

1.31.11		WJ	1.31.11	TYPE SWD	1269	176W	1103154845
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NEW MEXICO OIL CONSERVATION DIVISION  
- Engineering Bureau -  
1220 South St. Francis Drive, Santa Fe, NM 87505

ABOVE THIS LINE FOR DIVISION USE ONLY

Mesquite 16/1/08  
Holt  
RECEIVED OGD  
Heavy Metal 12 Feb #1  
2006-10-12 12:36

## ADMINISTRATIVE APPLICATION CHECKLIST

30-015-29602

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

### Application Acronyms:

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

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]  
[A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]  
[B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
- [D] Other: Specify \_\_\_\_\_

- [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.

Kay Havenor

Kay C Havenor

Agent

1/24/2011

Print or Type Name

Signature

Title

Date

KHavenor@georesources.com  
e-mail Address

WITHDRAWN BY COG  
Noted by 3/15  
2/14/11  
Waiting this was  
Noted by 1/21/09

Mesquite SWD, Inc. 161968  
P.O. Box 1479  
Carlsbad, NM 88221

Contact party: Kay Havenor 575-626-4518  
KHavenor@georesources.com

### C-108 Ancillary Data

1. API: 30-015-29602
- 2.. Original Lease Name: Heavy Metal 12 Federal #1      New name used here: No
3. Legal publication lay distance description: "located 22.5 miles east of Loving, NM off NM-128 and Buck Jackson Road"
4. AOR data: All wells are shown in summary and detail in **Item VI**: Data on unplugged wells in AOR:
  - 1) 3001528626 Chesapeake Operating, Inc. SOTOL A Federal 3, C-Sec. 12, T24S-R31E, Eddy Co., 660' FNL & 1980' FWL Elev 3530 GL Spudded 10/24/1995. TD 8625'. 11-3/4" @ 826' w/590 sxs, circulated. 8-5/8" casing @ 4450' w/1370 sxs, circulated. 5-1/2" @ 8625' w/1465 sxs, TOC 3500'. Perf 8163 - 8192'. Completed as oil well in Mesa Verde Delaware field (Brushy Canyon).
  - 2) 30-015-37607 COG, Seabiscuit Federal Com #1, N-12-R24S-R31E Spudded 4/26/2010, 13-3/8" @ 863' w/750 sxs circulated. 9-5/8" to 4508' w/1550 sx circ to surface. Ran 9206' 7" plus 4306' of 5-1/2" to 13584' w/MD 13550' w/450 sxs circ from DVT @ 8425' and 800 sxs above DVD. TOC temp survey @1000' TVD approx 8425'. Well completed as producer Bone Springs lateral, but no perf/treatment/completion data has been filed as of this date.
5. AOR well count as shown in **Item VI**: 6 (3 plugged, 2 active, 1 undrilled location)
6. P&A wells in AOR count: 3 (including target re-entry P&A 10/9/1997)
7. List of formation tops applicable to AOR: Tops in target re-entry well:  
Rustler 758', Salado 1232', main Salt 2380', B/Salt 4298', T/Lamar 4532', T/Bell Canyon 4587', T/Cherry Canyon 5515', Brushy Canyon 7080', Bone Springs 8396
8. Producing or non-P&A wells in proposed disposal AOR:  
Marbob Unit M-Sec. 11, T24S-R31E - New Bone Springs lateral well. Data & logs not yet filed or released.
9. Is proposed SWD in a depleted zone/well? No. Proposed injection into Bell and Cherry Canyon isolated from underlying Brushy Canyon w/cement plug.
10. Why is proposed interval non-productive?  
Log and tests show water wet.
11. Notification and related acreage is shown in **Item XIII**:  
Chesapeake Sec. 11: S/2 NE/4, SE/4, Sec. 12: NE/4 NW/4 Shallow ?, Sec. 14: N/2  
Devon Sec. 11: E/2 SW/4  
COG Sec 12: All  
Oxy Sec 14: All
12. Surface owner, as shown in Item XIII, is: BLM
13. Rule 5.9 status of applicant: Financial status in compliance. Inactive wells include: 1 inactive
- 14: Location of well as to Potash or other sensitive areas: Not within R-111-P

**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 1479 Carlsbad, NM 88221

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 Havenor DATE: January 24, 2011

E-MAIL ADDRESS: KHavenor@georesources.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.

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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.WELL NAME & NUMBER: Heavy Metal 12 Federal No.1WELL LOCATION: 1900' FSL & 1900' FWL  
FOOTAGE LOCATIONUNIT LETTER KSECTION 12TOWNSHIP 24SRANGE 31EWELLBORE SCHEMATIC

See attached well  
plugging/recompletion diagram

WELL CONSTRUCTION DATASurface CasingHole Size: 17-1/2" Casing Size: 13-3/8"Cemented with: 600 sx. or          ft<sup>3</sup>Top of Cement: Surface Method Determined: CirculatedIntermediate CasingHole Size: 11" Casing Size: 8-5/8"Cemented with: 1800 sx. or          ft<sup>3</sup>Top of Cement: Surface Method Determined: CirculatedProduction CasingHole Size:          Casing Size: NoneCemented with:          sx. or          ft<sup>3</sup>Top of Cement:          Method Determined:         Total Depth:         Injection Interval4415 feet to PB 7050 feet Open hole

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 3-1/2" L80 upset Lining Material: IPC 1850 coatedType of Packer: Lok-SetPacker Setting Depth: Approx 4360 ftOther Type of Tubing/Casing Seal (if applicable): Additional Data

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

If no, for what purpose was the well originally drilled? Oil/gas

2. Name of the Injection Formation: Delaware Mtn Group: Bell Canyon and Cherry Canyon

3. Name of Field or Pool (if applicable): NA (Not 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. No

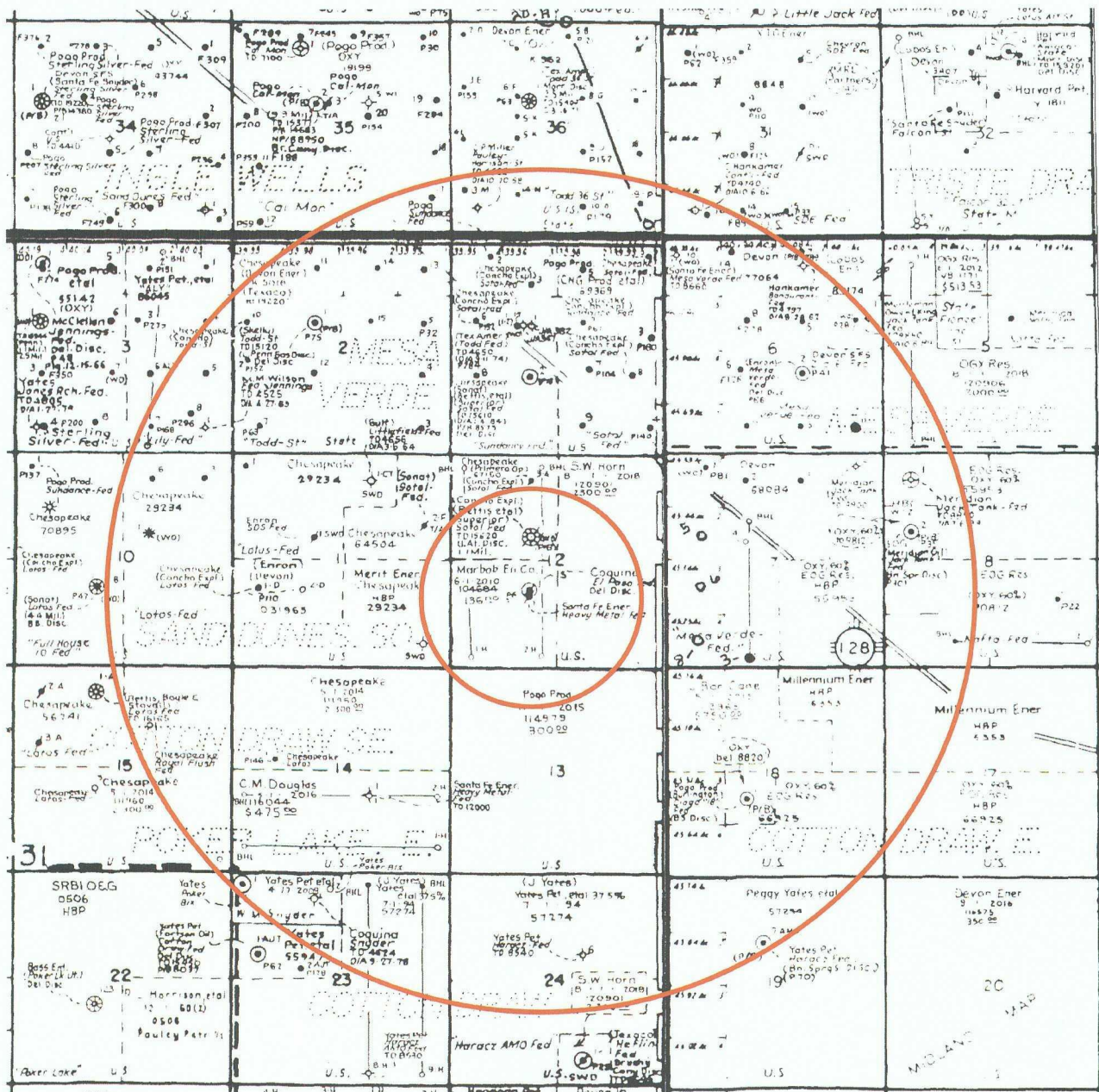
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: No Bell Canyon or Cherry Canyon (Delaware) productive in this

AOR. Lower Brushy Canyon - upper Bone Spring sand productive in the area below 7200'.

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

Item V:

Area of Review  
½ Mile AOR and 2 Mile Radius



Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
 1900' FSL & 1900' FWL  
 Sec. 12, T24S-R31E  
 Eddy County, NM

**Item VI:** Data on wells in AOR

All Known Wells in AOR

	API	WELL NAME	STATUS	UNIT	SEC	TOWNS	RANGE	NS	EW	OPERATOR	LAND	SPUD DATE	PLUG DATE	ELEV-GL	TVD_DEPTH	Highest Perf
1	3001522555	El Paso Federal 1	P&A	K	12	24S	31E	1980-S	1980-W	Chesapeake Operating, Inc.	Fed	5/25/1978	4/14/1979	3540	4690	4590
2	3001528626	SOTOL "A" FEDERAL 3	Active	C	12	24S	31E	660-N	1980-W	Devon Energy Production Co	Fed	10/24/0995		3530	8625	8163
3	3001528459	SOTOL "A" FEDERAL 1	P&A	F	12	24S	31E	1980-N	1980-W	Concho Exploration	Fed	5/28/1994	12/15/2000	3532	15620	7132
4	3001529602	HEAVY/METAL 12 FEDERAL 1	P&A	K	12	24S	31E	1900-S	1900-W	Devon SFS Operating, Inc.	Fed	8/28/1994	10/9/1997	3541	8600	NONE
5	3001537605	Seabiscuit Federal Com 2H	Loc	M	12	24S	31E	330-S	530-W	COG Operating, LLC	Fed			3559		
6	3001537607	Seabiscuit Federal Com 1H	Comp NA	N	12	24S	31E	330-S	2260-W	COG Operating, LLC	Fed	4/27/2010		3565	approx 8425	NR

Note: 3001529602 is the target re-entry.

Construction of producing well in AOR:

3001528626 Chesapeake Operating, Inc. SOTOL A Federal 3, C-Sec. 12, T24S-R31E, Eddy Co., 660' FNL & 1980' FWL Elev 3530 GL  
 Spudded 10/24/1995. TD 8625'. 11-3/4" @ 826' w/590 sxs, circulated. 8-5/8" casing @ 4450' w/1370 sxs, circulated. 5-1/2" @ 8625' w/1465 sxs,  
 TOC 3500'. Perf 8163 - 8192'. Completed as oil well in Mesa Verde Delaware field (Brushy Canyon).

Construction of recently drilled well in AOR:

3001537067 COG Operating, LLC, Seabiscuit Federal Com #1H, N-12, T24S-R31E, Eddy Co., 330' FSL & 2260' FWL, Elev 3566 GL, Spudded  
 4/27/10 as lateral Bone Springs test. MD 13550', TVD NR but approx 8425'. 13-3/8" @ 865' w/750 sxs, circulated. 9-5/8" @ 4508' w/1550 sxs,  
 circulated. 7" 9206' + 5-1/2" 4336' Cemented w/450 sx circ to DV tool @ 8425' + 800 sx thru DV tool for 7" to 1000' (TOC by Temp Survey  
 reported to BLM 5/26/2010. No further data reported as of 1/22/2011. Ground inspection shows well head and tankage completed and site clean.



Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

**Item VII:**

1. The maximum injected volume anticipated is 5,000 BWPD. Average anticipated is 4,000 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 883 PSI.
4. Sources will be only produced water.
5. Water sample analysis Delaware Brushy Canyon 30-015-27276 Sec. 3, T24S-R31E, Eddy Co. See figure from WAIDS data base below.

# NM WAIDS



Water Samples for Well LILY ALY FEDERAL 006

API = 3001527276

Formation = DEL

Field = INGLE WELLS

Current Water Production Information

Corrosion
Theory
Equipment
Gases
Prevention
References

**Instructions:**



Click

For general information about this sample.



Click

For scale calculation pages (Stiff-Davis or Odco Tomson methods).



Click

To select **this water sample** for water mixing. It will lead to the main page, and add the sample ID to the mixing table.

Click **664**

Click the hyperlinked sample number to make a .csv for that sample, **or** select several check boxes and click Submit for multiple samples

The ions are in (mg/L) units.

SampleID	T	R	S	SO4	CL	CO3	HCO3	K	Na	Ca	Mg
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☐

6825



24S 31E 03 25

180198 null

159

null null

17720 1080

☐ SELECT/DESELECT ALL

Submit

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
 1900' FSL & 1900' FWL  
 Sec. 12, T24S-R31E  
 Eddy County, NM

**Item VIII:**

**USGS 321312103395601 24S.32E.10.344333**

Lea County, New Mexico  
 Latitude 32°13'30", Longitude 103°39'51" NAD27  
 Land-surface elevation 3,589.00 feet above sea level NGVD29  
 The depth of the well is 60 feet below land surface.  
 This well is completed in the Alluvium, Bolson Deposits and Other  
 Surface Deposits (110AVMB) local aquifer.

**Output formats**

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	Water level, feet below land surface	Status
1950-04-13		33.64	
1955-06-03		31.90	R
1976-01-22		31.80	
1981-03-20		19.93	

Date	Time	Water level, feet below land surface	Status
1986-03-18		37.16	
1991-05-29		39.64	
1996-03-14		38.20	
2001-02-27		36.58	
2006-02-07	09:30	19.40	

The surface of the area included in the 2-mile radius, as shown in Item V above, is Quaternary alluvium and Recent blow-sand deposited on Cretaceous/Triassic Dewey Lake redbeds. No shallow samples have been found in the greater area to clearly define shallow tops. E-logs suggest the top of the Rustler Formation is in the range of 150'. The Dewey Lake and Rustler Formation extend down to about 1100' and/or the top of the Salado. Various wells report anhydrite as high as about 800', but the salt, with some interbedded anhydrites, is typically in the range of 1150' to about 4300'. The heavy-bedded anhydrite beneath the salt is approximately 300' to 400' thick. It is essentially non-porous, non-permeable and rests unconformably on the Lamar Limestone of the Delaware Mountain Group. The Delaware Mountain Group is comprised of three major sand-shale members: Bell Canyon, Cherry Canyon, and Brushy Canyon. In the study area the Bell Canyon is approximately 930' thick. The Cherry Canyon is close to 1560' thick. The Brushy Canyon is about 1300' thick, of which the lower 300' portion contains most of the formation's main oil/gas productive horizons. Not all the lower Brushy Canyon is productive.

Virtually no groundwater data is available within the 2-mile radius study area. A commercial water well supply for oil well drilling is present 1.6 miles NW of the proposed Mesquite SWD location. The water well is in NW/SE/NW of Sec. 2, T24S-R31E. OSE data for C-1246-A-O indicates the water was encountered at approximately 160' and the well was drilled to 250'. This depth would suggest basal Quaternary/upper Triassic localized aquifer. Water volume was estimated to originally yield 75 gpm. Texaco drilled a water supply well in 1995 in SE4/NW4 Sec. 12, T24S-R31E, but all that is available is the water was to be used for drilling. Water wells to the west of the 2-mile radius suggest the Cretaceous/Triassic Dewey Lake is around 25 feet deep and small volume (7 to 12 gpm) are coming from deeper redbeds in the Rustler. No water quality is reported. Quaternary water zones in this region are scattered and not hydraulically connected. They occur in low irregularities in the alluvial deposits and derive their recharge from precipitation that moves downward through the blow-sands to accumulate randomly on top of the Cretaceous/Triassic Dewey Lake. Potable water is not common in this portion of Eddy/Lea County. If shallow potable or stock water were present in the study area it would be above about 100'.

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

**Item IX:**

Acid wash of sand porosity zones between 4587' and 7050' may be attempted. No fracturing is planned.

**Item X:**

Logs are on file with the OCD.

**Item XI:**

No fresh water wells have been found within the 1-mile radius of the project well. See Item X above.

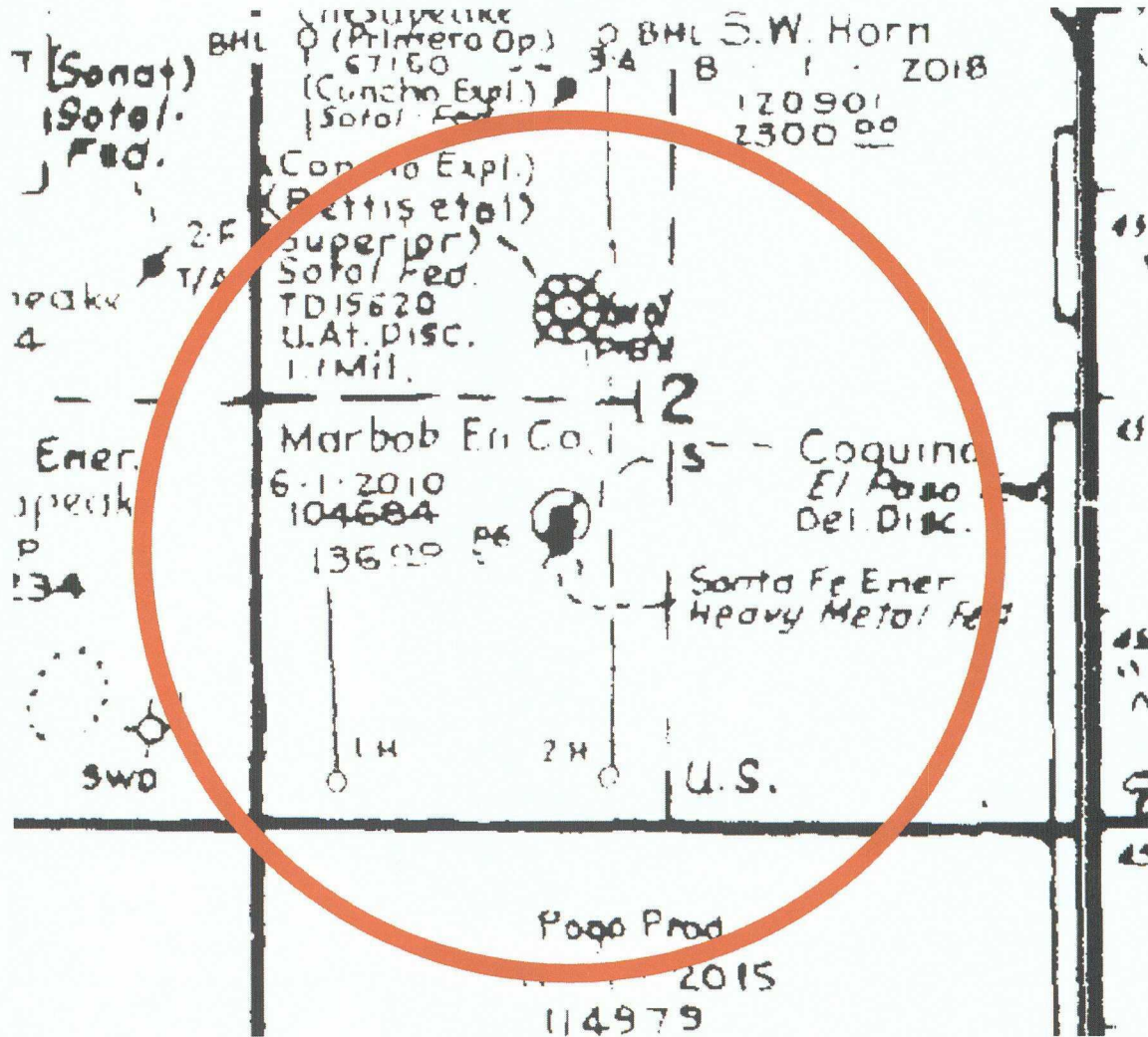
**Item XII:**

There is no geological evidence of open faults nor hydrologic connection between the disposal zone and any possible underground sources of potable water.

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

Enlarged View of AOR  
Centered in Unit K Sec. 12-T24S-R31E  
Eddy Co., NM

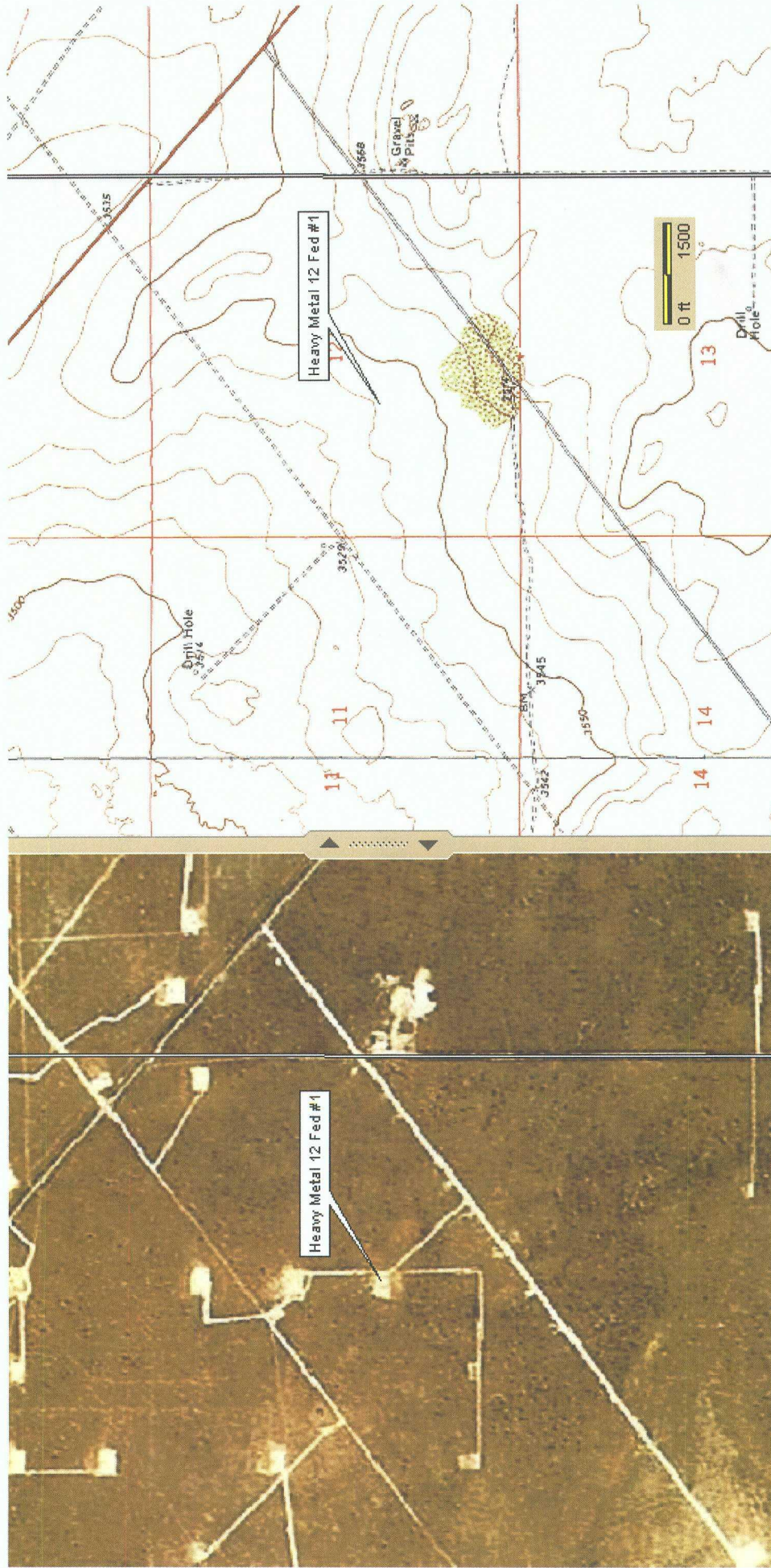
Item V(a):





Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

Topographic and Spot Satellite image of well site area



Delorme Xmap 6

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

### PLUG AND ABANDON WELL DIAGRAM

API: 3001529602

Originally: Devon SFS Operating, Inc. Heavy Metal 12 Federal No. 1

Operator: Devon SFS Operating, Inc.

Lease: Heavy Metal 12 Federal

Well No: 1

KB: 3554

Location: Sec 12, T24S-R31E Eddy Co., NM

GL: 3541

Footage: 1900 FSL, 1900 FWL

#### Original Surface Csg

Size: 13-3/8"

Set @: 608

Sxs cmt: 600

Circ: Circulated

TOC: Surface

Hole Size: 17-1/2"

#### Original Intermediate Csg

Size: 8-5/8"

Set @: 4415

Sxs cmt: 1800

Circ: Circulated

TOC: Surface

Hole Size: 11"

#### Original Production Csg

Size: None

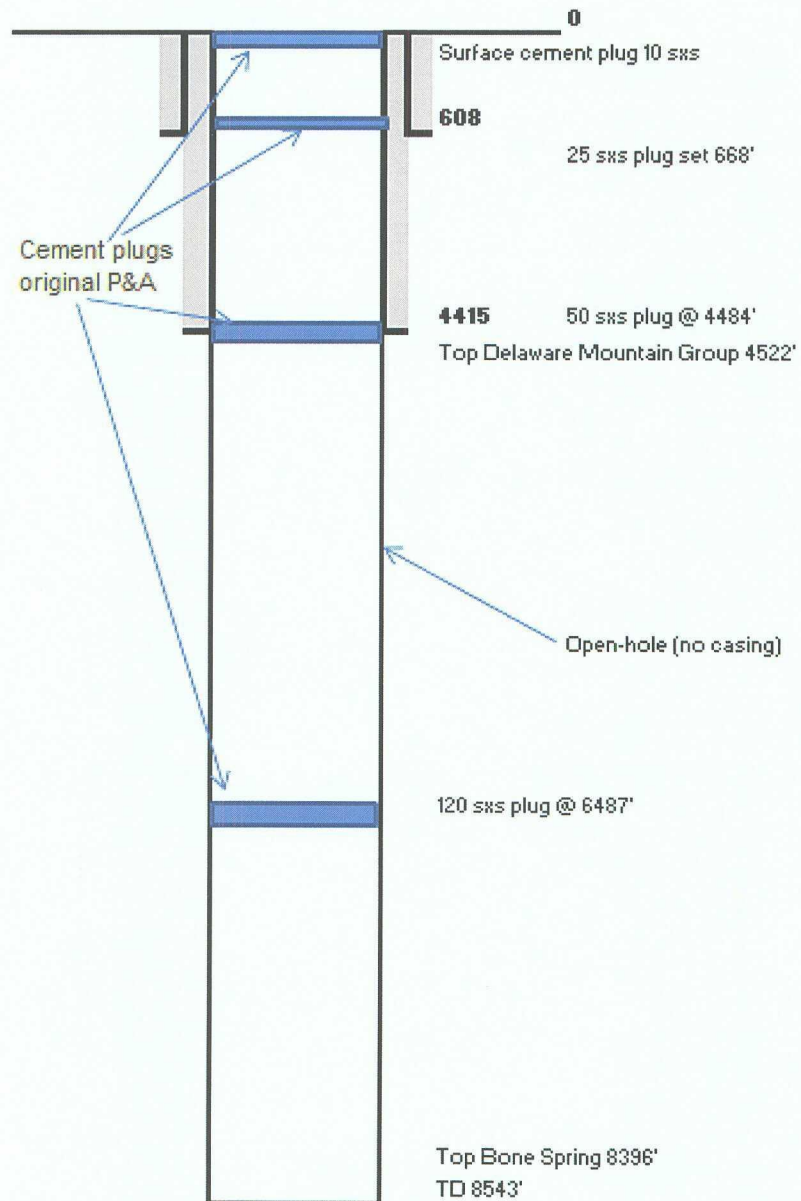
Set @:

Sxs cmt:

Circ:

TOC:

Hole Size: 7-7/8"



Not to Scale

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

### PLUG AND ABANDON WELL DIAGRAM

API: 3001523459  
Operator: Concho Exploration  
Lease: SOTOL A Federal  
Location: Sec 12, T24S-R31E Eddy Co., NM  
Footage: 1980 FNL, 1980 FWL

Well No: 1

KB: 3558  
GL: 3532  
Spud date: August 31, 1980  
Plugged date: December 31, 2000  
MSL of TD: -12060

#### Surface Csg

Size: 20"  
Set @: 660  
Sxs cmt: 1450  
Circ: Yes  
TOC: Surface  
Hole Size: 24"

#### Intermediate Csg

Size: 13-3/8"  
Set @: 4530  
Sxs cmt: 3200  
Circ: Yes  
TOC: Surface  
Hole Size: 17-1/2"

#### Production Csg

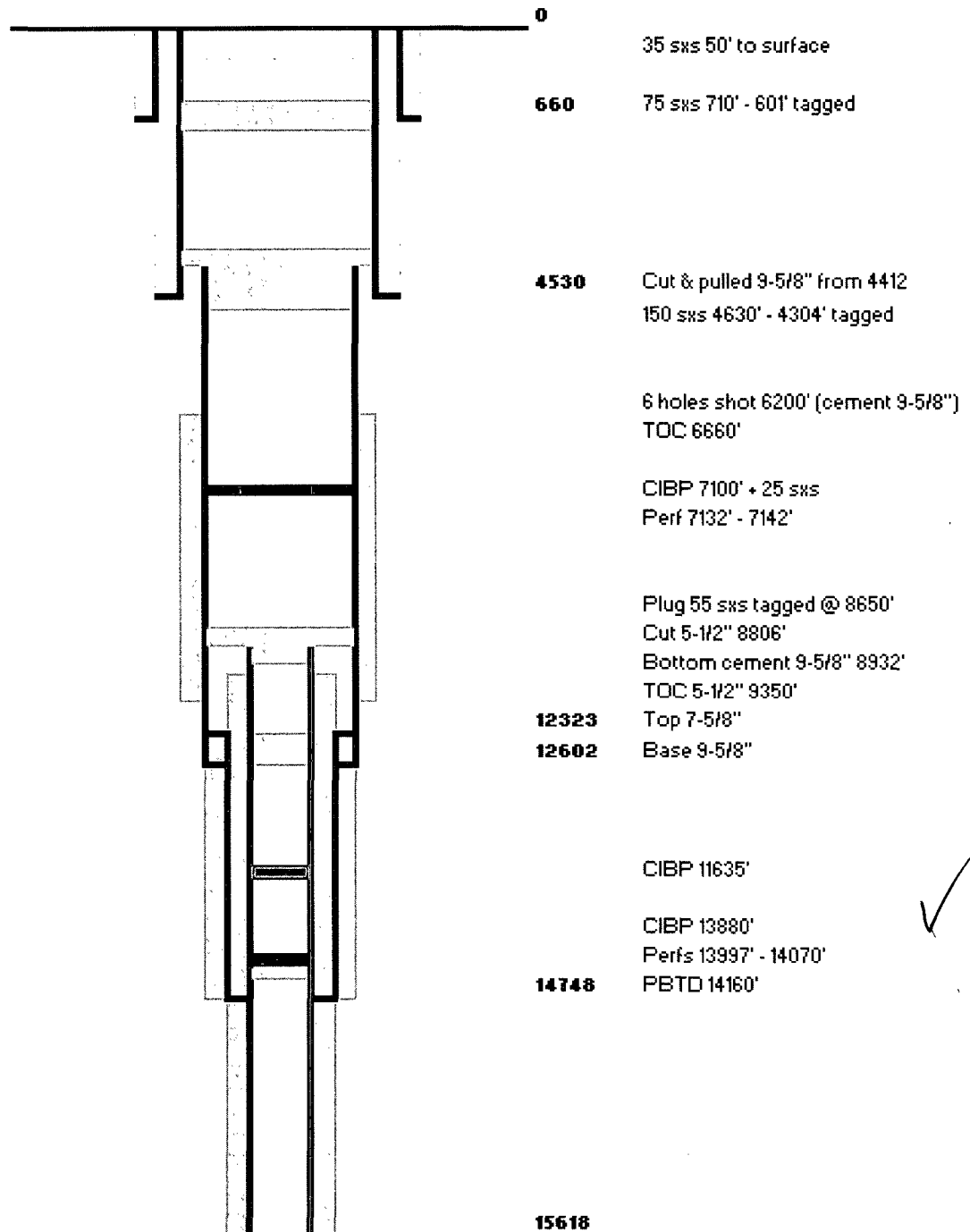
Size: 9-5/8"  
Set @: 12602  
Sxs cmt: 1451  
Circ: No  
TOC: NR  
Hole Size: 12-1/4"

#### Production Liner

Size: 7-5/8"  
Set @: 12323 to 14748  
Sxs cmt: 900  
Circ: NR  
TOC: NR  
Hole Size: 10-1/4"

#### Production Liner

Size: 5"  
Set @: 14509 to 15618  
Sxs cmt: 255  
Circ: NR  
TOC: NR  
Hole Size: NR





Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
 1900' FSL & 1900' FWL  
 Sec. 12, T24S-R31E  
 Eddy County, NM

### PLUG AND ABANDON WELL DIAGRAM

API: 3001522555

Operator: Cocquina Oil Corp

Lease: El Paso Federal

Well N 1

Location: Sec 22, T21S-R27E Eddy Co., NM

Footage: 660 FNL, 1980 FWL

KB:

GL:

3540

Spud date:

February 25, 1978

Plugged date:

April 14, 1979

MSL of TD:

-1150

#### Surface Csg

Size: 8-5/8"

Set @: 375'

Sxs cmt: 275

Circ: Yes

TOC: 0

Hole Size: 12-1/4"

#### Production Casing

Size: 5-1/2"

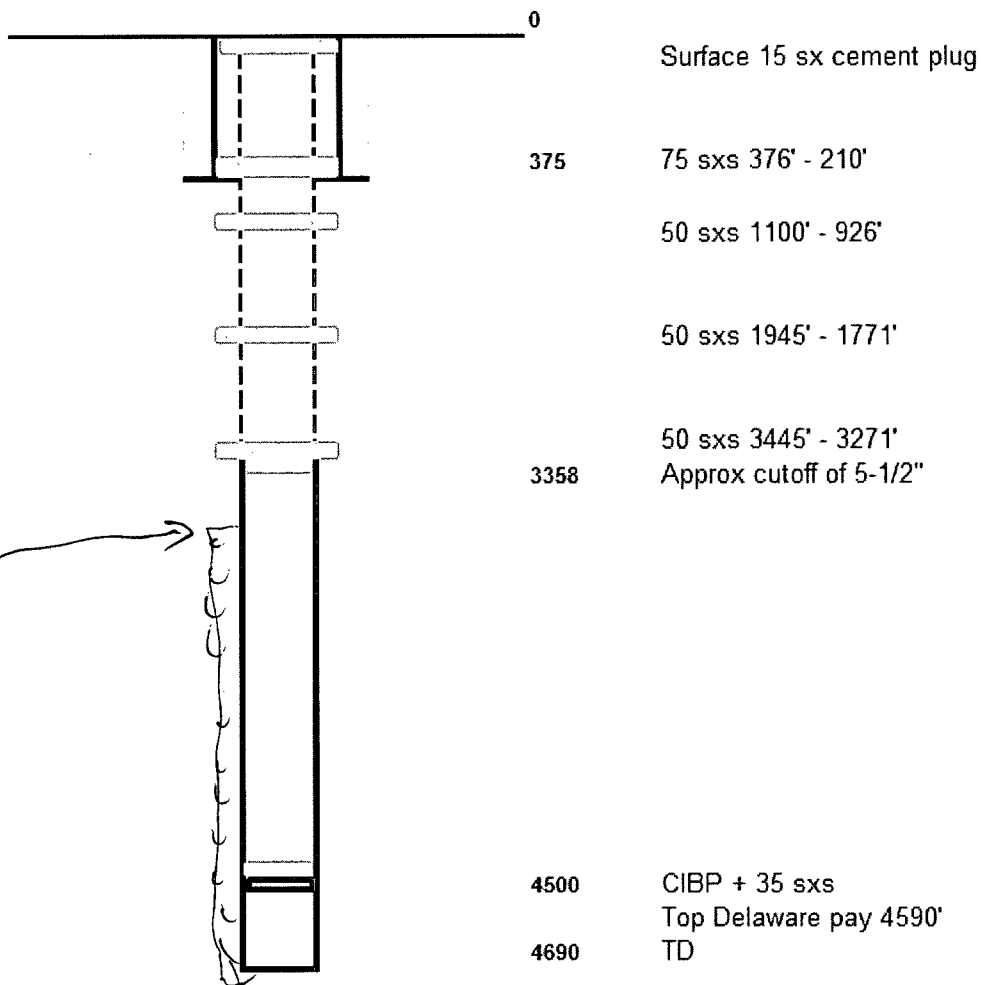
Set @: 4690'

Sxs cmt: 250

Circ: No

TOC: 3740' estimate

Hole Size: 7-7/8"





Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
 1900' FSL & 1900' FWL  
 Sec. 12, T24S-R31E  
 Eddy County, NM

# PROPOSED RE-ENTRY AND COMPLETION PLAN

API: 3001529602

Originally: Devon SFS Operating, Inc. Heavy Metal 12 Federal No. 1

Operator: Mesquite SWD, Inc.

Lease: Heavy Metal 12 Federal

Well No: 1

KB: 3554

Location: Sec 12, T24S-R31E Eddy Co., NM

GL: 3541

Footage: 1900 FSL, 1900 FWL

## Original Surface Csg

Size: 13-3/8"

Set @: 608

Sxs cmt: 600

Circ: Circulated

TOC: Surface

Hole Size: 17-1/2"

## Original Intermediate Csg

Size: 8-5/8"

Set @: 4415

Sxs cmt: 1800

Circ: Circulated

TOC: Surface

Hole Size: 11"

## Original Production Csg

Size: None

Set @:

Sxs cmt:

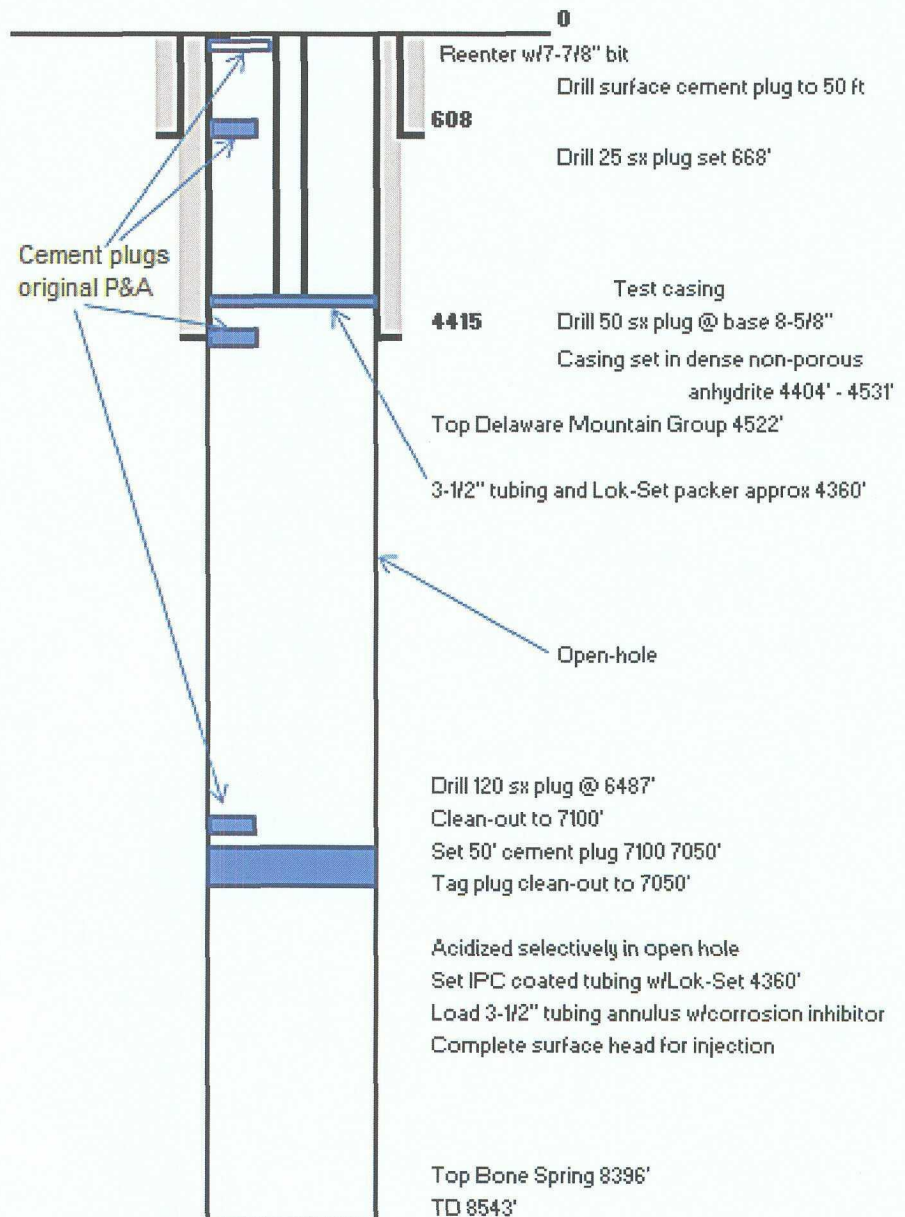
Circ:

TOC:

Hole Size: 7-7/8"

Tubular requirements (made-up):

4360' 3-1/2" N80 9.3# upset IPC 1810 coated



Not to Scale

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

**Item XIII:**

**Notification List**

**Surface Owner:**

Bureau of Land Management  
c/o Carlsbad Field Office  
620 E. Greene Street  
Carlsbad, NM 88220

**Operators:**

COG Operating, LLC  
550 W. Texas St. Ste 100  
Midland, TX 79701

*2000*  
*DEVON*

Chesapeake Operating, Inc.  
P.O. Box 18496  
Oklahoma City, OK 73154

Occidental Permian, LTD.  
P.O. Box 4294  
Houston, TX 77210-4294

**Surface BLM Lessee:**

Richardson Cattle Company  
P.O. Box 487  
Carlsbad, NM 88221

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

## Certified Mail Receipts

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OKLAHOMA CITY OK 73154**

Postage	\$ 1.39	0602
Certified Fee	\$2.80	
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	

Sent To  
Chesapeake Operating, Inc.  
Street, Apt. No.,  
or PO Box No. P. O. Box 18496  
City, State, ZIP+4  
Oklahoma City, OK 73154

PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**CARLSBAD NM 88220**

Postage	\$ 1.39	0602
Certified Fee	\$2.80	
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	

Sent To  
Bureau of Land Management  
Street, Apt. No.,  
or PO Box No. 620 E. Greene St  
City, State, ZIP+4  
Carlsbad, NM 88220

PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**HOUSTON TX 77210-4294**

Postage	\$ 1.39	0602
Certified Fee	\$2.80	
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	

Sent To  
Occidental Permian, LTD  
Street, Apt. No.,  
or PO Box No. P.O. Box 4294  
City, State, ZIP+4  
Houston, TX 77210-4294

PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**MIDLAND TX 79701**

Postage	\$ 1.39	0602
Certified Fee	\$2.80	
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	

Sent To  
COG Operating, LLC  
Street, Apt. No.,  
or PO Box No. 550 W. Texas St. Ste 100  
City, State, ZIP+4  
Midland, TX 79701

PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**CARLSBAD NM 88221**

Postage	\$ 1.39	0602
Certified Fee	\$2.80	
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	

Sent To  
Richardson Cattle Company  
Street, Apt. No.,  
or PO Box No. P.O. Box 487  
City, State, ZIP+4  
Carlsbad, NM 88221

PS Form 3800, August 2006 See Reverse for Instructions

Mesquite SWD, Inc. Heavy Metal 12 Federal No. 1  
1900' FSL & 1900' FWL  
Sec. 12, T24S-R31E  
Eddy County, NM

## Legal Notice

### Affidavit of Publication

NO. 21522

STATE OF NEW MEXICO

County of Eddy:

Walter L. Green

*Walter L. Green*

being duly sworn, says that he is the

Publisher

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

#### Legal Notice

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

day as follows:

First Publication January 25, 2011

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Subscribed and sworn to before me this

25th day of January 2011



OFFICIAL SEAL  
Danny Scott  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 3/18/2014

*Danny Scott*  
\_\_\_\_\_  
Danny Scott  
Notary Public, Eddy County, New Mexico

### Copy of Publication:

#### LEGAL NOTICES

Mesquite SWD, Inc., c/o Kay Havenor, 904 Moore Ave., Roswell, NM 88201, (575) 626-4518, is seeking approval from the New Mexico Oil Conservation Division to re-enter the Devon SFS Operating, Inc., Heavy Metal 12 Federal No.1 well AP: 30-015-29602, located 1980 feet from the south line and 1980 feet from the west line of Section 12, T24S, R34E, Eddy County, NM, located 22.5 miles east of Loving, NM off NM-128 and Buck Jackson Road, and complete for commercial produced water disposal as the Mesquite SWD, Inc., Heavy Metal 12 Federal No.1. The proposed disposal interval is the Delaware Mountain Bell Canyon and Cherry Canyon Formations through open hole from 4,415 feet to 7,050 feet. Mesquite SWD, Inc. plans to dispose of a maximum of 5,000 BWPD with a maximum pressure of 883 psi. Parties with questions regarding this proposal may contact Kay Havenor at the address or phone number above. Interested parties must file objections or requests for hearing within 15 days to the Oil Conservation Division: 1220 S. St. Francis Dr., Santa Fe, NM 87505. Published in the Artesia Daily Press, Artesia, N.M. January 25, 2011. Legal No. 21522.

? 1900 or 1980 ?



February 14, 2011

**VIA HAND DELIVERY**

Mr. Daniel Sanchez  
Acting Division Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

RECEIVED OGD  
2011 FEB 14 P 1:22

30-05-29602

**Re: Application of Mesquite SWD, Inc. for a salt water disposal well in Section 12, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico.**

Dear Mr. Sanchez:

COG Operating, LLC hereby objects to the above-referenced application filed by Mesquite SWD, Inc. seeking authorization to inject produced water in the Heavy Metal 12 Federal Well No. 1 located 1900 feet from the South line and 1900 feet from the West line of Section 12, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico.

Pursuant to Division Rule 19.15.26.8, this application must be set for hearing before a Division Examiner in order to be further considered, as COG has timely objected to this application. Your attention to this matter is appreciated.

Sincerely,

  
Ocean Munds-Dry

cc: Attn: Kay Havenor  
Mesquite SWD, Inc.  
P.O. Box 1479  
Carlsbad, NM 88221

Dean Chumbley  
COG Operating, LLC

## Jones, William V., EMNRD

---

**From:** Jones, William V., EMNRD  
**Sent:** Friday, February 18, 2011 4:47 PM  
**To:** 'Kay Havenor'; 'Ocean Munds-Dry'  
**Cc:** Ezeanyim, Richard, EMNRD  
**Subject:** Disposal Application from Mesquite SWD, Inc.: Heavy Metal 12 Federal #1 30-015-29602  
Unit Letter K, Sec 12, T24S, R28E, Eddy County NM 4415 to 7050 Bell and Cherry Canyon  
Open Hole Depths

Hello Dr. Havenor:

Just documenting that the OCD has received a protest letter from COG Operating LLC.

We can no longer process this administrative application for disposal into this well – unless we receive a letter from the protesting party revoking the protests.

If the protest is withdrawn, I will then review this application for other concerns.

Please consult your attorney as to what legal avenues are open to you.

Regards,

William V. Jones, P.E.  
Engineering, Oil Conservation Division  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Tel 505.476.3448 ~ Fax 505.476.3462



CC:  
Ocean Munds-Dry, Esq.  
Holland&Hart LLP  
Attorney for COG Operating LLC

March 15, 2011

**VIA HAND-DELIVERY**

Mr. Daniel Sanchez, Acting Director  
Attn: Richard Ezeanyim  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

**Re: Application of Mesquite SWD, Inc. for a salt water disposal well in Section 12, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico.**

Dear Mr. Sanchez:

On February 14, 2011, COG Operating, LLC filed an objection letter to the above-referenced application. COG and Mesquite have reached an agreement regarding the application.

COG now withdraws its objection to Mesquite's Application for approval of a salt water disposal well in Section 12, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico.

Your attention to this matter is appreciated. Please feel free to contact me should you have any questions or concerns at (505)988-4421.

Sincerely,

  
Ocean Munds-Dry  
Attorney for COG Operating, LLC

cc: Dean Chumbley

## **Jones, William V., EMNRD**

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**From:** Jones, William V., EMNRD  
**Sent:** Friday, March 25, 2011 4:21 PM  
**To:** 'Kay Havenor'  
**Cc:** Ezeanyim, Richard, EMNRD; Reeves, Jacqueta, EMNRD; 'Wesley\_Ingram@blm.gov'  
**Subject:** Disposal application from Mesquite SWD, Inc.: Heavy Metal 12 Federal #1 30-015-29602  
K/12/24S/31E Eddy County Delaware open hole 4415 - 7050

Hello Dr. Havenor:

Today, I reviewed your application and noticed a couple of items and have questions.

- a. As I understand it, COG has withdrawn its protest. Do you know what their concern was and how you addressed it?
- b. Who owns the rights to the Delaware in the N/2 N/2 of Section 13? I did not see that in the acreage summary.
- c. The Newspaper notice says 1980 fsl and 1980 fwl, but the application says 1900. Which is correct? You don't need to re-notice.
- d. What is the typical percentage Sw you see in the Bell Canyon in this well? For example, in one of the Ramsey sands?
- e. Have you any feedback from the BLM as to this project? It is about 2 miles east of the R-111-P acreage and proposed into the top of the Delaware.

Thank You,

William V Jones, P.E.  
Engineering, Oil Conservation Division  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Tel 505.476.3448 ~ Fax 505.476.3462





**Jones, William V., EMNRD**

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**From:** Kay Havenor [khavenor@georesources.com]  
**Sent:** Friday, March 25, 2011 6:16 PM  
**To:** Jones, William V., EMNRD  
**Subject:** Re: Disposal application from Mesquite SWD, Inc.: Heavy Metal 12 Federal #1 30-015-29602 K/12/24S/31E Eddy County Delaware open hole 4415 - 7050

Mr. Jones, in response to your questions:

- a. I was not involved, but the gist (as I understand it) was COG was playing hardball to get some concessions from Mesquite to take their water.
- b. N/2 N/2 of Sec. 13 is Oxy. They were notified. Sorry I missed that acreage on the summary.
- c. Good eye! The correct footage was 1900 FSL and 1900 FWL as is in the C-108. I did not notice that.
- d. Typical Ramsey  $S_w > 60$
- e. The BLM has already inspected the site with Clay Wilson and they have not said anything. The freshly drilled Marbob (COG) lateral in Unit N of the section had no problems. They finished, ran pipe, treated and completed the well, but have not reported any oil sales or filed a completion. They completed considerably beneath our lowest level.

As you may recall, this C-108 was earlier killed by Marbob before staking two locations and drilling this one. They had just bought the BLM lease. After the drilling they agreed to allow this application - just prior to becoming COG. The BLM approval of Mesquite's Bran SWD APD in the SE/4 SE/4 of Sec. 11 is virtually complete. That APD was complicated in complying with BLM needing 3-strings of casing into the Delaware - and we start with 8-5/8" surface.

Kay

At 04:21 PM 3/25/2011, you wrote:

Hello Dr. Havenor:

Today, I reviewed your application and noticed a couple of items and have questions.

- a. As I understand it, COG has withdrawn its protest. Do you know what their concern was and how you addressed it?
- b. Who owns the rights to the Delaware in the N/2 N/2 of Section 13? I did not see that in the acreage summary.
- c. The Newspaper notice says 1980 fsl and 1980 fwl, but the application says 1900. Which is correct? You don't need to re-notice.
- d. What is the typical percentage  $S_w$  you see in the Bell Canyon in this well? For example, in one of the Ramsey sands?
- e. Have you any feedback from the BLM as to this project? It is about 2 miles east of the R-111-P acreage and proposed into the top of the Delaware.

## Jones, William V., EMNRD

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**From:** wingram@blm.gov  
**Sent:** Monday, March 28, 2011 10:16 AM  
**To:** Jones, William V., EMNRD  
**Subject:** Re: Disposal application from Mesquite SWD, Inc.: Heavy Metal 12 Federal #1 30-015-29602 K/12/24S/31E Eddy County Delaware open hole 4415 - 7050  
**Attachments:** pic13940.jpg

Will,

One of the engineers reviewed this well in October 2009 and did not find any reason for the BLM to object.

I just did another check with the Potash group here in the office and they have no objections.

Thanks,  
Wesley W. Ingram  
Supervisory Petroleum Engineer  
Bureau of Land Management  
575-234-5982  
[wesley\\_ingram@nm.blm.gov](mailto:wesley_ingram@nm.blm.gov)

"Jones, William  
V., EMNRD"  
<William.V.Jones  
@state.nm.us>

03/25/2011 04:21  
PM

Kay Havenor  
<[khavenor@georesources.com](mailto:khavenor@georesources.com)>

To

cc

"Ezeanyim, Richard, EMNRD"  
<[richard.ezeanyim@state.nm.us](mailto:richard.ezeanyim@state.nm.us)>,  
"Reeves, Jacqueta, EMNRD"  
<[Jacqueta.Reeves@state.nm.us](mailto:Jacqueta.Reeves@state.nm.us)>,  
"Wesley Ingram@blm.gov"  
<[Wesley Ingram@blm.gov](mailto:Wesley Ingram@blm.gov)>

Subject

Disposal application from Mesquite  
SWD, Inc.: Heavy Metal 12 Federal #1  
30-015-29602 K/12/24S/31E Eddy  
County Delaware open hole 4415 -  
7050

Hello Dr. Havenor:

Today, I reviewed your application and noticed a couple of items and have questions.

- a. As I understand it, COG has withdrawn its protest. Do you know what their concern was and how you addressed it?
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- e. Have you any feedback from the BLM as to this project? It is about 2 miles east of the R-111-P acreage and proposed into the top of the Delaware.

Thank You,

William V Jones, P.E.

Engineering, Oil Conservation Division

1220 South St. Francis Drive, Santa Fe, NM 87505 Tel 505.476.3448 ~ Fax 505.476.3462

(Embedded image moved to file: pic13940.jpg)

<http://www.emnrd.state.nm.us/ocd/Graphics/L23-ocd-logo.gif>

## Injection Permit Checklist (07/9/2010)

WFX \_\_\_\_\_ PMX \_\_\_\_\_ SWD 1269 Permit Date 3/28/11 UIC Qtr J(FM)# Wells 1 Well Name(s): Harry Matal 12 Federal #1API Num: 30-0 15-29602 Spud Date: \_\_\_\_\_ New/Old: \_\_\_\_\_ (UIC primacy March 7, 1982)Footages 1900 ESL/1900 FWL Unit K Sec 12 Tsp 245 Rge 31E County EDDGeneral Location: 22 mi E. of LOVING, 7.5 mi South of Ruff POperator: Marquis SWD, INC. Contact: Kay HaasnerOGRID: 161968 RULE 5.9 Compliance (Wells) 0/18 (Finan Assur) OK IS 5.9 OK? OKWell File Reviewed ☒ Current Status: P&APlanned Work to Well: Re-enter Set Bottom PlugDiagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: ☒

Well Details:		Sizes Hole.....Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
New ___ Existing <input checked="" type="checkbox"/>	Surface	<u>11 1/2 - 13 3/8</u>	<u>608'</u>	<u>—</u>	<u>600SX</u>	<u>CIRC</u>
New ___ Existing <input checked="" type="checkbox"/>	Interm	<u>11 - 8 5/8</u>	<u>4415'</u>	<u>—</u>	<u>1800SX</u>	<u>CIRC</u>
New ___ Existing ___	LongSt					
New ___ Existing ___	Liner					
New ___ Existing ___	OpenHole					

Depths/Formations: Depths, Ft. Formation Tops?

Formation(s) Above 4532 - Lamar ☒Injection TOP: 4415 Bell Max. PSI 883 Open Hole ☒ Perfs —Injection BOTTOM: 7050 Cherry Tubing Size 3 1/2 Packer Depth 4360

Formation(s) Below

7050 - Bushy ☒  
Lower Bushy Cgn = Production300 to 400' of ANHYDRITE  
Beneath SALT.Capitan Reef? \_\_\_\_\_ (Retash? \_\_\_\_\_ Noticed? \_\_\_\_\_) WIPP? \_\_\_\_\_ Noticed? \_\_\_\_\_ Salado Top/Bot 1150-4300 Cliff House? \_\_\_\_\_Fresh Water: Depths: 1150-250 Formation BOLSON ALLUVIUM Wells? NONE Analysis? \_\_\_\_\_ Affirmative Statement ☒Disposal Fluid Analysis? \_\_\_\_\_ Sources: Commercial (Bore Spig Mainly)Disposal Interval: Analysis? OK Production Potential/Testing: WaterwetNotice: Newspaper Date 1/25/11 Surface Owner BLM/Richardson Mineral Owner(s) BLMRULE 28.7(A) Affected Persons: Devon/COG/Chesapeake/OXYAOR: Map? \_\_\_\_\_ Well List? \_\_\_\_\_ Active Wells 3 Producing in Interval? \_\_\_\_\_ Repairs \_\_\_\_\_ Which Wells? \_\_\_\_\_.....P&A Wells 2 Diagrams? \_\_\_\_\_ Repairs \_\_\_\_\_ Which Wells? \_\_\_\_\_Questions: Run Smiley  
Make Sure Bottom Plug is Set & Holds Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_