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MAR 4 1994

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

2. Name of Operator
Pogo Producing Company ✓

3. Address and Telephone No.
P. O. Box 10340, Midland, TX 79702-7340 (915)682-6822

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1980' FSL & 1980' FEL
Section 34, T23S, R31E

5. Lease Designation and Serial No.
NM-43744

6. If Indian, Ailotee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
Sand Dunes 34 Federal No. 7

9. API Well No.
30-015-27500

10. Field and Pool, or Exploratory Area
Undes Ingle Wells Delaware

11. County or Parish, State
Eddy County, NM

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

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

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

13. 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.

RECEIVED
FEB 9 10 53 AM '94
CARL AREA

I hereby certify that the foregoing is true and correct

Signed [Signature] Title Senior Operations Engineer Date February 7, 1994

(This space for Federal or State office use)

Approved by (ORIG. SGD.) JOE G. LARA Title PETROLEUM ENGINEER Date 3/1/94

Conditions of approval, if any:

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	81
-----	/----->	-----	CaSO ₄	68.1	71
275	*Mg ----->	*SO ₄	CaCl ₂	55.5	45298
-----	<-----/	-----	Mg(HCO ₃) ₂	73.2	
3475	*Na ----->	*Cl	MgSO ₄	60.2	
-----		4566	MgCl ₂	47.6	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	203106
BaSO ₄	2.4 mg/L				

REMARKS:

----- A. MILLER / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

TRETOLITE

Chemicals and Services


 16010 Barker's Point Lane • Houston, Texas 77079
 713 558-5200 • Telex: 4620348 • FAX: 713 589-4717

 Reply to: P.O. Box FF
 Artesia, New Mexico 88210
 (505) 746-3528 Phone
 (505) 746-3580 Fax
WATER ANALYSIS REPORT
 Company : POGO PRODUCING
 Address : MIDLAND, TEXAS
 Lease : 28-3
 Well : SWD
 Sample Pt. : TANK

 Date : 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 3193.5
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	2	Ca(HCO ₃) ₂	81.0 1.6 129
	/----->			CaSO ₄	68.1 7.8 531
213	*Mg ----->	*SO ₄	8	CaCl ₂	55.5 669.2 37136
	<-----/			Mg(HCO ₃) ₂	73.2
3012	*Na ----->	*Cl	3893	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 176003
	BaSO ₄	2.4 mg/L			

REMARKS:

A. MILLER / FILE

RED TANK 23 SWD

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT