

N.M. OIL CONS. COMMISSION
P.O. BOX 1980
HOBBS, NEW MEXICO 88240

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Designation and Serial No. NM-69377
2. Name of Operator Pogo Producing Company	6. If Indian, Allottee or Tribe Name
3. Address and Telephone No. P. O. Box 10340, Midland, TX 79702-7340 (915)682-6822	7. If Unit or CA, Agreement Designation
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1400' FSL & 2310' FEL, Section 28, T22S, R32E	8. Well Name and No. Red Tank 28 Federal No. 3
	9. API Well No. 30-025-32186
	10. Field and Pool, or Exploratory Area E.Liv. Ridge Delaware (Uncle
	11. County or Parish, State Lea County, NM

CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
☐ Notice of Intent	☐ Abandonment
☐ Subsequent Report	☐ Recompletion
☐ Final Abandonment Notice	☐ Plugging Back
	☐ Casing Repair
	☐ Altering Casing
	☐ Other _____
	☐ Change of Plans
	☐ New Construction
	☐ Non-Routine Fracturing
	☐ Water Shut-Off
	☐ Conversion to Injection
	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Pogo Producing Company request permission to use produced water to drill Delaware and Bone Springs wells after surface pipe has been set and cemented. Attached are copies of water analysis caught at our Red Tank 28 Federal No. 3 and Calmon No. 5 SWD's which collect and inject waters produced from the Delaware and Bone Springs formations. This analysis shows Pogo's produced waters are extremely high in chlorides and are basically 10# brine water thus will not adversely effect the salt sections.

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I hereby certify that the foregoing is true and correct.	
Signed <u><i>Adam Sultanah</i></u>	Title <u>Senior Operations Engineer</u> Date <u>February 4, 1994</u>
(This space for Federal or State office use)	
Approved by <u>Adam Sultanah</u>	Title <u>Petroleum Engineer</u> Date <u>2/24/94</u>
Conditions of approval, if any:	

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.

TRETOLITE

Chemicals and Services

16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620348 • FAX: 713 589-4737Reply to: P.O. Box FF
Arlasia, New Mexico 88210
(505) 748-3588 Phone
(505) 748-3580 Fax**WATER ANALYSIS REPORT**Company : POGO PRODUCING
Address : MIDLAND, TEXAS
Lease : 28-3
Well : SWD
Sample Pt. : TANKDate : 10/22/93
Date Sampled : 10/22/93
Analysis No. : 370

ANALYSIS		mg/L	* meq/L
-----		-----	-----
1. pH	5.3		
2. H ₂ S	NR		
3. Specific Gravity	1.140		
4. Total Dissolved Solids		223918.2	
5. Suspended Solids		NR	
6. Dissolved Oxygen		NR	
7. Dissolved CO ₂		NR	
8. Oil In Water		NR	
9. Phenolphthalein Alkalinity (CaCO ₃)			
10. Methyl Orange Alkalinity (CaCO ₃)			
11. Bicarbonate	HCO ₃	97.0	HCO ₃ 1.6
12. Chloride	Cl	138024.0	Cl 3893.5
13. Sulfate	SO ₄	375.0	SO ₄ 7.8
14. Calcium	Ca	13600.0	Ca 578.6
15. Magnesium	Mg	2583.6	Mg 212.6
16. Sodium (calculated)	Na	69238.6	Na 3011.7
17. Iron	Fe	NR	
18. Barium	Ba	NR	
19. Strontium	Sr	NR	
20. Total Hardness (CaCO ₃)		44600.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/
-----	-----	-----	-----	-----
679 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	1.6	129
----- /----->	CaSO ₄	68.1	7.8	531
213 *Mg -----> *SO ₄	CaCl ₂	55.5	669.2	37138
----- <----- /	Mg(HCO ₃) ₂	73.2		
3012 *Na -----> *Cl	MgSO ₄	60.2		
-----	MgCl ₂	47.6	212.6	10119
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0		
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0		
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4	3011.7	176008
BaSO ₄ 2.4 mg/L				

REMARKS:

A. MILLER / FILE

RED TANK 23 SWD

Petrolite, Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGHE

TRETOLITE

Chemicals and Services



16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : POGO PRODUCING
Address : MIDLAND, TEXAS
Lease : CALMON #5
Well : SWD
Sample Pt. : UNKNOWN

Date : 09/03/93
Date Sampled : 09/02/93
Analysis No. : 330

ANALYSIS	mg/L	* meq/L
1. pH	5.1	
2. H ₂ S	0 PPM	
3. Specific Gravity	1.165	
4. Total Dissolved Solids	261670.1	
5. Suspended Solids	NR	
6. Dissolved Oxygen	NR	
7. Dissolved CO ₂	NR	
8. Oil In Water	NR	
9. Phenolphthalein Alkalinity (CaCO ₃)		
10. Methyl Orange Alkalinity (CaCO ₃)		
11. Bicarbonate	HCO ₃ 61.0	HCO ₃ 1.0
12. Chloride	Cl 161880.0	Cl 4566.4
13. Sulfate	SO ₄ 50.0	SO ₄ 1.0
14. Calcium	Ca 16400.0	Ca 818.4
15. Magnesium	Mg 3338.4	Mg 274.7
16. Sodium (calculated)	Na 79900.7	Na 3475.5
17. Iron	Fe 40.0	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO ₃)	54700.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
818 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	1.0	81
----- /----->	CaSO ₄	68.1	1.0	71
275 *Mg -----> *SO ₄	CaCl ₂	55.5	816.3	45298
----- <----- /	Mg(HCO ₃) ₂	73.2		
3475 *Na -----> *Cl	MgSO ₄	60.2		
-----	MgCl ₂	47.6	274.7	13075
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0		
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0		
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4	3475.5	203106
BaSO ₄ 2.4 mg/L				

REMARKS:

----- A. MILLER / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT