

DATE IN 4/26/15	SUSPENSE	ENGINEER WVD	LOGGED IN	TYPE SWD	APP NO. 1547
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*Police/Pecker*

**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 \_\_\_\_\_

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- [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      Eddie W Seay      Agent      3/13/15  
 Print or Type Name      Signature      Title      Date  
seay\_04@leaco.net  
 e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_  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 \_\_\_\_\_  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).

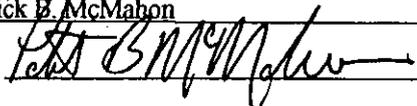
\*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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

OPERATOR: Permian TDS LLC

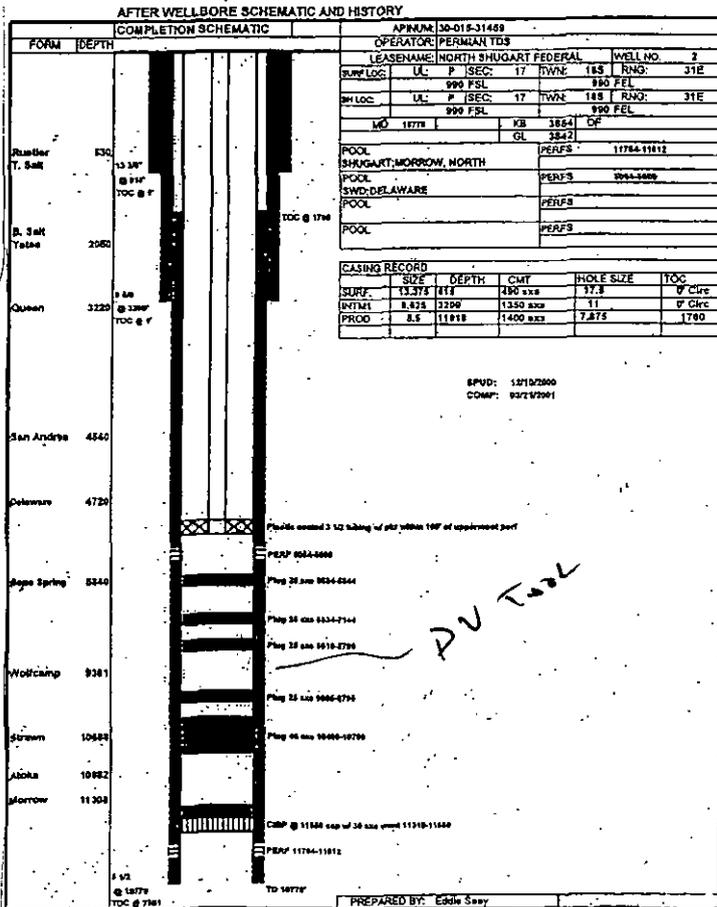
WELL NAME & NUMBER: North Shugart Fed #2 (API 30.015.31459)

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



Hole Size: 17.5      Casing Size: 13.375  
340+150      @ 615'  
 Cemented with: 490      SX.      or      615'      ft<sup>3</sup>

Top of Cement: Surface      Method Determined: Circ

Intermediate Casing

Hole Size: 11      Casing Size: 8.625  
1150+200      @ 3200'  
 Cemented with: 1350      SX.      or      3200'      ft<sup>3</sup>

Top of Cement: Surface      Method Determined: Circ

Production Casing

Hole Size: 7.875      Casing Size: 5.5  
(5.0+2.0) CIRC / 6.0+1.0      @ 11,918'  
 Cemented with: 1400      SX.      or      11,918'      ft<sup>3</sup>

Top of Cement: 1760      Method Determined: TS

Total Depth: 10770

Injection Interval 5064'-5600'

4720 feet to 5700

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3 1/2 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 PTA

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 Andros 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

FORM APPROVED OMB NO. 1004-0135 Expires: July 31, 2010

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.

5. Lease Serial No. NMNM83601
6. If Indian, Allottee or Tribe Name
7. If Unit or CA/Agreement, Name and/or No. NMNM84597
8. Well Name and No. NORTH SHUGART-FEDERAL 2
9. API Well No. 30-015-31459-00-S1
10. Field and Pool, or Exploratory SHUGART
11. 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
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

Table with columns TYPE OF SUBMISSION and TYPE OF ACTION. Includes checkboxes for Notice of Intent, Subsequent Report, Final Abandonment Notice, Acidize, Deepen, Production (Start/Resume), Water Shut-Off, etc.

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 recompleat 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.

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Approved: 104 110000 RD 4/16/14

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

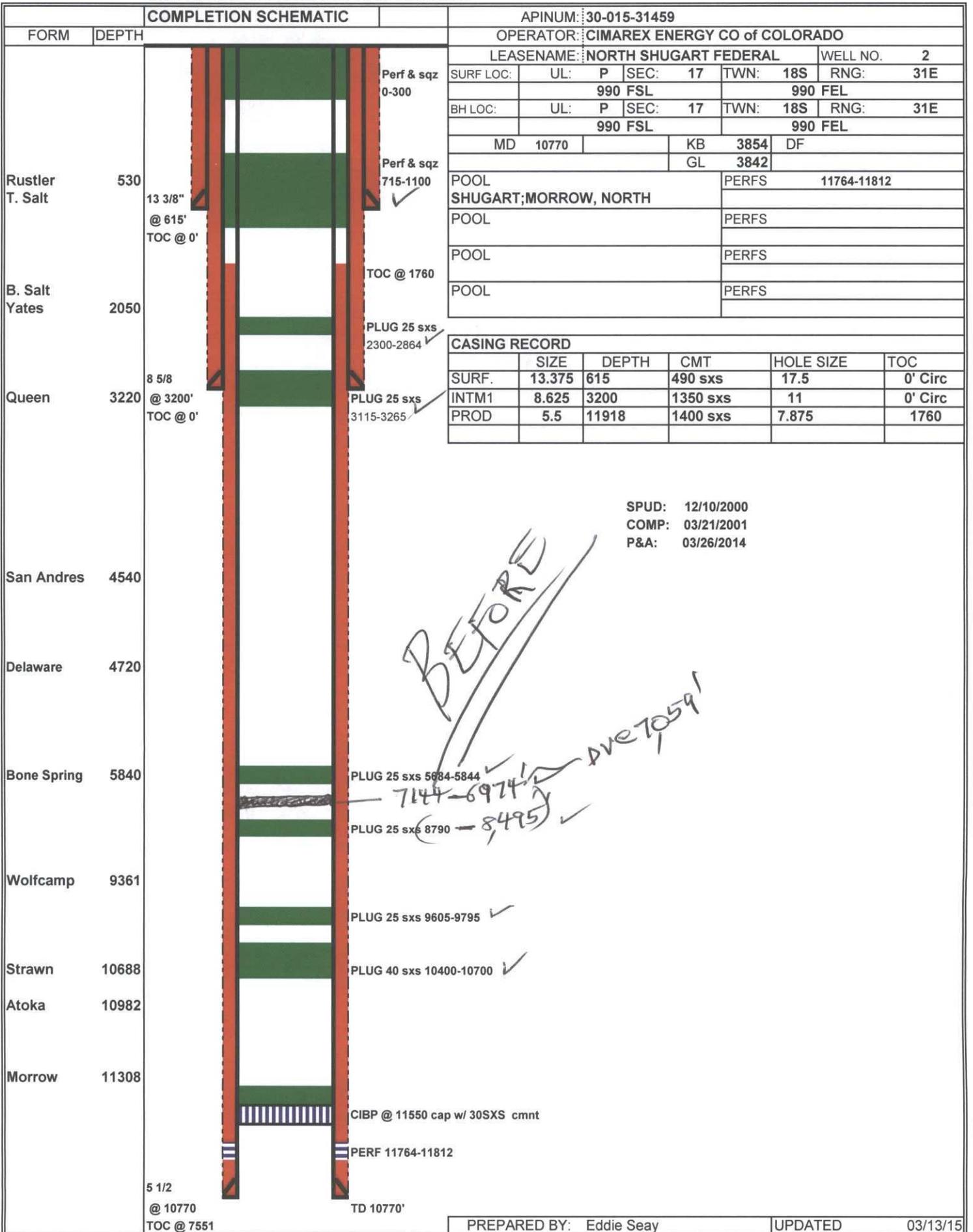
14. I hereby certify that the foregoing is true and correct. Electronic Submission #240347 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad Committed to AFMSS for processing by JAMES AMOS on 04/04/2014 (14JLD1508SE)
Name (Printed/Typed) DAVID A EYLER 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.

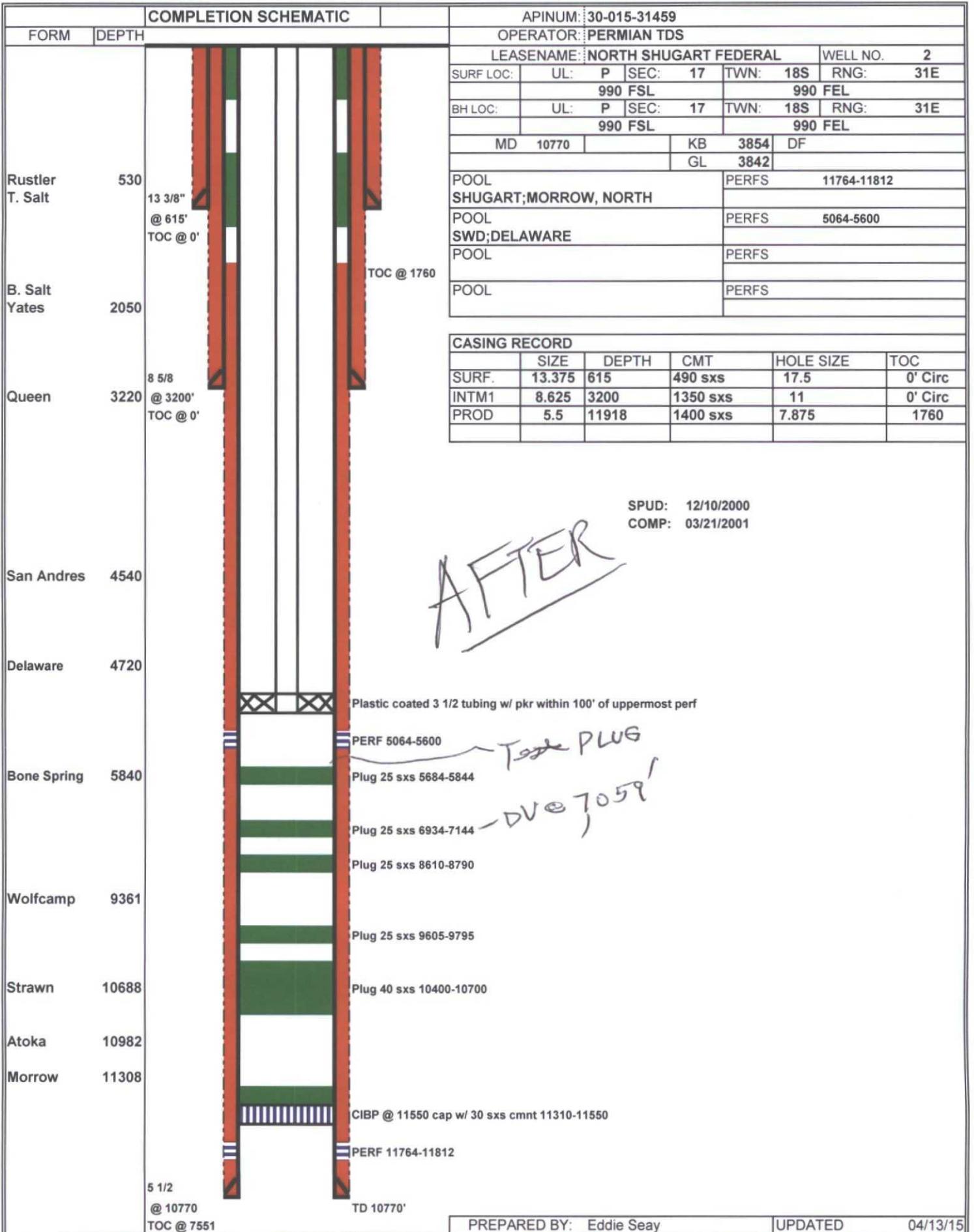
## WELLBORE SCHEMATIC AND HISTORY



BEFORE

AVE 7059'

**AFTER WELLBORE SCHEMATIC AND HISTORY**



**COMPLETION SCHEMATIC**

FORM		DEPTH		APINUM: 30-015-31459
				OPERATOR: PERMIAN TDS
		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
		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	

	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

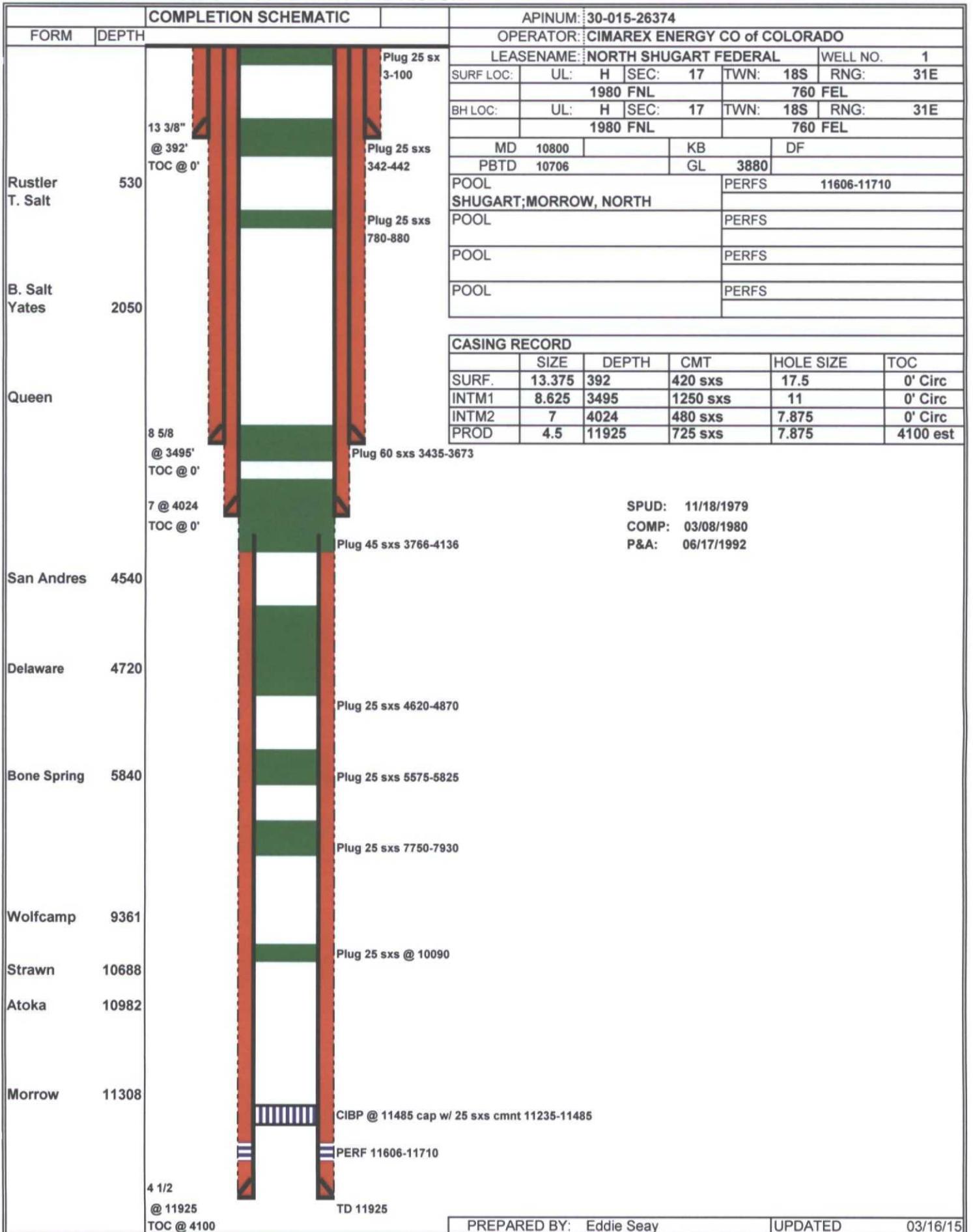
SPUD: 12/10/2000  
COMP: 03/21/2001

*AFTER*

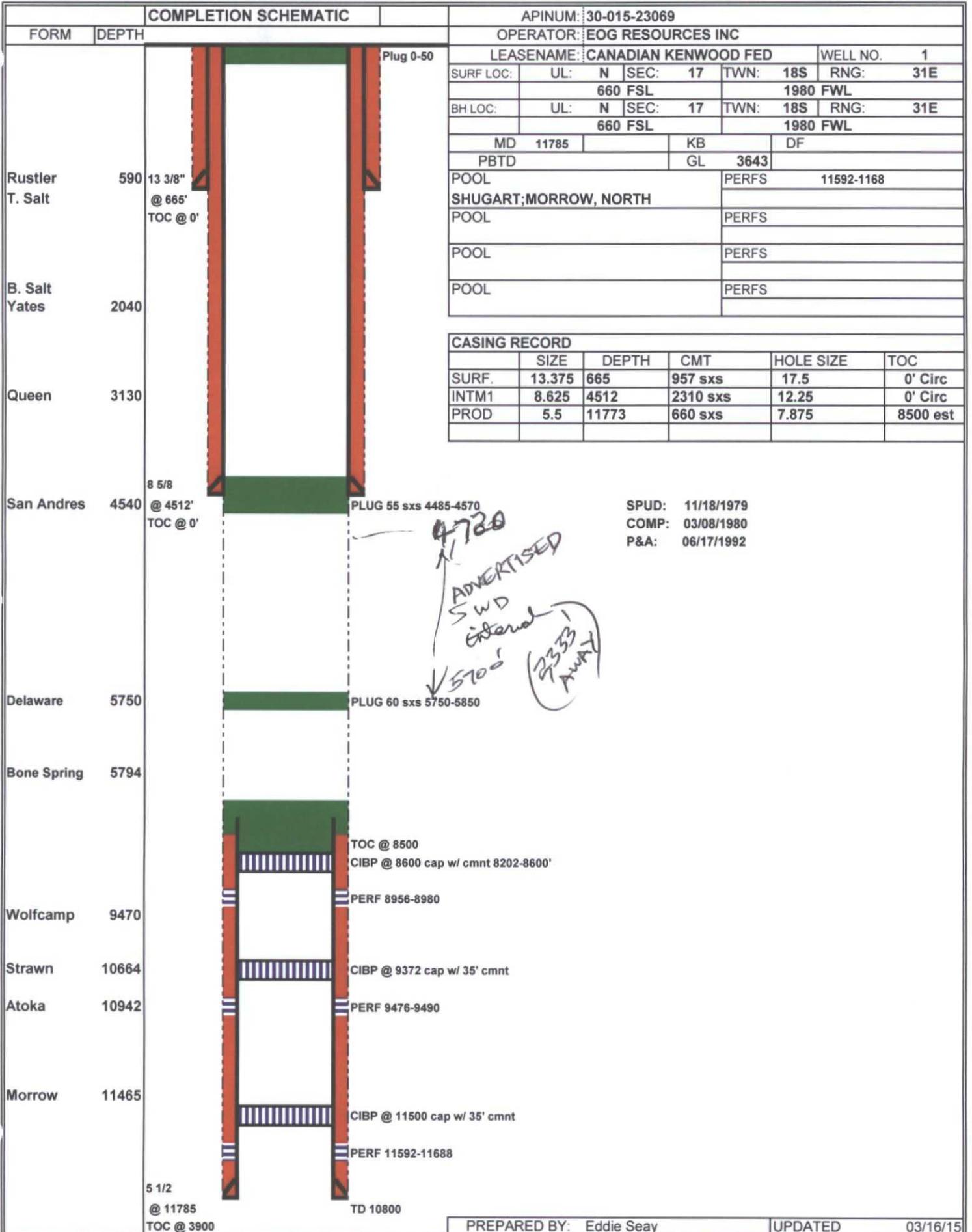
*Top PLUG*  
*DU @ 7059'*

5 1/2 @ 10770 TOC @ 7551  
TD 10770'

## WELLBORE SCHEMATIC AND HISTORY



## WELLBORE SCHEMATIC AND HISTORY



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 Sw (water saturation) to be approximately 64% using the parameters and assumptions below.

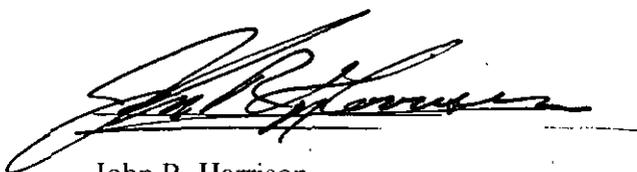
$$S_w^n = \frac{a}{\Phi^m} \times \frac{R_w}{R_t}$$

Rw = 0.04	Rt = 3.1
DPHI = 20	m = 2.15
a = 1	n = 2

*Even* *(2 To 3) OK*

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) 657-2196**

**GEOLOGIC CONSULTING**

**MIDLAND, TEXAS 79702**

**fedrobob2@yahoo.com**

**February 4, 2012**

**To: D. Linebarger**  
**From: B. Fedro *BF***  
**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 26 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**

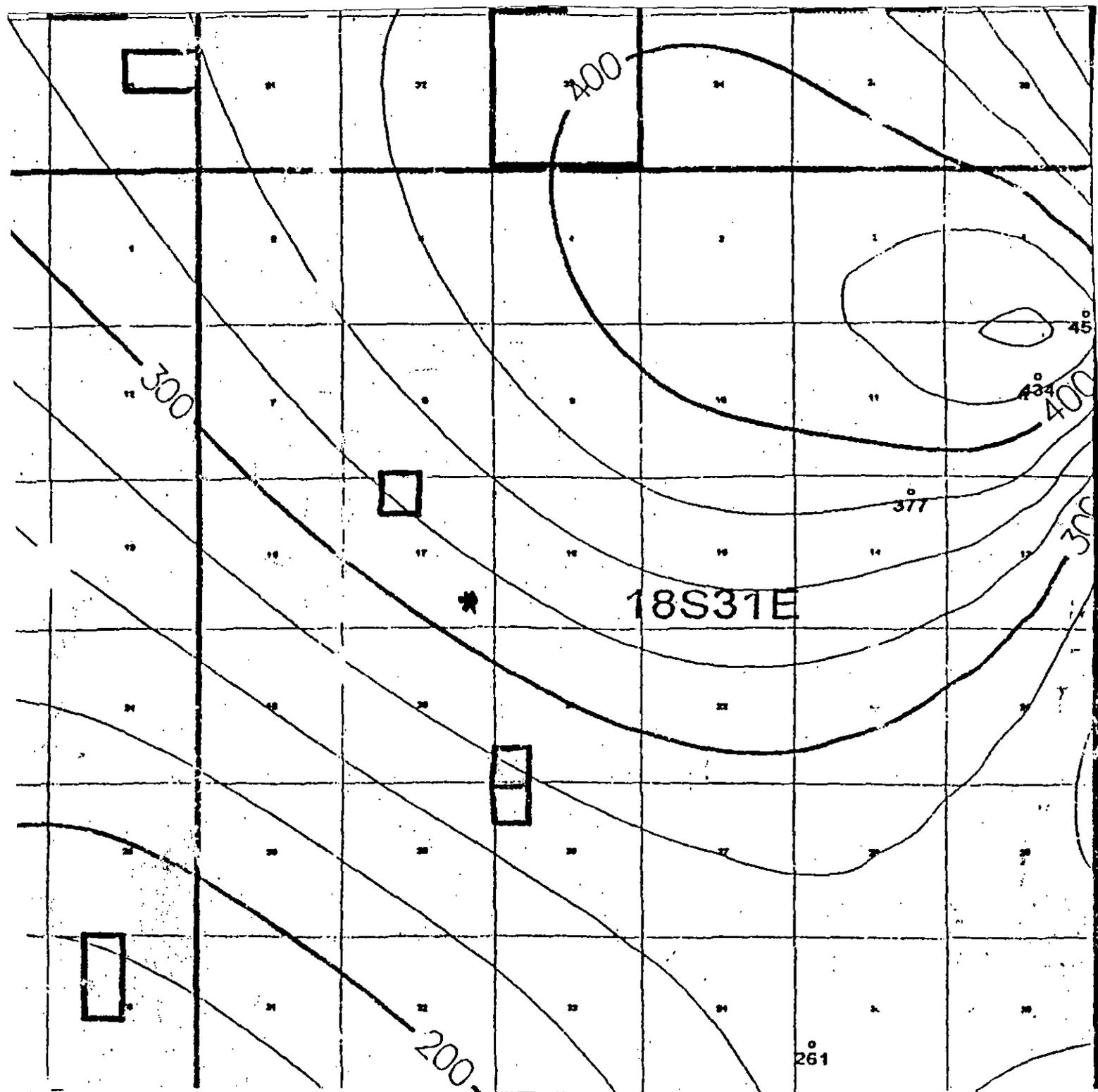
**Production in this area is primarily from the Yates-7R-Queen-Grayburg, the Upper Delaware, Bone Spring, Atoka, and Morrow. The main producing interval is the Second Bone Spring found at 7900' to 8400' in the area. After plotting all nearby producing perforations, it was found that the proposed Lower 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

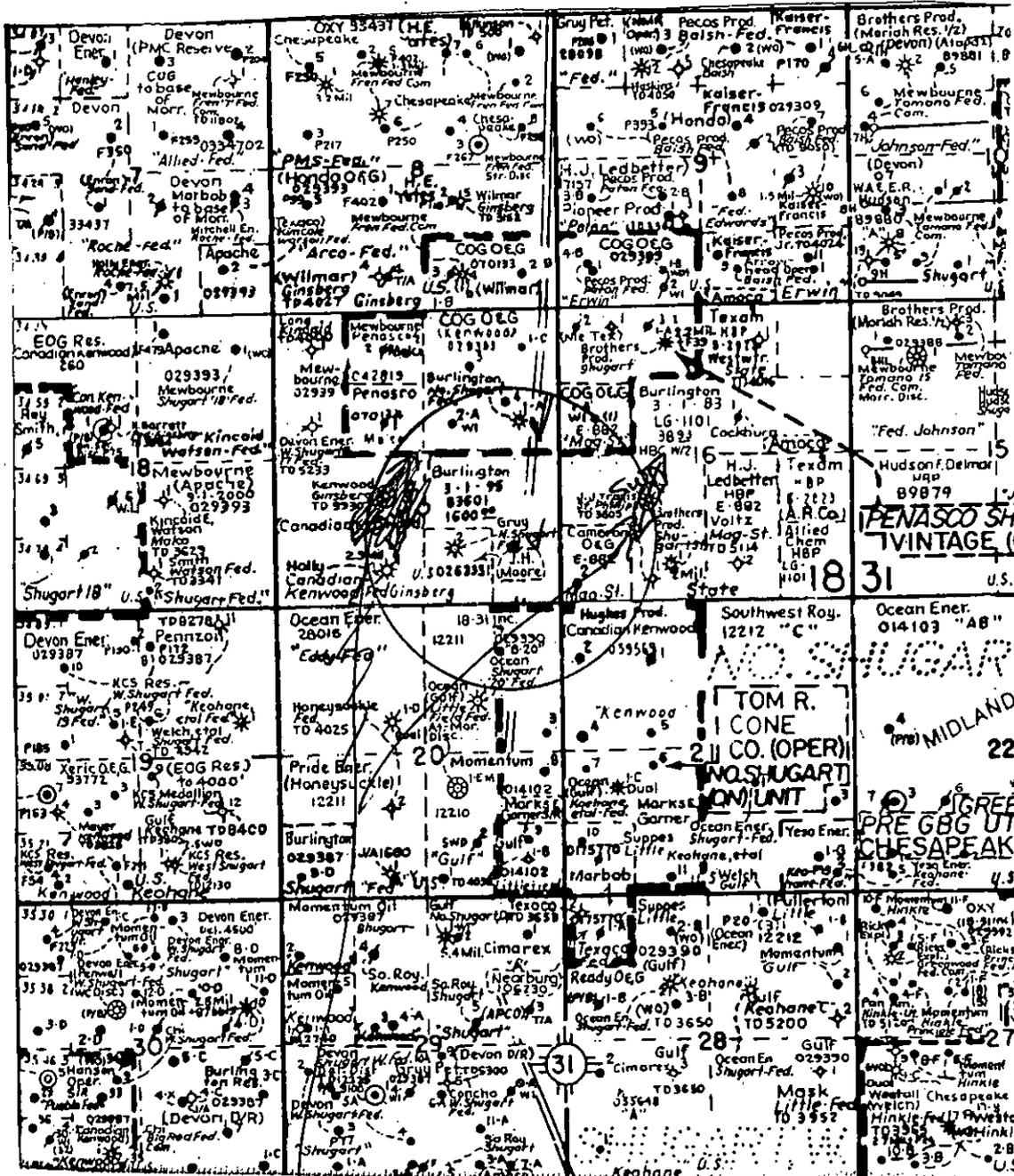
Pool	Section	Location Township	Range	Chlorides
North Justis Montoya	2	25S	37E	45440
North Justis McKee	2	25S	37E	58220
North Justis Fusselman	2	25S	37E	88533
North Justis Ellenburger	2	25S	37E	34151
Fowler Blinebry	22	24S	37E	116085
Skaggs Grayburg	18	20S	38E	84845
Warren McKee	18	20S	38E	85910
Warren Abo	19	20S	39E	91600
DK Drinkard	30	20S	39E	108855
Littman San Andres	8	21S	38E	38895
East Hobbs grayburg	29	18S	39E	6461
Halfway Yates	18	20S	32E	14788
Arkansas Junction San Andres	12	18S	38E	7171
Pearl Queen	28	19S	35E	114310
Midway Abo	17	17S	37E	38494
Lovinton Abo	31	16S	37E	22933
Lovington San Andres	9	18S	37E	4899
Lovington Paddock	31	16S	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	16S	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	93385
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	
<i>No water listed</i>							
22.110	Stock	3550		79.7	Dckm ?	Nov.29,1948	
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	



Surf 1340  
 3150-3740  
 Payoff pressure  
 Commercial SWD  
 1030 PSI

Call P&A weekly  
 in Sec 17

**PERMIAN TDS LLC**

March 2015

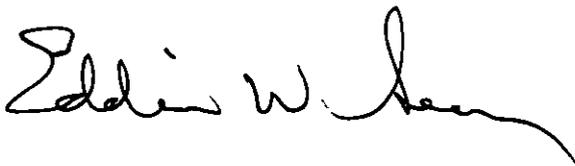
RE: North Shugart Fed. #2 (API 30-015-31459)  
Unit P, Section 17, Tws. 18 S., Rng. 31 E.  
Eddy Co., NM

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 that reads "Eddie W. Seay". The signature is fluid and cursive, with a long horizontal stroke at the end.

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

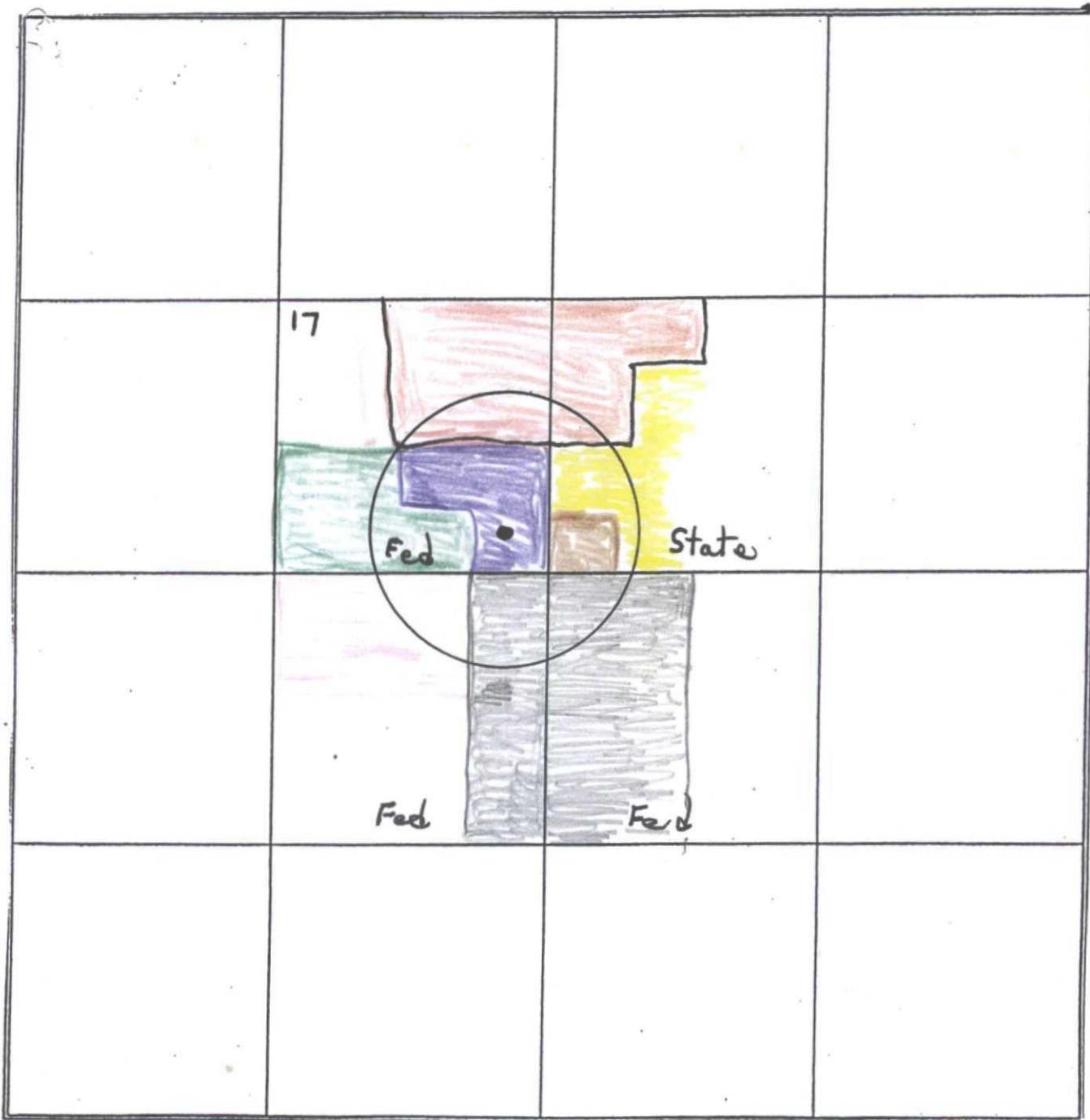
Devon Energy Production Co. LP  
20 N. Broadway  
Oklahoma City, OK 73102

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

# Mineral



● Proposed SWD

● COG ✓

● EOG ✓

● Cameron O + G ✓

● Legacy ✓

● Cimexex ✓

● Cone ✓

● Devon ✓

# Minerals:

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

● Proposed SWD

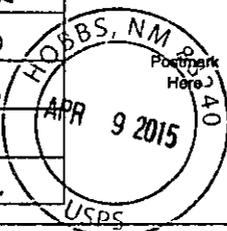
U.S. Postal Service™ *Katie Se...*  
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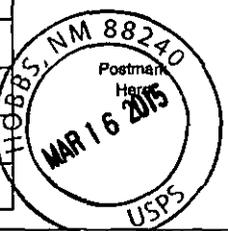
Sent To Tom R. Cone  
Street, Apt. No. or PO Box No. 1303 W. Broadway Place  
City, State, ZIP+4 Hobbs, NM 88240

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Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 7.61</b>



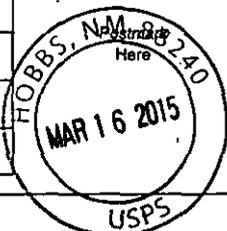
Sent to: **Bureau of Land Management**  
**ATTN: Brittany Chavez**  
Street, Apt. No., or PO Box No.: **620 E. Green St.**  
City, State, ZIP+4: **Carlsbad, NM 88220**  
PS Form 3800, August 2006 See Reverse for Instructions

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Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 7.61</b>



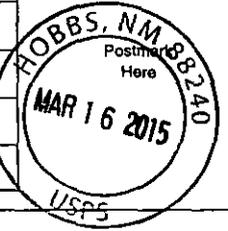
Sent to: **NM State Land Office**  
**310 Old Santa Fe Trail**  
Street, Apt. No., or PO Box No.: **Box 1148**  
City, State, ZIP+4: **Santa Fe, NM 87504-1148**  
PS Form 3800, August 2006 See Reverse for Instructions

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Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 7.61</b>



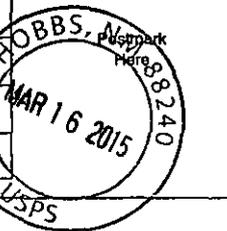
Sent to: **Legacy Reserves Op, LP**  
Street, Apt. No., or PO Box No.: **Box 10848**  
City, State, ZIP+4: **Midland, TX 79702**  
PS Form 3800, August 2006 See Reverse for Instructions

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Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 7.61</b>



Sent to: **EOG Resources Inc.**  
Street, Apt. No., or PO Box No.: **Box 2267**  
City, State, ZIP+4: **Midland, TX 79702**  
PS Form 3800, August 2006 See Reverse for Instructions

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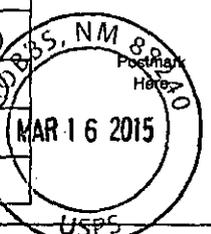
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Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.61

Sent To  
 COG Operating, LLC  
 Street, Apt. No., or PO Box  
 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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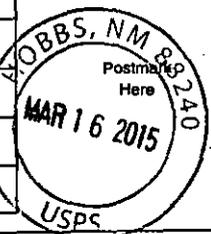
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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.61

Sent To  
 Devon Energy Production Co. LP  
 Street, Apt. No., or PO Box  
 20 N Broadway  
 City, State, ZIP+4  
 Oklahoma City, OK 73102

PS Form 3800, August 2006 See Reverse for Instructions



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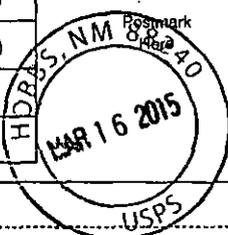
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Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.61

Sent To  
 Cimarex Energy Co.  
 Street, Apt. No., or PO Box  
 600 N. Marienfield St., Ste. 600  
 City, State, ZIP+4  
 Midland, TX 79701

PS Form 3800, August 2006 See Reverse for Instructions



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Postage	\$ 1.61
Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.61

Sent To  
 Cameron Oil & Gas Inc.  
 Street, Apt. No., or PO Box  
 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.

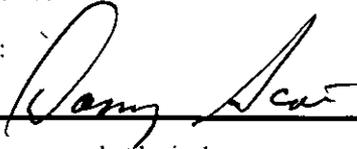
# A fidavit of Publication

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 \_\_\_\_\_

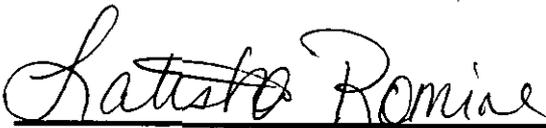
Subscribed and sworn before me this

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:** [seyay04@leaco.net](mailto:seyay04@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](mailto: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

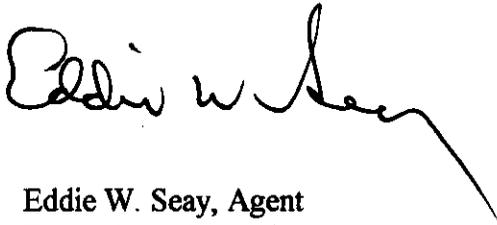
Mr. Jones:

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](mailto:seay04@leaco.net)

cc: Permian TDS



C-108 Review Checklist: Received 3/31/15 Add. Request: \_\_\_\_\_ Reply Date: \_\_\_\_\_ Suspended: \_\_\_\_\_ [Ver 14]

PERMIT TYPE: WFX / PMX / SWD Number: 1547 Permit Date: 4/29/15 Legacy Permits/Orders: \_\_\_\_\_

Well No: \_\_\_\_\_ Well Name(s): NORTH SAUGART Federal SWD #2

API: 30-0 15-31459 Spud Date: 12/10/2000 New or Old: \_\_\_\_\_ (UIC Class II Primacy 03/07/1982)

Footages 990 FSL / 990 FEL or Unit P Sec 17 Tsp 18S Rge 31E County EDDY

General Location: 2.2 mi E. of POTASH 6 mi N of Reef APEX Pool: Delaware Pool No.: \_\_\_\_\_

BLM 100K Map: \_\_\_\_\_ Operator: Permian TDS, LLC OGRID: 3069518 Contact: Patrick McMahon

COMPLIANCE RULE 5.9: Total Wells: 0 Inactive: 0 Fincl Assur:  Compl. Order? \_\_\_\_\_ IS 5.9 OK?  Date: \_\_\_\_\_

WELL FILE REVIEWED  Current Status: PEAED

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

Planned Rehab Work to Well: RE-Enter / Test / Perf / DISPOSE

Well Construction Details	Sizes (In) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>17 1/2 - 13 3/8</u>	<u>615</u>	<u>490</u>	<u>0</u>
Planned ___ or Existing ___ Intern/Prod				
Planned ___ or Existing ___ Intern/Prod	<u>11 - 8 5/8</u>	<u>3200</u>	<u>1350</u>	<u>0</u>
Planned ___ or Existing <u>Prod/Liner</u>	<u>5 1/2</u>	<u>10770</u>	<u>7,059</u>	<u>1760' TS</u>
Planned ___ or Existing ___ Liner				
Planned ___ or Existing <u>OH/PERF</u>				

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.				Drilled TD <u>10770</u> PBDT <u>PEA</u>
Confining Unit: Litho. Struc. Por.				NEW TD _____ NEW PBDT <u>5684</u>
Proposed Inj Interval TOP:	<u>5064</u>	<u>DEL</u>		NEW Open Hole <input type="checkbox"/> or NEW Perfs <input type="checkbox"/>
Proposed Inj Interval BOTTOM:	<u>5600</u>	<u>DEL</u>		Tubing Size <u>3/2</u> in. Inter Coated? <input checked="" type="checkbox"/>
Confining Unit: Litho. Struc. Por.				Proposed Packer Depth _____ ft
Adjacent Unit: Litho. Struc. Por.				Min. Packer Depth <u>(100)</u> (100-ft limit)
				Proposed Max. Surface Press. _____ psi
				Admin. Inj. Press. <u>1013</u> (0.2 psi per ft)

**AOR: Hydrologic and Geologic Information**

POTASH  Noticed? \_\_\_\_\_ BLM Sec Ord  WFF  Noticed? \_\_\_\_\_ SALT/SALADO T 745 B: CLIFF HOUSE

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

NMOSE Basin: CAPITAN REEF  No. Wells within 1-Mile Radius? 0 FW Analysis

Disposal Fluid: Formation Source(s) \_\_\_\_\_ Analysis? \_\_\_\_\_ On Lease  Operator Only  or Commercial

Disposal Int: Inject Rate (Avg/Max BWPD): \_\_\_\_\_ Protectable Waters? NO Source: \_\_\_\_\_ System: Closed  or Open

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

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

Penetrating Wells: No. Active Wells 0 Num Repairs? 0 On which well(s)? \_\_\_\_\_ Diagrams? \_\_\_\_\_

Penetrating Wells: No. P&A Wells 2 Num Repairs? 0 On which well(s)? \_\_\_\_\_ Diagrams?

NOTICE: Newspaper Date 3/17/15 Mineral Owner \_\_\_\_\_ Surface Owner BLM/SLD N. Date 3/16/15

RULE 26.7(A): Identified Tracts?  Affected Persons: Legacy / EOG / COG / Devon / Cameron N. Date 3/16/15

Permit Conditions: Issues: 5445 = SW 2 Top Case UT Basin

Add Permit Cond: NOTICE Patrick