

| | | | | | |
|--------|--|-----|--------|------------------|---------------------|
| 4.9.12 | | WVJ | 4.9.12 | TYPE SWD 1329 | PTG-W 1210044763 |
|--------|--|-----|--------|------------------|---------------------|

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



Mesquite SWD
RECEIVED OGD

ABOVE THIS LINE FOR DIVISION USE ONLY

ADMINISTRATIVE APPLICATION CHECKLIST

Oxy Marsh Hawk State #2
30-025-38309

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

3/30/2012

Print or Type Name

Signature

Title

Date

KHavenor@georesources.com
e-mail Address

F-21-169-32E

10,165'-101705'

| 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 <u>0</u> vs Total Wells Operated <u>25</u> Is financial assurance required on any well? <u>1 well in violation 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>QXY Marsh Hawk State #2</u> |
| | 9 | III | API Num: <u>30-025-38309</u> Spud Date: <u>10/01/2007</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>1980' FNL & 1650' FWL</u> Unit <u>F</u> Sec <u>21</u> Tsp <u>16S</u> Rge <u>32E</u> County <u>Lea</u> |
| | 12 | | General Location (i.e. Y miles NW of Z): <u>East of Maljamar, NM north from junction of US-82 and NM-249/72 for 3.4 miles on east side of highway.</u> |
| | 13 | | Current Well Status: <u>P&A</u> |
| | 14 | I | General Summary of Planned Work to Well: <u>Re-enter, CO to cmt plug @ 10859', set 7", cmt to surface. Perf 10165-10705. Acidize. Run 4" tbg and complete.</u> |
| | 15 | | <u>INTERVAL TOP and BOTTOM:</u> |
| | 16 | IIIB.(2) | Proposed disposal Top Depth: <u>10165'</u> Formation Name: <u>Cisco/Canyon</u> (include Member Names for Delaware or Mesaverde) |
| | 17 | IIIB.(2) | Proposed disposal Bottom Depth: <u>10705'</u> Formation Name: <u>Cisco/Canyon</u> |
| | 18 | IIIB.(2) | Is the disposal interval OpenHole? _____ or Perfed? <u>Yes</u> |
| | 19 | IIIB.(2) | What will be the disposal tubing size OD? <u>4"</u> Packer Seat, Feet: <u>approx 10115'</u> |
| | 20 | VII | What max surf inj. psi are you proposing? <u>2033</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 300'</u> Formation Name(s)? <u>Ogallala</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? _____ 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>Wolfcamp</u> |
| | 29 | VII | Are Waste waters compatible with proposed disposal interval waters? <u>Yes</u> Did you include waste water analysis? <u>NA</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> |
| | 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>Yes</u> but from outside the AOR Is the salinity within the disposal interval more than 10,000 mg/l of TDS? <u>Yes</u> or how will you determine this insitu water salinity? _____ |
| | 34 | VIII | Does the application include a list of Formation tops down to and including the bottom of the target formation? <u>Yes</u> , on page 10. _____ |
| | 35 | | What is the top <u>main salt 1340'</u> and bottom <u>2385'</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? <u>Yes</u> If logs not there, please send _____ |
| | 37 | IIIA. | Are the wellbore diagrams for this well included in the Application.....Before Conversion? <u>Yes</u> and After Conversion? <u>Yes</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: <u>4/3/2012</u> |
| | 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? <u>Yes</u> |
| | 42 | XIII | Did you identify the owner(s) of each of these separately owned tracts? <u>Yes</u> Were they all formally noticed? <u>Yes</u> |
| | 43 | XIII | If reentering a P&Aed well, are there depth divisions of ownership within that well? <u>Yes</u>If so, have you also noticed all the shallower interests of the intent to use the well for disposal? <u>Yes</u> |
| | 44 | XIII | Is the proposed well within the R-111-P defined Potash Area or the BLM Secretaries Potash Area? <u>No</u> 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)? <u>SLO</u> Was that party formally noticed? <u>Yes, plus Grazing lessee</u> |
| | 46 | | <u>Area of Review:</u> |
| | 47 | V | Did you include a map identifying all wells within 2 miles? <u>Yes</u> |
| | 48 | VI | Did you include a list of all AOR wells? <u>Yes</u> Is the list available to be emailed (if requested) in spreadsheet format? <u>Yes - Included in Item VI list</u> |
| | 49 | VI | Does this list identify all wells penetrating (at least the top of) the disposal interval within 1/2 mile of the proposed well? <u>Yes</u> |
| | 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? <u>Yes</u> |
| | 51 | VI | How many wells exist within the 1/2 mile AOR that penetrate the disposal interval? <u>Only target well</u> How many of these are Plugged/Dry and Abandoned? <u>1 P&A</u> |
| | 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? <u>Yes</u> |
| | 53 | VI | Do all reported cement tops describe how that "top" was determined? <u>If Available</u> If you calculated any tops, what fillup efficiency factor did you use? <u>1.0</u> |
| | 54 | VI | Did you identify the presence and depth of all Cement Stage Tools (DV) in the subject well and in the AOR wells? <u>Yes, when info was available</u> |
| | 55 | VIII | For the target formation, is there significant formation structural depth changes within the 1/2 mile AOR? <u>No</u> |
| | 56 | VIII | Is there any Karst or Massive Limestone in this target formation? <u>No</u> ...or in the formations directly above or below? <u>No</u> |
| | 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? is it "gas" or "oil"? |

| | | | |
|------|-----|-------|--|
| Miss | Row | C-108 | C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered. |
| | 59 | | <u>.... 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.</u> |
| | 60 | | Any other Issues..? |

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: 575-626-4518

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 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: 3/30/2012

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.

