12/15/2017 Complete

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
12/08/2017	MAM → PRG	SWD	pMAM1734254533

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: Mesquite SWD, Inc. **OGRID Number:** 161968
Well Name: Val SWD No. 1 **API:** 30-015-Pending
Pool: SWD; Devonian-Montoya **Pool Code:** 97803

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐NSL ☐ NSP(PROJECT AREA) ☐NSP(PRORATION UNIT) ☐SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐DHC ☐CTB ☐PLC ☐PC ☐OLS ☐OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐PMX ☒SWD ☐IPI ☐EOR ☐PPR

FOR OCD ONLY
☑ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☐ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☒ Surface owner
G. ☐ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **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.

December 8, 2017
Date

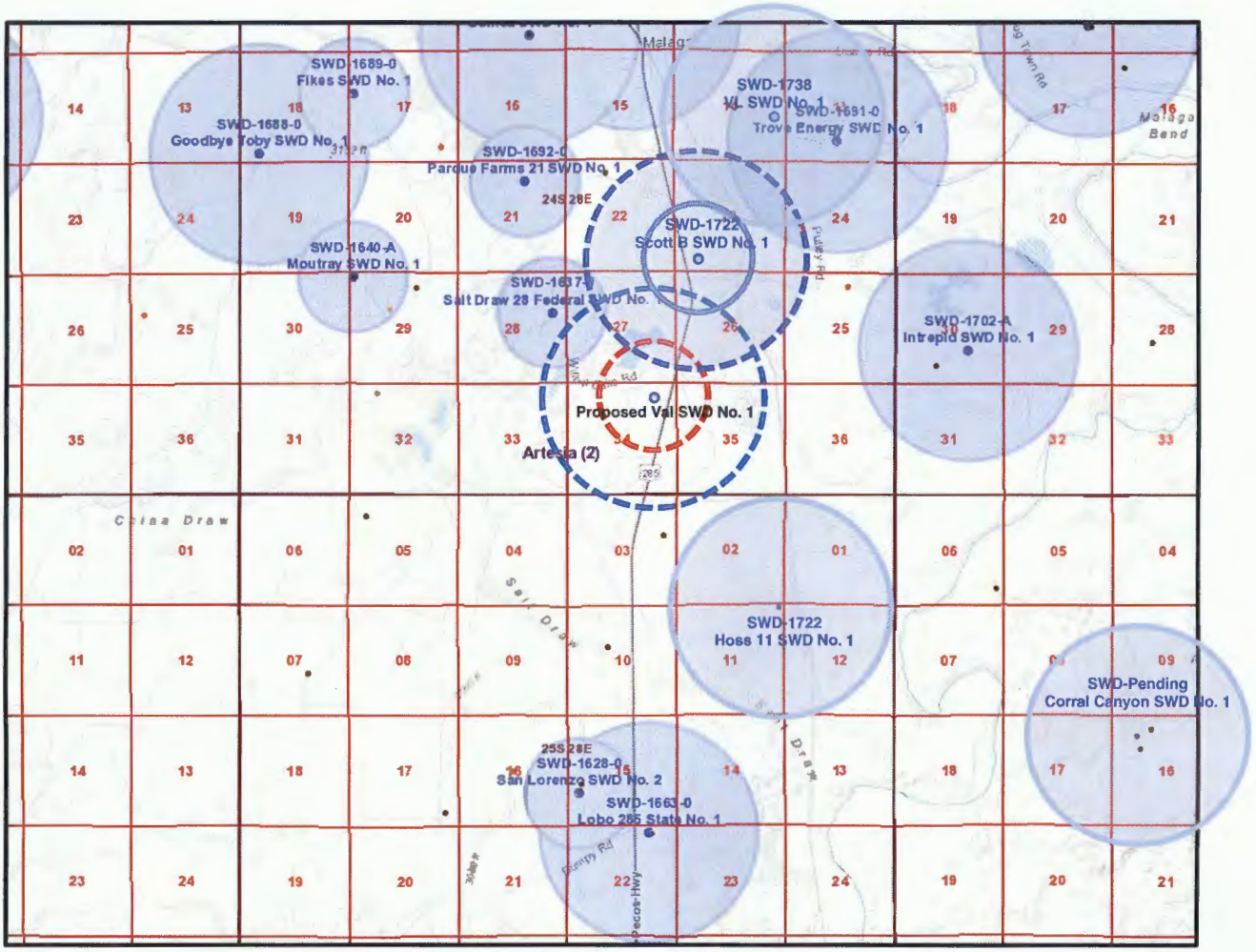
Kay Havenor; Agent
Print or Type Name

575-627-4518
Phone Number

See application
Signature

Kay.Havenor@gmail.com
e-mail Address

Pending Application for High-Volume Devonian Disposal Well
C-108 Application for Val SWD No. 1 – Mesquite SWD Inc.



Val SWD No. 1; Mesquite SWD, Inc.

API 30-015-Pending Application No. pMAM1734425453
Proposed interval: 16,300' to 17,850'
Processing application with current design.

Closet Devonian Well: Salt Draw 28 Federal SWD No. 1 (30-015-44676) SWD-1637 (Mewbourne; August 5, 2016) approved current tubing: 4.5-in, design limits any increase in tubing size.

Closet Devonian Well with Large-Volume Potential: Hoss 11 SWD No. 1 (30-015-44676) spud 2.25.2018; approved current tubing: 5-in with pending application for tubing size modification to 7-inch for tubing above liner.

Goetze, Phillip, EMNRD

From: Goetze, Phillip, EMNRD
Sent: Friday, April 20, 2018 9:03 AM
To: McQueen, Ken, EMNRD
Cc: Sayer, Matthias, EMNRD
Subject: FW: MESQUITE SWD, INC - VAL SWD #1

Per your request. PRG

Phillip Goetze, PG
Engineering Bureau, Oil Conservation Division, NM EMNRD
1220 South St. Francis Drive, Santa Fe, NM 87505
Direct: 505.476.3466
E-mail: phillip.goetze@state.nm.us

From: Goetze, Phillip, EMNRD
Sent: Thursday, April 19, 2018 3:46 PM
To: 'Melanie Wilson' <mjp1692@gmail.com>
Cc: claylwilson@hotmail.com; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>; McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>; Dawson, Scott, EMNRD <Scott.Dawson@state.nm.us>; Riley, Heather, EMNRD <Heather.Riley@state.nm.us>
Subject: RE: MESQUITE SWD, INC - VAL SWD #1

Melanie:

Yes. The Division met with Matador/Black River (Thursday, April 12th) to discuss their two applications: the Malaga SWD No. 4 and No. 5. Matador had proceeded to place these applications on the May 3rd Docket based on concerns raised by Division about the crowding of Devonian wells in the Loving-Malaga area. Matador presented a modified model (using their previous work done for the Rustler SWD wells) for assessment of pressure build-up and with characterization of the induced-seismicity potential. But for this assessment, they expanded the model to include all applications and existing Devonian wells (including Mesquite's) for the "fairway" of Devonian SWD wells along 285. Their models (ones for average rates and maximum rates) showed limited pressure increase for high-volume injection (for all the wells currently approved or pending) along with a low potential for any type of IS events.

I have requested Matador to send a summary paper that I will include in their application as to move forward with a recommendation to the Director for approval of both Matador's wells. I will also include this assessment as part of the Val application in support of this application – answering my concerns about the proximity of the wells around the Val location. When I have Matador's report, I will complete a draft order for the Val and move it forward for signature. So, hopefully next week all parties will have a final product.

But, a consideration for any future plans - this area is congested and any further applications to be considered will not be considered for administrative review and will be recommended for hearing. There may be opportunity in the future should one of the existing applications/orders fail to be approved or expires. Check with me next Friday if you don't see a e-mail. PRG

Phillip Goetze, PG
Engineering Bureau, Oil Conservation Division, NM EMNRD
1220 South St. Francis Drive, Santa Fe, NM 87505
Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us

From: Melanie Wilson <mjp1692@gmail.com>
Sent: Thursday, April 19, 2018 3:04 PM
To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Subject: MESQUITE SWD, INC - VAL SWD #1

Hi again,
Do you have any update on the Val SWD #1 C-108?
Thanks,
Melanie Wilson
575-914-1461
Mjp1692@gmail.com

Fault-Slip Probability Assessment in the Malaga Area, Eddy County New Mexico

Dr. Edmund L Frost III, Vice President—Geoscience, Matador Resources Company

In order to minimize the potential risk of induced seismicity associated with deep waste water disposal, Matador Resources Company has undertaken a study to characterize the fault-slip potential in the Malaga area in Eddy County, New Mexico. This study utilizes a mix of public and proprietary data in conjunction with the Stanford Center for Induced and Triggered Seismicity's (SCITS) Fault Slip Potential (FSP; Walsh et al., 2017) code. Two 13 well model cases, which are described in more detail herein, were run, as follows: 1) a case with 30,000 bbl/d maximum rates and 2) a case with 45,000 bbl/d maximum rates on 5 of the 13 wells. In both cases, the injection rates were held constant through 2047. Despite these significant long-term injection volumes, the results of such analyses indicate that the potential for fault slip in the Malaga area remains low through 2047, with all faults showing a slip probability of 12% or less.

Data:

Fault orientations (strike, dip) were obtained from 118 basement faults mapped in a proprietary 88 mi^2 prestack depth migrated (PSDM) 3D seismic volume. Fault orientations were calculated at multiple points along the trace of each fault in the injection interval from Matador's structural framework model. These points were exported directly from Petrel into the FSP code. Four fault trends were observed (Figure 1a/b, Figure 2): 1) high-angle (dip>70°), north-south trending reverse faults, 2) high-angle (dip>70°), southwest-northeast trending, northwest reverse faults, 3) high-angle (dip>70°), east-west trending reverse faults and 4) arcuate reverse faults with variable strikes and dips. The north-south trending fault set is the most common, making up more than 80% of the observed fault orientations (Figure 1a).

Stress data was derived from borehole image log data in the Black River #1 SWD (Figure 1c; Table 1), where the maximum horizontal stress (SHmax) orientation was observed as N42°E. This orientation agrees with published regional stress orientations for Southern Eddy County of N35°E by Lund Snee and Zoback (2018). Matador has observed significant rotations of SHmax across southeast New Mexico, and as such Matador feels a locally derived value is important. Matador used the Aø parameter of Simpson 1997 (as summarized by Lund Snee et al., 2018) to describe the ratio of the principle stresses and to determine the style of faulting. Horizontal stress magnitudes were not modeled explicitly by Matador

(Figure 2A), instead the published Aø value of 0.52 (Lund Snee and Zoback 2018; Table 1) for southern Eddy County, New Mexico was used, which implies a pure normal faulting environment.

Characteristics of the Siluro-Devonian aquifer were derived from public data, regional mapping and proprietary well data. The Siluro-Devonian aquifer has an average thickness of roughly 1000 ft, and an average porosity of 6%. Average permeability is inferred to be 150 md based on an observed permeability thickness of 204,000 md-ft in a step-rate test performed an existing Matador SWD well.

Experimental Design:

Using the Fault Slip Potential code, two 13 well cases were modeled. The SWD wells included in the models were a mix of active injectors and all known permitted (not currently injecting) wells that were within the PSDM volume as of April 12 2017 (Table 2; Figures 1c and 3). In both cases there are 12 high-volume injectors, and one low-volume injector—the Cigarillo SWD#1 (modeled at 8000 bbl/d). The rates and duration for these wells in each model case are summarized in Table 2. In Case #1, all 12 high-volume SWDs were rate-limited to 30,000 bbl/d, through 2047. In Case #2, the 5 Black River SWD #1, Rustler Breaks SWD #2, Rustler Breaks SWD #3, Malaga SWD #4 and Malaga SWD #5 were modeled to inject at a rate of 45,000 bbl/d, while the remaining high-volume injectors were modeled at an injection rate of 30,000 bbl/d. The rationale for the 30,000bbl/d and 45,000 bbl/d rates is that they respectively approximate the maximum achievable rate for 4.5" and 5.5" casing.

For both model cases, fault data and all other parameters were held constant. These parameters, and their variability limits for the Monte-Carlo simulations, are summarized in Table 1. The fault parameter with the largest impact on slip potential is fault dip (Figure 4a). Fault dip is also the parameter with the most local variability and the most likely to be adversely influenced by seismic depth imaging errors. As such, fault dip is allowed to vary by as much 15° in the probabilistic geomechanical modeling routines (Figure 4b).

Results:

In both model cases, the impact of high-rate injection can be seen as a regional increase in pore pressure with time (Figure 3). To interrogate the two model cases, the Malaga #4 location at the year 2047 was used as a reference point. In Case #1, the pressure impact was 312 psi at the reference point, while in Case #2 pressure increased to 360 psi. At the modelled depth of 13,500 ft, this translated to a pore pressure gradient increase of 0.023 psi/ft and of 0.026 psi/ft respectively. Results of the geomechanical modeling show that all faults have a "distance to failure" of greater than 750 psi; meaning that aquifer pore pressure would need to be increased by greater the 750 psi to potentially induce failure. The results

of both model cases are well below this limit. However, it is important to recognize that different fault populations have different stabilities. The SW-NE trending features have the lowest stability 750-1200 psi, while the north-south trending features, which are by far the more common observed fault orientation in the area, have stabilities of generally greater than 1500psi.

When probabilistic simulations were run with FSP, the overall fault slip probability was low (c.a., 10%) in both cases. Case #1 had a maximum probability of 11%, and the increased injection rates only increased the slip probability to 12% in Case #2 (Figure 5).

Conclusions and Recommendations:

Based on the model cases presented here, the overall probability of fault slip is less than 12% well into the future (2047), even with multiple high-volume injectors spaced roughly a mile apart. However, caution still needs to be exercised to avoid injection near unstable features. Mohr-Coulomb failure theory predicts that there are unstable orientations possible in all stress orientations (Fig. XX). As such, great care should be taken to identify these stress orientations and avoid injecting in the immediate vicinity of known unstable fault orientations. The FSP code provides an ideal tool to identify unstable fault orientations and, based on the stress parameters used in this study, the most unstable fault orientation are features with N41°E strike and a dip of approximately 60°. It should be noted that the stability of this fault orientation increases significantly by dips of 70° and greater. While faults that strike southwest-northeast are observed in the 3D volume, their dips are dominantly greater than 80° (Fig. 1b). Regardless, Matador screens all of the SWD locations that it drills against its 3D seismic to avoid this orientation in order to minimize risk; *it is Matador's assertion that all operators should do the same*. Moreover, it is important to emphasize that these results are local in nature, and they should not be applied to other settings without properly calibrating the input data.

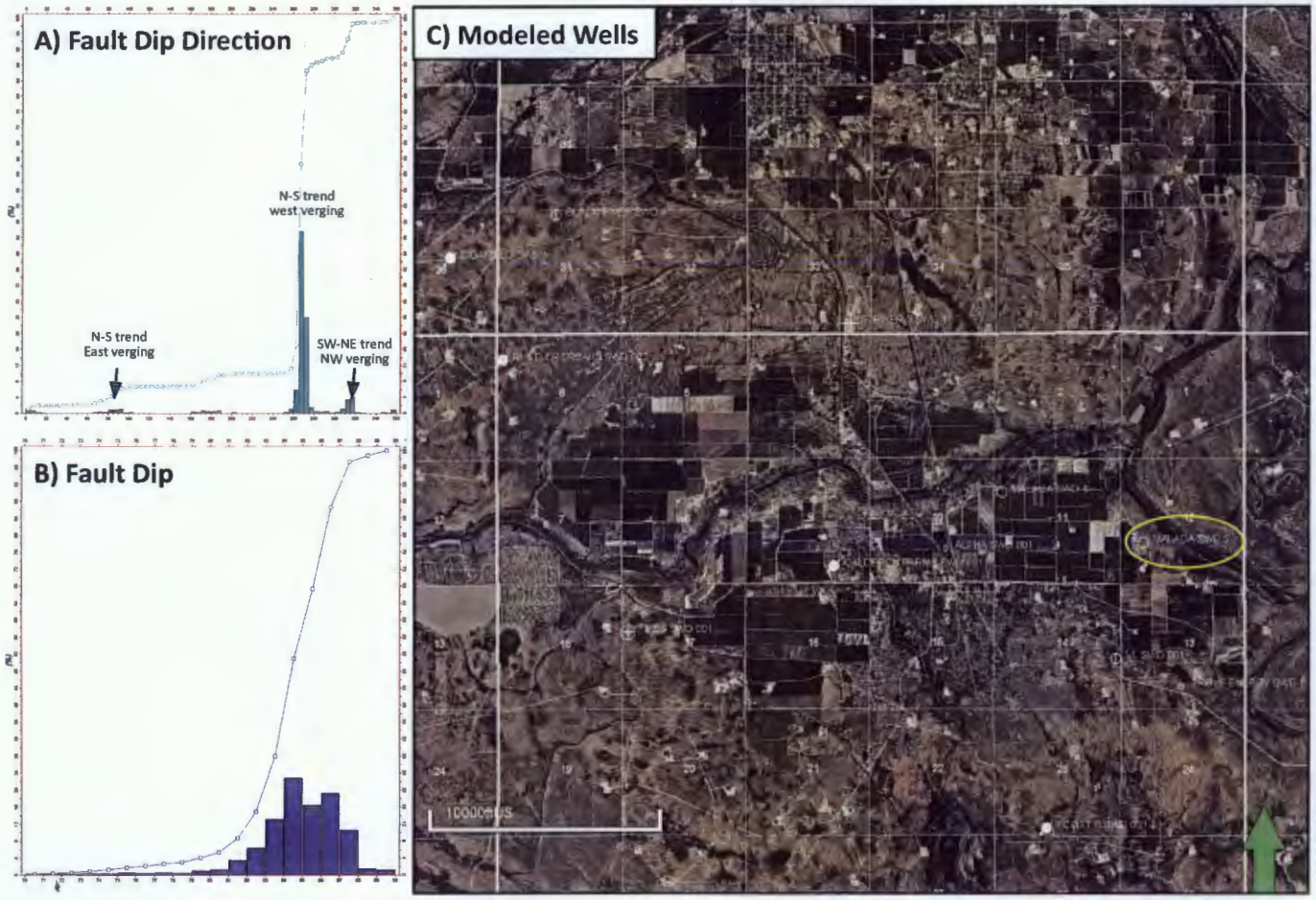


Figure 1: Input Data. A) Fault dip direction data from 118 mapped faults. The clusters of data at 90° and 270° represent the dominant N-S striking fault set. B) Fault dip data from 118 mapped faults. The majority of faults have dips greater than 75°, C) Distribution of 13 modeled wells. The Malaga SWD 4 (circled) serves as a reference point for modeling results.

Parameter	Input Value	Variability (+/-)	Data Source
Vertical Stress Gradient	1.05 psi/ft	0.05 psi/ft	Pilot Hole
Shmax	N 42 E	5°	Pilot Hole
Fault Strike	variable	5°	3D Seismic
Fault Dip	variable	15°	3D Seismic
Reference Depth	13500 ft	na	Pilot Hole, 3D Seismic, Regional Mapping
Initial Reservoir Pressure Gradient	0.43 psi/ft	0.03 psi/ft	Pilot Hole
A Phi Parameter	0.52	0.03	Lund Snee and Zoback 2018
Reference Friction Coefficient	0.6	0.01	Standard Value
Aquifer Thickness	1000 ft	200	Pilot Hole, Regional Mapping
Porosity	6%	2%	Pilot Hole
Permeability	150 mD	100 mD	Pilot Hole, Step-Rate Tests
Fluid Density	1000 kg/m³	50 kg/m³	Assume value
Dynamic Viscosity	0.0004 Pa. S	0.0001 Pa. S	Calculated value corrected for reservoir temperature

Table 1: Model Inputs, Variance, and Source.

Well	Start	End	Case #1 Volume	Case #2 Volume
Cigarillo SWD #1	2010	2047	8000 bbl/d	8000 bbl/d
Black River SWD #1	2017	2047	30000 bbl/d	45000 bbl/d
Rustler Breaks SWD #2	2017	2047	30000 bbl/d	45000 bbl/d
Rustler Breaks SWD #3	2018	2047	30000 bbl/d	45000 bbl/d
Malaga SWD #4	2018	2047	30000 bbl/d	45000 bbl/d
Malaga SWD #5	2018	2047	30000 bbl/d	45000 bbl/d
Alpha SWD #1	2019	2047	30000 bbl/d	30000 bbl/d
Calderon SWD #1	2017	2047	30000 bbl/d	30000 bbl/d
Fikes SWD #1	2019	2047	30000 bbl/d	30000 bbl/d
Scott B SWD #1	2019	2047	30000 bbl/d	30000 bbl/d
Striker 3 SWD #1	2019	2047	30000 bbl/d	30000 bbl/d
Trove Energy SWD #1	2019	2047	30000 bbl/d	30000 bbl/d
VL SWD #1	2019	2047	30000 bbl/d	30000 bbl/d

Table 2: Well Data for FSP Modeling.

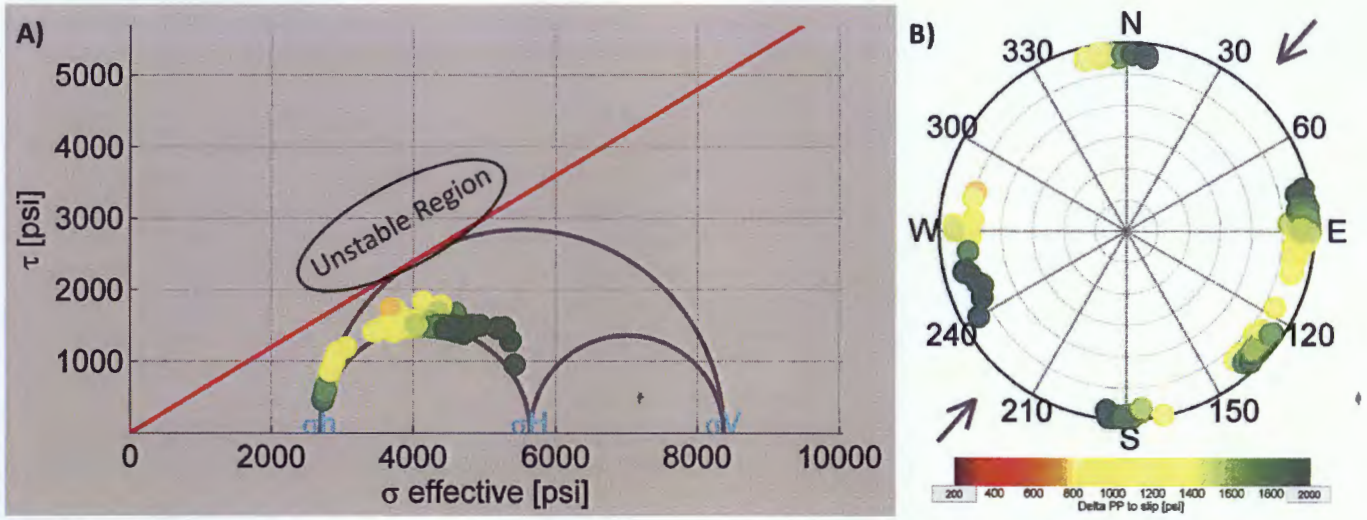


Figure 2: A) 3D Mohr Diagram with poles to faults shaded by change in pore pressure required for slip. Principal stress magnitudes are shown on the Y-axis. The red line represents fictional stability envelope, any points above or left of this line are considered unstable. B) Stereonet showing poles to faults shaded by change in pore pressure required for fault slip.

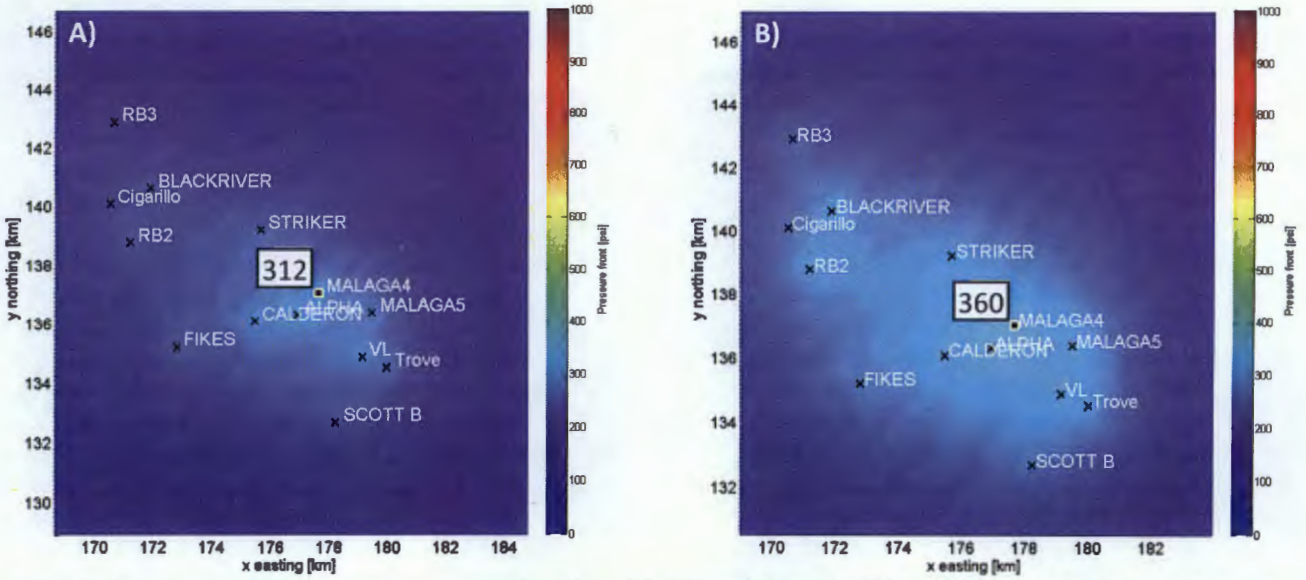


Figure 3: Modeled reservoir pressure increase for Case #1 (A) and Case #2 (B). Values at the Malaga #4 location are shown in the text box in each image.

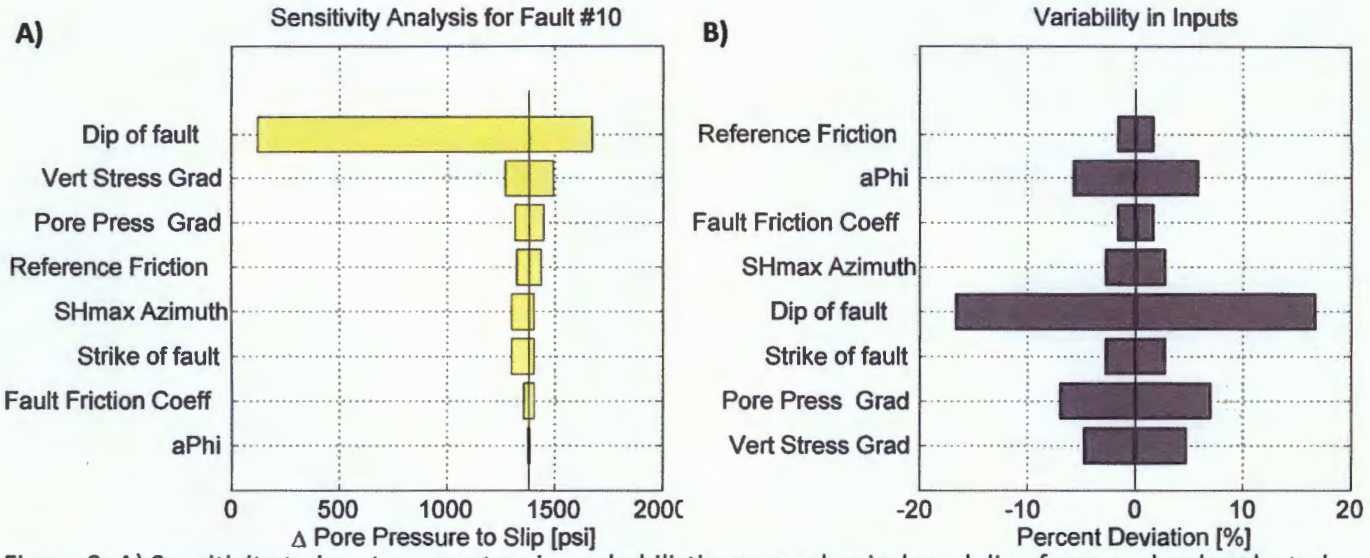


Figure 3: A) Sensitivity to input parameters in probabilistic geomechanical modeling for a randomly selected fault. B) Variability of geomechanical inputs.

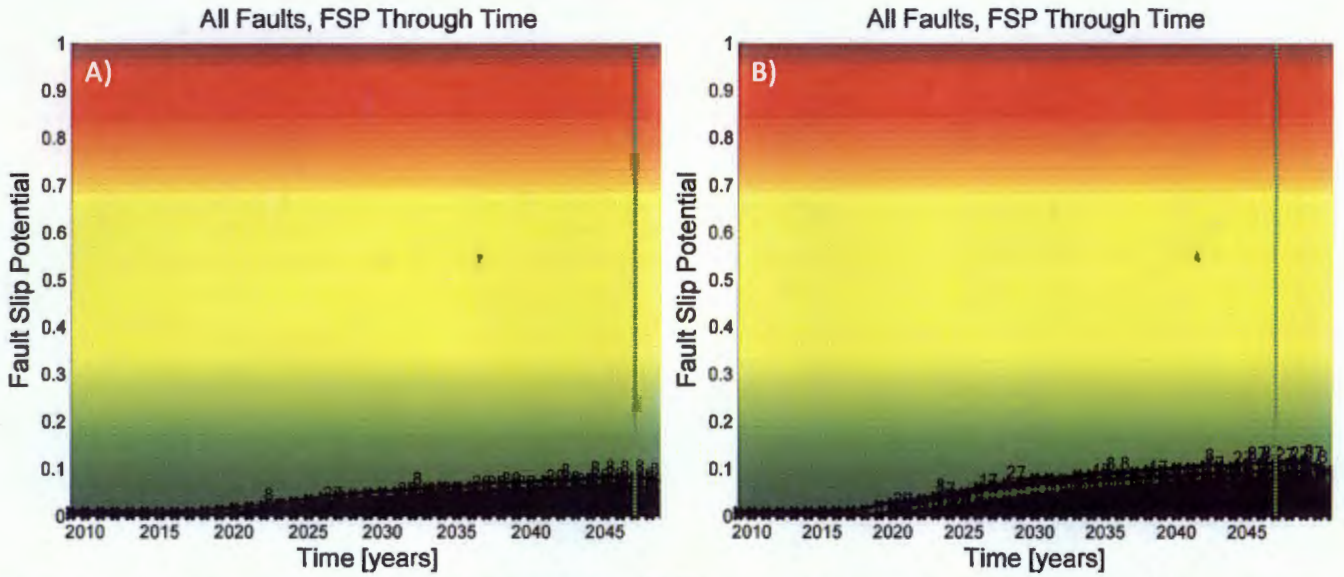


Figure 5: Fault slip probablity for Case #1 (A) and Case#2 (B). In model cases the fault slip probability remains below 12%.

References:

Simpson, R. W., 1997, Quantifying Anderson's fault types: Journal of Geophysical Research, 102, no. B8, 17909–17919.

Lund Snee, J.-E., and M. D. Zoback, 2018, State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity: The Leading Edge, Special Section: Induced seismicity, 127-133

Walsh, F. R. I., M. D. Zoback, D. Pais, M. Weingartern, and T. Tyrell, 2017, FSP 1.0: A program for probabilistic estimation of fault slip potential resulting from fluid injection, https://scits.stanford.edu/software.

Township 24 South Range 28 East of the New Mexico Principal Meridian, New Mexico

County: Eddy - 015

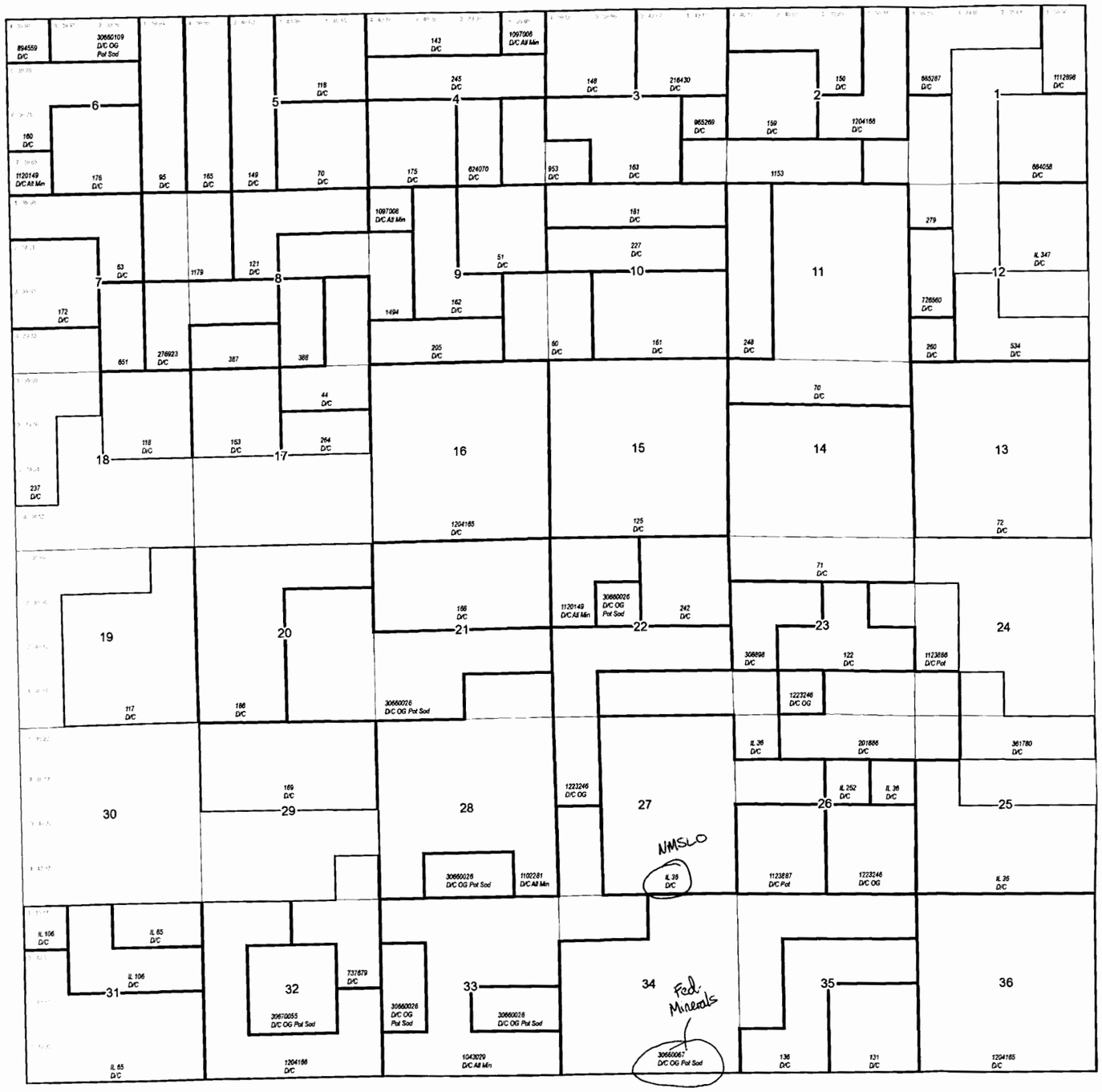
BLM Field Office: Carlsbad

BUREAU OF LAND MANAGEMENT
STATUS OF PUBLIC DOMAIN
LAND AND MINERALS

MTP

T24S R28E

CI of Public Lands NM 0560202 (CI No 30-06-01)



0 0.25 0.5 1 Mile

1 inch = 30 chains

1 : 23,760

CAVEAT STATEMENT

This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records hereon do *not* reflect title changes which may have been affected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information.

NOTE: The Serial Numbers displayed are in the Bureau's LR2000 system format.
-If there is a zero in the 7th position (from the right), the serial number has a "prefix" zero; example NM 0012345.
-If there is not a zero in the 7th position (from the right) then the serial number does not have a "prefix" zero; example NM 012345.

T 24 S
R 28 E
NMPM

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

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 1478 Carlsbad, NM 88220

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

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

IV. Is this an expansion of an existing project?_____Yes ____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 C Havenor DATE: 11/3/2017

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

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Mesquite SWD, Inc. (OGRID 161968)

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

WELL LOCATION: 1275' FNL & 1200' FEL | A | 34 | 24S | 28E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See attached diagram

PROPOSED WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26" Casing Size: 20" 80# J-55

Cemented with: 1980 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulate

Intermediate-1 Casing

Hole Size: 17-½" Casing Size: 13-⅜" 54# J55

Cemented with: 1000 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulate

Intermediate-2 Casing

Hole Size: 12¼" Casing Size: 9⅝" 40# HCN80

Cemented with: 1800 sx. or _____ ft^3

Top of Cement: Surface Method Determined: Opr

Liner

Hole Size 8¾" Casing Size 7⅝" 39# P-110

or _

Cemented with: 2880 sx. _____ ft^3

Top of Cement Surface Method Determined Opr

Total Depth: Approx 15,350'

Injection Interval

Approximately 14,130' To Approximately 15,350'

(Perforated or Open Hole; indicate which) Open Hole

INJECTION WELL DATA SHEET

Tubing Size: 5.5" 0-14,130' 20# Fiberglass coated

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 14,130 ft

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

Additional Data

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

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

   _____

2. Name of the Injection Formation: Siluro-Devonian-Upper most Montoya

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

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

   _____

   _____

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

   _____

   _____

   _____

Kay C. Havenor

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

November 27 , 2017

New Mexico OCD
Attn: Mr. Michael McMillan
1220 South St. Francis Dr.
Santa Fe, NM 81505

Re: Mesquite SWD, Inc.
Val SWD #1
Sec 34, T24S-R28E, Eddy Co., NM
C-108 application

Dear Mr. McMillan:

Casing depths in this well are planned to insure there will be no hydrologic connection between underground sources of drinking water and the injection zone.

