yet been apprised of the Herren Fed Gas Com status. Thanks!

Best Regards,

Preston M. Stein  
Vice President  
Delaware Energy, LLC  
3001 W. Loop 250 N  
Suite C-105-318  
Midland, TX 79705  
(214) 558-1371

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**From:** Preston Stein [<mailto:Preston@delawareenergyllc.com>]  
**Sent:** Friday, June 24, 2016 11:04 AM  
**To:** [Phillip.Goetze@state.nm.us](mailto:Phillip.Goetze@state.nm.us)  
**Subject:** Fwd: Status of Herren Fed Gas Com #1 & Paloma Fed Com #1

Good Morning Mr. Goetze,

Please see below. I spoke with Mr. McMillan this morning and he had no idea where these permits were. I have confirmation of receipt by the OCD of both. I submitted proofs of notice and publication affidavit for Paloma Fed and Herren Fed Gas Com on 5/27 and 6/2.

As the 15 day period has passed, I'm trying to get an idea of status on these so that we can properly plan and coordinate development etc. Thanks in advance.

Best Regards,

Preston M. Stein  
Vice President  
Delaware Energy, LLC  
3001 W. Loop 250 N  
Suite C-105-318  
Midland, TX 79705  
(214) 558-1371

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Begin forwarded message:

**From:** Preston Stein <[preston@delawareenergyllc.com](mailto:preston@delawareenergyllc.com)>  
**Date:** June 23, 2016 at 4:15:57 PM CDT  
**To:** "'McMillan, Michael, EMNRD'" <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>  
**Subject:** RE: Status of Herren Fed Gas Com #1 & Paloma Fed Com #1

Good Afternoon Mr. McMillan,

Just following up as to the below. Thanks,

Best Regards,

Preston M. Stein  
Vice President  
Delaware Energy, LLC  
3001 W. Loop 250 N  
Suite C-105-318  
Midland, TX 79705  
(214) 558-1371

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**From:** Preston Stein [<mailto:Preston@delawareenergyllc.com>]  
**Sent:** Monday, June 20, 2016 12:03 PM  
**To:** 'McMillan, Michael, EMNRD' <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>  
**Subject:** Status of Herren Fed Gas Com #1 & Paloma Fed Com #1

Good Morning Mr. McMillan,

I'm just following up as to the current status of the Herren Fed Gas Com and the Paloma Fed Com applications for injection/SWD that Delaware Energy submitted last month. Having received no notice of protest from any affected parties and having submitted all necessary proof of notice information, I believe we should be close to receiving approval assuming the technical aspects of the permits are satisfactory, etc.

Thanks,

Best Regards,

Preston M. Stein Vice President  
Delaware Energy, LLC 3001 W. Loop 250 N  
Suite C-105-318 Midland, TX 79705  
(214) 558-1371

*This electronic transmission and any attached documents or other writings are intended only for the person or entity to which it is addressed and may contain information that is privileged, confidential or otherwise protected from disclosure. If you have received this communication in error, please immediately notify sender by return e-mail and destroy the communication. Any disclosure, copying, distribution or the taking of any action concerning the contents of this communication or any attachments by anyone other than the named recipient is strictly prohibited.*

**VII.**

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

Average 2500 BWPD, Max 10,000 BWPD

**2. Whether the system is open or closed;**

Open System, Commercial SWD

**3. Proposed average and maximum injection pressure;**

Average 300 PSI, Max 578 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 (Willow Lake and Hay Hollow Pools) and Wolfcamp produced water. Water is compatible. Many Delaware SWD wells in the area dispose of water from these horizons, no known incompatibility exist. See attached water analysis from Bone Spring and Wolfcamp produced water.

**5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).**

See attached water analysis from nearby Delaware producing well. T24S, R28E

**\*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 Delaware Mountain Group 2,200' - 4,250' (Bell Canyon to Cherry Canyon Formations). The top of the Bell Canyon (top of Delaware Mountain Group) is located at the base of the Lamar Lime. Bell Canyon and Cherry Canyon contains fine grain sandstone with interbedded siltstones. There are no fresh water zones underlying the proposed injection zone. Usable water depth is from surface to the base of the Rustler at 350'. No known ground water wells exist in section 7, however there are many wells in section 8 of T24-27E. Water source is older alluvium with an average depth to water of 25ft. One well exist in section 18 T24 27E at a depth of 32ft. An additional well exist in section 13 of 24S 26E with a max depth of 200ft.

**IX. Describe the proposed stimulation program, if any.**

10,000 gallons 15% HCL acid job with packer

**X. Logs have been submitted by the previous operator. Delaware Energy will submit cased hole logs following workover and completion work.**

**XI. A water well sample from section 8-24S-27E and section 18-24S-26E are included.**

**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 Herren Fed Gas Com #1 SWD and have found no evidence of faults or other hydrologic connections between the Delaware disposal zone and the underground sources of drinking water.

Preston Stein Vice-President 4/27/2016  
Title \_\_\_\_\_ Date \_\_\_\_\_

### III. WELL DATA

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

Herren Fed Gas Com #1, Sec. 7-T24S-R27E, 1980' FSL & 1980' FWL, UL K, 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"	417'	550	17-1/2"	Surface	Circulate
8-5/8"	5,618'	1200	11"	240'	Free point & cut
*7" UFJ	2,842'	150	7.825"	Surface	Circulate, CBL
* 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 50ft above uppermost perforation

**(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.**

Delaware – Bell Canyon to Cherry Canyon

Pool Name: SWD (Delaware)

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

2,892' to 4,250 (perforated)

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

The well was originally drilled to test Wolfcamp, Bone Springs, and Delaware Sands. The well was found 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.**



Perforations 10,026'-10,134', Plugged with CIBP set @ 10,000' w/ 35 sx cmt

Perforations 5,230'-5,270', Plugged with CIBP set @ 5,215'

Perforations 5,140'-5,160', Plugged with CIBP set @ 5,120'

perforated 2,892'-2,914', spotted cement plug from 2764' to 2914'

Perforations 417'- 422 plugged with 100 sacks cement with tubing at 441' then squeezed

Plugged with 100 sx cmt spotted from 365'-465'

Spotted 100ft plug at 240' (casing stub)

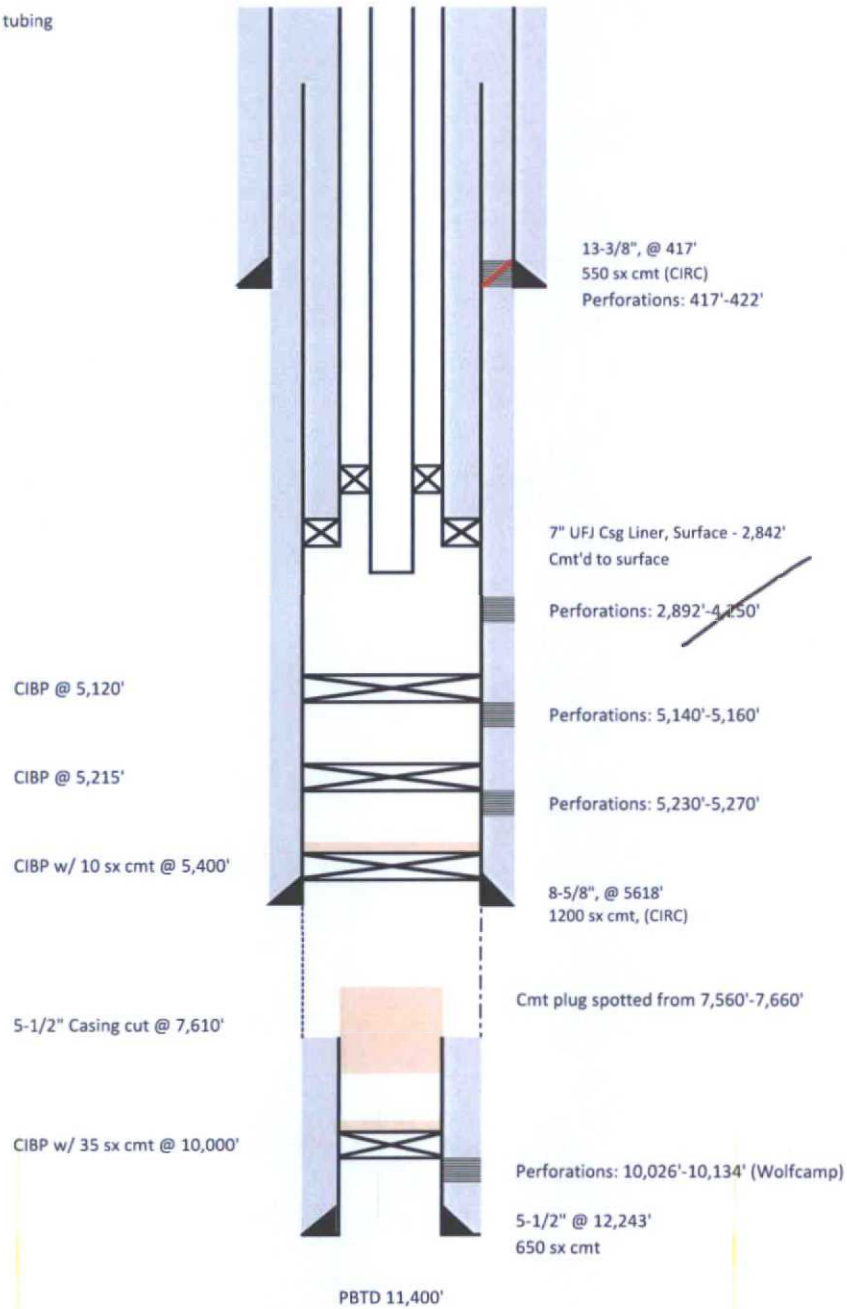
Spotted surface plug with 20 sx

**(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.**

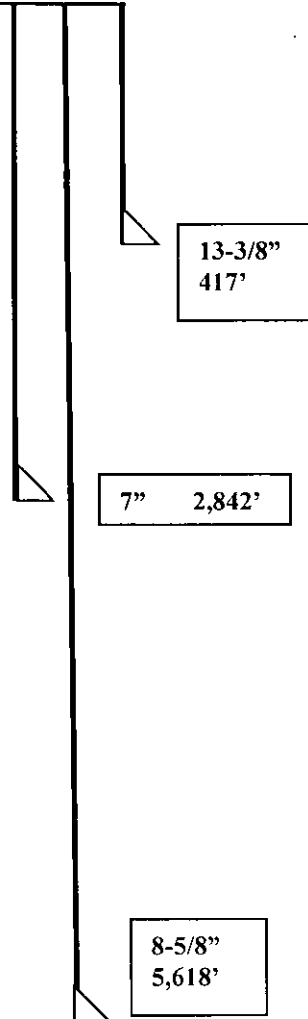
Next Higher: None. Next Lower: Bone Spring 5,620', Wolfcamp 8,718', Strawn 10,710', Atoka 10,955', Morrow 11,440'

Herren Federal Gas Com No 1  
1980 'FSL & 1980' FWL, UL K, SEC. 7, T-24S R-27E, Eddy County, NM  
API # 30-015-21033

4.5" IPC tubing



## INJECTION WELL DATA SHEET

OPERATOR: Delaware Energy LLCWELL NAME & NUMBER: Herren Fed Gas Com No 1WELL LOCATION: 1980' FSL. 1980' FWL K 7 24S 27E  
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"  
 Cemented with: 550 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: SURFACE Method Determined: Circulated  
 Total Depth: 417'

Intermediate Casing (N/A)

Hole Size: 11" Casing Size: 8-5/8"  
 Cemented with: 1200 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: 240' Method Determined: Free point & cut  
 Total Depth: 5618'

Liner\*

Hole Size: 7.825" Casing Size: 7", 26#  
 Cemented with: 150 sx. *or* \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: Surface Method Determined: CBL  
 Total Depth: 2,842'

\*Proposed work to be done

Injection Interval2,892' feet to 4,250'

Perforated, Cased Hole

*reduced to  
Cherry Canyon  
only*

# INJECTION WELL DATA SHEET

Tubing Size: 4.5" Lining Material: Internally plastic coated

Type of Packer: Weatherford Arrow Set IX Injection Packer

Packer Setting Depth: 50-100ft above perforations

Other Type of Tubing/Casing Seal (if applicable): NONE

## Additional Data

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

If no, for what purpose was the well originally drilled? Well was originally drilled to test Wolfcamp,

Bone Springs, and Delaware Sands. The well was found to be unproductive of hydrocarbons.

2. Name of the Injection Formation: DELAWARE-BELL – CHERRY CANYON

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

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.

Yes.

Perforations 10,026'-10,134', Plugged with CIBP set @ 10,000' w/ 35 sx cmt

Perforations 5,230'-5,270', Plugged with CIBP set @ 5,215'

Perforations 5,140'-5,160', Plugged with CIBP set @ 5,120'

Perforations 2,892'-2,914', Plugged with cement plug spotted from 2764' to 2914'

Squeeze perfs at 417'- 422' 100 sx cmt spotted with tubing at 441'

Spotted plug from 365'- 465'

Spotted 100ft plug at 240' (casing Stub)

20sx surface plug

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

BELOW: Bone Spring 5,620', Wolfcamp 8,718', Strawn 10,710', Atoka 10,955', Morrow 11,440',

ABOVE: NONE

---



C-108 Review Checklist: Received 05/09/16 Add. Request: 07/12/16 Reply Date: 05/09/16 Suspended: 05/09/16 [Ver 16]

ORDER TYPE: WFX / PMX / SWD Number: 1645 Order Date: Aug 22/16 Legacy Permits/Orders: None

Well No. 1 Well Name(s): Herren Federal Gas Com.

API: 30-0 15-21033 Spud Date: 12/13/1973 New or Old: old (UIC Class II Primacy 03/07/1982)

Footages 1980' FSL / 1980' FWL Lot - or Unit K Sec 7 Tsp 24S Rge 27E County Eddy

General Location: 27 mi. South of Lordsburg/north of Black River Pool: Delaware Bell Canyon - Cherry Canyon Pool No.: 96100

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

COMPLIANCE RULE 5.9: Total Wells: 0 Inactive: 0 Fincl Assur: Blanket bond Compl. Order? N6 IS 5.9 OK? Yes Date: 8/22/16

WELL FILE REVIEWED ☒ Current Status: P4A Morrow well; Federal well - fed. min; shallower tests & production

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☒ Logs in Imaging: Two logs on record - not all Delaware tests conducted are on file - P4A 1/1980 - CML/MIL/DLL

Planned Rehab Work to Well: Drill out plugs to 5120 CIBP; set new 7" casing to 2892' of DMG Shallow/deep enough to show top of DMG not on file

Well Construction Details	Sizes (in)	Setting	Cement	Cement Top and
Borehole / Pipe	Depths (ft)	Sx or Cf	Determination Method	
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface	17 1/2 / 13 3/8	0 to 417	550	Circulated to surface
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	11 / 8 5/8	0 to 5618	8 5/8 cut at 240' prior to P4A	1200 - cut casing
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	7 7/8 / 5 1/2	0 to 12243	5 1/2 cut at 7610' prior to P4A	< 7610' cut
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Prod/Liner			None	650 SX casing
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Liner	7"	0 to 2842'	None	Cir or CBL
Planned <input checked="" type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERF	Exist: 417-422' (P4A) 2892 - 2914	New 2892 - 5250'	Int Length 5708	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining	Units	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.	5140 - 5160 5250 - 5270	10026 - 10183	3600' Tops	Drilled TD <u>12243</u> PBT <u>11400</u>
Confining Unit: Litho. Struc. Por.	± 800'	Rustler	Not avail	NEW TD <u>—</u> NEW PBT <u>5120</u> (current CIBP)
Proposed Inj Interval TOP:	2892	Bell Canyon (?)	2000'	NEW Open Hole <input type="checkbox"/> or NEW Perfs <input checked="" type="checkbox"/>
Proposed Inj Interval BOTTOM:	5250	Cherry Canyon	2000'	Tubing Size <u>4 1/2</u> in. Inter Coated? <u>Yes</u>
Confining Unit: Litho. Struc. Por.	± 800'	Brush Canyon	2000'	Proposed Packer Depth <u>Not given</u> ft
Adjacent Unit: Litho. Struc. Por.	± 800'	Bone Spring	5670'	Min. Packer Depth <u>2792'</u> (100-ft limit)
				Proposed Max. Surface Press. <u>300</u> psi
				Admin. Inj. Press. <u>579</u> (0.2 psi per ft)

#### AOR: Hydrologic and Geologic Information

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

FRESH WATER: Aquifer Alluvial / Rustler (Base) Max Depth < 300' HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: Carlsbad CAPITAN REEF: thru — adj NA No. GW Wells in 1-Mile Radius? 3 FW Analysis? Not available

Disposal Fluid: Formation Source(s) Bone Spring / Wolfcamp Analysis? Yes On Lease ☐ Operator Only ☐ or Commercial ☐

Disposal Interval: Inject Rate (Avg/Max BWPD): 2500/10000 Protectable Waters? No Source: Historical System: Closed or Open

HC Potential: Producing Interval? Yes Formerly Producing? Yes Method: Logs/DST/P&A/Other Historical 2-Mile Radius Pool Map ☒

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 0 Horizontals? 0

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 5/6/16 Mineral Owner BLM Surface Owner BLM N. Date 5/6/16

RULE 26.7(A): Identified Tracts? Yes Affected Persons: COG / O'Neil Properties / Every Prod. / Featherstone N. Date 5/6/16

Order Conditions: Issues: Formation picks & confining zones; final const. due to interval reduction

Add Order Cond: Excluded Brushy Canyon based on adjacent logs; Cmt stipulations;

CIBP at 3000' / injection survey.

## Goetze, Phillip, EMNRD

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**From:** Goetze, Phillip, EMNRD  
**Sent:** Tuesday, July 12, 2016 10:55 AM  
**To:** 'Preston Stein'  
**Cc:** Jones, William V, EMNRD; McMillan, Michael, EMNRD; Lowe, Leonard, EMNRD  
**Subject:** RE: Status of Herren Fed Gas Com #1 & Paloma Fed Com #1

Mr. Stein:

The application for the Herren Fed Gas Com No. 1 proposes a disposal interval of the Delaware Mountain Group (DMG) that includes all three formations (including the Brushy Canyon formation based on correlation of completed intervals in the area), not just the Bell Canyon and Cherry Canyon formations as submitted. The New Mexico Bureau of Geology and Mineral Resources (Broadhead, 2010) identified this portion of the basin as having moderate to high potential for development of the Brushy Canyon by horizontal drilling. The HC tests conducted on the two perferd intervals in the lower DMG (at 5230'-5270' and at 5140'-5160') along with the test of the shallower, historical intervals of the Bell Canyon formation are representative of vertical DMG play development of the 1980's. Since this proposed injection contains a strata with potential hydrocarbon development, Division is considering modification of the application to the upper two formations.

The application does note that usable water is from surface to the base of the Rustler and that there are no known water wells in the vicinity. Review of the State Engineer's Waters Database identifies at least three shallow water wells (less than 110 feet deep) in Section 8 and within one-mile of the SWD location. All of these wells are domestic sources. Please refer to Section XI of the C-108 for addressing this matter.

Finally, though your summary list of the application notes a completed C-108 form, this item was not include in the package received by OCD. Would you please provide a PDF copy when possible.

If can provide these items and any additional information in support of the lithologic units and hydrocarbon potential would assist in the processing of this application. Please contact me with regards to any questions on this request or additional concerns regarding the application. PRG

Phillip R. Goetze, PG  
Engineering Bureau  
Oil Conservation Division  
New Mexico Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, NM 87505  
Direct: 505.476.3466  
E-mail: [phillip.goetze@state.nm.us](mailto:phillip.goetze@state.nm.us)



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**From:** Preston Stein [mailto:[preston@delawareenergyllc.com](mailto:preston@delawareenergyllc.com)]  
**Sent:** Monday, July 11, 2016 4:14 PM

1st Correlation well

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505		<b>NM OIL CONSERVATION</b> State of New Mexico Energy, Minerals and Natural Resources <b>FEB 2 2015</b> RECEIVED Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505		Form C-105 Revised August 1, 2011						
		1. WELL API NO. 30-015-42458								
		2. Type of Lease <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/> FED/INDIAN								
		3. State Oil & Gas Lease No.								
<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>										
4. Reason for filing:  <input checked="" type="checkbox"/> <b>COMPLETION REPORT</b> (Fill in boxes #1 through #31 for State and Fee wells only)  <input type="checkbox"/> <b>C-144 CLOSURE ATTACHMENT</b> (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)			5. Lease Name or Unit Agreement Name: Black River State							
			6. Well Number: 4H							
7. Type of Completion: <input checked="" type="checkbox"/> NEW WELL <input type="checkbox"/> WORKOVER <input type="checkbox"/> DEEPENING <input type="checkbox"/> PLUGBACK <input type="checkbox"/> DIFFERENT RESERVOIR <input type="checkbox"/> OTHER										
8. Name of Operator COG Operating LLC			9. OGRID 229137							
10. Address of Operator 2208 W. Main Street Artesia, NM 88210			11. Pool name or Wildcat Wildcat; Wolfcamp							
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	M	5	24S	27E		660	South	250	West	Eddy
BH:	P	5	24S	27E		701	South	671	East	Eddy
13. Date Spudded 8/31/14	14. Date T.D. Reached 9/27/14	15. Date Rig Released 10/1/14		16. Date Completed (Ready to Produce) 12/11/14		17. Elevations (DF and RKB, RT, GR, etc.) 3212' GR				
18. Total Measured Depth of Well 13775'		19. Plug Back Measured Depth 13698'		20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run				
22. Producing Interval(s), of this completion - Top, Bottom, Name 9823-13680' Bone Spring										
<b>23. CASING RECORD (Report all strings set in well)</b>										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13 3/8"		54.5#		350'		17 1/2"		400 sx		0
9 5/8"		36#		2035'		12 1/4"		750 sx		0
7"		29#		8932'		8 3/4"		900 sx		0
4 1/2"		13.5#		8637-13770		6 1/8"		600 sx		
<b>24. LINER RECORD</b>						<b>25. TUBING RECORD</b>				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET			
					2 7/8"	8802'				
26. Perforation record (interval, size, and number)  9823-13600' (936) 13670-13680' (60)						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL      AMOUNT AND KIND MATERIAL USED 9823-13600'      Acidz w/81606 gal 7 1/2%; Frac w/7820415# sand & 7579404 gal fluid				
<b>28. PRODUCTION</b>										
Date First Production 12/20/14		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing				
Date of Test 1/19/15	Hours Tested 24	Choke Size 36/64"	Prod'n For Test Period	Oil - Bbl 348	Gas - MCF 2691	Water - Bbl. 2025	Gas - Oil Ratio			
Flow Tubing Press. 1500#	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl. 348	Gas - MCF 2691	Water - Bbl. 2025	Oil Gravity - API - (Corr.)				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Flared						30. Test Witnessed By Tyler Deans				
31. List Attachments Surveys & logs previously submitted										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.										
33. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude _____ Longitude _____ NAD 1927 1983 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										
Signature: <i>Stormi Davis</i>		Printed Name: Stormi Davis		Title: Regulatory Analyst			Date: 1/29/15			
E-mail Address: sdavis@concho.com										



# 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 deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill 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 11, 12 and 26-31 shall be reported for each zone.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico			Northwestern New Mexico	
T. Anhy	T. Canyon		T. Ojo Alamo	T. Penn A"
T. Salt 482'	T. Strawn		T. Kirtland	T. Penn. "B"
B. Salt 1765'	T. Atoka		T. Fruitland	T. Penn. "C"
T. Yates	T. Miss		T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian		T. Cliff House	T. Leadville
T. Queen	T. Silurian		T. Menefee	T. Madison
T. Grayburg	T. Montoya		T. Point Lookout	T. Elbert
T. San Andres	T. Simpson		T. Mancos	T. McCracken
T. Glorieta	T. McKee		T. Gallup	T. Ignacio Otzte
T. Paddock	T. Lamar 1986'		Base Greenhorn	T. Granite
T. Blinbry	T. Bell Canyon 2085'		T. Dakota	
T. Tubb	T. Cherry Canyon 2841'		T. Morrison	
T. Drinkard	T. Brushy Canyon 3876'		T. Todilto	
T. Abo	T. Bone Spring Lm 5437'		T. Entrada	
T. Wolfcamp 8783'	T. 1 <sup>st</sup> Bone Spring 6459'		T. Wingate	
T. Penn	T. 2 <sup>nd</sup> Bone Spring 6935'		T. Chinle	
T. Cisco (Bough C)	T. 3 <sup>rd</sup> Bone Spring 8401'		T. Permian	

## OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....  
 No. 2, from.....to.....  
 No. 3, from.....to.....  
 No. 4, from.....to.....

## IMPORTANT WATER SANDS

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

No. 1, from.....to.....feet.....  
 No. 2, from.....to.....feet.....  
 No. 3, from.....to.....feet.....

## LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology



Submit To Appropriate District Office  
State Lease - 6 copies  
Fee Lease - 5 copies  
District I  
1625 N. I. Ave., Santa Fe, NM 87240  
District II  
1301 W. 1st St., Santa Fe, NM 87210  
District III  
1000 Richey Rd., Santa Fe, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

2nd Correlation well Form C-105  
Revised June 10, 2003

WELL API NO.: 30 015 34701

5. Indicate Type of Lease  
STATE FEE X  
State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:  
OIL WELL GAS WELL X DRY ☐ OTHER

b. Type of Completion:  
NEW X WORK ☐ DEEPEN ☐ PLUG ☐ DIFF.  
WELL OVER BACK RESVR.

2. Name of Operator: OGX Resources, LLC

3. Address of Operator  
P.O. Box 2064, Midland, TX 79702

7. Lease Name or Unit Agreement Name

Red Bat Fee

8. Well No.: 1

9. Pool name or Wildcat:  
Black River, Morrow (Gas)

4. Well Location

Unit Letter O : 660' Feet From The South Line and 1830' Feet From The East Line  
Section 8 Township 24S Range 27E NMPM Eddy County

10. Date Spudded 8-25-06 11. Date T.D. Reached 9-22-06 12. Date Compl. (Ready to Prod.) 12-2-06 13. Elevations (OF & RKB, RT, GR, etc.) 3169' GR 14. Elev. Casinghead

15. Total Depth: 12,344' 16. Plug Back T.D.: 12,260' 17. If Multiple Compl. How Many Zones? 18. Intervals Drilled By Rotary Tools: X Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name  
11,840-60'; 11,994-12,010'; 12,242-56' - Morrow 20. Was Directional Survey Made No

21. Type Electric and Other Logs Run: GR/CCL/CBL

22. Was Well Cored: No

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB. FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48#	532'	17 1/2"	730 sx	None
9 5/8"	36#	2031'	12 1/4"	800 sx	None
7"	26#	9300'	8 3/4"	1250 sx	None

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
4 1/2"	8996'	12,344'	355 sx	

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	8920'	

26. Perforation record (interval, size, and number):

Morrow @ 11,840-12,256' w/4 shots/ft

Morrow @ 11,644-11,760'

CIBP @ 11,800' pushed down to 12,182' washed out hole to 12,260' (Jan 07).

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

DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED

11.840-12.256" 495 bbl frac w/40000# ultraprop

w/196 tons C02

11.644-11.760" 3000 gals 7.5% HCL/22900 gal frac w/48500# prop

28. PRODUCTION

Date First Production: 12-3-06	Production Method (Flowing, gas lift, pumping - Size and type pump) flowing				Well Status (Prod. or Shut-in) Producing		
Date of Test 2-1-07	Hours Tested 24	Choke Size 32/64"	Prod'n For Test Period	Oil - Bbl 0	Gas - MCF 340	Water - Bbl. 28	Gas - Oil Ratio
Flow Tubing Press. 200=	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)	

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

Test Witnessed By:

Sales

30. List Attachments

Logs & inclination, C-104.

Signature

Name : Ann E. Ritchie

Title: Regulatory Agent

Date: 3-13-07

E-mail Address: ann.ritchie@wtor.net

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 deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill 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 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka 11,128'	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 Otzte
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. Delaware Sand 2106'	T. Todilto	T.
T. Drinkard	T. Bone Springs 6520'	T. Entrada	T.
T. Abo	T. Morrow 11,502'	T. Wingate	T.
T. Wolfcamp 8821'	T.	T. Chinle	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.....to.....

No. 3, from.....to.....

No. 2, from.....to.....

No. 4, from.....to.....

## IMPORTANT WATER SANDS

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

No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

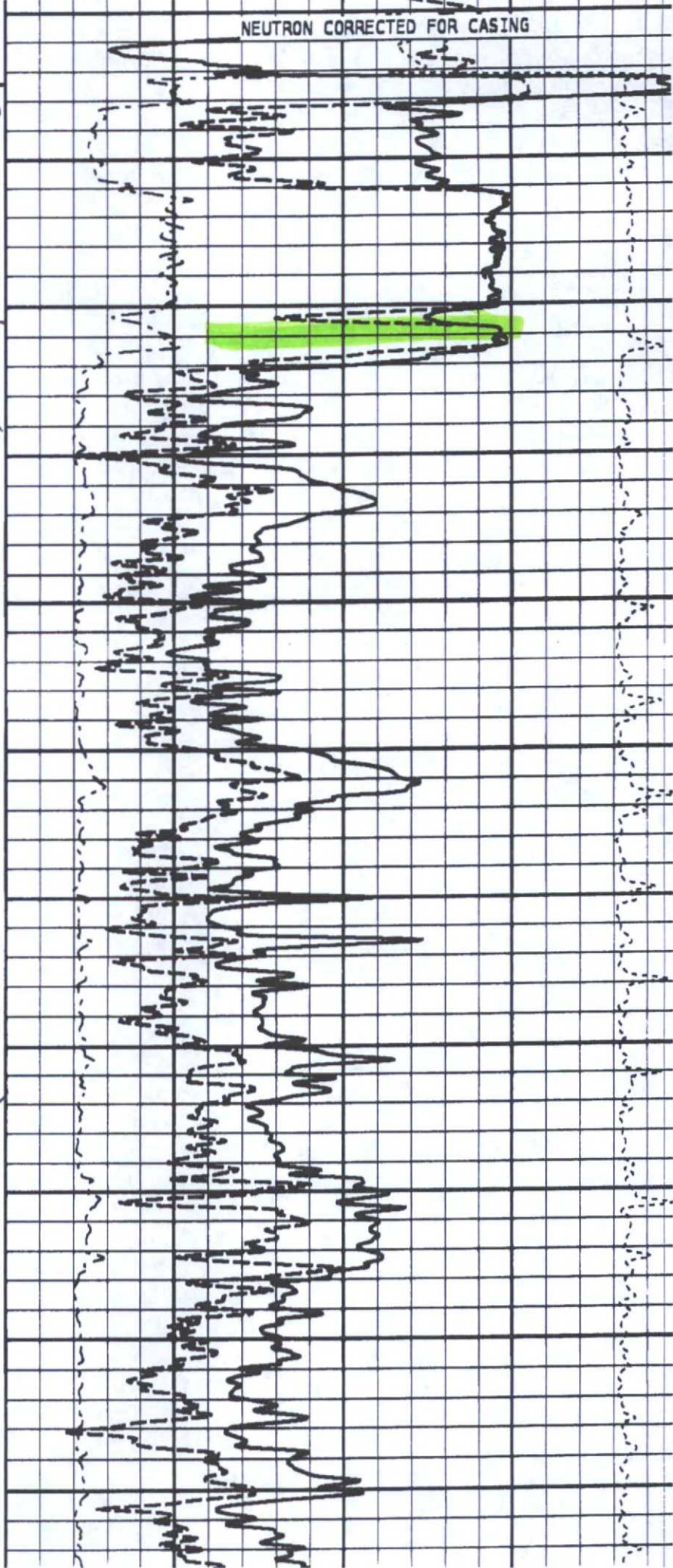
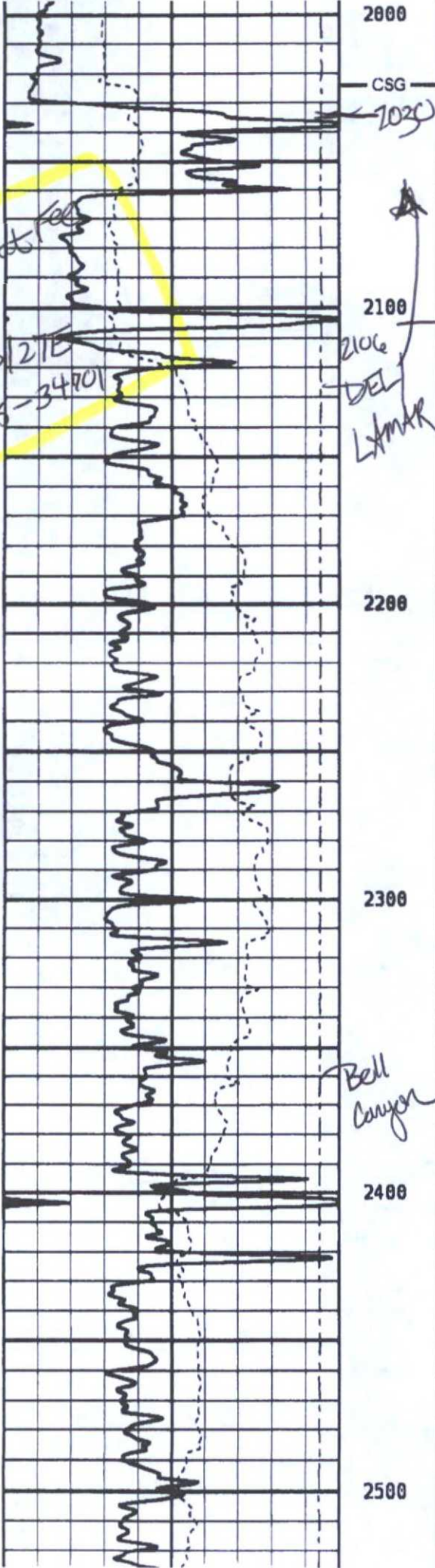
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## LITHOLOGY RECORD (Attach additional sheet if necessary)

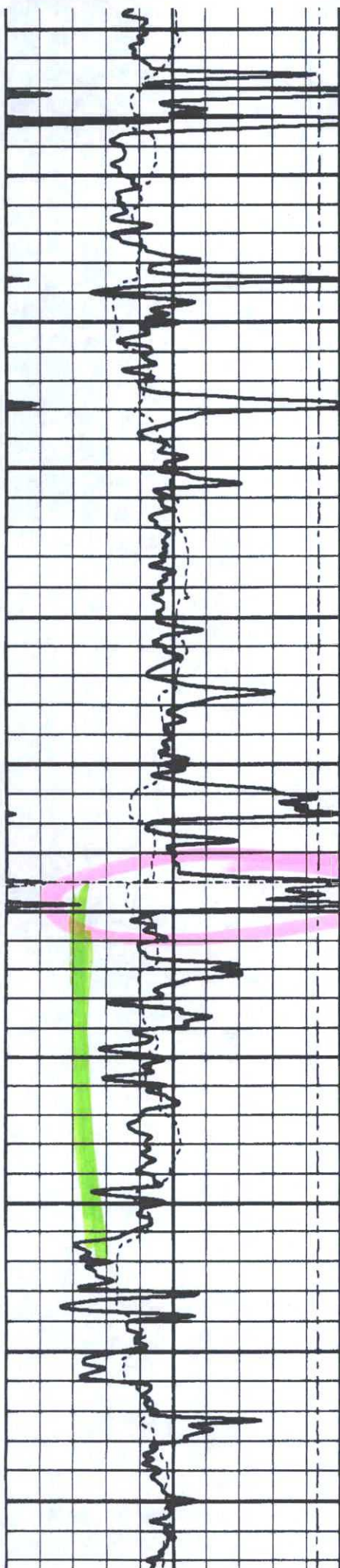
From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
			Delaware @ 2106'				
			Cherry Canyon @ 2808'				
			Bone Spring @ 5500'				
			1st Bone Spring @ 6502'				
			2nd Bone Spring @ 7039'				
			3rd Bone Spring @ 8448'				
			Wolfcamp @ 8821'				
			Atoka @ 11,128'				
			Morrow @ 11,502'				
			Upper Morrow @ 11,612'				
			Middle Morrow @ 11,817'				
			Lower Morrow @ 12,130'				



Rad Bot  
#1  
8/245/21E  
30-015-34701







2600

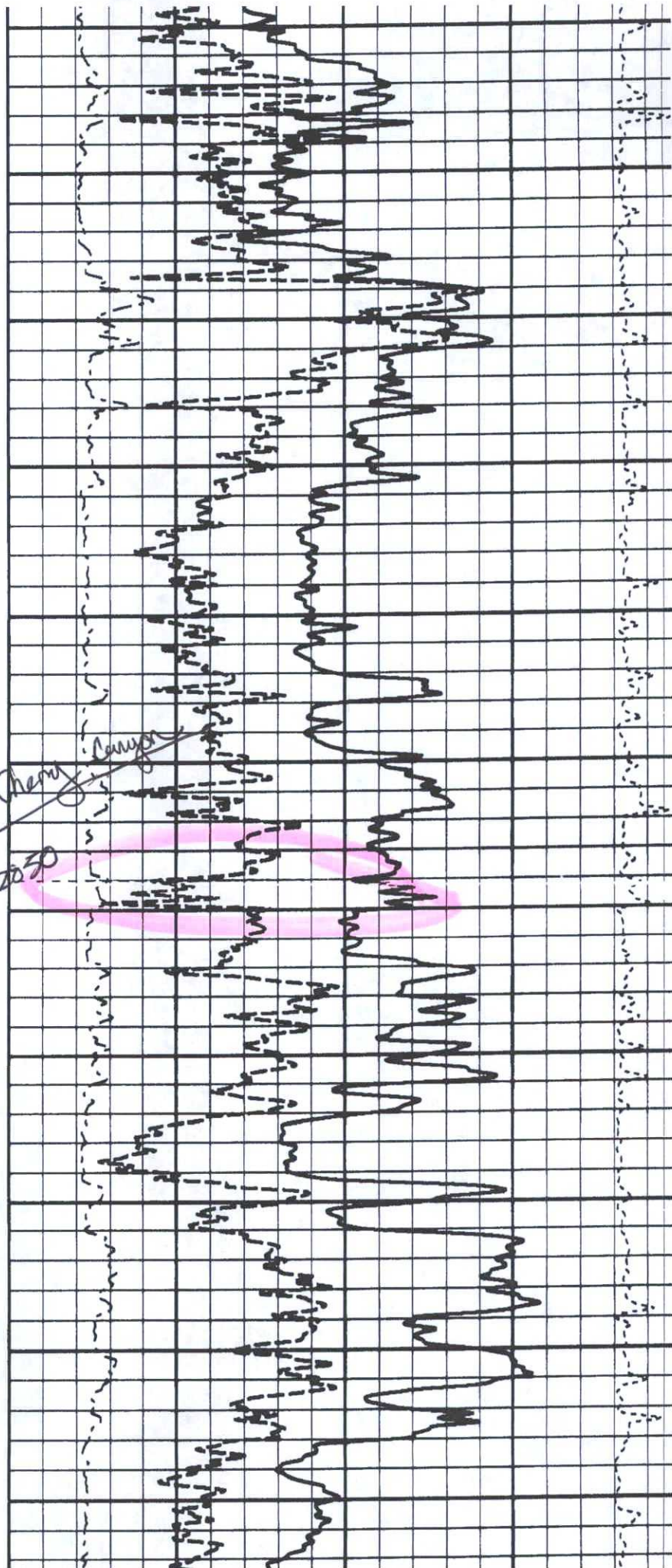
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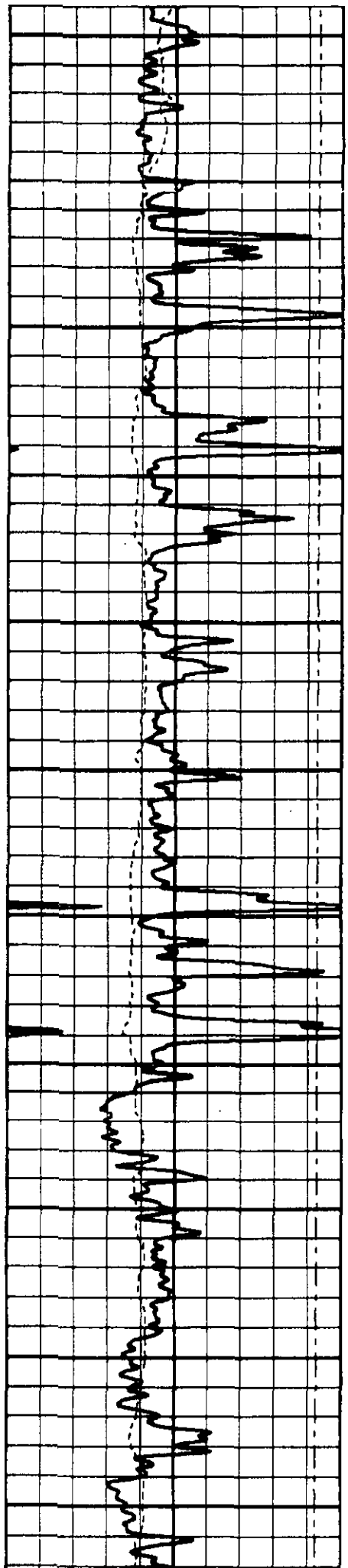
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2900

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Cherry  
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3100

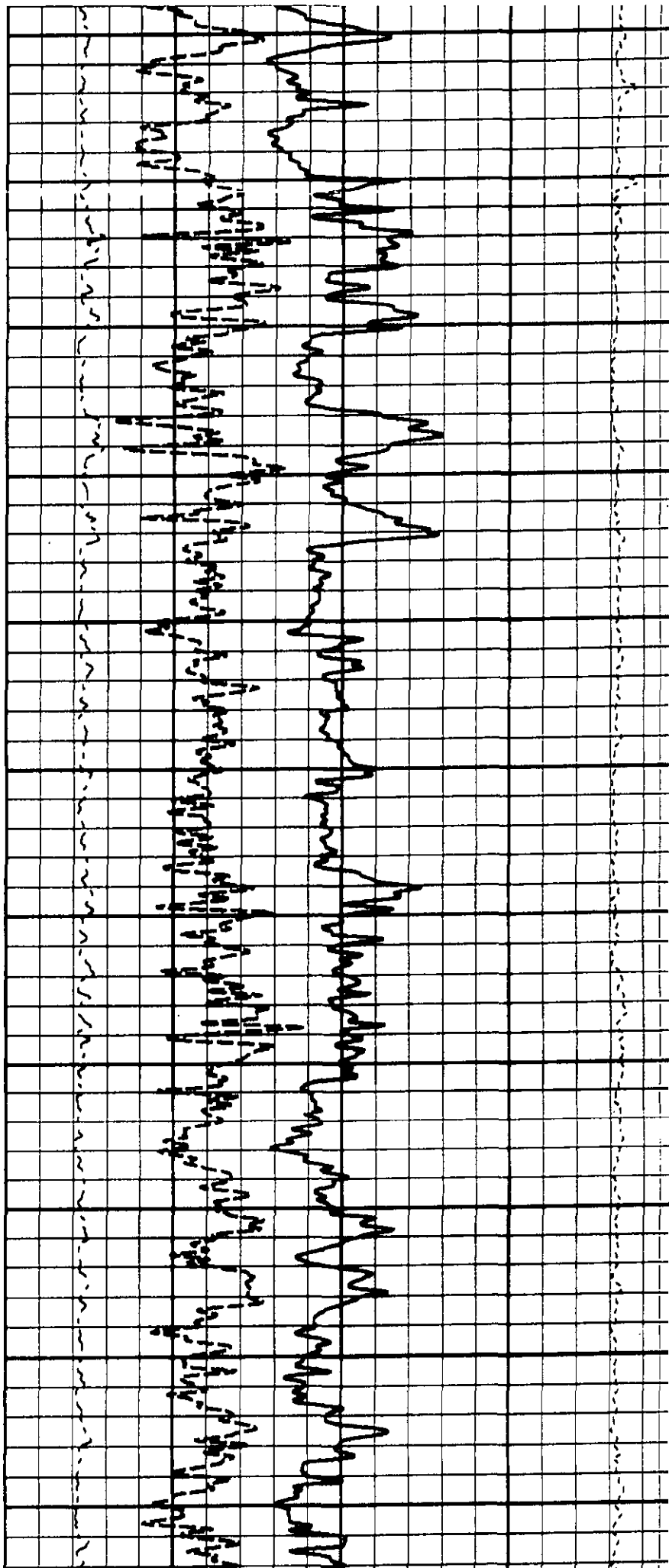
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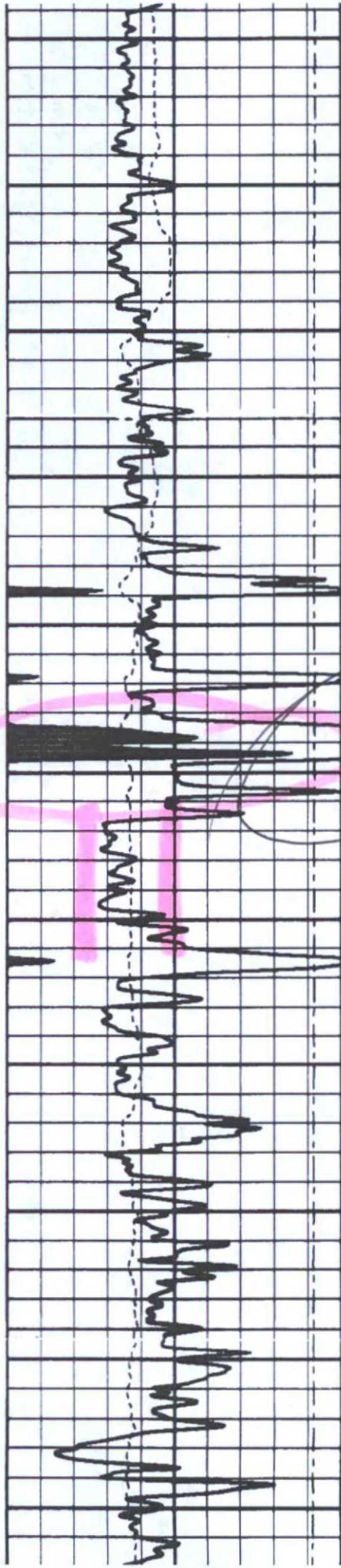
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3500

3600







3700

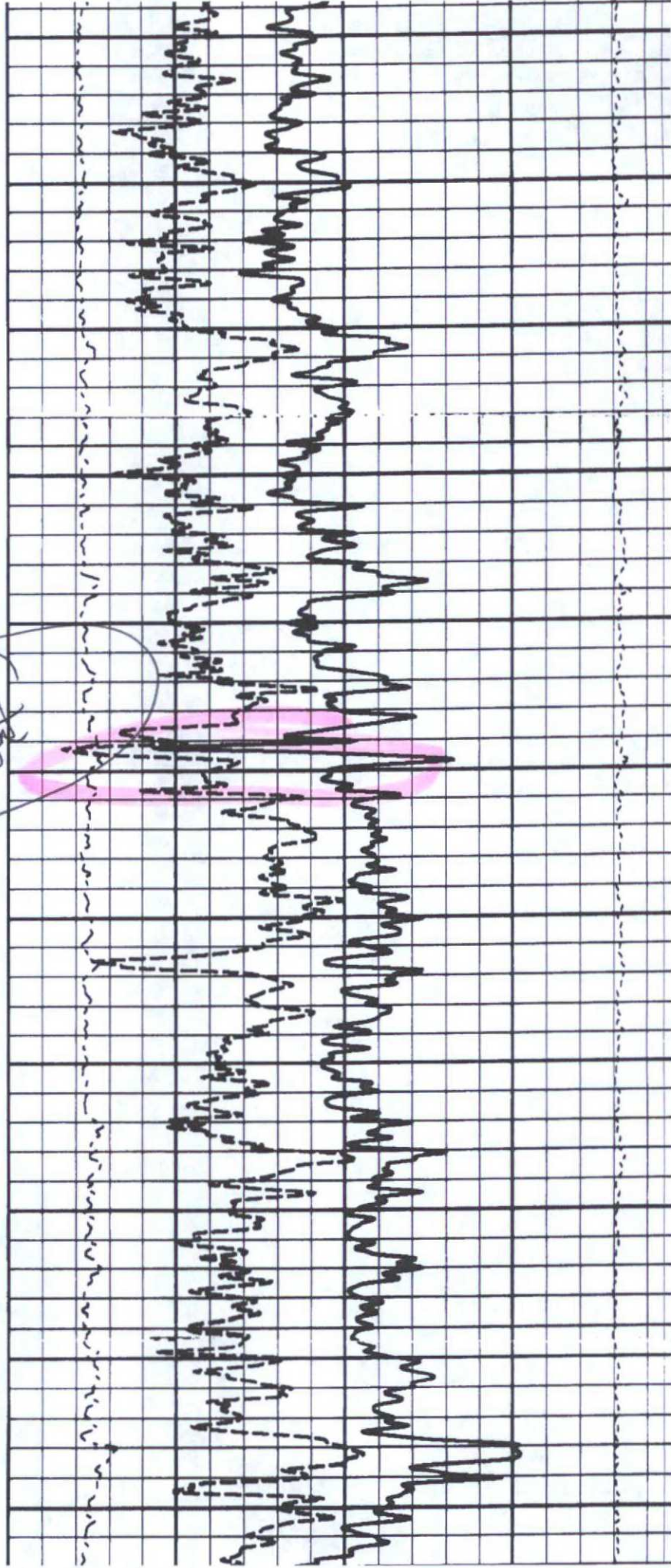
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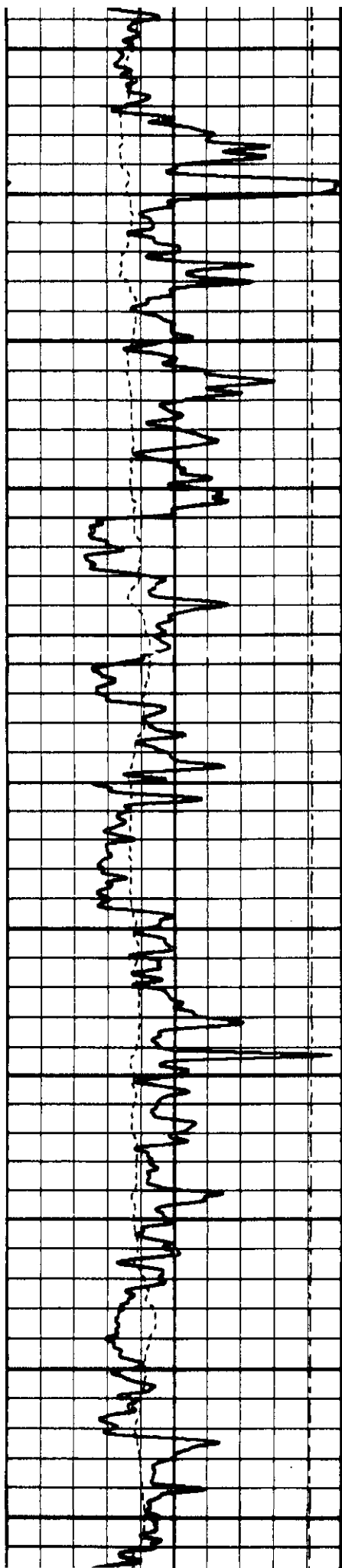
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*Brushy  
Congers*





4200

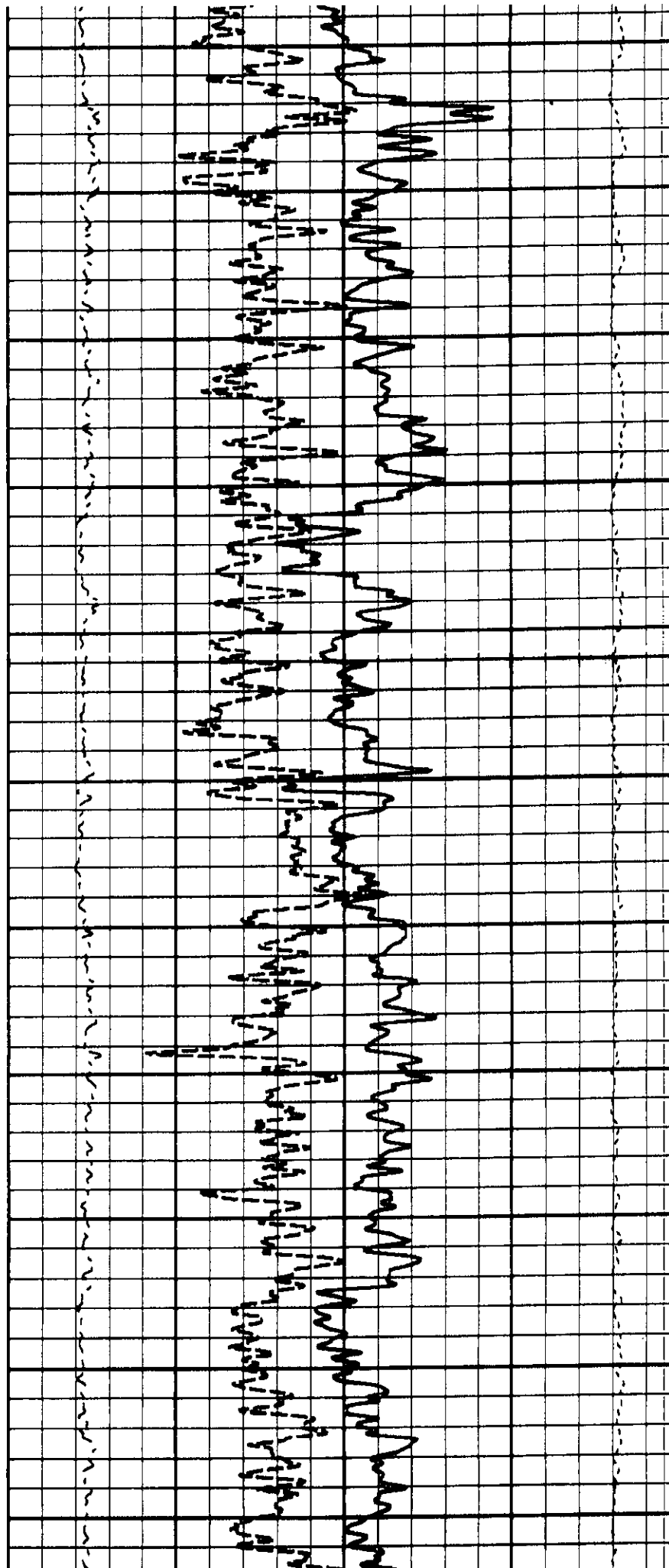
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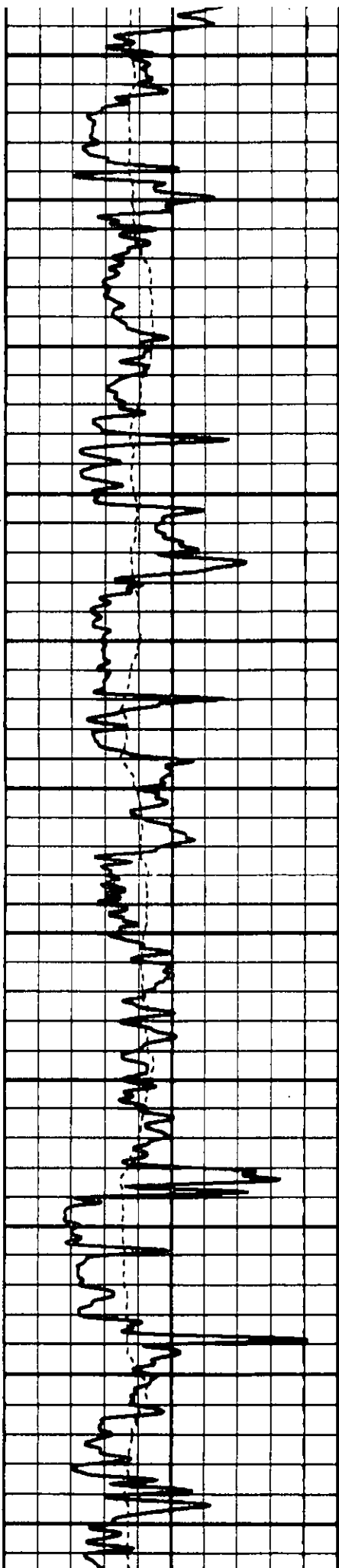
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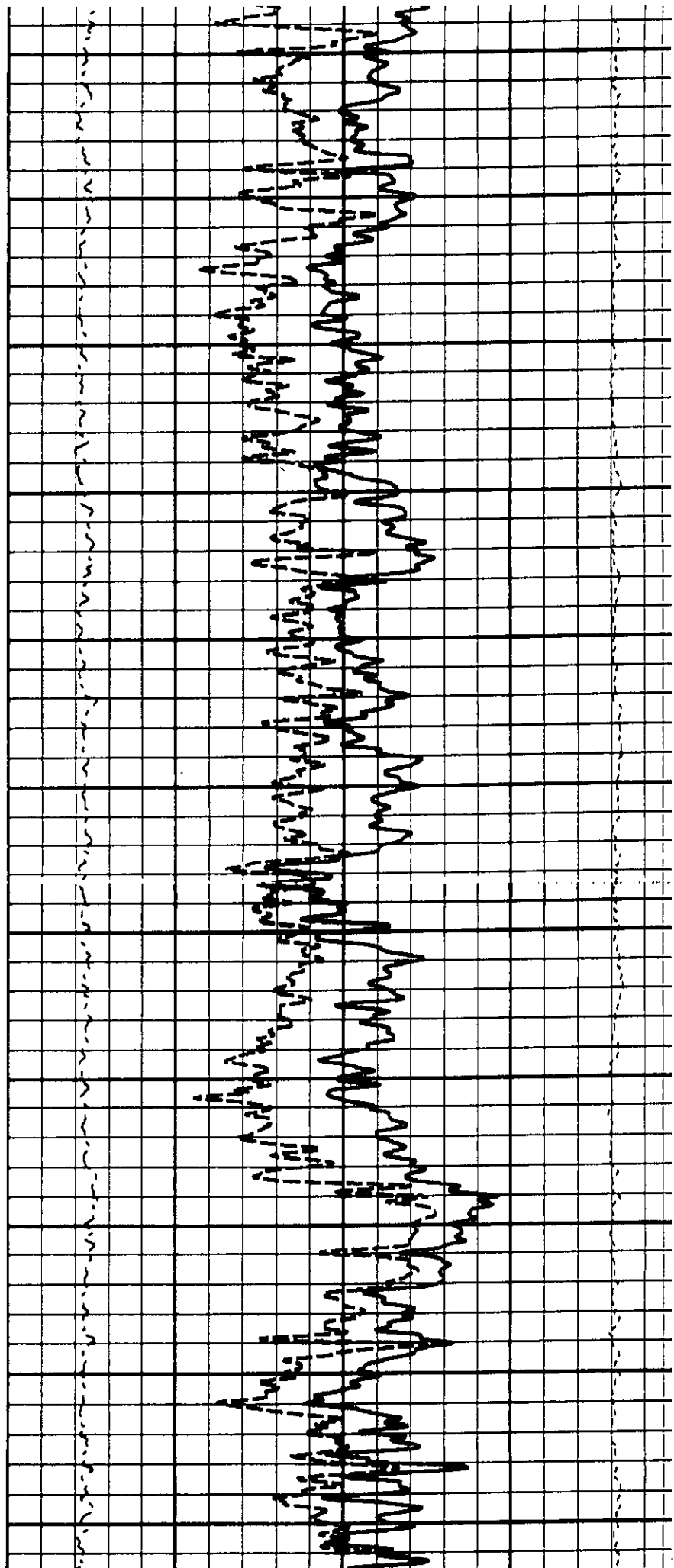
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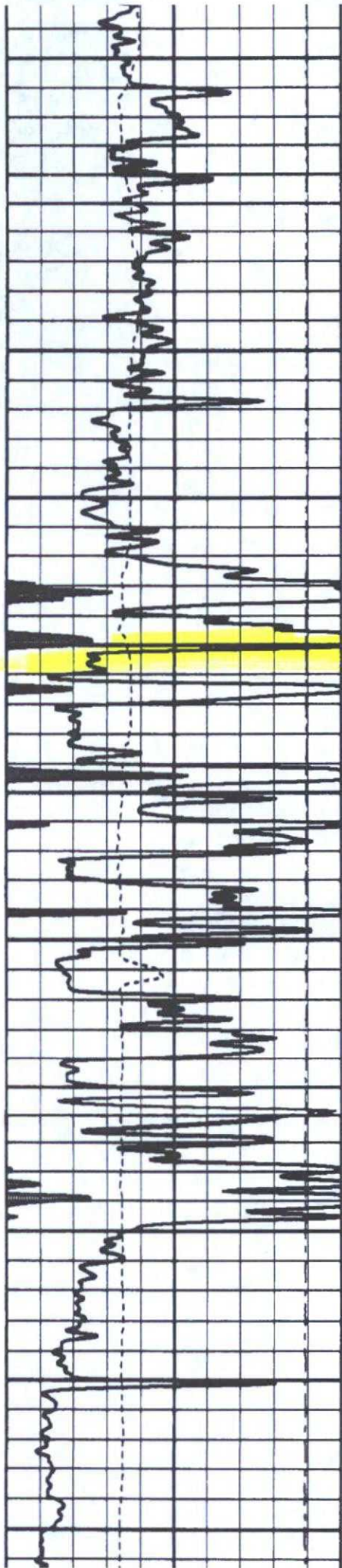
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5200





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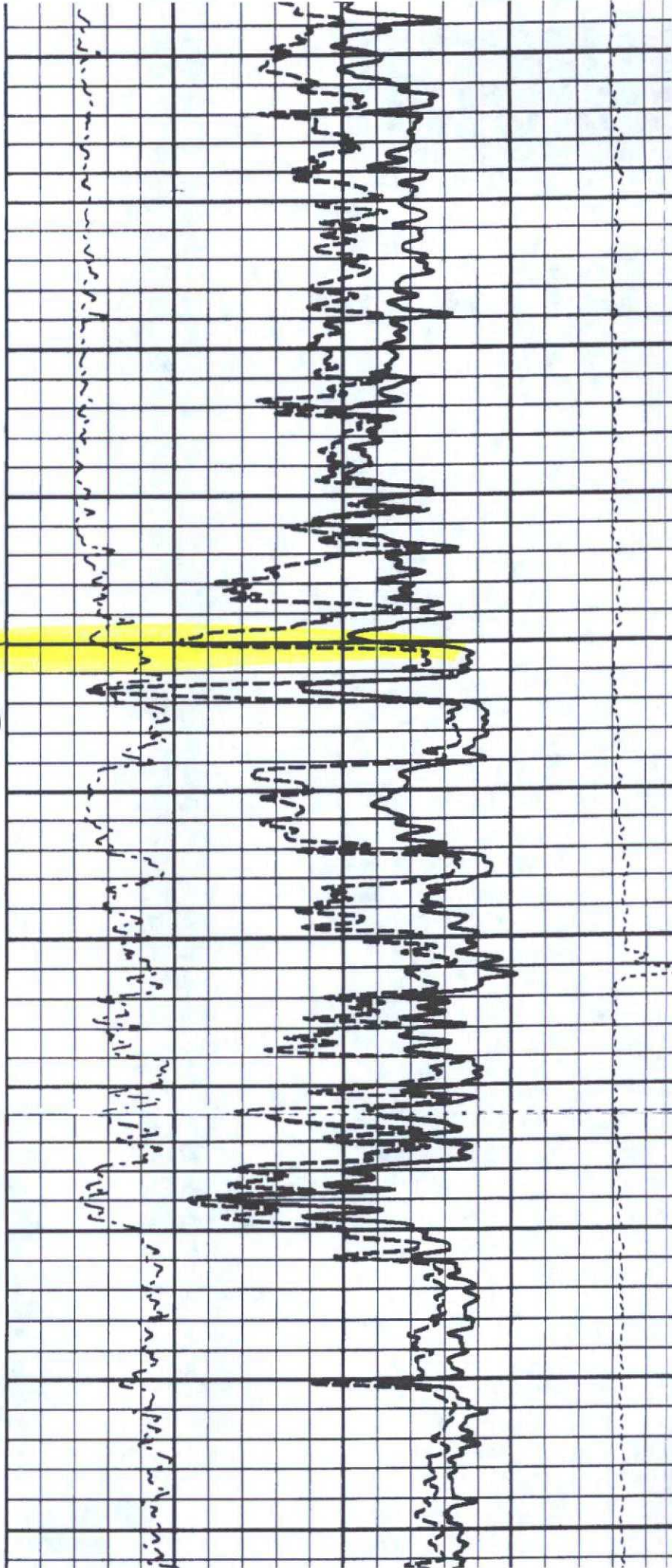
5500

