

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] TYPE OF APPLICATION - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication
 NSL NSP SD
SW 1649
- Mesquite SW,
161968
well
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM
- Cedar Canyon
SWD #1
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR
30-015-Pending
POD
- [D] Other: Specify _____
- SWD Deviation

- [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply *97869*
- [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.

KAY HAVENOR see Application Agent 8-17-2011
 Print or Type Name Signature Title Date

see Application
 e-mail Address

Please Note:

RECEIVED OOD

8/15/2016

This C-108 is the **REPLACEMENT** of the Mesquite SWD, Inc. canceled application for the Cedar Canyon SWD #1. The original C-108 was received by your office June 16, 2016. The well name has not been changed. The earlier application had the SWD site about 10' too close to the Unit boundary.

Thank you,

Kay Havenor
575-626-4518

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	1		<u>Operator, Well, and Contact info:</u>
	2	II	Name of person submitting the application: <u>Kay Havenor</u> Other Contact? _____
	3	II	Did you Include a contact Email in the application? <u>Yes</u> and Mailing Address? <u>Yes</u> and Phone? <u>Yes</u>
	4	II	Operator Name: <u>Mesquite SWD, Inc</u> OGRID Num <u>161968</u>
	5		RULE 5.9 Compliance..... Number of Inactive Wells vs Total Wells Operated <u>15</u> Is financial assurance required on any well? <u>No Violation</u>
	6		Is there any hearing order finding this operator out of compliance with Division Rule 19.15.5.9 NMAC? <u>No</u>
	7		Are all Rule 5.9 issues OK to allow the Division to issue Disposal Permits?
	8	III	Well Name: <u>Cedar Canyon SWD #1</u>
	9	III	API Num: <u>30-015-not assigned</u> Spud Date: <u>new drill</u>
	10		Have you included API numbers on all wellbore diagrams and well list(s) in this application? <u>Yes</u>
	11	III	Proposed well...Footages <u>1310' FSL & 1153' FEL</u> Unit <u>P</u> Sec <u>8</u> Tsp <u>24S</u> Rge <u>29E</u> County <u>Eddy</u>
	12		General Location (i.e. Y miles NW of Z): <u>4.2-miles W of Malaga, NM, and US 285, Eddy County, NM.</u>
	13		Current Well Status: <u>To be new drill</u>
	14	I	General Summary of Planned Work to Well: <u>New drill through Siluro-Devonian (open-hole), complete for SWD.</u>
	15		<u>INTERVAL TOP and BOTTOM:</u>
	16	IIIB.(2)	Proposed disposal <u>Approx 14800'-16000'</u> Formation Name <u>Siluro-Devonian</u> (include Member Names for Delaware or Mesaverde)
	17	IIIB.(2)	Proposed disposal <u>Bottom Depth: 16000'</u> Formation Name: <u>Siluro-Devonian</u>
	18	IIIB.(2)	Is the disposal interval OpenHole? <u>Yes</u> or Perfed?
	19	IIIB.(2)	What will be the disposal tubing size OD? <u>4-1/2"</u> Packer Seat, Feet: <u>approx 14800'</u>
	20	VII	What max surf inj. psi are you proposing? <u>2960</u> If differing from 0.2 psi/ft surf. Grad., is supporting data attached such as a Step Rate Test?

