

DATE IN 1/23/2013	SUSPENSE	PPG ENGINEER	LOGGED IN 1/2/2014	TYPE SWD	APP NO. PMAM14002303036
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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 _____

Ray Westall
Porto House State
Com. No. 1

2013 JAN 11 11:47
 PROD. NO. 1

30-015-32682

[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.

Ben Stone
 Print or Type Name

Signature

[Signature]

Agent for Ray Westall

Title
 ben@sosconsulting.us
 e-mail Address

12/29/13

Date



December 29, 2013

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

Attn: Ms. Jami Bailey, Director

*Re: Application of Ray Westall Operating, Inc. to permit for salt water disposal in the
Porterhouse State Com No.1 well located in Section 32, Township 18 South, Range 31
East, NMPM, Eddy County, New Mexico.*

Dear Ms. Bailey,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to reenter and configure for disposal, the Porterhouse State Com No.1.

Ray Westall Operating seeks to optimize efficiency, both economically and operationally, of its operations. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran in the December 24, 2013 edition of the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded upon receipt. This application also includes wellbore schematics, area of review maps, leaseholder plats and other required information for a complete Form C-108. The well is located on state lands and a copy of this application has been submitted to the State Land Office, Division of Oil, Gas and Minerals.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

A handwritten signature in black ink, appearing to read 'Ben Stone', is written over a white background.

Ben Stone, Partner
SOS Consulting, LLC
Agent for Ray Westall Operating, Inc.

Cc: Application attachment and file

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: *Salt Water Disposal and the application qualifies for administrative approval.*
- II. OPERATOR: *Ray Westall Operating, Inc.*
ADDRESS: *P.O. Box 4, Loco Hills, NM 88255*
- CONTACT PARTY: *Donnie Mathews (575) 677-2372*
Agent: SOS Consulting, LLC – Ben Stone (903) 488-9850
- III. WELL DATA: *All well data and applicable wellbore diagrams are attached hereto.*
- IV. *This is not an expansion of an existing project.*
- V. *A map is attached 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. *A tabulation is attached of data on all wells of public record within the area of review which penetrate the proposed injection zone. (1 AOR active SWD well penetrates subject interval and 1 P&A'd well.) The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail.*
- VII. *The following data is attached 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. *Appropriate geologic data on the injection zone is attached 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. *No stimulation program is proposed at this time.*
- *X. *There is no applicable test data on the well however, any previous well logs (2 well logs available via OCD Online) have been filed with the Division and they need not be resubmitted. A log strip w/ perf selection is included.*
- *XI. *State Engineer's records indicated no domestic water wells within one mile the proposed salt water disposal well.*
- XII. *An affirmative statement is attached that available geologic and engineering data has been examined and no evidence was found of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.*
- XIII. *"Proof of Notice" section on the next page of this form has been completed.*
There are 11 offset lessees and/or operators within ½ mile - all have been noticed.
- 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: *Ben Stone* TITLE: *SOS Consulting, LLC agent / consultant for Ray Westall Operating, Inc.*

SIGNATURE:  DATE: *12/30/2013*

E-MAIL ADDRESS: *ben@sosconsulting.us*

- * 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:

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

III. WELL DATA – *The following information and data is included:*

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 *pursuant to the following criteria is attached.*

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



WELL SCHEMATIC - PROPOSED Porterhouse State Com Well No.1 SWD

API 30-015-32682

660' FNL & 660' FEL, SEC. 32-T18S-R31E
EDDY COUNTY, NEW MEXICO

Spud Date: 3/29/2003

P&A Date: 1/28/2011

Re-Entry Date: ~3/01/2014

RAY WESTALL OPERATING, INC.

Convert to SWD: D/O & C/O Existing Plugs to ~4450'.
Perf & Sqz as Necessary to Establish Cement Sheath Behind 5.5"
(Minimum 3400' - Circulate to Surface if Possible.)
Perforate Disposal Intervals as Specified.
Set CIBP @ ~4350' w/ 35' Cmt.
Run PC Tubing and PKR - Conduct MIT.
Commence Disposal Operations.

Annulus Monitored
or open to atmosphere

Injection Pressure Regulated
and Volumes Reported

660'

Surface Casing

13.375", 54.5# Csg. (17.5" Hole) @ 660'
650 sx Cls 'C' - 100 sx - Circulated to Surface

Notes: 2130

Intermediate Casing

8.625", 26.0# csg. (11.0" Hole) @ 3614'
1175 sx Calc. to Circ - Not Rpt'd

2650

Q: 3230

3614'

Annulus Loaded
w/ Inert Packer Fluid

2.875" IC Tubing
PKR ~3820'

GRBG: ~3380'

3630?

LWR GRB: 3914'

SA: 4828'

Set CIBP @ ~4350' w/ 35' Cmt

Existing P&A Items Below

Spot 30 sx Cmt

4511'-4249' (Tagged)

Spot 30 sx Cmt

6050'-5814' (Tagged)

Sqz Holes @ 6000'

(Could Not Pump Into)

Circ. Hole w/ MLF

BB: ~3620'

WLF: ~9800'

CIBP @ 9720' w/ 35' Cmt

(P&A 1/26/2011)

ATKA: 11160'

CIBP @ 11726' w/ 35' Cmt

(Zone Abandon)

BRW: 11800'

12210'

DTD @ 12210'

Production Casing

5.5", 20 & 17.0# Csg (7.785" hole) @ 12210'
600 sx - TOC @ 9034' by Calc.

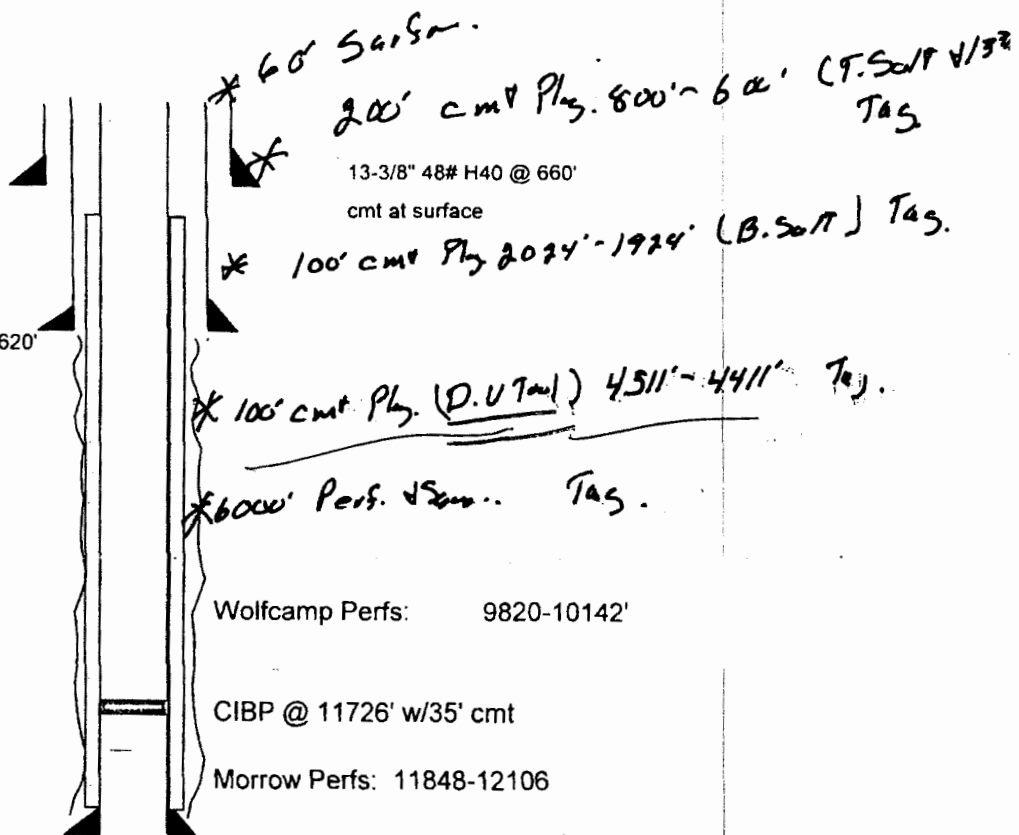


Drawn by: Ben Stone, 12/29/2013

Porterhouse State Com. #1
 API# 30-015-32682
 Eddy County, New Mexico

8-5/8" 32# K55 @ 3620'
 cmt at surface

5-1/2" 17# N80 & P110 @ 12228'
 DV tool @ 4461'



Wolfcamp Perfs: 9820-10142'

CIBP @ 11726' w/35' cmt

Morrow Perfs: 11848-12106

Plug and Abandon Procedure

POOH W/ production string

Set CIBP @ 9800' to abandon Wolfcamp Perfs

Dump 35' cmt on top of CIBP

Set CIBP @ 3600' w/35' cmt on top

* Pump 10 sx surface plug *min 60'*

Install dry hole marker

* Perf. & Squeez. @ 6000' (100' cmt plug.) WOC TAG.

* Spot 100' cmt Plug 4511'-4411' (DV. tool) WOC TAG

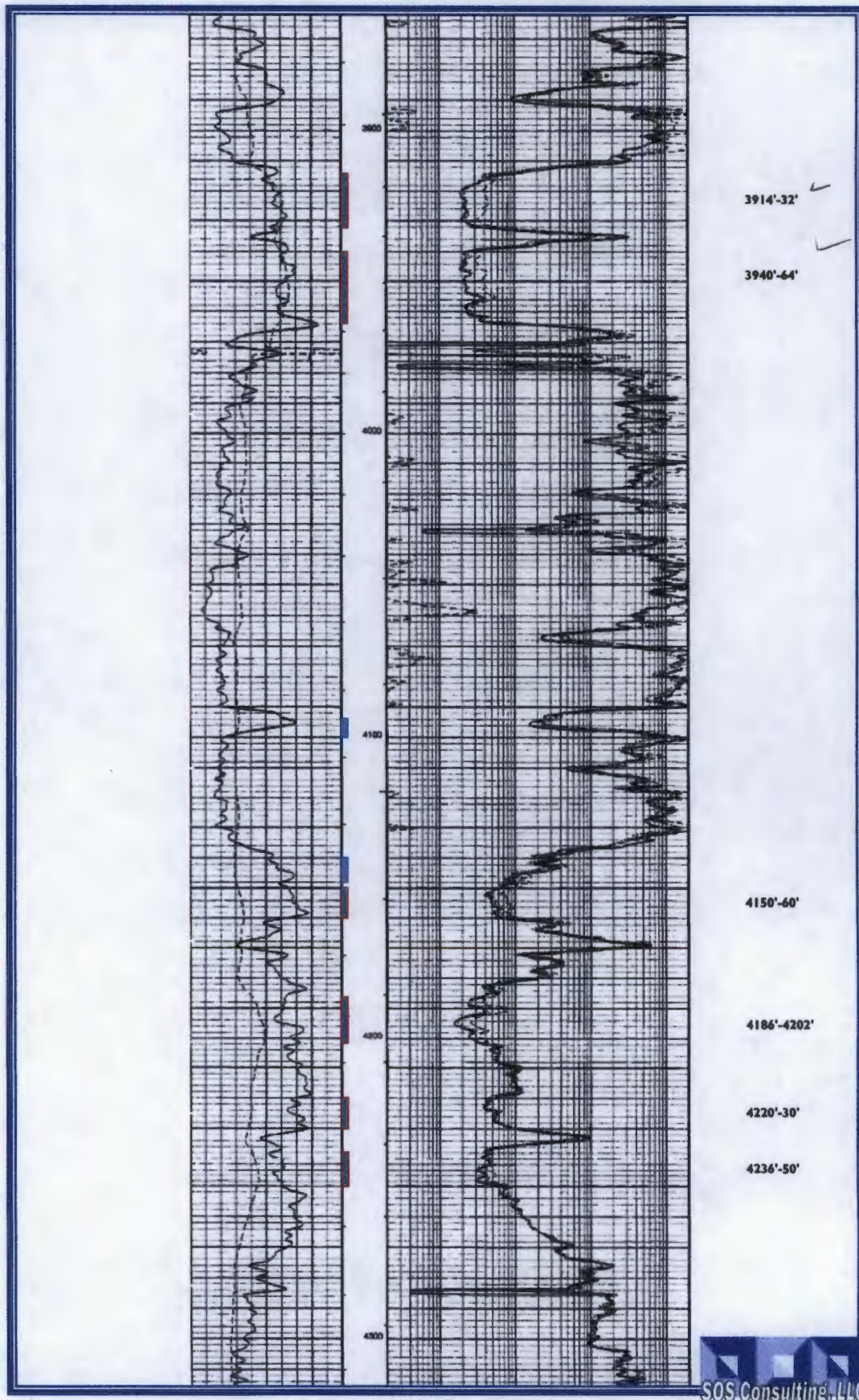
* 100' cmt Plug 2024'-1924' B. Salt. WOC TAG.

* 200' cmt Plug 800'-600' (T. Salt & 13 3/8 stu.) WOC TAG.

Porterhouse State Com No.1 SWD

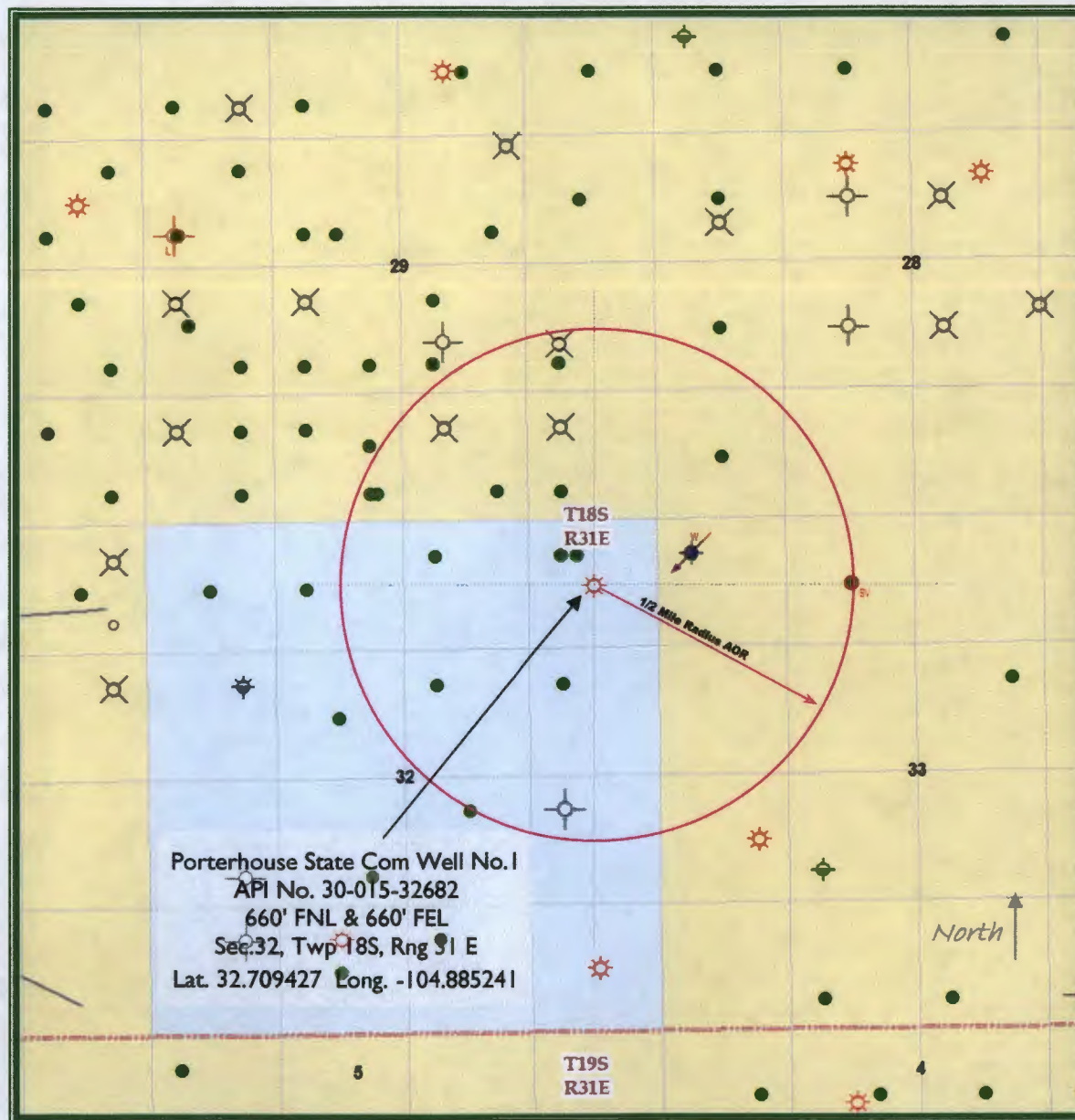
Log Strip with Perforation Selection

■ Primary Perforation Selections ■ Optional Selections - N/A (Shoot ALL w/ 4 jsf)

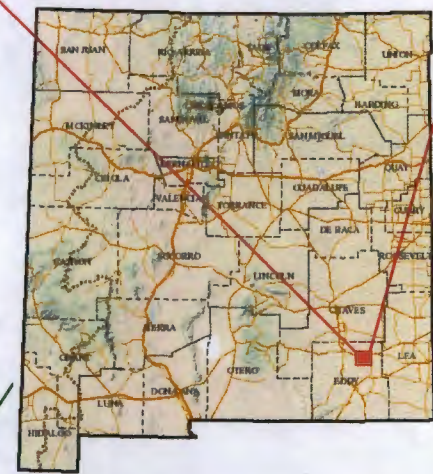
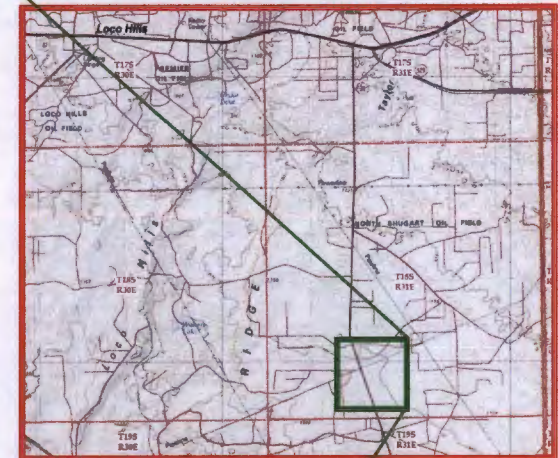


Porterhouse St. Com Well No.1 - Area of Review / Overview Map

(Attachment to NMOCD Form C-108 - Item V)



~8.0 miles Southeast
of Loco Hills, NM



Eddy County, New Mexico



RAY WESTALL OPERATING, INC.



Form C-108 Item VI - Tabulation of AOR Wells

Depth to Top of Proposed
GRAYBURG Injection Interval 3914'

Wells which PENETRATE
Proposed Injection Zone.

ALL WELLS WITHIN AOR, REGARDLESS OF STATUS, ARE PRESENTED IN TABULATION IF THERE IS A CORRESPONDING WELLSPOT ON THE MAP.

API Well No.	Current Operator	Well Name	Well No	Type	Lease	Status	Dir.	STR	Total Depth
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SUBJECT WELL

30-015-32682	[4378] CHI OPERATING INC	PORTERHOUSE STATE COM	#001	Gas	State	Plugged, Site Released	A	32-18S-31E	12,210'
SUBJECT WELL - CURRENT AND PROPOSED WELLBORE SCHEMATICS ATTACHED.									

SECTION 28 WELLS

ONLY 1 ACTIVE WELL PENETRATES PROPOSED INTERVAL - OXY T-BONE FEDERAL NO.1 SWD IN SECTION 33

Other AOR Wells

30-015-05620	[162683] CIMAREX ENERGY CO. OF CO	KEOHANE ETAL A FEDERAL	#001	Oil	Federal	Plugged, Site Released	M	28-18S-31E	3805'
DOES NOT PENETRATE									

SECTION 29 WELLS

30-015-05635	[162683] CIMAREX ENERGY CO. OF CO	SHUGART A	#002	Oil	Federal	Plugged, Site Released	N	29-18S-31E	3724'
DOES NOT PENETRATE									
30-015-05636	[162683] CIMAREX ENERGY CO. OF CO	SHUGART A	#003	Oil	Federal	Plugged, Site Released	O	29-18S-31E	3763'
DOES NOT PENETRATE									
30-015-05632	[162683] CIMAREX ENERGY CO. OF CO	SHUGART A	#007	Oil	Federal	Plugged, Site Released	P	29-18S-31E	2705'
DOES NOT PENETRATE									
30-015-05640	[162683] CIMAREX ENERGY CO. OF CO	SHUGART A	#009	Injection	Federal	Plugged, Site Released	I	29-18S-31E	3820'
DOES NOT PENETRATE									
30-015-26667	[162683] CIMAREX ENERGY CO. OF CO	SHUGART A	#011	Oil	Federal	Plugged, Site Released	N	29-18S-31E	3921'
DOES NOT PENETRATE									

30-015-30870	[162683] CIMAREX ENERGY CO. OF CO	WEST SHUGART 29 FEDERAL	#004	Oil	Federal	Plugged, Site Released	N	29-18S-31E	5300'
P&A SCHEMATIC ATTACHED									

30-015-31239	[166111] DEVON ENERGY PROD. CO.	WEST SHUGART 29 FEDERAL	#007	Oil	Federal	Cancelled APD	P	29-18S-31E	0'
CANCELLED APD									
30-015-31240	[166111] DEVON ENERGY PROD. CO.	WEST SHUGART 29 FEDERAL	#008	Oil	Federal	Cancelled APD	I	29-18S-31E	0'
CANCELLED APD									
30-015-41795	[166111] DEVON ENERGY PROD. CO.	SARGAS 28 FEDERAL COM	#003H	Oil	Federal	New (Not Drilled/Comp)	I	29-18S-31E	0'
DOES NOT PENETRATE									
30-015-41560	[166111] DEVON ENERGY PROD. CO.	SARGAS 28 FEDERAL COM	#004H	Oil	Federal	New (Not Drilled/Comp)	I	29-18S-31E	0'
DOES NOT PENETRATE									



Form C-108 Item VI - Tabulation of AOR Wells (cont.)

<i>API Well No</i>	<i>Current Operator</i>	<i>Well Name</i>	<i>Well No.</i>	<i>Type</i>	<i>Lease</i>	<i>Status</i>	<i>UL</i>	<i>STR</i>	<i>Total Depth</i>
<u>SECTION 29 WELLS (Cont.)</u>									
30-015-31301	[166111] DEVON ENERGY PROD. CO.	WEST SHUGART 29 FEDERAL	#006	Oil	Federal	Cancelled APD	O	29-18S-31E	0' <u>CANCELLED APD</u>
30-015-05633	[214263] PRE-ONGARD OPERATOR	PRE-ONGARD WELL	#008	Oil	Federal	Plugged, Site Released	N	29-18S-31E	2692' <u>DOES NOT PENETRATE</u>
<u>SECTION 32 WELLS</u>									
30-015-32682	[4378] CHI OPERATING INC	PORTERHOUSE STATE COM	#001	Gas	State	Plugged, Site Released	A	32-18S-31E	12,210' <u>SUBJECT WELL - CURRENT AND PROPOSED WELLBORE SCHEMATICS ATTACHED.</u>
30-015-05659	[162683] CIMAREX ENERGY CO. OF CO	MONTEREY STATE	#001	Oil	State	Plugged, Not Released	J	32-18S-31E	3344' <u>DOES NOT PENETRATE</u>
30-015-05668	[162683] CIMAREX ENERGY CO. OF CO	NEW MEXICO Y STATE	#003	Oil	State	Plugged, Not Released	H	32-18S-31E	3350' <u>DOES NOT PENETRATE</u>
30-015-20657	[162683] CIMAREX ENERGY CO. OF CO	NEW MEXICO Y STATE	#005	Oil	State	Active	A	32-18S-31E	2779' <u>DOES NOT PENETRATE</u>
30-015-05669	[7318] ENERGY RESOURCES CORP	STATE 32	#001	Oil	State	Plugged, Site Released	B	32-18S-31E	3670' <u>DOES NOT PENETRATE</u>
30-015-05660	[214263] PRE-ONGARD OPERATOR	PRE-ONGARD WELL	#002	Oil	State	Plugged, Site Released	I	32-18S-31E	2708' <u>DOES NOT PENETRATE</u>
30-015-05663	[214263] PRE-ONGARD OPERATOR	PRE-ONGARD WELL	#002	Oil	State	Plugged, Site Released	A	32-18S-31E	3743' <u>DOES NOT PENETRATE</u>
30-015-05661	[214263] PRE-ONGARD OPERATOR	PRE-ONGARD WELL	#003	Oil	State	Plugged, Site Released	3	32-18S-31E	3677' <u>DOES NOT PENETRATE</u>
30-015-05667	[26478] SOUTHLAND ROYALTY CO	NEW MEXICO Y STATE	#001	Injection	State	Plugged, Site Released	G	32-18S-31E	3750' <u>DOES NOT PENETRATE</u>
<u>SECTION 33 WELLS</u>									
30-015-32122	[245872] JUDAH OIL LLC	OXY T-BONE FEDERAL	#001	SWD	Federal	Active	C	33-18S-31E	12,172' <u>SWD IN SAN ANDRES - PBDT 4450'</u>
30-015-05674	[214263] PRE-ONGARD OPERATOR	PRE-ONGARD WELL	#005	Oil	Federal	Plugged, Site Released	D	33-18S-31E	3855' <u>DOES NOT PENETRATE</u>

CMAREX ENERGY Co. of COLORADO

~~DEVON ENERGY PRODUCTION COMPANY~~

Well Name: West Shugart 29 Federal 4	Field: West Shugart Delaware
Location: Sec 29-T18S-R31E, 822' FSL & 2310' FWL	County: Eddy State: NM
Elevation: 3584' Casing Head	Spud Date: 7/21/00 Compl Date: 8/24/00
API#: 30-015-30870 Prepared by: Ronnie Slack	Date: 11/17/04 Rev:

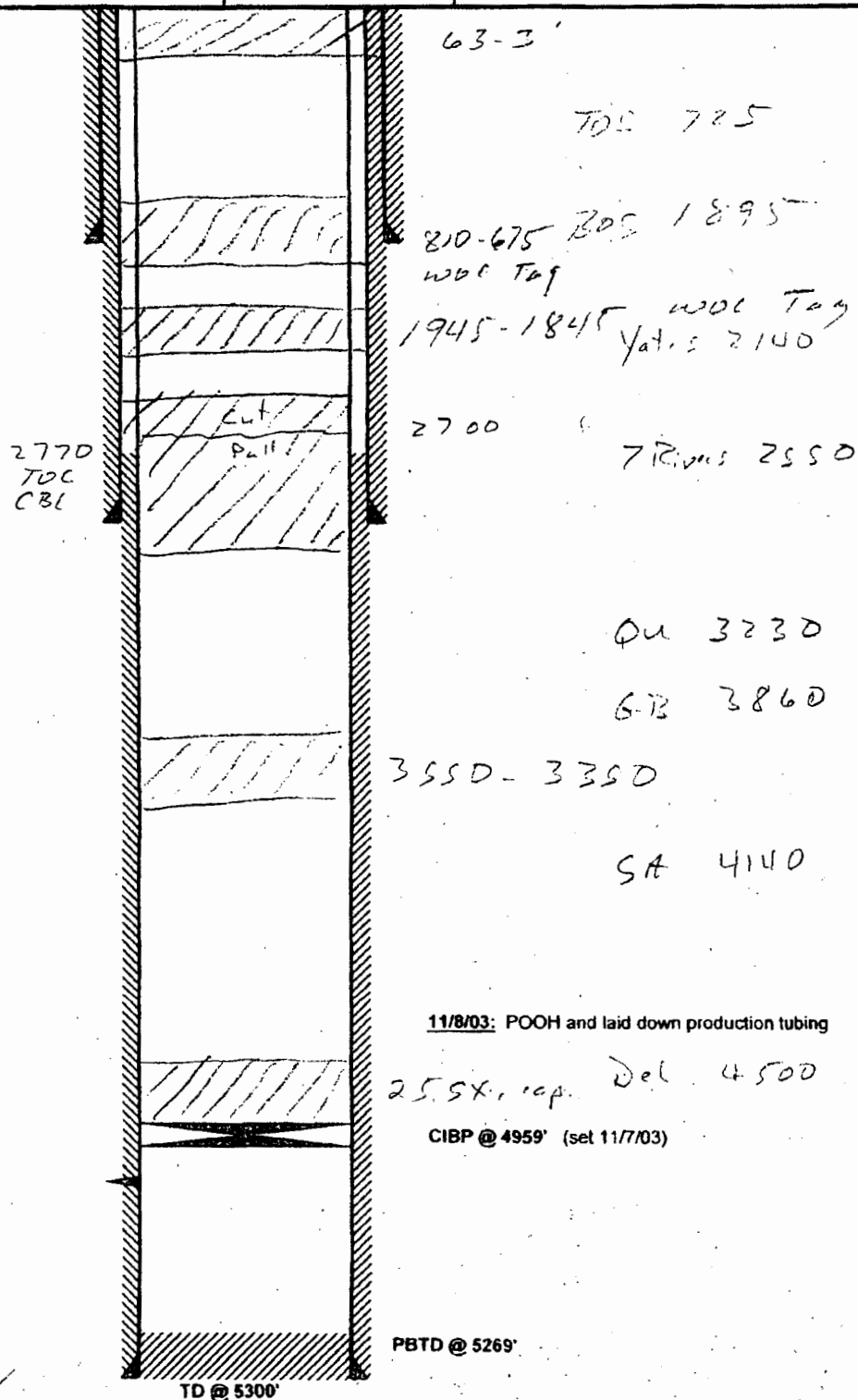
■ CURRENT

17-1/2" hole
13-3/8", 48#, H40, @ 760'
Cmt'd w/570 sxs. Cmt to surface ✓

11" hole
8-5/8", 32#, J55, @ 2804'
Cmt'd w/950 sxs. Cmt to surface ✓

DELAWARE
5018' - 5030' ✓
Frac'd w/87755# 16/30

7-7/8" hole
5-1/2", 15.5 & 17#, J55, @ 5300'
Cmt'd w/500 sxs TOC @ 2770' (cbl) ✓



DAE
04/20/09

C-108 ITEM VII – PROPOSED OPERATION

The Porterhouse State Com No.1 SWD will be operated as a commercial disposal service to area operators to facilitate in disposal of produced water from typical producing formations in the area. (Samples are included in this application from San Andres, Delaware and Morrow formation waters - chlorides and TDS are relative compatible with Grayburg/San Andres waters.)

The system will be closed utilizing a tank battery facility located on the well site.

Injection pressure will be 729 psi with rates limited only by that pressure. In the future, Ray Westall Operating, Inc. may opt to conduct a step rate test if it is determined that greater rates may be required. This would be submitted to OCD as a request to increase the injection pressure.

Routine maintenance will be ongoing and any releases will be reported within 24 hours to OCD on form C-141 pursuant to various portions of 19.15.30 NMAC.

The facility will not be manned but will be available to Ray Westall's customers 24/7. The facility will be available for inspections at any time deemed necessary by OCD.

C-108 - Item VIII
Geological Data

SOS Consulting, LLC
PO Box 300
Como, Texas 75431
Attn. Mr. Ben Stone

Re: Porterhouse State Co. Well No. 1
API # 30-015-32682
Sec. 2, T-18-S, R-31-E, Eddy County, New Mexico

Dear Mr. Stone

I have reviewed the open hole logs on the above referenced well for zones that would be conducive for the disposal of produced water. Your best choice for a long life disposal facility would be to inject in the Lower Grayburg and San Andres arkosic sands in this well bore. These sands are non productive for hydrocarbons in this area and are extensive enough to insure that a considerable volume of water can be disposed of. The following depths represent the best porosity;

3914'-3932'
3940'-3964'
4150'-4160'
4186'-4202'
4220'-4230'
4236'-4250'

The sands of the Delaware Mountain Group below the San Andres formation indicate porosity on the density log but experience has shown that these sands have a low permeability and will not accept a lot of water without a great deal of pressure.

Should you have any questions please feel to contact me.

Sincerely

Roy E. Johnson
cc. Ray Westall

C-108 ITEM VIII – GEOLOGIC DATA (Supplemental Pool Map)

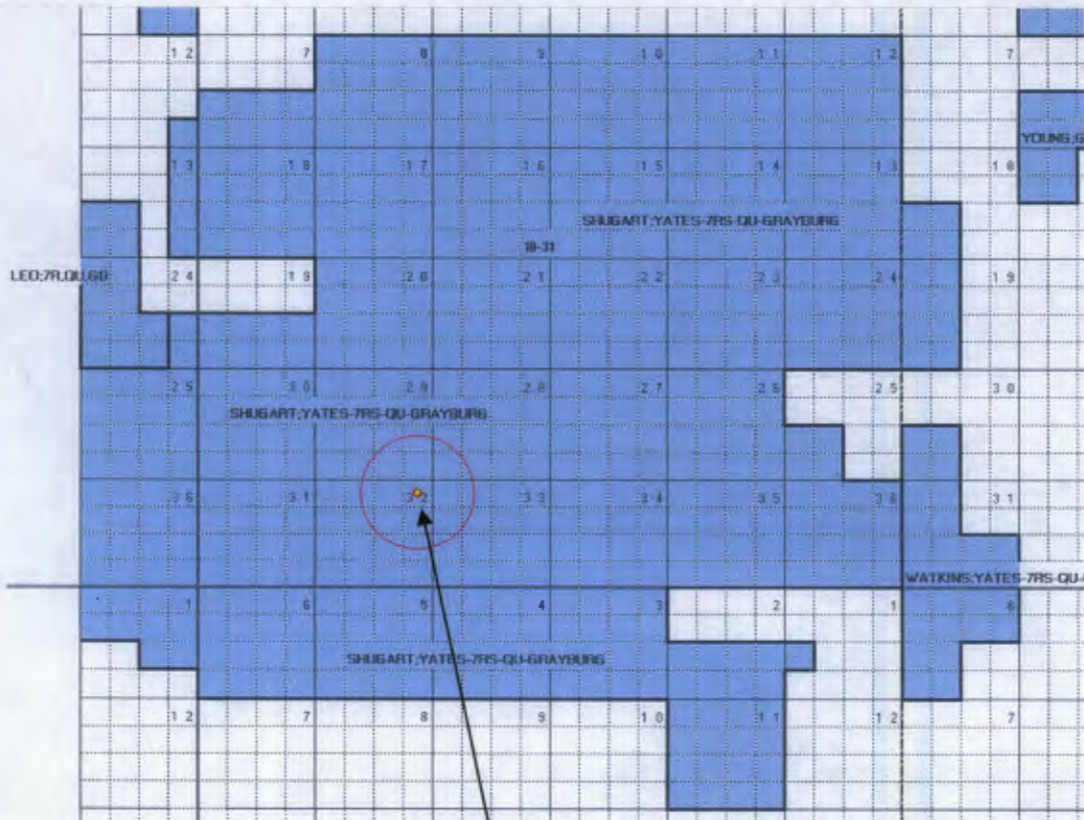
The Porterhouse State Com No.1 is located within the surface boundaries of the Shugart Yates-7 Rivers-Queen-Grayburg pool. It should be noted that the historical play in this pool existed above the proposed disposal interval.

