rm 3160-5
ugust 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
1625 N. French Dr.
Hobbs, NM 88240

FORM 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

5. Lease Serial No.
NM 85937

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM84611B
PROHIBITION FEDERAL UNIT, WELL #4

8. Well Name and No.
PROHIBITION FEDERAL UNIT, WELL #4

9. API Well No.
30-025-32758

10. Field and Pool, or Exploratory Area
RED TANK; DELAWARE, WEST

11. County or Parish, State
LEA COUNTY, NEW MEXICO

Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

Name of Operator
MARALO, LLC

a. Address
P. O. Box 832, MIDLAND, TX 79702

3b. Phone No. *(include area code)*
(915) 684-7441

Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
2310' FNL & 1980' FEL, SECTION 14, T22S, R32E
UNIT LETTER G

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☒ Water Disposal	

3. 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.)

SEE ATTACHED WATER DISPOSAL FORM:

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
DOROTHEA LOGAN

Title REGULATORY ANALYST

Signature Dorothea Logan

Date APRIL 3, 2001

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by (ORIG. SGD.) GARY GOURLEY

Title PETROLEUM ENGINEER

Date APR 22 2001

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.

ATTACHMENT to Incident of Noncompliance # AJM-026-01

The following information is needed before your disposal of produced water can be approved, per Onshore Oil & Gas Order #7.

You may attach this information to your Sundry Notice (3160-5). Submit all required information as per this attachment, submit a Sundry Notice(3160-5),one original and five copies to this office within the required time.

1. Name(s) of all formation(s) producing water on the lease. DELAWARE

2. Amount of water produced from all formations in barrels per day. APPROXIMATELY 93 BBLS/DAY

3. 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. - ATTACHED -

4. How water is stored on the lease. ONE (1) 500 BARREL FIBERGLASS WATER TANK

5. How water is moved to the disposal facility. BY PIPELINE

6. Identify the Disposal Facility by:
   A. Operators' Name MARALO, LLC
   B. Well Name PROHIBITION FEDERAL UNIT
   C. Well type and well number SALT WATER DISPOSAL #2
   D. Location by quarter/quarter, section, township, and range NE¼SW¼, SEC. 11, T22S, R32E, NMPM

7. A copy of the Underground Injection Control Permit - issued for the injection well by the Environmental Protection Agency or New Mexico Oil Conservation Division where the State has achieved primacy.
   -ATTACHED-

DISPOSAL REPORT

PROHIBITION FEDERAL #2 SWD

MONTH Feb-01

PIPELINE

WILD TURKEY "9" STATE #1 = 315

WILD TURKEY "10" STATE #1 = 553

TOTAL = 1868

EMERALD FEDERAL = 4596

PROHIBITION FEDERAL #4 = 1376

PROHIBITION FEDERAL #5 = —

PROHIBITION FEDERAL #6 = 1226

TOTAL = 7198

PROHIBITION FEDERAL #1 = 284

PROHIBITION FEDERAL #3 = _____

ARKLAND PRODUCING (BAR NONE FED) = 41

C. W. TRAINER(BOOTLEG ST.) = —

TOTAL WATER DISPOSED FOR MONTH = 9391

C:\WPWIN60\DOCS\DONNA\PRO#2SWD.GC

Permian Treating Chemicals
WATER ANALYSIS REPORT

SAMPLE

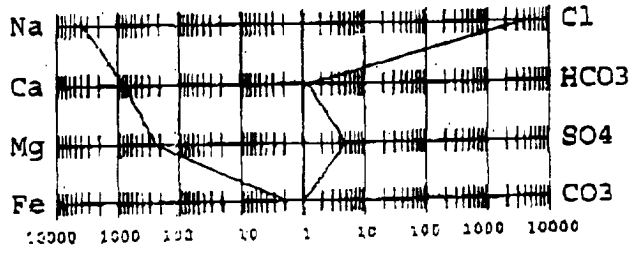
Oil Co. : **Maralo, LLC.**
Lease : **Prohibition Fed.**
Well No.: **# 4**
Lab No. : **F:\ANALYSES\Apr0301.002**

Sample Loc. :
Date Analyzed: **03-April-2001**
Date Sampled : **29-March-2001**

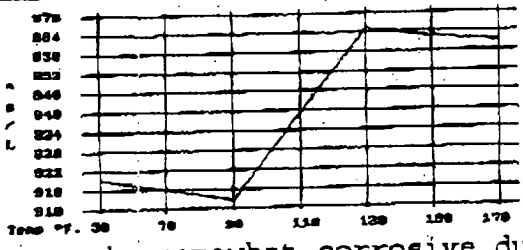
ANALYSIS

1.	pH			5.040		
2.	Specific Gravity 60/60 F.			1.173		
3.	$CaCO_3$ Saturation Index		@ 80 F.	-0.297		
			@ 140 F.	+1.738		
	Dissolved Gasses			**MG/L**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			**Not Present**		
5.	Carbon Dioxide			**Not Determined**		
6.	Dissolved Oxygen			**Not Determined**		
	Cations					
7.	Calcium	(Ca^{++})		14,741	/ 20.1 =	733.38
8.	Magnesium	(Mg^{++})		2,683	/ 12.2 =	219.92
9.	Sodium	(Na^{+})	(Calculated)	78,641	/ 23.0 =	3,419.17
10.	Barium	(Ba^{++})		Below 10		
	Anions					
11.	Hydroxyl	(OH^{-})		0	/ 17.0 =	0.00
12.	Carbonate	($CO_3^{=}$)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO_3^{-})		73	/ 61.1 =	1.19
14.	Sulfate	($SO_4^{=}$)		230	/ 48.8 =	4.71
15.	Chloride	(Cl^{-})		154,965	/ 35.5 =	4,365.21
16.	Total Dissolved Solids			251,333		
17.	Total Iron (Fe)			31	/ 18.2 =	1.70
18.	Total Hardness As $CaCO_3$			47,857		
19.	Resistivity @ 75 F. (Calculated)			0.001 /cm.		

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



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L	= mg/L.
$Ca(HCO_3)_2$	81.04	1.19	97
$CaSO_4$	68.07	4.71	321
$CaCl_2$	55.50	727.48	40,375
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCL_2$	47.62	219.92	10,472
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	3,417.82	199,806

***Milli Equivalents per Liter**

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

Permian Treating Chemicals
WATER ANALYSIS REPORT

SAMPLE

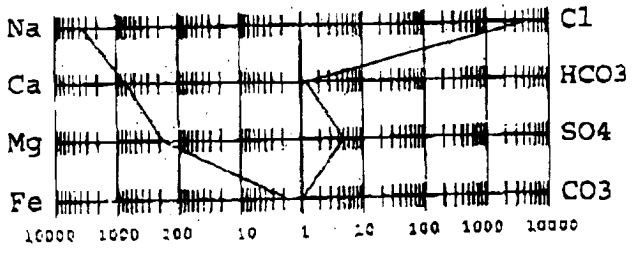
Oil Co. : Maralo, LLC.
Lease : Prohibition Fed.
Well No. : # 6
Lab No. : F:\ANALYSES\Apr0301.002

Sample Loc. :
Date Analyzed: 03-April-2001
Date Sampled : 29-March-2001

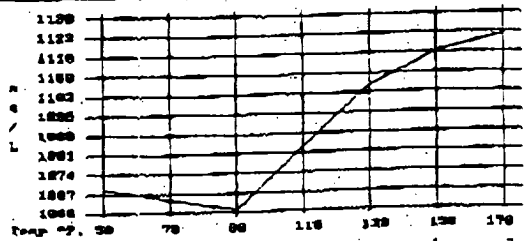
ANALYSIS

1.	pH		5.610		
2.	Specific Gravity 60/60 F.		1.168		
3.	$CaCO_3$ Saturation Index	@ 80 F.	+0.062		
		@ 140 F.	+2.162		
	Dissolved Gasses		**MG/L**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide		Not Present		
5.	Carbon Dioxide		Not Determined		
6.	Dissolved Oxygen		Not Determined		
	Cations				
7.	Calcium (Ca^{++})		13,267	/ 20.1 =	660.05
8.	Magnesium (Mg^{++})		2,086	/ 12.2 =	170.98
9.	Sodium (Na^{+})	(Calculated)	78,217	/ 23.0 =	3,400.74
10.	Barium (Ba^{++})		Below 10		
	Anions				
11.	Hydroxyl (OH^{-})		0	/ 17.0 =	0.00
12.	Carbonate ($CO_3^{=}$)		0	/ 30.0 =	0.00
13.	Bicarbonate (HCO_3^{-})		73	/ 61.1 =	1.19
14.	Sulfate ($SO_4^{=}$)		225	/ 48.8 =	4.61
15.	Chloride (Cl^{-})		149,966	/ 35.5 =	4,224.39
16.	Total Dissolved Solids		243,834		
17.	Total Iron (Fe)		29	/ 18.2 =	1.59
18.	Total Hardness As $CaCO_3$		41,721		
19.	Resistivity @ 75 F. (Calculated)		0.001 /cm.		

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



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L	= mg/L.
$Ca(HCO_3)_2$	81.04	1.19	97
$CaSO_4$	68.07	4.61	314
$CaCl_2$	55.50	654.24	36,311
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCL_2$	47.62	170.98	8,142
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	3,399.17	198,715

***Milli Equivalents per Liter**

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

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

DRUG FREE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

ADMINISTRATIVE ORDER SWD-569

APPLICATION OF MARALO, INC. FOR SALT WATER DISPOSAL, ~~EDDY~~ LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Maralo, Inc. made application to the New Mexico Oil Conservation Division on August 29, 1994, for permission to complete for salt water disposal its Prohibition Federal Well No. 2 located 1980 feet from the South line and 2080 feet from the West line (Unit K) of Section 11, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;

(2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;

(3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and

(4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

The applicant herein, Maralo, Inc. is hereby authorized to complete its Prohibition Federal Well No. 2 located 1980 feet from the South line and 2080 feet from the West line (Unit K) of Section 11, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of salt water for disposal purposes into the Delaware formation at approximately 5220 feet to 8706 feet through 2 7/8-inch plastic-lined tubing set in a packer located at approximately 5150 feet.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1044 psi.

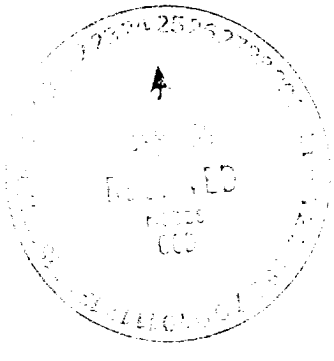
The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.



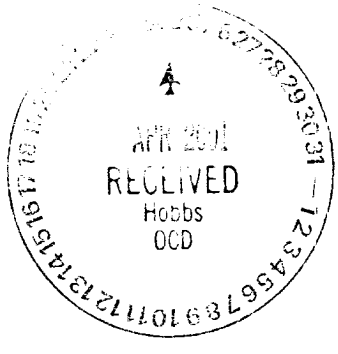
The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 20th day of September, 1994.

WILLIAM J. LEMAY, Director

WJL/BES/amg

xc: Oil Conservation Division - Hobbs
US Bureau of Land Management - Carlsbad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