| | | | | | |
|----------------|----------------------------------|-------------|-----------|------------|------------|
| WELL LOCATION: | <u>1980' FNL & 1650' FWL</u> | <u>F</u> | <u>21</u> | <u>16S</u> | <u>32E</u> |
| | FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE |

WELL CONSTRUCTION DATA

(Perforated or Open Hole; indicate which)

See attached well diagram

INJECTION WELL DATA SHEET

Tubing Size: 4" N-80 11# Lining Material: Fiberglass lined

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 10,105 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: Pennsylvanian Cisco/Canyon
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. No
Plugging details listed below in Item VI (a).
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Queen 3,400', Morrow below 11,750'

- OXY Marsh Hawk State #2

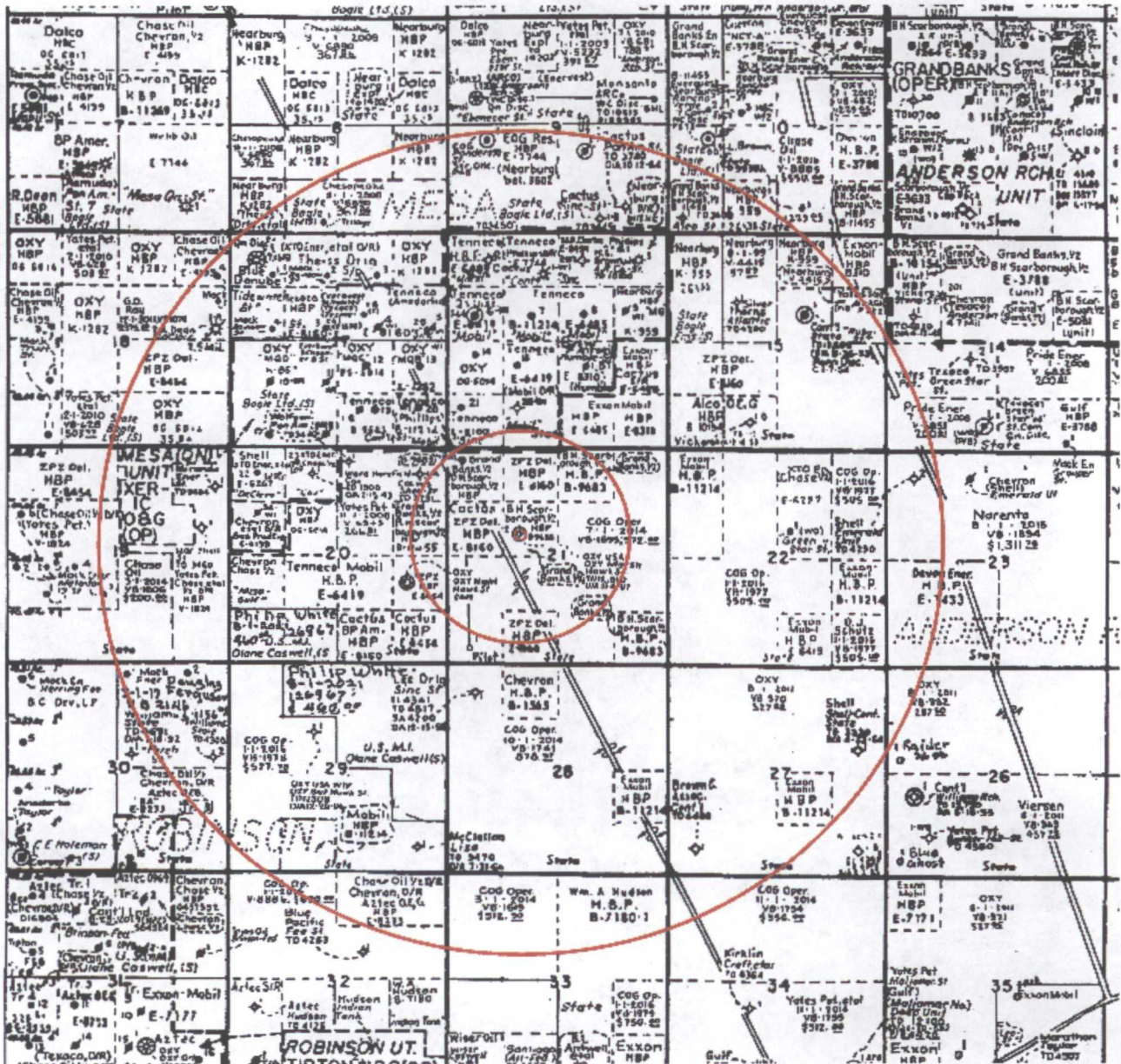
1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Item V:

Area of Review

½ Mile AOR and 2 Mile Radius



Mesquite SWD, Inc.

API 30-025-38309

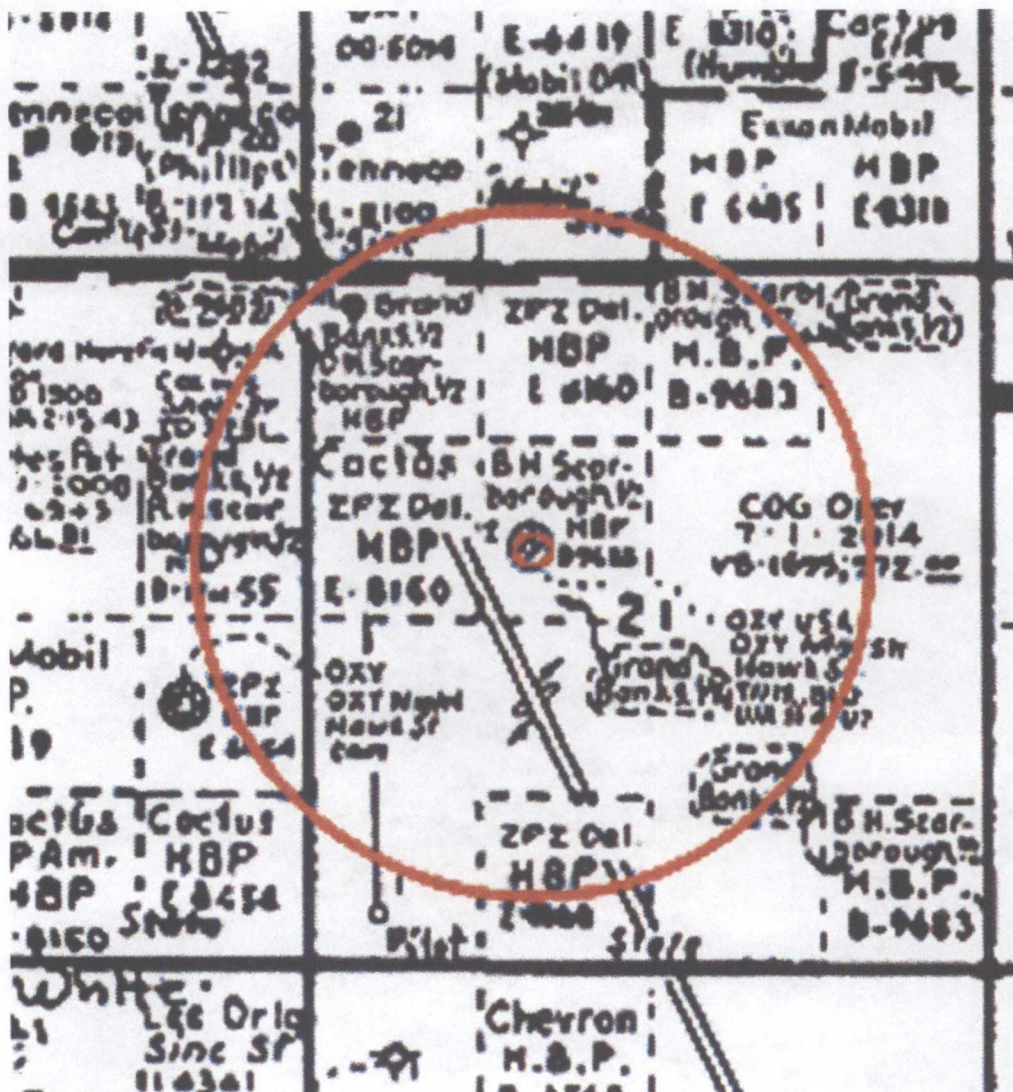
-OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Enlarged View of AOR
Centered in Unit F Sec. 21, T16S-R32E
Lea Co., NM

Item V(a):



Mesquite SWD, Inc.

API 30-025-38309

OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Item VI: Data on wells in AOR that penetrate the proposed injection interval:

| API | WELL_NAME | STATUS | SDIV | SEC | TWN | RANGE | FTG | NS | FTG | EW | OCD | OPERATOR | LAND | WELL | PLUG_DATE | SPUD_DATE | ELEVGL | TVD |
|------------|----------------------|---------|------|-----|-------|-------|------|----|------|----|-----|-------------------|------|------|-----------|-----------|--------|-------|
| 3002538309 | OXY MARSH HAWK STATE | Plugged | F | 21 | 16.0S | 32E | 1980 | N | 1650 | W | F | CHI OPERATING INC | S | G | 19-Nov-07 | 01-Oct-07 | 4338 | 12860 |

1. 3002538309 CHI Operating, Inc., OXY Marsh Hawk State #2, OCD Unit F, Sec. 21, T16S-R32E, 1980' FNL & 1650' FWL. Spud 10/1/2007. 17-1/2" hole set 13-3/8" 68# J-55 @600' w/550 sx cmt, circ 6 sx to surface. 12-1/4" hole set 9-5/8" 40# J-55/N-80 @4,508' w/2150 sxs cmt, circ 172 sx to surface. 8-3/4" hole to TD 12,860'. No testing reported. Ran logs. 35 sx "H" @12,838, 35 sx "H" @10,859', 35 sx "H" @8,766', 35 sx "H" @6,692', 35 sx "C" @4,533', 35 sx "C" @638', 10 sx "H" @602' to surface. P&A approx 2/8/2007 (OCD report dtd 12/7/2009).

Item VI(b): All known wells in the AOR and their reported status.

| API | WELL_NAME | STATUS | SDIV | SEC | TWN | RANGE | FTG | NS | FTG | EW | OCD | OPERATOR | LAND | WELL | PLUG_DATE | SPUD_DATE | ELEVGL | TVD |
|------------|--------------------------|---------|------|-----|-------|-------|------|----|------|----|-----|-------------------------------|------|------|-----------|-----------|--------|-------|
| 3002520255 | MESA QUEEN UNIT 021 | Plugged | M | 16 | 16.0S | 32E | 990 | S | 330 | W | M | XERIC OIL ; GAS CORP | S | O | 05-Aug-03 | 27-Jan-64 | 4356 | 3500 |
| 3002523483 | MESA QUEEN UNIT 025 | Active | N | 16 | 16.0S | 32E | 990 | S | 1650 | W | N | XERIC OIL ; GAS CORP | S | I | | 23-Apr-70 | 4345 | 3498 |
| 3002520102 | SHELL A STATE 001 | Plugged | A | 20 | 16.0S | 32E | 660 | N | 660 | E | A | CACTUS DRILLING CORP OF TEXAS | S | O | 24-Jul-63 | 16-Jul-63 | 4350 | 3731 |
| 3002538309 | OXY MARSH HAWK STATE | Plugged | F | 21 | 16.0S | 32E | 1980 | N | 1650 | W | F | CHI OPERATING INC | S | G | 19-Nov-07 | 01-Oct-07 | 4338 | 12860 |
| 3002539032 | MONKEY BIZ STATE COM 001 | | M | 21 | 16.0S | 32E | 660 | S | 660 | W | M | YATES PETROLEUM CORPORATION | S | G | | | 4334 | 0 |
| 3002539757 | CHICKEN HAWK 21 STATE | New | M | 21 | 16.0S | 32E | 430 | S | 535 | W | M | COG OPERATING LLC | S | O | | 30-Jan-11 | 4336 | 9096 |

