

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.

PAUL RAGSDALE

Print or Type Name

Signature

*Paul Ragdale*

OPERATIONS MANAGER 11/28/2017

Title

Date

pragsdale@stratanm.com  
 e-mail Address

SWD-1715  
 - Strata Production CO  
 well  
 - Tristadown  
 Fed #2  
 30-025-277q  
 Pool  
 - SWD, Devonian  
 SWD  
 1-12-82

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_ ☒ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ Yes \_\_\_\_\_ No
- II. OPERATOR: STRATA PRODUCTION COMPANY  
ADDRESS: \_\_\_\_\_ 1301 NORTH SYCAMORE, ROSWELL NM 88202  
CONTACT PARTY: \_\_\_\_\_ PAUL RAGSDALE \_\_\_\_\_ PHONE 622-1127 EXT 18
- 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. SEE ATTACHMENTS 1A, 1B, 1C & 1D
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes \_\_\_\_\_ ☒ 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. SEE ATTACHMENT VI & V2
- 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: \_\_\_\_\_ Paul Ragsdale \_\_\_\_\_ TITLE: \_\_\_\_\_ OPERATIONS MANAGER \_\_\_\_\_
- SIGNATURE: \_\_\_\_\_ *Paul Ragsdale* \_\_\_\_\_ DATE: \_\_\_\_\_ 10/31/2017 \_\_\_\_\_
- E-MAIL ADDRESS: \_\_\_\_\_ pragsdale@stratanm.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.

10-27-201 NEW MEXICO - FORM C-108  
TRISTE DRAW FED #2

**III. WELL DATA:**

TRISTE DRAW FED #2, Unit Letter J, 1980 FSL & 2480 FEL,  
Sec 14 - T23S - R32E  
LEA County, NM

API # 30-025-27708

All pertinent data for the proposed salt water disposal well is included on the schematic sheets in this application.

B. The following must be submitted for each injection well covered by this application.

- (1) The proposed Injection Formation is the Devonian formation in the Diamondtail Field.
- (2) The injection interval will be Open Hole from the top of the Devonian at 17,140' to 18,140'
- (3) The well was originally drilled to test the Lower Morrow formation in 1982.
- (4) Bone Springs perms from 9512 - 9802 will be squeezed with 250 sacks of Class H cement  
CIBP @ 10,090', CMT RETAINER @ 11,790' & CIBP @ 12,500' Will be drilled out.
- (5) There is not an oil and gas zone below the Devonian. The Lower Morrow is an oil and gas zone above the Devonian

IV. Is this an expansion of an existing project? NO, the well is currently plugged and abandoned and will need to be cleaned out and deepened.

V. A lease map is attached as Exhibit A.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. *There are no other wells that penetrate the Devonian formation in any wells within the area of review.*

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected. *Average daily rate will be between 3000 and 5000 bpd with a maximum rate of 15,000 bpd.*
2. Whether the system is open or closed. *The system is a closed system.*
3. Proposed average and maximum injection pressure. *The well should take water for a long time with a minimum of surface pressure, less than 750 psi. As the system is utilized more, the maximum injection pressure is 3200 psig. A step rate test will be performed on the well after it is put into operation.*
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water. *The water to be injected is produced water from the Delaware and the Bone Springs formations.*
5. If injection is for disposal purposes into a zone not productive of oil and gas at or within one mile of the proposed well, attach a chemical analysis of the disposal formation water. *No analysis is available from the zone since it has not been penetrated.*



VIII. Geologic Data:

*The Devonian formation is expected to be penetrated at 17140' and then drilled to 18,140. It is a fractured carbonate consisting of limestone and dolomite. Total thickness is 1500' but this well will only penetrate 1000' or less.*

*The fresh water formation is the Rustler formation and is located 200' to 500' deep in this area.*

IX. Proposed Stimulation:

Small cleanup acid jobs may be used to remove mud and drill cuttings from the Devonian, usually 1000-5000 gals of 15% HCL. An initial acid job of 10,000 gallons of 15% HCL will be pumped.

X. Well Test Data

Logs and well test information are on file with the NMOCD.

XI. Chemical Analysis

An analysis of the fresh water is attached as Exhibit B.

XII. Geologic Statement

Strata Production Company has examined geologic and engineering data and has found no evidence of faults, fractures or other geologic connections between the fresh water aquifer and the proposed injection zone. See ATTACHMENT XII #1

XIII. PROOF OF NOTICE

Public Notice will be run in the Hobbs Sun News. An Affidavit will be provided.

Surface Owner of Section 14 is the Bureau of Land Management and a certified letter has been mailed to Chris Walls with the Carlsbad Field Office.

Devon Energy Corporation, an offset leasehold operator within the ½ mile area of review has been mailed a certified letter to their corporate office in Oklahoma City.

Marathon Oil Corporation, an offset leasehold operator within the ½ mile area of review has been mailed a certified letter to their corporate office in Houston, TX.

Cimarex Energy Corporation, an offset leasehold operator within the ½ mile area of review has been mailed a certified letter to their Permian office in Midland, TX.

XIV. CERTIFICATION --- SEE APPLICATION.

## INJECTION WELL DATA SHEET

OPERATOR: STRATA PRODUCTION COMPANY  
WELL NAME & NUMBER: TRISTE DRAW FEDERAL #2

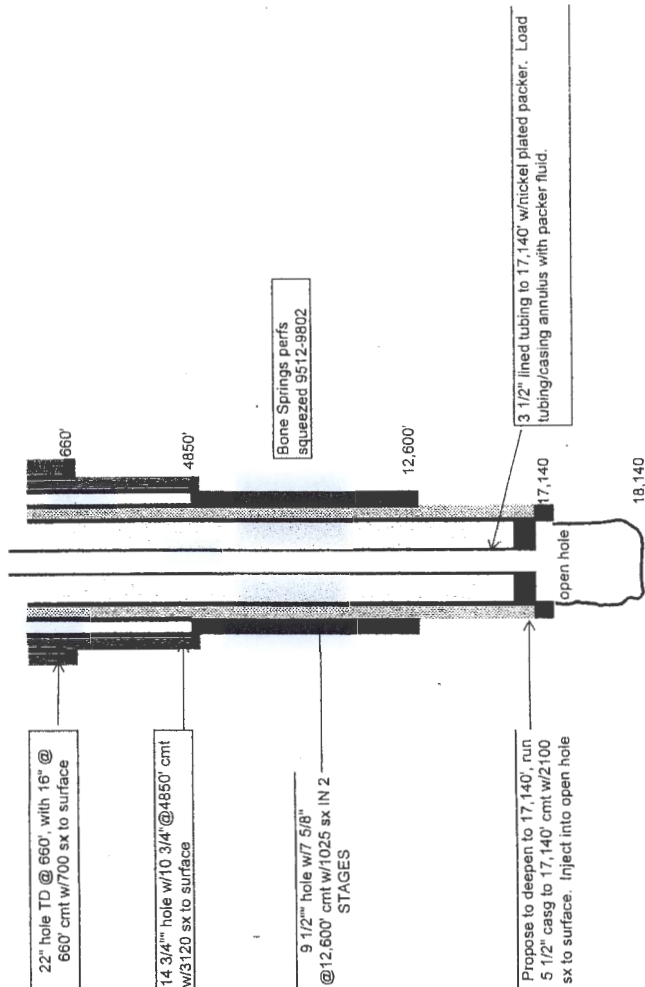
WELL LOCATION: 2480 FEL & 1980 FWL J 14 23S 32E  
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

## WELLBORE SCHEMATIC

## STRATA PRODUCTION COMPANY

## WELLBORE DIAGRAM

TRISTE DRAW FED #2		Well Info	
Hole Size	Csg Size	Depth	Grade
22"	16"	660'	65#
14 3/4"	10 3/4"	4850'	51#
9 1/2"	7 5/8"	12,600'	39# & 33.7#
5 1/2"	5 1/2"	17,140'	17.5# & 20# HCP
4 5/8"	open hole	18,140'	none
3 1/2"	tubing	17,050'	9.3#



## WELL CONSTRUCTION DATA

Surface Casing

Casing Size: 16"

Hole Size: 26"

Cemented with: 700 SX.

Top of Cement: SURFACE

Method Determined: NMOCD REPORTS

## FIRST Intermediate Casing

Hole Size: 14 3/4"

Casing Size: 10 3/4"

Cemented with: 3120 SX.

Top of Cement: surface

Method Determined: NMOCD REPORTS

## SECOND Intermediate Casing

Hole Size: 9 1/2"

Casing Size: 7 5/8"

Cemented with: 1025 SX. IN 2 STAGES

Top of Cement: 4050'

Method Determined: NMOCD REPORTS

## PROPOSED Production Casing

Hole Size: 6 1/2"

Casing Size: 5 1/2"

Cemented with: ESTIMATED 2100 SX

Top of Cement: SURFACE

Method Determined: BOND LOG

Total Depth: 17,140

## Injection Interval

OPEN HOLE 17,150' to 18140'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 3 1/2" 9.3# ULTRA-FX Lining Material: IPC TK70 P110Type of Packer: STAINLESS STEEL INJECTION PACKERPacker Setting Depth: 16,900'Other Type of Tubing/Casing Seal (if applicable): ON/OFF TOOL/PROFILE NIPPLEAdditional Data

1. Is this a new well drilled for injection? Yes X No
- If no, for what purpose was the well originally drilled? TEST THE MORROW GAS SANDS

2. Name of the Injection Formation: DEVONIAN
3. Name of Field or Pool (if applicable): DIAMONDTAIL
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. 9512-9592, 9600-9676, 9707-9791, 9800-9802, 11715-11800 CEMENT PLUGS AT SURFACE, 610-710', 4635-5000', CIBP W/35 SK @ 9460', CIBP @ 10,090' CMT RETAINER @ 11790', 11715-11800' CEMENT PLUG, CIBP @ 12,500', CEMENT PLUG@12900-13400', CEMENT PLUG@14,000-14,300'
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: RUSTLER ANHY - 1200', DELAWARE OIL ZONES 4932-8476
- BONE SPRINGS OIL 8476-12,072', WOLFCAMP OIL/GAS 12,072-13,510
- PERMO-PENN GAS 13,510-14,030, STRAWN 14,030-14,208 ATOKA 14,208-14,559

13000' (100' plugging interval)



STRATA PRODUCTION

TRISTE DRAW

FED # 2

AMRAD

revised

Current Condition

CMT Plug at Surface

CMT Plug 610'

16"

660'

CMT TO SURFACE

CMT TOP AT 3069

CASING CUT OFF AT  
3276'

10 3/4"

TOC @ 4400'

TOC @ 4635'

4850 10 3/4"

CEMENT TO SURFACE

4950 X

5000 X

Cement Plug

UNKNOWN Top of CMT  
STAGE 1

CIBP @ 9460

w/ 35' CMT CAP

9512-9802

CIBP @ 10090

w/ CMT CAP

TOP OF TBL @ 10,820

CMT RET @ 11790

11715-11800

CIBP @ 12500 w/ 35' CMT

12600' 7 5/8"

CMT Plug

CMT Plug

12900-13400

14000-14300

14559'



