

Form 3160-5  
(August 1999)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

## 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

## 1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

## 2. Name of Operator

Latigo Petroleum Inc

## 3a. Address

415 W WALL, SUITE 1900, MIDLAND, TX 79701

## 3b. Phone No. (include area code)

(432)684-4293

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1980' FNL & 660' FWL  
SEC 25 (E), T9S, R33E

## 5. Lease Serial No.

NM 054111

## 6. If Indian, Allottee or Tribe Name

## 7. If Unit or CA/Agreement, Name and/or No.

## 8. Well Name and No.

Midwest E Federal #1

## 9. API Well No.

30-025-23284

## 10. Field and Pool, or Exploratory Area

Vada Penn

## 11. County or Parish, State

LEA

NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/ Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Wtr Disposal
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recompleat horizontally, give subsurface locations 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 recompleat 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.)

Approx 40 BWPD is produced from the Midwest E Fed #1 Well located in the Vada Penn Pool (Bough C) and is disposed of via a disposal line and dumped in to a water storage tank located at the State L #2 well, then dumped/flow dwn the State L disposal line to NM SWD. The State L #2 well is located in Sec 2 (C), T10S, R33E, Vada Penn Pool. API No: 30-025-22388. Produced water is subsequently disposed of at the NM SWD Co's WDW's, State 1-28 (API 30-025-25558) and/or Continental State (API 30-025-22551)

WDW permits for both NM SWD's wells along with a water analysis of the Midwest E Fed produced water was previously forwarded to the Hobbs Inspection office at the request of Jim McCormick

ACCEPTED FOR RECORD

JUL 8 2004

GARY GOURLEY  
PETROLEUM ENGINEER

## 14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Bonnie Husband

Title

Production Analyst

Signature

Bonnie Husband

Date

06/09/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

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, makes 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.

(Instructions on reverse)

Midwest E Fed

## Water Production & disposal Information

In order to process your disposal request, the following information must be completed:

1. Name of formations producing water on the lease. Vada Penn/Bough C

2. Amount of water produced from all formations in barrels per day. approx 40 BWPD

3. Attach a current water analysis of produced water from all zones showing at least the total dissolved solids, ph, and the concentrations of chlorides and sulfates. ( one sample will suffice if the water is commingled ) Water Analysis date 1999 is attached. Current analysis to be forwarded under separate cover

4. How water is stored on the lease. no storage, dumped/produced wtr flow dwn line w/ pressure from H1 to State L wtr storage

5. How water is moved to the disposal facility. Produced wtr dumped/flow dwn disposal line from wtr storage tank to SWD

6. Identify the Disposal Facility by :

A. Facility operators name. NM SWD Co, P O Box 1518, Roswell, NM 88202

B. Name of facility or well name & number New Mexico Salt Water Disposal Co

C. Type of facility or well (WDW) (WIW) etc. WDW

D. Location by 1/4 1/4 NESE section 28 township 10S range 34E - State 1-28  
SENEW Sec 18, T10S, R34E - Continental State API 30-025-22551

7. Attach a copy of the State issued permit for the Disposal Facility.

SWD-706 attached -Continental State located in Sec 18

Only located application for well in Sec 28 on line. Requested permit from operator

Submit to this office, 414 West Taylor, Hobbs, NM 88240, the above required information on a Sundry Notice 3160-5. Submit 1 original and 5 copies, within the required time frame. (This form may be used as an attachment to the Sundry Notice.) Call me at 505-393-3612 if you need to further discuss this matter.

mailed to BLM 6-7-04  
Hobbs Field Station - 414 W Taylor, Hobbs, 88240  
Jim McCormick 505/393-3612

**CAPITAN CHEMICAL  
WATER ANALYSIS REPORT**

Lease Name :	Latigo Petroleum	Date Sampled : 06/07/04
Well Number :	Mid-west "E"	Capitan Rep. : Sam Seed
Location :		Company Rep. : Rodney Long

**ANALYSIS**

1. pH	6.038	
2. Specific Gravity @ 60/60 F.	1.066	
3. CaCO <sub>3</sub> Saturation Index @ 80 F.	-0.216	
@ 140 F.	+0.704	'Calcium Carbonate Scale Possible'

**Dissolved Gases**

4. Hydrogen Sulfide	0	PPM
5. Carbon Dioxide	50	PPM
6. Dissolved Oxygen	Not Determined	

**Cations**

	mg/L	/	Eq. Wt.	=	MEQ/L
7. Calcium (Ca++)	6,200	/	20.1	=	308.46
8. Magnesium (Mg++)	3,524	/	12.2	=	288.81
9. Sodium (Na+) Calculated	51,292	/	23.0	=	2,230.07
10. Barium (Ba++)	Not Determined	/	68.7	=	0.00

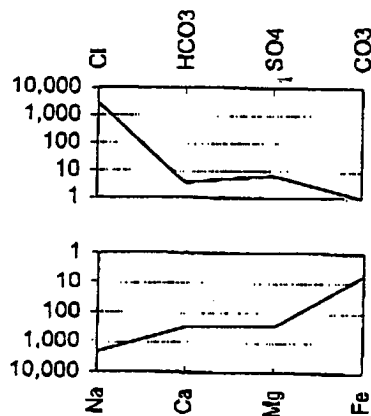
**Anions**

11. Hydroxyl (OH-)	0	/	17.0	=	0.00
12. Carbonate (CO <sub>3</sub> =)	0	/	30.0	=	0.00
13. Bicarbonate (HCO <sub>3</sub> -)	224	/	61.1	=	3.67
14. Sulfate (SO <sub>4</sub> =)	330	/	48.8	=	6.76
15. Chloride (Cl-)	100,000	/	35.5	=	2,816.90

**Other**

16. Soluble Iron (Fe)	100	/	18.2	=	5.49
17. Total Dissolved Solids	161,570				
18. Total Hardness As CaCO <sub>3</sub>	30,000				
Calcium Sulfate Solubility @ 90 F.	2,474				
20. Resistivity (Measured)	0.090	Ohm/Meters	@ 90	Degrees (F)	

Logarithmic Water Pattern



**PROBABLE MINERAL COMPOSITION**

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	X	3.67	=	298
CaSO <sub>4</sub>	68.07	X	6.76	=	460
CaCl <sub>2</sub>	55.50	X	298.02	=	16,540
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	X	0.00	=	0
MgSO <sub>4</sub>	60.19	X	0.00	=	0
MgCl <sub>2</sub>	47.62	X	288.81	=	13,753
NaHCO <sub>3</sub>	84.00	X	0.00	=	0
NaSO <sub>4</sub>	71.03	X	0.00	=	0
NaCl	58.46	X	2,230.07	=	130,370

To McCormick  
w/BH  
6-9-04

# Miller Chemicals

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Saga Petroleum  
 Lease : Midwest 'E'  
 Well No. : # 1  
 Lab No. : F:\ANALYSES\Oct0699.001

Sample Loc. :  
 Date Analyzed: 06-October-1999  
 Date Sampled : 04-October-1999

### ANALYSIS

1. pH 6.150
2. Specific Gravity 60/60 F. 1.068
3. CaCO<sub>3</sub> Saturation Index @ 80 F. -0.582  
 @ 140 F. +0.343

#### Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

Not Present  
 Not Determined  
 Not Determined

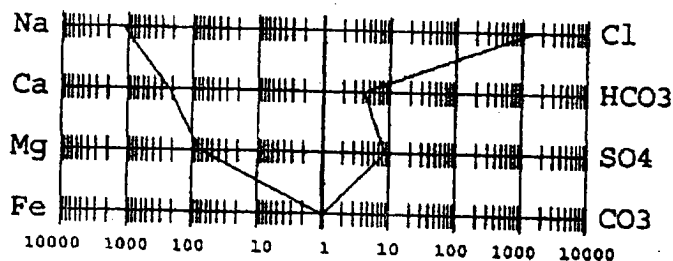
#### Cations

		MG/L	EQ. WT.	*MEQ/L
7. Calcium	(Ca++)	4,509	/ 20.1 =	224.33
8. Magnesium	(Mg++)	912	/ 12.2 =	74.75
9. Sodium	(Na+)	25,802	/ 23.0 =	1,121.83
10. Barium	(Ba++)	Not Determined		

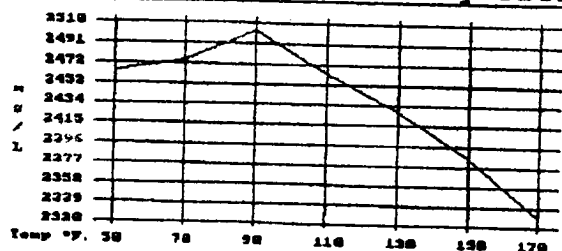
#### Anions

11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	244	/ 61.1 =	3.99
14. Sulfate	(SO <sub>4</sub> =)	400	/ 48.8 =	8.20
15. Chloride	(Cl <sup>-</sup> )	49,989	/ 35.5 =	1,408.14
16. Total Dissolved Solids		81,856		
17. Total Iron (Fe)		8	/ 18.2 =	0.41
18. Total Hardness As CaCO <sub>3</sub>		15,013		
19. Resistivity @ 75 F. (Calculated)		0.118 /cm.		

#### LOGARITHMIC WATER PATTERN \*meq/L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.

Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	3.99	324
CaSO <sub>4</sub>	68.07	8.20	558
CaCl <sub>2</sub>	55.50	212.14	11,774
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCl <sub>2</sub>	47.62	74.75	3,560
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	1,121.25	65,548

\*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.  
 The corrosivity is increased by the content of mineral salts in solution.