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	21		<u>FRESH WATERS:</u>
	22	VIII	Depth to bottom of Fresh Waters: <u>less than 200'</u> Formation Name(s)? <u>Quaternary alluvium</u>
	23	XI	Any Fresh Water Wells Within 1 Mile? <u>No</u> If so, did you attach an analysis from these Wells?
	24		Are all "Fresh" waters isolated with Casing and Cement? <u>Yes</u> ("Fresh" water is defined as less than 10,000 mg/l of TDS)
	25	XII	Included "Affirmative Statement" concerning any Connection from Disposal Depths to existing Fresh Waters? <u>Yes</u> Item XII
	26		<u>WASTE WATERS:</u>
	27	XIV	Will this be a Lease Only disposal well? <u>No</u> or only used for the Operator's own waste needs? or Commercial Disposal? <u>Yes</u>
	28	VII	Which formations will supply the waste waters to be disposed into this well... List most common: <u>Delaware/Bone Springs</u>
	29	VII	Are Waste waters compatible with proposed disposal interval waters? <u>Yes</u> Did you include waste water analysis? <u>Yes, Delaware water</u>
	30		<u>AT PROPOSED WELL....INSITU WATERS AND HYDROCARBON POTENTIAL:</u>
	31		Is a discussion included of the potential for future OIL/GAS recovery from the proposed disposal interval? <u>Yes</u> P. 9
	32		If your proposed well for disposal is a depleted producer (within the proposed interval); do you know what was the cumulative oil/gas/water? and did you include a Rate-Time plot of this depleted interval?
	33	VII	Insitu water analysis Included? <u>No</u> Is the salinity within the disposal interval more than 10,000 mg/l of TDS? or how will you determine this insitu water salinity? Regional knowledge <u>Siluro-Devonian.</u>
	34	VIII	Does the application include a list of Formation tops down to and including the bottom of the target formation? <u>Yes, on Page 12</u>
	35		What is the top main salt <u>700' +/-</u> and bottom <u>2700' +/-</u> of the Salado Salt (...If this well is in the Southeast and the Salt is present)
	36	X	Are all existing Logs (including any CBL over the disposal interval) are on the OCD Web Site? If logs not there, please send <u>On completion</u>
	37	IIIA.	Are the wellbore diagrams for this well included in the Application.....Before Conversion? and After Conversion? <u>Yes, New drill.</u>
	38		Are the top and bottom footage of the proposed disposal interval marked on the "after" diagram? <u>Yes</u>
	39		<u>NOTICE:</u>

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	40	XIV	Date of the Newspaper Notice in the County: Eddy Co. Artesia Daily Press 08/05/2016
	41	V	Within 1/2 mile, did you clearly identify (either on a map or by legal description) all separately owned tracts of lands within the disposal interval? Yes
	42	XIII	Did you identify the owner(s) of each of these separately owned tracts? Yes, in Item XIII Were they all formally noticed? Yes
	43	XIII	If reentering a P&Aed well, are there depth divisions of ownership within that wellIf so, have you also noticed all the shallower interests of the intent to use the well for disposal?
	44	XIII	Is the proposed well within the R-111-P defined Potash Area or the BLM Secretaries Potash Area? No ... If so, did you send notice to the nearest Potash lessee?
	45	XIV	Who owns the surface lands at the disposal well site (BLM, SLO, or who)? Valley Land, LLC Was that party formally noticed? Yes
	46		<u>Area of Review:</u>
	47	V	Did you include a map identifying all wells within 2 miles? Yes
	48	VI	Did you include a list of all AOR wells? Yes Is the list available to be emailed (if requested) in spreadsheet format? Yes - Included in Item VI list
	50	VI	Did you include wellbore diagrams for all P&Aed wells that exist within the 1/2 mile AOR that penetrate the disposal interval? None present
	51	VI	How many wells exist within the 1/2 mile AOR that penetrate the disposal interval? 0 How many of these are Plugged/Dry and Abandoned?
	52	VI	Are details included on cement coverage of the proposed disposal interval for all wells penetrating the disposal interval within 1/2 mile of the proposed well? N/A
	53	VI	Do all reported cement tops describe how that "top" was determined? N/A If you calculated any tops, what fillup efficiency factor did you use?
	54	VI	Did you identify the presence and depth of all Cement Stage Tools (DV) in the subject well and in the AOR wells? Yes
	55	VIII	For the target formation, is there significant formation structural depth changes within the 1/2 mile AOR? No
	56	VIII	Is there any Karst or Massive Limestone in this target formation? No ...or in the formations directly above or below? No
	57		<u>Administrative or Hearing:</u>
	58	VI	How many wells within the 1/2 mile AOR currently are producing (or still have open perforations) within the disposal interval? 0 is it "gas" or "oil"?

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	59	 NOTE: If the proposed disposal interval is a "Gas" interval or if any AOR wells are producing or have open perforations within this interval then this application may not be properly classified as a "disposal". These types of applications must be processed at an examiner hearing.
	60		Any other Issues..? No

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Mesquite SWD, Inc

ADDRESS: P.O. Box 1478 Carlsbad, NM 88220

CONTACT PARTY: Kay Havenor PHONE: 575-626-4518

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes _____ No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

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

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Kay Havenor TITLE: Agent

SIGNATURE: *Kay C Havenor* DATE: 7/31/2016

E-MAIL ADDRESS: Kay.Havenor@Gmail.com Mesquite SWD, Inc contact: ClayL.Wilson@hotmail.com

* 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

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

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.

INJECTION WELL DATA SHEET

OPERATOR: Mesquite SWD, Inc. (OGRID 161968)

WELL NAME & NUMBER: Cedar Canyon SWD #1 30-025-NA (New Drill)

WELL LOCATION: 1310' FSL & 1153' FEL P 8 24S 29E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

See attached diagram

PROPOSED WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26" Casing Size: 20" 133# J-55 BTC

Cemented with: 650 sx. or _____ ft³

Top of Cement: Surface Method Determined: Circulate

Intermediate-1 Casing

Hole Size: 17-1/2" Casing Size: 13-3/4" 68# N-80 LTC

Cemented with: 1000 sx. or _____ ft³

Top of Cement: Surface Method Determined: Circulate

Intermediate-2 Casing

Hole Size: 12 1/4" Casing Size: 9 5/8" 53.5# L-80 LTC

Cemented with: 1800 sx. or _____ ft³

Top of Cement: 11415' Method Determined: Opr

Liner

Hole Size 8½" Casing Size 7⅝" 39# P-110 UFJ

Cemented with: 2340 sx. or _____ ft³

Top of Cement Surface Method Determined Opr

Total Depth: Approx 16,000'

Injection Interval

← Approximately 14,000' To Approximately 16,000'

(Perforated or Open Hole; indicate which) Open Hole

Newspaper 14000' - 16000'

INJECTION WELL DATA SHEET

Tubing Size: 4-1/2" P110/N-80 Lining Material: Fiberglass coated

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 14,800' ft

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

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

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

2. Name of the Injection Formation: Siluro-Devonian

3. Name of Field or Pool (if applicable): _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. New drill

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Delaware & Bone Springs horizons all above approximately 9,800'

Mesquite SWD, Inc.
 Cedar Canyon SWD #1
 1310' FSL & 1153' FEL
 Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

PROPOSED NEW WELL DIAGRAM

API: 30025xxxx
 Operator: Mesquite SWD, Inc
 Lease: Cedar Canyon SWD
 Location: Sec 8, T24S-R29E Eddy Co., NM
 Footage: 1310' FSL, 1153' FEL

Well No: 1

KB: 2985 est
 GL: 2964 est

Surface Csg

Size: 20" 133# J-55 BTC
 Set @: 850
 Sxs cmt: 650
 Circ: Yes
 TOC: Surf
 Hole Size: 26"

Intermediate Csg

Size: 13-3/8" 68# N-80 LTC
 Set @: 4,400
 Sxs cmt: 1000
 Circ: Yes
 TOC: Surf
 Hole Size: 14-3/4"

Intermediate-2 Csg

Size: 9-5/8" 53.5# L-80 LTC
 Set @: 11650
 Sxs cmt: 1800
 Circ: Yes
 Hole Size: 12-1/4"

Liner

Size: 7-5/8" 39# P-110 Ultra FJ
 Top: 11415
 Set @: 14800
 Sx cmt: 2340
 Circ: Yes
 Hole Size: 8-1/2"

Open Hole

Size: 14800-16000'
 Interval: 14800-16000'
 Hole Size: 6-1/4"

Tubular requirements (made-up):

14,800' 4-1/2" w/o-1700' 13.5# P-110 LTC, 1700'-4300' 11.6# P-110 LTC, 4300'-9990' 11.6# N-80 LTC, 9990'-13000' 11.6# P-110 LTC, 13000'-14800' 13.5# N-80 LTC, all Fiberglass coated.
 Lok-Set or equivalent approx 14,800'

Open hole acid/stimulation if required.
 Tubing annulus w/corrosion inhibitor.
 Complete surface head for disposal