While the subject proposed interval includes a portion of Lower Grayburg porosity, it is approximately 200' deeper than the typical completions in the Area of Review. Further, all of the wells (producing and injecting) have been plugged and abandoned, indicating that operators have mostly exploited the pool reserves in the area. (See AOR Well Tabulation.)

There is no San Andres pool in the immediate vicinity and the next producing pool having surface boundaries in the subject area is the West Shugart Delaware (apprx. 2000') with no active completions, followed by the Bone Spring, situated well below the proposed interval.

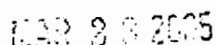
Checked
orders
for
Shugart

— no
production
in lower
GB/
no injection
in lower
GB



Porterhouse State Com No.1 and 1/2 mile area of review

Disposal Zone – San Andres Formation Water



OIL CONSERVATION

Date: 3/15/2006

30-05-32122

Country	Weight	Division	State
Judah	T Bone Fed 1	Eddy	New Mexico

Sample # 1

Depth

SG @ 60 °F	1.030
Sulfides	Not Tested
Reducing Agents	Not Tested

Sodium (Calc)	in Mg/L	12,097	in PPM	11,745
Calcium	in Mg/L	3,200	in PPM	3,107
Magnesium	in Mg/L	480	in PPM	468
Soluble Iron (FE2)	in Mg/L	0.0	in PPM	0

Chlorides	in Mg/L	24,000	in PPM	23,301
Sulfates	in Mg/L	2,000	in PPM	1,942
Bicarbonates	in Mg/L	268	in PPM	261
Total Hardness (as CaCO ₃)	in Mg/L	10,000	in PPM	9,709
Total Dissolved Solids (Calc)	in Mg/L	42,048	in PPM	40,821
Equivalent NaCl Concentration	in Mg/L	39,970	in PPM	38,806

*Calcium Carbonate Index 858,000

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

6,400,000

Below 500,000 Remote / 500,000 - 10,000,00 Possible / Above 10,000,000 Probable

***This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.**

Remarks FAX 748-1290

C-108 Item VII-4

Source – Yates Formation Water



Water Analysis

Date: 9/28/2004

2401 Sivley, Artesia NM 88210

Phone (505) 746-3140 Fax (505) 746-2293

Analyzed For

Company	Well Name	County	State
Gruy Pet Mng	Keohane Et al 1	Eddy	New Mexico

Sample Source

Sample

1

Formation

Depth

Specific Gravity	1.080	SG @ 60 °F	1.082
pH	6.77	Sulfides	
Temperature (°F)	72	Reducing Agents	

Cations

Sodium (Calc)	in Mg/L	-23,799	in PPM	-21,987
Calcium	in Mg/L	46,000	in PPM	42,498
Magnesium	in Mg/L	5,040	in PPM	4,656
Soluable Iron (FE2)	in Mg/L	0.0	in PPM	0

Anions

Chlorides	in Mg/L	58,000	in PPM	53,585
Sulfates	in Mg/L	1,800	in PPM	1,663
Bicarbonates	in Mg/L	288	in PPM	266
Total Hardness (as CaCO3)	in Mg/L	136,000	in PPM	125,647
Total Dissolved Solids (Calc)	in Mg/L	87,329	in PPM	80,681
Equivalent NaCl Concentration	in Mg/L	82,187	in PPM	75,930

Scaling Tendencies

*Calcium Carbonate Index 13,244,320

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 82,800,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

*This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks

C-108 Item VII-4

Source – Queen Formation Water



Water Analysis

Date: 9/28/2004

2401 Sivley, Artesia NM 88210

Phone (505) 746-3140 Fax (505) 746-2293

Analyzed For

Company	Well Name	County	State
<u>Gruy Pet Mng</u>	Shugart A 3	Eddy	New Mexico

Sample Source

Sample

1

Formation

Depth

Specific Gravity	1.125	SG @ 60 °F	1.127
pH	6.53	Sulfides	
Temperature (°F)	72	Reducing Agents	

Cations

Sodium (Calc)	in Mg/L	-19,970	in PPM	-17,713
Calcium	in Mg/L	40,000	in PPM	35,480
Magnesium	in Mg/L	6,000	in PPM	5,322
Soluble Iron (FE2)	in Mg/L	0.0	in PPM	0

Anions

Chlorides	in Mg/L	56,000	in PPM	49,672
Sulfates	in Mg/L	1,600	in PPM	1,419
Bicarbonates	in Mg/L	732	in PPM	649
Total Hardness (as CaCO3)	in Mg/L	125,000	in PPM	110,875
Total Dissolved Solids (Calc)	in Mg/L	84,362	in PPM	74,829
Equivalent NaCl Concentration	in Mg/L	77,193	in PPM	68,470

Scaling Tendencies

*Calcium Carbonate Index 29,280,000

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 64,000,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

**This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.*

Remarks

C-108 Item VII-4

Source – Delaware Formation Water



Water Analysis

Date: 9/28/2004

2401 Sivley, Artesia NM 88210

Phone (505) 746-3140 Fax (505) 746-2293

Analyzed For

Company	Well Name	County	State
Grux Pet Mng	Keohane Et al 1	Eddy	New Mexico

Sample Source

Sample

1

Formation

Depth

Specific Gravity	1.080	SG @ 60 °F	1.082
pH	6.77	Sulfides	
Temperature (°F)	72	Reducing Agents	

Cations

Sodium (Calc)	in Mg/L	-23,799	in PPM	-21,987
Calcium	in Mg/L	46,000	in PPM	42,498
Magnesium	in Mg/L	5,040	in PPM	4,656
Soluble Iron (FE2)	in Mg/L	0.0	in PPM	0

Anions

Chlorides	in Mg/L	58,000	in PPM	53,585
Sulfates	in Mg/L	1,800	in PPM	1,663
Bicarbonates	in Mg/L	288	in PPM	266
Total Hardness (as CaCO3)	in Mg/L	136,000	in PPM	125,647
Total Dissolved Solids (Calc)	in Mg/L	87,329	in PPM	80,681
Equivalent NaCl Concentration	in Mg/L	82,187	in PPM	75,930

Scaling Tendencies

*Calcium Carbonate Index 13,244,320

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 82,800,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

*This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks

C-108 ITEM XI – WATER WELLS IN AOR

There are no known water wells within 1 mile of the subject well.



New Mexico Office of the State Engineer **Active & Inactive Points of Diversion** (with Ownership Information)

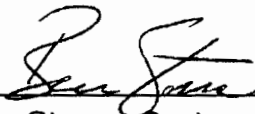
No PODs found.

PLSS Search:

Section(s): 28, 29, 32, 33 Township: 18S Range: 31E

C-108 ITEM XII – GEOLOGIC AFFIRMATION

We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.