Boxe  
Spring

5600

5700

5800







# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)					C=the file is closed)			(quarters are smallest to largest) (NAD83 UTM in meters)									
WR File Nbr	Sub		Diversion	Owner	County	POD Number	Code	Grant	q q q						X	Y	
	basin	Use							Source	6416	4	Sec	Tws	Rng			
<u>C 00342</u>	C	CLS	0	UNION OIL CO. OF CALIFORNIA	ED	<u>C 00342</u>		C		4	1	13	24S	27E	580432	3565080*	
<u>C 00347</u>	CUB	EXP	0	BRANTLEY GEORGE	ED	<u>C 00347</u>			Shallow	1	1	13	24S	27E	580010	3565479*	
<u>C 00364</u>	C	CLS	0	A.J. CRAWFORD	ED	<u>C 00364</u>		C		1	2	09	24S	27E	575997	3567043*	
<u>C 00516</u>	C	IRR	72.4	BARBARA DAVIS	ED	<u>C 00516</u>			Shallow	1	3	4	08	24S	27E	574288	3565901*
					ED	<u>C 00516 POD3</u>				1	3	4	08	24S	27E	574288	3565901*
					ED	<u>C 00516 POD5</u>				1	3	4	08	24S	27E	574286	3565921
					ED	<u>C 00516 POD6</u>			Shallow	1	4	3	08	24S	27E	573885	3565895*
					ED	<u>C 00516 S</u>			Shallow	1	3	4	08	24S	27E	574288	3565901
<u>C 00631</u>	C	SAN	3	GIRL SCOUTS OF AMERICA	ED	<u>C 00631</u>			Shallow	3	3	4	08	24S	27E	574288	3565701*
<u>C 00683</u>	C	DOM	3	HARLEY DAVIS	ED	<u>C 00683</u>			Shallow	4	3	08	24S	27E	573986	3565796*	
<u>C 00821</u>	C	PRO	0	UNION OIL CO. OF CALIFORNIA	ED	<u>C 00821</u>			Shallow	3	2	09	24S	27E	575996	3566635*	
<u>C 00850</u>	C	PRO	0	UNION OIL CO. OF CALIFORNIA	ED	<u>C 00850</u>			Shallow	2	3	09	24S	27E	575595	3566223*	
<u>C 00929</u>	C	DOM	3	J F FOREHAND	ED	<u>C 00929</u>			Shallow	3	3	18	24S	27E	572013	3564159*	
<u>C 01169</u>	C	DOM	3	ALBERT E. WARREN	ED	<u>C 01169</u>			Shallow	1	4	3	18	24S	27E	572282	3564261*
<u>C 01187</u>	C	DOM	3	CAMP LAVELLE ZIA GIRL SCOUT C.	ED	<u>C 01187</u>			Shallow	4	3	08	24S	27E	573986	3565796*	
<u>C 01366</u>		EXP	0	HARLEY DAVIS	ED	<u>C 01366</u>			Shallow	4	08	24S	27E	27E	574590	3566003*	
<u>C 01452</u>	C	STK	3	WILLIAM DIESCHER	ED	<u>C 01452</u>			Shallow			22	24S	27E	577435	3563175*	
<u>C 01646</u>		IRR	0	GEORGE BRANTLEY	ED	<u>C 01646</u>						13	24S	27E	580641	3564866*	

\*UTM location was derived from PLSS - see Help

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C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)					C=the file is closed)		(quarters are smallest to largest) (NAD83 UTM in meters)													
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q	q	q	6416	4	Sec	Tws	Rng	X	Y	
					ED	<u>C 01646 X</u>							1	13	24S	27E		580221	3565275*	
					ED	<u>C 01646 X 2</u>							2	13	24S	27E		581045	3565286*	
					ED	<u>C 01646 X 3</u>							3	13	24S	27E		580239	3564464*	
					ED	<u>C 01646 X 4</u>							4	13	24S	27E		581057	3564476*	
<u>C 01721</u>	C	STK		0 WILLIAM DIESCHER	ED	<u>C 01721</u>							1	25	24S	27E		580271	3562033*	
<u>C 01836</u>		IRR		0 GEORGE BRANTLEY	ED	<u>C 01836</u>							1	1	13	24S	27E	580010	3565479*	
<u>C 01841</u>	C	STK		0 WILLIAM DIESCHER	ED	<u>C 01841</u>							1	29	24S	27E		573806	3561953*	
<u>C 01943</u>	C	STK		3 GARY THOMPSON	ED	<u>C 01943</u>							1	13	24S	27E		580221	3565275*	
<u>C 02937</u>	C	PRO		0 MEWBOURNE OIL COMPANY	ED	<u>C 02937</u>							3	4	3	12	24S	27E	580315	3565789*
<u>C 02941</u>	C	PRO		0 PATTERSON DRILLING	ED	<u>C 02941</u>							3	4	3	12	24S	27E	580315	3565789*
					ED	<u>C 02941 POD1</u>							3	4	3	12	24S	27E	580315	3565789*
<u>C 02942</u>	C	PRO		0 SAMSON	ED	<u>C 02942</u>							3	4	3	23	24S	27E	578748	3562516*
<u>C 02976</u>	C	STK		3 GEORGE BRANTLEY	ED	<u>C 02976</u>			Shallow	4	2	3	12	24S	27E			580519	3566195*	
<u>C 03032</u>	C	DOL		3 GEORGE BRANTLEY	ED	<u>C 03032</u>				4	1	4	12	24S	27E			580931	3566200*	
<u>C 03037</u>	C	DOL		3 GEORGE BRANTLEY	ED	<u>C 03037</u>			Shallow	4	3	4	12	24S	27E			580930	3565795*	
<u>C 03055</u>	C	DOL		0 GEORGE BRANTLEY	ED	<u>C 03055</u>				2	3	4	12	24S	27E			580930	3565995*	
<u>C 03092</u>	C	DOM		3 JAMES S DAVIS	ED	<u>C 03092</u>			Shallow	4	3	1	08	24S	27E			573678	3566501*	
<u>C 03145</u>	C	STK		3 GEORGE BRANTLEY	ED	<u>C 03145</u>			Shallow	3	1	4	13	24S	27E			580749	3564579*	
<u>C 03147</u>	C	MUL		3 GEORGE BRANTLEY	ED	<u>C 03147</u>				3	3	3	12	24S	27E			579884	3565715	
<u>C 03246</u>	C	PRO		0 MARBOB ENERGY CORP.	ED	<u>C 01986</u>				3	4	3	12	24S	27E			581302	3566124	
<u>C 03253</u>	C	PRO		0 MEWBOURNE OIL	ED	<u>C 03032</u>				4	1	4	12	24S	27E			580931	3566200*	
<u>C 03260</u>	C	STK		3 CLARAMAI R HAYHURST	ED	<u>C 03260 POD1</u>			Shallow	3	3	3	12	24S	27E			579994	3565935	

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ACTIVE & INACTIVE POINTS OF DIVERSION

C 3092 C-13-24S-26E

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		(acre ft per annum)																	
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q	q	q	Sec	Tws	Rng	X	Y		
C 03300	C	PRO	0	YATES PETROLEUM	ED	C 01986				3	4	3	12	24S	27E	581302	3566124		
C 03311	C	PRO	0	MARBOB ENERGY	ED	C 01986				3	4	3	12	24S	27E	581302	3566124		
C 03333	C	PRO	0	OGX RESOURCES LLC	ED	C 03147				3	3	3	12	24S	27E	579884	3565715		
C 03352	C	PRO	0	NOVA MUD	ED	C 03147				3	3	3	12	24S	27E	579884	3565715		
C 03353	C	PRO	0	MARBOB ENERGY	ED	C 01986				3	4	3	12	24S	27E	581302	3566124		
C 03354	C	PRO	0	NOVA MUD	ED	C 01986				3	4	3	12	24S	27E	581302	3566124		
C 03416		EXP	0	JAMES S DAVIS	ED	C 03416 POD1				3	1	4	08	24S	27E	574271	3566180		
C 03489	C	EXP	0	JAMES S. DAVIS	ED	C 03489 POD1			Shallow	2	4	3	08	24S	27E	574153	3565939		
C 03490	C	EXP	0	JAMES DAVIS	ED	C 03490 POD1			Shallow	3	4	3	08	24S	27E	573811	3565709		
C 03560	C	DOM	1	DANIEL MAGBY	ED	C 03560 POD1			Shallow	2	3	3	18	24S	27E	572009	3564150		
C 03707	C	PRO	0	BARBARA DAVIS	ED	C 00516 POD9				3	4	3	08	24S	27E	573809	3565705		
C 03708	C	PRO	0	JIM DAVIS	ED	C 00516 S			Shallow	1	3	4	08	24S	27E	574288	3565901		
C 03740	C	DOL	0	GEORGE BRANTLEY	ED	C 03740 POD1				4	4	4	12	24S	27E	581283	3565795		
C 03837	C	PRO	0	DEVON ENERGY CO	ED	C 03260 POD1			Shallow	3	3	3	12	24S	27E	579994	3565935		
C 03838	C	PRO	0	DEVON ENERGY CO	ED	C 03260 POD1			Shallow	3	3	3	12	24S	27E	579994	3565935		
C 03839	C	PRO	0	DEVON ENERGY CO	ED	C 03260 POD1			Shallow	3	3	3	12	24S	27E	579994	3565935		
C 03869	C	STK	3	DRAPER BRANTLEY JR	ED	C 03869 POD1		NON		1	3	4	12	24S	27E	580677	3566039		

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Record Count: 57

POD Search:

**POD Basin:** Carlsbad

PLSS Search:

**Township:** 24S    **Range:** 27E

Sorted by: File Number