

DATE IN 4/28/15	SUSPENSE	ENGINEER WVD	LOGGED IN	TYPE SWD	APP NO. PWVS/15/11937719
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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.

Eddie W Seay
 Print or Type Name

Eddie W Seay
 Signature

Agent
 Title

3/13/15
 Date

seay.04@leaco.net
 e-mail Address

RECEIVED OGD
 2015 MAR 30 P 2:29

APPLICATION FOR AUTHORIZATION TO INJECT

PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No

II. OPERATOR: Permian TDS, LLC

ADDRESS: Box 788 Lovington, NM 88260

CONTACT PARTY: Patrick McMahon PHONE: 575-399-5031

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 X 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: Patrick B. McMahon TITLE: Owner

SIGNATURE:  DATE: 3/13/15

E-MAIL ADDRESS: hsncpbm@leaco.net

* 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: logs submitted by previous operator when drilled.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

ATTACHMENT TO APPLICATION C-108

North Shugart Fed #2
Unit P, Sect. 17, Tws. 18 S., Rng. 31 E.
Eddy Co., NM

III. WELL DATA

- A.
 - 1) See injection well data sheets and attached schematics.
 - 2) See injection well data sheets and attached schematics.
 - 3) 3 1/2" plastic coated tubing.
 - 4) Baker Lock Set with on/off tool.
- B.
 - 1) Injection formation is the Delaware.
 - 2) Injection interval from 4720' to 5700'.
 - 3) This is an existing P & A well.
 - 4) The next higher producing zone is the San Andres at approximately 4540'.
 - The next lower producing zone is the Bone Springs at approximately 5840'.

IV. NO.

V. MAP ATTACHED.

VI. LIST OF WELLS AND DATA ATTACHED.

VII. Permian plans to re-enter well for the purpose of completing as a Delaware SWD. Install anchors, and wellhead. Clean out well down to 5840', tag plugs. Selectively perforate 5 1/2" casing 5000' to 5600'. Run in hole with 3 1/2" IPC tubing and packer. Set at approximately 4900' or within 100 ft. of top perfs. Acidize as needed, run MIT as OCD requires, file all sundry reports and put on injection.

- 1) Plan to inject approximately 10,000 bpd of produced water from various operations.
- 2) Open system, commercial.
- 3) Average injection pressure should be approximately 850# or whatever limit OCD allows.
- 4) Produced water analysis.
- 5) Water from various operations; San Andres, Yeso, Grayburg and Wolfcamp.

VIII. The proposed disposal formation is sand and limestone. The primary geologic formations are the Delaware sand from 4700' to 5700'.

The fresh water formation in the area is the Ogallala, which if existed, would be in excess of 300 ft.

IX. ACIDIZE AS NEEDED.

X. LOGS PREVIOUSLY SUBMITTED.

XI. NO WATER FOUND OR NOTED BY STATE ENGINEERS SITE. MAP AND DATA ATTACHED.

XII. I, Eddie W. Seay, have examined all available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zones and any underground source of drinking water pertaining to this well.

XIII. ATTACHED.

INJECTION WELL DATA SHEET

WELL NAME & NUMBER: North Shugart Fed #2 (API 30.015.31459)

WELL LOCATION: 990/S 990/E P 17 18 31 E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

AFTER WELL BORE SCHEMATIC AND HISTORY

COMPLETION SCHEMATIC

APPRAISAL 30-015-31489

OPERATOR: PERMIAN TDS

LEASENAME: NORTH SHUGART FEDERAL		WELL NO. 2
SURF LOC:	U/L: P (SEC: 17 TOWN: 16S RANG: 31E)	990 FSL
IN LOC:	U/L: P (SEC: 17 TOWN: 16S RANG: 31E)	990 FSL
MD 10778	KB 3854 OL 2842	CP
POOL SHUGART;MORROW, NORTH		PERFS 11784-11812
POOL SWD;DELAWARE		PERFS 3044-3068
POOL		PERFS
POOL		PERFS

CASING RECORD				
SURF	SIZE	DEPTH	CMT	HOLE SIZE
INTNL	13.375	811	280 x 80	17.8
PROD	8.5	11818	1400 x 80	7.875

SPUD: 12/10/2000
 COMP: 03/12/2001

Handwritten: PV TOOL

PREPARED BY: Eddie Sawyer

Top of Cement: Surface Method Determined: Circ

Intermediate Casing

Top of Cement: Surface Method Determined: Cure

Production Casing

Top of Cement: 1760 ← Method Determined: (TS)

Total Depth: 10770

Injection Interval

~~4720~~ feet to ~~5700~~

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3½ Lining Material: IPC
 Type of Packer: Baker Loc Set
 Packer Setting Depth: Approx 4900 or within 100 ft. of top perfs.
 Other Type of Tubing/Casing Seal (if applicable): NONE

Additional Data

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

If no, for what purpose was the well originally drilled? Production

2. Name of the Injection Formation: Delaware Sand
 3. Name of Field or Pool (if applicable): Shugart North
 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. Perforated in Morrow 11764-11812; See attached schematic for PFA
 5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

The zone which overlies the proposed SWD is the San Andres at 4540. The zone that underlies the proposed SWD is Bone Springs at 5840

DISPOSAL WELL

API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STAT	CO	LAND	U/L	SEC	TWN	RNG	N/S	E/W	
30-015-31459	NORTH SHUGART FEDERAL	2	PERMIAN TDS	11919	G	A	Eddy	F	P	17	18 S	31 E	990 S	990 E	

Wells within 1/2 mile

API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STAT	CO	LAND	U/L	SEC	TWN	RNG	N/S	E/W	Dist
30-015-05575	VS UNIT	107	COG OPERATING LLC	3225	I	P	Eddy	F	G	17	18 S	31 E	1980 N	1980 E	2513
30-015-05573	VS UNIT	108	COG OPERATING LLC	3200	O	P	Eddy	F	H	17	18 S	31 E	1650 N	990 E	2640
30-015-26374	NORTH SHUGART FEDERAL	1	CIMAREX ENERGY CO of COLORADO	11925	G	P	Eddy	F	H	17	18 S	31 E	1980 N	760 E	2321
30-015-05569	PRE-ONGARD WELL	2	PRE-ONGARD WELL OPERATOR		O	P	Eddy		K	17	18 S	31 E	1980 S	1980 W	2513
30-015-23069	CANADIAN KENWOOD FED	1	EOG RESOURCES INC	11785	G	P	Eddy	F	N	17	18 S	31 E	660 S	1980 W	2333
30-015-05561	MAGNOLIA STATE	2	CAMERON OIL & GAS INC	3264	O	A	Eddy	S	M	16	18 S	31 E	330 S	330 W	1475
30-015-05592	NORTH SHUGART QUEEN UNIT	2	TOM R CONE	3259	O	A	Eddy	F	D	21	18 S	31 E	990 N	330 W	2379
30-015-31013	SHUGART 21 FEDERAL	2	DEVON ENERGY PROD CO LP	0	G	C	Eddy	F	D	21	18 S	31 E	660 N	800 W	2434

Wells within 1/2 mile which penetrate the proposed disposal zone

API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STAT	CO	LAND	U/L	SEC	TWN	RNG	N/S	E/W	Dist
30-015-26374	NORTH SHUGART FEDERAL	1	CIMAREX ENERGY CO of COLORADO	11925	G	P	Eddy	F	H	17	18 S	31 E	1980 N	760 E	2321
30-015-23069	CANADIAN KENWOOD FED	1	EOG RESOURCES INC	11785	G	P	Eddy	F	N	17	18 S	31 E	660 S	1980 W	2333

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 20105. Lease Serial No.
NMNM83601

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM845978. Well Name and No.
NORTH SHUGART FEDERAL 29. API Well No.
30-015-31459-00-S110. Field and Pool, or Exploratory
SHUGART11. County or Parish, and State
EDDY COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

CIMAREX ENERGY COMPANY OF CO

Contact: DAVID A EYLER

E-Mail: DEYLER@MILAGRO-BES.COM

3a. Address

600 NORTH MARIENFELD STREET SUITE 600
MIDLAND, TX 79701

3b. Phone No. (include area code)

Ph: 432-687-2033

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 17 T18S R31E SESE 990FSL 990FEL

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

TYPE OF SUBMISSION

- ☐
- Notice of Intent
-
- ☒
- Subsequent Report
-
- ☐
- Final Abandonment Notice

TYPE OF ACTION

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input type="checkbox"/> Other |
| <input type="checkbox"/> Change Plans | <input checked="" type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed; and the operator has determined that the site is ready for final inspection.)

03/22/14: SET 5-1/2" CIBP @ 11,550'; CIRC. WELL W/ PXA MUD.

03/23/14: PUMP 30 SXS.CMT. @ 11,550'-11,310'(CALC.); PRES. TEST CSG. TO 900# - HELD OK; PUMP 40

SXS.CMT. @ 10,700'-10,400'(CALC.); PUMP 25 SXS.CMT. @ 9,795'-9,605'(CALC.); PUMP 25 SXS.CMT. @

8,790'; WOC X TAG CMT. @ 8,495'; PUMP 25 SXS.CMT. @ 7,144'-6,974'(CALC.);

03/24/14: PUMP 25 SXS.CMT. @ 5,844'-5,684'(CALC.); PUMP 25 SXS.CMT. @ 3,265'; WOC X TAG CMT. @

3,115'; PUMP 75 SXS.CMT. @ 2,864'; WOC.

03/25/14: TAG CMT. @ 2,300'; PERF. X SQZ. 120 SXS.CMT. W/ 2% CACL @ 1,100'; WOC X TAG CMT. @ 715'

(OK'D BY BLM); PERF. X SQZ. 40 SXS.CMT. @ 665'; WOC.

03/26/14: TAG CMT. @ 478'; PERF. X CIRC. TO SURF., FILLING ALL ANNULI, 100 SXS. @ 300'-3'; DIG OUT

X CUT OFF WELLHEAD 3' B.G.L.; VERIFY CMT. TO SURF. ON ALL ANNULI; WELD STEEL PLATE TO CSGS. X

INSTALL GROUND LEVEL DRY HOLE MARKER.

RECEIVED

APR 15 2014

NMOCD ARTESIA

Accepted as to plugging of the well bore.
Liability under bond is retained until
Surface restoration is complete.

Approved: 104 #20000
URD 4/16/14

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

Electronic Submission #240347 verified by the BLM Well Information System

For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad

Committed to AFMSS for processing by JAMES AMOS on 04/04/2014 (14JLD1508SE)

Name (Printed/Typed) DAVID A EYLER

Title AGENT

Signature (Electronic Submission)

Date 03/28/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

ACCEPTED

JAMES A AMOS
Title SUPERVISOR EPS

Date 04/06/2014

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

WELLBORE SCHEMATIC AND HISTORY

COMPLETION SCHEMATIC		APINUM: 30-015-31459	
FORM	DEPTH	OPERATOR: CIMAREX ENERGY CO of COLORADO	
Rustler T. Salt	530	LEASENAME: NORTH SHUGART FEDERAL	
		WELL NO. 2	
		SURF LOC: UL: P SEC: 17 TWN: 18S RNG: 31E	
		990 FSL 990 FEL	
		BH LOC: UL: P SEC: 17 TWN: 18S RNG: 31E	
B. Salt Yates	2050	990 FSL 990 FEL	
		MD 10770 KB 3854 DF	
		GL 3842	
		POOL SHUGART;MORROW, NORTH	
		PERFS 11764-11812	
Queen	3220	POOL	
		PERFS	
		POOL	
		PERFS	
		POOL	
San Andres	4540	CASING RECORD	
		SIZE DEPTH CMT HOLE SIZE TOC	
		SURF. 13.375 615 490 sxs 17.5 0' Circ	
		INTM1 8.625 3200 1350 sxs 11 0' Circ	
		PROD 5.5 11918 1400 sxs 7.875 1760	
Delaware	4720	SPUD: 12/10/2000	
		COMP: 03/21/2001	
		P&A: 03/26/2014	
		BEFORE	
		AVE 7059'	
Bone Spring	5840	PLUG 25 sxs 5684-5844	
		7144-6974	
		PLUG 25 sxs 8790 - 8495	
		PLUG 25 sxs 9605-9795	
		PLUG 40 sxs 10400-10700	
Wolfcamp	9361	CIBP @ 11550 cap w/ 30SXS cmnt	
		PERF 11764-11812	
		Strawn	
		Atoka	
		Morrow	
Morrow	11308	5 1/2	
		@ 10770	
		TOC @ 7551	
		TD 10770'	
		PREPARED BY: Eddie Seay	
UPDATED 03/13/15			

AFTER WELLBORE SCHEMATIC AND HISTORY

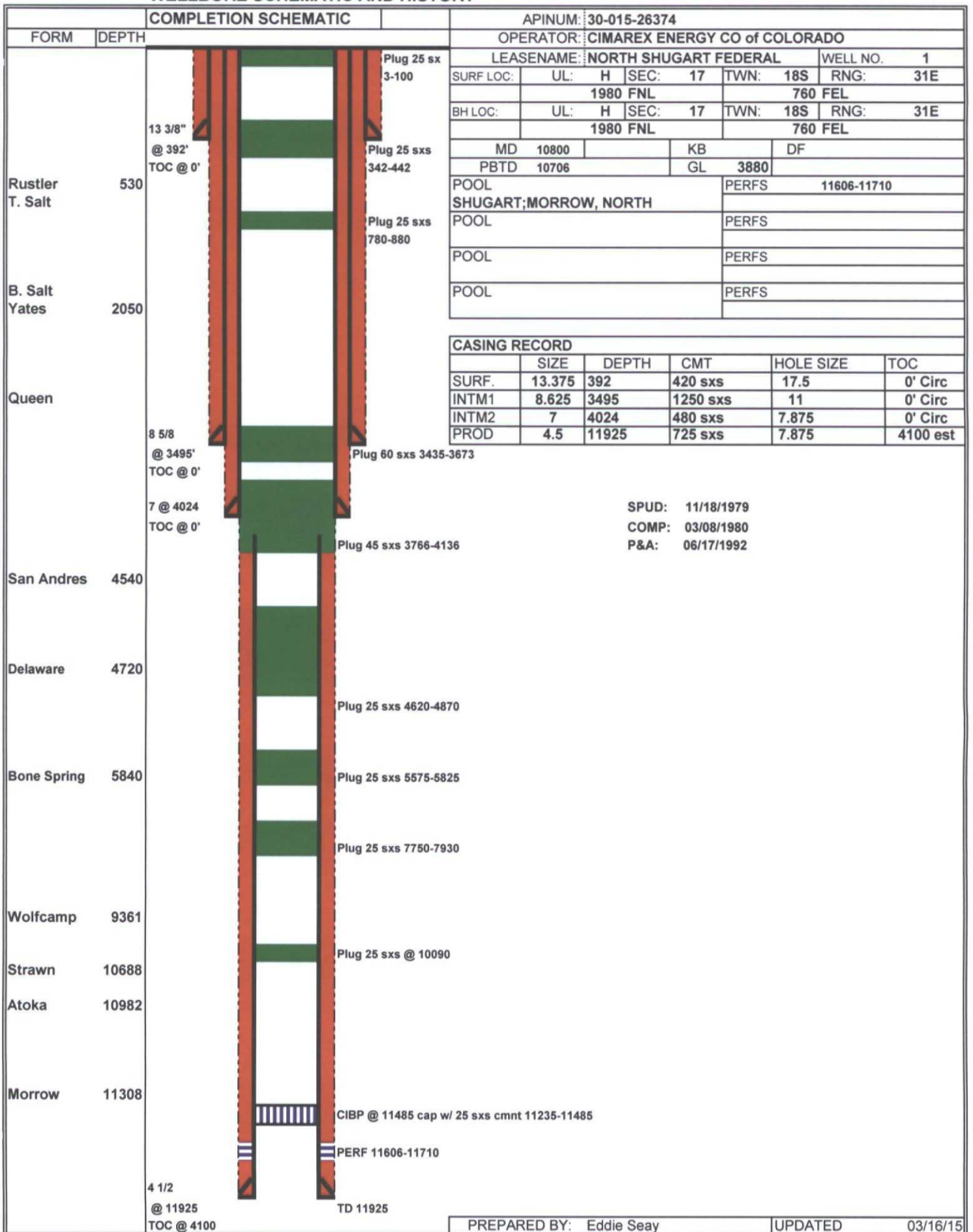
COMPLETION SCHEMATIC		APINUM: 30-015-31459																									
FORM	DEPTH	OPERATOR: PERMIAN TDS																									
Rustler T. Salt B. Salt Yates Queen San Andres Delaware Bone Spring Wolfcamp Strawn Atoka Morrow	530	LEASENAME: NORTH SHUGART FEDERAL SURF LOC: UL: P SEC: 17 TWN: 18S RNG: 31E 990 FSL 990 FEL BH LOC: UL: P SEC: 17 TWN: 18S RNG: 31E 990 FSL 990 FEL MD 10770 KB 3854 DF GL 3842 POOL SHUGART;MORROW, NORTH PERFS 11764-11812 POOL SWD;DELAWARE PERFS 5064-5600 POOL PERFS POOL PERFS																									
	2050	TOC @ 1760 CASING RECORD <table border="1"> <thead> <tr> <th></th> <th>SIZE</th> <th>DEPTH</th> <th>CMT</th> <th>HOLE SIZE</th> <th>TOC</th> </tr> </thead> <tbody> <tr> <td>SURF.</td> <td>13.375</td> <td>615</td> <td>490 sxs</td> <td>17.5</td> <td>0' Circ</td> </tr> <tr> <td>INTM1</td> <td>8.625</td> <td>3200</td> <td>1350 sxs</td> <td>11</td> <td>0' Circ</td> </tr> <tr> <td>PROD</td> <td>5.5</td> <td>11918</td> <td>1400 sxs</td> <td>7.875</td> <td>1760</td> </tr> </tbody> </table>			SIZE	DEPTH	CMT	HOLE SIZE	TOC	SURF.	13.375	615	490 sxs	17.5	0' Circ	INTM1	8.625	3200	1350 sxs	11	0' Circ	PROD	5.5	11918	1400 sxs	7.875	1760
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	PROD	5.5	11918	1400 sxs	7.875	1760																					
	3220	8 5/8 @ 3200' TOC @ 0' SPUD: 12/10/2000 COMP: 03/21/2001 <div style="font-size: 2em; transform: rotate(-15deg); opacity: 0.5;">AFTER</div>																									
	4540																										
	4720																										
	5840	Plastic coated 3 1/2 tubing w/ pkr within 100' of uppermost perf PERF 5064-5600 Plug 25 sxs 5684-5844 Plug 25 sxs 6934-7144 Plug 25 sxs 8610-8790 Plug 25 sxs 9605-9795 Plug 40 sxs 10400-10700 CIBP @ 11550 cap w/ 30 sxs cmnt 11310-11550 PERF 11764-11812																									
9361																											
10688																											
10982																											
11308																											
	5 1/2 @ 10770 TOC @ 7551 TD 10770'																										

PREPARED BY: Eddie Seay

UPDATED

04/13/15

WELLBORE SCHEMATIC AND HISTORY



PREPARED BY: Eddie Seay

UPDATED

03/16/15

WELLBORE SCHEMATIC AND HISTORY

COMPLETION SCHEMATIC		APINUM: 30-015-23069	
FORM	DEPTH	OPERATOR: EOG RESOURCES INC	
		LEASENAME: CANADIAN KENWOOD FED WELL NO. 1	
		SURF LOC: UL: N SEC: 17 TWN: 18S RNG: 31E	660 FSL 1980 FWL
		BH LOC: UL: N SEC: 17 TWN: 18S RNG: 31E	660 FSL 1980 FWL
		MD 11785 KB DF	PBTD GL 3643
		POOL SHUGART;MORROW, NORTH	PERFS 11592-1168
		POOL	PERFS
		POOL	PERFS
		POOL	PERFS
		CASING RECORD	
		SIZE	DEPTH
		CMT	HOLE SIZE
		TOC	
		SURF. 13.375 665 957 sxs 17.5 0' Circ	
		INTM1 8.625 4512 2310 sxs 12.25 0' Circ	
		PROD 5.5 11773 660 sxs 7.875 8500 est	
Rustler	590	13 3/8" @ 665' TOC @ 0'	Plug 0-50
T. Salt			
B. Salt	2040		
Yates			
Queen	3130		
San Andres	4540	8 5/8" @ 4512' TOC @ 0'	PLUG 55 sxs 4485-4570
Delaware	5750		PLUG 60 sxs 5750-5850
Bone Spring	5794		
Wolfcamp	9470		TOC @ 8500 CIBP @ 8600 cap w/ cmnt 8202-8600'
Strawn	10664		PERF 8956-8980
Atoka	10942		CIBP @ 9372 cap w/ 35' cmnt
Morrow	11465		PERF 9476-9490
			CIBP @ 11500 cap w/ 35' cmnt
			PERF 11592-11688
		5 1/2" @ 11785 TOC @ 3900	TD 10800

4720
ADVERTISED
SWD
internal
5700
(2333' apart)

SPUD: 11/18/1979
COMP: 03/08/1980
P&A: 06/17/1992

PREPARED BY: Eddie Seay

UPDATED

03/16/15

HALLIBURTON

5801 North Lovington Hwy
Hobbs, NM 88240

4/15/15

Mr. Seay,

As per your request, Halliburton Wireline has evaluated the logs for the North Shugart Federal #2 well, specifically, the Delaware Sand Zone, from 5064 to 5600. Applying the Archie equation, we have determined the S_w (water saturation) to be approximately 64% using the parameters and assumptions below.

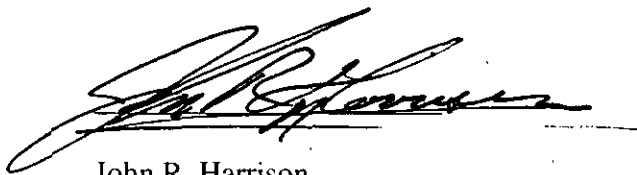
$$S_w^n = \frac{a}{\Phi^m} \times \frac{R_w}{R_t}$$

Even
(2 To 3) OK

$R_w = 0.04$	$R_t = 3.1$
$DPHI = 20$	$m = 2.15$
$a = 1$	$n = 2$

If you would like additional information about these values please do not hesitate to contact us again and we would be happy to discuss it in more detail.

Best Regards,



John R. Harrison
Field Service Manager
Halliburton Wireline & Perforating
5801 N. Lovington Hwy
Hobbs, NM 88240

FEDRO & ASSOCIATES L. P.

P. O. BOX 10872

(432) 557-2196

GEOLOGIC CONSULTING

MIDLAND, TEXAS 79702

fedrobob2@yahoo.com

February 4, 2012

To: D. Linebarger
From: B. Fedro
Subject: Shugart SWD (Shugart St. #2 API # 30-018-32438)
Sec. 16, T18S - R31E
Eddy County, New Mexico

Recommendation

Based on an evaluation of the captioned area, it is recommended that Basic Energy move forward with plans for a commercial SWD utilizing the captioned well bore. Local geology indicates several excellent, non-productive Lower Delaware disposal zones are present between 5250' and 5750'.

Summary

Beginning January 25 of this year an evaluation of the captioned area was performed with the aim of determining what zones produce there, and to determine if there are porous non-productive intervals present for saltwater disposal. Based on this evaluation it has been determined that there are in fact several excellent zones of highly porous (>18%) Lower Delaware sand from 5250' to 5750' which have not produced in the area and would take water.

Discussion

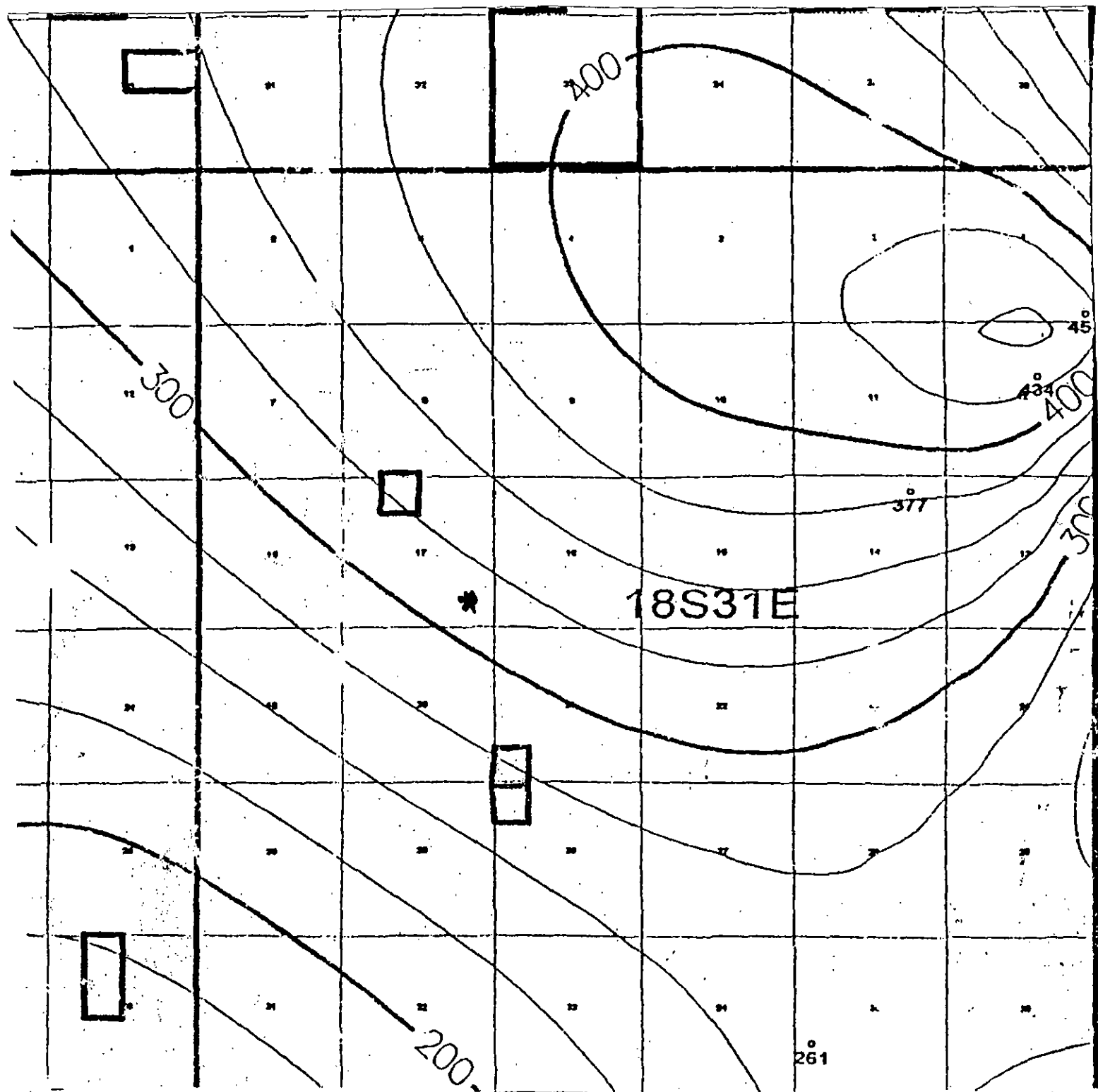
Production in this area is primarily from the Yates-7R-Queen-Grayburg, the Upper Delaware, Bone Spring, Atoka, and Morrow. The main producing interval is the Second Bone Spring found at 7900' to 8400' in the area. After plotting all nearby producing perforations, it was found that the proposed Lower Delaware disposal interval has never produced or been tested, with excellent porosity. In addition, there is no evidence of any open faults or any other hydrologic connection between the proposed disposal zone and any underground source of drinking water. It would be advisable to run a quick updated cement bond log to check for cement integrity between the surface and the proposed disposal zone.

Thank you for the opportunity to provide this evaluation, and don't hesitate to call if you have any questions.

From SWD-

Water Sample Analysis

Pool	Section	Location Township	Range	Chlorides
North Justis Montoya	2	25S	37E	45440
North Justis McKee	2	25S	37E	58220
North Justis Fusselman	2	25S	37E	88533
North Justis Ellenburger	2	25S	37E	34151
Fowler Blinebry	22	24S	37E	116085
Skaggs Grayburg	18	20S	38E	84845
Warren McKee	18	20S	38E	85910
Warren Abo	19	20S	39E	91600
DK Drinkard	30	20S	39E	108855
Littman San Andres	8	21S	38E	38895
East Hobbs grayburg	29	18S	39E	8481
Halfway Yates	18	20S	32E	14768
Arkansas Junction San Andres	12	18S	38E	7171
Pearl Queen	28	19S	35E	114310
Midway Abo	17	17S	37E	38494
Lovinton Abo	31	18S	37E	22933
Lovington San Andres	9	18S	37E	4899
Lovington Paddock	31	18S	37E	93720
Mesa Queen	17	18S	32E	172530
Kemnitz Wolfcamp	27	18S	34E	48345
Hume Queen	9	18S	34E	124960
Anderson Ranch Wolfcamp	2	18S	32E	11040
Anderson Ranch Devonian	11	18S	32E	25702
Anderson Ranch Unit	11	18S	32E	23788
Caudill Devonian	9	15S	38E	20874
Townsend Wolfcamp	6	18S	38E	38895
Dean Penno Penn	5	18S	37E	44730
Dean Devonian	35	15S	38E	18525
South Denton Wolfcamp	29	15S	37E	54315
South Denton Devonian	36	15S	37E	34080
Medicine Rock Devonian	15	15S	38E	39760
Little Lucky Lake Devonian	29	15S	30E	23288
Wantz Abo	28	21S	37E	132770
Crosby Devonian	19	25S	37E	58220
Scarborough Yates Seven Rivers	7	26S	37E	3443(Reef)
Teague Simpson	34	23S	37E	114685
Teague Ellenburger	34	23S	37E	120345
Rhodes Yates 7 Rivers	27	26S	37E	144485
House SA	11	20S	38E	93365
House Drinkard	12	20S	38E	49700
South Leonard Queen	24	26S	37E	115375
Elliot Abo	2	21S	38E	55380
Scharb Bone Springs	5	19S	35E	30801
EK Queen	13	18S	34E	41890
East EK Queen	22	18S	34E	176830
Maljamar Grayburg SA	22	17S	32E	46079
Maljamar Paddock	27	17S	32E	115375
Maljamar Devonian	22	17S	32E	25418



Groundwater Map

Records of wells from Eddy County, New Mexico

Location	Well Status	Altitude (feet)	Depth of Well(ft.)	Depth to Water(ft.)	Aquifer	Date of Measurement	Remarks
17.28.14.220	Stock/domestic			80	Dckm ?		
19.200	Stock			224.3	Ckbf/Rslr	Dec.2,1948	
22.230	Abandoned stock			45.5	Rslr/Dckm	Dec.1,1948	
24.224	Stock	3565	33.88	24.2		Oct.14,1977	
17.29. 8.231	Stock	3617	92.7	90.13		Oct.14,1977	
No water listed							
22.110	Stock	3550		79.7	Dckm ?	Nov.29,1948	
No water 29.400	Stock			210	Dckm ?	Dec.3,1948	
17.31.34.000	Stock			271+	Dckm	Dec.6,1948	
18.27. 8.240	Unused	3505		181.40		Jan.9,1964	
8.244	Industrial	3513	381	325 ?		Apr.,1951	Oil test
10.200	Unused	3470		46.92		Jan.9,1964	
10.214	Industrial	3493	130	50		Jul.,1958	Oil test
28.13	Domestic/stock	3377	120	100		May,1960	
28.140	Unused	3415		91.37		Jan.9,1964	
33.42	Stock	3447	90	49.3		Sep.,1969	
18.28. 8.330	Stock			81.6	Ckbf/Rslr	Dec.3,1948	
30.110	Stock/domestic	3560		137.1	Ckbf ?	Dec.2,1948	
18.29.24.142	Windmill	3436		156.44		Oct.18,1977	S.C.2600; 21°C
24.23311	Windmill	3436		160.20	Trsc	Apr.8,1971	
24.300	Stock	3430		158.3	Dckm	Apr.28,1950	
34.324	Stock	3440	250	230		Mar.,1960	Yield: 63gpm
18.30.21.4200	Open cased hole	3495		266.48	Trcl	Dec.9,1965	
22.2220	Open cased hole	3430		239.26	Trcl	Apr.8,1971	
26.4140	Stock	3430	223.0	201.67	Trcl	Dec.14,1977	S.C. 1100
31.323	Observation	3370	161.0	157.80		Nov.18,1977	
32.32422	Windmill	3380		161.28	Trcl	Apr.8,1971	
32.413	Abandoned windmill	3370	266	158.77		Oct.18,1977	
18.31. 1.44432	Windmill	3797		460.42	Trcl	Apr.7,1971	
12.223	Stock	3795	480+	453.39		Oct.18,1977	
12.23144	Stock	3775	600	435.34	Trcl	Apr.7,1971	

PERMIAN TDS LLC

March 2015

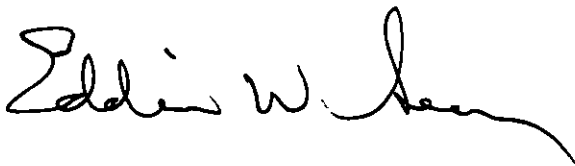
RE: North Shugart Fed. #2 (API 30-015-31459)
Unit P, Section 17, Tws. 18 S., Rng. 31 E.
Eddy Co., NM

Dear Sir:

In accordance with the Rules and Regulations of the Oil Conservation Division of the State of New Mexico, you are being provided a copy of the C-108, Application for Authorization to Inject in to the above captioned well.

Any questions about the permit can be directed to Eddie W. Seay, (575)392-2236. Any objections or request for hearing must be filed with the Oil Conservation Division within fifteen (15) days from the date received. The OCD address is 1220 S. Saint Francis Drive, Santa Fe, NM 87504, (505)476-3440.

Thank You,

A handwritten signature in black ink, appearing to read "Eddie W. Seay", with a long, sweeping underline.

Eddie W. Seay, Agent
Eddie Seay Consulting
601 W. Illinois
Hobbs, NM 88242
575-392-2236
seay04@leaco.net

LEGAL NOTICES

SURFACE OWNER & MINERAL OWNER

BLM-Bureau of Land Management
620 E. Green St.
Carlsbad, NM 88220

OFFSETS OPERATORS AND LEASEES

Cameron Oil & Gas Inc.
Box 1456
Roswell, NM 88202

Cimarex Energy Co.
600 N. Marienfield St., Ste. 600
Midland, TX 79701

COG Operating, LLC
550 W. Texas Ave., Ste. 1300
Midland, TX 79701

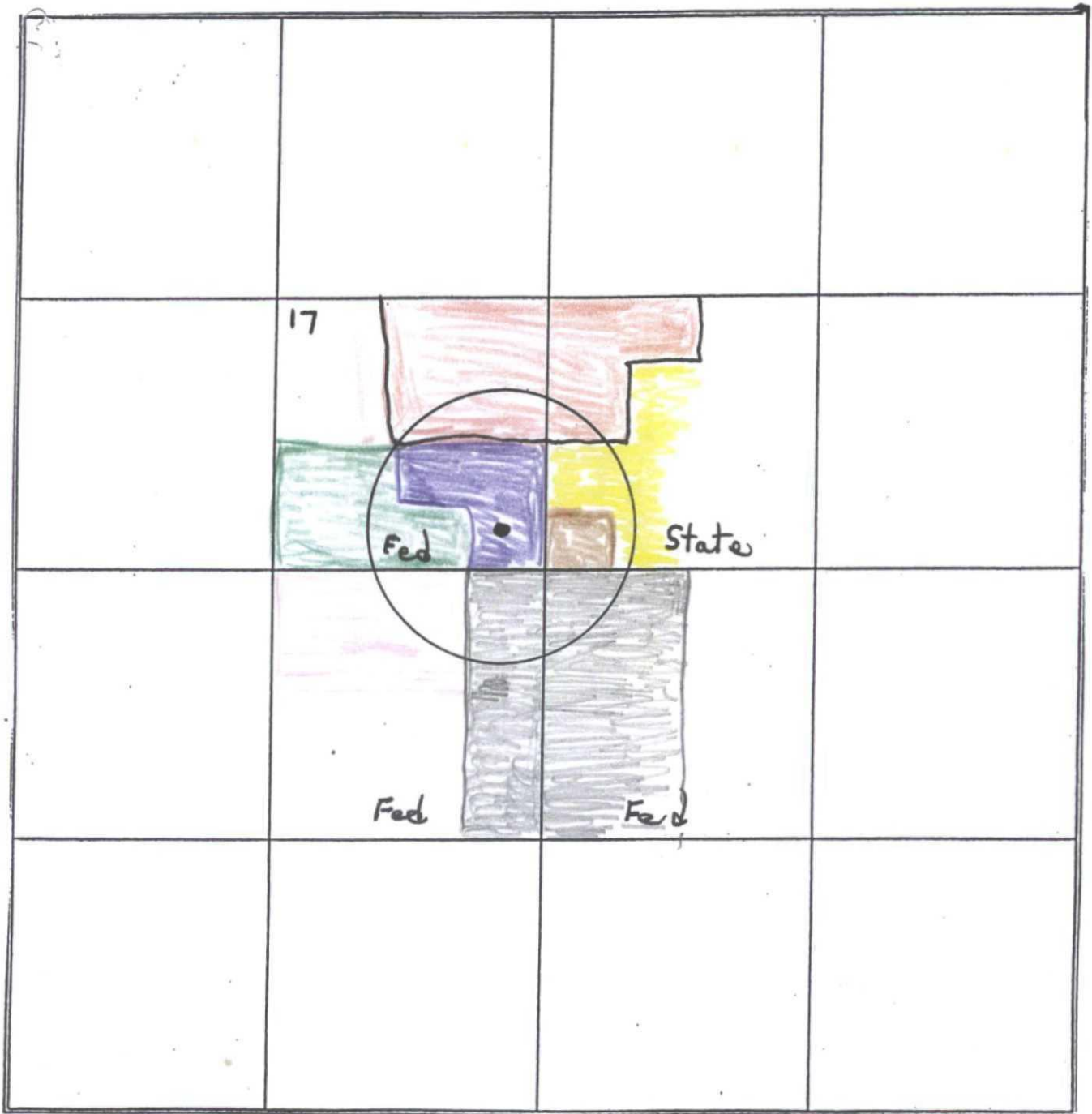
Devon Energy Production Co. LP
20 N. Broadway
Oklahoma City, OK 73102

EOG Resources, Inc.
Box 2267
Midland, TX 79702

Legacy Reserves Op, LP
Box 10848
Midland, TX 79702

NM State Land Office
310 Old Santa Fe Trail
Box 1148
Santa Fe, NM 87504-1148

Minerva



• Proposed SWD

• COG ✓

• EOG ✓

• Cameron O + G ✓

• Legacy ✓

• Cimerex ✓

• Cone ✓

• Devon ✓

Minerals:

	<u>Fed</u>		
<u>Fed</u>	<u>Fed</u> (17)	<u>St.</u>	
	<u>Fed</u>	<u>Fed</u>	

● Proposed SWD

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APR 9 2015
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Sent To *Tom R. Cone*
Street, Apt. No.,
or PO Box No. *1303 W. Broadway Place*
City, State, ZIP+4[®] *Hobbs, NM 88240*

PS Form 3800, August 2006

See Reverse for Instructions

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Sent to: **Bureau of Land Management**
ATTN: Brittany Chavez
Street, Apt. No.,
or PO Box No.: **620 E. Green St.**
City, State, ZIP+4: **Carlsbad, NM 88220**

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PS Form 3800, August 2006 See Reverse for Instructions

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310 Old Santa Fe Trail
Street, Apt. No.,
or PO Box No.: **Box 1148**
City, State, ZIP+4: **Santa Fe, NM 87504-1148**

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Sent to: **Legacy Reserves Op, LP**
Street, Apt. No.,
or PO Box No.: **Box 10848**
City, State, ZIP+4: **Midland, TX 79702**

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Sent to: **EOG Resources Inc.**
Street, Apt. No.,
or PO Box No.: **Box 2267**
City, State, ZIP+4: **Midland, TX 79702**

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Sent To COG Operating, LLC Street, Apt. No., or PO 550 W. Texas Ave., Ste. 1300 City, State, ZIP+4 [®] Midland, TX 79701	
PS Form 3800, August 2006 See Reverse for Instructions	

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Restricted Delivery Fee (Endorsement Required)	
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Sent To Cameron Oil & Gas Inc. Street, Apt. No., or PO Box 1456 City, State, ZIP+4 [®] Roswell, NM 88202	
PS Form 3800, August 2006 See Reverse for Instructions	

LEGAL NOTICE

Pursuant to the rules and regulations of the Oil Conservation Division of the State of New Mexico, Permian TDS, LLC, Box 788 Lovington, NM 88260, is filing a C-108, Application for Salt Water Disposal. The well being applied for is a P & A well, North Shugart Fed. #2, located in Unit P, Section 17, Township 18 South, Range 31 East, Eddy Co., NM. The injection formation is the Delaware from 4720' to 5700' below surface. Expected maximum injection rate is 10,000 bpd., and the expected maximum injection pressure is 850 psi or what the OCD allows. Any questions about the application can be directed to Eddie W. Seay, (575)392-2236, or any objection or request for hearing must be directed to the Oil Conservation Division, (505)476-3440, 1220 South Saint Francis Drive, Santa Fe, NM 87504, within fifteen (15) days.

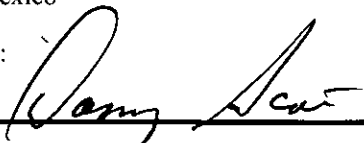
A Affidavit of Publication

No. 23387

State of New Mexico

County of Eddy:

Danny Scott



being duly sworn, says that he is the

Publisher

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same

day as follows:

First Publication

March 17, 2015

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

17th day of March 2015



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015



Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Pursuant to the rules and regulations of the Oil Conservation Division of the State of New Mexico, Permian TDS, LLC Box 788 Lovington, NM 88260, is filing a C-108, Application for Salt Water Disposal. The well being applied for is a P & A well, North Shugart Fed #2, located in Unit P, Section 17, Township 18 south, Range 31 East, Eddy Co, NM. The injection formation is the Delaware from 4720' to 5700' below surface. Expected maximum injection rate is 10,000 bpd, and the expected maximum injection pressure is 850 psi or what the OCD allows. Any questions about the application can be directed to the Oil Conservation Division, (575) 392-2236, or any objection or request for hearing must be directed to the Oil Conservation Division, (505) 476-3440, 1220 south Saint Francis Drive, Santa Fe, NM 87504, within fifteen (15) days.

Published in the Artesia Daily Press, Artesia, N.M., March 17 2015 Legal No. 23387.

Jones, William V, EMNRD

From: Sanchez, Daniel J., EMNRD
Sent: Wednesday, April 01, 2015 7:26 AM
To: Jones, William V, EMNRD
Subject: RE: Proposed SWD from Permian TDS, LLC : Re-entry of the plugged North Shugart Federal SWD Well No. 2 30-015-31459 Delaware perms from 5064 - 5600 feet

Mr. Jones,

Permian TDS, LLC completed their "new operator orientation" on 9/6/2013 but I guess they never followed through with the rest of program to become an operator. Patrick McMahon was their attorney, so he may have some more information on what happened to them. You might also want to check with Denise, to see if they ever contacted her about bonding.

Daniel

From: Jones, William V, EMNRD
Sent: Tuesday, March 31, 2015 7:05 PM
To: seay04@leaco.net
Cc: Goetze, Phillip, EMNRD; Sanchez, Daniel J., EMNRD; Catanach, David, EMNRD; McMillan, Michael, EMNRD; Gallegos, Denise, EMNRD; Sharp, Karen, EMNRD; efernand@blm.gov
Subject: Proposed SWD from Permian TDS, LLC : Re-entry of the plugged North Shugart Federal SWD Well No. 2 30-015-31459 Delaware perms from 5064 - 5600 feet

Hello Eddie,
Hope all is well.

Here is some feedback;

- a. ✓ can't find Permian TDS, LLC in our list of operators – what is the plan for this?
- b. ✓ I see you need to also provide notice to Tom R. Cone as an operator of a Unit located within ½ mile – please do.
- c. ✓ You noticed several parties but did not provide a breakdown of separately owned tracts within ½ mile of this well and list the owners of each tract – please let me know what Landman you are working with to gather this data and please also send the breakdown of tracts.
- d. ✓ Please send a log calculation at depth 5445 in this well – show assumptions and resulting SW. This depth looks like it could possibly have oil on top of water.
- e. ✓ You didn't send a "Before" or "as plugged" wellbore diagram of the proposed SWD – please send.
- f. ✓ Please confirm that 5064 – 5600 feet will be the limits of disposal depths in this well.

We just received this today and it has notice issues and an operator who does not seem to have an OGRID or bond. Per my latest instructions for all SWD applications, we are also asking that you have all these issues listed above addressed and the complete reply back to me or Phillip Goetze within 10 days – close of business on April 10th.

Many Regards,

April 20, 2015

RECEIVED OCD
2015 APR 24 P 3:13

NMOCD Engineering
ATTN: William V. Jones
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Supplement Information
Permian TDS LLC
North Shugart Fred #2 (API 30-015-31459)
C-108

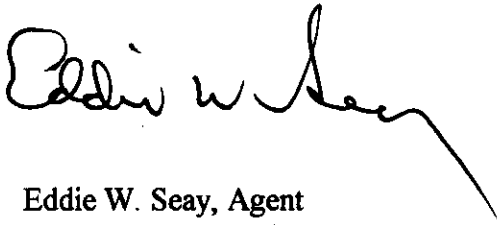
Mr. Jones:

Find attached additional information as requested.

- A. Checked with Denise Gallegos, bond and operator number is in place.
- B-C. Sent additional notice to Tom R. Cone and have map of interest owners attached.
- D. Find calculation from Haliburton on zone of interest. Also did a comparison, correlating the logs with (30-015-32438) and our proposed well. Logs look very similar. The well 32438 is an approved SWD in the Delaware.
- E. Find well diagram of proposed SWD, showing P & A.
- F. Permian TDS will only use the portion of the Delaware from 5064' to 5600'.

I appreciate your response to this application and hope this additional information will help in furthering your evaluation.

Thanks,



Eddie W. Seay, Agent
Eddie Seay Consulting
601 W. Illinois
Hobbs, NM 88242
575-392-2236
seay04@leaco.net

cc: Permian TDS