Target re-entry 3002538309

OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Item VII:

1. The maximum injected volume anticipated is 6,000 BWPD. Average anticipated is 4,500 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 2,033 psi, or as adjusted for depth.
4. Sources will be produced water. These will be compatible with waters in the disposal zone.
5. Water sample analyses from the Devon Energy Lea CL State NCT-A #1 , Unit G, Sec. 2, T16S- R32E, Lea Co., shown below, from the Cisco/Canyon at approximately 10,500' (Source: NM WAIDS):

NM WAIDS

**Water Samples for Well LEA CL STATE NCT-A 001**

API = 3002500369

Formation = CIS

Field = ANDERSON RANCH NORTH

Instructions:

- Click For general information about this sample.
- Click For scale calculation pages (Stiff-Davis or Oddo 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"/> | 3157 | 16S | 32E | 02 | 1980 | 2212 | null | 2424 | null | null | 267 | 110 |
| <input type="checkbox"/> | 3159 | 16S | 32E | 02 | 1500 | 31900 | null | 795 | null | null | 1650 | 350 |
| <input type="checkbox"/> | 2442 | 16S | 32E | 02 | 1940 | 27660 | null | 622 | null | null | null | null |
| <input type="checkbox"/> | 2285 | 16S | 32E | 02 | 1500 | 31900 | null | 795 | null | null | null | null |
| <input type="checkbox"/> | 7439 | 16S | 32E | 02 | 1940 | 27658 | null | 622 | null | null | 1692 | 353 |

☐ SELECT/DESELECT ALL

Mesquite SWD, Inc.
OXY Marsh Hawk State #2
1980' FNL & 1650' FWL
Sec. 21, T16S-R32E Lea County, NM

API 30-025-38309

Item VIII:

Disposal will be into the Pennsylvanian Cisco/Canyon. The lithology is predominately limestone and shale. The interbedded members, both porous and non-porous, are effectively separated by very-low vertical permeability shale beds and/or carbonates. The majority of the beds are tight and form excellent barriers to the vertical movement of water. The selected Cisco/Canyon is overlain and underlain by bounding shales and dense limestones Cisco above and the Canyon below. No zones (beneath surface casing) in, above or below the Cisco/Canyon are known to contain waters less than 10,000 mg/l.

There are no known domestic water wells within a 1-mile radius. One water sample from a WAIDS chloride report from the New Mexico Office of the State Engineer well records indicates several drilling rig water supply wells in Section 16 were developed in the Ogallala at depths of 250' to 300' and are within the 2-mile radius of the proposed Mesquite SWD disposal well. Those wells were abandoned upon completion of drilling. The Ogallala water zone has been protected by cemented surface casing in all wells drilled in the area.

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

No wells found.

Basin/County Search:

Basin: Lea County County: Lea

UTMNA83 Radius Search (in meters):

Easting (X): 614629 Northing (Y): 3641647 Radius: 1610

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

3/27/12 9:49 AM

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 Ogallala Formation deposits of lower Pliocene to middle Miocene age. These are underlain by Permian redbeds. OCD Rustler Formation top in the target re-entry reported at 1,282' in the well file. The top of the Yates formation is at 2,542'. 13-3/8" csg is cemented to 600'. 9-5/8" csg set @4,508' has cement circulated to the surface. Mesquite proposes circulating 7" casing back to the surface.

OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Item IX:

Acidize perforations in the Cisco/Canyon between 10,165' and 10,705' in 7" casing with approximately 10,000 gal HCl.

Item X:

Logs are on file with the OCD.

Item XI:

No domestic or locatable livestock water wells located in the 1-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.

Addendum:

E-log evaluation of the Cisco/Canyon in the target re-entry well, DST testing of the Conoco Williams Ranch Unit #1 in Sec. 26, T16S-R32E and testing of the correlative zones to the northeast in Sec. 2, Devon Lea CL State NCT-A #1, cited in the WAIDS sample above, demonstrate the proposed disposal zone is water-wet throughout the greater local area and contains waters greater than 10,000 mg/l TDS.

Formation tops: Rustler 1,282' (OCD), T/Salt 1,370', B/Salt 2,385', Yates 2,542', Seven Rivers 2,846. Queen 3,452', Grayburg 3,876', San Andres 4,240', Glorieta 5,712', Tubb 6,917', Drinkard 7,077', Wolfcamp 9,180', Cisco 9,938, Strawn 11,080', Atoka 11,260', Morrow 11,752'.

OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Plug and Abandon Diagram

API: 3002538309

Operator: CHI Operating, Inc.

Lease: OXY Marsh Hawk State

Location: Sec. 21, T16S-R32E Lea Co., NM

Footage: 1980' FNL & 1650' FWL

Well No. 2

KB: 4355

GL: 4338

Surface Csg

Size: 13-3/8"

Set @: 600

Sxs cmt: 550

Circ: 6 sx surface

TOC: Surface

Hole Size: 17-1/2"

Intermediate Csg

Size: 9-5/8" 40# J-55/N-80

Set @: 4508

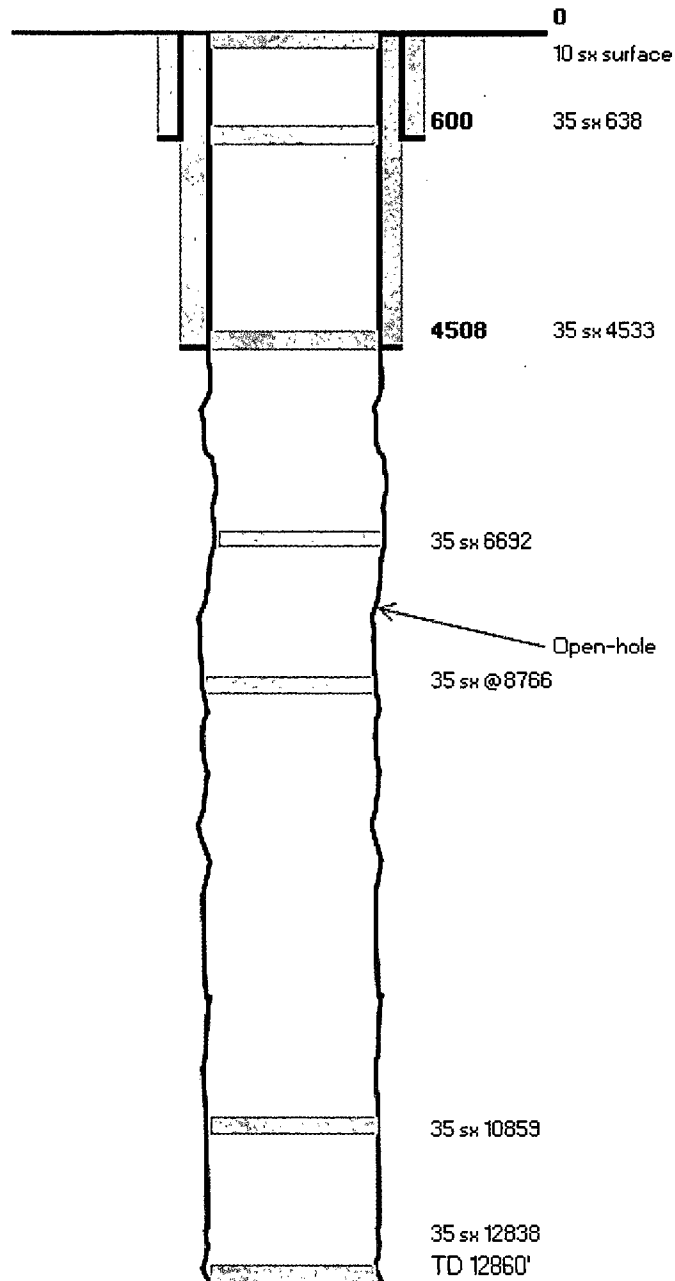
Sxs cmt: 2150

Circ: 172 sx surface

TOC: Surface

Hole Size: 12-1/4"

8-3/4" hole to TD



Not to Scale

• Mesquite SWD, Inc.

API 30-025-38309

• OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Proposed SWD Completion Diagram

API: 3002538309

Operator: Mesquite SWD, Inc.

Lease: OXY Marsh Hawk State

Well No: 2

KB: 4355

Location: Sec. 21, T16S-R32E Lea Co., NM

GL: 4338

Footage: 1980' FNL & 1650' FWL

Surface Csg Installed Originally

Size: 13-3/8"
Set @: 600
Sxs cmt: 550
Circ: 6 sx surface
TOC: Surface
Hole Size: 17-1/2"

Intermediate Csg Installed Originally

Size: 9-5/8" 40# J-55/N-80
Set @: 4508
Sxs cmt: 2150
Circ: 172 sx surface
TOC: Surface
Hole Size: 12-1/4"

Production Csg

Size: 7" 26# N80/P110
Set @: 10800
Sxs cmt: 3000
Circ: Yes
TOC: Surface
Hole Size: 8-3/4"

Tubular requirements (made-up):

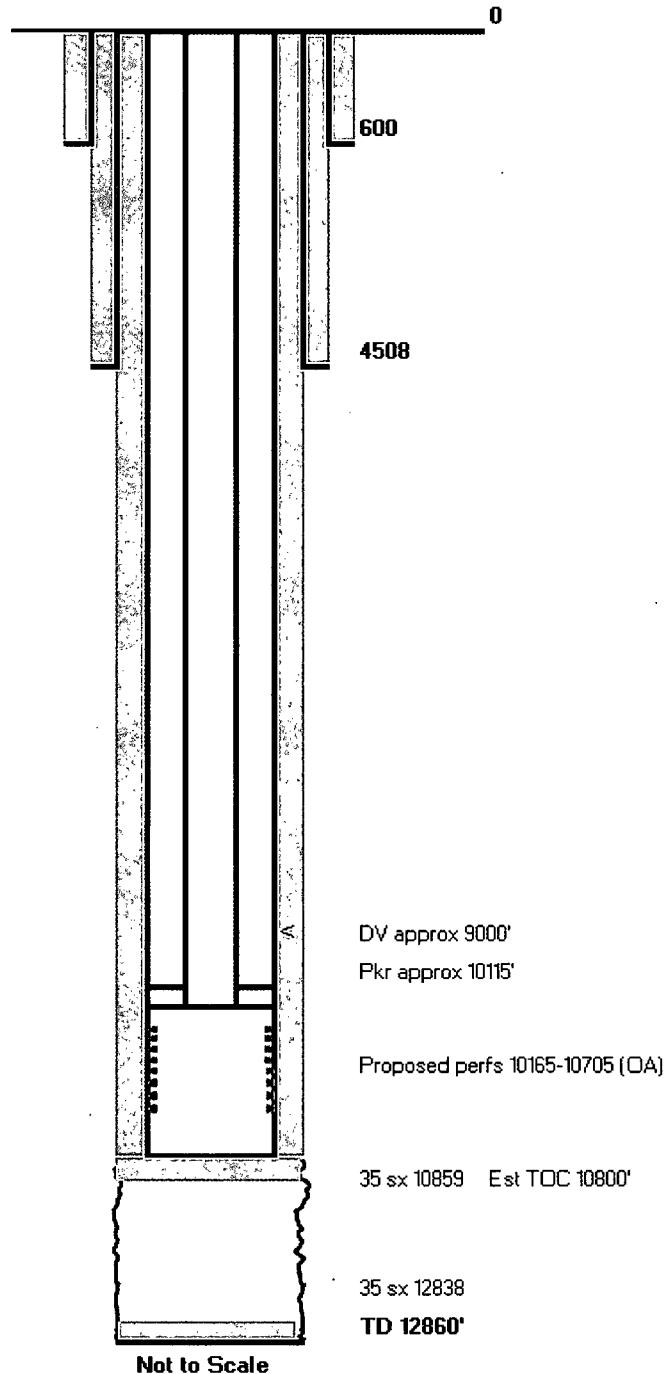
10115' 4" N80 11# upset Fiberglass coated

Lok-Set Packer set approx 10115'

Perf and acidized selectively

Load tubing annulus w/corrosion inhibitor

Complete surface head for disposal



Mesquite SWD, Inc.
OXY Marsh Hawk State #2
1980' FNL & 1650' FWL
Sec. 21, T16S-R32E Lea County, NM

API 30-025-38309

SPOT10 Satellite and Matching Topographic Map



Delorme XMap6

East of Maljamar NM, north from the junction of US-82 and NM-249/72 for 3.4 miles on east side of highway.

Mesquite SWD, Inc.
OXY Marsh Hawk State #2
1980' FNL & 1650' FWL
Sec. 21, T16S-R32E Lea County, NM

API 30-025-38309

Item XIII:

Surface and Minerals Owner:

Commissioner of Public Lands
State of New Mexico
310 Old Santa Fe Trail
Santa Fe, NM 87501

Surface Grazing Lessee

Ladoyce Caswell
1702 Gillham Drive
Brownfield, TX 79316

Operators:

COG Operating, LLC
2208 W. Main St.
Artesia, NM 88210

ContinentalPhillips Company
3401 E. 30th St.
Farmington, NM 87402

Eastern NM University
Inventory Control, Station 50
1500 S. Ave. K
Portales, NM 88130

Grand Banks Energy Co.
& Brian H. Scarborough
10 Desta Dr., Ste. 300 East
Midland, TX 79705

Mobil Producing Texas & New Mexico
P. O. Box 1760
Denver City, TX 79329

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

ZPZ Delaware, LLC
2000 Post Oak Blvd., Ste. 100
Houston, TX 77056

Mesquite SWD, Inc.
OXY Marsh Hawk State #2
1980' FNL & 1650' FWL
Sec. 21, T16S-R32E Lea County, NM

API 30-025-38309

Item XIII:

Legal Publication

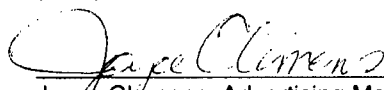
Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

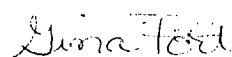
Joyce Clemens being first duly sworn on oath deposes and says that she is Advertising Director of THE LOVINGTON LEADER, a thrice a week newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled Legal Notice was published in a regular and entire issue of THE LOVINGTON LEADER and not in any supplement thereof, for one (1) day(s), beginning with the issue of April 3, 2012 and ending with the issue of April 3, 2012.

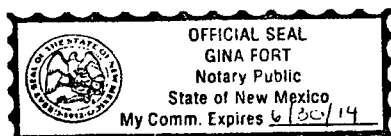
And that the cost of publishing said notice is the sum of \$ 35.69 which sum has been (Paid) as Court Costs.



Joyce Clemens, Advertising Manager
Subscribed and sworn to before me this 3rd day of April, 2012.



Gina Fort
Notary Public, Lea County, New Mexico
My Commission Expires June 30, 2014



Legal Notice
Mesquite SWD, Inc., c/o
Kay Havenor, 904 Moore
Ave., Roswell, NM 88201,
(575) 826-4518, email:
KHavenor@geore-
sources.com, is seeking
approval from the New
Mexico Oil Conservation
Division to re-enter the
CHI Operating, Inc. OXY
Marsh State No. 2 well
API: 30-025-38309, located
1980 feet from the
north line and 1650 feet
from the west line of
Section 21, T16S, R32E,

Lea County, NM, east of
Maljamar NM, north from
the junction of US-82 and
~~NM-246/72 for 8.4 miles~~
on east side of highway,
and re-enter for commercial
produced water disposal
as the Mesquite SWD, Inc.
OXY Marsh State No. 2. The
proposed disposal interval is
in the Cisco/Canyon through
7" casing perforations 10,165
feet to 10,705 feet (OA).
Mesquite SWD, Inc plans to
dispose of a maximum of 6,000
BWPd at a maximum pressure of 2,033
psi. Parties with questions
regarding this proposal are urged
to contact Kay Havenor at the email
address or phone number above.
Interested parties must file
objections or requests for hearing
within 15 days to the New Mexico
Oil Conservation Division, 1220 S. St.
Francis Dr., Santa Fe, NM 87505.

imum pressure of 2,033
psi. Parties with ques-
tions regarding this pro-
posal are urged to contact
Kay Havenor at the email
address or phone number
above. Interested parties
must file objections or
requests for hearing with-
in 15 days to the New
Mexico Oil Conservation
Division, 1220 S. St.
Francis Dr., Santa Fe, NM
87505.