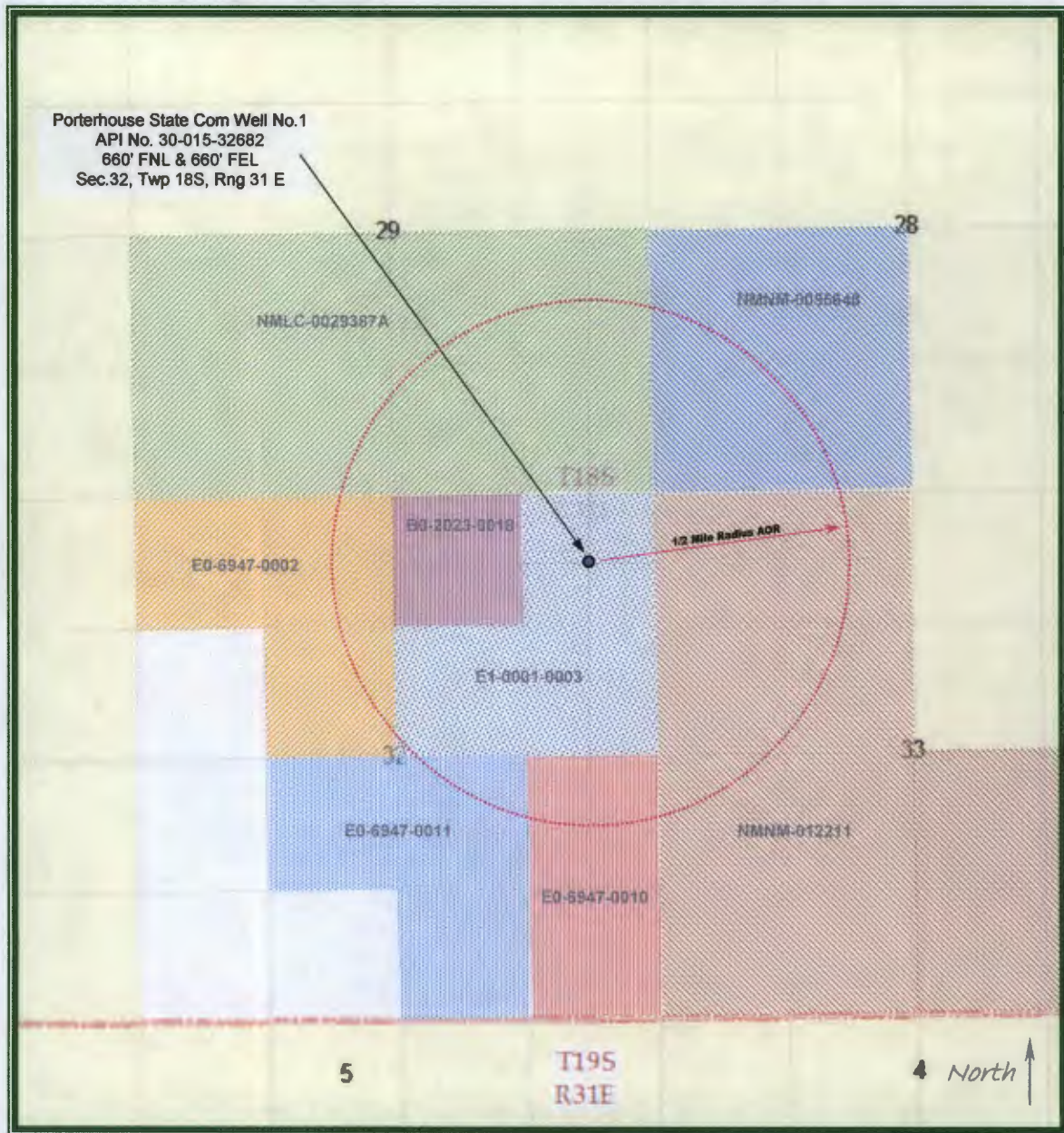


Ben Stone, Partner
SOS Consulting, LLC

Project: Ray Westall Operating, Inc.
Porterhouse State Com No.1
Reviewed 12/29/2013

Porterhouse State Com No.1 - Leasehold Plat

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



RAY WESTALL OPERATING, INC.

LEGEND

	NMLC-0029387A – 18-31, Inc.		E0-6947-0011 – Magnum Hunter
	NMNM-0055648 – Devon Energy Prod. and Others		E0-6947-0002 – Chambers & Kennedy
	NMNM-012211 – 18-31, Inc.		B0-2023-0018 – Occidental Permian
	E0-6947-0010 – Atofina Petrochemicals / Exxon		E1-0001-0003 – Magnum Hunter

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST**

SURFACE OWNER

STATE OF NEW MEXICO (FedEx'ed copy)
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504

OFFSET MINERALS LESSEES and OPERATORS (All Notified via USPS Certified Mail)

BLM Lease NMLC-0029387A

Lessee

- 1 18-31, Inc.
P.O. Box 1120
Roswell, NM 88201

Operators

- 2 CIMEREX ENERGY COMPANY OF COLORADO
600 N. Marienfeld, Suite 600
Midland, TX 79701
- 3 DEVON ENERGY PRODUCTION COMPANY, LP
333 W. Sheridan
OKC, OK 73102

BLM Lease NMNM-0055648

Lessees

- DEVON ENERGY PRODUCTION COMPANY, LP
333 W. Sheridan
OKC, OK 73102
- 4 ENERGEN RESOURCES COMPANY
605 Richard Arrington Jr. Blvd.
Birmingham, AL 35203-2707
- 5 FIDELITY EXPLORATION & PRODUCTION COMPANY
1615 Broadway, Suite 1800
Denver, CO 80202

Operator

CIMEREX ENERGY COMPANY OF COLORADO
600 N. Marienfeld, Suite 600
Midland, TX 79701

BLM Lease NMNM-012211

Lessee

18-31, Inc.
P.O. Box 1120
Roswell, NM 88201

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)**

6 **Operator**
JUDAH OIL, LLC
P.O. Box 568
Artesia, NM 88211

State Lease E0-6947-0010

7 **Lessee**
ATOFINA PETROCHEMICALS & EXXON CORP.
P.O. Box 2990
Midland, TX 79701

State Lease E0-6947-0011

8 **Lessee**
MAGNUM HUNTER PRODUCTION, INC.
600 N. Marienfeld, Suite 600
Midland, TX 79701

Operator
CIMEREX ENERGY COMPANY OF COLORADO
600 N. Marienfeld, Suite 600
Midland, TX 79701

State Lease E0-6947-0002

9 **Lessee**
CHAMBERS & KENNEDY
P.O. Box 2305
Houston, TX 77002

Operators
CIMEREX ENERGY COMPANY OF COLORADO
600 N. Marienfeld, Suite 600
Midland, TX 79701

10 CHI OPERATING, INC.
P.O. Box 1700
Midland, TX 79702

State Lease B0-2023-0018

11 OCCIDENTAL PERMIAN, LTD.
P.O. Box 4294
Houston, TX 77210

Operators
CIMEREX ENERGY COMPANY OF COLORADO
600 N. Marienfeld, Suite 600
Midland, TX 79701

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)**

State Lease E0-0001-0003

Lessee

MAGNUM HUNTER PRODUCTION, INC.
600 N. Marienfeld, Suite 600
Midland, TX 79701

REGULATORY

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed original and copy)
1220 S. St. Francis Dr.
Santa Fe, NM 87505

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed copy)
811 S. First St.
Artesia, NM 88210

NEW MEXICO STATE LAND OFFICE (FedEx'ed copy)
Commissioner of Public Lands
310 Old Santa Fe Trail
Santa Fe, NM



December 27, 2013

NOTIFICATION TO INTERESTED PARTIES
via U.S. Certified Mail

To Whom It May Concern:

Ray Westall Operating, Inc., Loco Hills, New Mexico, has made application to the New Mexico Oil Conservation Division to reenter and configure for salt water disposal the Porterhouse State Com Well No.1. The proposed commercial operation will be for produced water disposal from area operators. As indicated in the notice below, the well is located in Section 32, Township 18 South, Range 31 East in Eddy County, New Mexico.

The published notice states that injection will be into the Grayburg and San Andres formations with the bottom of the interval no deeper than 4250 feet. The uppermost top of the interval will be 3914 feet.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico in the December 24, 2013 edition.

LEGAL NOTICE

Ray Westall, Inc., P.O. Box 4, Loco Hills, NM 88255 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to reenter and permit for salt water disposal the Porterhouse State Com Well No.1. The well, API No.30-015-32682 is located 660 FNL & 660 FWL in Section 32, Township 18 South, Range 31 East in Eddy County, New Mexico. Produced water from area production will be commercially disposed into the lower Grayburg and San Andres formations through perforations from a maximum applied for top depth of 3914 feet to maximum depth of 4250 feet. Specific perforated intervals will be determined later. Maximum injection pressure of 729 psi and a maximum rate limited only by such pressure.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

You have been identified as a party who may be interested as an offset lessee or operator.

You are entitled to a full copy of the application. If so desired, please call or email SOS Consulting, LLC at 903-488-9850, info@sosconsulting.us, and a copy will be expedited to you. If a copy has already been sent to you or your company, we will advise you of that and the address to which it was sent.

Thank you for your attention in this matter.

Best regards,

A handwritten signature in black ink, appearing to read "Ben Stone". The signature is fluid and cursive, with the first name "Ben" and last name "Stone" clearly distinguishable.

Ben Stone, SOS Consulting, LLC
Agent for Ray Westall Operating, Inc.

Cc: Application File

C-108 Item XIV

Proof of Notice – Legal Notice Publication

(Affidavit will follow upon receipt.)

Good Morning Ben,

This is scheduled to run Tuesday Dec. 24. Attached is a proof, let me know if I need to change anything. The cost is \$40.61.

Thank You,

Latisha Romine

Artesia Daily Press

PO Box 190

Artesia NM, 88211

LEGAL NOTICE

Ray Westall, Inc., P.O. Box 4, Loco Hills, NM 88255 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to reenter and permit for salt water disposal the Porterhouse State Com Well No.1. The well, API No.30-015-32682 is located 660 FNL & 660 FWL in Section 32, Township 18 South, Range 31 East in Eddy County, New Mexico. Produced water from area production will be commercially disposed into the lower Grayburg and San Andres formations through perforations from a maximum applied for top depth of 3914 feet to maximum depth of 4250 feet. Specific perforated intervals will be determined later. Maximum injection pressure of 729 psi and a maximum rate limited only by such pressure.

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Published in the Artesia Daily Press, Artesia, N.M., Dec. 24 2013. Legal No 22815.

Proof of Notice (Certified Mail Receipts – Cont.)

0EHL 55E0 2000 0T22 270L 19 55E0 2000 0T22 270L

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11

Sent To

Street, Apt
or PO Box

City, State,

PS Form 3

CHAMBERS & KENNEDY
P.O. Box 2305
Houston, TX 77002

012	2210	0002	0335	75	7012	2210	0002	0335	7423
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Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 0.00

CHI OPERATING, INC.
P.O. Box 1700
Midland, TX 79702

OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11

Sent To _____

Street, /
or PO E _____

City, St _____

PS Form 3849, June 1995

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

7012 2210 0002 0335 5207

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com ®	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11
Postmark Here	
Sent To	
Street, Apt. N or PO Box N	18-31, INC.
City, State, ZIP	P.O. Box 1120
	Roswell, NM 88201
PS Form 3800	ctions
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11
Postmark Here	
Sent To	
Street, Apt. N or PO Box N	DEVON ENERGY PROD. CO., LP
City, State, ZIP	333 W. Sheridan Avenue
	Oklahoma City, OK 73102-5010
PS Form 3800	ns
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11
Postmark Here	
Sent To	
Street, Apt. N or PO Box N	FIDELITY EXPLORATION & PRODUCTION COMPANY
City, State, ZIP	1615 Broadway, Suite 1800
	Denver, CO 80202
PS Form 3800	ons

7012 2210 0002 0335 5191

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com ®	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11
Postmark Here	
Sent To	
Street, Apt. N or PO Box N	CIMEREX ENERGY COMPANY OF COLORADO
City, State, ZIP	600 N. Marienfeld, Suite 600
	Midland, TX 79701
PS Form 3800	ctions
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11
Postmark Here	
Sent To	
Street, Apt. N or PO Box N	ENERGEN RESOURCES COMPANY
City, State, ZIP	605 Richard Arrington Jr. Blvd.
	Birmingham, AL 35203-2707
PS Form 3800	ctions
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11
Postmark Here	
Sent To	
Street, Apt. N or PO Box N	JUDAH OIL, LLC
City, State, ZIP	P.O. Box 568
	Artesia, NM 88211
PS Form 3800	ctions

Affidavit of Publication

NO.

22815

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/days on the same day as follows:

First Publication

December 24, 2013

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Subscribed and sworn to before me this

24th

day of

December

2013



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires:

5/12/2015

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Ray Westall, Inc., P.O. Box 4, Loco Hills, NM 88255 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to reenter and permit for salt water disposal the Porterhouse State Com Well No.1. The well, API No.30-015-32682 is located 660 FNL & 660 FWL in Section 32, Township 18 South, Range 31 East in Eddy County, New Mexico. Produced water from area production will be commercially disposed into the lower Grayburg and San Andres formations through perforations from a maximum applied for top depth of 3914 feet to maximum depth of 4250 feet. Specific perforated intervals will be determined later. Maximum injection pressure of 729 psi and a maximum rate limited only by such pressure.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., Dec. 24 2013; Legal No 22815.



C-108 Review Checklist: Received 01/02/14 Add. Request: Reply Date: Suspended: [Ver 13]

PERMIT TYPE: WFX / PMX / SWD Number: 1479 Permit Date: 07/29/14 Legacy Permits/Orders: See Back

Well No. 1 Well Name(s): Porterhouse State Com. 08/11/14 AS

API: 30-0 15-32682 Spud Date: 03/29/2003 New or Old: New (UIC Class II Primacy 03/07/1982)

Footages 660 FNL / 660 FEL Lot - or Unit A Sec 32 Tsp 19S Rge 31E County Eddy

General Location: Southwest of Loco Hills / east of Nimenin Ridge Pool: Shugart; Morrow Witch Wolfcamp Pool No.: 85300

BLM 100K Map: Hobbs Operator: Ray Westall Operating Inc. OGRID: 119305 Contact: Ben Stone, Agent

COMPLIANCE RULE 5.9: Total Wells: 97 Inactive: 4 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Yes Date: 07/29/14

WELL FILE REVIEWED ☒ Current Status: P&A - former Morrow & Wolfcamp producer 08/11/14

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☒ Logs in Imaging: GR/Laterolog & Den/CNL AS

Planned Rehab Work to Well: Re-enter; drill out plugs to bottom of interval; set CIBP at 4350' + cmt / cmt 5 1/2' into int casing

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface	17 1/2 / 13 3/8	0 to 660'	Stage Tool	660 (100 to 250) Cir. to surface
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	11 / 8 5/8	0 to 3614	None	1175 Cir. to surface
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	7 7/8 / 5 1/2	0 to 12210	45H	1st / 250 / 2nd / 350 Calc. / 9034
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner	* (TOC to be addressed by remedial cmt / log if necessary)			
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner	Existing perfs: 11848 to 12106 & 9820 to 10142			
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> OH / PERF	5 1/2	3914 to 4250	Inj Length 336	

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.		Queen	~3200	Drilled TD <u>12210</u> PBTD <u>12138</u>
Confining Unit: Litho. Struc. Por.	<u>4300</u>	Grayburg	~3600	NEW TD <u> </u> NEW PBTD <u>4350</u>
Proposed Inj Interval TOP:	<u>3914</u>	Lower Grayburg	<u> </u>	NEW Open Hole <input type="radio"/> or NEW Perfs <input checked="" type="radio"/>
Proposed Inj Interval BOTTOM:	<u>4250</u>	San Andres Fm	<u>4020</u>	Tubing Size <u>2 7/8</u> in. Inter Coated? <u>Yes</u>
Confining Unit: Litho. Struc. Por.		Bone Spring	~4020	Proposed Packer Depth <u>3820</u> ft
Adjacent Unit: Litho. Struc. Por.		Wolfcamp		Min. Packer Depth <u>3814</u> (100-ft limit)
AOR: Hydrologic and Geologic Information				Proposed Max. Surface Press. <u>72485</u> psi
POTASH: R-111-P <input checked="" type="checkbox"/> Noticed? <u>NA</u> BLM Sec Ord <input checked="" type="checkbox"/> WIPP <input checked="" type="checkbox"/> Noticed? <u>NA</u> SALT/SALADO T. <u>700</u> B: <u>1420</u> CLIFF HOUSE <u> </u>				Admin. Inj. Press. <u>783</u> (0.2 psi per ft)

FRESH WATER: Aquifer Alluvial / pos. Rader - No records Max Depth < 500 HYDRO AFFIRM STATEMENT By Qualified Person ☒

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

Disposal Fluid: Formation Source(s) San Andres / Delay of Morrow North edge Yes On Lease ☐ Operator Only ☒ or Commercial ☐

Disposal Int: Inject Rate (Avg/Max BWPD) Not stipulated Protectable Waters NA Source: no in - 10 System: Closed ☒ or Open ☐

HC Potential: Producing Interval? No Formerly Producing? No Method: Logs/DST/P & A Other see SWB-950 2-Mile Radius Pool Map ☒

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

Penetrating Wells: No. Active Wells 1 Num Repairs? 0 on which well(s)? SWB - Judah in San Andres Diagrams? Y

Penetrating Wells: No. P&A Wells 1 Num Repairs? 0 on which well(s)? Diagrams? Y

NOTICE: Newspaper Date 12/24/13 Mineral Owner SLO Surface Owner SLO N. Date Fed EX

RULE 26.7(A): Identified Tracts? Yes Affected Persons: Occidental / CHI Oper / Ato Jira / Magnum Hunt / Rod Judah Oil / Ensigns / Denver / Cimarex / 16-31 Inc N. Date 12/30/13

Permit Conditions: Issues: Cement installation / existing WFs / Unit correlations / existing WPs

Add Permit Cond: Injection survey; RCBL if cmt not circulated to surface

Document Review - Porterhouse State Com. No. 1

Admin Orders

WFX-678
WFX-683
WFX-721
WFX-734
WFX-788

Grayburg & current WF operations
[Shugart pool]

Hearing Orders

R-3769 / Case 4138 - Specific to WF including Grayburg
R-11254 / Case 122 08 - Correlation of SA to upper Del.

Twelve logs - Correlation of SA. Goat Seep / Capitan in
back reef area

Adjacent Injection wells: SWD-950 / 30-015-32122 / OXY T. Bone Fedth
Judeah Oil / commercial
Same intervals - GB & SA - 796 psi
IPI-253 → 1400 psi / 0.35 psi/ft
IPI-279 → 1750 psi / 0.439 psi/ft

Submit To Appropriate District State Lease - 6 copies Fee Lease - 5 copies District I 1625 N French Dr., Hobbs, NM 88240 District II 1301 W Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S St Francis Dr., Santa Fe, NM 87505	State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	JUN - 2 2009 Form C-105 KM Revised June 10, 2003
WELL COMPLETION OR RECOMPLETION REPORT AND LOG		WELL API NO. 3001536068
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		State Oil & Gas Lease No.
1a Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____ b. Type of Completion: NEW <input checked="" type="checkbox"/> WORK <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG <input type="checkbox"/> DIFF. <input type="checkbox"/> WELL OVER BACK RESVR. <input type="checkbox"/> OTHER _____		7 Lease Name or Unit Agreement Name KC Strip State
2. Name of Operator CHI OPERATING, INC		8. Well No. #2
3. Address of Operator P.O. BOX 1799, MIDLAND, TEXAS 79702		9. Pool name or Wildcat Undesignated Shugart Morrow 85300
4. Well Location Unit Letter K 990' Feet From The FSL Line and 1980' Feet From The FWL Line Section 32 Township T18S Range R31E NMPM EDDY County		
10. Date Spudded 1/10/09	11. Date T.D. Reached 2/13/09	12. Date Compl. (Ready to Prod.) 5/20/09
13. Elevations (DF& RKB, RT, GR, etc) GL 3571'		14. Elev. Casinghead
15. Total Depth 12,275'	16. Plug Back T.D. 12,134'	17. If Multiple Compl. How Many Zones?
18. Intervals Drilled By		19. Producing Interval(s), of this completion - Top, Bottom, Name 12,138-144, 12,112-118' MORROW
20. Was Directional Survey Made YES		21. Type Electric and Other Logs Run COMP NEU, DLL
22. Was Well Cored NO		23. CASING RECORD (Report all strings set in well)
CASING SIZE	WEIGHT LB./FT.	DEPTH SET
13 3/8"	54.5# J55	648'
9 5/8"	40/36# J55	4035'
5 1/2"	17# P110	12,275'
HOLE SIZE		CEMENTING RECORD
17 1/2"		550SX - C
12 1/4"		1115SX - C
7 7/8"		860SX - C
		TOC @ 4926'
24. LINER RECORD		25. TUBING RECORD
SIZE	TOP	SIZE
	BOTTOM	DEPTH SET
SACKS CEMENT	SCREEN	PACKER SET
		2 3/8"
		12,027'
26. Perforation record (interval, size, and number) 12,138-144, 4SPF 12,112-118', 4 SPF		27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED
28. PRODUCTION		
Date First Production 5/20/09	Production Method (Flowing, gas lift, pumping - Size and type pump) FLOWING	Well Status (Prod. or Shut-in) PRODUCING
Date of Test 5/26/09	Hours Tested 24 HRS	Choke Size
Prod'n For Test Period	Oil - Bbl 0 BO	Gas - MCF 190 MCF
Flow Tubing Press.	Casing Pressure	Water - Bbl 0 BW
Calculated 24-Hour Rate	Oil - Bbl	Gas - MCF
	Water - Bbl.	Oil Gravity - API - (Corr.)
29. Disposition of Gas (Sold, used for fuel, vented, etc.) SOLD		Test Witnessed By SONNY MANN
30. List Attachments DRLG SURVEY, LOGS		
31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief		
Signature Robina Askew		Printed Name ROBIN ASKEW Title REGULATORY CLERK Date 5/29/09
E-mail Address robina@chienergyinc.com		

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Yates 2310'		T. Ojo Alamo	T. Penn. "B"
T. 7 Rivers 2547'		T. Kirtland-Fruitland	T. Penn. "C"
T. Queen 3257'		T. Pictured Cliffs	T. Penn. "D"
T. Capitan 3938'		T. Cliff House	T. Leadville
T. Cherry Canyon 4132'		T. Menefee	T. Madison
T. Bone Spring Carb 6298'		T. Point Lookout	T. Elbert
T. 1 st SD 7778'		T. Mancos	T. McCracken
T. 2 nd SD 8582'		T. Gallup	T. Ignacio Otzte
T. 3 rd SD 9420'		Base Greenhorn	T. Granite
T. Wolfcamp 9878'		T. Dakota	T.
T. Strawn 10,907'		T. Morrison	T.
T. Atoka 11,160'		T. Todilto	T.
T. Morrow Clastics 11,798'		T. Entrada	T.
T. Lower Morrow 11,980'		T. Wingate	T.
T. Mississippian 12,202'		T. Chinle	T.
		T. Permian	T.
		T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

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

IMPORTANT WATER SANDS

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

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

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

30-015-96068

3900

Capitol

4000

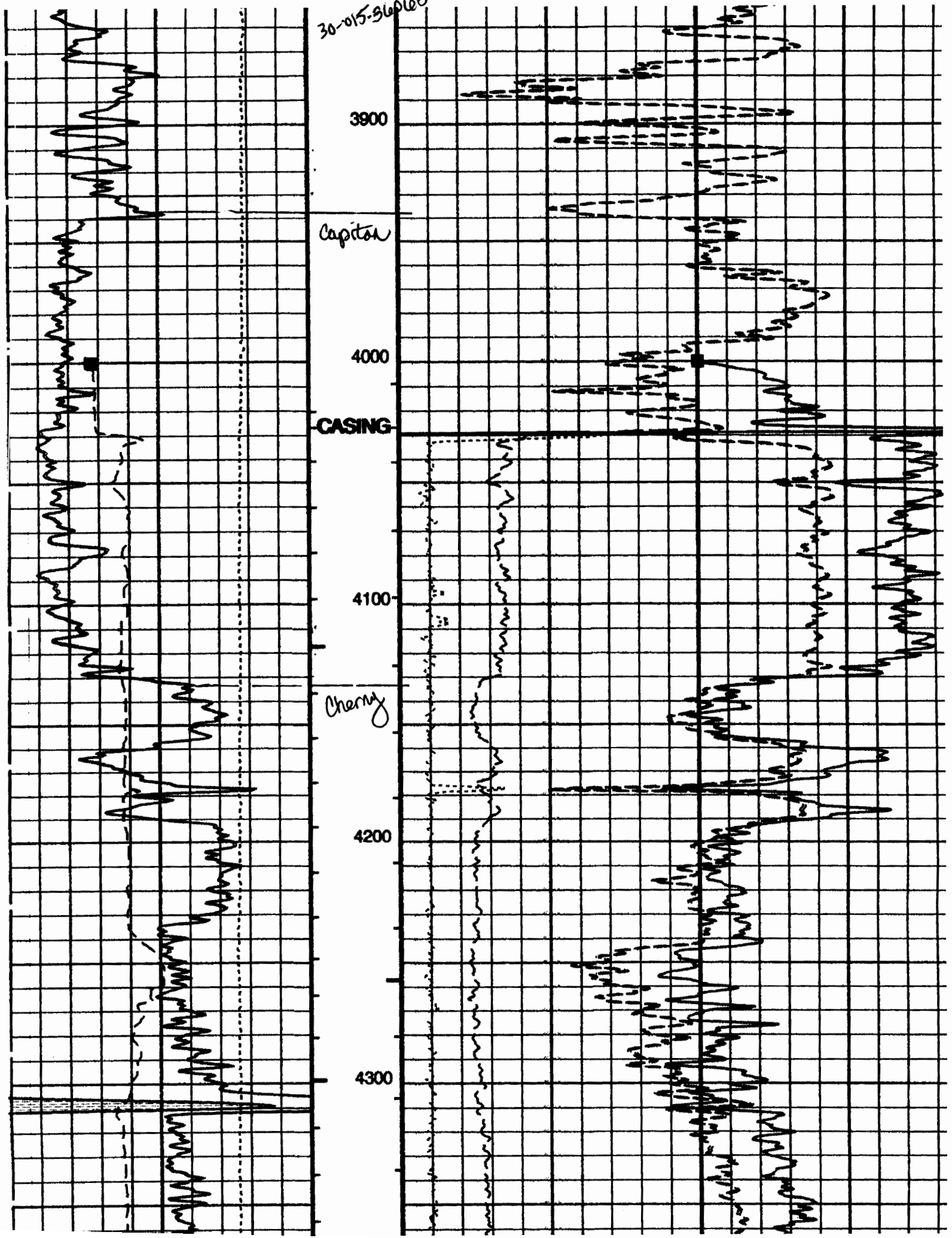
CASING

4100

Cherry

4200

4300



Porterhouse
30-015

