Form 3160-5 (April 2004)

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

# FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007 5. Lease Serial No.

#### SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

SWD-1269 NMNM104684

Eddy Co. NM

|   | 6. | If Indian, Allottee or Tribe Name        |
|---|----|--|
|   |    | NA                                       |
|   | 7. | If Unit or CA/Agreement, Name and/or No. |
| - |    | NA                                       |
|   | 8. | Well Name and No.                        |
|   |    | Heavy Metal Federal #1                   |

1. Type of Well Öil Well 🗆 🗆 ☐ Gas Well □□ **✓** Other 2. Name of Operator Mesquite SWD, Inc. API Well No. 30-015-29602 3a Address 3b. Phone No. (include area code) P.O.Box 1479, Carlsbad, NM 88221 575-706-1840 10. Field and Pool, or Exploratory Area SWD:Bell Canyon-Cherry Canyon 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 11. County or Parish, State 1900 FSL & 1900 FWL Sec. 12, T24S-R31E

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION

|                          | Acidize              | Deepen           | Production (Start/Resume) | Water Shut-Off           |
|--------------------------|----------------------|------------------|---------------------------|--------------------------|
| Notice of Intent         | After Casing         | Fracture Treat   | Reclamation               | Well Integrity           |
| Subsequent Report        | Casing Repair        | New Construction | Recomplete                | Other Injection pressure |
|                          | Change Plans         | Plug and Abandon | Temporarily Abandon       | increase                 |
| Final Abandonment Notice | Convert to Injection | Plug Back        | ☐ Water Disposal          | •                        |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Request for Injection Pressure Increase (IPI) as submitted to and approved by NM OCD (copy attached). Pressure test attached. Original NM OCD pressure permitted 883 psi. NM OCD increase to 1400 psi approved 4/22/2013. Approved and active present injection-interval-(OH) is.

4586'-6140'. Requested BLM concurrance to maximum IP of 1400 psi.

NMOCD ARTESIA

MAR 2014

BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE

|                        |  | NIMOCD 107                      | 1074            |                                    |  |  |
|------------------------|--|---------------------------------|-----------------|------------------------------------|--|--|
| 14. Thereby<br>Name (F | certify that the foregoir<br>Printed/Typed)<br>Kay Havenor | ng is true and correct 5        | Title Geologist | SUBJECT TO LIKE  APPROVAL BY STATE |  |  |
| Signature              | Kay Havenor  | Digitally algorid by Key Harmer | Date            | 05/14/2013                         |  |  |
|                        | 10 1   | THIS SPACE FOR FEDERA           | D               | ·                                  |  |  |
| Approved by            | Paul   | 1) Aromah                       | Title   F       | Date                               |  |  |

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

# State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

advertion

**David Martin**Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oll Conservation Division



Administrative Order IPI-435 April 22, 2013

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

Attn: Dr. Kay Havenor, Geoscience Technologies

**RE:** Injection Pressure Increase

Disposal Permit: SWD-1269

Pool: SWD; Bell Canyon and Cherry Canyon members: Delaware Mountain Group

Heavy Metal 12 Federal Well No. 1 API 30-015 29602

Unit K, Sec 12, T24S, R31E, NMPM, Eddy County, New Mexico

Dear Dr. Havenor:

Reference is made to your request on behalf of Mesquite SWD, Inc. (OGRID 161968) received by the Division on April 9, 2013, to increase the maximum allowed surface tubing pressure on the above named well.

This well was permitted by the Division for water disposal in the Bell Canyon and Cherry Canyon (of the Delaware Mountain Group) by Division administrative order SWD-1269 approved March 29, 2011. That permit allowed disposal through open hole from 4415 feet to 7050 feet at a maximum surface disposal pressure of 883 psi.

It is our understanding that this well will not take a sufficient volume of fluid at the current pressure limit and a higher pressure limit is needed. It is also understood that an increase will not result in the fracturing of the formation and confining strata.

Based on a step rate test for this well run February 28, 2013, through 3-1/2 inch tubing, you are hereby authorized to inject at the following <u>maximum surface tubing pressure:</u>

Heavy Metal 12 Federal Well No. 1

API 30-015 32421 1400 psi

This approval is based on the provision that the tubing size, packer setting depth and completion interval for this well does not change. Any future requested pressure increase will require resubmission of additional data and a new step-rate test. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well. This approval is subject to your

Administrative Order IPI-435 Mesquite SWD, Inc. April 22, 2013 Page 2 of 2

being in compliance with all other Division rules, including but not limited to Division Rule 19.15.5.9 NMAC.

The Division Director may rescind this permitted injection pressure increase if it becomes apparent that the injected fluid is not being confined to the permitted disposal interval or is endangering any fresh water aquifer.

Sincerely,

JAMI BAILEY

Director

JB/pg

cc: Oil Conservation Division - Artesia

Bureau of Land Management - Carlsbad

File: SWD-1269

## **Step Rate Test**



## **Cardinal Surveys Company**

February 28, 2013

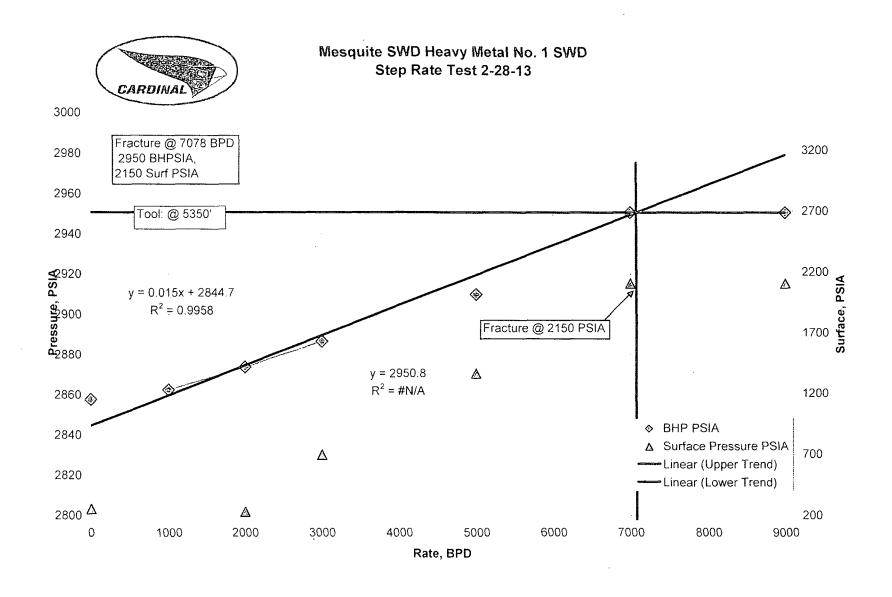
Mesquite SWD Heavy Metal No. 1 SWD

Eddy County, New Mexico File # 21159 Tool #

Downhole PSI Tool Ser. No. Surface PSI Gauge Ser. No. Tool @ 5350'

|   | Start<br>Time                         |         | End<br>Time |    | Rate<br>BPD |      | Comments  |  |  |  |
|---|---------------------------------------|---------|-------------|----|-------------|------|-----------|--|--|--|
| 1 |                                       | 7:03 AM | 7:30        | AM |             | 0    | On Bottom |  |  |  |
| 2 |                                       | 7:30 AM | 8:00        | ΑM |             | 1000 |           |  |  |  |
| 3 |                                       | 8:00 AM | 8:30        | AM |             | 2000 |           |  |  |  |
| 4 |                                       | 8:30 AM | 9:00        | AM |             | 3000 |           |  |  |  |
| 5 |                                       | 9:00 AM | 9:30        | AM |             | 5000 |           |  |  |  |
| 6 |                                       | 9:30 AM | 10:00       | AM |             | 7000 |           |  |  |  |
| 7 | 1                                     | 0:00 AM | 10:30       | ΑM |             | 9000 |           |  |  |  |
|   | No fall off Data due to wellhead leak |         |             |    |             |      |           |  |  |  |

Fracture @ 7078 BPD 2950 BHPSIA, 2150 Surf PSIA



#### Step Rate Test

Mesquite SWD Heavy Metal No. 1 SWD



#### Clear Trend Lines

Eddy County , New Mexico

Unhide Cells

|   |          |          | D Time L | .ast Rate | Step B. I | H. Pressure | Surf   | Cum | Delta  | Avg. | Lower  | Upper  |
|---|----------|----------|----------|-----------|-----------|-------------|--------|-----|--------|------|--------|--------|
|   | S Time   | E Time   | Min      | BPD       | BPD       | PSIA        | PSIA   | BBL | BBL    | BPD  | Trend  | Trend  |
| 1 | 7:03 AM  | 7:30 AM  | 27       | 0         | 0         | 2857.7      | 253.7  | 0   | 0.00   | 0    |        |        |
| 2 | 7:30 AM  | 8:00 AM  | 30       | 1000      | 1000      | 2862.5      | 197.8  | 22  | 22.00  | 1056 | 2862.5 |        |
| 3 | 8:00 AM  | 8:30 AM  | 30       | 2000      | 1000      | 2873.8      | 231.4  | 67  | 45.00  | 2160 | 2873.8 |        |
| 4 | 8:30 AM  | 9:00 AM  | 30       | 3000      | 1000      | 2886.6      | 695.8  | 137 | 70.00  | 3360 | 2886.6 |        |
| 5 | 9:00 AM  | 9:30 AM  | 30       | 5000      | 2000      | 2910        | 1365.3 | 251 | 114.00 | 5472 |        |        |
| 6 | 9:30 AM  | 10:00 AM | 30       | 7000      | 2000      | 2950.8      | 2105.2 | 368 | 117.00 | 5616 | 2950.8 | 2950.8 |
| 7 | 10:00 AM | 10:30 AM | 30       | 9000      | 2000      | 2950.8      | 2105.2 | 566 | 198.00 | 9504 |        | 2950.8 |

Shut down @ 10:30 due to well head leak. No fall off data

0.0150 2844.7 0 2950.8

int point:

7078.382507 BPD 2950.8 Psia



# Mesquite SWD Heavy Metal No. 1 SWD Step Rate Test 2-28-13