Published in the
Lovington Leader April 3,
2012.

Mesquite SWD, Inc.

API 30-025-38309

OXY Marsh Hawk State #2

1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Item XIII:

Certified Mail Receipts

U.S. Postal ServiceTM
CERTIFIED MAILTM RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage \$ **\$1.50**
Certified Fee **\$2.95**
Return Receipt Fee (Endorsement Required) **\$2.35**
Restricted Delivery Fee (Endorsement Required) **\$0.00**
Total Postage & Fees **\$6.80**

Sent To: **Ladovce Caswell**
Street, Apt. No., or PO Box No.: **1702 Gillham Drive**
City, State, ZIP+4: **Brownfield, TX 79316**

PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal ServiceTM
CERTIFIED MAILTM RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com

OFFICIAL USE

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Certified Fee **\$2.95**
Return Receipt Fee (Endorsement Required) **\$2.35**
Restricted Delivery Fee (Endorsement Required) **\$0.00**
Total Postage & Fees **\$6.80**

Sent To: **Commissioner of Public Lands**
Street, Apt. No., or PO Box No.: **310 Old Santa Fe Trail**
City, State, ZIP+4: **Santa Fe, NM 87501**

PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal ServiceTM
CERTIFIED MAILTM RECEIPT
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Certified Fee **\$2.95**
Return Receipt Fee (Endorsement Required) **\$2.35**
Restricted Delivery Fee (Endorsement Required) **\$0.00**
Total Postage & Fees **\$6.80**

Sent To: **COG Operating, LLC**
Street, Apt. No., or PO Box No.: **2208 W. Main St.**
City, State, ZIP+4: **Artesia, NM 88210**

PS Form 3800, August 2006 See Reverse for Instructions

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Return Receipt Fee (Endorsement Required) **\$2.35**
Restricted Delivery Fee (Endorsement Required) **\$0.00**
Total Postage & Fees **\$6.80**

Sent To: **Continental Phillips Company**
Street, Apt. No., or PO Box No.: **3401 E. 30th St**
City, State, ZIP+4: **Farmington, NM 87402**

PS Form 3800, August 2006 See Reverse for Instructions

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Return Receipt Fee (Endorsement Required) **\$2.35**
Restricted Delivery Fee (Endorsement Required) **\$0.00**
Total Postage & Fees **\$6.80**

Sent To: **Yates Petroleum Corporation**
Street, Apt. No., or PO Box No.: **105 S. 4th St.**
City, State, ZIP+4: **Artesia, NM 88210**

PS Form 3800, August 2006 See Reverse for Instructions

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Return Receipt Fee (Endorsement Required) **\$2.35**
Restricted Delivery Fee (Endorsement Required) **\$0.00**
Total Postage & Fees **\$6.80**

Sent To: **ENMU - Inventory Control**
Street, Apt. No., or PO Box No.: **1500 S. Ave. K**
City, State, ZIP+4: **Portales, NM 88130**

PS Form 3800, August 2006 See Reverse for Instructions

Mesquite SWD, Inc.
OXY Marsh Hawk State #2
1980' FNL & 1650' FWL
Sec. 21, T16S-R32E Lea County, NM

API 30-025-38309

Item XIII:

Certified Mail Receipts - continued

7011 1570 0003 3482 6785

| U.S. Postal Service TM | |
|--|---------|
| CERTIFIED MAIL TM RECEIPT | |
| (Domestic Mail Only; No Insurance Coverage Provided) | |
| For delivery information visit our website at www.usps.com | |
| OFFICIAL USE | |
| Postage | \$ 1.50 |
| Certified Fee | \$ 2.95 |
| Return Receipt Fee (Endorsement Required) | \$ 2.35 |
| Restricted Delivery Fee (Endorsement Required) | \$ 0.00 |
| Total Postage & Fees | \$ 6.80 |

Sent To: Mobil Producing Texas & New Mexico
Street, Apt. No., or PO Box No.: P.O. Box 1760
City, State, ZIP+4: Denver City, TX 79329

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 6304

| U.S. Postal Service TM | |
|--|---------|
| CERTIFIED MAIL TM RECEIPT | |
| (Domestic Mail Only; No Insurance Coverage Provided) | |
| For delivery information visit our website at www.usps.com | |
| OFFICIAL USE | |
| Postage | \$ 1.50 |
| Certified Fee | \$ 2.95 |
| Return Receipt Fee (Endorsement Required) | \$ 2.35 |
| Restricted Delivery Fee (Endorsement Required) | \$ 0.00 |
| Total Postage & Fees | \$ 6.80 |

Sent To: Grand Banks Energy Co. & B.H. Scarborough
Street, Apt. No., or PO Box No.: P.O. Box 1760
City, State, ZIP+4: Denver City, TX 79329

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 5314

| U.S. Postal Service TM | |
|--|---------|
| CERTIFIED MAIL TM RECEIPT | |
| (Domestic Mail Only; No Insurance Coverage Provided) | |
| For delivery information visit our website at www.usps.com | |
| OFFICIAL USE | |
| Postage | \$ 1.50 |
| Certified Fee | \$ 2.95 |
| Return Receipt Fee (Endorsement Required) | \$ 2.35 |
| Restricted Delivery Fee (Endorsement Required) | \$ 0.00 |
| Total Postage & Fees | \$ 6.80 |

Sent To: ZPZ Delaware, LLC
Street, Apt. No., or PO Box No.: 200 Post Oak Blvd., Ste. 100
City, State, ZIP+4: Houston, TX 77056

PS Form 3800, August 2006 See Reverse for Instructions

Jones, William V., EMNRD

From: Mull, Donna, EMNRD
Sent: Wednesday, April 25, 2012 9:36 AM
To: Jones, William V., EMNRD
Cc: Gonzales, Elidio L, EMNRD
Subject: FW: Disposal application from Mesquite SWD, Inc.: OXY Marsh Hawk State #2 30-025-38309 Cisco-Canyon from 10165 to 10705 feet perforated

Will, This well has Intent to Re-entry. We were told that if this well had the intent in the well file and had not started the work, but showed up on the Financial Assurance list to let it be and go ahead and approve paperwork (C-101, C-104, etc). You may want to check again with Daniel and Sonny.

Have a nice day. Donna

From: Gonzales, Elidio L, EMNRD
Sent: Wednesday, April 25, 2012 8:20 AM
To: Mull, Donna, EMNRD
Subject: FW: Disposal application from Mesquite SWD, Inc.: OXY Marsh Hawk State #2 30-025-38309 Cisco-Canyon from 10165 to 10705 feet perforated

fyi

E. L. GONZALES
STAFF SUPERVISOR
EMNRD - OCD DISTRICT 1
HOBBS, NM 88240
OFFICE: 575-393-6161 X-114
CELL: 575-370-3182 FAX: 575-393-0720
ELIDIOL.GONZALES@STATE.NM.US

From: Jones, William V., EMNRD
Sent: Tuesday, April 24, 2012 5:09 PM
To: Kay Havenor
Cc: Ezeanyim, Richard, EMNRD; Dade, Randy, EMNRD; Gonzales, Elidio L, EMNRD; Kautz, Paul, EMNRD; Shapard, Craig, EMNRD; Sanchez, Daniel J., EMNRD; Swazo, Sonny, EMNRD
Subject: Disposal application from Mesquite SWD, Inc.: OXY Marsh Hawk State #2 30-025-38309 Cisco-Canyon from 10165 to 10705 feet perforated

Hello Dr. Havenor:

I'm sure I would regret getting you Geo's wound up on formation definitions....but guess we will lump the Cisco into the Canyon in this area?

I can't release this permit until the single well bond is posted on 30-015-24784 or am told the well does not really need a bond. Also, this could result in refusal of APD's for Mesquite. Let me know when the issue is resolved.

Thanks for the application,

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

From: Kay Havenor [khavenor@georesources.com]
Sent: Wednesday, April 25, 2012 9:13 AM
To: Jones, William V., EMNRD
Subject: Re: Disposal application from Mesquite SWD, Inc.: OXY Marsh Hawk State #2 30-025-38309 Cisco-Canyon from 10165 to 10705 feet perforated

Will,

The bond problem will be resolved promptly. Thanks for the heads-up.

Comment on Cisco/Canyon. In some areas the time-line between the human-desired boundary falls in a quasi-continuous dispositional sequence and is difficult to reliably pick a boundary from logs. In times past companies did detailed micropaleo studies, but those days are basically gone.

Kay

At 05:09 PM 4/24/2012, you wrote:

Hello Dr. Havenor:

I'm sure I would regret getting you Geo's wound up on formation definitions....but guess we will lump the Cisco into the Canyon in this area?

I can't release this permit until the single well bond is posted on 30-015-24784 or am told the well does not really need a bond. Also, this could result in refusal of APD's for Mesquite. Let me know when the issue is resolved.

Thanks for the application,

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



Injection Permit Checklist (11/15/2010)

WFX PMX SWD 1329 Permit Date 4/25/12 UIC Qtr 30015-24784

Wells 1 Well Name(s): OXY MARSH HAWK STATE #2

API Num: 30-0 25-38309 Spud Date: 10/1/07 New/Old: N (UIC primacy March 7, 1982)

Footages 1980 FNL/1650 FNL Unit F Sec 21 Tsp 16S Rge 32E County LEA

General Location: E. of MALJAMAR

Operator: Mesquite SWD, INC Contact KAY HAVENOR

OGRID: 161968 RULE 5.9 Compliance (Wells) 0/26 (Finan Assur) IS 5.9 OK?

Well File Reviewed Current Status: P&A (MORROW TEST)

Planned Work to Well: RE-ENTER, RUN CMT 7"

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 | Surface | 17 1/2 13 3/8 | 600' | — | 600 SX | CIRC |
| New Existing | Interm | 12 1/4 9 5/8 | 4508' | 9000' | 2150 SX | CIRC |
| New Existing | LongSt | 8 3/4 7" | (12860' OLD TD) | 3000 SX | 3000 SX | CIRC (PLANNED) |
| New Existing | Liner | | 10,800' | NEW TD | | |
| New Existing | OpenHole | | | | | |

Depths/Formations: Depths, Ft. Formation Tops?

| | | | |
|--------------------|--------|--------|------------------------------------|
| Formation(s) Above | 9938 | CISCO | ✓ |
| Injection TOP: | 10165' | CISCO | Max. PSI 2033 OpenHole Perfs ✓ |
| Injection BOTTOM: | 10705' | CANYON | Tubing Size 4" Packer Depth 10115' |
| Formation(s) Below | 11080 | STRAWN | ✓ |

Capitan Reef? (Potash? Noticed?) (WIPP? Noticed?) Salado Top/Bot 1390-2385 (2 Drape) Cliff House?

Fresh Water: Depths: <300' Formation OGALLALA Wells? NONE Analysis? Affirmative Statement ✓

Disposal Fluid Analysis? Sources: COMMERCIAL (W.C.)

Disposal Interval: Analysis? Production Potential/Testing: DRY/WATER WET (>10,000 TDS)

Notice: Newspaper Date 4/3/12 Surface Owner S.L.O. (4/3/12) Mineral Owner(s)

RULE 26.7(A) Affected Persons: See LDI. (4/3/12)

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

.....Active Wells 0 Repairs? Which Wells?

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

Issues: Request Sent Reply: