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ABOVE THIS LINE FOR DIVISION USE ONLY

ADMINISTRATIVE APPLICATION CHECKLIST

#### NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

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



#### 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-Poot/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] Location - Spacing Unit - Simultaneous Dedication [A]Ruy Westall Gooding Two Fortes No.1 30-015-24655 WG ascol Conyon NSL NSP SD Check One Only for [B] or [C] Commingling - Storage - Measurement [B]☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM Injection - Disposal - Pressure Increase - Enhanced Oil Recovery [C]□ WFX □ PMX ☒ SWD □ IPI □ EOR □ PPR [D] Other: Specify [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or $\square$ Does Not Apply Working, Royalty or Overriding Royalty Interest Owners [A] [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	Sen Lan	Agent for Ray Westall	3/18/14
Print or Type Name	Signature	Title	Date
		ben@sosconsulting.us	
		e-mail Address	



March 17, 2014

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 its Two Forks No.1 well located in Section 2, Township 18 South, Range 28 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 covert for disposal, the Two Forks Well 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 February 23, 2014 edition of the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit is included in this application package. 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 private land and state minerals 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,

Ben Stone, Partner SOS Consulting, LLC

Agent for Ray Westall Operating, Inc.

Cc: Application attachment and file

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108 Revised June 10, 2003

#### **APPLICATION FOR AUTHORIZATION TO INJECT**

1.	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 well penetrates subject interval No P&A.) 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 with prospective perfs is included.
- \*XI. State Engineer's records indicates two domestic water wells within one mile the proposed salt water disposal well.

  1 not found affidavit included, the other will be sampled and results forwarded to OCD.
- 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 18 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: 3/14/2014

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:

#### 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.

# Two Forks Well No. I - Area of Review / Overview Map (Attachment to NMOCD Form C-108 - Item V)

~11.0 miles West / Southwest of Loco Hills, NM T175 R28E \* 0 1185 R28E North Two Forks Well No.1 API No. 30-015-24655 660' FNL & 2090' FEL Sec.2, Twp 18S, Rng 28 E Lat. 32.78265 Long. -104.14507 Eddy County, New Mexico RAY WESTALL OPERATING. INC.

#### Form C-108 Item VI - Tabulation of AOR Wells

	Top of Proposed WOLFCAMP Interval 7100'					Wells which PENETRATE Proposed Injection Zone.			
API	Current Operator	Well Name	Well No.	Туре	Lease	Status	UL	S-T-R	Depth
ubject Well									
0-015-24655	[240974] LEGACY RSRVS OPERATING, LP	TWO FORKS STATE	#001	Gas	State	P&A	2	2-185-28E	
	13.375" (17.5" hole) @ 519'	w/ 575 sx Circ; 8.625" (11.0"	hole) @ 2899	' w/ 1150 sx	Circ Surf;	5.5" (7.875"	hole) @ 1	0985' w/ 1075 sx TO(	: 4380' by Ter
ection 2 Wei	l <u>is</u>								
0-015-01783	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#034	Oil	State	Active	2	2-18S-28E	2706'
0-015-01786	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	State	P&A	C	2-18S-28E	2581'
0-015-01785	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#035	Oil	State	Active	3	2-18S-28E	2676'
0-015-01780	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#050	Oil	State	Active	E	2-18S-28E	2662'
0-015-01771	[274841] ALAMO PERMIAN RSRCS, LLC	FEATHERSTONE STATE E	#003	Oil	State	Active	F	2-18S-28E	2676'
0-015-39592	[274841] ALAMO PERMIAN RSRCS, LLC	FEATHERSTONE STATE E	#006	Oil	State	Active	F	2-18S-28E	3520'
0-015-01774	[274841] ALAMO PERMIAN RSRCS, LLC	FEATHERSTONE STATE E	#005	Oil	State	Active	G	2-18S-28E	2737'
0-015-39622	[274841] ALAMO PERMIAN RSRCS, LLC	FEATHERSTONE STATE E	#007	Oil	State	New	G	2-18S-28E	3300' prop
0-015-01777	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	State	P&A	1	2-18S-28E	2819'
0-015-01769	[274841] ALAMO PERMIAN RSRCS, LLC	FEATHERSTONE STATE B	#001	Oil	State	Active	J	2-18S-28E	2875'
ection 35 We	ells								
0-015-40136	[873] APACHE CORP	D STATE	#097	Oil	State	Active	1	35-18S-28E	4750'
0-015-40145	[873] APACHE CORP	D STATE	#084	Oil	State	Active	J	35-18S-28E	4701'
0-015-40238	[873] APACHE CORP	D STATE	#093	Oil	State	Active		35-18S-28E	4700'
0-015-01748	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#021	Oil	State	Active	1	35-18S-28E	2634'
0-015-31488	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#088	Oil	State	Active	K	35-18S-28E	3100'
0-015-33285	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#101	Oil	State	Active	M	35-18S-28E	3156'
0-015-01731	[214263] PRE-ONGARD OP	PRE-ONGARD WELL	#001	Oil	State	P&A	N	35-18S-28E	7002'
0-015-01742	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#029	Injection	State	Active	N	35-18S-28E	2495'
-015-24059	[10701] ASPEN OIL INC	STATE BX COM	#001	Gas	State	Active	0	35-18S-28E	10861'
	13.375" (17.5" hole) @ 811' w/ 950 sx Circ; 8.	625" (11.0" hole) @ 2713' w/	1200 sx Circ;	7.0" (7.875"	hole) @ 1	.0861' w/ 95	0 sx TOC 5		4'-84' w/ 285 erfs: 10208'-2
0-015-01743	[214263] PRE-ONGARD OP	PRE-ONGARD WELL	#030	Oil	State	P&A	0	35-18S-28E	2535
-015 01744	[243874] QUANTUM RSRCS MGT, LLC	ARTESIA UNIT	#031	Oil	State	Active	Р	35-18S-28E	2575'

- PAC Morrow DActive



#### **CURRENT CONFIGURATION**

#### PLUGGED WELL SCHEMATIC Two Forks State Well No.1

#### API 30-015-24655

660' FNL & 2090' FWL, SEC. 2-T18S-R28E **EDDY COUNTY, NEW MEXICO** 

NSL-5086

Spud Date: 10/29/1983 P&A Date: 1/05/2009

Well plugged by: Legacy Reserves Operating Co. <PLUGGING ITEMS LISTED LEFT> <PRE-P&A EXISTING ITEMS LISTED RIGHT> Spot 25 sx PLUGS: 60'-0' Surface Casing 13.375", 55.0# Csg. (17.5" Hole) @ 519' Spot 45 sx 575 sx - Circulated to Surface Toc at 670'-445' (Tagged) Intermediate Casing Spot 45 sx 8.625", 32.0# csg. (11.0" Hole) @ 2899' 1150 sx - Circulated to Surface 825'-670' (Finished off w/ 1° 830 sx of total) - Circ. 30 sx to Surf. (Tagged) Spot 45 sx Cmt <P&A SUBSEQUENT SUNDRY> 2950'-2800' ordinate Type of Leases

B ATE M POR [7]

State Of 6 Des Leases No. (Tagged) 2899" Spot 50 sx Cmt 4060'-3720' (Tagged) Shot & Pulled 5-1/2" @ 3815" BSPG: 4507 REI: workshift for on slink free & sag TOC on CERP © 10,510°. Durry half 5ss cent on lap of CERP. 3. Sat CRIP @ 10,300', rie fig. Spot 25kg one on top of CIBP. Spot 25 sx Cmt WLFCP: 7120 S. Spit 25ts and @ PSST. 8557'-8382' 6. Cm & pull 5-1/2" mg @ 2015 9. Spet 45sz erst (f/2000'-2950', WOC & temped. CSCO: 8573 Spot 25 sx Cmt Circulated Hole w/ 9# Mud Ladened Fluid Set CIBP @ 10300' **Production Casing** 5.5", 17.0 & 20.0# Csg (7.875" Hole) @ 10985' Dump Bail 3 sx Cmt 1075 sxs Cls H - TOC @ 4380' by Temp On Existing CIBP Perfs:10340'-70' Set CIBP @ 10530' for Zone Abandon Perfs:10680'-84', 10706'-10' **Formation Fluids** 

PBTD @ 10923\*

10985

DTD @ 10985

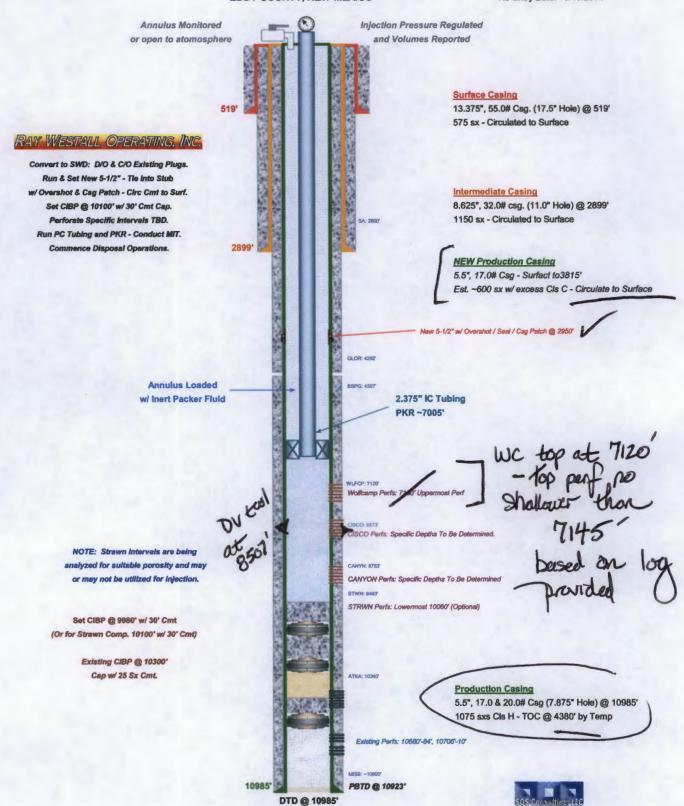


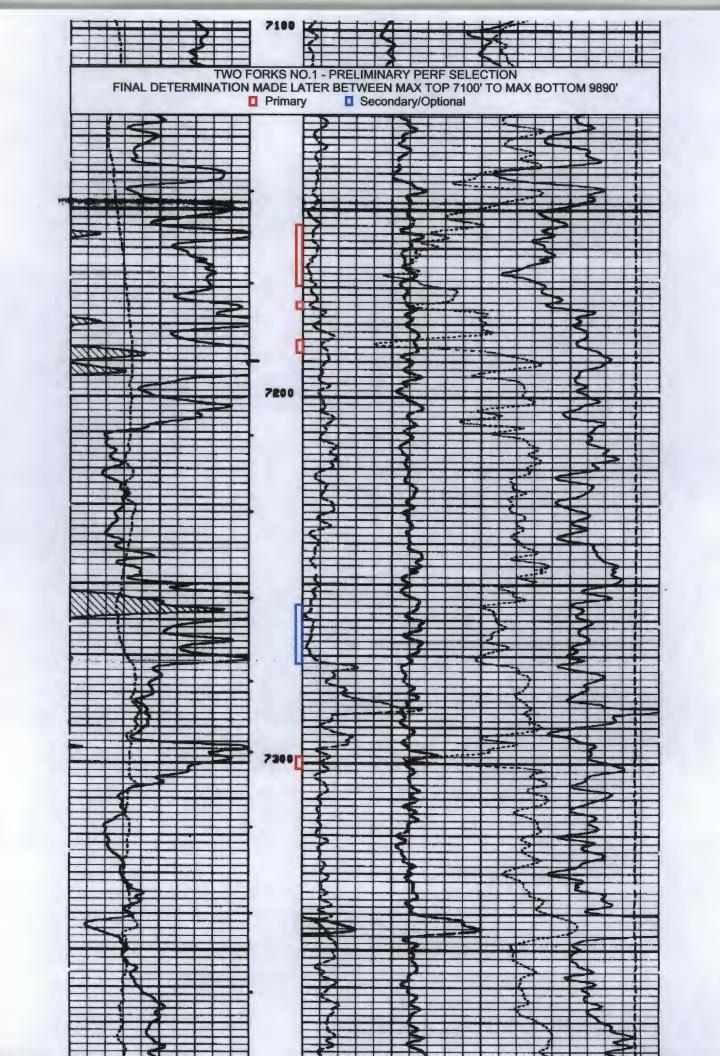


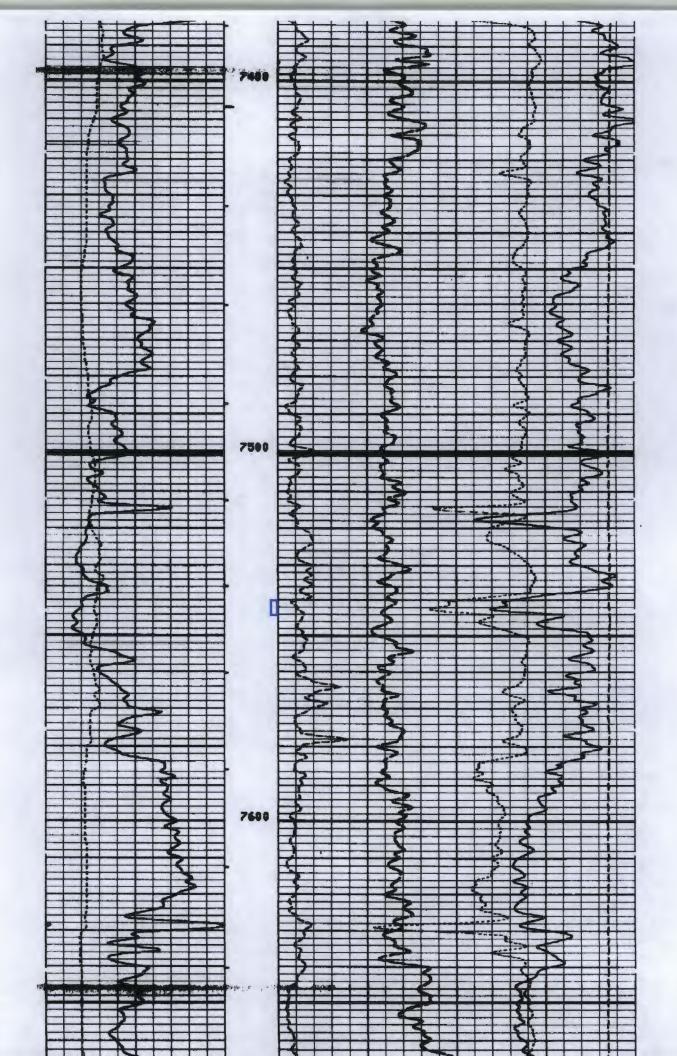
## WELL SCHEMATIC - PROPOSED Two Forks State Well No.1 SWD

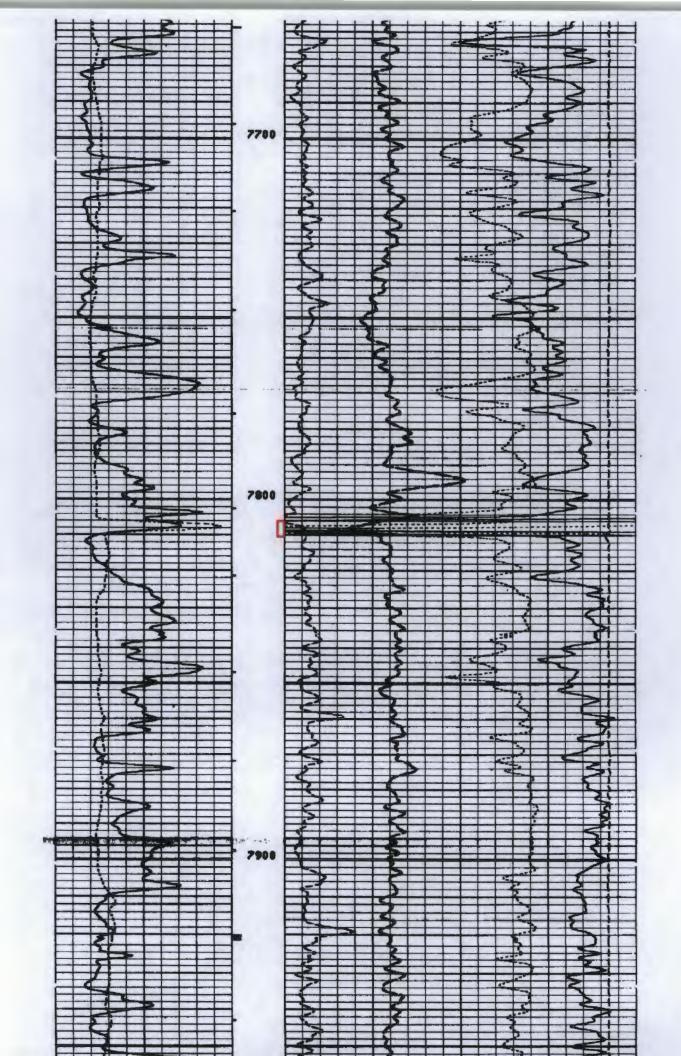
#### API 30-015-24655

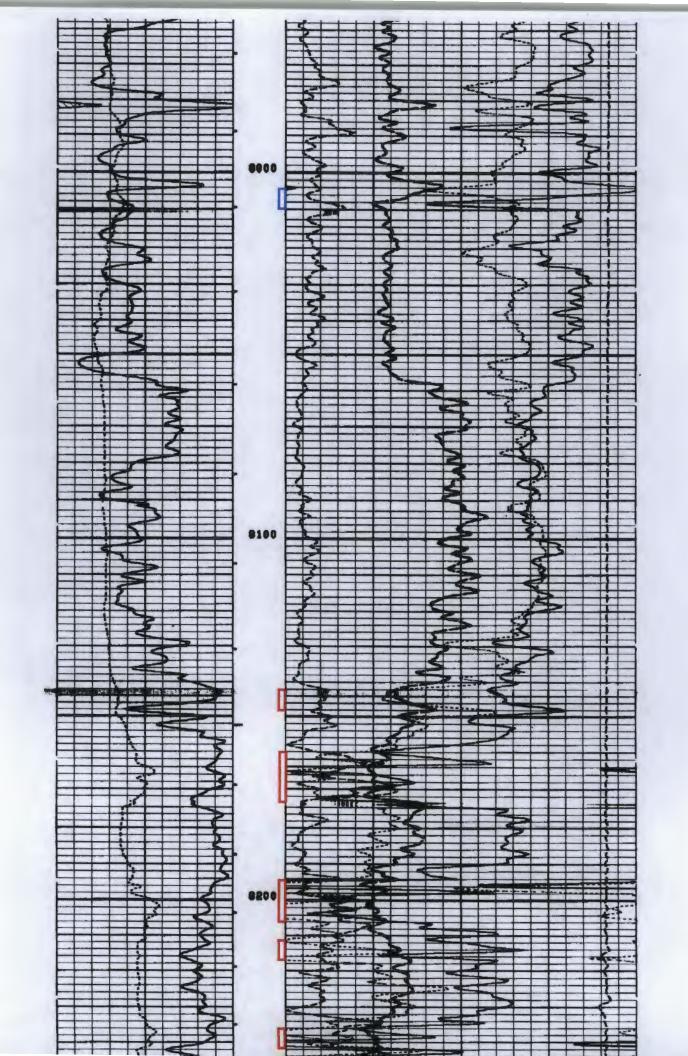
660' FNL & 2090' FWL, SEC. 2-T18S-R28E EDDY COUNTY, NEW MEXICO Spud Date: 10/29/1983 Re-Entry Date: ~5/15/2014

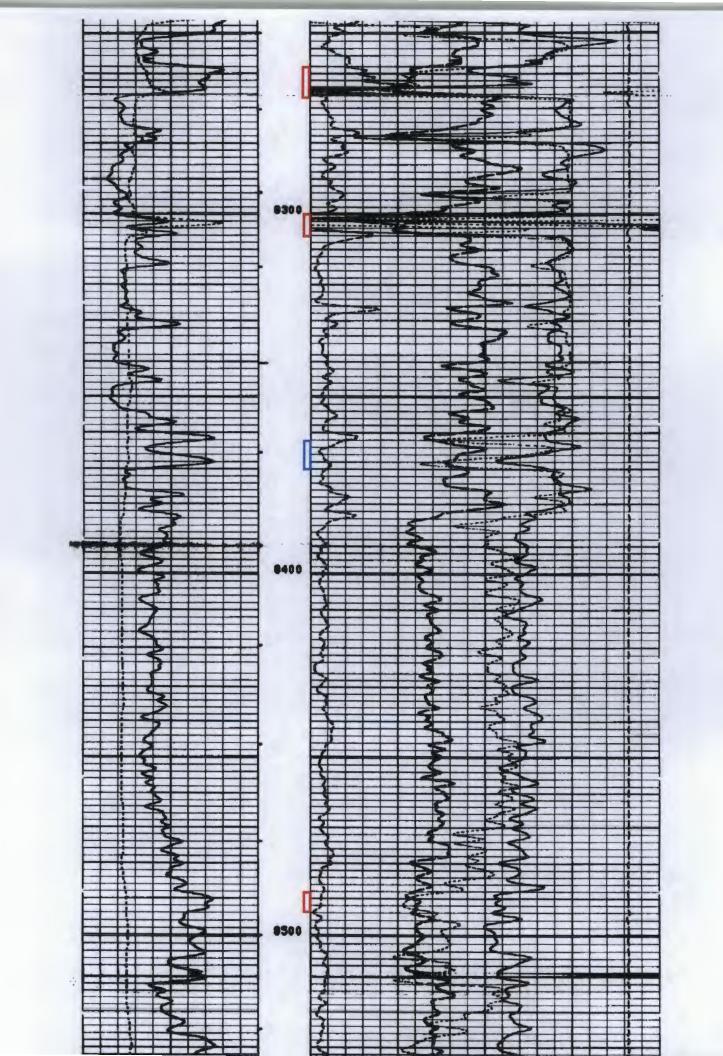


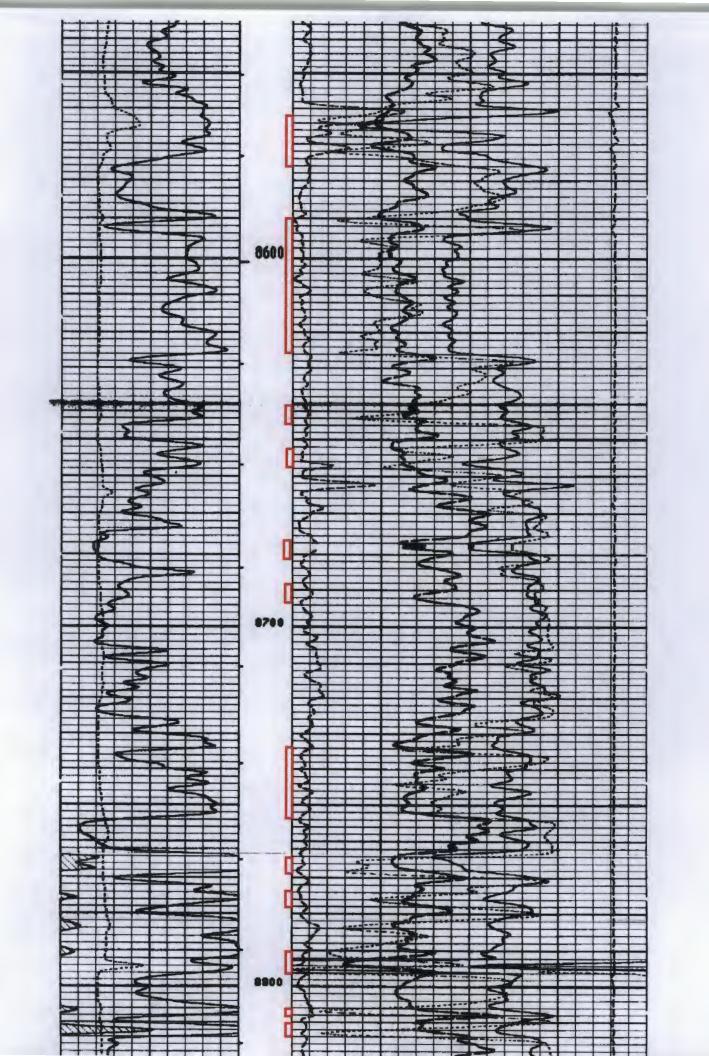


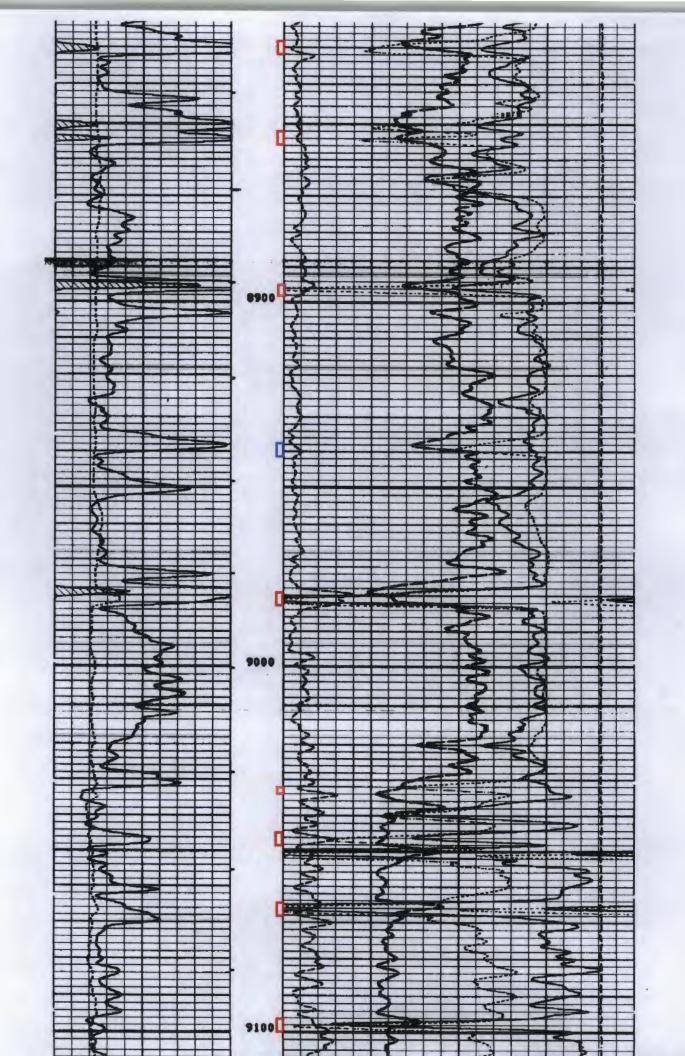


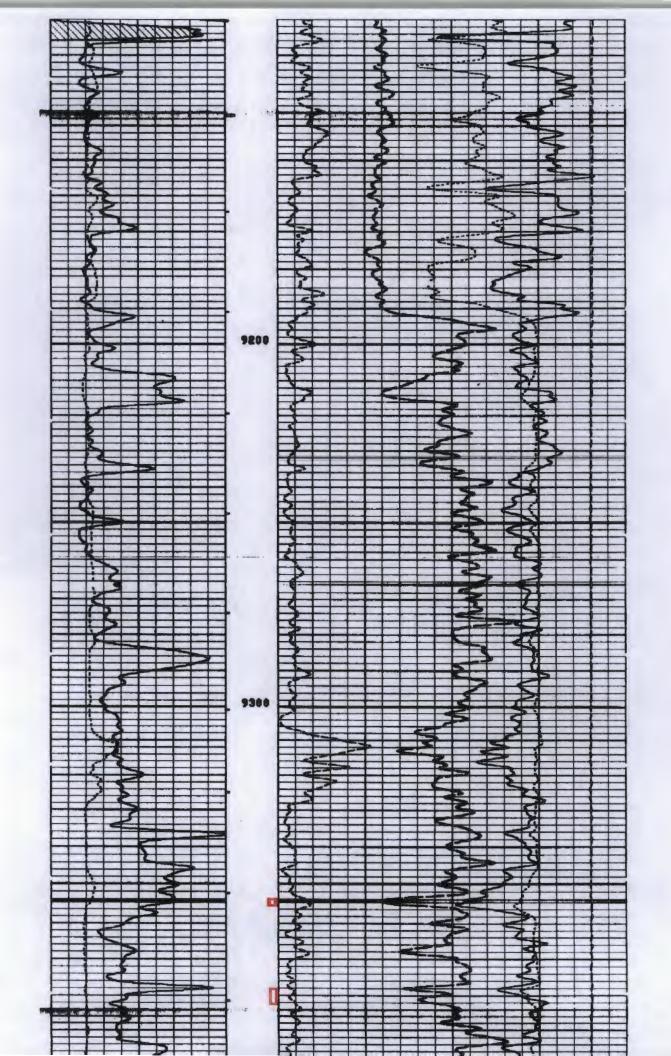


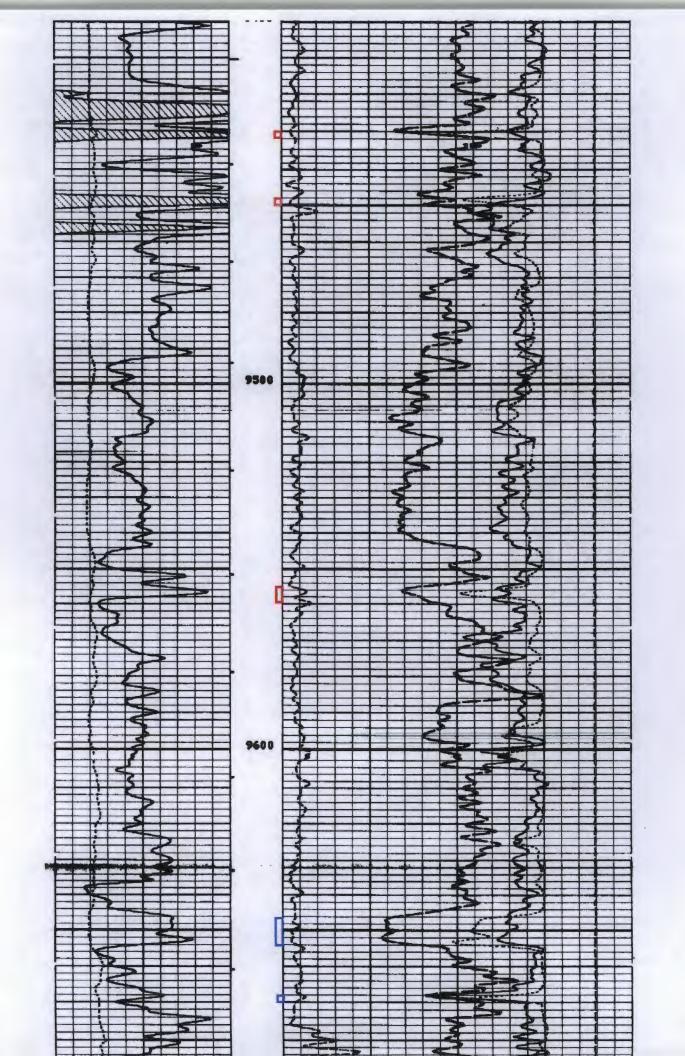


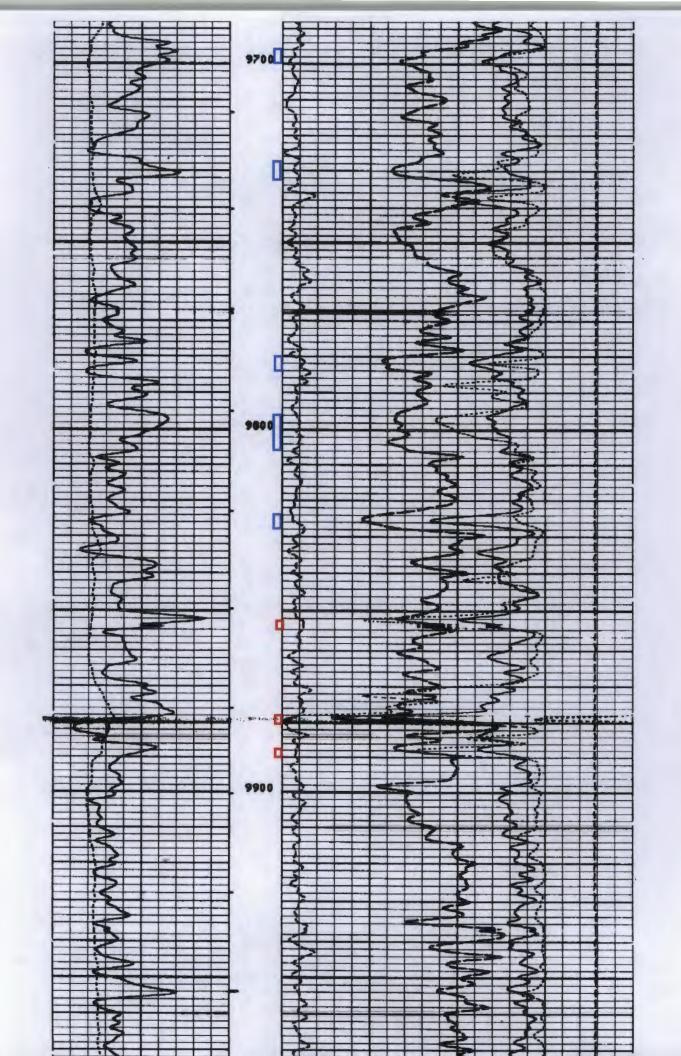


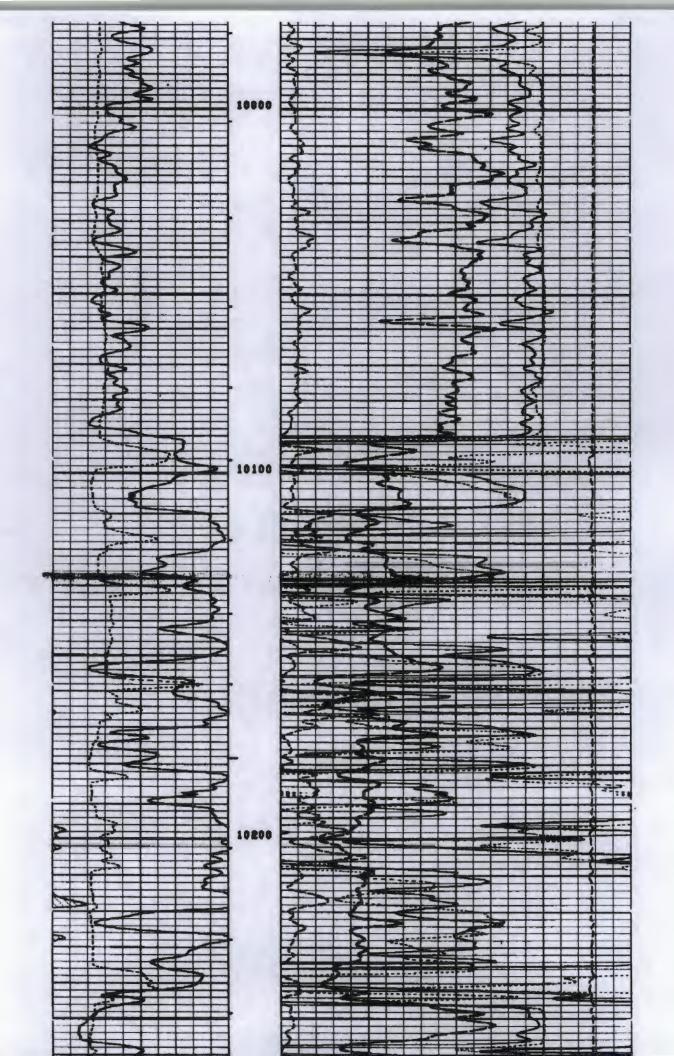












#### OCD EXAMINER POOL MAP

Created for Previous SWD Application Processing in Same Area - Two Forks No.2 - SWD-1452

Two Forks State = 2 30-015-25015 Ray wested Swo Appl. County, Chaves Edy 29E Township 175 Range 28E 175 Township. ZPE 185 Range 28E 188 Township. Township. 175 28E Intends Wolfcomp O Cisco O Cunyon — Strawn O WC: Empire, South 29E Lisco: Julinois Camp/ Gos Upper Penn - Travis @ Strown / Alaka / Morrow - Gas

85

#### C-108 ITEM VII – PROPOSED OPERATION

The Two Forks Well 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 Canyon and other proposed formation waters.)

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

Injection pressure will be 1420 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 – GEOLOGIC INFORMATION

The Wolfcamp formation is a mixed lithology system of light gray-brown, fine to medium crystalline fossiliferous limestone with intercrystalline vugular porosity including considerable dolomite of medium to fine grains and minor sandstone interbedded with gray shale. Additional porosity can be found when the well bore encounters detrital carbonates which were shed off shelf and foreslope areas and transported down the Wolfcamp paleoslope. The formation thickness varies from about 400 to 500 feet of shales.

The Cisco Formation (Upper Penn) similar to the Wolfcamp is a gray micritic (fine grained) fossiliferous limestone with vugular porosity. The reservoirs in this area are usually limited in size with up dip porosity loss due to shelf margin carbonate build up.

The [Pennsylvanian] Canyon formation consists of similarly mediumgrained carbonates, primarily dolomite and porous and permeable sandstone interbedded with shale and is generally 150 to 200 feet in thickness.

There is potential sources of drinking water in the overlying sands occurring at a depth from surface of up to 250 feet. State Engineer's records indicated 2 water wells located within 1 mile of the proposed well, outside the ½ mile AOR (shown on AOR map). The Section 2 well could not be located by foot search for a previous SWD and an affidavit to that effect is included. A water analysis is being obtained on the Section 35 well and will be forwarded to OCD. The upper part of the section on average consists of 200 ft of Holocene alluvial deposits of caliche, sand, gravel, and clay. Included in this interval are red sandstone and shale of the Chinle formation and Santa Rosa sandstone and similar deposits of the Dewey Lake formation. These formations are underlain by the Rustler and Salado formations.

There are no known sources of water <10,000 mg/l TDS which underlie the injection zones.

#### Water Analysis - Source Water - SAN ANDRES

## **B J Services Water Analysis**

Artesta

District Lationality (806)-746-3140

Date: 6-Nov-00 Company: SDX Resources Leace: Chalt Federal #2 Blate: N.M. Dapth: 2800	Tool fk Vivid fk County: Edfy Pormalign San Andres Source:	
	1) Tamp (7): 25.3	51/
	543	12
CATIONS Codum (colo.)	64892 2970.7 48882	.10
Calchay	2200 100.1 2004	
Magnachum	1458 120.0 1362	
Berlum Petaectum	<25 1	
res	<10 — — — 3 0.1 2	
	7. n/	
ANICHE		
Chlorido Sulfato	1071 22.3 967	
Carbonate	<1	
Ricarbonato	878 14.A 784	
Total Disselved Solide(exts.)	184120 137,007	
Total Hardness as OsCOS	14014 280.0 12513	
COMMENTA:	1700 1 de .	

Rum 0.0847@61.1 dag.

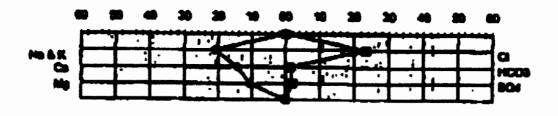
#### ELALE ABALYES:

CallO4 Paster

2017907 Catalum Carbannia Sania Frabability -

rranan Annais

#### **BUT Flot**



#### Water Analysis - Source Water - DELAWARE



## **Water Analysis**

Date: 11-Jan-05

2708 West County Road, Hobbs MM 86249 Phone (505) 392-5556 Fax (505) 392-7307

#### **Analyzed For**

Devon	Spud 16 8	Harle #1		Les	New Medoo
Sample Source	Sample		Sample #		1
Formation			Dopth		
Specific Gravity	1.706		SG (	<b>60</b> F	1.196
pH	5.96		\$	adides	Absort
Temperature ("F)	65		Reducing	Agents	
Cations					
Sodium (Calc)	in	MpL	73,905	in PPM	01,000
Calcium	in	Mpl	34,000	in PPM	28,438
Magnesium	in	Mpl	5,040	in PPM	4,214
Solveble Iron (FE2)	les :	MgL	90.0	in PPM	42
Anions		. <b></b>	···		
Chlorides	In	Mg/L	188,660	in PPM	157,191
Sulfatee	in.	Mg/L	950	in PPM	400
Sicerbonetes	h	MgC	78	in PPM	65
Total Hardness (as CaCO3)	in	Mpl	100,000	in PPM	96,629
Total Dissolved Solids (Calc)	je je	MgL	301,793	in PPM	282,200
Equivalent NaCl Concentrati	on in	Mpl	264,733	in PPM	212,900

#### Scaling Tendencies

\*Calcium Carbonate Index

2,884,720

Below 800,000 Remote / 880,000 - 1,000,000 Pecable / Above 1,000,000 Probable

"Calcium Suttate (Gyp) Index

16,700,000

Below \$60,000 Remain / 800,000 - 10,000,00 Possible / Above 10,000,000 Probable

"This Cultrivities in only as appreximation and is only raild before treatment of a srail or several weeks alter treatment.

Remerks

ru=.040@63f

Water Analysis - Source Water - MORROW

# HALLIBURTON

CENTRAL OPERATIONS LABORATORY WATER ANALYSIS REPORT HOUSE, NEW MEXICO

COMPANY	Market			REPORT DATE DISTRICT	W00-128 June 16, 3002 House
SUBMITTED S	Y Jim Trulo				
WELL PA	W St. 51	DEFTH		FORMATION SOURCE	
SAMPLE	Morrow Prod. Wate				
Sample Temp.	0.13	7	*	*	*
SPECIFIC GR.	1,040				
CALCRUM MACROSTANA	<u>(900</u>			TOP!	
CHLOPEDE	25.89				
SOLVENE MON	13				
Sodium TDS OIL GRAVITY			<u>0</u>	0 7	
REMARKS					

MPL + Miliprove per Star Residely measured in: Cherleighe

This report is the property of Hallburken Company and mallion from any part thereof nor a copy thereof is to be published or displaced without the countries the deprivate of interesting meanagement it may have been been in the countries of regular bushness operations by any parson or countries and copylayees thereof resolving each report from Hallburken Co.

ANALYST: No America

### Water Analysis - Disposal Zone



## Water Analysis

Date: 2/24/2005

2401 String, Artesia NM 82210

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

#### **Analyzed For**

Westell	9	tate G#1		iddy	New Mexico
					1401 41014
Sample Source			Sample #		1
Formation	Cenyo	n	Depth		
Specific Gravity	1.880		50 <b>Q</b>	60 °F	1.081
pH	6.30		3	ullides	Not Tested
Temperature ("F)	65		Reducing A	(gents	Not Tested
Cations					
Sodium (Cate)		in Mg/L	9,518	in PPM	9,096
Calchim		in Mg/L	8,600	in PPM	5,326
Magnasium		in Mark	349	in PPM	221
Soluable fron (FE2)		in Mol	200.0	in PPM	285
Anlons	Bire var , ≥var den den den	No			
Chlorides		in Mg/L	24,000	n HH	22,835
Suffetee		in Mg/L	2,000	in PPM	1,903
Bicerbonates		in Mg/L	185	in PPM	176
Total Hardness (as CaCO	3)	in MOL	18,000	in PPM	14.222
Tatal Discolved Salids (Ca	Ac)	in Mg/L	41,844	in PPM	30,813
Equivalent NaCi Concents	Mon	in high	38,410	in PPM	<b>M:36</b>
Icaling Tendencies					
Colcium Cerbonate Index	Bounds / 800		M Samble / Anna	1 (46 604 500 5	1,038,464
Calotum Sulfate (Gyp) Incl		(000 - 1.000(o)	00 Possibili / Above		11,200,000
, , , , , , , , , , , , , , , , , , , ,		.000 - 10.000,0	O Possible / Above		, ,
Pale Colouiption is easy on app magness.	wadhida i	and in only val	M before transver	i of a well or an	400 s4000 Mil
Remarks FAX 477-2	361		* .	-	

#### 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.

Two Forks Well No.1 Reviewed 2/20/2014

#### C-108 - Item XI

#### Water Wells Within One Mile

#### **AFFIRMATIVE STATEMENT**

State Engineer's records indicate there are two water wells within the area of review. (Both locations are shown on the AOR map.) The well in Section 35 is being sampled and analyzed and results will be forwarded to OCD upon receipt.

The water well indicated to be located in the NW/NW/SW of Section 2, could not be found.

On September 12, 2013, Mr. Mathews conducted a foot search of the QTR/QTR section and found no evidence of an operating or a plugged water well. During the search, a contract pumper was seen in the area. Mr. Mathews was able to communicate with the pumper who stated to Mr. Mathews that he has been working the area for years and has no knowledge of a water well in the area. They again looked to area over as indicated on the map and determined that if the well had existed, it must have been plugged out and there is no indication at surface that would confirm its existence.

This information was relayed to me by Mr. Mathews via a telephone conversation on 9/14/2013.

Ben Stone

New Mexico Office of the State Engineer

### Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file. C=the file is closed)

Invarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters) 999

Shallow 1 1 3 02 18S 28E

3 GERALD P SIMPSON Record Count: **PLSS Search** Section(s): 1, 2, 11, 12 Township: 18S

(acre ft per annum)

loplan to South

Sorted by: File Numbe

#### Water Well in Section 35 - Sample and Analysis in Process

(R=POD has been replaced (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters) (acre it per annum) C=the file is closed) ce 6416.4 Sec Tws Ring Lisa Diversion Owne 1.61 BOGLE FARMS 2 4 35 17S 28E 580472 3628330° au

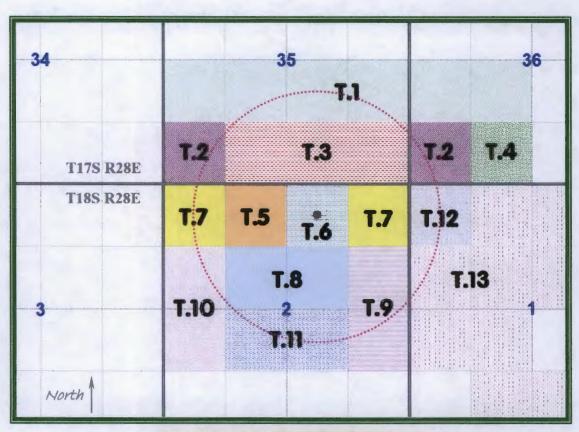
PLSS Search: Section(s): 35, 36

Township: 17S

Sorted by: File Number

#### Two Forks Well No.1 - Leasehold Plat

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



### RAY WESTALL OPERATING, INC.

#### LEGEND

- T.1 X0-0647-0405 Khody Land & Minerals Company
- T.2 E0-0949-0001 BP America Production Company
- T.3 \* B0-4456-0012 \* DeKalb Energy Company
- T.4 B1-1593-0013 ZPZ Delaware
- T.5 E0-6946-0003 Jerry Curtis & Ralph Nix
- T.6 B0-8814-0025 Marathon Oil Company & SDX Resources
- T.7 E0-1285-0011 Hanson-McBride Petroleum Company
- T.8 E0-1285-0001 W.E. Jeffers
- T.9 E0-1285-0012 Olen F. Featherstone II
- T.10 E0-1285-0008 DeKalb Energy Company
- T.11 B0-7071-0004 W.E. Jeffers
- T.12 L0-1645-0005 CBS Partners, Ltd.
- T.13 E0-1284-0003 Harvey E. Yates Company



## 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)

#### State Lease X0-0647-0405

#### Lessee

1 KHODY LAND AND MINERALS COMPANY 210 Park Avenue, Ste., 900 Oklahoma City, OK 73102

#### Operator

2 APACHE CORPORATION 303 Verteran's Airpark Lane Midland, TX 79701

#### State Lease E0-0949-0001

#### Lessee

3 BP AMERICA PRODUCTION COMPANY 501 Westlake Park Blvd. Houston, TX 77079

#### Operator

4 QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

#### State Lease B0-4456-0012

#### Lessee

5 DEKALB ENERGY COMPANY 1625 Broadway Denver, CO 80202

#### Operator(s)

QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

6 ASPEN OIL INC. P.O. Box 2674 Hobbs, NM 88241

#### **State Lease B1-1593-0013**

#### Lessee

ZPZ DELAWARE I, LLC
 2000 Post Oak Blvd., Ste. 100
 Houston, TX 77056-4497

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

#### Operator

QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

#### State Lease E0-6946-0003

#### Lessee

S JERRY CURTIS & RALPH NIX P.O. Box 617 Artesia, NM 88210

#### Operator

QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

#### State Lease B0-8814-0025

#### Lessee

9 MARATHON OIL COMPANY & SDX RESOURCES MGT, LLC P.O. Box 22164 Tulsa, OK 74121-2164

#### Operator

QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

#### State Lease E0-1285-0011

#### Lessee

10 HANSON-McBRIDE OIL COMPANY P.O. Box 1515 Roswell, NM 88201

#### Operator(s)

QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

11 MELROSE OPERATING COMPANY 1601 Elm St., Ste. 4600 Dallas, TX 75201

#### State Lease E0-1285-0001

#### Lessee

12 W.E. JEFFERS P.O. Box 1473 Artesia, NM 88211-1473

#### Operator

13 ALAMO PERMIAN RESOURCES, LLC 415 W. Wall Street, Suite 500 Midland, TX 79701

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

#### **State Lease E0-1285-0012**

#### Lessee

14 OLEN F. FEATHERSTONE II 1717 W. Second St. Roswell, NM 88202

#### Operator

RAY WESTALL OPERATING, INC. (Applicant) P.O. Box 4 Loco Hills, NM 88255

#### State Lease E0-1285-0008

#### Lessee

DEKALB ENERGY COMPANY 1625 Broadway Denver, CO 80202

#### Operator

QUANTUM RESOURCES MANAGEMENT, LLC 1401 McKinney St., Suite 2400 Houston, TX 77010

#### State Lease B0-7071-0004

#### Lessee

W.E. JEFFERS P.O. Box 1473 Artesia, NM 88211-1473

#### Operator

ALAMO PERMIAN RESOURCES, LLC 415 W. Wall Street, Suite 500 Midland, TX 79701

#### State Lease L0-1645-0005

#### Lessee

15 CBS PARTNERS, LTD P. O. Box 2236 Midland, TX 79702-2236

#### State Lease E0-1284-0003

#### Lessee

16 HARVEY E. YATES COMPANY Attn: Jen Atkinson P.O. Box 1933 Roswell, NM 88202

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

Operator

17 CHEVRON USA, INC. Attn: Sandy Stedman-Daniel P.O. Box 2100 Houston, TX 77252

#### **OFFSET SURFACE & MINERAL OWNER**

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

#### ADDITIONAL NOTICE PROVIDED

19 COG OPERATING, LLC Attn: Jim Bob Burnett 2208 W. Main St. Artesia, NM 88210

#### **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



March 17, 2014

## 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 convert for salt water disposal its Two Forks State 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 2, Township 18 South, Range 28 East in Eddy County, New Mexico.

The published notice states that the bottom of the interval will be no deeper than 10,060 feet. The uppermost top of the interval will be 7100 feet.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on February 23, 2014.

#### 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 permit for salt water disposal in its Two Forks State Well No.1. The well, API No.30-015-24655 is located 660 FNL & 2090 FEL in Section 2, Township 18 South, Range 28 East in Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Wolfcamp, Cisco and Strawn formations through perforations between a maximum applied for top of 7100 feet to maximum depth of 10060 feet. Specific perforated intervals will be determined later. (Further consideration may result in a shallower maximum depth of 9654 feet.) Maximum injection pressure will be 1420 psi with 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. A full copy in PDF format on a mini-CD will be arriving within a few days of this notice. If you do not receive it, please call or email SOS Consulting, LLC at 903-488-9850, info@sosconsulting.us, and a copy will be expedited to you and may also be sent via email if preferred.

Thank you for your attention in this matter.

Best regards,

Ben Stone, SOS Consulting, LLC

Agent for Ray Westall Operating, Inc.

Cc: Application File

### **C-108 - Item XIV**

Proof of Notice (Certified Mail Receipts)

1.0	U.S. Postal Service <sub>TM</sub> CERTIFIED MAIL <sub>TM</sub> RECEIPT (Domestic Mail Only: No Insurance Coverage Provided)	<u>r</u> ~	U.S. Postal Service™ CERTIFIED MAIL™ RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)
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7	Street, Ap. or PO Box KHODY LAND & MINERAL COMPANY	70	Street, A or POB. APACHE CORPORATION
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### **C-108 - Item XIV**

Proof of Notice (Certified Mail Receipts - cont.)

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<sup>City, St.</sup> 1601 Elm St., Ste. 4600	City, State P.O. Box 1473
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### C-108 - Item XIV

Proof of Notice (Certified Mail Receipts - cont.)

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•	City, State	P.O. Box 2100		City, State Attn: Jim Bob Burnett 2208 W. Main St.
	PS Form	Houston, TX 77252		PS Form: Artesia, NM 88210 tions

## **Affidavit of Publication**

	No.	22874
State of New Mexico	%	,
County of Eddy:		
Danny Scott	any /c	a -
being duly sworn, sa	yes that he is the	Publisher
of the Artesia Daily	Press, a daily newspar	per of General
circulation, published	d in English at Artesia	, said county
and state, and that th	e hereto attached	
Le	gal Notice	
was published in a re	egular and entire issue	of the said
Artesia Daily Press, a	a daily newspaper duly	y qualified
for that purpose with	in the meaning of Cha	pter 167 of
the 1937 Session La	ws of the state of New	Mexico for
1 Consecu	tive weeks/day on the	same
day as follows:		
First Publication	February	y 23, 2014
Second Publication		
Third Publication		
Fourth Publication		
Fifth Publication		
Subscribed ans sworn	before me this	
24th day of	February	2014
OFFICIAL SE Latisha Rom NOTARY PUB	NINE BLIC-STATE OF NEW MEXICO	2015
Late	An Rou	11/0

Latisha Romine

Notary Public, Eddy County, New Mexico

## **Copy of Publication:**

Ray Westall, Inc., P.O. Box 4, Loco Hills, NIM 86255 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to permit for salt water disposal in its Two Forks State Well No.1. The well, API No.30-015-24655 is located 660 FNL & 2090 FEL in Section 2, Township 18 South, Range 28 East in Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Wolfcamp, Cisco and Strawn formations through perforations between a maximum applied for top of 7100 feet to maximum depth of 10060 feet. Specific perforated intervals will be determined later. (Further consideration may result in a shallower maximum depth of 9654 feet.) Maximum injection pressure will be 1420 psi with 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., Feb. 23, 2014 Legal No 22874.

Persy the Superior Proposition Proposition Property   Persy the Superior Proposition   Personal Date   Per	0.3/20/4
Well No   Well Name(s): LUX Forks State   Same zones   UL - of See   2 April 200   15-24655   Sput Date: 10   24/83   New or Oit: NOW (LIC Class II Primary 2007/1982)    API : 30-0   5-24655   Sput Date: 10   24/83   New or Oit: NOW (LIC Class II Primary 2007/1982)    API : 30-0   Filt   2070 FWL Lot	C-108 Review Checklist: Received Add. Request: Reply Date: Suspended: [Ver 13]
Well Construction Details:  Paramed or Searcy Confliction First Confliction First Confliction Processing Confliction First Conflic	PERMIT TYPE: WFX / PMX/ SWD Number: 1991 Permit Date: 01/14 Legacy Permits/Orders:
API: 30-0 15 - 24655  Spud Date: 10 124/83  New or Oid: No. (UIC Class III Primacy 0307/1982)  Footages (Alex FNL) 2010 FWL Lot or Unit B. Sec. 2 Tsp. 185 Rge 28 E county. Eddy  General Location   Smiles Cast of Artesia (accessor) of Pool. 320 Empire Montae  BIM 100K Map: Artesia (operator: Rds.) Worth 10 Depths of Tsp. 1930 Contact: Constitution of State 1850 Contact: Constitution of Contact: Constitution of Contact: Constitution of Contact: Contac	Well No. 1 Well Name(s): Two Forks State Same Zones/ DE See 2
BLM 100K Map:	
BLM 100K Map:	Footages 660 FNL 2090 FWL Lot - or Unit B Sec 2 Tsp 185 Rge 28 E County Eddy
RIM 100K Map: Proceded: Operator: Maj Weltz 1 Section 1 Section 1 Section 2 Section 3	Constall and A Miles east of Artesia laware to Pool South Empire Morrow
RIM 100K Map: Proceded: Operator: Maj Weltz 1 Section 1 Section 1 Section 2 Section 3	State 380 Well-kamp / Cisco / Congression / Sept State 380
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WELL PILE REVIEWED & Current Status PA.    Care active   2 are inactive   2 are inactive   2 are inactive   2 are inactive   3 are inactive	COMPLIANCE RULE 5.9: Total Wells: 95 Inactive Fincl Assur: YES Compl. Order? No IS 5.9 OK? 19 page: 11
Planned or Existing Delicities   Sizes (in)   Setting Despite (ii)   Setting Despite (iii)   Despite (iiii)   Despite (iiiii)   Despite (iiiii)   Despite (iiiii)   Despite (iiiii)   Despite (iiiiii)   Despite (iiiiii)   Despite (iiiiiii)   Despite (iiiiiiii)   Despite (iiiiiiii)   Despite (iiiiiiiii)   Despite (iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	WELL FILE REVIEWED ( ) Current Status: PAA; 2 are active / 2 are inactive
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Injection Stratigraphic Units:  Depths (ft)  Depths (ft)  Adjacent Unit: Litho. Struc. Por.  Confining Unit: Litho. Struc. Por.  Proposed Inj Interval TOP: Proposed Inj Interval BOTTOM: Confining Unit: Litho. Struc. Por.  Proposed Inj Interval BOTTOM: Confining Unit: Litho. Struc. Por.  Adjacent Unit: Litho. Struc. Por.  Manageria Man	Planned or Existing OH /PERB 5/2 1000 to 1000 Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.  Confining Unit: Litho. Struc. Por.  Proposed Inj Interval TOP: HOO 71H Wolf Cand 120 Proposed Inj Interval BOTTOM: Inote Casted? Yes Proposed Packer Depth 7005 ft Use Size 2 ft in. Inter Coated? Yes Proposed Packer Depth 7005 ft Min. Packer Depth 7005 ft Min. Packer Depth 7005 ft Min. Packer Depth 7015 (100pt limit) Proposed Max. Surgar Ress. 1720 psi Admin. Inj. Press 1720 psi Admin.	
Confining Unit: Litho. Struc. Por.  Proposed Inj Interval TOP: Proposed Inj Interval BOTTOM: 10000 Cieco Contien Struct Proposed Packer Depth 7005 ft  Confining Unit: Litho. Struc. Por.  Adjacent Unit: Litho. Struc. Por.  Adjacent Unit: Litho. Struc. Por.  AOR: Hydrologic and Geologic Information  POTASH: R-111-P (Noticed? MA BLM Sec Ord No WIPP (Noticed? NA SALT/SALADO T: B: CLIFF HOUSE NA FIRSH WATER: Aquifer Alluna Posches Max Depth 70 Disposal Fluid: Formation Source(s) Swikard Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Int: Inject Rate (Avg/Max BWPD): No rate of Will Depth Max Depth 70 Disposal Interval: 1 Dispos	ANGEL CHIEF TO A VEHICLE AND A
Proposed Inj Interval TOP: HOUTILD Wolf Candon   Struct   Proposed Inj Interval BOTTOM:   1000   Candon   Struct   Proposed Packer Depth   7005   ft   Min. Proposed Packer Depth   7005   ft   Min. Packer Depth   7005   ft   Min. Proposed Max. Surger Ress.   1720 psi   Admin. Inj. Press.   1720 psi   Admin. Inj. Press	
Proposed Inj Interval BOTTOM: 10060 (1007) (1008) Proposed Packer Depth 7005 ft  Confining Unit: Litho. Struc. Por. 130 Aboke 10090  Adjacent Unit: Litho. Struc. Por. 130 Aboke 10090  Adjacent Unit: Litho. Struc. Por. 140 Aboke 10090  Admin. Packer Depth 70 45 (1009)  Admin. Pa	
Confining Unit: Litho. Struc. Por.   30   A boke   10090   Min. Packer Depth 70 45   1009th limit)   Adjacent Unit: Litho. Struc. Por.   McGrow   M	Proposed Inj Interval BOTTOM: 1/2000 (1600) Caputon / Brown   Proposed Packer Depth ~7005 ft
AOR: Hydrologic and Geologic Information Admin. Inj. Press 429 (0.2 psi per ft)  POTASH: R-111-P (Novoticed? NA BLM Sec Ord No WIPP (Novoticed? NA SALT/SALADO T: B: CLIFF HOUSE NA FRESH WATER: Aquifer Allwind: Disposal Fresh (South Area) Max Depth 200 Hydro Affirm Statement By Qualified Person (No. Wells within 1-Mile Radius? Hydro Affirm Statement By Qualified Person (No. Wells within 1-Mile Radius? Hydro Affirm Statement By Qualified Person (No. Wells within 1-Mile Radius? Hydro Affirm Statement By Qualified Person (No. Wells within 1-Mile Radius? Mydro Analysis Power Statement By Qualified Person (No. Wells within 1-Mile Radius? Mydro Analysis Power Statement By Qualified Person (No. Wells within 1-Mile Radius? Mydro Analysis Power Statement By Qualified Person (No. Wells within 1-Mile Radius? Mydro Analysis Power Statement By Qualified Person (No. Wells Power Statement By System: Closed (No. Open) Sanda: (No. Active Wells Power By Producing Interval: No. Method Logs DST P& Other 2-Mile Radius Pool Map (No. Active Wells No. Active Wells No. Active Wells No. Wells Penetrating Interval: Horizontals? Penetrating Wells: No. Active Wells No. P&A Wells No. P&A Wells No. P&A Wells No. P&A Wells No. Active Wells No. Mineral Owner Statement Surface Owner Surface Owner Surface Owner Statement Surface Owner Surface Owner Surface Owner Surface Owner Surface Owner Surface Owner Surface	Confining Unit: Litho. Struc. Por. +30 Above 10090 Min. Packer Depth 7045 (100/ft limit)
POTASH: R-111-P (Dovoticed? MA BLM Sec Ord ( WIPP ( Provided? MA SALT/SALADO T: B: CLIFF HOUSE ( A SALT/SALTADO T: CLIFF HOUSE (	Adjacent Unit: Litho. Struc. Por. Mcnow — Proposed Max. Surface Press. 1720 psi
PRESH WATER: Aquifer Allwid Dissolution (Could Apptan REEF: thru) adip No. Wells within 1-Mile Radius?   Wanalysis and Disposal Fluid: Formation Source(s) Sendrated Macray Delayanasis:   PS On Lease Operator Only Or Commercial Disposal Int: Inject Rate (Avg/Max BWPD):   No rate given between this location   Source:   System: Closed or Open Oscarda   Source:   System: Closed or Open Oscarda   Source:   System: Closed or Open Oscarda   Source:   Source:   Source:   Source:   Source:   System: Closed or Open Oscarda   Source:   S	AOR: Hydrologic and Geologic Information Admin. Inj. Press (1729) (0.2 psi per ft)
NMOSE Basin: Lepiton (South Apitan Reef: thru) adij Nac No. Wells within 1-Mile Radius? FW Analysis and Disposal Fluid: Formation Source(s) Sender of Morraus Default Reef (Avg/Max BWPD): No. att. away Repairs? No. Source: Utat: System: Closed or Open (Disposal Int: Inject Rate (Avg/Max BWPD): No. att. away Repairs? No. Method Logs DSTP&ADther 2-Mile Radius Pool Map (Partial Readius Pool Map (Partial Readius Pool Map (Partial Readius Pool Map): No. Method Logs DSTP&ADther 2-Mile Radius Pool Map (Partial Readius Pool Map): No. Active Wells: 1/2-M Radius Map? No. Active Wells No. Mum Repairs? On which well(s)? Diagrams? No. Penetrating Wells: No. P&A Wells No. Date Of	POTASH: R-111-P (VONoticed? NA BLM Sec Ord No WIPP (Noticed? NA SALT/SALADO T: B: CLIFF HOUSE NA
NMOSE Basin: Lepiton (South Apitan Reef: thru) adij Nac No. Wells within 1-Mile Radius? FW Analysis and Disposal Fluid: Formation Source(s) Sender of Morraus Default Reef (Avg/Max BWPD): No. att. away Repairs? No. Source: Utat: System: Closed or Open (Disposal Int: Inject Rate (Avg/Max BWPD): No. att. away Repairs? No. Method Logs DSTP&ADther 2-Mile Radius Pool Map (Partial Readius Pool Map (Partial Readius Pool Map (Partial Readius Pool Map): No. Method Logs DSTP&ADther 2-Mile Radius Pool Map (Partial Readius Pool Map): No. Active Wells: 1/2-M Radius Map? No. Active Wells No. Mum Repairs? On which well(s)? Diagrams? No. Penetrating Wells: No. P&A Wells No. Date Of	FRESH WATER: Aquifer Allwid: Deschie Suite Max Depth 4200 HYDRO AFFIRM STATEMENT By Qualified Person
Disposal Fluid: Formation Source(s) Sandrates Microsist Delastical Size on Lease Operator Only or Commercial Disposal Int: Inject Rate (Avg/Max BWPD): No cate diversorbectable Waters? No Source: Letter System: Closed Or Open Of HC Potential: Producing Interval? No Formerly Producing? No Method Logs DS (F&A) Dther 2-Mile Radius Pool Map Of AOR Wells: 1/2-M Radius Map? No Well List? Source: Letter Source: Letter System: Closed Or Open Of Had AOR Wells: 1/2-M Radius Map? No Well List? Source: Letter Source: Letter System: Closed Or Open Of Had AOR Wells: 1/2-M Radius Map? No Method Logs DS (F&A) Dther 2-Mile Radius Pool Map Of Had No. Wells Penetrating Interval: Horizontals? Diagrams? No	NMOSE Basin: (ADITAN REEF: thru) adio NA DNo. Wells within 1-Mile Radius? FW Analysis Fording
HC Potential: Producing Interval? No Formerly Producing? No Method Logs/DST/P&A/Other 2-Mile Radius Pool Map (F)  AOR Wells: 1/2-M Radius Map? Ves Well List? Ves Total No. Wells Penetrating Interval: Horizontals?  Penetrating Wells: No. Active Wells Num Repairs? On which well(s)?  Penetrating Wells: No. P&A Wells Num Repairs? On which well(s)?  Diagrams? No  NOTICE: Newspaper Date 02/23/14 Mineral Owner SLC Surface Owner SLC Notes (S) Hanson Model (S) Hanson Mo	Disposal Fluid: Formation Source(s) Sen Andrew De Automalysis? Les On Lease Operator Only or Commercial O
HC Potential: Producing Interval? No Formerly Producing? No Method Logs/DSTP&ADther 2-Mile Radius Pool Map (ADR Wells: 1/2-M Radius Map? 1/2 Well List? 1/2 Total No. Wells Penetrating Interval: Horizontals? Diagrams? No Penetrating Wells: No. Active Wells Num Repairs? On which well(s)? Diagrams? No Penetrating Wells: No. P&A Wells Num Repairs? On which well(s)? Diagrams?  NOTICE: Newspaper Date 02/23/14 Mineral Owner Sto Surface Owner Sto Hanson-Pickindo RULE 26.7(A): Identified Tracts? 1/2 Affected Persons: 11 E Septem CB Particles Marchan 22 Dat N. Date 03/17/14  Permit Conditions: Issues: 100 of Interval in BS; Innutt. of Injection Interval Injection Inje	Disposal Int: Inject Rate (Avg/Max BWPD): No rate give Reptectable Waters? No Source: User System: Closed or Open
Penetrating Wells: No. Active Wells Num Repairs? on which well(s)? Diagrams? No. P&A Wells Num Repairs? On which well(s)? Diagrams?  NOTICE: Newspaper Date 02/23/14 Mineral Owner SLC Surface Owner SLC Newspaper Date 03/17/4 Contist Nix Know Lond/BP America Dekals Enemal Votas Hanson-Methodo RULE 26.7(A): Identified Tracts? Surface Persons: In Enemal Conditions: Issues: 10P of Interval in BS; Innath of Injection Interval—Injection dist, Indianal Conditions: Issues: 10P of Interval in BS; Innath of Injection Interval—Injection dist, Indianal Conditions: Issues: 10P of Interval in BS; Innath of Injection Interval—Injection dist, Indianal Conditions: Indianal Conditions: Issues: 10P of Interval in BS; Innath of Injection Interval—Injection dist, Indianal Conditions: Indianal Cond	HC Potential: Producing Interval? No Formerly Producing? No Method Logs/DST/P&ADther 2-Mile Radius Pool Map (*)
Penetrating Wells: No. P&A Wells  Num Repairs? On which well(s)?  NOTICE: Newspaper Date 02/23/14 Mineral Owner SLC Surface Owner SLO Nate 03/17/4  Feathert of Dekals Energy Votes Hansan-Method  RULE 26.7(A): Identified Tracts? Of Interval in BS; I math of Injection Interval—Injection dist, Ingli	AOR Wells: 1/2-M Radius Map? Ves Well List? Yes Total No. Wells Penetrating Interval: Horizontals?
NOTICE: Newspaper Date 02/23/14 Mineral Owner SLC Surface Owner SLO Nate 03/17/4  Feathert of Dx 22/2 Cartes & Nix Know Lond BP America Dekals Enemal Votes Hanson-Methode  RULE 26.7(A): Identified Tracts? 65 Affected Persons: i) E Jeffers/CBS Particles/Morutha/ZDZ but N. Date 03/17/14  Permit Conditions: Issues: 100 of Interval in BS; Innath of Injection Interval—Injection dist; Innath	Penetrating Wells: No. Active WellsNum Repairs?on which well(s)?
RULE 26.7(A): Identified Tracts? 165 Affected Persons: W. E. Jeffers/ CBS Parties/Morutan/ 202 Del N. Date 03/17/14  Permit Conditions: Issues: 100 of interval in BS; I math of injection interval—injection dist; injection	Penetrating Wells: No. P&A Wells Num Repairs? On which well(s)?Diagrams?
RULE 26.7(A): Identified Tracts? 165 Affected Persons: W. E. Jeffers/ CBS Parties/Morutan/ 202 Del N. Date 03/17/14  Permit Conditions: Issues: 100 of interval in BS; I math of injection interval—injection dist; injection	NOTICE: Newspaper Date 02/23/14 Mineral Owner SLC Surface Owner SLO Neate 03/17/14
	reathesteres DX 123/ Cirtis & NIX Know Lord/BP America Dekallo Enema Yates/ Hanson-Mistide
Add Permit Cond: Kedweed top of interval to 7145; injection surce for operation time; This	Permit Conditions: Issues: Top of interval in BS; longth of injection interval - injection dist; final
	Add Permit Cond: Keduced top of interval to 7145; injection surcey for operation time; This

### **Inactive Well List**

Total Well Count: 95 Inactive Well Count: 4 Printed On: Wednesday, July 09 2014

Distric	t API	Well	ULSTR	OCD Unit	OGRID	Operator	Lease Type	Well Type	Last Production	Formation/Notes	Status	Date	.6.
1	30-025-27944	CASA STATE #001	H-28-17S-34E	Н	119305	RAY WESTALL OPERATING, INC.	S	0	01/2013			SOME -	Hours
	30-025-28115	CASA STATE #002	I-28-17S-34E	I	119305	RAY WESTALL OPERATING, INC.	s	0	01/2013	-	- Ar	SULVE !	2.7
2	30-015-29618	EMPIRE A FEDERAL #002	H-27-18S-29E	Н	119305	RAY WESTALL OPERATING, INC.	F	s	03/2009	CONV TO SWD SWD-1368	)	dive	
2	30-015-25245	TEXAS CRUDE #001	J-21-19S-31E	J	119305	RAY WESTALL OPERATING, INC.	F	0	11/2012	PLACED BACK ON PROD 6/25/14	)		1
													1

WHERE Ogrid:119305, County:All, District:All, Township:All, Range:All, Section:All, Production(months):15, Excludes Wells Under ACOI, Excludes Wells in Approved TA Period

only z inactive