Respectfully submitted,

Kay Havenor

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

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

PROPOSED NEW WELL DIAGRAM

API: 30025xxxx
Operator: Mesquite SWD, Inc
Lease: Val SWD
Location: Sec 34, T24S-R28 Eddy Co., NM
Footage: 1275' FNL & 1200' EL, Unit A

Well No: 1

KB: 3030' est
GL: 3010'
MSL of TD: -12300' est
32.7771N 104.07053W

Surface Csg

Size:	20" 94# J-55 BTC
Set @:	400
Sxs cmt:	650
Circ:	Yes
TOC:	Surf
Hole Size:	26"

Intermediate Csg

Size:	13-3/8"54# J-55 LTC
Set @:	2,500
Sxs cmt:	1000
Circ:	Yes
TOC:	Surf
Hole Size:	17-1/2"

Intermediate-2 Csg

Size:	9-5/8" 40# HC N80
Set @:	9900
Sxs cmt:	1800
Circ:	Yes
Hole Size:	12-1/4"

Liner

Size:	7-5/8" 39/42.8# P-110
Top	9400
Set @	14130
Sx cmt	500
Circ	Yes
Hole Size:	8-3/4"

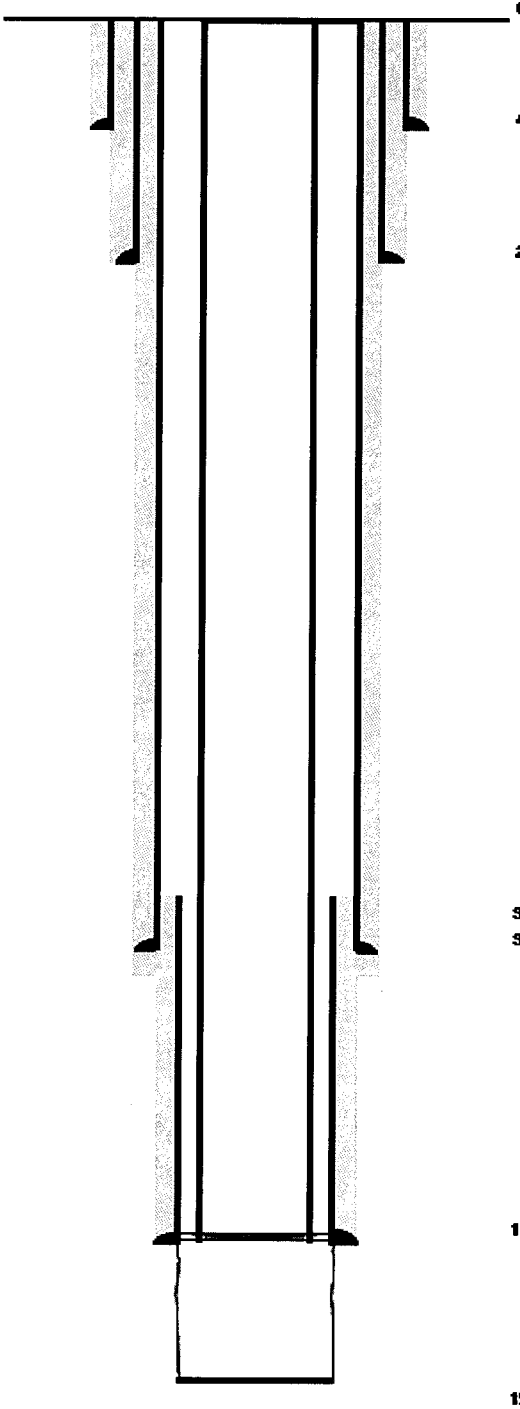
Open Hole

Size	
Interval	14130-15330'
Hole Size	6-1/4"

Tubing (made-up): 14130' 5-1/2" T-95

Lok-Set or equivalent approx 14,130'

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



NOT TO SCALE

0
400 Rustler est 720'
T/salt est 1060'
B/Salt est 2340'
2500 Del Mtn Group est 2650'
Bone Springs est 6410'
9400 Wolfcamp est 9650'
9900
Strawn est 11750'
Morrow est 12080'
14130 Top Siluro-Devonian est
Montoya 15320 est
15330 TD

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Wells in AOR:

API	WELL_NAME	STATUS	SDIV	SEC	TWN	RANGE	FTG	NS	FTG	EW	OCD	OPERATOR	WELL	LAND	PLUG_DATE	SPUD	ELEVGL	TVD_DEPTH
3001532400	RUSTLER BREAKS 26 FEE COM 001	Active	M	26	24.0S	28E	900	S	660	W	M	MEWBOURNE OIL CO	G	P		27-Sep-02	2954	12118
3001531311	KYLE 34 FEDERAL 001	Active	A	34	24.0S	28E	660	N	860	E	A	MARATHON OIL PERMIAN LLC	G	F		01-Oct-00	3001	12200
3001523181	FEDERAL AI COM 001	Active	J	34	24.0S	28E	1980	S	1980	E	J	CHEVRON U S A INC	G	F		13-Jun-80	3007	13619
3001536001	MOSAIC 34 FEDERAL COM 003H	Active	I	34	24.0S	28E	1670	S	25	E	I	CHEVRON U S A INC	O	F		04-Oct-08	2989	4828

No known wells in the AOR penetrate pre-Pennsylvanian formations. Note: 3001536001 included above is marginally outside the AOR.

Item VII:

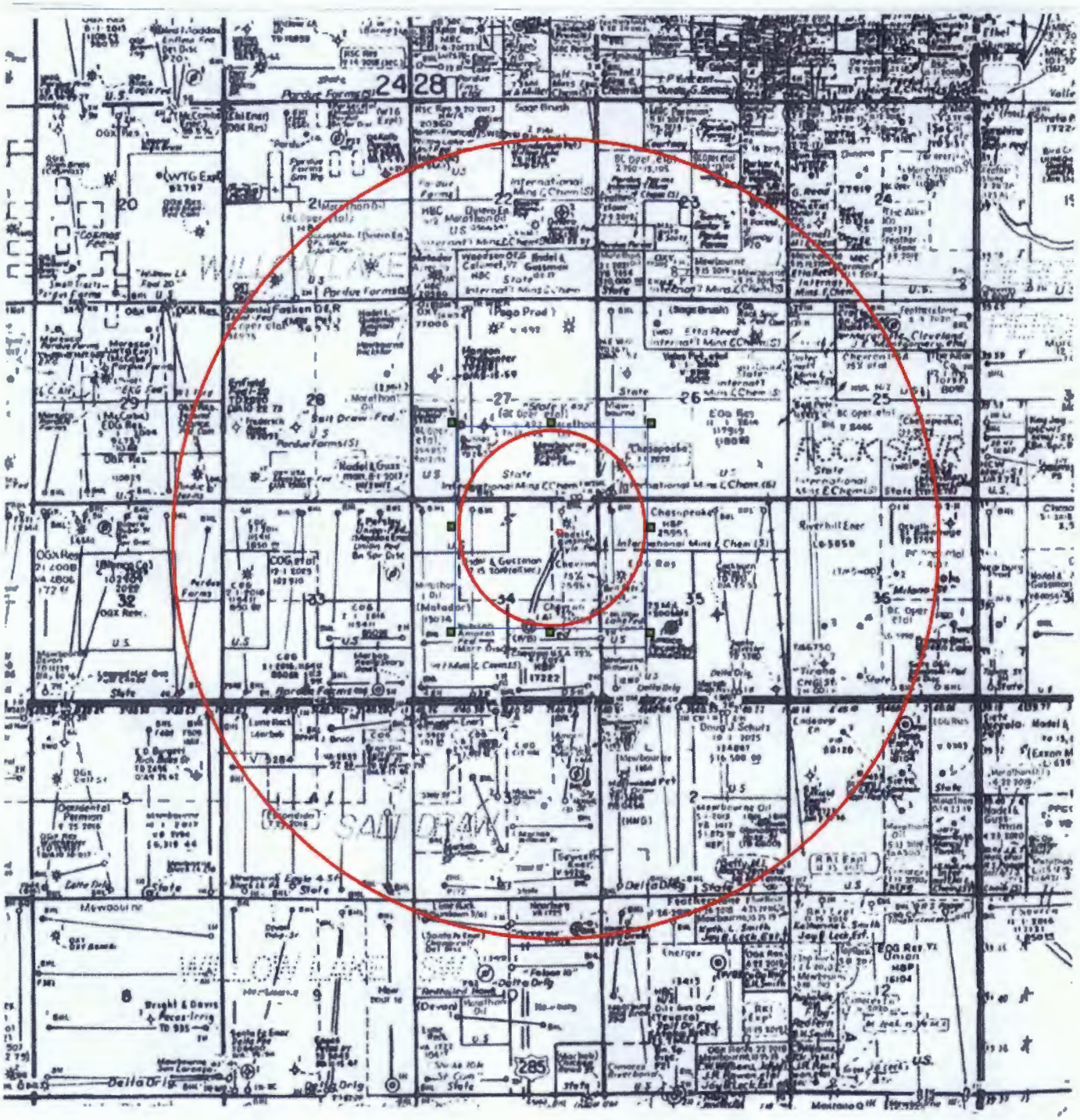
1. The maximum injected volume anticipated is 25,000 BWPD. Average anticipated is 20,000 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be2,826 psi or as controlled by depth.
4. Disposal sources will be produced waters that, based upon regional experience, are compatible with known waters in the disposal zone.
5. Water analysis data from the greater area:

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Item V:

Area of Review
½ Mile and 2 Mile Radius



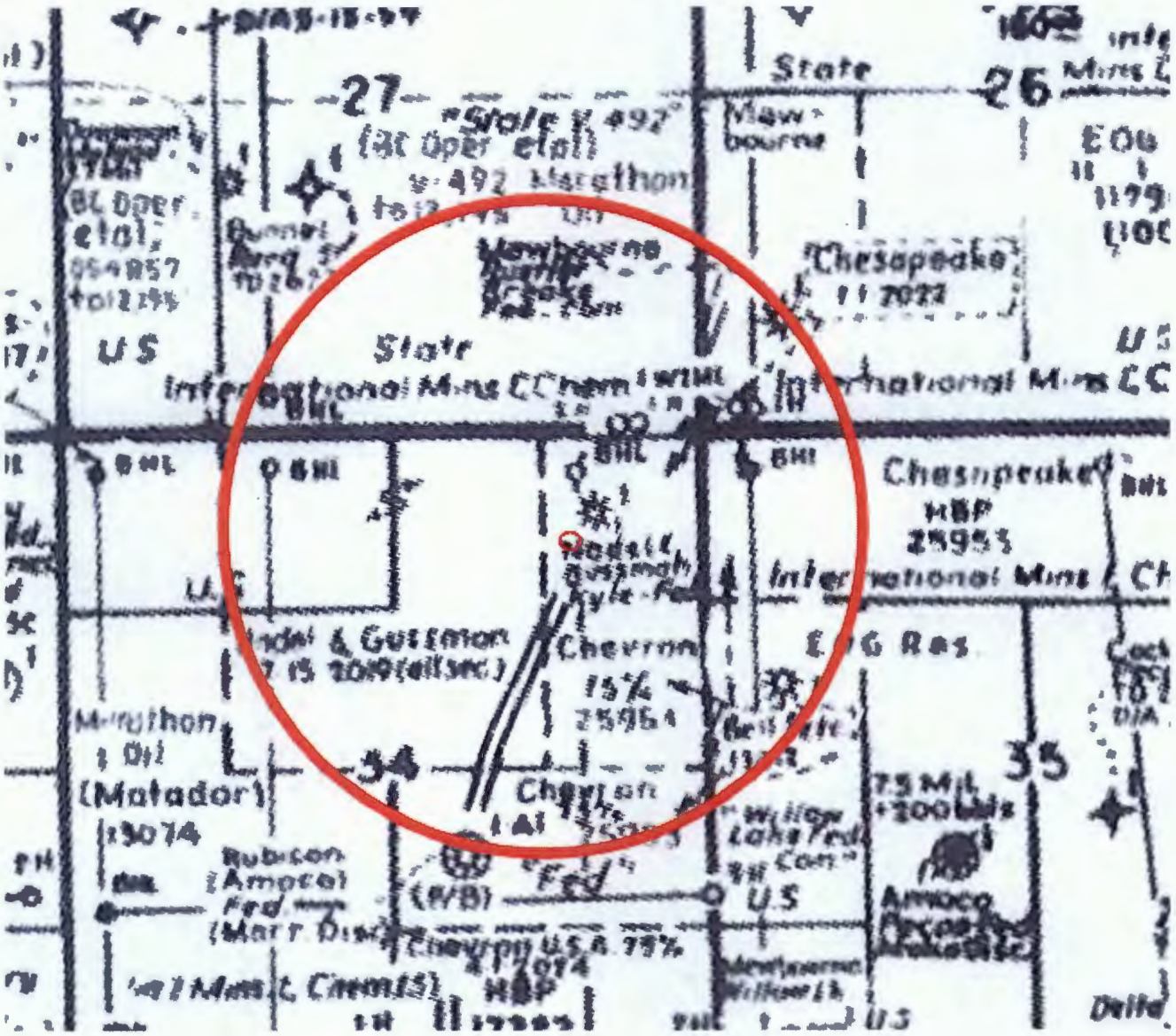
Some wells shown may not have been drilled.

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Item V (a):

AOR Half-Mile



Some wells shown may not have been drilled.

Item VII (continued):

Sec 22, T25S, R28E

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(806) 229-8121
Lab Team Leader - Sheila Hernandez
(432) 495-7240

Bone Spring

Water Analysis Report by Baker Petrolite

Company:		Sales RDT:	33514.1
Region:	PERMIAN BASIN	Account Manager:	TONY HERNANDEZ (575) 910-7135
Area:	ARTESIA, NM	Sample #:	534685
Lease/Platform:	PINOCHLE 'BPN' STATE COM	Analysis ID #:	108785
Entity (or well #):	2 H	Analysis Cost:	$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	03/10/11
Analysis Date:	03/12/11
Analyst:	SANDRA GONZ
TDS (mg/l or g/m3):	184911.1
Density (g/cm3, tonne/m3):	1.113
Anion/Cation Ratio:	1
Carbon Dioxide:	0 50 PPM
Oxygen:	
Comments:	

Analysis of Sample 534685 @ 75 °F

Anions	mg/l	meq/l
Chloride:	108819.0	3061.82
Bicarbonate:	1135.0	34.99
Carbonate:	0.0	0.
Sulfate:	747.0	15.58
Phosphate:		
Borate:		
Silicate:		
Hydrogen Sulfide:		0 PPM
pH at time of sampling:		7
pH at time of analysis:		
pH used in Calculation:		7

Cations	mg/l	meq/l
Sodium:	70975.7	3088.02
Magnesium:	185.0	15.04
Calcium:	844.0	42.12
Strontium:	220.0	5.02
Barium:	0.8	0.01
Iron:	8.5	0.22
Potassium:	869.0	22.22
Aluminum:		
Chromium:		
Copper:		
Lead:		
Manganese:	0.100	0.
Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite $CaCO_3$		Gypsum $CaSO_4/2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$		CO_2 Press
F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	1.06	188.62	-1.29	0.00	-1.15	0.00	-0.11	0.00	0.56	0.29	1.72
100	0	1.10	208.05	-1.29	0.00	-1.20	0.00	-0.15	0.00	0.35	0.29	2.35
120	0	1.12	224.17	-1.38	0.00	-1.19	0.00	-0.17	0.00	0.16	0.00	3.17
140	0	1.13	242.17	-1.42	0.00	-1.18	0.00	-0.19	0.00	0.00	0.00	4.21

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.
Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

Item VII (continued):

Wolfcamp

BAKER HUGHES

Water Analysis

Date: 23-Aug-11

2708 West County Road, Hobbs NM 88240
Phone (575) 392-5556 Fax (575) 392-7307

Analyzed For Brushy Draw Unit #1

Company	Well Name	County	State
	BD	~~Lea~~ Eddy	New Mexico

Sample Source Swab Sample **Sample #** 1-265-29E

Formation **Depth**

Specific Gravity	1.170	SG @ 60 °F	1.172
pH	6.30	Sulfides	Absent
Temperature (°F)	70	Reducing Agents	

Cations

Sodium (Calc)	in Mg/L	77,982	in PPM	66,520
Calcium	in Mg/L	4,000	in PPM	3,413
Magnesium	in Mg/L	1,200	in PPM	1,024
Soluable Iron (FE2)	in Mg/L	10.0	in PPM	9

Anions

Chlorides	in Mg/L	130,000	in PPM	110,922
Sulfates	in Mg/L	250	in PPM	213
Bicarbonates	in Mg/L	127	in PPM	108

Total Hardness (as CaCO3)	in Mg/L	15,000	in PPM	12,799
Total Dissolved Solids (Calc)	in Mg/L	213,549	in PPM	182,209
Equivalent NaCl Concentration	in Mg/L	182,866	in PPM	156,031

Scaling Tendencies

Calcium Carbonate Index 507,520

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

Calcium Sulfate (Gyp) Index 1,000,000

Below 500,000 Remote / 500,000 - 10,000,00 Possible / Above 10,000,000 Probable

This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks RW=.048@70F

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Item VIII:

Disposal will be into Siluro-Devonian formations.

There is no known potable water within a 1-mile radius. Records from the New Mexico Office of the State Engineer on April 25, 2017 show no known water wells within a 1-mile radius of the proposed Mesquite SWD disposal well.

New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right) (R=POD has been replaced, O=orphaned, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters) (in feet)

POD Number	POD Code	POD Subbasin	County	Source	q q q 64 16 4	Sec	Twn	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
C 04025 POD1		CUB	ED	Shallow	4 3 3	27	24S	28E	586700	3560964	1167	04/25/2017	04/26/2017	05/16/2017	190	90	STEWART, JOEL H.	331
C 03358 POD1		C	ED	Shallow	1 4 1	26	24S	28E	588416	3562116	1958	04/01/2014	04/06/2014	04/11/2014	135		RICHARD CARTER	1229
C 03423		C	ED	Shallow	2 4 1	26	24S	28E	588786	3561952	1991		12/06/1965	12/07/1965	126		A.M. BRININSTOOL	410
C 01411		C	ED	Shallow	4 4 2	04	25S	28E	586289	3558522*	2253	10/07/1969	10/15/1969	10/20/1969	69	35	WHITE, QUINCE L.	439
C 03833 POD1		C	ED	Shallow	2 1 2	26	24S	28E	589014	3562545	2613	02/19/2015	03/06/2015	03/23/2015	96	55	CARTER, RICHARD M	1229

Record Count: 5

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 587665 Northing (Y): 3560307 Radius: 3000

***UTM location was derived from PLSS - see Help**

The data is furnished by the NMOSE/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.

11/12/17 4:15 PM WELLS WITH WELL LOG INFORMATION

The surface geology of the greater area, including the 2-mile radius as shown in Item V above, is lower Pliocene to middle Miocene ~~Ogallala Formation~~ eolian and alluvial deposits. These are underlain by Permian formations and evaporites. Based upon surface geology the depth of potable water is expected to be less than 250'.

Item VIII: continued

WELLNAME	API	TOWNSHIP	RANGE	SECTION	TDS(mg/L)	Chlorides(mg/L)
GUY A REED #001	3001510872	24S	28E	24	130273	78600
MALAGA UNIT #001	3001502494	24S	28E	13	148288	91050
FED #001	3001502504	24S	28E	24	130195	78580

Item IX:

Acid may be applied after drilling completed. No other formation stimulation is currently planned.

Item X:

Logs will be filed with the OCD upon completion of the well. Density-Neutron will cover open-hole.

Item XI:

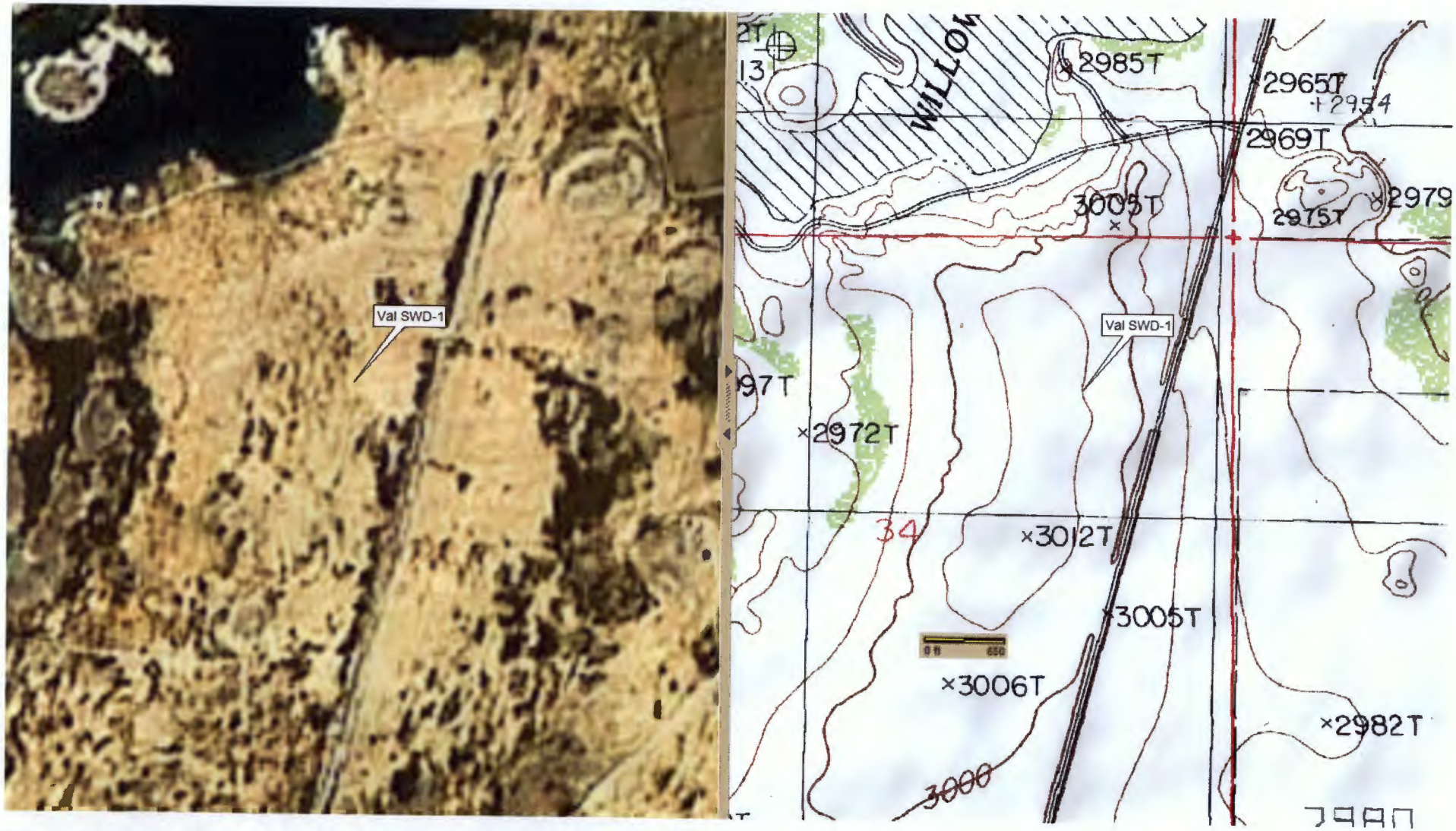
Please note Item VIII discussion above.

Item XII:

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

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA



Delorme X-Map6 Pro
Location approximately 3.2 miles south of Malaga, NM off west side US 286 Pecos Highway.

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Google Earth Pro view of Val SWD #1 SWD #1 proposed location.

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Item XIII: Legal Publication

Affidavit of Publication

No. 24492

State of New Mexico

County of Eddy:

Danny Scott Danny Scott

being duly sworn says that she is the **Publisher**

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

Legal Ad

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

1 Consecutive weeks/day on the same day as follows:

First Publication	November 29, 2017
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	
Seventh Publication	

Subscribed and sworn before me this 29th day of November 2017

OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 5/12/2019

Latisha Romine

Latisha Romine
Notary Public, Eddy County, New Mexico

Copy of Publication:

Legal Notice

Mesquite SWD, Inc., c/o Kay Havenor, 904 Moore Ave, Roswell, NM, (575) 626-4518, is seeking approval from the New Mexico Oil Conservation Division to drill and complete the Val SWD #1 well API: not assigned, located 1275' FNL & 1200' FEL Sec. 34, T24S-R28E Eddy County, NM, 3.3 miles south of Malaga, NM., and complete for commercial produced waterdisposal as the Mesquite SWD, Inc. Val SWD #1. The proposed disposal interval is the Siluro-Devonian Formation in open-hole approximately 14,130' to 15,330' at a maximum of 2,826 psi to dispose a maximum of 40,000 BWPD.

Parties with questions regarding this proposal may contact Kay Havenor at the address or phonenumber above.

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

Published in the Artesia Daily Press, Artesia, N.M., Nov. 29, 2017 Legal No. 24492.

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

API 30-025-NA

Item XIII: Proof of Notice

Minerals Owner:

Bureau of Land Management (well site)
620 E. Greene St.
Carlsbad, NM 88220

Surface:

Branson Properties, LLC
1501 Mountain Shadow
Carlsbad, NM 88220

Operators in AOR:

Chevron U.S.A.
15 Smith Rd
Midland, TX 79705

Sec. 34

Marathon Oil Permian, LLC
5555 San Felipe St.
Houston, TX 77056

Sec. 34

Mewborne Oil Company
701 S. Cecil St.
Hobbs, NM 88240

Sec. 26

Non-Operators in AOR Legal Notification

EOG Y Resources, Inc.
104 S 4th St
Artesia, NM 88210

Sec 26 An original lessor

Occidental Petroleum Corp
5 Greenway Plaza, Ste 110
Houston, TX 77046-0521

Sec 27 An original lessor

New Mexico State Land Office
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87501

Sec 27 Adjacent, in Half-mile area of review

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

Item XIII: Notification Receipts

Page 1 Bureau of Land Management

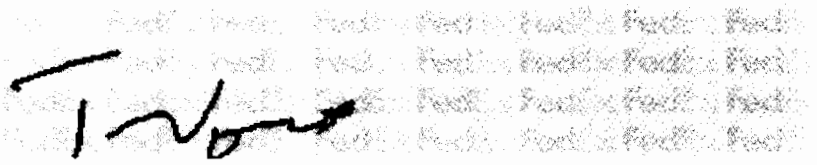
FedEx

December 1,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770861828048**.

Delivery Information:			
Status:	Delivered	**Delivered to:**	Receptionist/Front Desk
Signed for by:	T.NORRIS	**Delivery location:**	620 E GREENE STREET CARLSBAD, NM 88220
Service type:	FedEx Express Saver	**Delivery date:**	Nov 30, 2017 11:22
Special Handling:	Deliver Weekday		



Shipping Information:			
Tracking number:	770861828048	**Ship date:**	Nov 29, 2017

Recipient:
Bureau of Land Management
620 E GREENE ST
CARLSBAD, NM 88220 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

FedEx

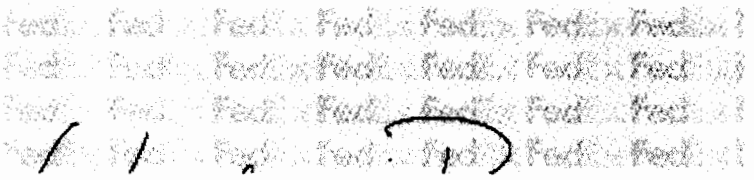
December 5,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770862075909**.

Delivery Information:

Status:	Delivered	**Delivered to:**	FedEx Location
Signed for by:	V. BRANSON	**Delivery location:**	1401 W PIERCE ST CARLSBAD, NM 88220
Service type:	FedEx Express Saver	**Delivery date:**	Dec 4, 2017 19:55
Special Handling:	Deliver Weekday Residential Delivery Adult Signature Required		



Shipping Information:

Tracking number:	770862075909	**Ship date:**	Nov 29, 2017

Recipient:
Branson Properties, LLC
1501 MOUNTAIN SHADOW DR
CARLSBAD, NM 88220 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

Mesquite SWD, Inc.
Val SWD #1
1275' FNL & 1200' FEL
Sec. 34, T24S-R28E Eddy County, NM

Page 3 Chevron

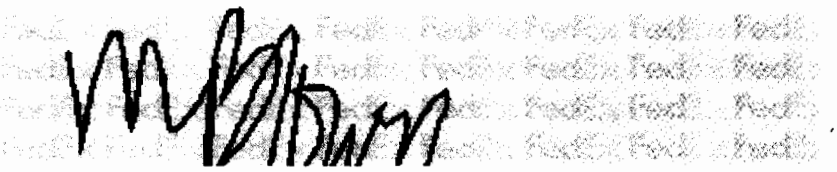
December 1,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770861881428**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Shipping/Receiving
Signed for by:	M.BROWN	**Delivery location:**	6301 DEAUVILLE MIDLAND, TX 79706
Service type:	FedEx Express Saver	**Delivery date:**	Nov 30, 2017 14:31
Special Handling:	Deliver Weekday		



Shipping Information:

Tracking number:	770861881428	**Ship date:**	Nov 29, 2017

Recipient:
Permitting Team
Chevron U.S.A. Inc.
6301 DEAUVILLE
MIDLAND, TX 79706 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

December 1,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770861908634**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Mailroom
Signed for by:	M.CAMEY	**Delivery location:**	5555 SAN FELIPE ST B112 HOUSTON, TX 77056
Service type:	FedEx Express Saver	**Delivery date:**	Nov 30, 2017 09:20
Special Handling:	Deliver Weekday		

Marcus Camey

Shipping Information:

Tracking number:	770861908634	**Ship date:**	Nov 29, 2017

Recipient:
Marathon Oil Permian, LLC
5555 SAN FELIPE ST
HOUSTON, TX 77056 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

FedEx

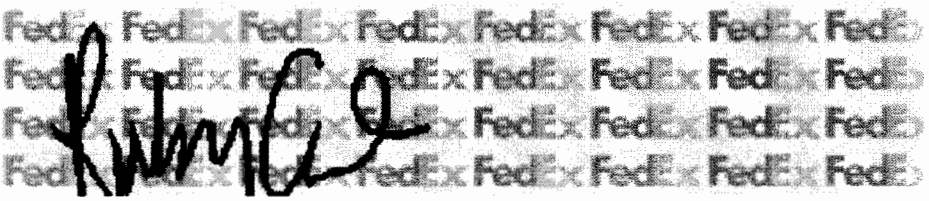
December 5,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770861941232**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Receptionist/Front Desk
Signed for by:	R.CABALLERO	**Delivery location:**	4801 BUSINESS PARK BLVD HOBBS, NM 88240
Service type:	FedEx Express Saver	**Delivery date:**	Dec 1, 2017 11:20
Special Handling:	Deliver Weekday		



Shipping Information:

Tracking number:	770861941232	**Ship date:**	Nov 29, 2017

Recipient:
Mewborne Oil Company
701 S CECIL ST
HOBBS, NM 88240 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

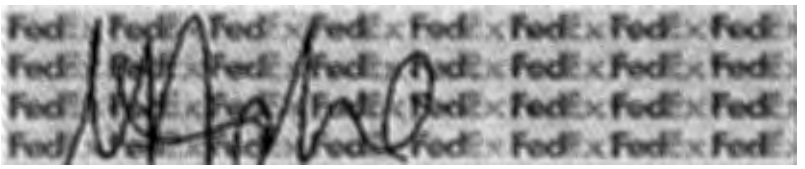
FedEx

December 13,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770951662760**.

Delivery Information:			
Status:	Delivered	**Delivered to:**	Receptionist/Front Desk
Signed for by:	A.ANDERSON	**Delivery location:**	104 S 4TH ST ARTESIA, NM 88210
Service type:	FedEx Express Saver	**Delivery date:**	Dec 12, 2017 11:16
Special Handling:	Deliver Weekday		



Shipping Information:			
Tracking number:	770951662760	**Ship date:**	Dec 11, 2017

Recipient:
EOG-Y Resources, Inc.
104 S 4TH ST
ARTESIA, NM 88210 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

FedEx

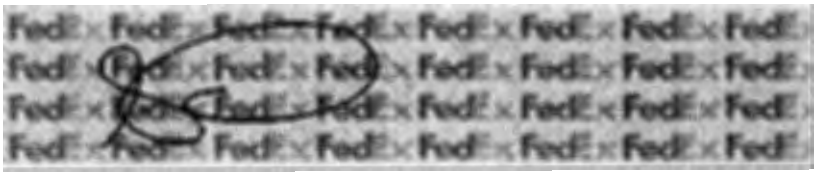
December 13,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770951664307**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Mailroom
Signed for by:	S.JACKSON	**Delivery location:**	5 GREENWAY PLZ 110 HOUSTON, TX 77046
Service type:	FedEx Express Saver	**Delivery date:**	Dec 13, 2017 10:26
Special Handling:	Deliver Weekday		



Shipping Information:

Tracking number:	770951664307	**Ship date:**	Dec 11, 2017

Recipient:
Occidental Petroleum Corp
5 GREENWAY PLZ
STE 110
HOUSTON, TX 77046 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

FedEx

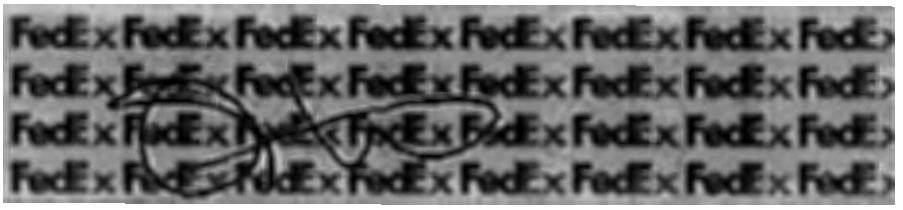
December 15,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770951666480**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Mailroom
Signed for by:	S.SAMANTHA	**Delivery location:**	310 OLD SANTA FE TRL SANTA FE, NM 87501
Service type:	FedEx Express Saver	**Delivery date:**	Dec 14, 2017 10:05
Special Handling:	Deliver Weekday		



Shipping Information:

Tracking number:	770951666480	**Ship date:**	Dec 11, 2017

Recipient:
Oil, Gas and Minerals Division
New Mexico State Land Office
310 OLD SANTA FE TRL
SANTA FE, NM 87501 US

Shipper:
Deborah Havenor
904 Moore Ave
Roswell, NM 88201 US

Thank you for choosing FedEx.

McMillan, Michael, EMNRD

From: Kay Havenor <kay.havenor@gmail.com>
Sent: Monday, December 11, 2017 4:46 PM
To: McMillan, Michael, EMNRD
Subject: Re: Mesquite SWD Inc. Val SWD Well No. 1

Wells in Sec 26 and 35 AOR are Mewbourne.

On Mon, Dec 11, 2017 at 12:52 PM, McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us> wrote:

Can you tell me who the affected parties were in Section 26 and Section 35?

I believe in Section 27 you already told the OCD who the affected party was

Mike

From: Kay Havenor [mailto:kay.havenor@gmail.com]
Sent: Monday, December 11, 2017 12:50 PM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Subject: Re: Mesquite SWD Inc. Val SWD Well No. 1

Thank you. Notifications were sent to parties today, including SLO. All "Operators" and the well site surface owner were previously notified.

On Fri, Dec 8, 2017 at 3:18 PM, McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us> wrote:

Kay:

The OCD received the administrative SWD application for the Val SWD Well No. 1 on December 7, 2017.

It appears that the operator in the SW/4 SW/4 of Section 26, S/2 of Section 27, W/2 NW/4 of Section 35 were not notified.

As a result your application is suspended until the information is received.

Thanks

Mike

FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 12/8/17 **Admin Complete:** 12/15/17 **or Suspended:** 1/3/2018* Add. Request/Reply: _____

ORDER TYPE: WFX / PMX / (SWD) Number: 1725 Order Date: 4/24/18 Legacy Permits/Orders: _____

Well No. 1 Well Name(s): Val SWD *Pending applications in area

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

Footages 1275 FNL / 1200 FEL Lot — or Unit A Sec 34 Tsp 24S Rge 28E County Eddy

General Location: ~3mi South of Malaga; west side of US285 Pool: SWD; Devonian-Silurian Pool No.: 97869

BLM 100K Map: Carlsbad Operator: Mesquite SWD, Inc. OGRID: 161968 Contact: Dr. Havenor

COMPLIANCE RULE 5.9: Total Wells: 32 Inactive: 2 **Fincl Assur:** Yes Compl. Order? No **IS 5.9 OK?** Yes **Date:** 4/24/18

WELL FILE REVIEWED ○ Current Status: NA - no API as of review date

WELL DIAGRAMS: NEW: Proposed ✓ or **RE-ENTER:** Before Conv. ○ After Conv. ○ Logs in Imaging: None

Planned Rehab Work to Well: _____

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)		Cement (Sx or Cf)	Cement Top and Determination Method
Planned ___ or Existing ___ **Surface**	26 / 20	0 to 400	Stage Tool	650	Circulate to surf.
Planned ✓ or Existing ___ **(Interm)/Prod**	17½ / 13⅜	0 to 2500	None	1000	Circulate to surf.
Planned ✓ or Existing ___ **(Interm)/Prod**	12¼ / 9⅝	0 to 9400	(Not Reported)	1800	Circulate to surf.
Planned ✓ or Existing ___ **Prod/(Liner)**	8¾ / 7⅝	9400 to 14130	None	500	Circulate - but no
Planned ___ or Existing ___ **Liner**	—	—	—	—	method to deter
Planned ✓ or Existing ___ **(OH)/PERF**	6¼	14130 to 15330	Inj Length 1200'		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Mississippian	13790
Confining Unit: (Litho.) Struc. (Por.)	140'	Woodford Shale	13990
Proposed Inj Interval TOP:	14130	Devonian	14130
Proposed Inj Interval BOTTOM:	15330	Silurian	
Confining Unit: Litho. Struc. (Por.)	+10	Montoya	15320
Adjacent Unit: Litho. Struc. Por.		Simpson	15600

Completion/Operation Details:

Drilled TD NA PBTD NA

NEW TD 15330 NEW PBTD NA

NEW Open Hole ✓ or NEW Perfs ○

Tubing Size 5½ in. Inter Coated? Yes

Proposed Packer Depth 14130 ft

Min. Packer Depth 14030 (100-ft limit)

Proposed Max. Surface Press. 2826 psi

Admin. Inj. Press. 2826 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P No Noticed? NA **BLM Sec Ord** NA **WIPP** NA Noticed? NA **Salt/Salado** T: — B: — **NW: Cliff House fm** —

FRESH WATER: Aquifer Shallow alluvial; Rustler Max Depth <100' **HYDRO AFFIRM STATEMENT By Qualified Person** ✓

NMOSE Basin: Carlsbad **CAPITAN REEF:** thru ___ adj ___ NA ✓ **No. GW Wells in 1-Mile Radius?** 0 FW Analysis? NA

Disposal Fluid: Formation Source(s) Permian (Wc & BS) Analysis? Yes On Lease ○ Operator Only ○ or Commercial ✓

Disposal Interval: Inject Rate (Avg/Max BWPD): 20,000 / 25,000 Protectable Waters? No Source: Historical System: (Closed) or Open

HC Potential: Producing Interval? No Formerly Producing? No Method: Logs/DST/P&A/Other No - mudlog determined 2-Mile Radius Pool Map (No)

AOR Wells: 1/2-M Radius Map and Well List? Yes **No. Penetrating Wells:** 0 [AOR Horizontals: — AOR SWDs: —]

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

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

NOTICE: Newspaper Date 11/29/2017 Mineral Owner BLM Surface Owner Fee / Bronson Prop N. Date 12/4/18

RULE 26.7(A): Identified Tracts? Yes Affected Persons: NMSLO / Chevron / Marathon / Mewbourne / EOG-Y / OXY USA N. Date 11/30/18

Order Conditions: Issues: * IS assessment due to congested SWD area w/LV wells; HC pot.; Stratigraphic

Additonal COAs: * Matador assess used; mudlog & geo; limit Completion and provide Control picks / CBL