STRATA PRODUCTION  
TRISTE Draw  
FCD #2

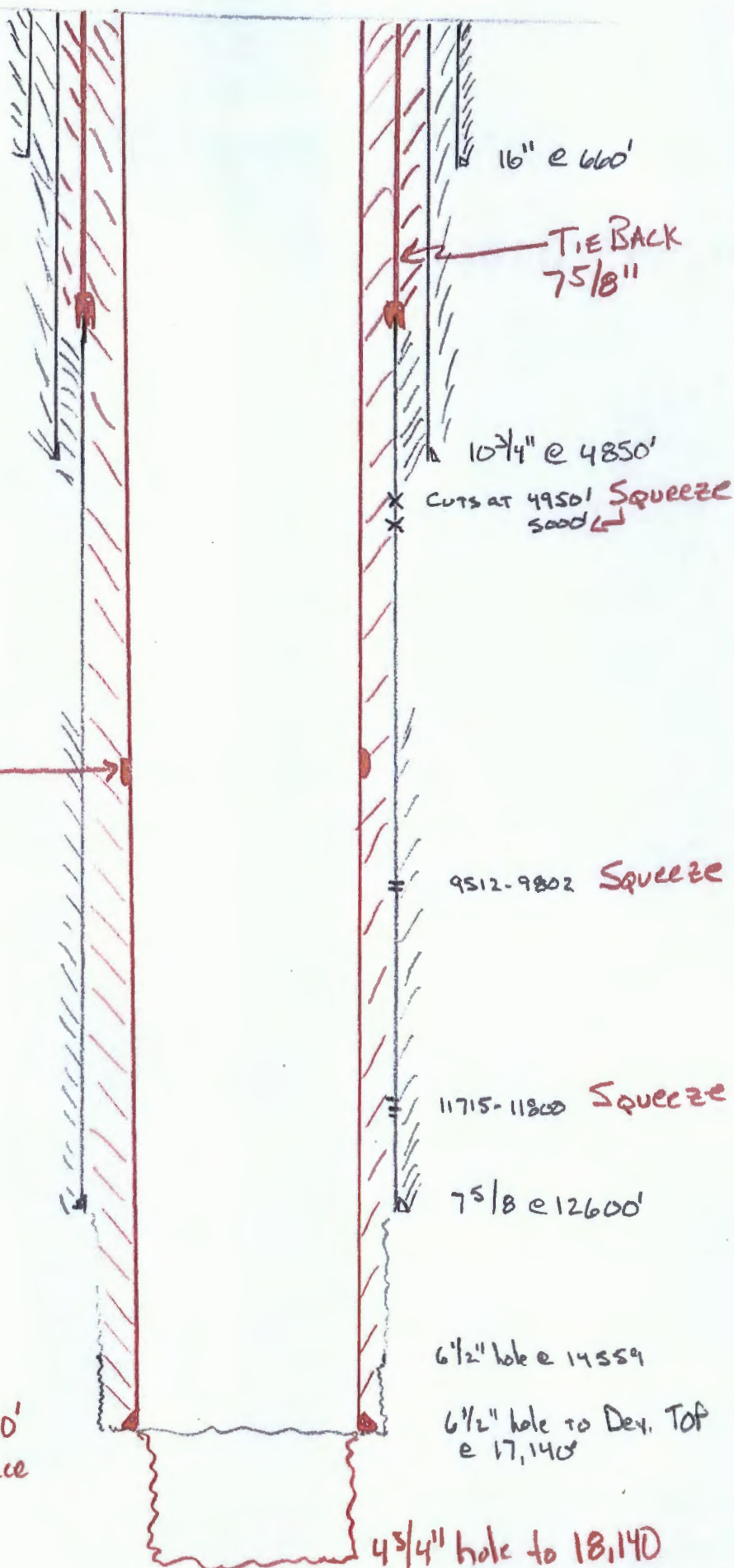
PROPOSED PLAN

CHANGES ARE IN  
RED

revised

POSSIBLE DV TOOL  
IN 5 1/2" AT TOP  
OF BONE SPRINGS

5 1/2" CSG @ 17,140'  
Cement to Surface



# STRATA PRODUCTION COMPANY

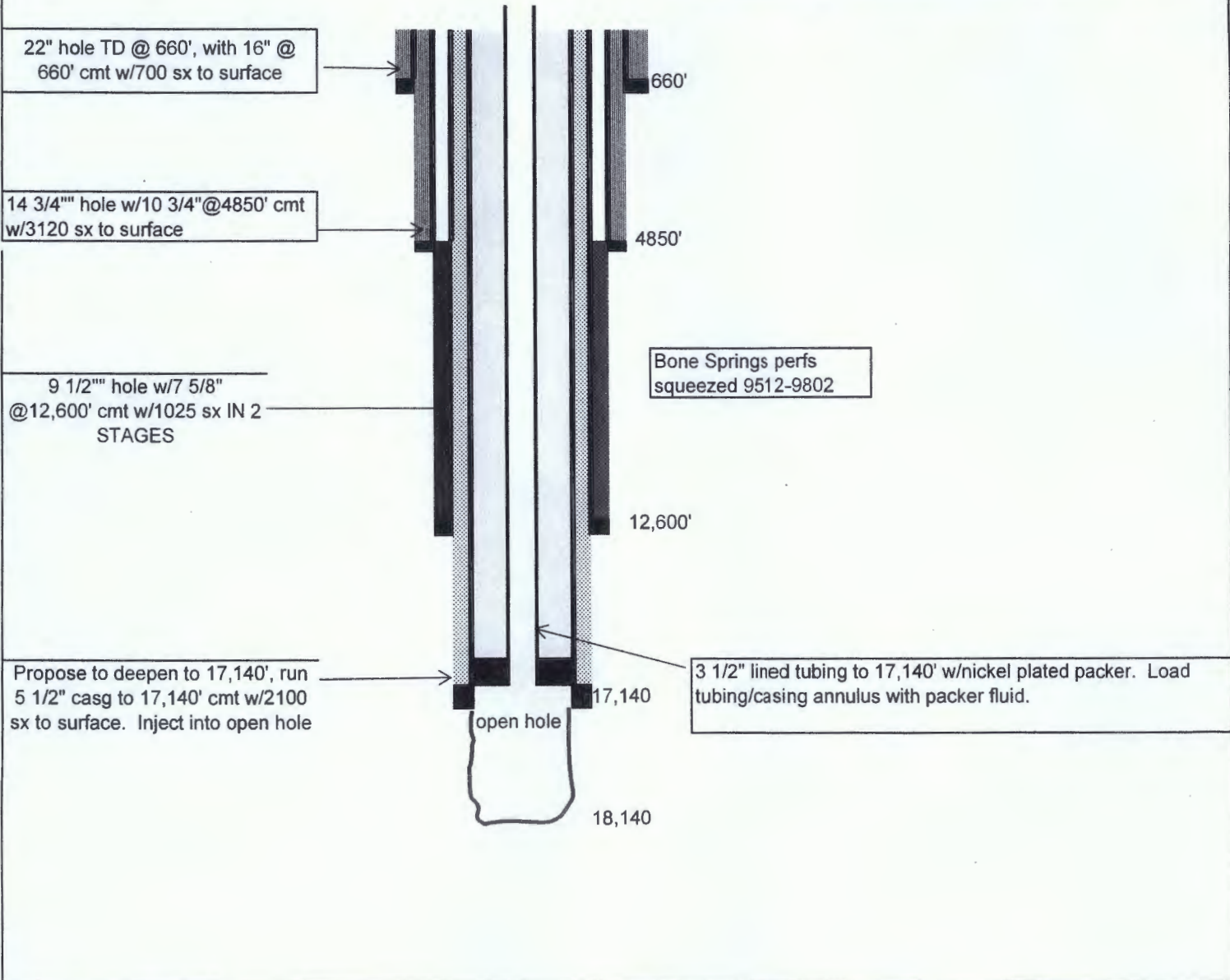
## WELLBORE DIAGRAM

### TRISTED DRAW FED #2

DIAMONDTAIL FIELD  
1980 FSL & 2480 FEL  
Sec 14-T23S-R32E  
LEA County, NM

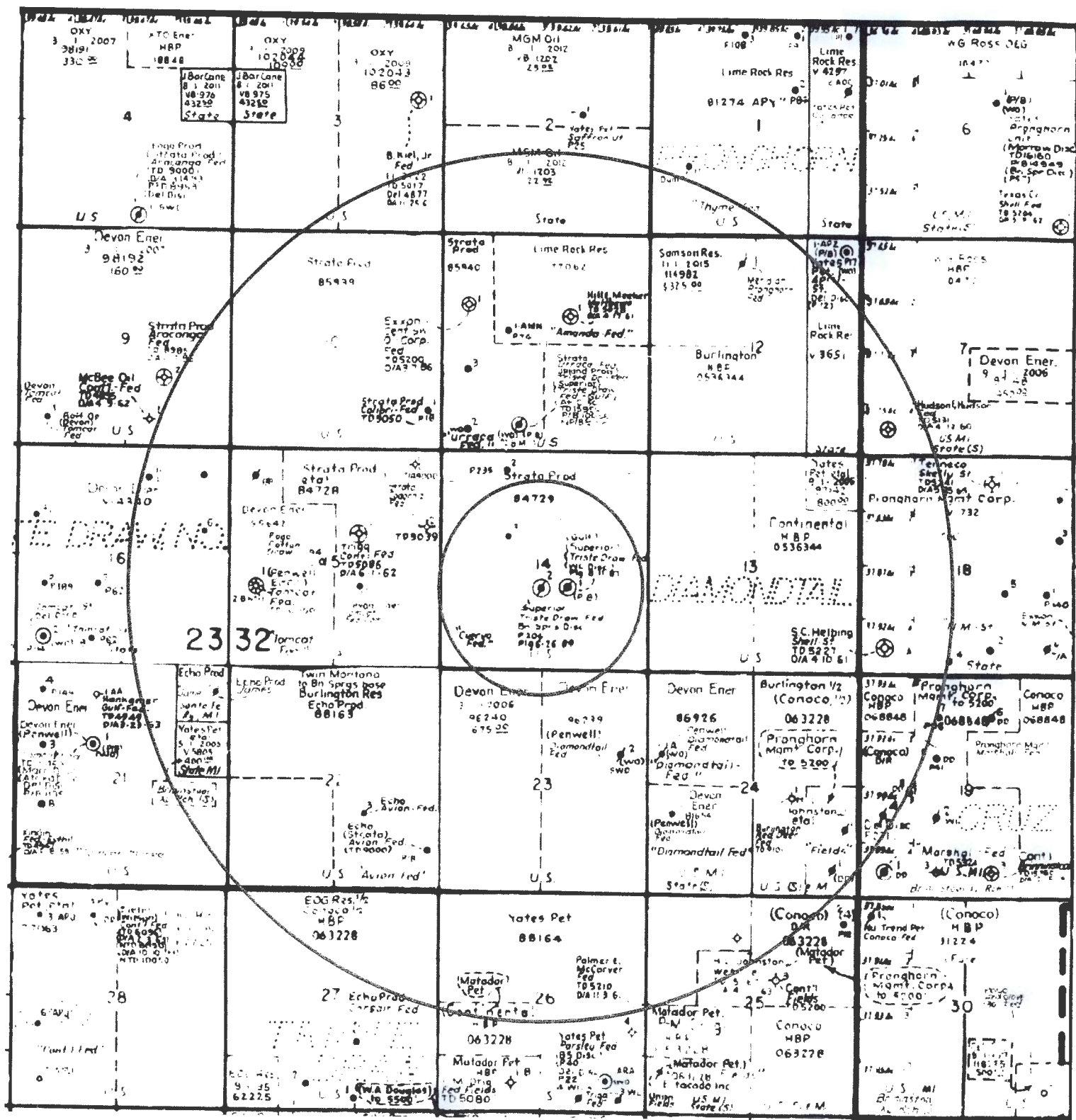
### Well Info

Hole Size	Csg Size	Depth	Grade		
22"	16"	660'	65#		
14 3/4"	10 3/4"	4850'	51#		
9 1/2"	7 5/8"	12,600'	39# & 33.7#		
6 1/2"	5 1/2"	17,140'	17.5# & 20# HCP		
4 5/8"	open hole	18,140'	none		
3 1/2"	tubing	17,050'	9.3#		



Strata Production Company  
Phone: 575-622-1127 ext. 18  
PO BOX 1030  
ROSWELL, NM 88202-1030

Notification Boundary  
Triste Draw #2  
API # 30-025-27708



V. 1.  
A MAP SHOWING ALL WELLS AND LEASES  
WITHIN 2 MILES AND A 1/2 MILE RADIUS



1



1:36,112

2.

WITHIN 2 MILES AND A 1/2 MILE RADIUS

Gas, Cancelled, Never Drilled	Injection, Active
Gas New	Oil Active

### Salt Water Injection, New

OCD District Offices  
PLSS Townships

Texas Parks &amp; Wildlife, Esq. HERE, Garmin, INCREMENT P, USGS, METINA

V. 2.  
A MAP THAT IDENTIFIES ALL WELLS AND LEASES  
WITHIN 2 MILES AND A 1/2 MILE RADIUS



POST OFFICE DRAWER 1030  
ROSWELL, NM 88202-1030



TELEPHONE (575) 622-1127  
FACSIMILE (575) 623-3533

1301 NORTH SYCAMORE AVENUE  
ROSWELL, NEW MEXICO 88201  
[www.stratannm.com](http://www.stratannm.com)

October 30, 2017

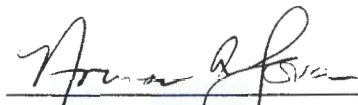
New Mexico Energy, Minerals and Natural Resources Department  
Engineering Bureau, Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Re: Application for Authorization to Inject  
Strata Production Co Triste Federal No 2

To whom it may concern:

This letter is in regard to the Strata Production Company "Application for Authorization to Inject," into the Triste Federal #2 located 1980 ft. FSL and 2480 ft. FEL of Section 14, T23S R3E in Lea County, New Mexico.

Available geologic and engineering data has been examined and no evidence of open faults or any other hydrological connection between the proposed injection-disposal zone and any underground sources of drinking water has been found.

  
\_\_\_\_\_  
Norman A. Lovari, PhD.  
Consulting Geologist

## EXHIBIT B

XI. THERE ARE NO FRESH WATER WELLS WITHIN 1 MILE OF THE PROPOSED WELL.

HOWEVER, THERE ARE WATERING TANKS FOR CATTLE AND WE TOOK WATER SAMPLES OF THE TANKS. THE FOLLOWING ANALYSES ARE FOR THE STOCK TANKS.



Catalyst Oilfield Services  
11999 E Hwy 158  
Gardendale, TX 79758  
(432) 563-0727  
Fax: (432) 224-1038

## Water Analysis Report

Customer:	Strata Production Company	Sample #:	53428
Area:	Permian Basin	Analysis ID #:	51468
Lease:	Mills Ranch		
Location:	Middle		0
Sample Point:	Well		

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	10/28/2017	Chloride:	102.0	Sodium:	172.8
Analysis Date:	11/1/2017	Bicarbonate:	219.0	Magnesium:	35.5
Analyst:	Catalyst	Carbonate:		Calcium:	35.2
TDS (mg/l or g/m3):	854.4	Sulfate:	280.0	Potassium:	4.2
Density (g/cm3):	1.003	Borate*:	3.8	Strontium:	1.9
		Phosphate*:		Barium:	0.0
Hydrogen Sulfide:	0	*Calculated based on measured elemental boron and phosphorus.		Iron:	0.0
Carbon Dioxide:	0			Manganese:	0.000
Comments:					
		pH at time of sampling:	7.5		
		pH at time of analysis:			
		pH used in Calculation:	7.5		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	1323
				Resistivity (ohm meter):	7.5586

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl											
Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	-0.22	0.00	-1.57	0.00	-1.64	0.00	-1.15	0.00	0.00	0.00	
100	-0.09	0.00	-1.57	0.00	-1.58	0.00	-1.13	0.00	0.00	0.00	
120	0.05	0.70	-1.56	0.00	-1.48	0.00	-1.10	0.00	0.00	0.00	
140	0.20	2.80	-1.53	0.00	-1.37	0.00	-1.06	0.00	0.00	0.00	
160	0.35	5.60	-1.51	0.00	-1.24	0.00	-1.01	0.00	0.00	0.00	
180	0.51	8.41	-1.47	0.00	-1.09	0.00	-0.96	0.00	0.00	0.00	
200	0.68	11.56	-1.43	0.00	-0.93	0.00	-0.91	0.00	0.00	0.00	
220	0.84	15.06	-1.39	0.00	-0.76	0.00	-0.85	0.00	0.00	0.00	



Catalyst Oilfield Services  
11999 E Hwy 158  
Gardendale, TX 79758  
(432) 563-0727  
Fax: (432) 224-1038

## Water Analysis Report

Customer:	Strata Production Company	Sample #:	53429
Area:	Permian Basin	Analysis ID #:	51469
Lease:	Mills Ranch		
Location:	North		0
Sample Point:	Well		

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	10/31/2017	Chloride:	84.1	Sodium:	68.4
Analysis Date:	11/1/2017	Bicarbonate:	244.0	Magnesium:	30.8
Analyst:	Catalyst	Carbonate:		Calcium:	23.2
TDS (mg/l or g/m3):	477.3	Sulfate:	20.0	Potassium:	3.9
Density (g/cm3):	1.003	Borate*:	1.3	Strontium:	1.6
		Phosphate*:		Barium:	0.0
Hydrogen Sulfide:	0	*Calculated based on measured elemental boron and phosphorus.		Iron:	0.0
Carbon Dioxide:	0			Manganese:	0.000
Comments:		pH at time of sampling:	8		
		pH at time of analysis:			
		pH used in Calculation:	8		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	723
				Resistivity (ohm meter):	13.8313

### Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.27	2.45	-2.73	0.00	-2.81	0.00	-2.17	0.00	0.00	0.00
100	0.37	3.50	-2.73	0.00	-2.74	0.00	-2.14	0.00	0.00	0.00
120	0.49	4.90	-2.71	0.00	-2.64	0.00	-2.10	0.00	0.00	0.00
140	0.61	6.66	-2.69	0.00	-2.52	0.00	-2.06	0.00	0.00	0.00
160	0.73	8.76	-2.66	0.00	-2.39	0.00	-2.00	0.00	0.00	0.00
180	0.86	10.86	-2.62	0.00	-2.24	0.00	-1.94	0.00	0.00	0.00
200	1.00	12.96	-2.59	0.00	-2.08	0.00	-1.87	0.00	0.00	0.00
220	1.13	14.71	-2.54	0.00	-1.91	0.00	-1.81	0.00	0.00	0.00





Catalyst Oilfield Services  
11999 E Hwy 158  
Gardendale, TX 79758  
(432) 563-0727  
Fax: (432) 224-1038

## Water Analysis Report

Customer:	Strata Production Company	Sample #:	53430
Area:	Permian Basin	Analysis ID #:	51470
Lease:	Mills Ranch		
Location:	South		0
Sample Point:	Well		

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	10/31/2017	Chloride:	60.5	Sodium:	68.8
Analysis Date:	11/1/2017	Bicarbonate:	292.0	Magnesium:	33.4
Analyst:	Catalyst	Carbonate:		Calcium:	13.2
TDS (mg/l or g/m3):	477.3	Sulfate:	0.0	Potassium:	3.2
Density (g/cm3):	1.003	Borate*:	1.1	Strontium:	1.2
		Phosphate*:		Barium:	0.0
Hydrogen Sulfide:	0	*Calculated based on measured elemental boron and phosphorus.		Iron:	0.0
Carbon Dioxide:	0			Manganese:	0.000
Comments:		pH at time of sampling:	8.75		
		pH at time of analysis:			
		pH used in Calculation:	8.75		
		Temperature @ lab conditions (F):	75		
				Conductivity (micro-ohms/cm):	696
				Resistivity (ohm meter):	14.2678

### Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.27	2.45	-2.73	0.00	-2.81	0.00	-2.17	0.00	0.00	0.00
100	0.37	3.50	-2.73	0.00	-2.74	0.00	-2.14	0.00	0.00	0.00
120	0.49	4.90	-2.71	0.00	-2.64	0.00	-2.10	0.00	0.00	0.00
140	0.61	6.66	-2.69	0.00	-2.52	0.00	-2.06	0.00	0.00	0.00
160	0.73	8.76	-2.66	0.00	-2.39	0.00	-2.00	0.00	0.00	0.00
180	0.86	10.86	-2.62	0.00	-2.24	0.00	-1.94	0.00	0.00	0.00
200	1.00	12.96	-2.59	0.00	-2.08	0.00	-1.87	0.00	0.00	0.00
220	1.13	14.71	-2.54	0.00	-1.91	0.00	-1.81	0.00	0.00	0.00

## PROOF OF NOTICE

### XIV. PROOF OF NOTICE SECTION

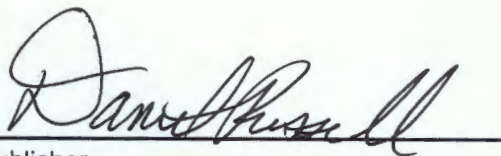
1. AN AFFADAVIT OF PUBLICATION IN THE HOBBS NEWS SUN.
2. COPIES OF DELIVERY AND LETTER TO THE CARLSBAD BLM
3. COPIES OF DELIVERY AND LETTER TO MARATHON OIL PERMIAN, LLC
4. COPIES OF DELIVERY AND LETTER TO CIMAREX ENERGY CO.
5. COPIES OF DELIVERY AND LETTER TO DEVON ENERGY CORP.

# Affidavit of Publication

STATE OF NEW MEXICO  
COUNTY OF LEA

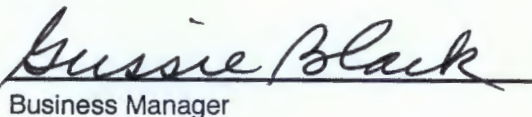
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated  
November 02, 2017  
and ending with the issue dated  
November 02, 2017.



Publisher

Sworn and subscribed to before me this  
2nd day of November 2017.



Business Manager

My commission expires

January 29, 2019

(Seal)



OFFICIAL SEAL  
GUSSIE BLACK  
Notary Public  
State of New Mexico

My Commission Expires 1-29-19

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL

LEGAL

## LEGAL NOTICE November 2, 2017

### APPLICATION FOR WATER DISPOSAL

Strata Production Company, PO Box 1030, Roswell, NM 88202-1030, has filed Application with the Oil Conservation Division, Energy, Minerals and Natural Resources Department, State of New Mexico for Administrative Approval and authority to inject salt water into the Triste Draw Fed #2 located 1980 FSL & 2480 FEL of Section 14-T23S-R32E, NMPM, Lea County, NM.

The purpose of the water injection well is to dispose of salt water produced from the Delaware wells in the Diamondtail Field and other wells in the area as designated by the Oil Conservation Division and as may be extended by additional drilling.

Water to be disposed will be injected into the Devonian formation at a depth of 17,140' to 18,140'.

The minimum injection rate is expected to be 3000 barrels of water per day. The maximum injection rate is expected to be 15,000 barrels per day.

Minimum injection pressure is 100 psig and maximum injection pressure is 3428 psig.

Any interested party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days from the date of publication.

Strata Production Company

By: Paul Ragsdale, Operations Manager,  
575-622-1127 ext. 18.  
#32203

02103504

00201988

ATTN: PAUL RAGSDALE  
STRATA PRODUCTION COMPANY  
P.O. BOX 1030  
ROSWELL, NM 88202-1030



POST OFFICE DRAWER 1030  
ROSWELL, NM 88202-1030



1301 NORTH SYCAMORE AVENUE  
ROSWELL, NEW MEXICO 88201  
[www.stratanm.com](http://www.stratanm.com)

TELEPHONE (575) 622-1127  
FACSIMILE (575) 623-3533

October 30, 2017

Devon Energy Corporation  
333 West Sheridan Avenue  
Oklahoma City, OK 73102-5010

Re: Application for Salt Water Disposal  
Triste Draw Fed #2  
Diamondtail Field  
Devonian Formation  
Unit Letter J, Sec 14-T23S-R32E  
Lea County, NM

Gentlemen,

Please find the Application to re-enter and deepen the Triste Draw Fed #2 to convert the well to a Devonian disposal well. This is necessary due to increasing pressure in current disposal system and the potential for more water from additional drilling and recompletions.

Strata Production Company is requesting Administrative Approval for the attached C-108 application on its Triste Draw Fed #2 well for the purpose of disposing of produced fluids in the non-commercial Devonian formation at 17,140'. The well is currently plugged and abandoned. The Devonian is a good alternative as it is deeper than the producing formations and much deeper than any fresh water.

As you know, any interested party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days from the date of publication.

It is our plan to submit an APD to the BLM once the NMOCD approves the application.  
Sincerely yours,

A handwritten signature in cursive script that reads "Paul Ragsdale".

Paul Ragsdale  
Operations Manager  
Strata Production Company



POST OFFICE DRAWER 1030  
ROSWELL, NM 88202-1030



1301 NORTH SYCAMORE AVENUE  
ROSWELL, NEW MEXICO 88201  
www.stratanm.com

TELEPHONE (575) 622-1127  
FACSIMILE (575) 623-3533

RECEIVED OCD

2017 NOV 31 A 4:17

November 28, 2017

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

Attn: Philip Goetze

Re: Application for Salt Water Disposal  
Triste Draw Fed #2  
Diamondtail Field  
Devonian Formation  
Unit Letter J, Sec 14-T23S-R32E  
Lea County, NM

Dear Mr. Goetze,

Please find the Application to re-enter and deepen the Triste Draw Fed #2 to convert the well to a Devonian disposal well. This is necessary due to increasing pressure on the well currently and the potential for more water from additional drilling and recompletions.

Strata Production Company is requesting Administrative Approval for the attached C-108 application on its Triste Draw Fed #2 well for the purpose of disposing of produced fluids in the non-commercial Devonian formation at 17,140'. The well is currently plugged and abandoned. The Devonian is a good alternative as it is deeper than the producing formations and much deeper than any fresh water.

As you know, any interested party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days from the date of publication.

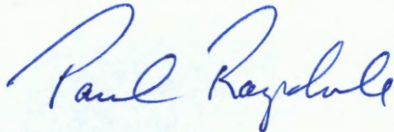
In addition to the application, we have attached the Administrative Checklist in front of the Application. As requested in VI of the application, a spreadsheet of the wells that penetrate the Devonian is to be included. In this case, there are no other wells that have penetrated the Devonian in the Area of Review. We have also attached copies of the Letters sent to other operators in the Area of Review and a copy of the letter sent to the BLM in Carlsbad, who is the surface owner. We have included copies of the Certified Delivery of all the letters.

It is our plan to submit an APD to the BLM once the NMOCD approves the application.

We have also furnished a copy of this entire package to the Hobbs Office of the NMOCD.

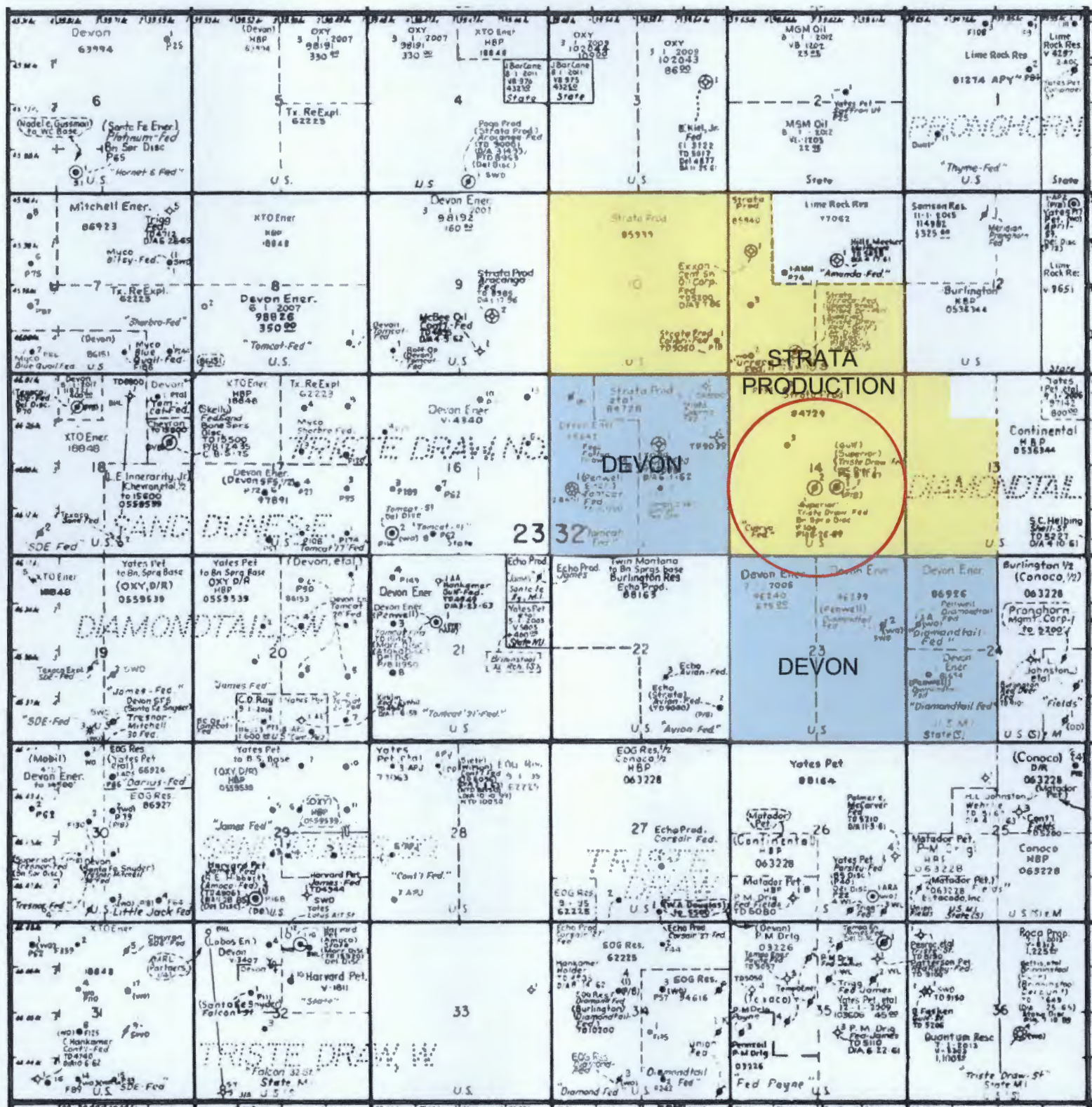
We hope you find that we have included all data that is pertinent to the application. If you find that we have not included something, please contact me at [pragsdale@stratanm.com](mailto:pragsdale@stratanm.com) and we will get it to you. If you need to discuss something, please give me a call at 575-622-1127 ext 18.

Sincerely yours,



Paul Ragsdale  
Operations Manager  
Strata Production Company





WATER SAMPLES REPRESENTATIVE OF WATER BEING INJECTED INTO THE PROPOSED WELL

wellname	county	state	sampledate	ph	tds_mgl	sodium_mg	calcium_mg	iron_mgl	magnesium	manganese	chloride_mg	bicarbonate	sulfate_mgl
<b>BONE SPRINGS</b>													
DIAMONDTAIL 24 FEDERAL #001	Lea	NM	8/12/2014 0:00	8.5	172490.2	59465.3	5813.5	121.6	1016.4	2.3	103630	199.2	2
PHANTOM 18 ST #002H	Lea	NM	1/6/2012 0:00	6.52	136209	43509	6156	29	1132	1.36	83000	153	0
<b>DELAWARE</b>													
COLIBRI FED #001	Lea	NM	5/3/2017 0:00	6.4	246132	68238	19726	16.7	3337	2.361	151716	0	140
TOMCAT 21 FEDERAL #003	Lea	NM	1/27/2015 0:00	5.6	258460.4	66996.2	21006.5	27.5	3246.8	4.96	163589.5	85.4	0
FALCON 32 STATE #003	Lea	NM	1/28/2015 0:00	5.5	249184.8	71161.3	16116.1	33	2496.1	3.96	156337.9	85.4	0
FALCON 32 STATE #004	Lea	NM	1/28/2015 0:00	5.8	241993.3	72965.6	14328.7	29.4	2268.5	3.28	149603.8	97.6	0
THYME APY FEDERAL #002	LEA	NM	11/27/2001 0:00	6.1	172896		0	0	2025		104976	781	1150
DIAMONDTAIL 23 FEDERAL #002	Lea	NM	8/6/2003 0:00	5.5	254950.9	68892.9	20721	15	3986		157297	54	386
<b>WOLFECAMP</b>													
AUGUSTUS 10 #001H	Lea	NM	3/8/2012	6.6	89771	28320	3963	17.85	639	0	54600	220	950
TRAIL BOSS4 #004	Lea	NM	9/30/2011	7.1	78745	27950	3143	15	406	0.41	45500	366	150



## McMillan, Michael, EMNRD

---

**From:** Paul Ragsdale <pragsdale@stratanm.com>  
**Sent:** Monday, December 4, 2017 2:51 PM  
**To:** McMillan, Michael, EMNRD  
**Subject:** Strata Triste Draw SWD application  
**Attachments:** Triste Draw Midland Map Radius 2.pdf; producedwater.xlsx

Michael,

As we discussed, I have attached a spreadsheet with typical water analyses from the Bone Springs, Delaware and Wolfcamp formations. These analyses were obtained from the GoTech website and from Strata's files.

