Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT D-HOBBS

FORM APPROVED OM B No. 1004-0137 Expires: March 31, 20
5. Lease Serial No.

SUNDRY NOTICES AND REPORTS ON WELLS

SUNDRY NO	HICES AND RE	PORTS ON WE	LLS	LC0636	159		
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160 - 3 (APD) for such proposals.				6. If Indian	, Allottee or Tribe Name		
SUBMIT IN TRIPLI	CATE- Other insti	ructions on rever	se side.	7. If Unit or	r CA/Agreement, Name and/or No.		
1. Type of Well				8. Well Nar	ne and No		
2. Name of Operator Manhattan Petr	oleum, Inc.			Great V	Great Western Federal #1 9. API Well No.		
a. Address P.O. Box 35888, Tulsa, OK 74153-08	388	3b. Phone No. (include 918-621-6533	e area code)	30-025-	-07069		
1. Location of Well (Footage, Sec., T., R.,		1			10. Field and Pool, or Exploratory Area Sawyer		
M Sec 28-T9S-R38E 660' FSL & 660' FWL					or Parish, State		
12. CHECK APPRO	PRIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE,	REPORT, OR	OTHER DATA		
TYPE OF SUBMISSION		TYI	PE OF ACTION				
Notice of Intent	Acidize Alter Casing Casing Repair	Deepen Fracture Treat New Construction	Production (Start/Resume)	Water Shut-Off Well Integrity Other		
Subsequent Report Final Abandonment Notice	Change Plans Convert to Injection	Plug and Abandon Plug Back	Temporarily Water Dispos		Ouici		
Request for approval of water d			Notice No. AJM-0	11-07. 15 34 80 60 60 60 60 60 60 60 60 60 60 60 60 60	Received 18 18 18 18 18 18 18 18 18 18 18 18 18		
14. I hereby certify that the foregoing Name (Printed/Typed)	is true and correct						
Connie Swan		Title Re	gulatory Adminis	trator			
Signature Courant		Date		01/29/2007			
TH	IIS SPACE FOR F	EDERAL OR ST	TATE OFFICE	USE	APPROVED		
Approved by		T;	tle	Da	ate		
Conditions of approval, if any, are attached certify that the applicant holds legal or equivalent would entitle the applicant to conduct the applicant the applicant the applicant the applicant to conduct the applicant the ap	itable title to those rights in	loes not warrant or	fice		FEB 5 2007		
Title 18 U.S.C. Section 1001 and Title 43 U.S. States any false, fictitious or fraudulent sta		crime for any person knos to any matter within its	wingly and willfull	y to make to any	department OF BLICK AVE ISH		

Attachment to Sundry Notice 3160-5 Notice of Intention for Water Disposal Approval Great Western A Federal #1

API No. 30-025-07069

1. Formation producing water on the lease:

San Andres

2. Amount of water produced in barrels per day:

5.0 bbls/day in Nov06

3. Current water analysis attached:

Dec1506.002-2

4. How water is stored on the lease:

Fiberglass tank

5. How water is moved to the disposal facility:

Tank truck

6. Identify disposal facility by

a. Operator's name:

State Line Trucking

b. Well name:

Reed Estate #1

c. Well type and well number:

Commercial Disposal

d. Location:

467' FNL & 2130' FWL

Sec 41 Harrison & Brown Survey

Abstract 46

Cochran County, Texas

RRC Injection Permit No. 10658

P. 002/003

Permian Treating Chemicals, Inc. WATER ANALYSIS REPORT

4325509967

SAMPLE Oil Co.: Manhattan Petroleum

Lease : Great Western Fed A

Well No.: 1 Location: Attention:

Date Sampled: 08-December-2006 Date Analyzed: 15-December-2006 Lab ID Number: Dec1506-002- 2

Salesperson:

Requested By: Permian Treating Chemicals, Inc.*

*MEQ/L

File Name: Dec1506.002

ANALYSIS

5.720 1. 1.163 Specific Gravity 60/60 F. 2.

Moderate @ 80F 0.600 **CACO3 Saturation Index** 3. Severe @140F 2.210 MG/I EQ. WT. **Dissolved Gasses**

Present Hydrogen Sulfide **Not Determined** Carbon Dioxide 5. **Not Determined** Dissolved Oxygen

Cations

7. 8. 9. 10.	Calcium Magnesium Sodium Barium	(Ca++) (Mg++) (Na+) (Ba++)	(Calculated)	10,020 3,525 73,061 Not Determined	/ 20.1 = / 12.2 = / 23.0 =	498.51 288.93 3,176.57
^	nione	-				

-	Anions				
11.	Hydroxyl	(OH+)	0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)	425	/ 61.1 =	6.96
14.	Sulfate	(SO4=)	625	/ 48.8 =	12.81
15.	Chloride	(CI-)	139,968	/ 35.5 =	3,942.76
16.	Total Dissolved	Solids	227,624		
17.	Total Iron	(Fe)	3.50	/ 18.2 =	0.19
18.	Manganese	(Mn++)	Not Determined		

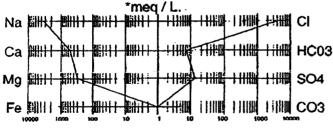
Total Hardness as CaCO3 19.

Resistivity @ 75 F. (Calculated) 20.

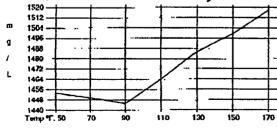
0.001 Ohm · meters

39,535

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



DROBARI E MINERAL COMPOSITION

PROBABLE MINERAL COMPOSITION							
COMPOUND	*meq/L	Χ	EQ. WT.	= mg/L			
Ca(HCQ3)2	6.96		81.04	564			
CaSO4	12.81		68.07	872			
CaCl2	478.74		55.50	26,570			
Mg(HCO3)2	0.00		73.17	(
MgSO4	0.00		60.19	(
MgCl2	288.93		47.62	13,759			
NaHCO3	0.00		84.00	(
NaSO4	0.00		71.03	(
NaCl	3,175.08		58.4 6	185,618			
8 million in alento may liter							

* milliequivalents per Liter

Kevin Byrne, Analyst



RICHARD A. VARELA DIRECTOR, OIL AND GAS DIVISION STEVEN J. SENI

ASSISTANT DIRECTOR, ENVIRONMENTAL SERVICES

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION PERMIT TO DISPOSE OF NON-HAZARDOUS OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL AND GAS

PERMIT NO. 10658, AMENDED

STATE LINE TRUCKING, INC. P O BOX 520 LEVELLAND TX 79336

Based on information contained in your application (Form W-14) dated April 6, 2006, you are hereby authorized to dispose of oil and gas waste into your well designated as follows:

Reed Estate Lease, (67650), Well No. 1, Levelland Field, Cochran County, RRC District 8A

Authority is granted to inject in accordance with Statewide Rule 9 of the Railroad Commission of Texas and subject to the following special and standard conditions:

SPECIAL CONDITIONS:

- 1. Oil and gas waste shall only be injected into strata in the subsurface depth interval from 5200 feet to 10300 feet.
- 2. The injection volume shall not exceed 3000 barrels per day.
- 3. The maximum operating surface injection pressure shall not exceed 2600 psig.
- 4. The authority to dispose of oil and gas waste is limited to the disposal of salt water.

STANDARD CONDITIONS:

- 1. Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted interval.
- 2. The District Office must be notified 48 hours prior to:
 - a. running tubing and setting packer;
 - b. beginning any workover or remedial operation;
 - c. conducting any required pressure tests or surveys.
- The wellhead must be equipped with a pressure observation valve on the tubing and for each annulus.