

|         |     |         |          |                     |
|---------|-----|---------|----------|---------------------|
| 12.7.10 | WJ. | 12.7.10 | TYPE SWD | PTG-W<br>1034040002 |
|---------|-----|---------|----------|---------------------|

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



Mesquite  
161988

Paducah Unit Com #1

ABOVE THIS LINE FOR DIVISION USE ONLY

## ADMINISTRATIVE APPLICATION CHECKLIST

30-025-27616

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]

Fed.

- [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 \_\_\_\_\_

Processed by  
DEVON  
Cancelled

- [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 Havenor

Agent

11/16/2010

Print or Type Name

Signature

Title

Date

KHavenor@georesources.com  
e-mail Address

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

PTGW  
1034040002  
Contact party: Kay Havenor 575-626-4518  
KHavenor@georesources.com

### C-108 Ancillary Data

1. API 3002527616
- 2.. Original Lease Name: Paduca Federal Unit Com #1                      New name used here: No
3. Legal publication lay distance description: "27.2 miles due west of Jal, NM off CR-1"
4. AOR data: All wells are shown in summary and detail in **Item VI**: Data on wells in AOR  
EOG Paduca Fed Com Unit #1 is the only well in the AOR
5. AOR well count as shown in **Item VI**: 1 well (the target re-entry).
6. P&A wells in AOR count: One (the target re-entry).
7. List of formation tops applicable to AOR:
  - Rustler 755
  - Banded anhydrite 1110
  - Base salt 4440 (logs poor)
  - Lamar (T/Delaware Mtn Group) 4648
  - Bell Canyon 4722
  - Cherry Canyon 5808 (Opr) 6470 (KH)
  - Brushy Canyon 6902 (Opr) 7460 (KH)
  - Bone Springs 8705
  - Wolfcamp 11828 (Opr)
  - Permo-Penn 13502 (Opr)
  - Atoka 13997 (Opr)
  - Morrow 14559 (Opr)
8. Producing or non-P&A wells in proposed disposal AOR: None.
9. Is proposed SWD in a depleted zone/well? Non-commercial Morrow gas abandoned 2004
10. Why is proposed interval non-productive? Logs indicate intervals water wet. Well is down-dip from watered-out Bell Canyon wells. Dry holes to the east.
11. Notification and related acreage is shown in **Item XIII: Item XIII Notification List** and in **Item V** Land plat.
  - Yates Petroleum Corp E/2 E/2 Sec 22, NW/4, SW/4 Sec. 23
  - Devon Energy W/2 E/2 Sec. 22
  - Chevron/Devon E/2 E/2 Sec. 15
  - Exxon Mobil Corp. SW/4 Sec. 14
  - Sahara Operating Co. W/2 Sec. 22
12. Surface owner, as shown in Item XIII, is: BLM Surface leasee (Robins) notified.
13. Rule 5.9 status of applicant: Financial status in compliance: All in compliance. Inactive wells include: 1) 30-015-23389 CARTEL FEDERAL COM #002 G-5 -23S-29E  
Note: This property was sold to COG within the last 60 days. C-104A not yet filed/posted as of 11/16/2010.
- 14: Location of well as to Potash or other sensitive areas: Not within R-111-P area.

RECEIVED OGD  
200 NOV 31 P 1:39

well plugged in 2004

**APPLICATION FOR AUTHORIZATION TO INJECT**

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

II. OPERATOR:   Mesquite SWD, Inc.  

ADDRESS:   P.O. Box 1479 Carlsbad, NM 88221  

CONTACT PARTY:   Kay Havenor   PHONE:   575-622-0283  

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   X   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:   11/16/2010  

E-MAIL ADDRESS:   KHavenor@georesources.com     575-626-4518  

\* 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.WELL NAME & NUMBER: Paduca Federal Unit Com No. 130-025-27616WELL LOCATION: 1980' FNL & 660' FEL  
FOOTAGE LOCATIONUNIT LETTER HSECTION 22TOWNSHIP 25SRANGE 32EWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 26" Casing Size: 20"  
Cemented with: 1850 sx. or ft<sup>3</sup>  
Top of Cement: Surface Method Determined: Circulated

See attached well diagram

Intermediate Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"  
Cemented with: 4120 sx. or ft<sup>3</sup>  
Top of Cement: Surface Method Determined: Circulated

Production Casing

Hole Size: 12-1/4" Casing Size: 9-5/8"  
Cemented with: 2860 sx. or ft<sup>3</sup>  
Top of Cement: Surface - See P&A Method Determined: Circulated

Production Liner

Hole Size: NR Casing Size: 7-5/8" (2643')

Cemented with: 225 sx. or ft<sup>3</sup>

Top of Cement: Top of liner 11913' Method Determined: Drilled-out cmt

Production Liner #2

Hole Size: NR Casing Size: 5"

Cemented with: 215 sx. or ft<sup>3</sup>

Top of Cement: Top of liner 14256' Method Determined: NR

Injection Interval  
Perfs 4722' - 7940' (OA)  
(~~Perforated or Open Hole~~; indicate which)

Side 2 continued

## INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" J-55 Lining Material: IPC 1850 coated

Type of Packer: Lok-Set

Packer Setting Depth: Approx 4700 ft

Other 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 Mountain Group

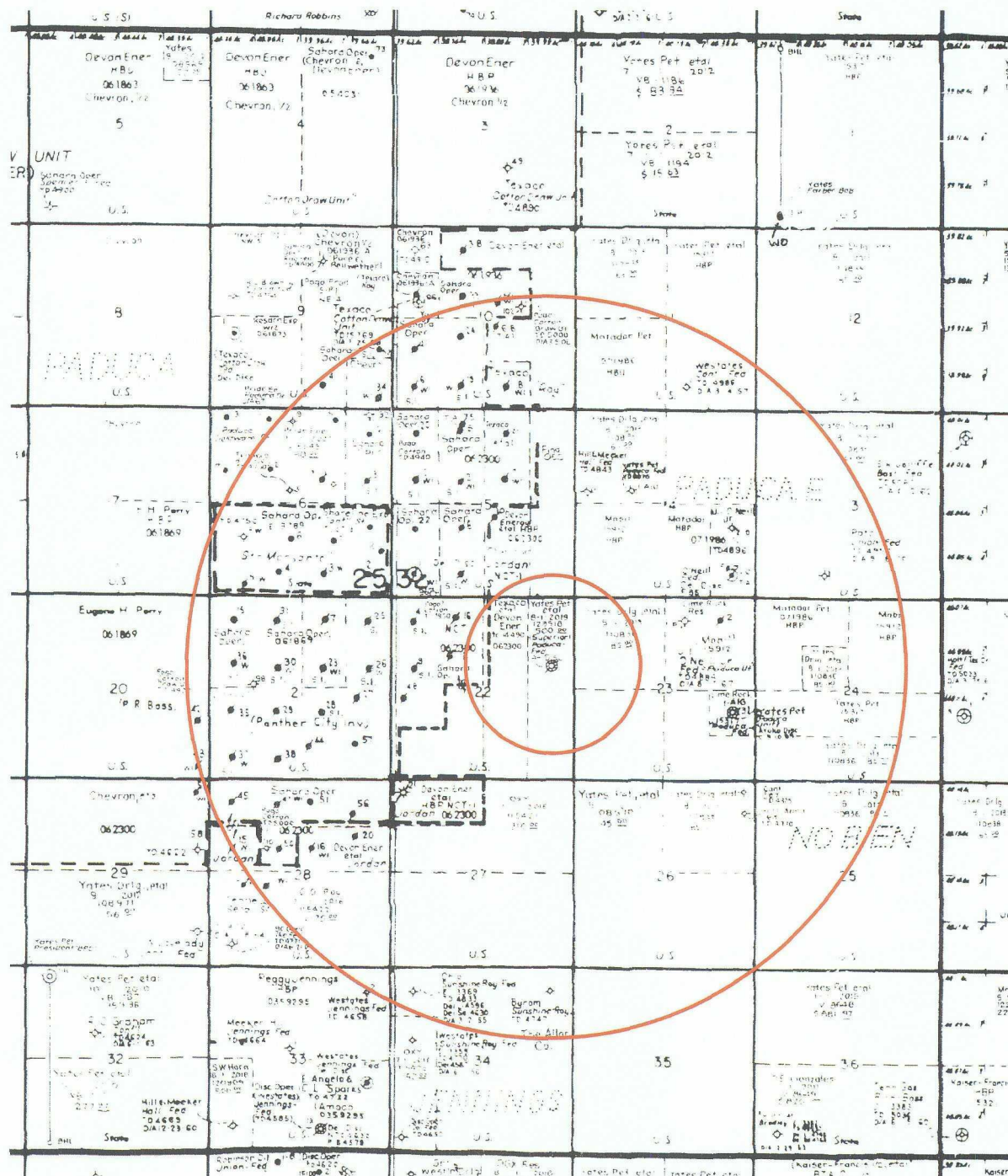
3. Name of Field or Pool (if applicable): Red Hills, Atoka, Northwest (Gas) - abandoned

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. Yes. Morrow 14585' - 15000' BP 14233' +35' cement. Atoka 14135' to 14317', CIBP 6975' +25 sxs cement. Full details listed below in Item VI(a) 1.

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Abandoned Delaware Bell Canyon wells and production NW. Abnd Bell Canyon and Atoka to the east in the 2-mile radius.

Lea County, NM

### 1/2 Mile AOR and 2 Mile Radius

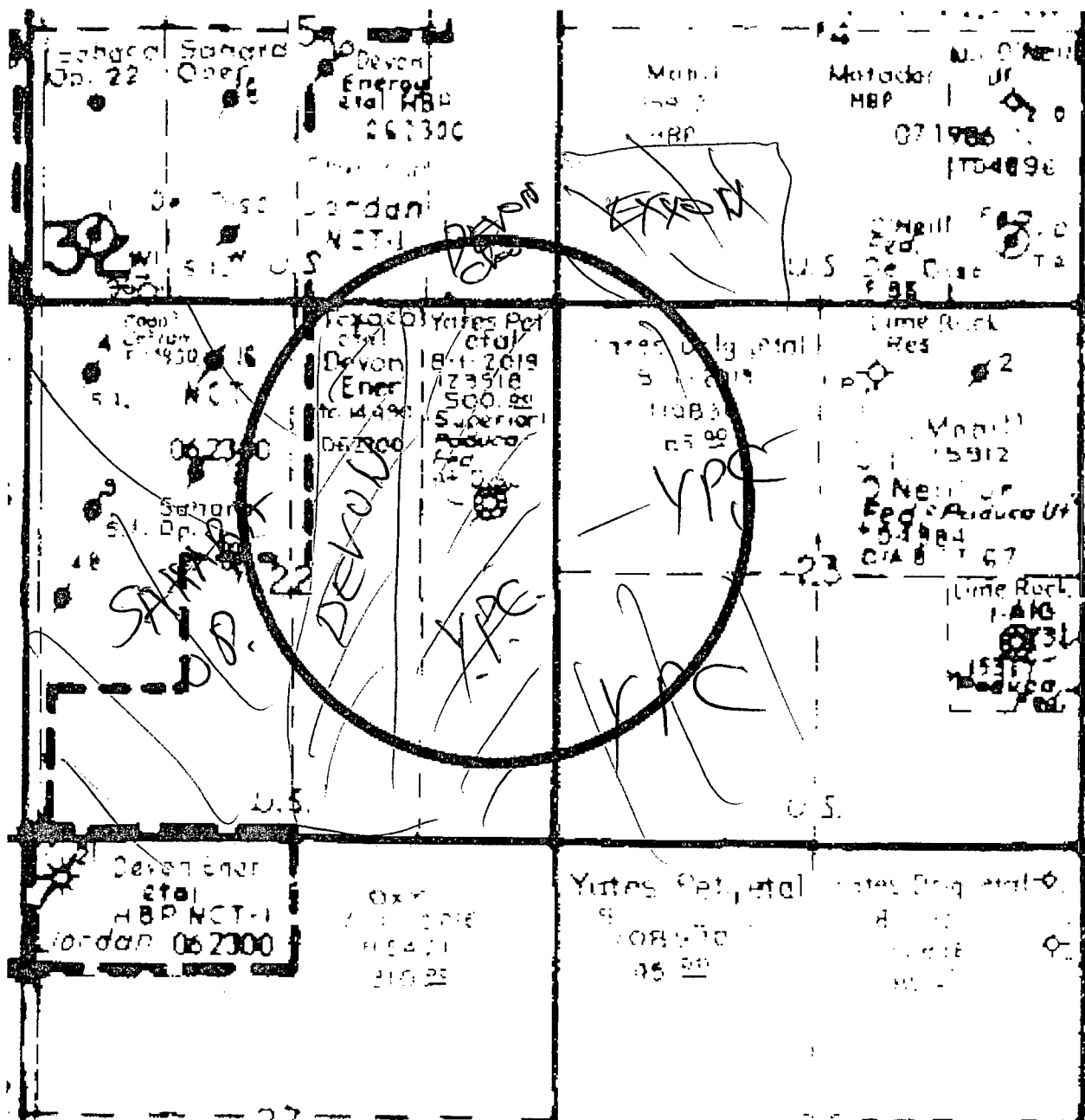




Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

Enlarged View of AOR  
Centered in Unit H Sec. 22, T25S-R32E  
Lea Co., NM

Item V(a):



Paduca Federal Com Unit No. 1  
 1980' FNL & 660' FEL  
 Sec. 22, T25S-R32E  
 Lea County, NM

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

All Known Wells in AOR

| API        | WELL NAME                    | STATUS | UNIT | SEC | TWNS | RANGE | NS     | EW    | OPERATOR            | LAND    | SPUD DATE | PLUG DATE | ELEV-GL | TVD_DEPTH | Highest Perf |
|------------|------------------------------|--------|------|-----|------|-------|--------|-------|---------------------|---------|-----------|-----------|---------|-----------|--------------|
| 3002527616 | Paduca Fed Com Unit No.1 P&A | H      | H    | 22  | 25S  | 32E   | 1980-N | 660-E | EOG Resources, Inc. | Federal | 6/29/1982 | 7/28/2004 | 3409    | 15850     | 14135        |

3002527616 Target conversion to SWD

**Item VI(a):** Construction of well in the AOR:

1. 30-025-27616 EOG Paduca Federal Unit Com No. 1, Unit H-Sec. 22-T21S-R32E Spudded 6/19/1982. 30" @ 40' Redi-mix. 20" 94# K-55 @ 650' w/1850 sxs circulated. 13-3/8" @ 4,630" w/4120 sxs, circulated to surface. 9-5/8" @12,250' 2860 sxs in two DV stages, circulated. 7-7/8" liner 11,913'-14,556' w/225 sxs, circulated to top of string. 5" liner 14,246'-15,489' w/ 215 sxs, circulated (tagged cmt 14,138'). Perf Morrow 14,585'-14,595' w/2 jspf (34 holes). Acid 2,500 gal 7-1/2% MS. CIBP @14,298 & CIBP + 35' cmt @14,233' (tagged). Perf Atoka 14,135'-14,318' w/40 holes, acidized w/3000 gal. CIBP in 9-5/8" @6975'. 40 sxs cmt @4850' to 4725', tagged @4730'. Cut 9-58" @4680' could not pull. 50 sxs cmt 4730'-4558', tagged @4577'. Cut 9-5/8" @2400', could not pull. 80 sxs cmt (base salt) 2450'-2193', tagged @2180'. Perf 700' sqxd 260 sxs cmt 700'-500' - cmt circulated up 13-3/8" annulus to surface. Tagged cmt in 9-5/8" @2471' Circulated 25 sxs smt from 60' to surface. P&A 7/28/2004.

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

Item VII:

- 1. The maximum injected volume anticipated is 5,000 BWPD. Average anticipated is 2,500 BWPD.
- 2. Injection will be through a closed system.
- 3. Maximum injection pressure is expected to be 944 PSI.
- 4. Sources will be produced water. These will be compatible with known waters in the disposal zones.
- 5. Water sample analyses from the OXY Cotton Draw Unit No. 4, Unit D, Sec. 22, T25S-R32E, Lea Co., is shown below, TDS 276,839 mg/l (Source: NM WAIDS):



Water Samples for Well COTTON DRAW UNIT 004  
API = 3002508221  
Formation = DEL  
Field = PADUCA  
Current Water Production Information

Instructions:

- Click For general information about this sample.
- Click For scale calculation pages (Stiff-Davis or Odde 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   |
|--------------------------|----------|-----|-----|----|-----|--------|------|------|------|------|------|------|
| <input type="checkbox"/> | 4293     | 25S | 32E | 22 | 552 | 170500 | null | 198  | null | null | null | null |

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

**Item VIII:**

Disposal will be into the Delaware Mountain Group (Delaware). The Delaware is comprised of sandstones, dolomites, and shales. The proposed disposal intervals are in the Bell Canyon, Cherry Canyon and uppermost Brushy Canyon Formations. All the Delaware members are interbedded sandstones and shales with occasional dolomite horizons. The lateral transmissivities of the sandstone beds are highly variable and often form selective barriers to the movement of hydrocarbons while allowing down-gradient movement of water. The transmissivity variations are fundamentally due to 1) the very-fine grained nature of the sands and 2) the local percentage of silt and clay. The Delaware sandstone members are typically overlain and underlain by bounding shale, dolomite, and/or silty shale horizons. The depth to the Delaware Mountain Group (top of Lamar) in this well is 4,650'. The base of the Delaware (top of Bone Springs Formation) is 8,705'.

There is no known fresh, potable or stock water within a 2-mile radius. Records from the New Mexico Office of the State Engineer on 11/13/2010 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:

Basin: Carlsbad

UTMADBS Radius Search (in meters):

Easting (X): 626811

Northing (Y): 3654072

Radius: 3300

---

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

11/13/10 3:02 PM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

The surface geology of the greater area, including the 2-mile radius as shown in Item V above, is Quaternary eolian and piedmont deposits of Holocene to middle Pleistocene age. These are underlain by the Permian Rustler Formation and Permian evaporites. The base of the anhydrite sequence in the subject re-entry is at 4,650' (msl -1241'). 13-3/8" csg is cemented to 4,630'. 9-5/8" csg cement was circulated to the surface.

**Item IX:**

Acidize perforations in the Delaware between 4722' and 7940' in the 9-5/8" casing with a total maximum 7,500 gal 15% HCl.

**Item X:**

Logs are on file with the OCD.

**Item XI:**

No water wells located in the 2-mile area surrounding the proposed disposal. Please note Item VIII above.

**Item XII:**

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

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

Plugging diagram of EOG Paduca Federal Com Unit No. 1 API 30-25 27616 Sec. 22-25S-32E Lea Co. New Mexico

### PLUG AND ABANDON WELL DIAGRAM

API: 3002527616  
Operator: Enron Oil & Gas Company  
Lease: Paduca Federal Unit Com  
Location: Sec 22, T25S-R32E Lea Co., NM  
Footage: 1980 FNL, 660 FEL

Well No: 1

KB: 3439  
GL: 3409  
Spud date: 6/29/1982  
Plugged date: July 28, 2004  
MSL of TD: -12411

#### Surface Csg

Size: 20" 94# K-55  
Set @: 650  
Sxs cmt: 1850  
Circ: Yes  
TOC: Surface  
Hole Size: 26"

#### Intermediate Csg

Size: 13-8/8" 40#  
Set @: 4630  
Sxs cmt: 4120  
Circ: Yes  
TOC: Surface  
Hole Size: 17-1/2"

#### Production Csg

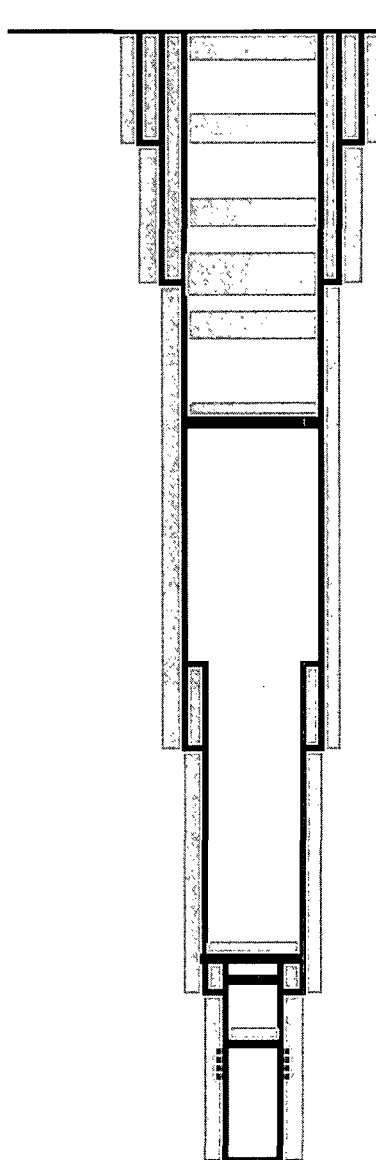
Size: 9-5/8" 47# S-95  
Set @: 12,250  
Sxs cmt: 2000 +110 on P&A  
Circ: Yes  
TOC: Surf  
Hole Size: NR

#### Production Liner

Size: 7-5/8" 18#  
Set @: 11913-14556'  
Sxs cmt: 175 +sqz 300  
Circ: Yes  
TOC: 11913  
Hole Size: NR

#### Production Liner

Size: 5"  
Set @: 14246-15849'  
Sxs cmt: 250  
Circ: Yes  
TOC: 14246  
Hole Size: NR



0  
Circ 25 sxs 60' to surface

650  
Perf 700' sqd 260 sxs 700-500' -  
cmt circ up 13-3/8" annulus to surf

4620  
Cut 3-5/8" @2400' could not pull.  
80 sxs (base salt) 2450-2193' Tagged 2180'

Top Lamar Ls 4650'  
40 sxs 4650'-4725' tagged @ 4730',  
Cut 3-5/8" @4680' could not pull'  
50 sxs 4730-4558' tagged @4577'  
CIBP in 3-5/8"@6975 spot 25 sxs 6975-6875'

Top Bone Springs 7470'

11913  
11913-14556' 225 sxs circ top liner

12250  
Base 3-5/8" DV #110172' circ w/900 sxs  
DV #2 w/1960 sxs

CIBP 14233 +35' cmt  
CIBP 14238

14585-15000 w/2 jcpf

15850

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

Proposed Re-entry and Re-completion:

API: 3002527616  
Operator: Mesquite SWD, Inc.  
Lease: Paduca Federal Unit Com  
Location: Sec 22, T25S-R32E Lea Co., NM  
Footage: 1980 FNL, 660 FEL

Well No: 1

KB: 3439  
GL: 3409  
Spud date: 6/29/1982  
Plugged date: July 28, 2004  
MSL of TD: -12411

**Surface Csg**

Size: 20" 94# K-55  
Set @: 650  
Sxs cmt: 1850  
Circ: Yes  
TOC: Surface  
Hole Size: 26"

**Intermediate Csg**

Size: 13-8/8" 40#  
Set @: 4630  
Sxs cmt: 4120  
Circ: Yes  
TOC: Surface  
Hole Size: 17-1/2"

**Production Csg**

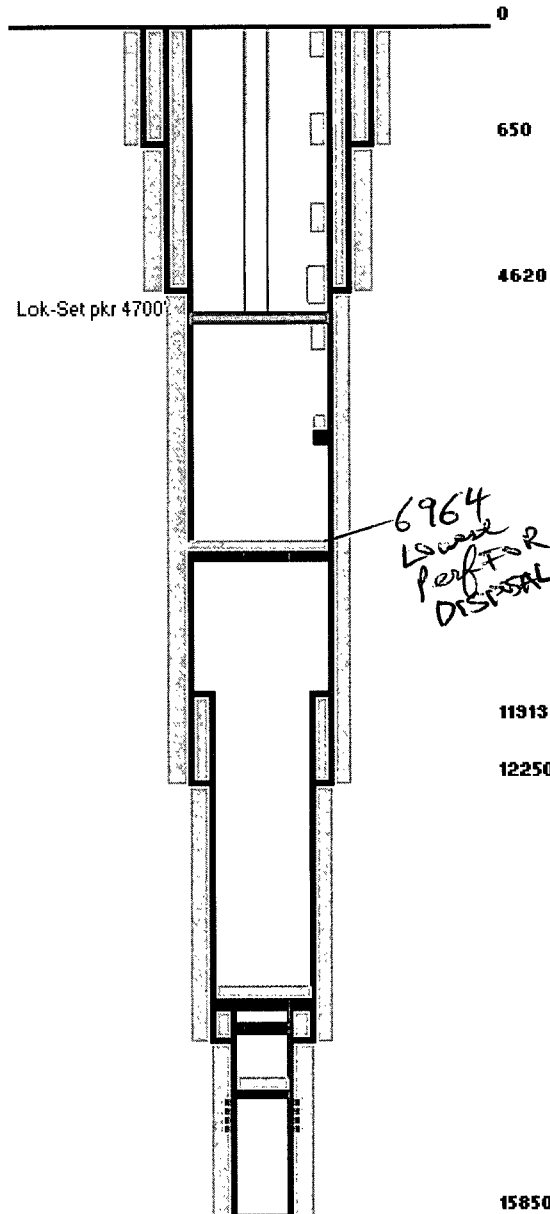
Size: 9-5/8" 47# S-95  
Set @: 12,250  
Sxs cmt: 2000 +110 on P&A  
Circ: Yes  
TOC: Surf  
Hole Size: NR

**Production Liner**

Size: 7-5/8" 18#  
Set @: 11913-14556'  
Sxs cmt: 175 +sqz 300  
Circ: Yes  
TOC: 11913  
Hole Size: NR

**Production Liner**

Size: 5"  
Set @: 14246-15849'  
Sxs cmt: 250  
Circ: Yes  
TOC: 14246  
Hole Size: NR



Drill surf plug to 60'

650 Drill-out sqd area 500'-700'

Drill-out cmt 2180'-2450'. Test csg.

4620 Drill-out cmt 4577'-4850'. Test csg.  
Top Lamar Ls 4650'

Drill-out cmt 4730' - 4850'. Test csg.

Drill-out cmt & CIBP 6875'-6975'

Plan: OA perfs 9-5/8" csg 4722' - 7940'

CO to 8100'. Test csg.

Set CIBP @ 8040' - 850' cmt - (25 sxs). Tag

Top Bone Springs 8632'

11913 11913-14556' 225 sxs circ top liner

12250 Base 9-5/8" DV #110172' circ w/300 sxs  
DV #2 w/1960 sxs

CIBP 14233 +35' cmt

CIBP 14236

BP 14283 +35' cmt

14585-15000 w/2 jsp

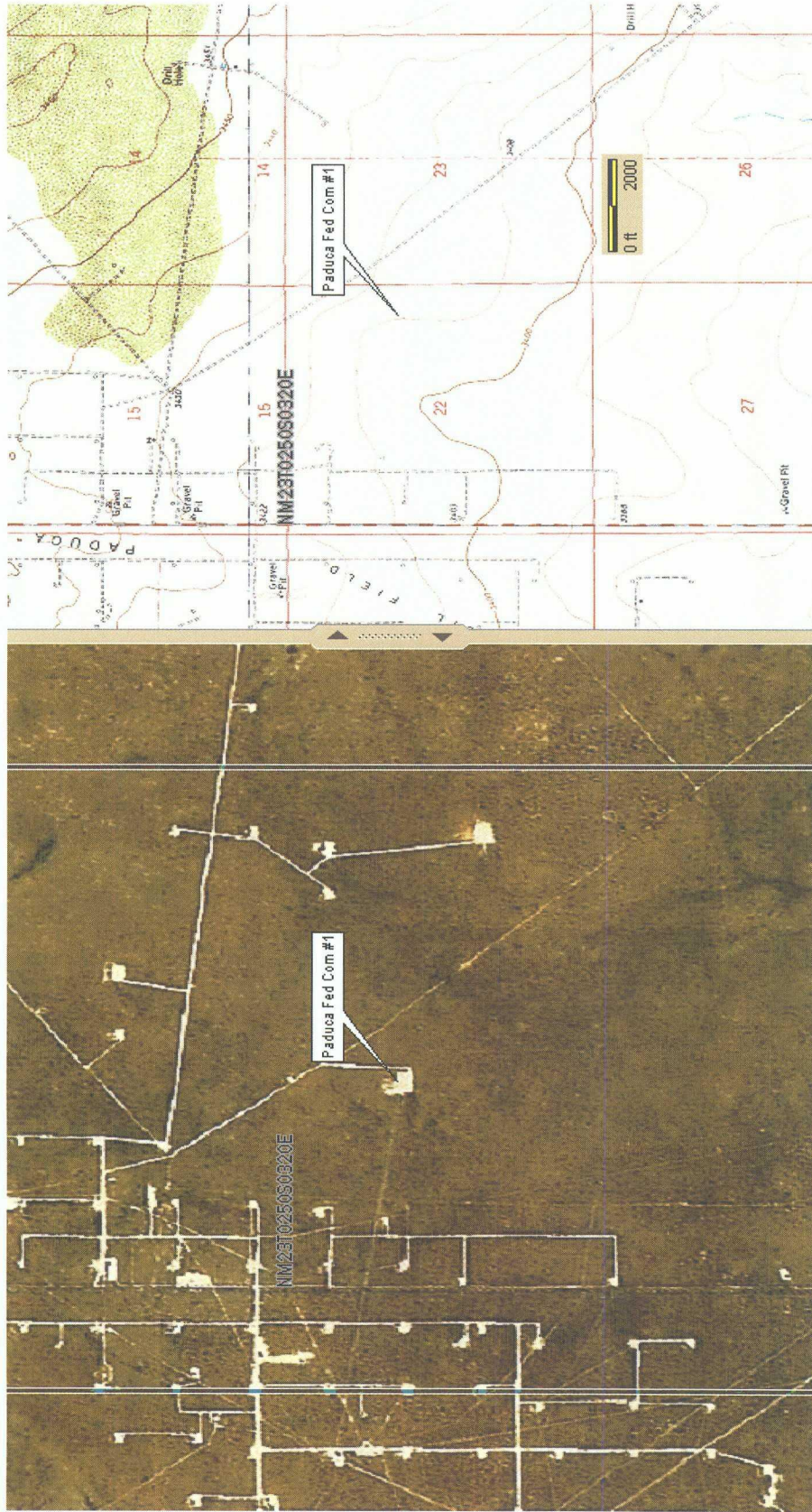
15850

Lok-set pkr approx 4700' in 9-5/8" on 3-1/2"  
IPC 1850 coated tbg.  
OA perfs in 9-5/8" csg 4722' to 7940'.

Not to Scale

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

SPOT10 Satellite and Matching Topographic Map



Delorme Xmap6



Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

**Item XIII:**

**Surface and Minerals Owner:**

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

**Operators:**

Yates Petroleum Corporation  
105 S. 4th Street  
Artesia, NM 88210

Devon Energy Operating Corp.  
20 N. Broadway  
Oklahoma City, OK 73102

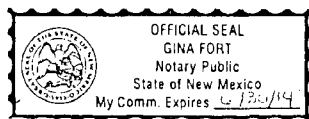
Sahara Operating Co..  
P.O. Box 4130  
Midland, TX 79704

Exxon Mobile Corporation  
P.O. Box 4358  
Houston, TX 77210-435

Chevron USA, Inc.  
15 Smith Rd.  
Midland, TX 79705

**BLM Grazing Leasee**

Mr. Jeff Robbins  
301 Orla Rd.  
Jal, NM 88252



Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

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Street, Apt. No., or PO Box No. 620 E. Greene St  
City, State, ZIP+4<sup>®</sup> Carlsbad, NM 88220

PS Form 3800, August 2006 See Reverse for Instructions

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Sent To: Yates Petroleum Corp.  
Street, Apt. No., or PO Box No. 105 S. 4th  
City, State, ZIP+4<sup>®</sup> Artesia, NM 88210

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Sent To: Devon Energy Operating Corp.  
Street, Apt. No., or PO Box No. 20 N. Broadway  
City, State, ZIP+4<sup>®</sup> Oklahoma City, OK 73102

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| Total Postage & Fees   | \$ 6.49 |

Sent To: Mr. Jeff Robbins  
Street, Apt. No., or PO Box No. 301 Orla Rd.  
City, State, ZIP+4<sup>®</sup> Jal, NM 88252

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Continued on next page

Paduca Federal Com Unit No. 1  
1980' FNL & 660' FEL  
Sec. 22, T25S-R32E  
Lea County, NM

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| HOUSTON, TX 77210 OFFICIAL USE  |         |      |
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| Return Receipt Fee<br>(Endorsement Required)  | \$2.30  |      |
| Restricted Delivery Fee<br>(Endorsement Required)   | \$0.00  |      |
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Sent To: Exxon Mobile Corporation  
Street, Apt. No., or PO Box No. P.O. Box 4358  
City, State, ZIP+4 Houston, TX 77210-435

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| MIDLAND, TX 79705 OFFICIAL USE  |         |  |
| Postage   | \$ 1.39 |  |
| Certified Fee   | \$2.80  |  |
| Return Receipt Fee<br>(Endorsement Required)  | \$2.30  |  |
| Restricted Delivery Fee<br>(Endorsement Required)   | \$0.00  |  |
| Total Postage & Fees  | \$ 6.49 |  |

Sent To: Chevron USA, Inc.  
Street, Apt. No., or PO Box No. 15 Smith Rd.  
City, State, ZIP+4 Midland, TX 79705

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

Sent To: Sahara Operating Co.  
Street, Apt. No., or PO Box No. P.O. Box 4130  
City, State, ZIP+4 Midland, TX 79704

PS Form 3800, August 2006 See Reverse for Instructions

**Jones, William V., EMNRD**

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**From:** Dustin\_Winkler@blm.gov  
**Sent:** Friday, December 03, 2010 2:40 PM  
**To:** Jones, William V., EMNRD  
**Subject:** Paduca Federal Unit Com #1  
**Attachments:** SWD Appl - Paduca Fed Unit Com 1 - 253222H 112310.docx

Will,

Attached is a letter regarding the SWD application of the subject well.

Thanks,

Dusty Winkler  
Petroleum Engineer  
Bureau of Land Management  
Carlsbad Field Office  
575-234-5914

(See attached file: SWD Appl - Paduca Fed Unit Com 1 - 253222H 112310.docx)

November 23, 2010

RE : Review of the Class II SWD commercial injection well application for the Mesquite SWD, Inc.'s, Paduca Federal Unit Com #1 , 1980' FNL & 660' FEL (Ut H) Section 22-25S-32E, Lea County, New Mexico; re-entry of the plugged and abandoned Paduca Fed Com Unit #1, API No. 3002527616.

Comments: There are no wells within the ½ mile area of review (AOR) and four within 2 miles of the subject well. All the wells in the 2 mile AOR are plugged or constructed properly.

The top of the injection zone (4722 ft) is only about 170 ft below the base of the Salado (4550 ft), which is within reason. The BLM has noted that the plugging of this well did not follow regulations and/or guidelines. The BLM recommends once the CIBP at 6975 ft is drilled out, the operator plug back the well properly with the following plugs:

CIBP at 14085 ft with 25 sx of Class H on top.

520 ft plug of approximately 160 sx of Class H from 12300 ft to 11780 ft.

190 ft plug of approximately 85 sx of Class H from 8724 ft to 8555 ft.

DHW 112310

## Jones, William V., EMNRD

---

**From:** Cromer, James [James.Cromer@dvn.com]  
**Sent:** Friday, January 14, 2011 8:07 AM  
**To:** Jones, William V., EMNRD  
**Cc:** Burdick, Carl; Gray, Ken; Kay Havenor; Kline, Adam  
**Subject:** FW: Mesquite SWD - Paduca  
**Attachments:** 3002527616\_37\_WF[1].TIF

Mr. Jones,  
Mesquite SWD has agreed to limit their injection interval in the Delaware to zones above 6964' (PBTD 7020'). Subject to that condition of approval, Devon hereby withdraws its objection to the proposed injection permit for the EOG PADUCA FEDERAL UNIT COM No. 001 in Section 22 of T25S R32E.

Regards,

*Jim Cromer*

Senior Operations Advisor  
Devon Energy Production Company, LP  
Western Division Operations  
Permian District, PB New Mexico  
405-228-4464  
[james.cromer@dvn.com](mailto:james.cromer@dvn.com)

---

**From:** Kay Havenor [<mailto:kay.havenor@gmail.com>]  
**Sent:** Thursday, January 06, 2011 3:54 PM  
**To:** Cromer, James  
**Subject:** Mesquite SWD - Paduca

Please forgive if this is a repeat of my email from [KHavenor@georesource.com](mailto:KHavenor@georesource.com). It appears that I have had a host in-coming and out-going email failure and wanted to be sure you received this message.

Mr. Cromer,

In my discussions of the SWD interval in the Sec. 22, T25S-R32E C-108 application with Carl Burdick, it is my understanding that our excluding the Brushy Canyon satisfied his concerns. Mesquite will set a CIBP about 7070' plus a 50' of cement on top. Mr. Burdick calls the Brushy Canyon at 7100'. That arrangement means our lowest perf would be at 6964'. That will allow us a reasonable amount of rathole and still fully isolate the Brushy Canyon.

It would be greatly appreciated if you will email Will Jones ([William.V.Jones@state.nm.us](mailto:William.V.Jones@state.nm.us)) and withdraw Devon's protest conditional upon the above modifications.

Thank you. Have a great New Year.

Kay

--

Kay C. Havenor, Ph.D., P.G.  
GeoScience Technologies  
904 Moore Ave

Roswell, NM 88201-1144  
(575) 622-0283

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**Confidentiality Warning:** This message and any attachments are intended only for the use of the intended recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments from your system.



**Jones, William V., EMNRD**

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**From:** Kay Havenor [khavenor@georesources.com]  
**Sent:** Friday, January 14, 2011 8:31 AM  
**To:** Jones, William V., EMNRD  
**Subject:** Mesquite SWD - 30-025-27616

Good morning, Mr. Jones,

This is simply to advise you the modifications to the depths setout in Mr. Cromer's email are correct and those to which Mesquite worked out with Devon's geologist. Mesquite respectfully requests renewal of processing the C-108 modified with to the limitation on depth outlined.

Again, thank you for your efforts and repeated assistance.

Kay Havenor

Delivered-To: [khavenor@georesources.com](mailto:khavenor@georesources.com)

Mr. Jones,  
Mesquite SWD has agreed to limit their injection interval in the Delaware to zones above 6964? (PBSD 7020?). Subject to that condition of approval, Devon hereby withdraws its objection to the proposed injection permit for the EOG PADUCA FEDERAL UNIT COM No. 001 in Section 22 of T25S R32E.

Regards,

***Jim Cromer***

Senior Operations Advisor  
Devon Energy Production Company, LP  
Western Division Operations  
Permian District, PB New Mexico  
405-228-4464  
[james.cromer@devon.com](mailto:james.cromer@devon.com)

Snip . . .

Kay C. Havenor, Ph.D., PG. CPG  
GeoScience Technologies  
904 Moore Ave  
Roswell, NM 88201-1144  
(575) 626-4518



Ken Gray  
Senior Advisor, Land

Devon Energy Corporation  
20 North Broadway  
Oklahoma City, Oklahoma 73102-8260  
Office: (405) 552-4633  
Fax: (405) 552-8113

December 1, 2010

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
Attn: David Brooks

Re: EOG Paduca Federal Unit Com #1  
Section 22-T25S-R32E  
Lea County, New Mexico  
API 30-025-27616

Gentlemen:

Devon Energy Production Company, L.P. ("Devon") is in receipt of an administrative Application For Authorization To Inject Form C-108 on behalf of Mesquite SWD, Inc. covering the referenced well, a copy of which is attached. As an offset leasehold operator and in accordance with applicable New Mexico Oil Conservation Division rules and regulations, Devon hereby objects to this administrative application.

If there are any questions feel free to contact Jim Cromer, Operations Engineering at 405-228-4464.

Yours very truly,

DEVON ENERGY PRODUCTION COMPANY, L.P.

A handwritten signature in black ink, appearing to read "Ken Gray", written over the printed name and title.

Ken Gray  
Senior Advisor, Land

cc: Kay C. Havenor, Ph.D.  
904 Moore Avenue  
Roswell, New Mexico 88201-1144



Kay C. Havenor, Ph.D.

Office: 575-626-4518  
e-mail: KHavenor@GeoResources.com  
904 Moore Ave  
Roswell, New Mexico 88201-1144

November 16, 2010

Devon Energy Operating Corp.  
20 N. Broadway  
Oklahoma City, OK 73102

Re: EOG Paduca Federal Unit Com #1  
Sec 22, T25S-R32E, Lea Co., NM  
API 30-025-27616

Mesquite SWD, Inc. is filing with NM OCD to re-enter the subject well for salt water disposal. The Legal Notice is to be published November 18, 2010 in the Lovington, NM Lovington Daily Leader. Produced water will be disposed from perforations 4,722 feet to 7,940 feet (over-all) into the Delaware Mountain Group.

As per OCD requirements a copy of the C-108 application is attached.

Should you have questions or concerns regarding this application please contact the undersigned by telephone at the above number, or by e-mail to [KHavenor@georesources.com](mailto:KHavenor@georesources.com).

Respectfully submitted,

A handwritten signature in cursive script that reads "Kay Havenor".

Kay Havenor, PG  
Agent on behalf of Mesquite SWD, Inc.

Encl: C-108 application

# Injection Permit Checklist (11/15/2010)

WFX \_\_\_\_\_ PMX \_\_\_\_\_ SWD 1264 Permit Date 1/24/11 UIC Qtr (U/FM)

# Wells 1 Well Name(s): PADUCA F&L UMT COM #1

API Num: 30-0 25-27616 Spud Date: 6/19/82 New/Old: N (UIC primacy March 7, 1982)

Footages 1980 FNL/66 OFEL Unit A Sec 22 Tsp 258 Rge 32E County LEA

General Location: 27 mda west of JAL

Operator: MESQUITE SWD, INC Contact Kay Hovener

OGRID: 161988 RULE 5.9 Compliance (Wells) ✓ (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed \_\_\_\_\_ Current Status: abandoned (dry) Morrow Co well (2009)

Planned Work to Well: RE-enter

Diagrams: Before Conversion ✓ After Conversion ✓ Elogs in Imaging File: ✓

## Well Details:

|                                    | Sizes                | Setting              | Stage             | Cement      | Determination |
|------------------------------------|----------------------|----------------------|-------------------|-------------|---------------|
|                                    | Hole.....Pipe        | Depths               | Tool              | Sx or Cf    | Method        |
| New ___ Existing <u>✓</u> Surface  | <u>26 20</u>         | <u>650</u>           | <u>—</u>          | <u>1850</u> | <u>CIRC</u>   |
| New ___ Existing <u>✓</u> Interm   | <u>17 1/2 13 3/8</u> | <u>4630</u>          | <u>—</u>          | <u>4120</u> | <u>CIRC</u>   |
| New ___ Existing <u>✓</u> LongSt   | <u>12 1/4 9 5/8</u>  | <u>12250</u>         | <u>(2 stages)</u> | <u>2860</u> | <u>CIRC</u>   |
| New ___ Existing <u>✓</u> Liner    | <u>7 1/8</u>         | <u>(11913-1459)</u>  |                   |             | <u>CIRC</u>   |
| New ___ Existing <u>✓</u> OpenHole | <u>5"</u>            | <u>(14256-15489)</u> |                   |             | <u>CIRC</u>   |

## Depths/Formations:

|                    | Depths, Ft. | Formation     | Tops?    |
|--------------------|-------------|---------------|----------|
| Formation(s) Above | <u>4648</u> | <u>Dol</u>    | <u>✓</u> |
| Injection TOP:     | <u>4722</u> | <u>Bell</u>   | <u>✓</u> |
| Injection BOTTOM:  | <u>6964</u> | <u>Cherry</u> |          |
| Formation(s) Below | <u>5808</u> | <u>Cherry</u> | <u>✓</u> |
|                    | <u>5902</u> | <u>Brushy</u> | <u>✓</u> |
|                    | <u>8765</u> | <u>B.S.</u>   | <u>✓</u> |

Capitan Reef? \_\_\_\_\_ (Retash? \_\_\_\_\_ Noticed? \_\_\_\_\_) (WIPP? \_\_\_\_\_ Noticed? \_\_\_\_\_) Salado Top/Bot (755/MO - 4440) Cliff House? \_\_\_\_\_

Fresh Water: Depths: \_\_\_\_\_ Formation None Wells? NO Analysis? \_\_\_\_\_ Affirmative Statement ✓

Disposal Fluid Analysis? \_\_\_\_\_ Sources: Commercial

Disposal Interval: Analysis? ✓ Production Potential/Testing: Wet on logs / down dip from wet zone (Dry Hole to East)

Notice: Newspaper Date 11/30/10 Surface Owner BLM Mineral Owner(s) ✓

RULE 26.7(A) Affected Persons: DEVON / Yates / Chevron / Sahara / Exxon

AOR: Maps? ✓ Well List? ✓ Producing in Interval? NO Wellbore Diagrams? —

.....Active Wells 0 Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

.....P&A Wells 0 Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

Issues: BLM requests Magna RE-ENTER TO TD ± PLUS properly. Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_