I also attached a Land map of the area showing the Operators in the Area of Review. The yellow acreage is Strata Production and the blue acreage is Devon Energy.

Please let me know if you need anything else,

Paul

**Paul Ragsdale**

Strata Production Company  
Operations Manager

(575) 622-1127 ext 18 Work

(575) 626-7903 Mobile

pragsdale@stratanm.com

PO Drawer 1030

Roswell NM 88202

## **McMillan, Michael, EMNRD**

---

**From:** Paul Ragsdale <pragsdale@stratanm.com>  
**Sent:** Tuesday, December 5, 2017 10:25 AM  
**To:** McMillan, Michael, EMNRD  
**Subject:** RE: Strata Triste Draw SWD application

That is correct. Devon is the "Operator of record" in Section 23. However, Cimarex permitted to drill the wells in the north half of Section 23. Strata does not know the terms of the agreement between Cimarex and Devon but we assume it must be a "farm out" of the Bone Springs rights.

That is why we notified both Devon and Cimarex.

Paul

---

**From:** McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]  
**Sent:** Monday, December 4, 2017 3:37 PM  
**To:** Paul Ragsdale  
**Subject:** RE: Strata Triste Draw SWD application

Paul:

Today's map shows that Devon is the operator of Section 23; however, your ARCGIS shows Cimarex is the operator of Section 23.

Mike

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Monday, December 4, 2017 2:55 PM  
**To:** 'Paul Ragsdale' <pragsdale@stratanm.com>  
**Subject:** RE: Strata Triste Draw SWD application

That is perfect.

All that is required is to wait for the 15-day clock to expire.

Mike

---

**From:** Paul Ragsdale [mailto:pragsdale@stratanm.com]  
**Sent:** Monday, December 4, 2017 2:51 PM  
**To:** McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>  
**Subject:** Strata Triste Draw SWD application

Michael,

As we discussed, I have attached a spreadsheet with typical water analyses from the Bone Springs, Delaware and Wolfcamp formations. These analyses were obtained from the GoTech website and from Strata's files.

I also attached a Land map of the area showing the Operators in the Area of Review. The yellow acreage is Strata Production and the blue acreage is Devon Energy.

Please let me know if you need anything else,

Paul

**Paul Ragsdale**

Strata Production Company  
Operations Manager

(575) 622-1127 ext 18 Work  
(575) 626-7903 Mobile  
pragsdale@stratanm.com  
PO Drawer 1030  
Roswell NM 88202

---

avast! Antivirus: Inbound message clean.

Virus Database (VPS): 171124-6, 11/24/2017

Tested on: 12/4/2017 3:43:48 PM

avast! ~ copyright (c) 1988-2017 AVAST Software.



Paul

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## Status History ?

## Tracking Number Information

<b>Meter:</b>	11288732	<b>Mailing Date:</b>	11/01/17 12:29 PM
<b>Tracking Number:</b>	9171969009350177580029	<b>Sender:</b>	
<b>Current Status:</b>	OK : Delivered	<b>Recipient:</b>	
<b>Class of Mail</b>	FC	<b>Zip Code:</b>	73102
<b>Service:</b>	CERT	<b>City:</b>	OKC
<b>Value</b>	(\$6.100)	<b>State:</b>	OK

Proof of Delivery

## Status Details

## ▼ Status Date

## Status

Fri, 11/03/17, 08:05:00 AM	OK : Delivered
Fri, 11/03/17, 07:47:00 AM	Arrival at Unit
Thu, 11/02/17, 02:32:00 PM	OK; USPS acknowledges reception of info

Note: Delivery status updates are processed throughout the day and posted upon receipt from the Postal Service.

Devon Energy Corp.  
 333 West Sheridan Avenue  
 Oklahoma, OK 73102-5010  
 Mailed: Nov 1st, 2017  
 Delivered: Nov. 3rd, 2017

**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

Devon Energy Corporation  
 333 West Sheridan Avenue  
 Oklahoma City, OK 73102-5010

9590 9402 2907 7094 1464 36

Article Number (Transfer from service label)  
 9171 9690 0935 0177 5800 29

Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature ☒ X

B. Received by (Printed Name)

C. Date of Delivery

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

3. Service Type

☐ Adult Signature  
☐ Adult Signature Restricted Delivery  
☐ Certified Mail®  
☐ Certified Mail Restricted Delivery  
☐ Collect on Delivery  
☐ Collect on Delivery Restricted Delivery  
☐ Insured Mail®  
☐ Insured Mail Restricted Delivery

☐ Priority Mail Express®  
☐ Registered Mail™  
☐ Registered Mail Restricted Delivery  
☐ Return Receipt for Merchandise  
☐ Signature Confirmation™  
☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt



Tracking  
Paul

https://ols-prd-sso.neopostinc.com/SSO-NeopostInc/sso?\_pxs=null&...

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### Status History ?

#### Tracking Number Information

Meter:	11288732	Mailing Date:	11/01/17 12:35 PM
Tracking Number:	9171969009350177580050	Sender:	
Current Status:	OK : Delivered	Recipient:	
Class of Mail	FC	Zip Code:	88220
Service:	CERT	City:	HAPPY VALLEY
Value	\$1.400	State:	NM

Proof of Delivery

#### Status Details

##### ▼ Status Date

##### Status

Wed, 11/08/17, 02:18:00 PM

OK : Delivered

Thu, 11/02/17, 02:32:00 PM

OK: USPS acknowledges reception of info

Note: Delivery status updates are processed throughout the day and posted upon receipt from the Postal Service.

Carlsbad Field Office  
Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220  
Mailed: Nov. 1st, 2017  
Delivered: Nov. 8th, 2017

<b>SENDER: COMPLETE THIS SECTION</b>		<b>COMPLETE THIS SECTION ON DELIVERY</b>	
<ul style="list-style-type: none"><li>Complete items 1, 2, and 3.</li><li>Print your name and address on the reverse so that we can return the card to you.</li><li>Attach this card to the back of the mailpiece, or on the front if space permits.</li></ul>		<b>A. Signature</b> X 	
<b>1. Article Addressed to:</b>  Carlsbad Field Office Bureau of Land Management 620 E. Greene St. Carlsbad, NM 88220		<input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
 9590 9402 2907 7094 1464 29		<b>B. Received by (Printed Name)</b>	<b>C. Date of Delivery</b>
<b>2. Article Number (Transfer from service label)</b> 9171 9690 0935 0177 5800 50		<b>D. Is delivery address different from item 1?</b> <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
<b>3. Service Type</b> <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery		<input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery	
PS Form 3811, July 2015 PSN 7530-02-000-9053			
Domestic Return Receipt			

October 30, 2017

Carlsbad Field Office  
Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220

Attn: Chris Walls  
Senior Petroleum Engineer

Re: Application for Salt Water Disposal  
Triste Draw Fed #2  
Diamondtail Field  
Devonian Formation  
Unit Letter J, Sec 14-T23S-R32E  
Lea County, NM

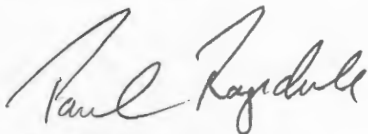
Dear Mr. Walls,

Please find the Application to re-enter and deepen the Triste Draw Fed #2 to convert the well to a Devonian disposal well. This is necessary due to increasing pressure on the well currently and the potential for more water from additional drilling and recompletions.

Strata Production Company is requesting Administrative Approval for the attached C-108 application on its Triste Draw Fed #2 well for the purpose of disposing of produced fluids in the non-commercial Devonian formation at 17,140'. The well is currently plugged and abandoned. The Devonian is a good alternative as it is deeper than the producing formations and much deeper than any fresh water.

As you know, any interested party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days from the date of publication.

It is our plan to submit an APD to the BLM once the NMOCD approves the application.  
Sincerely yours,



Paul Ragsdale  
Operations Manager  
Strata Production Company

Paul

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## Status History ?

## Tracking Number Information

<b>Meter:</b>	11288732	<b>Mailing Date:</b>	11/01/17 12:27 PM
<b>Tracking Number:</b>	9171969009350177580005	<b>Sender:</b>	
<b>Current Status:</b>	OK : Delivered	<b>Recipient:</b>	
<b>Class of Mail</b>	FC	<b>Zip Code:</b>	77056
<b>Service:</b>	CERT	<b>City:</b>	HOUSTON
<b>Value</b>	\$0.460	<b>State:</b>	TX

[Proof of Delivery](#)

## Status Details

▼ Status Date	Status
Mon, 11/06/17, 12:25:00 PM	OK : Delivered
Thu, 11/02/17, 02:32:00 PM	OK: USPS acknowledges reception of info

Note: Delivery status updates are processed throughout the day and posted upon receipt from the Postal Service.

Marathon Oil Permian, LLC  
5555 San Felipe St.  
Houston, TX 77056  
Mailed: Nov 1st, 2017  
Delivered: Nov. 6th, 2017



POST OFFICE DRAWER 1030  
ROSWELL, NM 88202-1030



TELEPHONE (575) 622-1127  
FACSIMILE (575) 623-3533

1301 NORTH SYCAMORE AVENUE  
ROSWELL, NEW MEXICO 88201  
[www.stratanm.com](http://www.stratanm.com)

October 30, 2017

Marathon Oil Permian, LLC  
5555 San Felipe St.  
Houston, TX 77056

Re: Application for Salt Water Disposal  
Triste Draw Fed #2  
Diamondtail Field  
Devonian Formation  
Unit Letter J, Sec 14-T23S-R32E  
Lea County, NM

Gentlemen,

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It is our plan to submit an APD to the BLM once the NMOCD approves the application.

Sincerely yours,

Paul Ragsdale  
Operations Manager  
Strata Production Company



**FedEx.**

Erica

**FedEx® Tracking****770801787483**

Ship date:

**Tue 11/21/2017****Strata Production**

Mark Murphy

PO Box 1030

1301 N. Sycamore

Roswell, NM US 88201

505 622-1127

Actual delivery:

**Wed 11/22/2017 10:46 am****Delivered**

Signed for by: S. GARCIA

**Cimarex Energy Co.**

600 N Marienfield St #600

MIDLAND, TX US 79701

575 622-1127

**Travel History**

Date/Time	Activity	Location
<b>11/22/2017 - Wednesday</b>		
10:46 am	Delivered	MIDLAND, TX
9:55 am	On FedEx vehicle for delivery	MIDLAND, TX
8:38 am	At local FedEx facility	MIDLAND, TX
<b>11/21/2017 - Tuesday</b>		
8:47 pm	Left FedEx origin facility	ROSWELL, NM
5:48 pm	Left FedEx origin facility	ROSWELL, NM
5:48 pm	At destination sort facility	LUBBOCK, TX
10:36 am	Shipment information sent to FedEx	

**Shipment Facts**

Tracking Number	770801787483	Service	FedEx Priority Overnight
Delivery attempts	1	Delivered To	Receptionist/Front Desk
Total pieces	1	Terms	Not Available
Packaging	FedEx Envelope	Special handling section	Deliver Weekday
Standard transit	11/22/2017 by 10:30 am		

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POST OFFICE DRAWER 1030  
ROSWELL, NM 88202-1030



1301 NORTH SYCAMORE AVENUE  
ROSWELL, NEW MEXICO 88201  
[www.stratanm.com](http://www.stratanm.com)

TELEPHONE (575) 622-1127  
FACSIMILE (575) 623-3533

November 21, 2017

Cimarex Energy  
600 N Marienfield St # 600  
Midland, TX 79701

Re: Application for Salt Water Disposal  
Triste Draw Fed #2  
Diamondtail Field  
Devonian Formation  
Unit Letter J, Sec 14-T23S-R32E  
Lea County, NM

Gentlemen,

Please find the Application to re-enter and deepen the Triste Draw Fed #2 to convert the well to a Devonian disposal well. This is necessary due to increasing pressure in current disposal system and the potential for more water from additional drilling and recompletions.

Strata Production Company is requesting Administrative Approval for the attached C-108 application on its Triste Draw Fed #2 well for the purpose of disposing of produced fluids in the non-commercial Devonian formation at 17,140'. The well is currently plugged and abandoned. The Devonian is a good alternative as it is deeper than the producing formations and much deeper than any fresh water.

As you know, any interested party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days from the date of publication.

It is our plan to submit an APD to the BLM once the NMOCD approves the application.  
Sincerely yours,

Paul Ragsdale  
Operations Manager  
Strata Production Company

LEA

SUPERIOR OIL CO., THE

Wildcat

2 Triste Draw Federal  
Sec 14, T23S, R32E

NM

Page #2

8-10-82

Continued

Perf (Bone Spring) 9512-92, 9600-76,  
9707-88, 9800, 9802

Acid(9512-9802)\*6000 gals

Frac (9512-9802)\*160,000 gals +\*30,500# sd

8-17-82

TD 14,561; PBD 10,081; Tstg

Flwd 8 BO + 110 BLW in 24 hrs thru 12/64 chk,  
TP 220 (9512-9802)

8-24-82

TD 14,561; PBD 10,081; Tstg

Swbd 51 BO + 46 BW (9512-9802)

9-8-82

TD 14,561; PBD 10,081; Ppg

Ppd 65 BO + 192 BW + 150 MCFGPD in 24 hrs  
(9512-9802)

9-4-30 NM

9-15-82

TD 14,561; PBD 10,081; Ppg

Ppd 103 BO + 143 BW in 24 hrs (9512-9802)

9-20-82

TD 14,561; PBD 10,081; Complete

Bone Spring Discovery

\*LOG TOPS: Rustler 1200, Lamar 4932, Base

Salt 8476, Wolfcamp 12,072, Permo-Pennsylvanian

13,510, Strawn 14,030, Atoka 14,208

\*Denotes changes & additions

9-25-82

COMPLETION ISSUED

10-23-82

RE-ISSUED COMPLETION

9-4-30 NM

IC 30-025-70732-81



Log-4023

# 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.	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
Rustler Anhy	1,200	8,476	Anhydrite	Rustler Anhy	1,200		
Lamar Lime	4,932	12,072	Lime	Lamar Lime	4,932		
Bone Spring	8,476	13,510	Lm, Sh, Sd	Bone Spring	8,476		
Wolfcamp	12,072	14,030	Shw/lm, sltly sdy top 200'	Wolfcamp	12,072		
Permo-Penn	13,510	14,208	Sh w/thin Lm.	Permo-Penn	13,510		
Strawn	14,030	14,559	Chty Lm	Strawn	14,030		
Atoka	14,208		Sd, Sh, Lm	Atoka	14,208		
DST	14,379	14,561	90' mud, gas TSTM				

4430

DELIVER  
SEND

OCT 5 1932

RECEIVED



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE  
(Other instruction  
reverse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	5. LEASE DESIGNATION AND SERIAL NO. NM - 11967
2. NAME OF OPERATOR Mobil Producing TX & N.M. Inc.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR % Mobil Exploration & Producing U.S. Inc. P.O. Box 633 Midland, TX 79702	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1980 FSL 2480 FEL	8. FARM OR LEASE NAME Triste Draw Federal
	9. WELL NO. 2
	10. FIELD AND POOL, OR WILDCAT Diamondtail-bone Spring
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 14, T-23S, R-32E
14. PERMIT NO.	12. COUNTY OR PARISH Lea
15. ELEVATIONS (Show whether DF, RT, GR, etc.) GL - 3706	13. STATE New Mexico

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐  
FRACTURE TREAT ☐  
SHOOT OR ACIDIZE ☐  
REPAIR WELL ☐  
(Other) ☐

PULL OR ALTER CASING ☐  
MULTIPLE COMPLETION ☐  
ABANDON\* ☐  
CHANGE PLANE ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐  
FRACTURE TREATMENT ☐  
SHOOTING OR ACIDIZING ☐  
(Other) ☐

REPAIRING WELL ☐  
ALTERING CASING ☐  
ABANDONMENT\* ☒

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.) \*

6-15-89 MIRU Mayo Marrs POH w/272 2 7/8 tbg. Set CIBP @ 9460 w/30' cmt (2x)  
6-19-89 RIH w/tbg & circ mud.  
6-20-89 Attempt to cut csg @ 5000' & 4950' but would not part.  
6-21-89 Spot 80x CL C cmt @ 5000'. Attempt to tag - nothing- Spot 60x CL C cmt  
Witnessed by Andy Carter w/BLM  
6-22-89 TOC @ 4979 needed 4800' min. Spotted 60c C1 C. Tagged @ 4635 - Witnessed  
by Andy Carter. Cut csg.  
6-23-89 Cut 7 5/8 csg.  
6-24-89 POOH w/78 jts of 7 5/8 csg. Spot w/85x CL C cmt. from 3500-3400. Spot  
65x @ 3200'. TOC 3050'  
6-25-89 TOC below 3250' Spot w/65x CL C. Tag TOC @ 3069' Spot 60x CL C cmt at 710'  
TOC 610'  
6-26-89 Spot 50x CL C cmt to surf. Set P & A marker.

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

SIGNED

*Stacy Todd*

TITLE

MOBIL EXPLORATION & PRODUCING U.S. INC.  
AS AGENT FOR MOBIL PRODUCING TX & NM INC.

DATE

7-13-89

(This space for Federal or State office use)

APPROVED BY

*Shamuel J. Shaw*

FOR: TITLE

CHIEF, MINERAL RECORDS

DATE

7-31-89

CONDITIONS OF APPROVAL, IF ANY:

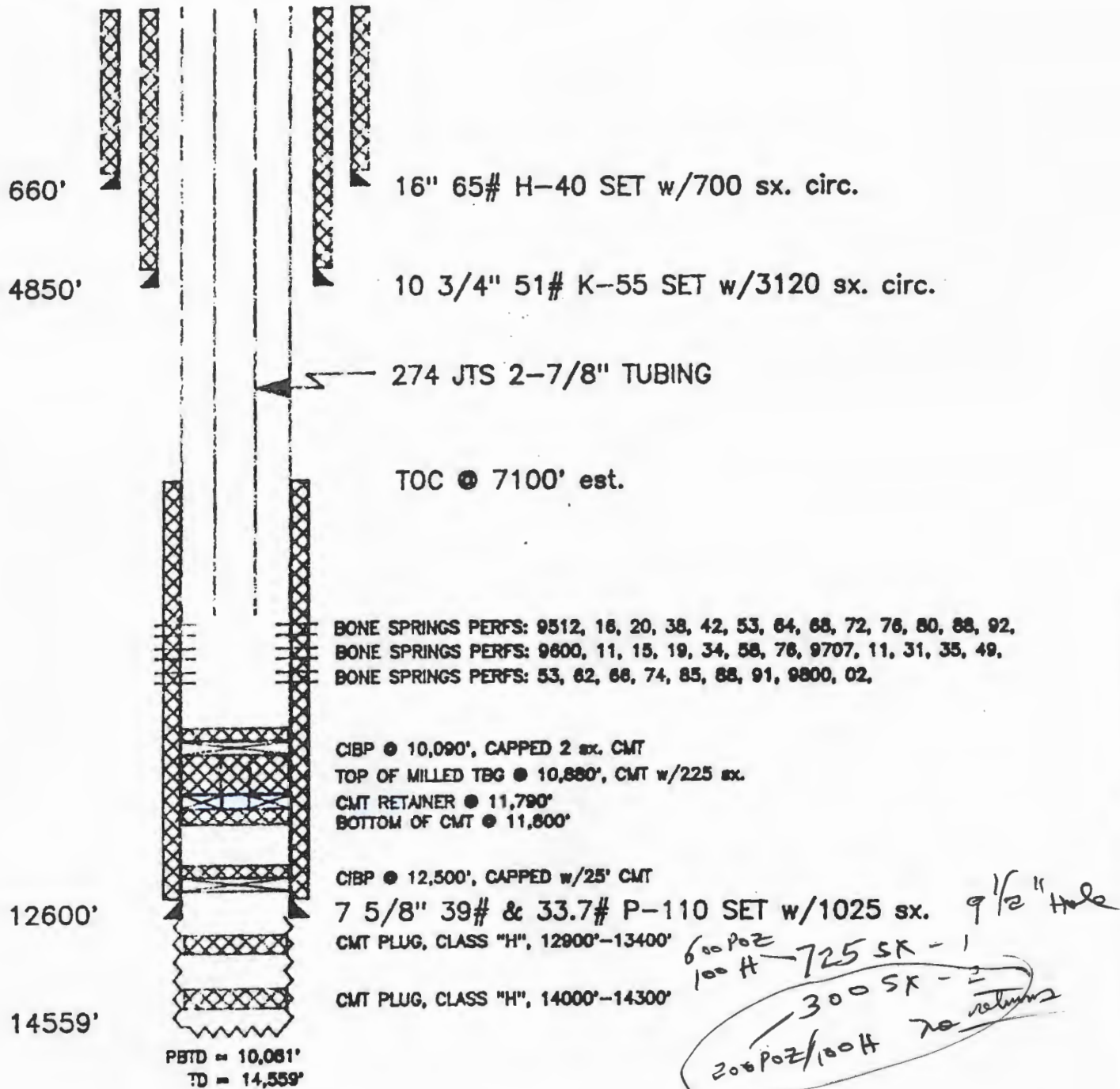
Approved as to the accuracy of the well logs.  
Liability under this permit is retained until  
surface restoration is completed.

\*See Instructions on Reverse Side

TRISTE DRAW FEDERAL #2  
DIAMONDTAIL / BONE SPRINGS  
LEA COUNTY, NEW MEXICO

GL = 3708'  
DF = N.A.  
KB = 3728'  
2480'FEL - 1980'FSL  
J - SECTION 14  
T23S - R32E

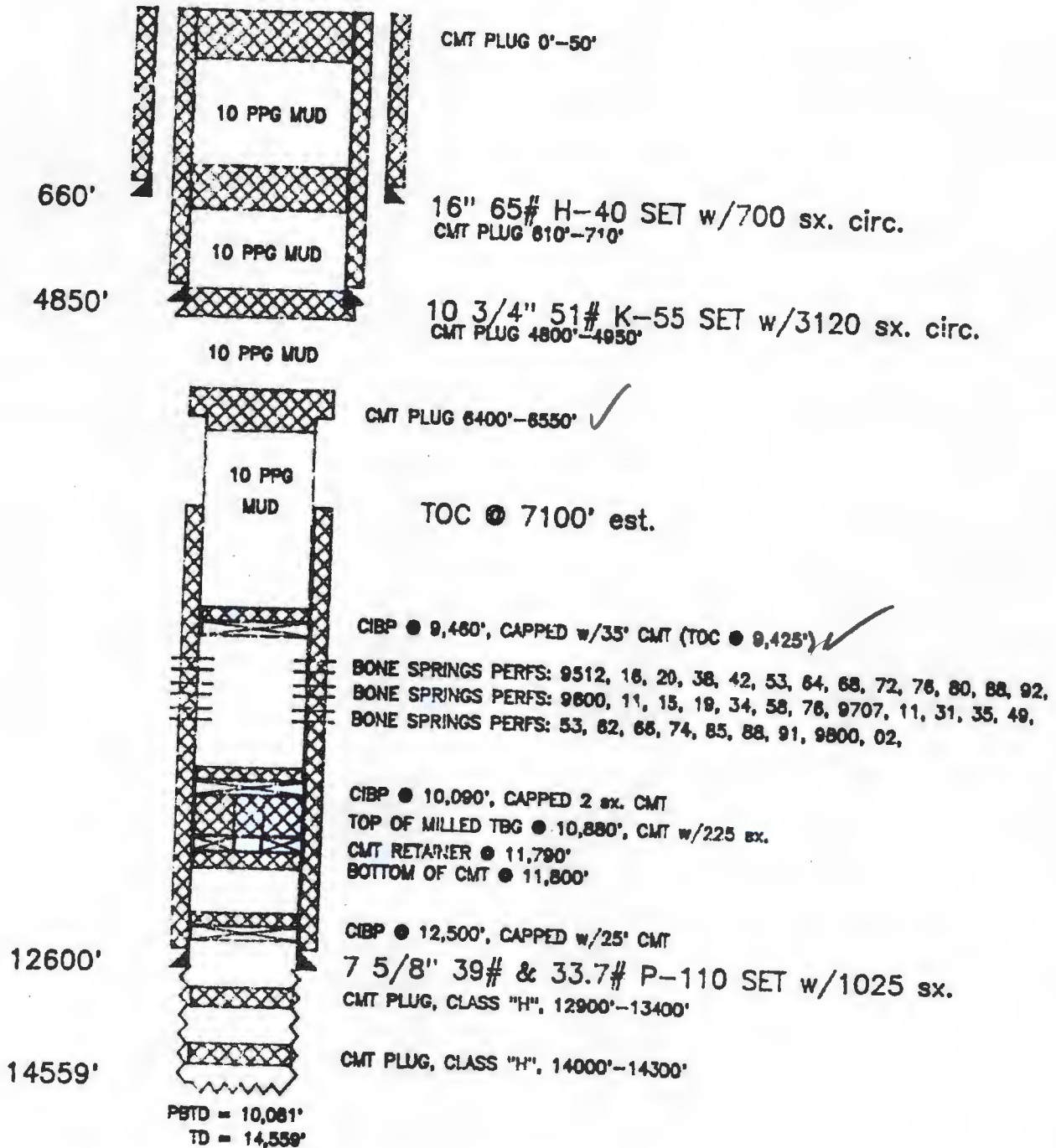
# CURRENT WELLBORE SKETCH



TRISTE DRAW FEDERAL #2  
DIAMONDTAIL / BONE SPRINGS  
LEA COUNTY, NEW MEXICO

GL = 3706'  
DF = N.A.  
KB = 3728'  
2480'FEL - 1980'FSL  
J - SECTION 14  
T23S - R32E

PROPOSED WELLBORE SKETCH



W. P. GOSSETT

04/07/89

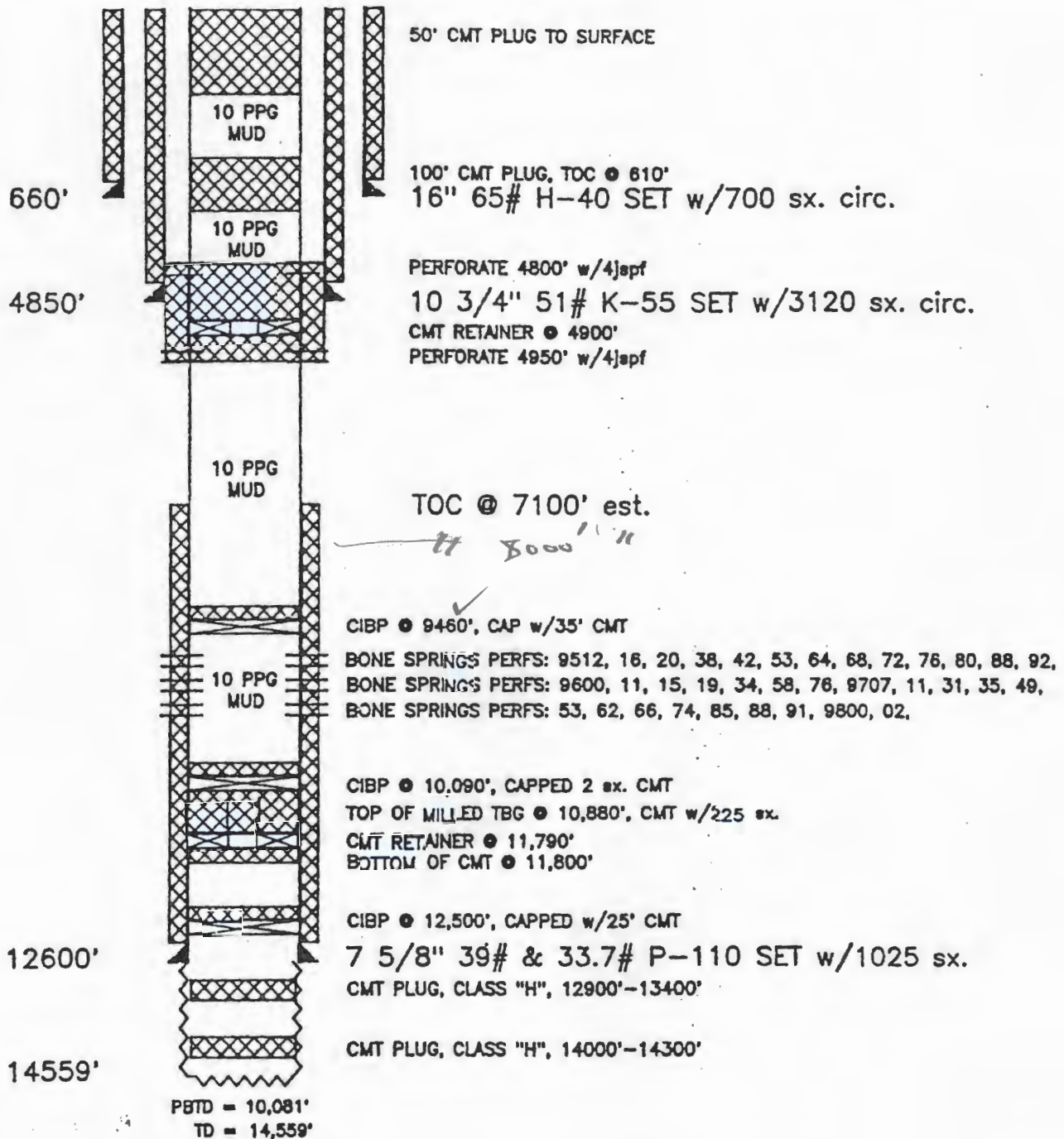
ATTACHMENT  
1D  
P&A WELL BORE  
DIAGRAM



TRISTE DRAW FEDERAL #2  
DIAMONDTAIL / BONE SPRINGS  
LEA COUNTY, NEW MEXICO

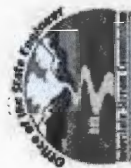
GL = 3706'  
DF = N.A.  
KB = 3728'  
2480'FEL - 1980'FSL  
J - SECTION 14  
T23S - R32E

PROPOSED WELLBORE SKETCH



W. P. GOSSETT

09/08/88



## New Mexico Office of the State Engineer

# Water Column/Average Depth to Water

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

No records found.

### PLSS Search:

Section(s): 10-15, 22-24 Township: 23S Range: 32E

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

12/18/17 9:43 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

## McMillan, Michael, EMNRD

---

**From:** Paul Ragsdale <pragsdale@stratanm.com>  
**Sent:** Monday, December 18, 2017 12:51 PM  
**To:** McMillan, Michael, EMNRD  
**Subject:** RE: Strata Triste Draw SWD application  
**Attachments:** Tristi Draw Federal #1.xls

Mike,

I have attached a wellbore diagram of the current wellbore condition, at least to the best of our knowledge. We believe the 7 5/8" casing was shot at 5000' but would not part. It was shot again at 3275' and pulled. Our plan is to drill out the top plug, the 2<sup>nd</sup> plug from 610-710' and then clean out to the top of the 7 5/8" stub. We will run a "tie back" string of 7 5/8" casing from the surface to the cut casing and cement it back to surface. Then, we will continue to clean out the 7 5/8" casing and drill out all the plugs to the casing shoe at 12,600'. We plan on squeezing the Bone Spring perms from 9512-9802' also. We will also have to "fish" the tubing and packer that are in the hole.

Once we get cleaned out to the casing shoe, we will drill a 6 1/2" hole to the top of the Devonian at an estimated 17,140'. At that point, we will run a full string of 5 1/2" casing and cement it, probably in 2 stages, and circulate cement to surface. After setting and cementing the 5 1/2" casing, we will drill approximately 1000' of open hole with a 4 5/8" bit. We will then move the rig off, run the tubing and packer and inject into the open hole.

So, to answer your questions: we do not plan any remedial cementing on the existing 7 5/8" casing except for squeezing the Bone Springs. We think it is better to have a brand new string of 5 1/2" casing, completely cemented to surface rather than trying to maintain mechanical integrity in the 7 5/8" casing.

Let me know if you need anything else.  
Thanks,  
Paul

---

**From:** McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]  
**Sent:** Friday, December 15, 2017 1:46 PM  
**To:** Paul Ragsdale  
**Subject:** RE: Strata Triste Draw SWD application

Paul:  
What are your workover plans to bring the cement in the 7-5/8-inch casing from 7000 or 8000 feet (the cement tops are estimated) to 4850 feet?

Are you planning on drilling out the plugs (at what depth?)

Then run a cement bond log?

Then squeezing the 7-5/8-inch casing?

Thanks

Mike



**From:** McMillan, Michael, EMNRD  
**Sent:** Tuesday, December 5, 2017 10:30 AM  
**To:** 'Paul Ragsdale' <[pragsdale@stratanm.com](mailto:pragsdale@stratanm.com)>  
**Subject:** RE: Strata Triste Draw SWD application

Thanks for the quick response  
The 15-day clock starts December 1  
Mike

---

**From:** Paul Ragsdale [<mailto:pragsdale@stratanm.com>]  
**Sent:** Tuesday, December 5, 2017 10:25 AM  
**To:** McMillan, Michael, EMNRD <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>  
**Subject:** RE: Strata Triste Draw SWD application

That is correct. Devon is the "Operator of record" in Section 23. However, Cimarex permitted to drill the wells in the north half of Section 23. Strata does not know the terms of the agreement between Cimarex and Devon but we assume it must be a "farm out" of the Bone Springs rights.  
That is why we notified both Devon and Cimarex.  
Paul

---

**From:** McMillan, Michael, EMNRD [<mailto:Michael.McMillan@state.nm.us>]  
**Sent:** Monday, December 4, 2017 3:37 PM  
**To:** Paul Ragsdale  
**Subject:** RE: Strata Triste Draw SWD application

Paul:  
Today's map shows that Devon is the operator of Section 23; however, your ARCGIS shows Cimarex is the operator of Section 23.  
Mike

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Monday, December 4, 2017 2:55 PM  
**To:** 'Paul Ragsdale' <[pragsdale@stratanm.com](mailto:pragsdale@stratanm.com)>  
**Subject:** RE: Strata Triste Draw SWD application

That is perfect.  
What is required is to wait for the 15-day clock to expire.  
Mike

---

**From:** Paul Ragsdale [<mailto:pragsdale@stratanm.com>]  
**Sent:** Monday, December 4, 2017 2:51 PM  
**To:** McMillan, Michael, EMNRD <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>  
**Subject:** RE: Strata Triste Draw SWD application

Michael,  
As discussed, I have attached a spreadsheet with typical water analyses from the Bone Springs, Delaware and Permian formations. These analyses were obtained from the GoTech website and from Strata's files.  
I have also attached a Land map of the area showing the Operators in the Area of Review. The yellow acreage is Strata Triste Draw and the blue acreage is Devon Energy.

Please let me know if you need anything else,  
Paul

**Paul Ragsdale**

Strata Production Company  
Operations Manager

(575) 622-1127 ext 18 Work  
(575) 626-7903 Mobile  
pragsdale@stratanm.com  
PO Drawer 1030  
Roswell NM 88202

---

[avast! Antivirus](#): Inbound message clean.

Virus Database (VPS): 171124-6, 11/24/2017

Tested on: 12/4/2017 3:43:48 PM

avast! - copyright (c) 1988-2017 AVAST Software.

## McMillan, Michael, EMNRD

---

**From:** Paul Ragsdale <pragsdale@stratanm.com>  
**Sent:** Wednesday, February 7, 2018 8:36 AM  
**To:** McMillan, Michael, EMNRD  
**Subject:** RE: Strata Triste Draw SWD application

That is correct and you are also correct about the 3 ½" tubing. I will see Edsel tonight and will tell him Hello for you.  
Thanks,  
Paul

---

**From:** McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]  
**Sent:** Tuesday, February 6, 2018 4:45 PM  
**To:** Paul Ragsdale  
**Subject:** RE: Strata Triste Draw SWD application

Ignore this-I assume it is 2100sacks from the original drawing  
Mike

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Tuesday, February 6, 2018 4:44 PM  
**To:** 'Paul Ragsdale' <pragsdale@stratanm.com>  
**Subject:** RE: Strata Triste Draw SWD application

How many sacks will be estimate in the 5-1/2-inch casing to circulate to the surface?  
Mike

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Tuesday, February 6, 2018 3:23 PM  
**To:** 'Paul Ragsdale' <pragsdale@stratanm.com>  
**Subject:** RE: Strata Triste Draw SWD application

I assume you are using a 3-1/2 inch tubing?  
It appears to be a good plan  
I will work on the application tomorrow  
Tell Edsel Hi  
Mike

---

**From:** Paul Ragsdale [mailto:pragsdale@stratanm.com]  
**Sent:** Tuesday, February 6, 2018 2:28 PM  
**To:** McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>  
**Subject:** RE: Strata Triste Draw SWD application

Hi,  
We have drawn a couple of wellbore diagrams for the Triste Draw re-entry. The "current" file is the Current condition of plugged well, as we read the reports on file. The proposed file is a diagram of how we propose to re-enter and run rig on the well. Please take a look at them and give me a call or let me know and I can give you a call.  
Thanks,



## McMillan, Michael, EMNRD

---

**From:** Brown, Maxey G, EMNRD  
**Sent:** Thursday, February 8, 2018 10:25 AM  
**To:** McMillan, Michael, EMNRD  
**Subject:** RE: Strata Triste Draw SWD application

Mr. McMillan,

I don't see any problems with the design. You mentioned 9 5/8" I believe it's 7 5/8".

Maxey

---

**From:** McMillan, Michael, EMNRD  
**Sent:** Thursday, February 8, 2018 9:36 AM  
**To:** Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>  
**Cc:** Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>  
**Subject:** FW: Strata Triste Draw SWD application

Maxey and Mark:

Are you satisfied with the administrative application, for the well?

Basically the 9-5/8-inch casing was shot off, and the 9-5/8-inch cement behind the casing goes to approximately 8000'.

My administrative order will follow your recommendations.

Mike

---

**From:** Paul Ragsdale [<mailto:pragsdale@stratanm.com>]  
**Sent:** Tuesday, February 6, 2018 2:28 PM  
**To:** McMillan, Michael, EMNRD <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>  
**Subject:** RE: Strata Triste Draw SWD application

Mike,

I have drawn a couple of wellbore diagrams for the Triste Draw re-entry. The "current" file is the Current condition of the plugged well, as we read the reports on file. The proposed file is a diagram of how we propose to re-enter and run casing on the well. Please take a look at them and give me a call or let me know and I can give you a call.

Thanks,

Paul

---

**From:** McMillan, Michael, EMNRD [<mailto:Michael.McMillan@state.nm.us>]  
**Sent:** Tuesday, January 16, 2018 3:28 PM  
**To:** Paul Ragsdale  
**Subject:** RE: Strata Triste Draw SWD application

anks

ill be back in the office Monday

e

---

**From:** Paul Ragsdale [<mailto:pragsdale@stratanm.com>]  
**Sent:** Tuesday, January 16, 2018 1:55 PM  
**To:** McMillan, Michael, EMNRD <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>  
**Subject:** RE: Strata Triste Draw SWD application





# FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 12/01/2017 Admin Complete: 12/01/2017 or Suspended: \_\_\_\_\_ Add. Request/Reply: \_\_\_\_\_

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

Well No. 2 Well Name(s): Tristed New Federal SWD VI211982  
API: 30-0 25-27708 Spud Date: 05/7/80 New or Old (EPA): TSD (UIC Class II Primacy 03/07/1982)

Footages 1980 FSL 2480 FEL Lot \_\_\_\_\_ or Unit 5 Sec 14 Tsp 23S Rge 32E County LLA

General Location: 23 miles SW/EHance Pool: SWD, Devonian Pool No.: 96101

BLM 100K Map: JAI Operator: State Production Co OGRID: 217/2 contact: Paul Cassdalej mgr

COMPLIANCE RULE 5.9: Total Wells: 50 Inactive: 2 Fincl Assur. OK Compl. Order? MA IS 5.9 OK? X Date: 2-07-2018

WELL FILE REVIEWED ☐ Current Status: P&A

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

Planned Rehab Work to Well: run 5" casing w/ cement 6 1/4" it c/w/surface

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___	Surface	<u>22" / 16"</u>	<u>660'</u>	<u>700</u>	<u>Surface / UBS</u>
Planned ___ or Existing ___	Interm/Prod	<u>14 7/8" / 10 3/4"</u>	<u>4850'</u>	<u>3120</u>	<u>Surface / UBS</u>
Planned ___ or Existing ___	Interm/Prod	<u>6 1/2" / 5 1/2"</u>	<u>17140</u>	<u>2100</u>	<u>Surface / UBS</u>
Planned ___ or Existing ___	Prod/Liner				
Planned ___ or Existing ___	Liner				
Planned ___ or Existing ___	OH / PERF	<u>17 1/8" / 150</u>		<u>Inj Length</u> <u>1000'</u>	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		<u>u2</u>	
Confining Unit: Litho. Struc. Por.		<u>DEV</u>	
Proposed Inj Interval TOP:			
Proposed Inj Interval BOTTOM:			
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:	
Drilled TD	<u>14551</u> PBTD _____
NEW TD	<u>14150</u> NEW PBTD _____
NEW Open Hole	<input checked="" type="radio"/> or NEW Perfs <input type="radio"/>
Tubing Size	<u>5 1/2</u> in. Inter Coated? _____
Proposed Packer Depth	<u>1640</u> ft <u>17040</u>
Min. Packer Depth	<u>12000</u> (100-ft limit)
Proposed Max. Surface Press.	<u>3428</u> psi
Admin. Inj. Press.	<u>31340</u> (0.2 psi per ft)

## AOR: Hydrologic and Geologic Information

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

FRESH WATER: Aquifer MA Max Depth \_\_\_\_\_ HYDRO AFFIRM STATEMENT By Qualified Person X

NMOSE Basin: Carlsbad CAPITAN REEF: thru \_\_\_\_\_ adj. NA No. GW Wells in 1-Mile Radius? 0 FW Analysis? MA

Disposal Fluid: Formation Source(s) Spring, water Analysis? Y On Lease ☐ Operator Only ☐ or Commercial ☒

Disposal Interval: Inject Rate (Avg/Max BWPD): 54/157 Protectable Waters? \_\_\_\_\_ Source: \_\_\_\_\_ System: Closed or Open

IC Potential: Producing Interval? MA Formerly Producing? \_\_\_\_\_ Method: Logs/DST/P&A/Other regional 2-Mi Radius Pool Map ☐

AOR Wells: 1/2-M Radius Map and Well List? \_\_\_\_\_ No. Penetrating Wells: \_\_\_\_\_ [AOR Horizontals: \_\_\_\_\_ AOR SWDs: \_\_\_\_\_]

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

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

NOTICE: Newspaper Date 11-02-2017 Mineral Owner BLM Surface Owner BLM N. Date 11-1-2017

LE 26.7(A): Identified Tracts? Y Affected Persons: Devon, Cimarron, Marathon N. Date 11-1-2017

er Conditions: Issues: Sfg 2022 B.S. Perfs, Cumulate Closes 6 1/4" 5 1/2" Surfa

itional COAs: \_\_\_\_\_