8/11/2015 DATE IN	SUSPENSE	PDC ENGINEER	8/14/2015 LOGGED IN	SWD TYPE	PMAM1522631619 APP NO.

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]

-SWD 1576
-Ray Westall Operating, Inc. 119305
Well
-DHY State #1
30-015-21638
Pool
-SWD; Cisco-Canyon 96186

[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 ______________________

RECEIVED OCD
2015 AUG 11 P 2:12

[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	[signature]	Agent for Ray Westall Operating, Inc.	8/08/15
Print or Type Name	Signature	Title	Date

ben@sosconsulting.us
e-mail Address

August 8, 2015

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

Attn: Mr. David Catanach, Director

Re: Application of Ray Westall Operating, Inc. to permit for salt water disposal the DHY 'F' State Well No.1 located in Section 23, Township 19 South, Range 28 East, NMPM, Eddy County, New Mexico.

Dear Mr. Catanach,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to covert for disposal, the DHY State Well No.1. Concurrent with this application, Ray Westall will be submitting a C-101 to reenter and configure the well for SWD and add "F" to the name for operational clarity, resulting in the well being renamed the DHY 'F' State No.1 SWD.

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 June 26, 2015 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, leasehold-er plats and other required information for a complete Form C-108. The well is located on state land and minerals and a copy of this application has been submitted to the State Land Office, Oil and Gas Division.

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

I. PURPOSE: ***Salt Water Disposal*** and the application ***qualifies*** for administrative approval.

II. OPERATOR: ***Ray Westall Operating, Inc. Ogrid - 119305***
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 the subject interval - No P&As penetrate.)*** *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. ***The well may be acidized to clean perforations and formation wall w/ 15% HCl w/ up to 5000 gals.***

*X. ***There is no applicable test data on the well however, any previous well logs (1 well log available via OCD Online) have been filed with the Division and they need not be resubmitted. A log strip of subject interval is ATTACHED.***

*XI. ***State Engineer's records indicate there are NO 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 and ATTACHED.***
There are 5 offset lessees and/or operators plus state minerals within one 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: ***8/06/2015***

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 and ATTACHED:***

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.

CURRENT CONFIGURATION

PLUGGED WELL SCHEMATIC

DHY State Well No.1

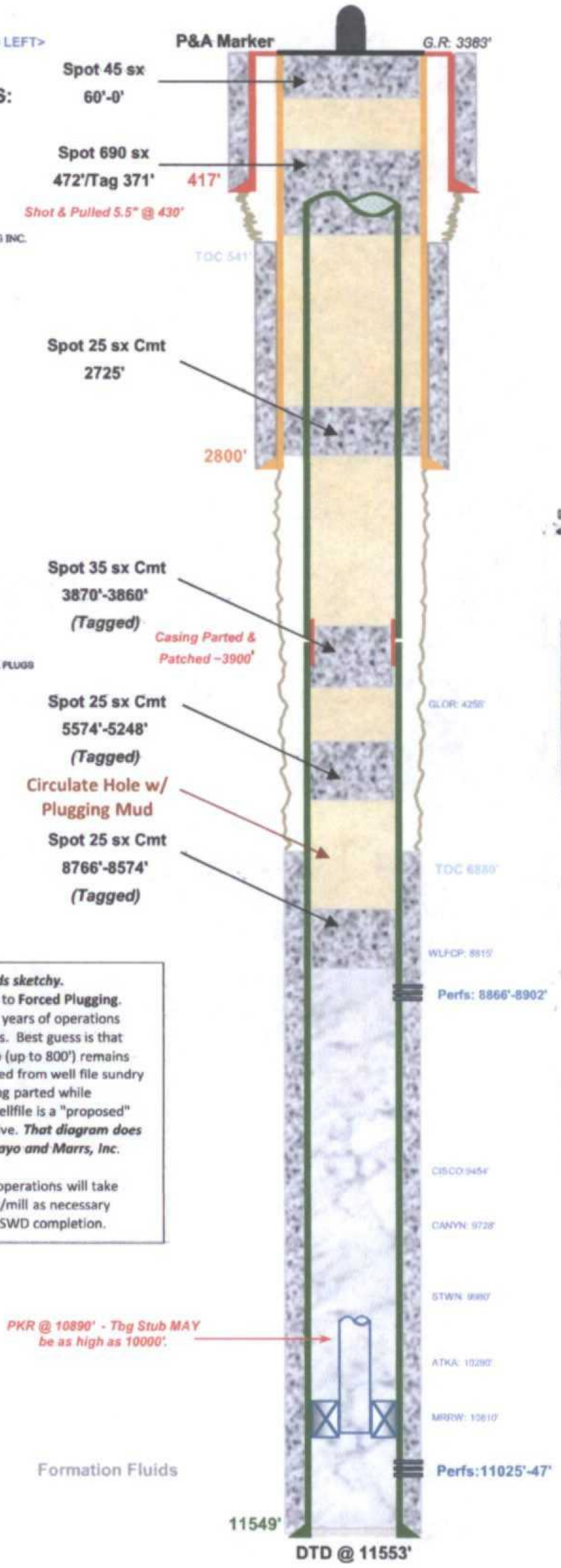
Well Plugged by:
Mayo Marrs, Inc.
(See Well Notes Below)

API 30-015-21638
1980' FNL & 1980' FWL, SEC. 23-T19S-R28E
EDDY COUNTY, NEW MEXICO

Spud Date: 12/22/1975
P&A Date: 9/06/2007

<PLUGGING ITEMS LISTED LEFT>

<PRE-P&A EXISTING ITEMS LISTED RIGHT>



MAYO MARRS CASING PULLING INC.
BOX 863
KERMIT, TEXAS 79745

NMOCD

Lease: DHY STATE # 1
Project: P & A

8/16/2007 SPOT 25 SACKS @ 8766' - TAG @ 8574'
8/20/2007 PERF @ 5574' - PUMP 35 SACKS - TAG @ 5248' -
8/22/2007 SPOT 35 SACKS @ 3870' - TAG @ 3860'
8/23/2007 SPOT 25 SACKS @ 2725'
8/24/2007 CUT AND PULL CASING @ 430'
8/27/2007 SPOT 690 SACKS @ 472' - TAG @ 321'
9/6/2007 CIRCULATE 45 SACKS FROM 60' TO SURFACE

PUMPED PLUGGING MUD BETWEEN ALL PLUGS
INSTALLED DRY HOLE MARKER

Surface Casing
12.75" 31.0# Csg. (17.5" Hole) @ 417'
400 sx - Circulated to Surface

Intermediate Casing
8.625" 24.0/28.0# Csg. (11.0" Hole) @ 2800'
1121 sx - TOC @ 541' by Temp

<P&A SUBSEQUENT SUNDRY>

03/16/2009 MON 10:51 FAX 4325862453 MARRS MAYO CASING 001/002 RW
MAR 16 2009

State of New Mexico
Energy, Minerals and Natural Resources
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103

WELL API NO. 30-015-21638
5. Indicate Type of Lease: STATE [X] FEE [ ]
6. State Oil & Gas Lease No. E-5136

SUNDRY NOTICES AND REPORTS ON WELLS
7. Lease Name or Unit Agreement Name: DHY STATE
8. Well Number 001
1. Type of Well: Oil Well [ ] Gas Well [X] Other
2. Name of Operator: LT PROPERTIES
9. OGRID Number
3. Address of Operator: 3502 YACHCLUB CT, STE 100, ARLINGTON, TX 76106
10. Pool name or Wildcat: WINCHESTER,MORROW,NORTH(GAS
4. Well Location: Unit Letter F : 1980 feet from the NORTH line and 1980 feet from the WEST line; Section 23 Township 19S Range 28E NMPM County EDDY, NM
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK [ ] PLUG AND ABANDON [ ] TEMPORARILY ABANDON [ ] CHANGE PLANS [ ] PULL OR ALTER CASING [ ] MULTIPLE COMPL [ ] OTHER [ ]

SUBSEQUENT REPORT OF: REMEDIAL WORK [ ] ALTERING CASING [ ] COMMENCE DRILLING OPNS [ ] P AND A [X] CASING/CEMENT JOB [ ] OTHER [ ]

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

SEE ATTACHMENT

OK To Release

Equipment has been Removed

SIGNATURE TITLE Agent for OCD DATE 3/16/09

APPROVED BY TITLE OK To Release DATE 3/20/09

ENTERED 3-23-09

Well Notes: Well file records sketchy.
Unable to confirm events leading up to **Forced Plugging**. Operator unresponsive during last 2 years of operations and well had several downhole issues. Best guess is that at least 1 packer w/ 2-3/8" tubing stub (up to 800') remains in hole set @ 10890'. Information derived from well file sundry dated 2/06/2002 indicated tubing parted while attempting to pull. P&A diagram in wellfile is a "proposed" by the operator who became unresponsive. ***That diagram does not reflect the P&A performed by Mayo and Marrs, Inc.***

Ray Westall Operating, Inc. reentry operations will take unknowns into account and drillout/mill as necessary to establish solid PBTD ~9960' for SWD completion.

Production Casing
5.5" 17.0/20.0# Csg (7.875" Hole) @ 11549'
1025 sxs Cls H - TOC @ 6880' by Temp

SOS Consulting, LLC
Drawn by: Ben Stone, 8/03/2015

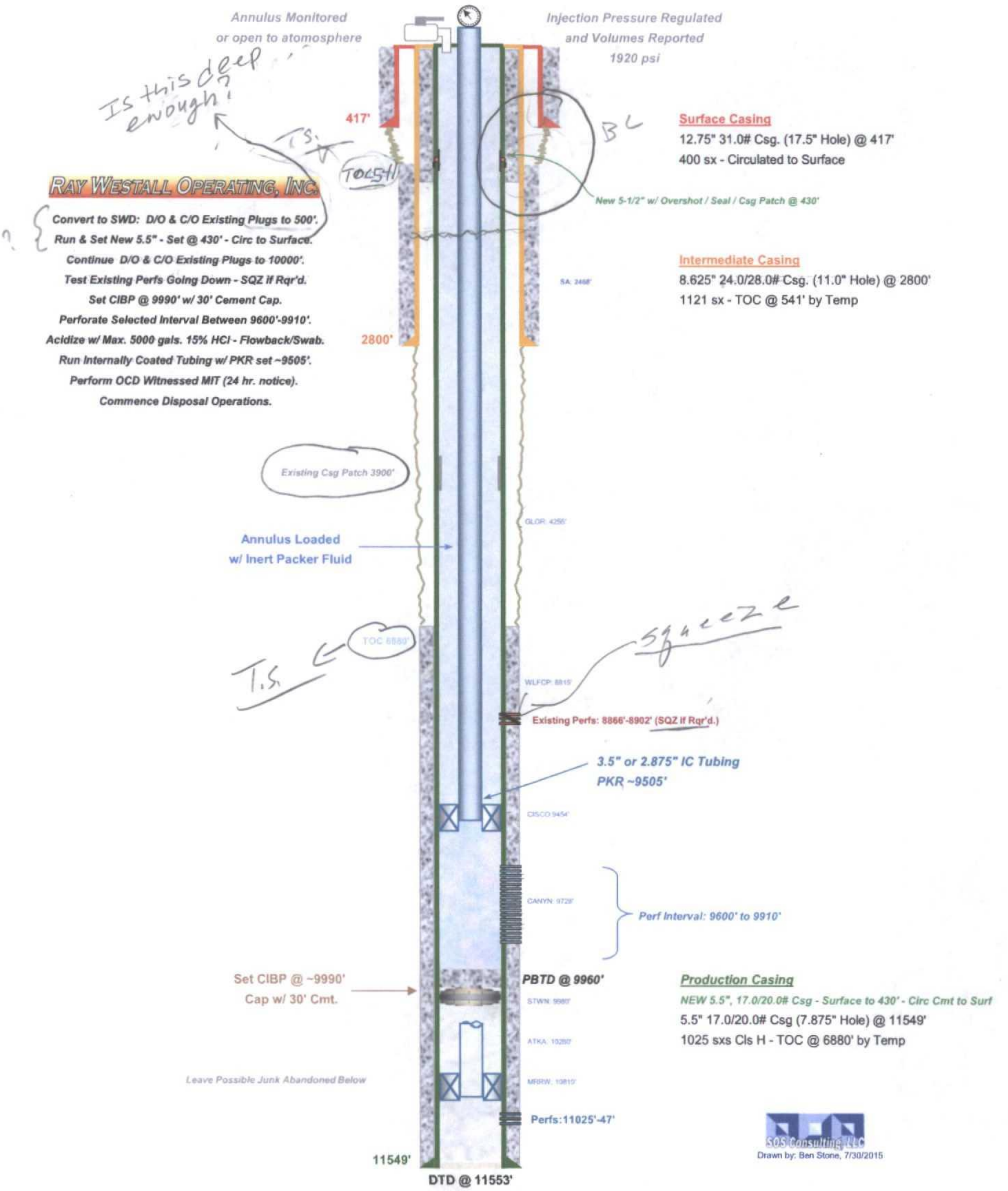
WELL SCHEMATIC - PROPOSED

DHY 'F' State Well No.1 SWD

API 30-015-21638

1980' FNL & 1980' FWL, SEC. 23-T19S-R28E
EDDY COUNTY, NEW MEXICO

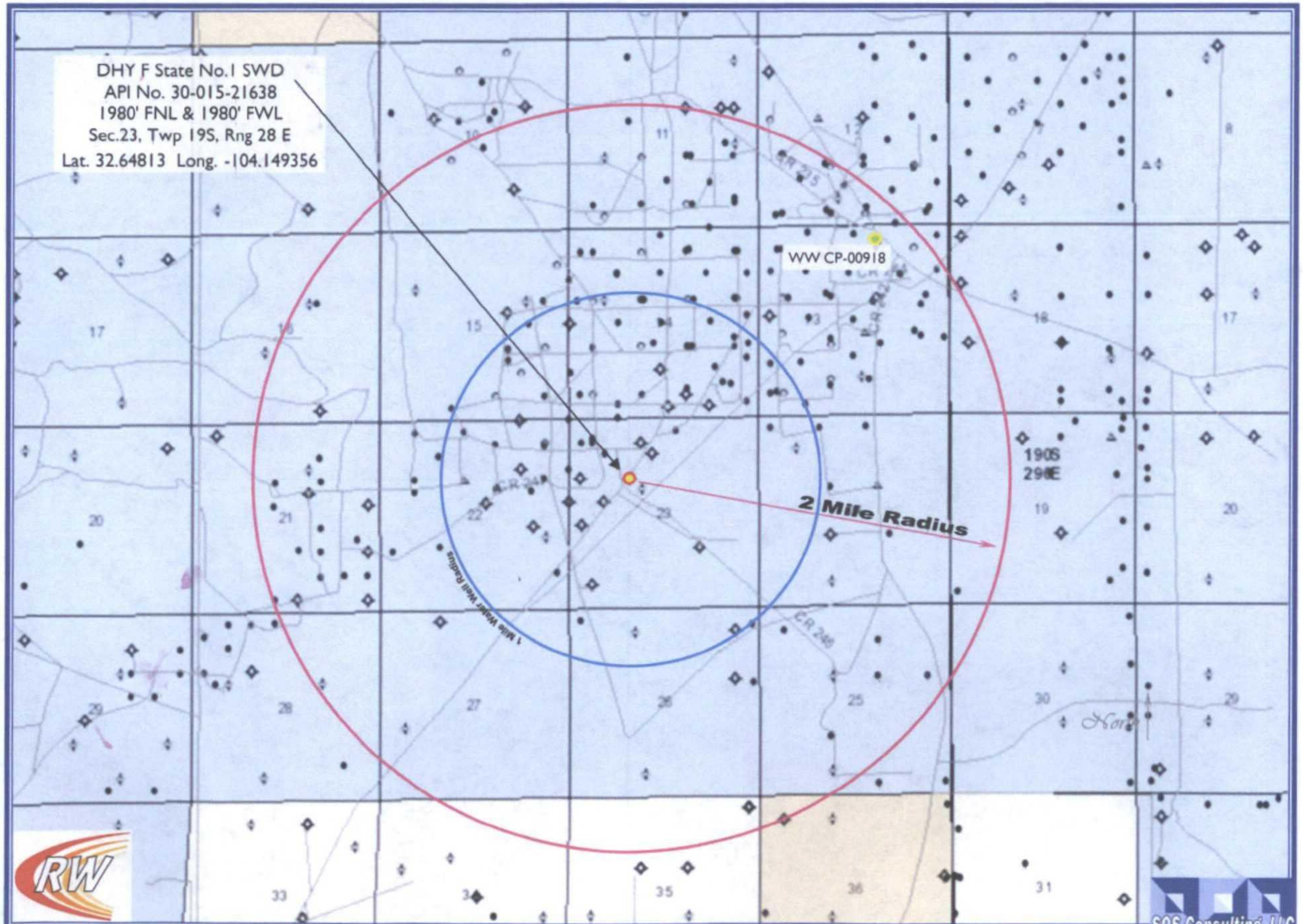
P&A Date: 9/06/2007
SWD Config Date: ~9/15/2015



SOS Consulting, LLC
Drawn by: Ben Stone, 7/30/2015

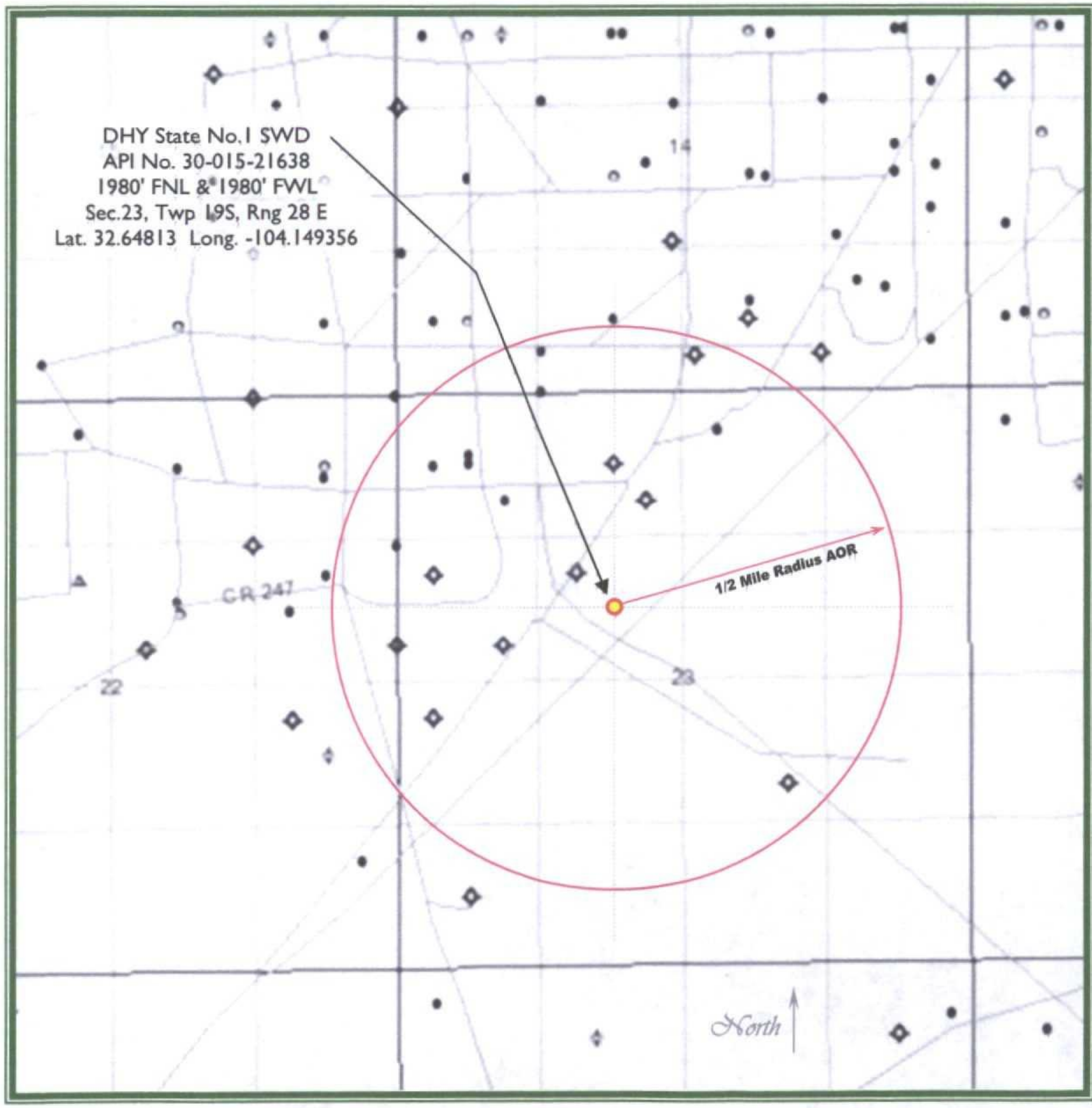
DHY 'F' State No.1 SWD - Area of Review / 2 Miles + 1 Mile WW

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



DHY State No.1 SWD - Area of Review / Overview Map

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



~18.5 miles North/Northeast of Carlsbad, NM

Eddy County, New Mexico

RW Ray Westall Operating, Inc.

SOS Consulting, LLC

Form C-108 Item VI - Tabulation of AOR Wells

Top of Proposed CISCO Interval 9600'

Only 1 Well Penetrates Proposed Interval.

API	Current Operator	Well Name	Well Number	Type	Lease	Status	ULSTR	Depth	Plugged On
Subject Well									
30-015-21638	[10882] IT PROPERTIES	DHY STATE	#001	Gas	State	P&A	F-23-19S-28E	11553'	9/23/2008
									See CURRENT (P&A) Diagram
Section 14 Wells									
30-015-27299	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#193	Oil	State	Active	M-14-19S-28E	2650'	
30-015-02247	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#145	Injection	State	P&A	M-14-19S-28E	2500'	12/1/2011
30-015-42544	[873] APACHE CORP	PALMILLO 14 STATE	#002H	Oil	State	New	M-14-19S-28E		
									New well, no docs
30-015-02242	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#183	Oil	State	Active	N-14-19S-28E	2555'	
30-015-02241	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#182	Oil	State	P&A	O-14-19S-28E	2385'	5/1/1969
30-015-22089	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#218	Oil	State	Active	O-14-19S-28E	11352'*	
	Yates-SR-QN-GB-SA Perfs: 2064'-2287'; *PBTD 2705' ; 13.375" (17" hole) @ 410' w/ 365 sx - circ.; 8.625 (11" hole) @ 2820' w/ 1200 sx - circ.; 5.5"(7.875" hole) @ 11352' w/ 1100 sx - TOC @ 5530'								
30-015-27527	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#211	Oil	State	Active	O-14-19S-28E	2650'	
30-015-27766	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#223	Oil	State	Active	O-14-19S-28E	2675'	
30-015-27296	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#192	Oil	State	Active	N-14-19S-28E	2645'	
Section 22 Wells									
30-015-27468	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#209	Oil	State	Active	H-22-19S-28E	2650'	
30-015-02290	[20451] SDX RESOURCES INC	EAST MILLMAN UNIT	#162	Oil	State	P&A	H-22-19S-28E	2294'	3/12/2004
Section 23 Wells									
30-015-27723	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#220	Oil	State	Active	C-23-19S-28E	2700'	
30-015-27768	[19958] STEPHENS & JOHNSON OP CO	DEVON STATE	#001	Oil	State	Active	F-23-19S-28E	2755'	
30-015-27781	[19958] STEPHENS & JOHNSON OP CO	DEVON STATE	#002	Oil	State	Active	L-23-19S-28E	2755'	
30-015-10083	[19958] STEPHENS & JOHNSON OP CO	MALCO STATE	#006	Oil	State	Active	B-23-19S-28E	2364'	
30-015-02297	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#002	Oil	State	P&A	C-23-19S-28E	2566'	4/23/1975
30-015-02296	[20451] SDX RESOURCES INC	MALCO STATE	#001	Oil	State	P&A	D-23-19S-28E	2533'	3/9/2004
30-015-27481	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#210	Oil	State	Active	D-23-19S-28E	2990'	
30-015-10197	[20451] SDX RESOURCES INC	MALCO STATE	#004	Oil	State	P&A	D-23-19S-28E	1210'	3/10/2004
30-015-10309	[20451] SDX RESOURCES INC	EAST MILLMAN UNIT	#005	Oil	State	P&A	D-23-19S-28E	2295'	3/4/2004
30-015-02298	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#003	Oil	State	P&A	E-23-19S-28E	2620'	4/22/1975
30-015-27724	[19958] STEPHENS & JOHNSON OP CO	EAST MILLMAN UNIT	#221	Oil	State	Active	E-23-19S-28E	2660'	
30-015-10604	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil		P&A	J-23-19S-28E	2900'	12/15/1965
30-015-20044	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#007	Oil	State	P&A	M-23-19S-28E	3493'	6/13/1967

SUMMARY: 1 well penetrates proposed disposal interval. 0 P&A.

SOS Consulting, LLC

PAGE 1
HEADER

Corr-Jur-Nom

Schlumberger

COMPENSATED NEUTRON-FORMATION DENSITY

COUNTY	WILDCAT
FIELD	
LOCATION	STATE D.H.Y. #1
WELL	
COMPANY	DEPCO INCORPORATED

COMPANY DEPCO INCORPORATED

WELL STATE D.H.Y. #1

FIELD WILDCAT Perfs CK Twe 4/26/75

COUNTY EDDY STATE NEW MEXICO

LOCATION 1980' FNL & 1980' FWL

Other Services: DLL, HDT

API SERIAL NO. SEC. 21 TWP. 19-S RANGE 28-E

Permanent Datum: G.L. ; Elev.: 3382

Log Measured From K.B. 19 Ft. Above Perm. Datum

Drilling Measured From K.B.

Elev.: K.B. 3402 D.F. G.L. 3382

RECEIVED FEB 25 1976 O.C.C. ARTESIA, OFFICE

Date	12-24-75			
Run No.	ONE			
Depth-Driller	11535			
Depth-Logger	11553			
Btm. Log Interval	11552			
Top Log Interval	0			
Casing-Driller	8 5/8@2800	@	@	@
Casing-Logger	2804			
Bit Size	7 7/8			
Type Fluid in Hole	SUPER X			
Dens. | Visc.	9.9 | 39			
pH | Fluid Loss	8 | 4.6 ml	ml	ml	ml
Source of Sample	CIRCULATED			
Rm @ Meas. Temp.	.051 @80 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.049 @80 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	.076 @80 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | C			
Rm @ BHT	@ °F	@ °F	@ °F	@ °F
Circulation Stopped	0830			
Logger on Bottom	1330			
Max. Rec. Temp.	°F	°F	°F	°F
Equip. | Location	7627 HOBBS			
Recorded By	REED			
Witnessed By Mr.	RAGSDALE			

The well name, location and borehole reference data were furnished by the customer.

FOLD HERE

RUN NO.	ONE
Service Order No.	41512
Fluid Level	FULL
Salinity, PPM Cl.	172000
Speed - F.P.M.	30
EQUIPMENT DATA	
Dens. Panel	1195
Dens. Cart.	269
Dens. Skid.	1252
Dens. Sonde	489
Dens. Source	3376
Dens. Calibrator	1058
Neut. Panel	285
Neut. Cart.	300
Neut. Source	354
Neut. Calibrator	293
GR Cart.	256
Memorizer Panel	573
Tape Recorder (TTR)	794
Depth Encoder (DRE)	119
Pressure Wheel (CPW)	1937
Centralizer: Enter Spring, Standoff, In-line, or None — Type	BOWSPRING
No.	1
S.O. - Inches	-
CALIBRATION DATA	
GR — BKG. CPS	80
GR — Source CPS	550
GR — Sens. - Cal	165
GR — T.C. - Cal	6
CNL — Short Spacing - Before Log	RATIO
CNL — Long Spacing - Before Log	2.25
CNL — Short Spacing - After Log	RATIO
CNL — Long Spacing - After Log	2.25
FDC — P1 - Before Log	680
FDC — P2 - Before Log	433
FDC — P1 - After Log	680
FDC — P2 - After Log	433

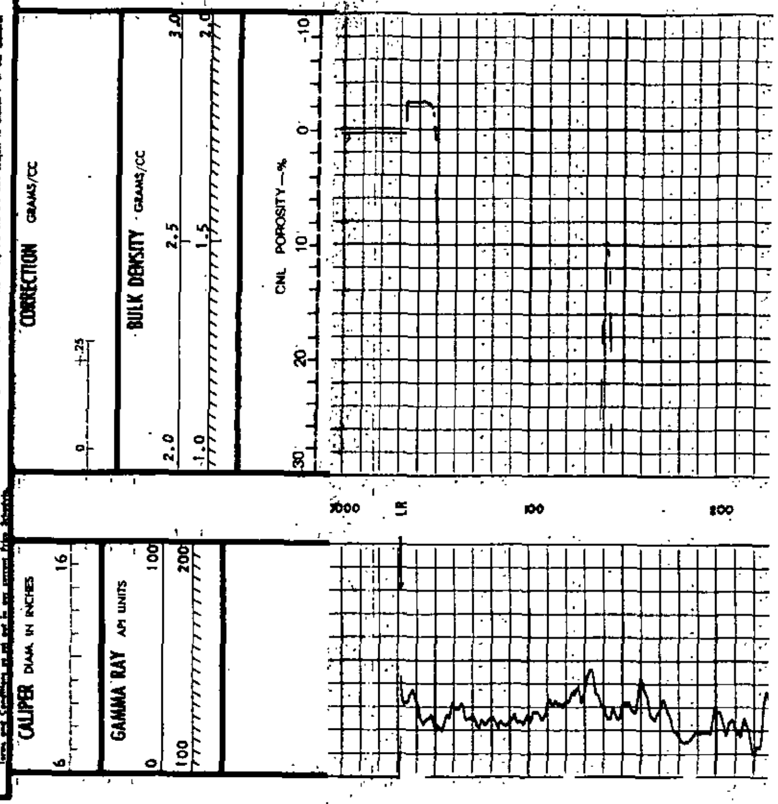
Type Log | Depth | Down Hole

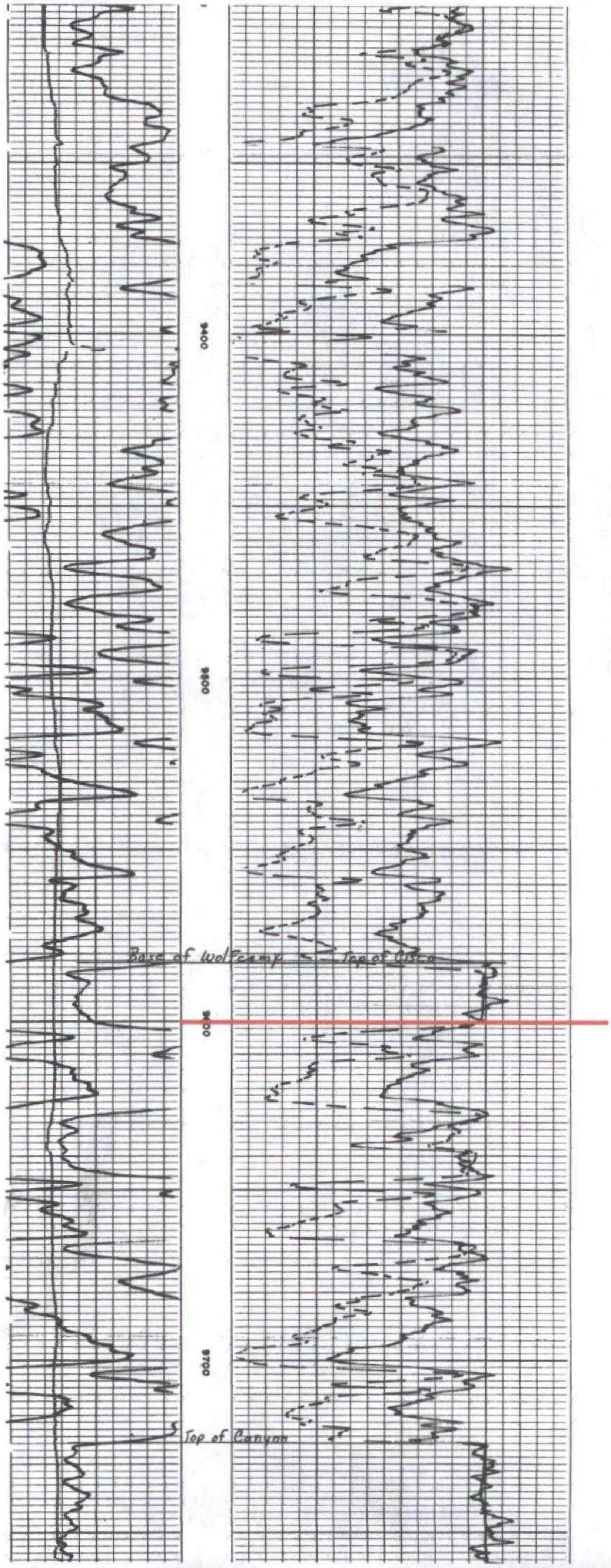
REMARKS:

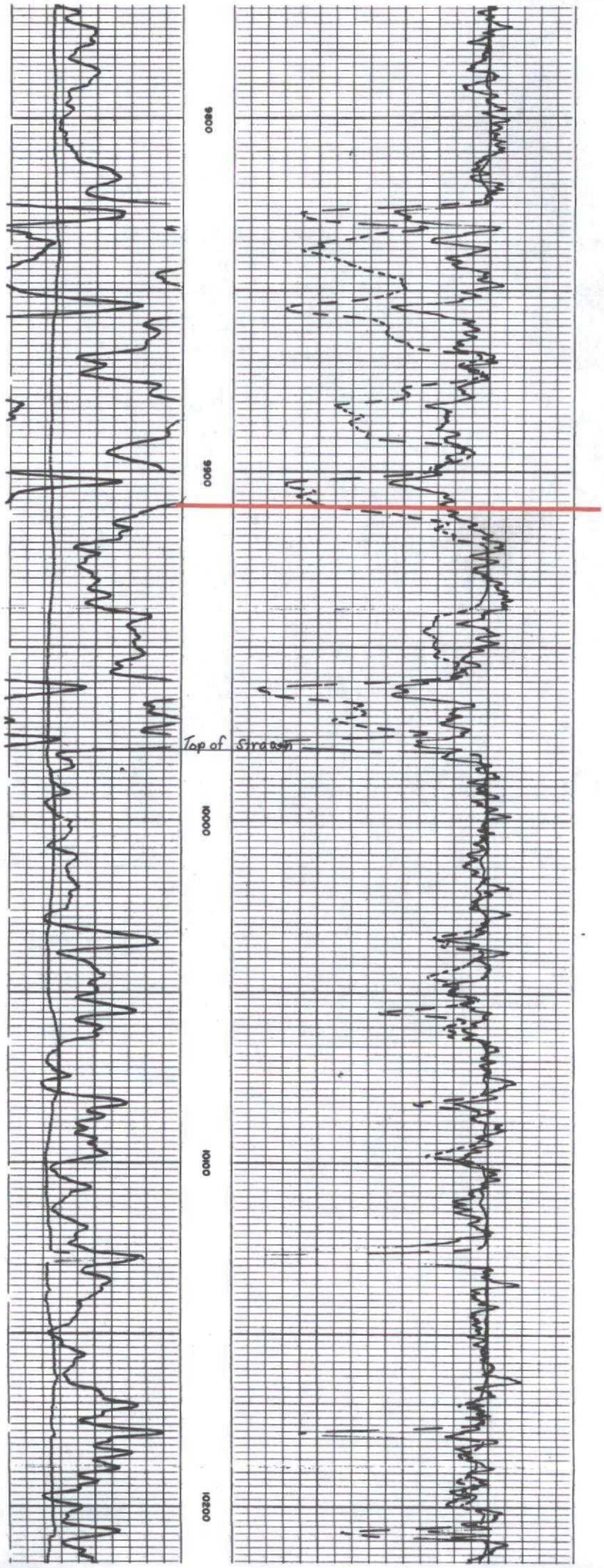
LOGGING DATA

DEPTH Top	DEPTH Bottom	CNP Porosity Scale	CNP Matrix	CNP Auto Corr. or Hole Size Setting	FDC Porosity Scale	FDC Grain Density	FDC Liquid Density	FDC Hole Fluid	GR Sens. Logged	GR T.C.	GR Zero Div. Left	GR Scale Per 100 Div.
2804	11553	30 -10	LS-OH	AUTO	30 -10	2.71	1.10	LIQ	0-100	2	0	0-100
0	2804	30 -10	LS-CH						0-100	1	0	0-100

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 7 of our General Terms and Conditions as set out in our current Price Schedule.




9400
9500
Base of Wolfcamp ~ Top of Cisco
9600
9700
Top of Canyon
TOP OF PROPOSED
INTERVAL @ 9600'



BOTTOM OF PROPOSED INTERVAL @ 9910'

C-108 - Item VII.5

Water Analysis - Disposal Zone

BJ SERVICES

Water Analysis

Date: 2/24/2005

2401 Sivley, Artesia NM 88210
Phone (505) 746-3140 Fax (505) 746-2293

Analyzed For

Company	Well Name	County	State
Westall	State G#1	Eddy	New Mexico

Sample Source **Sample #** 1

Formation Canyon **Depth**

Specific Gravity	1.060	SG @ 60 °F	1.051
pH	6.30	Sulfides	Not Tested
Temperature (°F)	65	Reducing Agents	Not Tested

Cations

Sodium (Calc)	in Mg/L	9,318	in PPM	9,056
Calcium	in Mg/L	5,600	in PPM	5,328
Magnesium	in Mg/L	240	in PPM	228
Soluable Iron (FE2)	in Mg/L	300.0	in PPM	285

Anions

Chlorides	in Mg/L	24,000	in PPM	22,835
Sulfates	in Mg/L	2,000	in PPM	1,903
Bicarbonates	in Mg/L	185	in PPM	176
Total Hardness (as CaCO3)	in Mg/L	15,000	in PPM	14,272
Total Dissolved Solids (Calc)	in Mg/L	41,844	in PPM	39,813
Equivalent NaCl Concentration	in Mg/L	38,410	in PPM	36,546

Scaling Tendencies

*Calcium Carbonate Index 1,033,464

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

*Calcium Sulfate (Gyp) Index 11,200,000

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 677-2361

Report # 1732

C-108 ITEM VII – PROPOSED OPERATION

The DHY 'F' State 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 Cisco and Canyon formation waters.)

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

Injection pressure will be 1920 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 VII.4

Water Analysis - Source Water - SAN ANDRES

B J Services Water Analysis

Artesia District Laboratory

(505)-746-3140

Date:	6-Nov-00	Test #:	
Company:	SDX Resources	Well #:	
Lease:	Chalk Federal #2	County:	Eddy
State:	N.M.	Formation:	San Andres
Depth:	2900	Source:	

pH:	6.61	Temp (F):	58.3
Specific Gravity	1.12		

CATIONS	mg/l	meq/l	ppm
Sodium (calc.)	54502	2370.7	48662
Calcium	3208	160.1	2864
Magnesium	1458	120.0	1302
Barium	< 25	—	—
Potassium	< 10	—	—
Iron	3	0.1	2
ANIONS			
Chloride	93000	2623.4	83036
Sulfate	1071	22.3	957
Carbonate	< 1	—	—
Bicarbonate	878	14.4	784
Total Dissolved Solids(calc.)	154120		137,607
Total Hardness as CaCO3	14014	280.0	12513

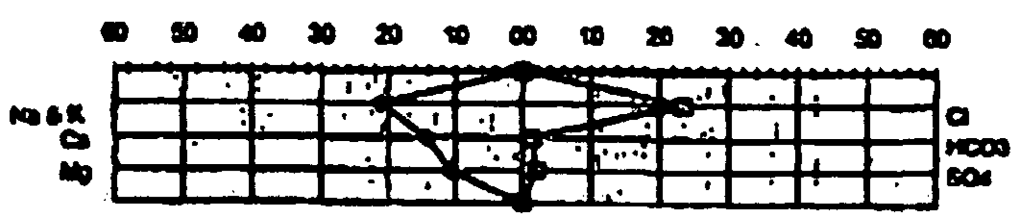
COMMENTS:

Rw= 0.0647@51.1 deg.

SCALE ANALYSIS:

CaCO3 Factor	2817907	Calcium Carbonate Scale Probability->	Probabl
CaSO4 Factor	3848600	Calcium Sulfate Scale Probability -->	Remote

Stiff Plot



Water Analysis - Source Water - DELAWARE

BJ SERVICES

Water Analysis

Date: 11-Jan-05

2708 West County Road, Hobbs NM 88240
Phone (505) 392-5556 Fax (505) 392-7307

Analyzed For

[illegible]	[illegible]	[illegible]	[illegible]
Devon	Spud 16 State #1	Lea	New Mexico

Sample Source Sample **Sample #** 1

Formation ***Depth***

Specific Gravity	1.196	*SG @ 60 °F*	1.196
pH	5.98	*Sulfides*	Absent
Temperature (°F)	65	*Reducing Agents*	

Cations

Sodium (Calc)	*in Mg/L*	73,985	*in PPM*	61,869
Calcium	*in Mg/L*	34,000	*in PPM*	28,428
Magnesium	*in Mg/L*	5,040	*in PPM*	4,214
Soluable Iron (FE2)	*in Mg/L*	50.0	*in PPM*	42

Anions

Chlorides	*in Mg/L*	188,000	*in PPM*	157,191
Sulfates	*in Mg/L*	550	*in PPM*	460
Bicarbonates	*in Mg/L*	78	*in PPM*	65
Total Hardness (as CaCO3)	*in Mg/L*	106,000	*in PPM*	88,629
Total Dissolved Solids (Calc)	*in Mg/L*	301,783	*in PPM*	252,269
Equivalent NaCl Concentration	*in Mg/L*	254,733	*in PPM*	212,988

Scaling Tendencies

**Calcium Carbonate Index* 2,654,720

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

**Calcium Sulfate (Gyp) Index* 18,700,000

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 rw=.040@63f

C-108 - Item VII.4

Water Analysis - Source Water - MORROW

HALLIBURTON

CENTRAL OPERATIONS LABORATORY
WATER ANALYSIS REPORT
HOBBS, NEW MEXICO

COMPANY	Marbob	REPORT	W02-126
		DATE	June 18, 2002
		DISTRICT	Hobbs

SUBMITTED BY: Jim Trels

WELL	Ruger St. #1	DEPTH		FORMATION	
COUNTY		FIELD		SOURCE	

SAMPLE	Morrow Prod. Water							
Sample Temp.	84	°F		°F		°F		°F
RESISTIVITY	0.13							
SPECIFIC GR.	1.040							
pH	6.63							
CALCIUM	4,500	mpl		mpl		mpl		mpl
MAGNESIUM	6,300	mpl		mpl		mpl		mpl
CHLORIDE	34,989	mpl		mpl		mpl		mpl
SULFATES	light	mpl		mpl		mpl		mpl
BICARBONATES	18	mpl		mpl		mpl		mpl
SOLUBLE IRON	0	mpl		mpl		mpl		mpl
Sodium		mpl	0	mpl	0	mpl	0	mpl
TDS		mpl	0	mpl	0	mpl	0	mpl
OIL GRAVITY	@	°F	@	°F	@	°F	@	°F

REMARKS

MPL = Milligrams per liter
Resistivity measured in: Ohm/m2/m

ANALYST: Mike Armstrong

C-108 - Item VIII
Geological Data

The Cisco Formation (Upper Penn) 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 medium-grained carbonates, primarily dolomite and porous and permeable sandstone interbedded with shale and is generally 150 to 200 feet in thickness.

The combined zones offer good porosity in the proposed injection interval located from 9600 feet to 9910 feet with some very good porosity interspersed throughout the overall interval.

The Cisco is overlain by the Wolfcamp and the Canyon is underlain by the Strawn and Atoka. (See Pool Map and Data exhibit included.)

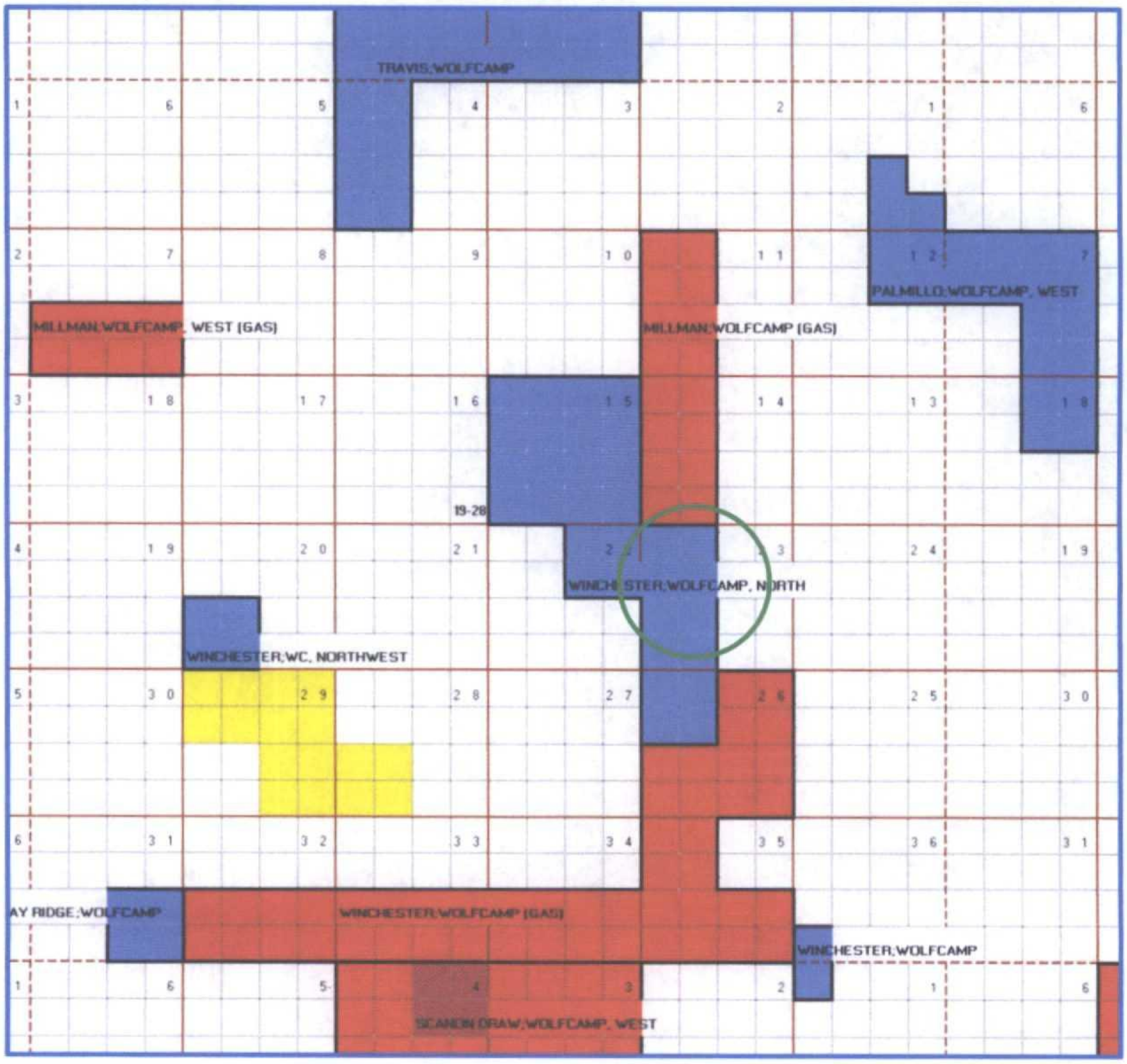
Fresh water in the area is generally available from the Santa Rosa formation (Capitan Basin). Based on State Engineer's records for water wells in Section Twp 19S, Rng 28E, groundwater is found from 75 feet to 265 feet, average depth 143 feet.

There are no water wells located within one mile of the proposed SWD.

C-108 – Item VIII – Geologic Data
SUPPLEMENTAL INFORMATION – POOL DATA

WOLFCAMP POOLS IN REGION

(Overlying Disposal Formation)

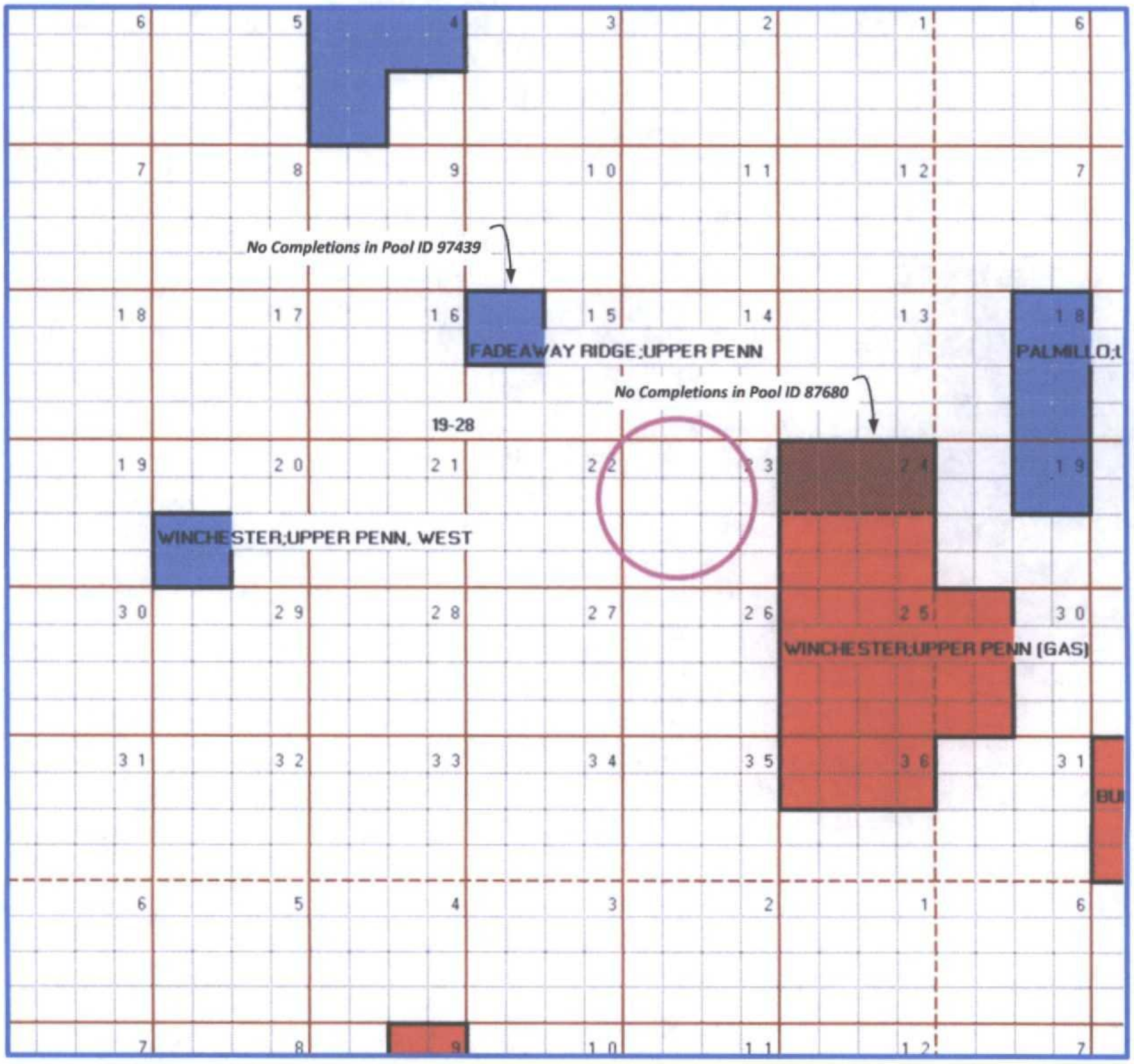


Pool Maps Courtesy of Paul Kautz

C-108 – Item VIII – Geologic Data
SUPPLEMENTAL INFORMATION – POOL DATA

UPPER PENN / CISCO / CANYON POOLS IN REGION

(Cisco &Canyon Disposal Formations)



Pool Maps Courtesy of Paul Kautz

SOS Consulting, LLC

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.
DHY State Well No.1
Reviewed 7/09/2015

C-108 ITEM XI – WATER WELLS IN AOR

A search of the State Engineer's database indicates one water well located in any section surrounding the subject section. This well is NOT within one mile of the proposed salt water disposal well. The location is spotted on the 2-Mile AOR map.

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

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

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

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y
CP 00918		PRO	3	ST MARY LAND AND EXPL.	ED	CP 00918			Shallow	2	1	2	13	19S	28E	581837	3614736

Record Count: 1

PLSS Search:

Section(s): 13, 14, 15, 22, 23, 24, 25, 26, 27 **Township:** 19S **Range:** 28E

Sorted by: File Number

The nearest water wells in Twp 19-S, Rng 28-E were used for the average depth to groundwater; shown to be 143 feet.

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00361			ED	3	1	3	09	19S	28E	576094	3615246*	365	265	100
CP 00502			ED		1	1	18	19S	28E	573001	3614478*	100	91	9
CP 00836			ED		1	1	18	19S	28E	573001	3614478*	110		
CP 00837			ED		1	1	18	19S	28E	573001	3614478*	110		
CP 00838			ED		1	1	18	19S	28E	573001	3614478*	110		
CP 01231 POD1			ED	4	4	2	36	19S	28E	582311	3609372	300	75	225

Average Depth to Water: **143 feet**

Minimum Depth: **75 feet**

Maximum Depth: **265 feet**

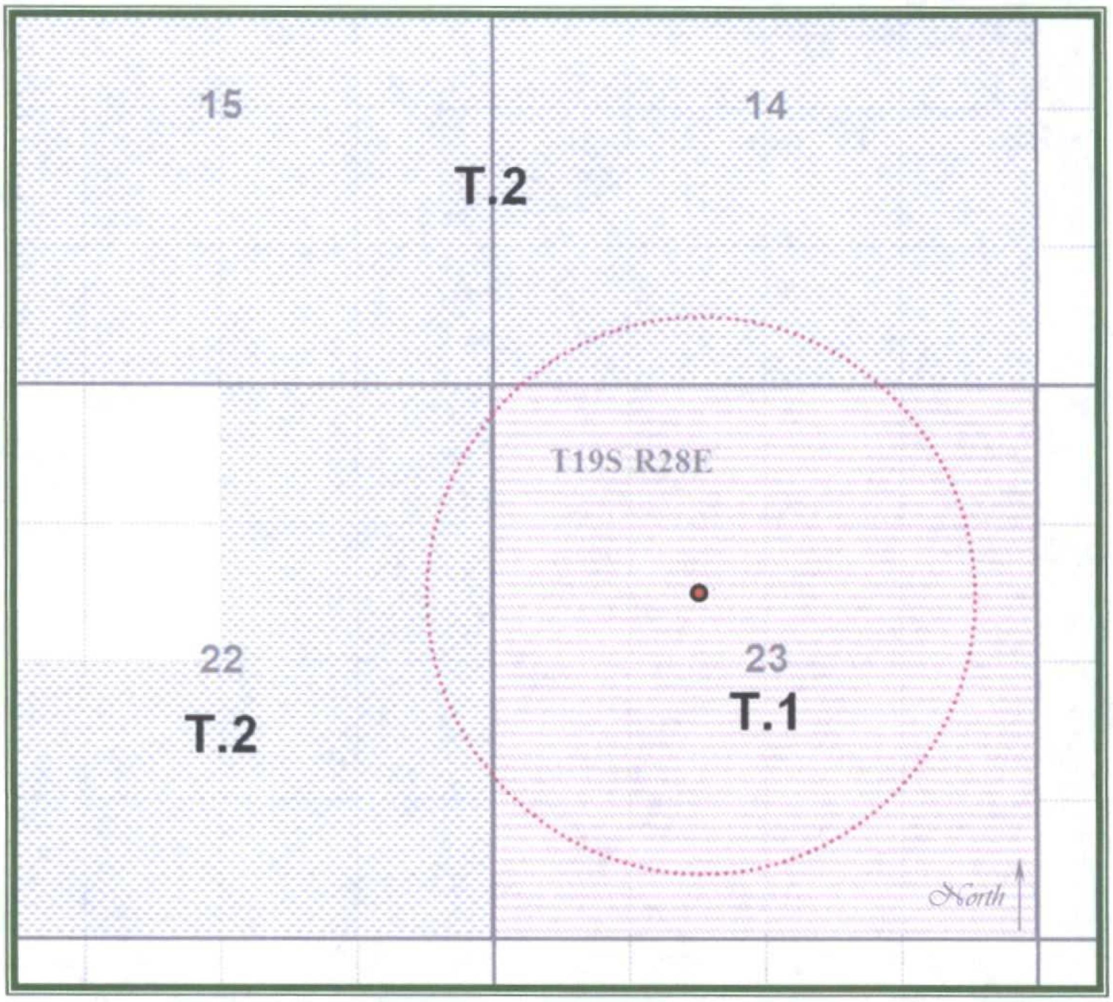
Record Count: 6

PLSS Search:

Township: 19S **Range:** 28E

DHY 'F' State SWD No.1 - Leasehold Plat

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



RAY WESTALL OPERATING, INC.

LEGEND

T.1 – E0-5136-0002 – Devon Energy Production Company

T.2 – X0-0648-0131 – Marathon Oil Company

X0-0648-0151 - Khody Land and Minerals Company

Research performed by CG&L Records & Research

SOS Consulting, LLC

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 E0-5136-0002

Lessee

1 DEVON ENERGY PRODUCTION CO., LP
333 W. Sheridan Avenue
OKC, OK 73102-5010

Operator

2 STEPHENS & JOHNSON OPERATING CO.
P.O. Box 2249
Wichita Falls, TX 76307

State Lease X0-0648-0131

Lessee/Operator

3 MARATHON OIL COMPANY
P.O. Box 22164
Tulsa, OK 74121-2164

Operators

STEPHENS & JOHNSON OPERATING CO.
P.O. Box 2249
Wichita Falls, TX 76307

4 APACHE CORPORATION
303 Veterans Airpark Lane, Ste.3000
Midland, TX 79705

State Lease X0-0648-0151

Lessee

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

Operators

STEPHENS & JOHNSON OPERATING CO.
P.O. Box 2249
Wichita Falls, TX 76307

APACHE CORPORATION
303 Veterans Airpark Lane, Ste.3000
Midland, TX 79705

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

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

August 5, 2015

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 the DHY State 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 23, Township 19 South, Range 28 East in Eddy County, New Mexico.

The published notice states that the interval will be from 9600 feet to 9910 feet.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on or about June 26, 2015

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 DHY State No.1. The well, API No.30-015-21638 is located 1980 FNL & 1980 FEL in Section 23, Township 19 South, Range 28 East in Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Cisco and Canyon formations through selected perforated intervals between a maximum applied for top of 9600 feet to maximum depth of 9910 feet and based on further log analysis. Maximum injection pressure will be 1920 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)

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OKC, OK 73102-5010

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Wichita Falls, TX 76307

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MARATHON OIL COMPANY
P.O. Box 2069
Houston, TX 77252-2069

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KHODY LAND & MINERALS CO.
210 Park Avenue, Ste.900
OKC, OK 73102

PS Form

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APACHE CORPORATION
303 Veterans Airpark Lane, Ste.3000
Midland, TX 79705

PS Form

A idavit of Pu lica ion

No. 23548

State of New Mexico

County of Eddy:

Danny Scott Danny Scott

being duly s sworn sayes that she is the **Publisher**

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

Legal Notice

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

1 Consecutive weeks/day on the same day as follows:

First Publication	June 26, 2015
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	

Subscribed and sworn before me this

29th day of June 2015

OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 5/12/2019

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

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Published in the Artesia Daily Press, Artesia, N.M., June 26, 2015 Legal No. 23548.

C-108 Review Checklist: Received ________ Add. Request: ________ Reply Date: ________ Suspended: ________

PERMIT TYPE: WFX / PMX / SWD Number: 1574 Permit Date: 5-31 Legacy Permits/Orders: ________

Well No. 1 Well Name(s): DHY State SWD

API : 30-0 15-21638 Spud Date: ~~10-10-1975~~ 11-4-1975 New or Old: O (*UIC Class II Primacy 03/07/1982*)

Footages 1980FNL 1980FWL Lot ____ or Unit F Sec 23 Tsp 19S Rge 28E County Eddy

General Location: 2 ISSE / Artesia Pool: SWD; Canyon Pool No.: 96186

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

COMPLIANCE RULE 5.9: Total Wells: 65 Inactive: 1 Fincl Assur: Y Compl. Order? NA IS 5.9 OK? ✓ Date: 5-31

WELL FILE REVIEWED ✓ Current Status: P&A

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

Planned Rehab Work to Well: Run new 5½" casing surface - tie into existing 5½ CIBP @ 9990 w/ 35' cement cap

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)		Cement Sx or Cf	Cement Top and Determination Meth
Planned __ or Existing X Surface	17½ / 12¾	417	Stage Tool	400	Surface/visual
Planned __ or Existing X Interm/Prod	11" / 8 5/8	2800		1121	541' / TS*
Planned X Existing __ Interm/Prod	7⅞ / 5½"	4130'			Surface/visual
Planned __ or Existing X Prod/Liner	7⅞ / 5½	6880 (TS)			11553 / TD
Planned __ or Existing __ Liner					
Planned __ or Existing __ OH / PERF	9660/9910		Inj Length 310		

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		WC	8815
Confining Unit: Litho Struc. Por.		base WC	9590
Proposed Inj Interval TOP:	9660		
Proposed Inj Interval BOTTOM:	~~9910~~ 9960	Strawn	9960
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD 11553 PBTD 9960

NEW TD ________ NEW PBTD ________

NEW Open Hole ◯ or NEW Perfs ✓

Tubing Size 3½ in. Inter Coated? Y

Proposed Packer Depth 9505 ft

Min. Packer Depth 9500 (100-ft limit

Proposed Max. Surface Press. 1920 p

Admin. Inj. Press. 1920 (0.2 psi pe

AOR: Hydrologic and Geologic Information

POTASH: R-111-P ◯ *Noticed?* NA **BLM Sec Ord** ◯ **WIPP** ◯ *Noticed?* NA **SALT/SALADO** T: ____ B: ____ **CLIFF HOUSE**

FRESH WATER: Aquifer Triassic Max Depth 150 **HYDRO AFFIRM STATEMENT** By Qualified Person ✓

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

Disposal Fluid: Formation Source(s) San Andres, Delaware, Wolfcamp Analysis? Y On Lease ◯ Operator Only ◯ or Commerci ✓

Disposal Int: Inject Rate (Avg/Max BWPD): 4k/6k Protectable Waters? ____ Source: ____ System: Closed ✓ or Ope

HC Potential: Producing Interval? ____ Formerly Producing? ____ Method: Logs/DST/P&A/Other ____ 2-Mile Radius Pool Ma ✓

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

Penetrating Wells: No. Active Wells 1 Num Repairs? ____ on which well(s)? ____ Diagrams? ____

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

NOTICE: Newspaper Date June 26, 2015 Mineral Owner NMSLO Surface Owner NMSLO N. Date ____

RULE 26.7(A): Identified Tracts? Y Affected Persons: Devon, Apache, Stevens & Johnson N. Date ____

Permit Conditions: Issues: CBL b/w ~~#~~ proposed 5½ & 8 5/8 to ensure

Add Permit Cond: good bond ~~b/w 8 5/8 & 5½~~ to 10,000.

Squeeze perfs b/w 8866 & 8862. 8 5/8 → 541