

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

Oxy Marsh Hawk State #2
 30-225-38309

ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

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

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication
 NSL NSP SD
 - 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 _____

F-21-169-32E

- [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

10,165'-101705'

[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	<i>Kay C Havenor</i>	Agent	3/30/2012
_____	_____	_____	_____
Print or Type Name	Signature	Title	Date

KHavenor@georesources.com
 e-mail Address

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 Sec 21 Tsp 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? <u>Yes</u> 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 _____ 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: 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.

INJECTION WELL DATA SHEET

OPERATOR: Mesquite SWD, Inc. OGRID: 161968 API 30-025-38309

WELL NAME & NUMBER: OXY Marsh Hawk State #2

WELL LOCATION: 1980' FNL & 1650' FWL F 21 16S 32E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing PRESENTLY IN HOLE

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 600 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulated

See attached well diagram

Intermediate Casing PRESENTLY IN HOLE

Hole Size: 12-1/4" Casing Size: 9-5/8"

Cemented with: 2150 sx. *or* _____ ft³

Top of Cement: Surf Method Determined: Circulated

Proposed Production Casing

Hole Size: 8-3/4" Casing Size: 7" 26# N80/P110 LTC

Cemented with: 3000 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Observed

Total Depth: 12,860'

Injection Interval

Perforations 10,165' - 10,705'

(Perforated or Open Hole; indicate which)

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

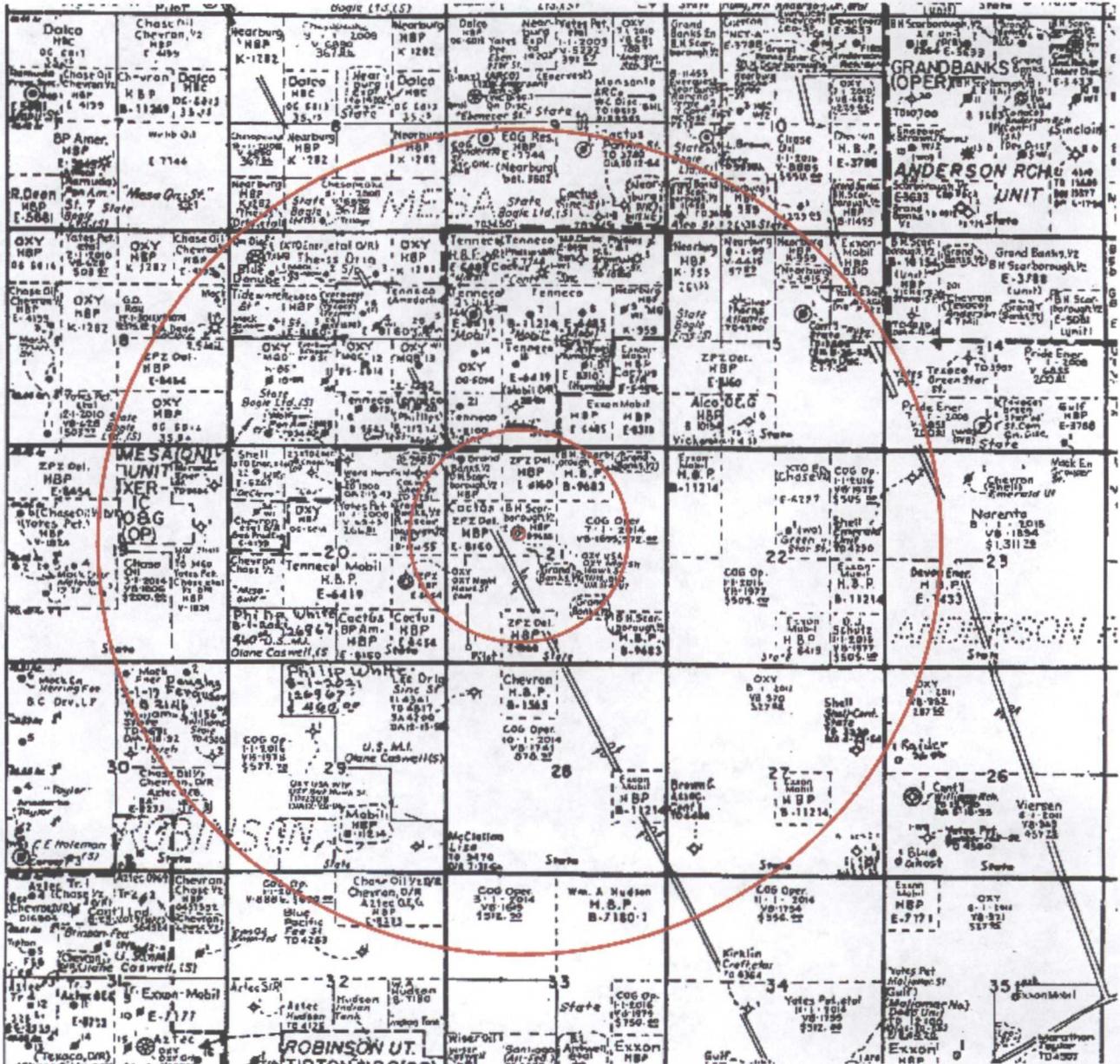
1980' FNL & 1650' FWL

Sec. 21, T16S-R32E Lea County, NM

Item V:

Area of Review

1/2 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

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

UTMAD83 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 OSE/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.

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

API 30-025-38309

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'.

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

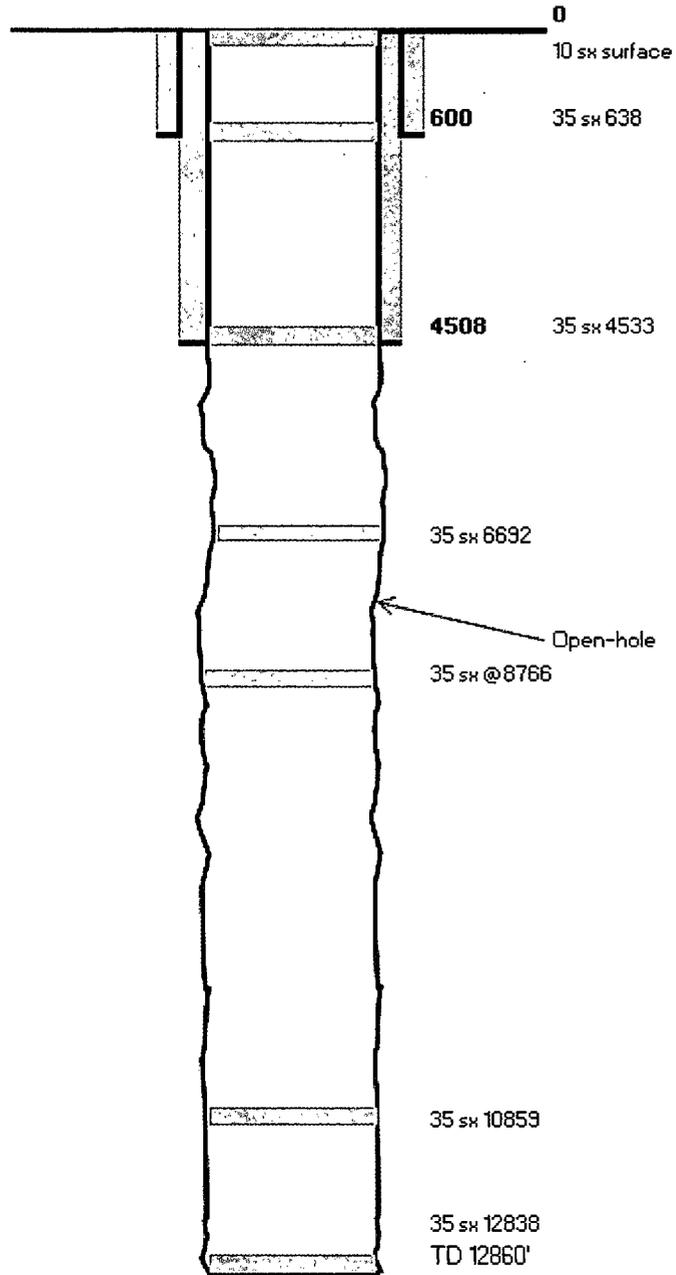
Surface Csg

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-55N-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

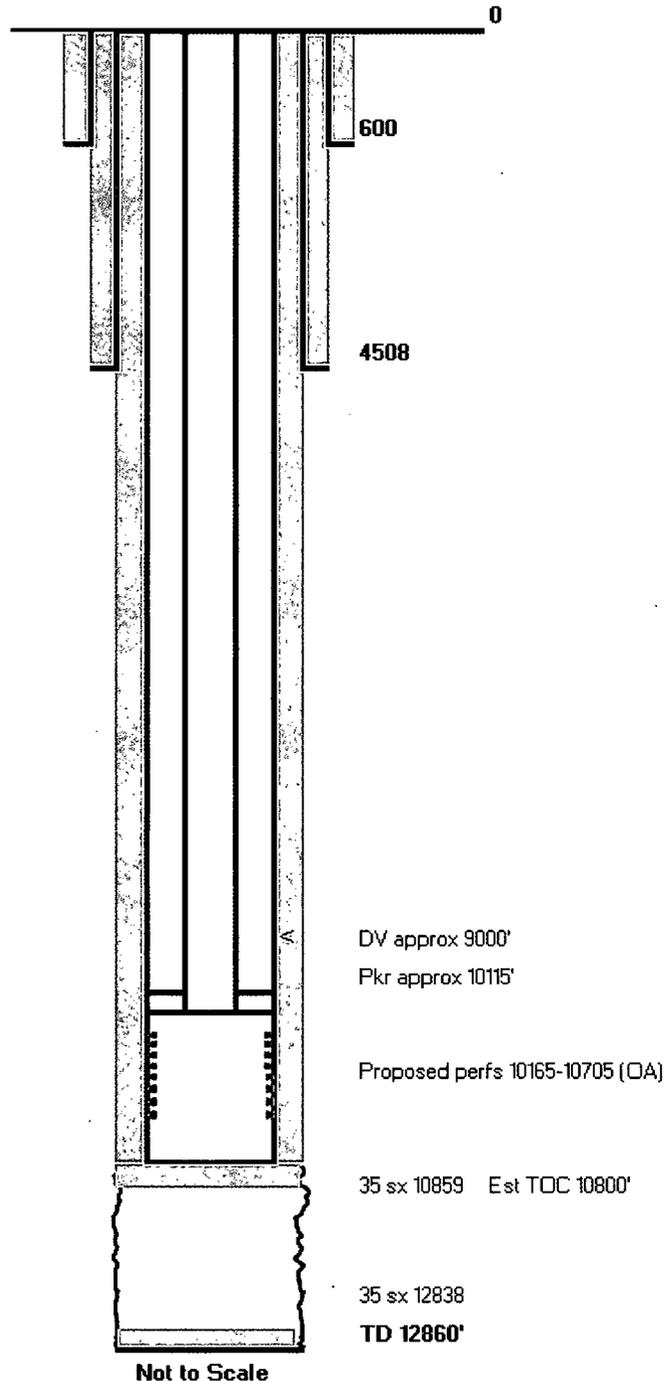
Size: 9-5/8" 40# J-55/N-80
 Set @: 4508
 Sxs cmt: 2150
 Circ: 172 sx surface
 TOC: Surface
 Hole Size: 12-1/4"

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

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:

Certified Mail Receipts

7011 1570 0003 3481 6397

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com

7011 1570 0003 3481 6397
OFFICIAL USE

Postage	\$ 11.50	0602
Certified Fee	\$ 2.95	06
Return Receipt Fee (Endorsement Required)	\$ 2.35	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	APR 03 2012
Total Postage & Fees	\$ 16.80	USPS 8820

Sent To: Ladoyce 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

7011 1570 0003 3481 6305

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SANTA FE NM 87501
OFFICIAL USE

Postage	\$ 11.50	0602
Certified Fee	\$ 2.95	06
Return Receipt Fee (Endorsement Required)	\$ 2.35	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	APR 03 2012
Total Postage & Fees	\$ 16.80	USPS 8820

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

7011 1570 0003 3481 6403

U.S. Postal Service™
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ARTESIA NM 88210
OFFICIAL USE

Postage	\$ 11.50	0602
Certified Fee	\$ 2.95	06
Return Receipt Fee (Endorsement Required)	\$ 2.35	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	APR 03 2012
Total Postage & Fees	\$ 16.80	USPS 8820

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

7011 1570 0003 3481 6410

U.S. Postal Service™
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FARMINGTON NM 87402
OFFICIAL USE

Postage	\$ 11.50	0602
Certified Fee	\$ 2.95	06
Return Receipt Fee (Endorsement Required)	\$ 2.35	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	APR 03 2012
Total Postage & Fees	\$ 16.80	USPS 8820

Sent To: ContinentalPhillips 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

7011 1570 0003 3481 6411

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ARTESIA NM 88210
OFFICIAL USE

Postage	\$ 11.50	0602
Certified Fee	\$ 2.95	06
Return Receipt Fee (Endorsement Required)	\$ 2.35	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	APR 03 2012
Total Postage & Fees	\$ 16.80	USPS 8820

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

7011 1570 0003 3481 6427

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

PORTALES NM 88130
OFFICIAL USE

Postage	\$ 11.50	0602
Certified Fee	\$ 2.95	06
Return Receipt Fee (Endorsement Required)	\$ 2.35	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	APR 03 2012
Total Postage & Fees	\$ 16.80	USPS 8820

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

Item XIII:

Certified Mail Receipts - continued

7011 1570 0003 3482 6785

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HOUSTON TX 77056 OFFICIAL USE

Postage	\$ 1.50	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.80	

Postmark Here: ROSWELL, NM APR 9 2012

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

4059 1570 0003 3481 6304

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HOUSTON TX 77056 OFFICIAL USE

Postage	\$ 1.50	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.80	

Postmark Here: ROSWELL, NM APR 9 2012

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

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HOUSTON TX 77056 OFFICIAL USE

Postage	\$ 1.50	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.80	

Postmark Here: ROSWELL, NM APR 9 2012

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 elogs. 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 AMJ 30-015-24784 needs BOND

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 FWL 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 (NO R/W TEST)

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

Diagrams: Before Conversion After Conversion Elogs in Imaging File:

Well Details:	Sizes		Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
	Hole.....	Pipe				
New ___ Existing <input checked="" type="checkbox"/> Surface	<u>17 1/2</u>	<u>13 3/8</u>	<u>600'</u>	<u>---</u>	<u>600SX</u>	<u>CIRC</u>
New ___ Existing <input checked="" type="checkbox"/> Interm	<u>12 1/4</u>	<u>9 5/8</u>	<u>4508</u>	<u>---</u>	<u>2150SX</u>	<u>CIRC</u>
New ___ Existing <input checked="" type="checkbox"/> LongSt	<u>8 3/4</u>	<u>7"</u>	<u>(12860' OLD TD)</u>	<u>---</u>	<u>3000SX</u>	<u>CIRC (PLANNED)</u>
New ___ Existing ___ Liner			<u>10,800</u>	<u>NEW TD</u>		
New ___ Existing ___ OpenHole						

Depths/Formations:	Depths, Ft.	Formation	Tops?
Formation(s) Above	<u>9938</u>	<u>CISCO</u>	<input checked="" type="checkbox"/>
Injection TOP:	<u>10165'</u>	<u>CISCO</u>	Max. PSI <u>2033</u> OpenHole ___ Perfs <input checked="" type="checkbox"/>
Injection BOTTOM:	<u>10705'</u>	<u>CANYON</u>	Tubing Size <u>4"</u> Packer Depth <u>10115'</u>
Formation(s) Below	<u>11080</u>	<u>STRAWN</u>	<input checked="" type="checkbox"/>

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

Fresh Water: Depths: <300' Formation OGALALA Wells? NONE Analysis? ___ Affirmative Statement

Disposal Fluid Analysis? Sources: COMMERCIAL (WC.)

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: _____