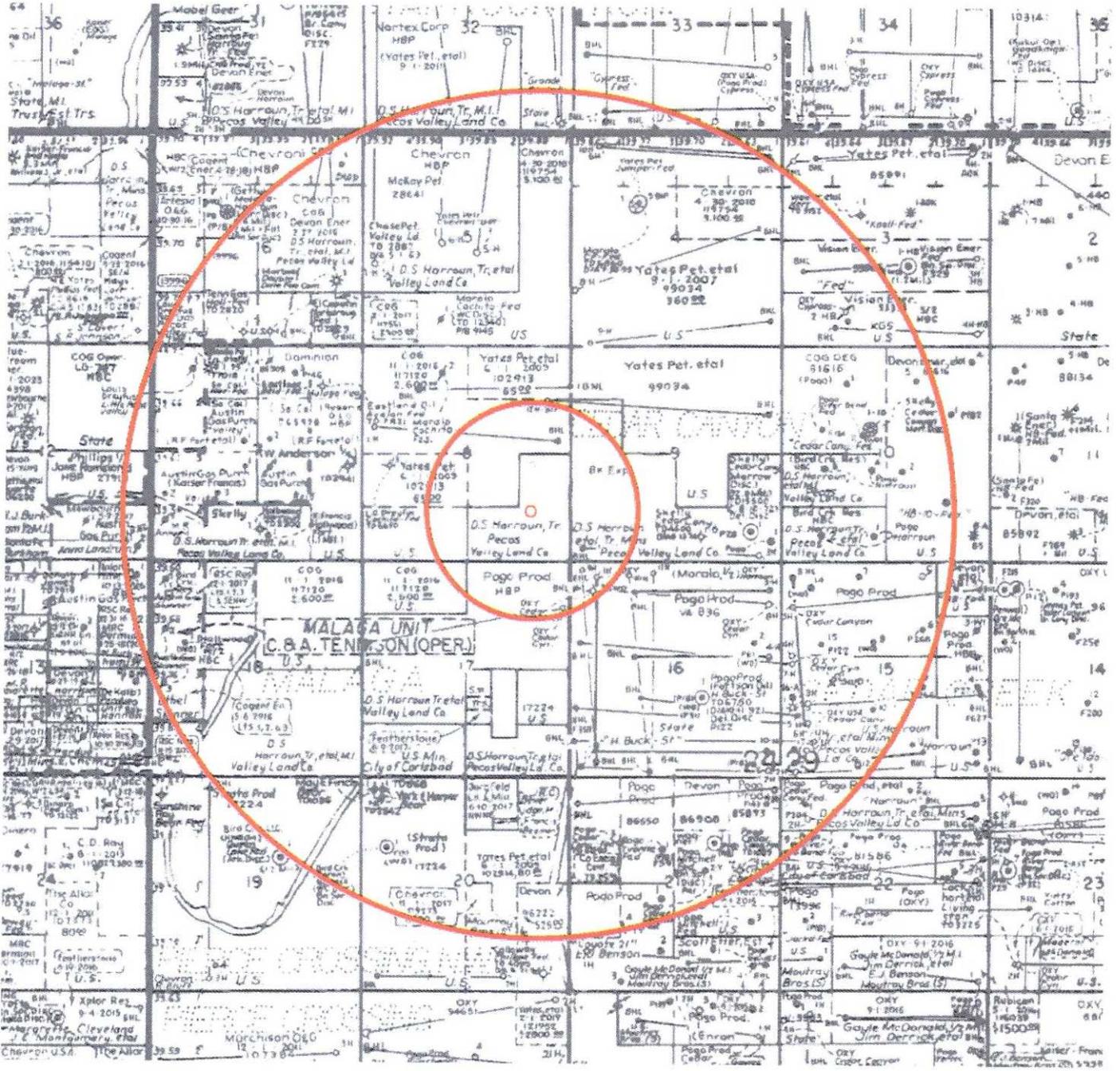


Mesquite SWD, Inc.
Cedar Canyon SWD #1
1310' FSL & 1153' FEL
Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item V:

Area of Review
1/2 Mile AOR and 2 Mile Radius

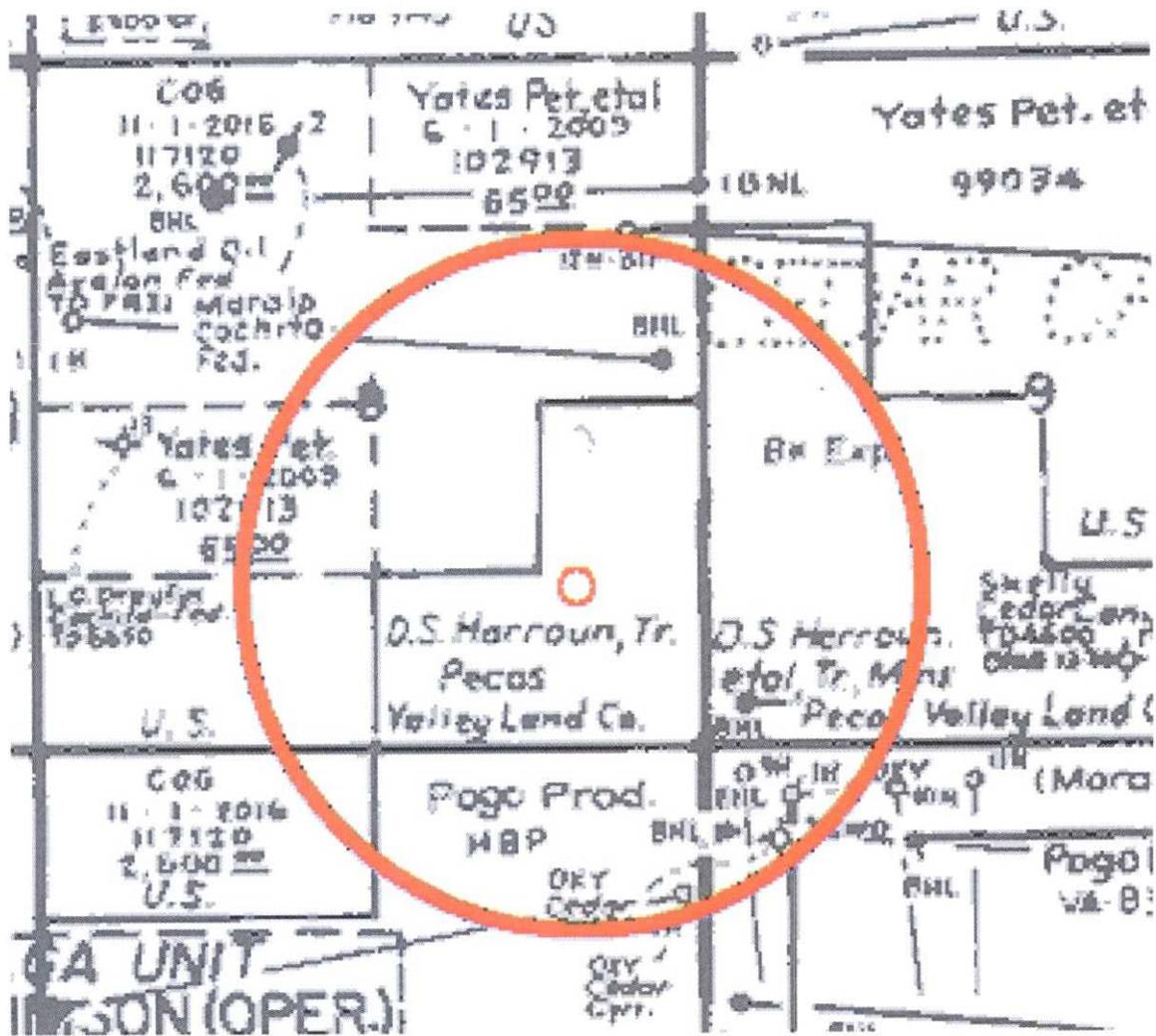


Mesquite SWD, Inc.
Cedar Canyon SWD #1
1310' FSL & 1153' FEL
Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item V (a):

AOR Half - Mile



Mesquite SWD, Inc.
 Cedar Canyon SWD #1
 1310' FSL & 1153' FEL
 Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item VI: Data on wells in AOR:

API	WELL NAME	STATUS	SDV	SEC	TWP	RANGE	NO	NS	NO	BY	DATE	OPERATOR	WELL	LAND	PLUG DATE	SADD	BLVD	IND DEPTH
3001537035	BALSAM BNL FEDERAL COM 001H	Active	A	8	24.05	29E	960	N	30	E	A	YATES PETROLEUM CORPORATION	O	F		31-May-09	2990	7675
3001540754	JUNIPER BIP FEDERAL COM 012H	drilled or	A	8	24.05	29E	1296	N	587	E	A	YATES PETROLEUM CORPORATION	O	F		12-Jan-13	2995	8782
3001528618	COCHITI 8 FEDERAL 002	Plugged	C	8	24.05	29E	660	N	1980	W	C	MARALO LLC	O	F	29-Jun-00	26-Aug-95	3023	6900
3001537644	MORNING FEDERAL 001H	drilled or	E	8	24.05	29E	1980	N	330	W	E	COG OPERATING LLC	O	F		22-May-10	3010	12023
3001529137	COCHITI 8 FEDERAL 013	Plugged	L	8	24.05	29E	2310	S	660	W	L	DOMINION OKLAHOMA-TX EXPL/PROD	O	F	16-Sep-96	31-Aug-96	3013	6650
3001534997	HARROUN 9 001	Active	P	9	24.05	29E	530	S	330	E	P	OXY USA INC	O	P		05-Jun-06	2939	10680

No known wells in the AOR penetrate pre-Permian formations.

Mesquite SWD, Inc.
 Cedar Canyon SWD #1
 1310' FSL & 1153' FEL
 Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item VII:

1. The maximum injected volume anticipated is 25,000 BWPD. Average anticipated is 18,000 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 2,960 psi, or as controlled by depth.
4. Sources will be produced water that is compatible with known waters in the disposal zones.
5. Water sample analyses from the immediate surrounding Siluro-Devonian area are not known, however, the regional information indicates it is non-productive of hydrocarbons. This is supported by SWD-1510 located 1-3/4 miles southeast of this proposed location.

Pro-Kem, Inc.
WATER ANALYSIS REPORT

SAMPLE

Oil Co. : **Southwestern Energy Co.**
 Lease : **Karlsbad Corral 11-ST.**
 Well No.: **2-H**
 Location: *Cherry Canyon 4*
 Attention:

Date Sampled : **30-November-2006**
 Date Analyzed: **01-December-2006**
 Lab ID Number: **Doc0106.001- 3**
 Salesperson :
 Requested By : **Pro-Kem, Inc.***
 File Name : **Doc0106.001**

ANALYSIS

1. Ph **6.320**
2. Specific Gravity 60/60 F. **1.206**
3. CACO3 Saturation Index **@ 80F 3.353**
@ 140F 3.353

Severe
Severe

Dissolved Gases

4. Hydrogen Sulfide **0**
5. Carbon Dioxide **Not Determined**
6. Dissolved Oxygen **Not Determined**

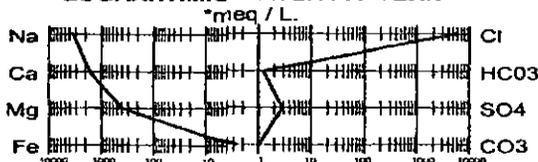
Cations

7. Calcium (Ca++) **31,864** / 20.1 = **1,585.27**
8. Magnesium (Mg++) **4,559** / 12.2 = **373.69**
9. Sodium (Na+) (Calculated) **74,853** / 23.0 = **3,254.48**
10. Barium (Ba++) **Below 10**

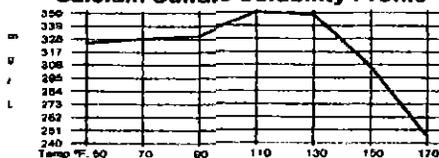
Anions

11. Hydroxyl (OH+) **0** / 17.0 = **0.00**
12. Carbonate (CO3=) **0** / 30.0 = **0.00**
13. Bicarbonate (HCO3-) **73** / 61.1 = **1.19**
14. Sulfate (SO4=) **135** / 48.8 = **2.77**
15. Chloride (Cl-) **184,958** / 35.5 = **5,210.08**
16. Total Dissolved Solids **296,442**
17. Total Iron (Fe) **46.00** / 18.2 = **2.53**
18. Manganese (Mn++) **Not Determined**
19. Total Hardness as CaCO3 **98,338**
20. Resistivity @ 75 F. (Calculated) **0.001** Ohm · meters

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.19		81.04		97
CaSO4	2.77		68.07		188
CaCl2	1,581.31		55.50		87,763
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	373.69		47.62		17,795
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,255.08		58.46		190,292

* milliequivalents per Liter

Rebecca A. Rodriguez
 Rebecca Rodriguez, Analyst

Scott B produced water samples

wellname	api	section	township	range	unit	ftgns	ftgew	formation	chloride_mgl
GUY A REED #001	3001510872	24	24S	28E	E	1980N	660W	DELAWARE	78600
FED #001	3001502504	24	24S	28E	A	330N	990E		78580
H B 11 FEDERAL #0	3001529248	11	24S	29E	L	1650S	400W		109207
H B 11 FEDERAL #0	3001532606	11	24S	29E	K	2550S	1600W		103070
H B 11 FEDERAL #0	3001529249	11	24S	29E	N	850S	2100W		118370
H B 11 FEDERAL #0	3001537900	11	24S	29E	B	330N	1650E	AVALON UPPER	114114
H B 11 FEDERAL #0	3001529248	11	24S	29E	L	1650S	400W		112725
H B 11 FEDERAL #0	3001532741	11	24S	29E	C	330N	1750W		59222
H B 11 FEDERAL #0	3001537900	11	24S	29E	B	330N	1650E	AVALON UPPER	104800

Mesquite SWD, Inc.
Cedar Canyon SWD #1
1310' FSL & 1153' FEL
Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item VIII:

Disposal will be into the Siluro-Devonian formations above the Montoya Formation.

There is no known fresh, potable water within a 2-mile radius. Records from the New Mexico Office of the State Engineer on May 27, 2016 show no known water wells within the 2-mile radius of the proposed Mesquite SWD disposal well.



New Mexico Office of the State Engineer
Wells with Well Log Information

No wells found.

Basin/County Search:

County: Eddy

UTMNAE83 Radius Search (in meters):

Easting (X): 666330

Northing (Y): 3556940

Radius: 3200

The data is furnished by the NMDBE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/27/16 6:44 PM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION

The surface geology of the greater area, including the 2-mile radius as shown in Item V above, is Quaternary eolian Holocene underlain or upon the Permian Rustler Formation and evaporites. Based upon surface geology and available shallow data the depth to potential potable water (not hole depth), if present, is estimated to be less than 200'

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Item IX:

Some acid may be applied after completion. No other formation stimulation is currently planned.

Item X:

Logs will be filed with the OCD upon completion of the well. Density -Neutron is planed from surface to TD.

Item XI:

No water wells are reported in the 2-mile radius of the proposed SWD. Please note Item VIII discussion above.

Item XII:

There is no geological evidence of open faults or hydrologic connection between the disposal zone and any possible underground sources of protectable water.

Mesquite SWD, Inc.
Cedar Canyon SWD #1
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API 30-025-NA



Delorme Xmap 6
4.2 miles west of Malaga, NM and US 285.

Mesquite SWD, Inc.
Cedar Canyon SWD #1
1310' FSL & 1153' FEL
Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item XIII: Proof of Notice

Minerals Owner:

Valley Land, LLC
P.O. Box 597
Loving, NM 88256

Surface: Fee:

Valley Land, LLC
P.O. Box 597
Loving, NM 88256

Operators in AOR:

BK Exploration Corp
10159 E. 11th St, Ste 401
Tulsa, OK 74128-3028

Operator
SW/4 NW/4, SW/4 Sec 9

COG Operating, LLC
600 W. Illinois Ave.
Midland, TX 79701

Operator
NW/4 SE/4, S/2 SE/4 Sec. 8,
NW/4 Sec 16,

OXY USA, Inc
P.O. Box 27570
Houston, TX 77277-7570

Operator
SE/4 Sec.7

Yates Petroleum Corp, et al
105 S. 4th St
Artesia, NM 88210

Operator
NW/4 NW4, SE/4 NW/4 Sec 9

Mesquite SWD, Inc.
Cedar Canyon SWD #1
1310' FSL & 1153' FEL
Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item XIII: Legal Publication

Affidavit of Publication

No. 24021

State of New Mexico

County of Eddy:

Danny Scott

Danny Scott

Publisher

being duly sworn says that she is the
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 Ad

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	August 5, 2016
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	

Subscribed and sworn before me this

5th day of August 2016



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

Mesquite SWD, Inc., c/o Kay Havenor, 904 Moore Ave, Roswell, NM 88201-1144, (675) 826-4518, is seeking approval from the New Mexico Oil Conservation Division to drill and complete the Mesquite SWD, Inc. Cedar Canyon SWD No. 1 well API: 30-015- (unassigned), to be located 1310 feet from the south line and 1153 feet from the east line of Section 8, T24S, R29E, Eddy County, NM for commercial produced water disposal by drilling to approximately 16,000 feet to penetrate the Siluro-Devonian formation. The site is 4.2 miles west of Malaga, NM and US 285, Eddy County, NM.

Mesquite SWD, Inc. plans to dispose of a maximum of 25,000 BWPD with a disposal interval in the Siluro-Devonian formation through open hole approximately 14,800' to 16,000' with maximum pressure of 2,960 psi.

Parties with questions regarding this proposal can contact Kay Havenor at the address or phone number above.

Interested parties must file objections or requests for hearing within 15 days of publication to the Oil Conservation Division: 1220 South St. Francis Dr., Santa Fe, NM 87505.

Published in the Artesia Daily Press, Artesia, N.M., August 5, 2016 Legal No. 24021.

Mesquite SWD, Inc.
 Cedar Canyon SWD #1
 1310' FSL & 1153' FEL
 Sec. 8, T24S-R29E Eddy County, NM

API 30-025-NA

Item XIII: Certified Mail Receipts (3)

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com

ARTESIA NM 88210 SOCIAL USE

Postage	\$2.70
Certified Fee	\$0.00
Return Receipt Fee (Endorsement Required)	\$0.00
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$2.70

Sent To: Yates Petroleum Corp, et al
 Street & Apt. No., of PO Box No. 105 So. 4th Street
 City, State, ZIP+4 Artesia, NM 88210

PS Form 3800, July 2014 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>Signature: <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name): <i>[Signature]</i> C. Date of Delivery: <i>8/8/16</i></p> <p>D: Is delivery address different from item ?? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to:</p> <p>Yates Petroleum Corp, et al 105 So 4th Street Artesia, NM 88210</p>	<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™ <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</p>
<p>2. Article Number (Transfer from service label)</p> <p>7014 2120 0001 6412 9035</p>	<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>

wellname	api	section	township	range	unit	ftgns	ftgew	field	formation	depth	tds_mgL	calcium_mgL	iron_mgL	magnesium_mchloride_mgL
GAINES 21 #1	3001528638	21	24S	29E	D	990S	1650E	CEDAR CANYON;DELAWAR	BONE SPR	7850	8856	601.2	0	72.915 62858.2



ORDER TYPE: WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No. 1 Well Name(s): Cedar Canyon

API: 30-0 15-Pending Spud Date: TBQ New or Old: ← (UIC Class II Primacy 03/07/1982)

Footages 1310 FSL
1153 FEL Lot _____ or Unit P Sec 8 Tsp 24S Rge 28E County Eddy

General Location: 2 miles NW of Alga Pool: SWD, Deerhorn, Si Umm Pool No.: 92869

BLM 100K Map: Carlsbad Operator: Mesquite SWD, Inc OGRID: 161968 Contact: Maverick agent Kay

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

WELL FILE REVIEWED Current Status: Proposed

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

Planned Rehab Work to Well: C-B-L

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>26/20</u>	<u>850</u>	<u>6S2</u>	<u>SURFACE/VISUAL</u>
Planned ___ or Existing ___ Interm/Prod	<u>14 3/4 / 13 3/8</u>	<u>4400</u>	<u>1000</u>	<u>SURFACE/VISUAL</u>
Planned ___ or Existing ___ Interm/Prod	<u>12 1/4 / 11 1/4</u>	<u>11650</u>	<u>1800</u>	<u>SURFACE/VISUAL</u>
Planned ___ or Existing ___ Prod/Liner	<u>8 1/2 / 7 3/8</u>	<u>14800</u>	<u>2340</u>	<u>11415 / C-B-L</u>
Planned ___ or Existing ___ Liner				
Planned ___ or Existing ___ <u>QA</u> / PERF	<u>14800 / 1600</u>		<u>Inj Length</u> <u>1200'</u>	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.		<u>DU</u>	<u>14800</u>	Drilled TD <u>1600</u> PBTD _____
Confining Unit: Litho. Struc. Por.		<u>WIS</u>	<u>14900</u>	NEW TD _____ NEW PBTD _____
Proposed Inj Interval TOP:				NEW Open Hole <input checked="" type="radio"/> or NEW Perfs <input type="radio"/>
Proposed Inj Interval BOTTOM:				Tubing Size <u>4 1/2</u> in. Inter Coated? <u>Y</u>
Confining Unit: Litho. Struc. Por.				Proposed Packer Depth <u>14800</u> ft
Adjacent Unit: Litho. Struc. Por.				Min. Packer Depth <u>1310</u> (100-ft limit)
				Proposed Max. Surface Press. <u>290</u> psi
				Admin. Inj. Press. <u>2960</u> (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P MA Noticed? _____ BLM Sec Ord WIPP Noticed? _____ Salt/Salado T: 700 B: 274NW: Cliff House fm _____

FRESH WATER: Aquifer Quaternary Max Depth 250' HYDRO AFFIRM STATEMENT By Qualified Person

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

Disposal Fluid: Formation Source(s) Delaware, Conn Analysis? Y On Lease Operator Only or Commercial

Disposal Int: Inject Rate (Avg/Max BWPD): 112/25K Protectable Waters? _____ Source: _____ System: Closed or Open

HC Potential: Producing Interval? MA Formerly Producing? _____ Method: Logs/DST/P&A/Other Regional Geology 2-Mile Radius Pool Map

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

Penetrating Wells: No. Active Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

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

NOTICE: Newspaper Date 8-05-2011 Mineral Owner Valley Land LLC Surface Owner Valley Land LLC N. Date 8-7-2011

RULE 26.7(A): Identified Tracts? Y Affected Persons: BIC, COG, Oxy, YMAES N. Date 8-8-2011

Order Conditions: Issues: C-B-L of liner from approximately 11000'-14800'

Add Order Cond: _____