

1R - 294

APPROVALS

YEAR(S):

2001

Olson, William

From: Olson, William
Sent: Monday, March 05, 2001 10:44 AM
To: 'DLogan'
Subject: RE: Case #1 R0294 Jal Mat Yates Unit Tank Battery Site

The below extension request is approved.

From: DLogan [SMTP:DLogan@nwol.net]
Sent: Monday, March 05, 2001 10:24 AM
To: Bill Olson
Subject: Case #1 R0294 Jal Mat Yates Unit Tank Battery Site

Date: March 5, 2001
To: William C. Olson
Environmental Bureau - OCD
From: Dorothea Logan
Maralo, LLC
Subject: Your letter dated February 6, 2001, regarding the Jal Mat Yates Unit Tank Battery Site,
Jal New Mexico, Case # 1 R0294

Per your request for an e-mail confirmation of our conversation this morning, the following reasons are submitted for the extension of response time from the March 6, 2001 date in the above letter, to the newly agreed upon date of April 5, 2001:

- (1) A representative of Maralo, LLC has just met with the landowner, Clay Osborn, a few days ago to hear his remediation concerns.
- (2) We are currently discussing the issues with an environmental company along with other sources to determine a recommended plan of action.

The additional 30 days will allow a complete evaluation and response.

FAX COVER SHEET

ROCKY TOP RANCH
CLAY AND JERI OSBORN
One North Country Club Road
P.O. Box 1285
Jal, NM 88252
Phone number 505-395-2510
Fax number 505-395-2676

SEND TO Company name OCD	From CLAY Osborn
Attention Bill Olson	Date 9/11/00
Office location Santa Fe	Office location JAL NM
Fax number 505-827-8177	Phone number 505-395-2510

☐ Urgent ☐ Reply ASAP ☐ Please comment ☒ Please review ☒ For your information

Total pages, including cover: 4

COMMENTS

Clay Osborn
One North Country Club Road
P.O. Box 1285
Jal, NM 88252

September 11, 2000

RE: MARALO WATER SUPPLY WELL # 3

Bill Olson
Oil Conservation Division
2040 South Pacheco St.
Santa Fe, NM 87505

Dear Bill Olson,


After our phone conversation today 9/11/2000, I had another talk with Mr. Billy Bentle (Owner of Bentle Water Well Service) He told me again about the crude oil on top of the water in Maralo's water well #3, the well is approximately 600' TD and has been pumped for about 15 years with a 15 HP submersible pump. He also told me he called Mr. Warren Hunt who is a pumper for Maralo and left a message on his phone about the crude oil and that he would not run his tools in the well to clean it out as the oil would ruin the bailer and line. As of 7:00 PM this date, Mr. Hunt had not returned Billy's call.

I will FAX you this letter and not mail it as I need to FAX you a copy of Maralo's letter dated Oct. 12, 1982 and WATER ANALYSES dated 11/10/1980.

The water well is in Sec. 13 - R25S - T36E, S/E 1/4

Thank you for all your help.

Yours truly,


Clay Osborn

NE 1/4



October 12, 1982

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Jalmat Yates Unit
Well #30
Sec. 18 T-25-S, R-37-E
2310 FS & WL
Lea County, New Mexico

Dear Sir:

Attached for your consideration is Maralo's application for administrative approval to inject water for purpose of secondary recovery in the above referenced well in the Jalmat Yates Unit.

It is Maralo's proposal that the well be recompleted from a depleted gas well to a water injection well. This well was completed as a gas well in January, 1950 producing open hole from 2835-2900'. The well was deepened to 2913' and fraced in January of 1962 and has produced gas since that time. Because the gas is now depleted, we feel it would be advantageous to add this well to our unit as an injector. We propose to deepen to 3062', cement 4½" liner and inject an average daily volume of 500 barrels of water with a maximum of 1,000 barrels of water. The average injection pressure will be 100 psi with a maximum of 600 psi. The system will be a closed system and the source of water to be injected will be produced from water supply wells located within a mile of this injection well (Water supply wells are spotted on attached map in yellow). A chemical analysis of fresh water from the supply wells is attached.

The Yates zone (the zone of injection) is made up of several series of sand, shale and carbonates and is approximately 300' thick. The overlying sources of underground drinking water can be found at a total depth of 525'.

The zone of injection will be stimulated by spotting 150 gals 15% NEA acid across perms gross interval 3040'-2822' and acidized with 3000 gals 15% NEA acid + 2 ball sealers per 50 gals.

All logs for the well have been previously submitted to the NMOCC. If there is anything further you need, please let me know.

Yours truly,

A handwritten signature in dark ink, appearing to read "R. A. Lowery". The signature is fluid and cursive, with a large, sweeping "L" and "y".

R. A. Lowery
Production Manager

BC

M. D. BOX 1400
MONAHANS, TEXAS 79756
PHONE 943-3234 OR 863-1040

Martin Water Laboratories, Inc

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

TO: Mr. R. A. Lowery
P.O. Box 832, Midland, Texas

LABORATORY NO. 118064 (corrected copy)
SAMPLE RECEIVED 11-10-80
RESULTS REPORTED 11-11-80

COMPANY Maralo, Inc. LEASE Jalmat Yates Unit
FIELD OR POOL Jalmat
SECTION _____ BLOCK _____ SURVEY _____ COUNTY Lea STATE New Mexico
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Composite supply water - taken from water well supply #1 & #2.

NO. 2 Produced water - taken from Jalmat Yates Unit #1.

NO. 3 Produced water - taken from Tenneco's E. J. wells #3 & #4.

NO. 4 Produced water taken from Appollo Oil Company's Brown #5-A.

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0020	1.0208	1.0078	1.0057
pH When Sampled				
pH When Received	7.54	8.08	7.50	7.51
Bicarbonate as HCO_3	378	878	1,305	1,903
Supersaturation as CaCO_3	14	125	420	250
Undersaturation as CaCO_3	—	—	—	—
Total Hardness as CaCO_3	268	7,850	2,975	1,680
Calcium as Ca	40	260	780	336
Magnesium as Mg	41	1,750	249	204
Sodium and/or Potassium	189	6,614	1,315	1,678
Sulfate as SO_4	248	2,967	1,691	252
Chloride as Cl	78	12,996	2,131	2,486
Iron as Fe	0.89	2.8	0.30	0.04
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	974	25,525	7,471	6,859
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	35.0	375	850
Resistivity, ohms/m at 77° F.	8.20	0.290	0.750	0.810
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Carbonate, as CO_3	0	60	0	0

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

Letter of recommendation attached.

 $\partial \gamma$

Waylan C. Martin, M. A.

MEMORANDUM OF MEETING OR CONVERSATION

<input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Personal	Time 0900	Date 9/11/00
<u>Originating Party</u>		<u>Other Parties</u>
Clay Osborne - Tal Landowner		Bill Olson - Envir. Bureau
<u>Subject</u>		
Marlowe Tank Battery		
<u>Discussion</u>		
Battery west of Osborne ranch has water well for muleys, water for water flood. He heard from a field person that Marlowe was working on water well and found green oil on water.		
Asked him to send written information on the water well incident.		
<u>Conclusions or Agreements</u>		
He will send letter about the incident. I will contact District office to investigate.		
<u>Distribution</u>	<u>Signed</u>	
Chris Williams - OCO Hobbs	Will Olson	

July 17th 2000

[915] Brian McGruber

713-656-2190

Exxon Mobil

Bill for your files

9:30 a.m. July 17th 2000 visited w/ Clay Osborn on the Maralo Sal Mat Yates Injection Well #8 - claims it has been leaking for over a month now. Says it was leaking before Bill - Jack & Martine all came down from Santa Fe for the inspection of his land. He stated he measured it and it is leaking 1 gallon / 4 mins. He also stated he had not notified Maralo or OGD until today about the situation. says it is going straight down there isn't a puddle anywhere - & he knows it had been leaking for over a month. Gary will send E.L. Gonzales out to do an inspection of facility - I have asked for Pictures - Clay says he has taken some photos & will e-mail them to US (ME)

Donna Williams

7-17-00

@ 9:50

4.31 Landfill Cap Enhancements

(Soil Containment Remediation Technology)

**Previous
Section**

**Top
Page**

**Screen
Matrix**

**Table of
Contents**

**Synonym
List**

**Next
Section**

Description	Synonyms	Applicability	Limitations
Data Needs	Performance	Cost	References
Site Information	Points of Contact	Vendor Information	Health & Safety

Technology	Description
Soil, Sediment, and Sludge	
3.7 Containment	
4.31 Landfill Cover Enhancements	The purpose of landfill cover enhancement is to reduce or eliminate contaminant migration (e.g. percolation). Water harvesting and vegetative cover are two ways for landfill cover enhancements. Water harvesting uses runoff enhancement to manage landfill site water balance. Vegetative cover reduces soil moisture via plant uptake and evapotranspiration.

Description:

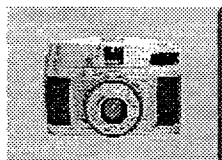


Figure 4-31: Typical Water Harvesting Enhancement

The precipitation to the landfill cover is balanced by the combination of following effects: run-off, cumulating in soil, evapotranspiration, and percolation. For a given amount of precipitation, in order to reduce or eliminate percolation, the effects of run-off and/or evapotranspiration need to be enhanced.

➤ *Water Harvesting*

Water harvesting uses runoff enhancement to manage landfill site water balance. This enhancement can be achieved by simply covering landfill cover surface with metal rain gutter placed parallel to the slope. The percentage of runoff increases when gutter coverage increases. However, too much coverage (> 40%) has little effect on runoff enhancement.

➤ *Vegetative Cover*

Vegetative cover reduces soil moisture via plant uptake and

evapotranspiration. Plant cover also limits soil erosion. Vegetative cover is more stable because it emphasizes use of natural materials and configurations, which implies longevity.

[Back to Top](#)

Synonyms: NA

[Back to Top](#)

Applicability: Landfill cover enhancement is applicable for traditional landfills, surface impoundment's, waste piles, sludges, and some mine tailings. It may prove to be less costly than a conventional barrier because it uses simple structure or local resources. It is simple in design, easy to install over an existing landfill cover, and easy to remove if other uses for the land emerge in the future.

[Back to Top](#)

Limitations: Factors that may limit the applicability and effectiveness of these processes include:

- Proper site evaluation is required.
- Plant coverage is seasonal.
- Too much gutter coverage (> 40%) has little effect on runoff enhancement.

[Back to Top](#)

Data Needs: A detailed discussion of data elements is provided in Subsection 2.2.1 (Data Requirements for Soil, Sediment, and Sludge).

[Back to Top](#)

Performance Data: Landfill cover enhancement is a fairly new technology that is still being tested and demonstrated.

Naval Facilities Engineering Services Center initiated a demonstration project at Marine Corp Base Hawaii to evaluate infiltration control cover design. Metal rain gutters were placed on the ground surface and parallel to the slope. Remaining surface was seeded with 6 native grasses and shrubs. After 9 months of operation, it was found that plots with runoff enhancement had 2 to 5 times more runoff, and 2 to 3 times less percolation.

[Back to Top](#)

Cost: The simple configuration of landfill cover enhancement should result better containment with little increase in costs. These costs are currently determined on a case-by-case basis because of construction material availability and design requirements at various site locations.

[Back to Top](#)

References: Dwyer, S., 1997. *Alternative Landfill Cover Demonstration*. Sandia National Laboratories, U.S. DOE Environmental Management, Office of Science and Technology.

EPA, 1998. *Evaluation of Subsurface Engineered Barriers at Waste Sites*, Technology Report, EPA/542/R-98/005.

Finley, R., 1997. *Demonstrate Capillary Barrier Design Tools*. Sandia National Laboratories, U.S. DOE Environmental Management, Office of Science and Technology.

Hakonson, T.E., L. Karr, and B. Harre, 1997. *A Water Balance Study of Infiltration Control Landfill Cover Design at Marine Corp Base Hawaii*, Technical paper, Naval Facilities Engineering Services Center, Port Hueneme, CA.

Murphy B., 1995. *Demonstration project may lead to more effective hazardous waste landfill covers*. Sandia National Laboratories, U.S. DOE Environmental Management, Office of Science and Technology.

[Back to Top](#)

Site Information:

- DOE Demonstration, Sandia National Laboratories
- MCAS Kaneohe Bay

[Back to Top](#)

Points of Contact:

General FRTR Agency Contacts

Technology Specific Web Site:

Government Web Sites

Non-Government Web Sites

[Back to Top](#)

Vendor Information:

A list of vendors offering Soil Containment Treatment is available from the Vendor Information System for Innovative Treatment Technologies (VISITT) developed by U.S. Environmental Protection Agency (EPA).

 **Government Disclaimer** 

[Back to Top](#)

Health and Safety:

HTRW Hazard Analysis

[Back to Top](#)

[Previous
Section](#)

[Top
Page](#)

[Screen
Matrix](#)

[Table of
Contents](#)

[Synonym
List](#)

[Next
Section](#)

4.30 Landfill Cap

(Soil Containment Remediation Technology)

Previous
Section

Top
Page

Screen
Matrix

Table of
Contents

Synonym
List

Next
Section

Description	Synonyms	Applicability	Limitations
Data Needs	Performance	Cost	References
Site Information	Points of Contact	Vendor Information	Health & Safety

Technology	Description
Soil, Sediment, and Sludge	
3.7 Containment	
4.30 Landfill Cap	Landfill caps are used for contaminant source control.

Description:

Landfill caps can be used to:

- Caps can minimize exposure on the surface of the waste facility.
- Prevent vertical infiltration of water into wastes that would create contaminated leachate.
- Contain waste while treatment is being applied.
- Control gas emissions from underlying waste.
- Create a land surface that can support vegetation and/or be used for other purposes.

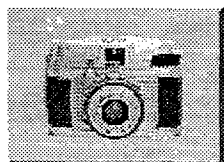


Figure 4-30: Typical RCRA Subtitle C Landfill Cap System

Landfill Capping is the most common form of remediation because it is generally less expensive than other technologies and effectively manages the human and ecological risks associated with a remediation site.

The design of landfill caps is site specific and depends on the intended functions of the system. Landfill Caps can range from a one-layer system of vegetated soil to a complex multi-layer system of soils and geosynthetics. In general, less complex systems are required in dry climates and more complex systems are required in wet climates. The material used in the construction of landfill caps include low-permeability and high-permeability soils and low-permeability geosynthetic products. The low-permeability materials divert

water and prevent its passage into the waste. The high permeability materials carry water away that percolates into the cap. Other materials may be used to increase slope stability.

The most critical components of a landfill cap are the barrier layer and the drainage layer. The barrier layer can be low-permeability soil (clay) and/or geosynthetic clay liners (GCLs). A flexible geomembrane liner is placed on top of the barrier layer. Geomembranes are usually supplied in large rolls and are available in several thickness (20 to 140 mil), widths (15 to 100 ft), and lengths (180 to 840 ft). The candidate list of polymers commonly used is lengthy, which includes polyvinyl chloride (PVC), polyethylenes of various densities, reinforced chlorosulfonated polyethylene (CSPE-R), polypropylene, ethylene interpolymer alloy (EIA), and many newcomers. Soils used as barrier materials generally are clays that are compacted to a hydraulic conductivity no greater than 1×10^{-6} cm/sec. Compacted soil barriers are generally installed in 6-inch minimum lifts to achieve a thickness of 2 feet or more. A composite barrier uses both soil and a geomembrane, taking advantage of the properties of each. The geomembrane is essentially impermeable, but, if it develops a leak, the soil component prevents significant leakage into the underlying waste.

For facilities on top of putrescible wastes, the collection and control of methane and carbon dioxide, potent greenhouse gases, must be part of facility design and operation.

➤ *Asphalt/Concrete Cap*

The most effective single-layer caps are composed of concrete or bituminous asphalt. It is used to form a surface barrier between landfill and the environment. An asphalt concrete cap would reduce leaching through the landfill into an adjacent aquifer.

➤ *RCRA Subtitle C Cap*

The RCRA C multilayered landfill cap is a baseline design that is suggested for use in RCRA hazardous waste applications. These caps generally consist of an upper vegetative (topsoil) layer, a drainage layer, and a low permeability layer which consists of a synthetic liner over 2 feet of compacted clay. The compacted clay liners are effective if they retain a certain moisture content but are susceptible to cracking if the clay material is desiccated. As a result alternate cap designs are usually considered for arid environments.

➤ *RCRA Subtitle D Cap*

RCRA Subtitle D requirements are for non-hazardous waste landfills. The design of a landfill cover for a RCRA Subtitle D facility is generally a function of the bottom liner system or natural subsoils present. The cover must meet the following specifications:

- the material must have a permeability no greater than 1×10^{-5} cm/s, or equivalent permeability of any bottom liner or natural subsoils present, whichever is less.
- The infiltration layer must contain at least 45 cm of earthen material.
- The erosion control layer must be at least 15 cm of earthen material capable of sustaining native plant growth.

Alternative design can be considered, but must be of equivalent performance as the specifications outlined above. All covers should be designed to prevent the "bathtub" effect. The bathtub effect occurs when a more permeable cover is placed over a less permeable bottom liner or natural subsoil. The landfill then fills up like a bathtub.

[Back to Top](#)

Synonyms:

Cap; Landfill cover; Surface cover.

DSERTS Codes: I0 (Containment)
I1 (Capping)

[Back to Top](#)

Applicability:

Landfill Caps may be temporary or final. Temporary caps can be installed before final closure to minimize generation of leachate until a better remedy is selected. They are usually used to minimize infiltration when the underlying waste mass is undergoing settling. A more stable base will thus be provided for the final cover, reducing the cost of the post-closure maintenance. Landfill caps also may be applied to waste masses that are so large that other treatment is impractical. At mining sites for example, caps can be used to minimize the infiltration of water to contaminated tailings piles and to provide a suitable base for the establishment of vegetation. In conjunction with water diversion and detention structures, landfill caps may be designed to route surface water away from the waste area while minimizing erosion.

[Back to Top](#)

Limitations:

Landfilling does not lessen toxicity, mobility, or volume of hazardous wastes, but does mitigate migration. Landfill caps are most effective where most of the underlying waste is above the water table. A cap, by itself, cannot prevent the horizontal flow of ground water through the waste, only the vertical entry of water into the waste. In many cases landfill caps are used in conjunction with vertical walls to minimize horizontal flow and migration. The effective life of landfill components (including cap) can be extended by long-term inspection and maintenance. Vegetation, which has a tendency for deep root penetration, must be eliminated from the cap area. In addition, precautions must be taken to assume that the integrity of the cap is not compromised by land use activities.

[Back to Top](#)

Data Needs:

A detailed discussion of these data elements is provided in Subsection 2.2.1 (Data Requirements for Soil, Sediment, and Sludge). Many laboratory tests are needed to ensure that the materials being considered for each of the landfill cap components are suitable. Tests to determine the suitability of soil

include grain size analysis, Atterberg limits, and compaction characteristics. Landfill instability can be solved by understanding interface friction properties between all material layers, natural or synthetic. The major engineering soil properties that must be defined are the shear strength and hydraulic conductivity. Shear strength may be determined with the unconfined compression test, direct shear test, or triaxial compression test. Hydraulic conductivity of soils may be measured in the laboratory by the constant head permeability test or the falling head permeability test. Field hydraulic conductivity tests on test pads are generally recommended prior to actual cover construction to ensure that the low-permeability requirements can actually be met under construction conditions.

Laboratory tests are also needed to ensure that geosynthetic materials will meet the cap requirements. For example, geosynthetics in caps may be subjected to tensile stresses caused by subsidence and by the gravitational tendency of a geomembrane or material adjacent to it to slide or be pulled down slopes.

Since facility performance is a function of quality construction more so than selection of materials, construction quality assurance of caps are critical. EPA has generated a technical guidance document on this subject. The technical guidance should be strictly followed during design and construction.

[Back to Top](#)

Performance Data:

Previously installed caps are hard to monitor for performance. Monitoring well systems or infiltration monitoring systems can provide some information, but it is often not possible to determine whether the water or leachate originated as surface water or ground water. Performance can be monitored much more effectively by including pan lysimeter in future caps.

[Back to Top](#)

Cost:

Landfill caps are generally the least expensive way to manage the human health and ecological risks effectively. Rough industry cost are \$175k/acre for RCRA Subtitle D, and \$225k/acre for RCRA Subtitle C.

Additional cost information can be found in the Hazardous, Toxic, and Radioactive Wastes (HTRW) Historical Cost Analysis System (HCAS) developed by Environmental Historical Cost Committee of Interagency Cost Estimation Group.

Go to [HCAS](#)

[Back to Top](#)

References:

DOE, 1995. *Technology Catalogue, Second Edition*, Office of Environmental Management and Office of Technology Development, DOE/EM-0235.

EPA, 1987. *Geosynthetic Design Guidance for Hazardous Waste Landfill Cells and Surface Impoundments*, EPA/600/2-87/025.

EPA, 1988. *Technology Screening Guide for Treatment of CERCLA Soil and Sludge*, EPA/540/288/004.

EPA, 1989. *Final Covers on Hazardous Waste Landfills and Surface Impoundments*, Technical Guidance Document, Office of Solid Waste and Emergency Response, Washington, DC, EPA/530/SW-89/047.

EPA, 1991. *Compilation of Information on Alternative Barriers for Liner and Cover Systems*, EPA/600/2-91/002.

EPA, 1991. *Inspection Techniques for the Fabrication of Geomembrane Field Seams*, Technical Guidance Document, EPA/530/SW-91/051.

EPA, 1993. *Construction Quality Control and Quality Assurance at Waste Containment Facilities*, Technical Guidance Document, Office of Research and Development, RREL, Cincinnati, OH, EPA/600/R-93/182.

EPA, 1993. *Engineering Bulletin Landfill Covers*, EPA/540/S-93/500.

EPA, 1995. *RCRA Subtitle D (258) Seismic Design Guidance for Municipal Solid Waste Landfills*, Office of Research and Development, NRMRL, Cincinnati, OH, EPA/600/R-95/051.

EPA, 1995. *Report of 1995 Workshop on Geosynthetic Clay Liners*, Office of Research and Development, NRMRL, Cincinnati, OH, EPA/600/R-96/149.

EPA, 1997. *Best Management Practices (BMPs) for Soil Treatment Technologies: Suggested Operational Guidelines to Prevent Cross-media Transfer of Contaminants During Clean-UP Activities*, EPA OSWER, EPA/530/R-97/007.

EPA, 1997. *Technology Alternatives for the Remediation of Soils Contaminated with As, Cd, Cr, Hg, and Pb*, Engineering Bulletin, EPA/540/R-97/008.

EPA, 1998. *Evaluation of Subsurface Engineered Barriers at Waste Sites*, Technology Report, EPA/542/R-98/005.

Federal Remediation Technologies Roundtable, 1998. *Remediation Case Studies: In Situ Soil Treatment Technologies (Soil Vapor Extraction, Thermal Processes)*, EPA/542/R-98/012

- Soil Vapor Extraction at the Seymour Recycling Corporation Superfund Site, Seymour, Indiana

Federal Remediation Technologies Roundtable, 1998. *Remediation Case*

***Studies: Groundwater Pump and Treat (Nonchlorinated Solvents),
EPA/542/R-98/014***

- Pump and Treat and Containment of Contaminated Groundwater at the
Sylvester/Gilson Road Superfund Site, Nashua, New Hampshire

Federal Remediation Technologies Roundtable, 1998. ***Remediation Case
Studies: Debris and Surface Cleaning Technologies, and Other
Miscellaneous Technologies***, EPA/542/R-98/017.

- Lawrence Livermore National Laboratory (LLNL) Site 300 - Pit 6
Landfill Operable Unit (OU), Livermore, CA.

[Back to Top](#)

Site Information:

- AFCEE action, Fairchild AFB, WA
- DOE Oak Ridge, TN facility
- Lawrence Livermore National Laboratory, Site 300, Coast Ranges, CA
- DOE Demo, Lee Acres landfill, Farmington, NM
- Lawrence Livermore National Laboratory, Site 300, Pit 6 Landfill OU, Livermore, CA
- Seymour Recycling Corporation Superfund Site, Seymour, IN
- Sylvester/Gilson Road Superfund Site, Nashua, NH

[Back to Top](#)

Points of Contact:

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Government Web Sites

Non-Government Web Sites

[Back to Top](#)

Vendor Information:

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[Back to Top](#)

Health and Safety:

[HTRW Hazard Analysis](#)

[Back to Top](#)

[Previous
Section](#)

[Top
Page](#)

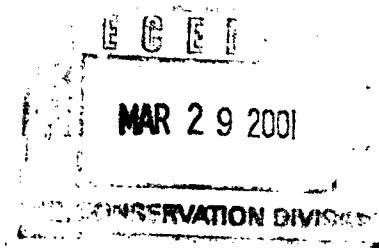
[Screen
Matrix](#)

[Table of
Contents](#)

[Synonym
List](#)

[Next
Section](#)

Clay Osborn
P.O. Box 1285
Jal, NM 88252
Phone 505-395-2510



March 25, 2001

RE: Maralo Jalmat Yates Unit 1997 Spill

Bill Olson
New Mexico Oil Conservation Division
P.O. Box 6429
1220 South St. Francis Drive
Santa Fe, NM 87505

Dear Bill,

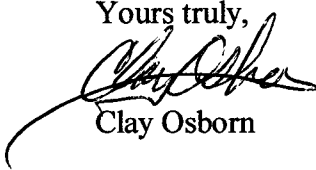
I have reviewed the letters and documentation from the Maralo Jalmat Yates Unit Tank Battery spill that happened on November 6, 1997. In the OCD records I've found two reports and only one analytical from a sample taken Dec. 18, 1997 along with a letter from Big D Environmental Services, a site map and a letter from the NMOCD. These reports have me confused because there is a report dated November 12, 1997 showing a final report stating that the contaminated dirt was dug up with a back hoe and replaced with top soil from a spot on the ranch where the landowner approved. Mr. Gary Wink from the OCD and I were on location that day and did not see any soil dug up and hauled off. The next report dated December 31, 1997 does not include a final closure report. The site map shows that dirt was spread over the affected areas.

Bill I know you are very busy and do not have a lot of time to look back for old leak and spill reports but I would appreciate very much if you could take time to search your records and see if this site is officially closed or not. I feel that this site has not been properly cleaned up and should not be officially closed. As you can see by the pictures this site has a large amount of erosion and is several feet deep now and the bottom of the gully has heavy oil stained dirt. If you find any reports I do not have would you please send me a copy?

I am also enclosing pictures of the Jalmat Yates Unit flow line leak from well No. 22 dated November 6 1999. This leak was not reported to the OCD. This leak also ran into the lower end of the gully over the spill from the tank battery.

If I can answer any questions or help you in anyway please do not hesitate call me.

Yours truly,



Clay Osborn

Enclosure (35)



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
DISTRICT I HOBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-0720

Jennifer A. Salisbury
CABINET SECRETARY

December 4, 1997

Mr. Phillip Smith
Maralo, Inc.
P.O. Box 832
Midland, Texas 79702

Re: NMOCD C-141 Jalmat Yates Unit
A-Sec 13-Ts25s-R36e

Dear Mr. Smith:

New Mexico Oil Conservation Division (NMOCD) is in receipt of the C-141 subsequent spill report for the above referenced location. Per our telephone conversation please find enclosed a list of NMOCD permitted disposal sites.

The NMOCD has reviewed your C-141 and has determined that the contaminated soil picked up should be disposed of off-site at an approved site or treated on site. Please provide to the NMOCD within 30 days of receipt of this letter a work plan addressing the on-site contamination. Also, please provide analytical results for TPH and BTEX of the composite area where the leak occurred. Please take these samples below where the leak occurred. This will indicate the vertical extent of the contamination for ground water protection. The NMOCD requires this information so as to provide you with the proper closure report as required by rule 116.

If you require any further information or assistance please do not hesitate to call (505-393-6161) or write this office.

Sincerely Yours,

Wayne Price-Environmental Engineer

cc: Chris Williams-NMOCD District I Supervisor
Gary Wink-NMOCD Field Rep. II-Hobbs, NM
Charlie Perrin-NMOCD Field Rep. I (Jal area)

attachments- list of NMOCD permitted disposal facilities; cc C-141;

C & C Landfarm

Box 55

Monument, New Mexico 88265

Contact: Mr. Jimmy Cooper
505-397-2045

505-369-7108 Mobil

Location: Southeast of Monument, NM
sec 3-Ts 20s-R 37 e
Lea Co. NM

Controlled Recovery Inc.

P.O. Box 369

Hobbs, New Mexico 88240

Contact: Billy Charo-Office Manager
505-393-1079

Location: Half way between Hobbs & Carlsbad NM
sec 27-Ts 20s-R 32 e
Lea Co. NM

Environmental Plus, Inc. (EPI)

P.O. Box 969

Eunice, New Mexico 88231

Contact: Mr. Charlie Bettis
505-394-2588

Location: South of Eunice, NM
sec 14,15- Ts 22s- R 37 e
Lea Co. NM

Gandy Marley, Inc.

P.O. Box 827

Tatum, New Mexico 88267

Contact: Mr. Larry Gandy
505-398-4960

Location: Half way between Tatum and Roswell NM
of Hwy 380, sec 4,5,8,9- Ts 11 s - R 31 e
Chavez Co. NM

Geo-Yea Landfarm, Inc.

P.O. Box 25547

Albuquerque, New Mexico 87125

Contact: Mr. Royce Cooper, Jr.
Mr. Steve Dyer-Rhino Environmental Ser.
1-800-762-0241

Location: 7 miles N of Bronco, Tx.
sec 14-Ts 11s-R 38 e
Lea Co. NM

Loco Hills Water Disposal

P.O. Box 68

Loco Hills, NM 88255

Contact: James R. Maloney
505-677-2118

Location: Loco Hills, NM 88255
Eddy Co. NM

Parabo, INC.

P.O. Box 1737

Eunice, New Mexico 88231

Contact: Donna Roach
505-394-2511

Location: 5 mi. east of Eunice, NM
sec 29-Ts 21s-R38 e
Lea Co. NM

ps, NM 88241-1980
District II - (505) 748-1283
11 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C
Originated

Submit 2 c
Appropriate
Office in acc
with Rule
back side

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final

Name MARALO, INC.	Contact PHILLIP SMITH, OPERATIONS MANAGER
Address P. O. BOX 832, MIDLAND, TX 79702	Telephone No. (915) 684-7441
Facility Name JALMAT YATES UNIT	Facility Type WATERFLOOD BATTERY

Surface Owner CLAY OSBORNE	Mineral Owner NOT APPLICABLE	Lease No. -
--------------------------------------	--	-----------------------

LOCATION OF RELEASE

Unit Letter A	Section 13	Township 25S	Range 36E	Feet from the 1050	North/South Line NORTH	Feet from the 1100	East/West Line EAST	County LEA
-------------------------	----------------------	------------------------	---------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	----------------------

NATURE OF RELEASE

Type of Release OIL	Volume of Release 95 BBLS	Volume Recovered 45 BBLS
Source of Release HEATER TREATER	Date and Hour of Occurrence 11-06-97 2:15 AM MST	Date and Hour of Discovery 11-06-97 9:00 AM M
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OIL CONSERVATION DIVISION, HOBBS, NM.	
By Whom? BOYD CHESSE	Date and Hour 11-06-97 12:15 PM	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 50 BBLS	

If a Watercourse was Impacted, Describe Fully.*

GULLY REMEDIATED AS STATED BELOW.

Describe Cause of Problem and Remedial Action Taken.*

CAUSE: HOLE IN HEATER TREATER

**REMEDIAL ACTION: PICK UP ALL LIQUID VOLUMES WITH VACUUM TRUCK. DUG UP CONTAMINATED DIRT WITH BACKHOE.
REPLACED DIRT WITH TOP SOIL FROM SPOT ON RANCH WHERE LAND OWNER APPROVED.**

Describe Area Affected and Cleanup Action Taken.*

AREA AFFECTED: DITCH ACROSS THE ROAD TO THE SOUTH OF THE BATTERY.

CLEANUP ACTION: SAME AS ABOVE IN REMEDIAL ACTION

Describe General Conditions Prevailing (Temperature, Precipitation, etc.).*

70° WITH SUN AND NO PRECIPITATION.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
Signature: *Phillip Smith*

Printed Name:

PHILLIP SMITH

Title: **OPERATIONS MANAGER**

Date: **NOVEMBER 12, 1997**

Phone: **(915) 684-7441**

OIL CONSERVATION DIVISION

Approved by
District Supervisor:

Approval Date:

Conditions of Approval:

Expiration Date:

Attached ☐

* Attach Additional Sheets If Necessary



NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
DISTRICT I HOBBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-6720

Jennifer A. Salisbury
CABINET SECRETARY

December 31, 1997

Phillip Smith
Maralo Inc.
P.O. Box 832
Midland, Texas 79701

Re: NMOCD C-141 Jalmat Yates Unit
A-Sec 13-Ts25s-R36e

Dear Mr. Smith:

New Mexico Oil Conservation Division (NMOCD) is in receipt of the fax copy of the proposed work plan for the above referenced site. **The NMOCD hereby approves the plan with the following additional conditions:**

1. **OCD APPROVAL CONDITIONS FOR REMEDIATION OF LEAKS AND SPILLS (attached).**
2. NMOCD has reviewed the work plan and it appears that only TPH analysis are being planned to be performed. Please note, the NMOCD will require both TPH and BTEX analysis for vertical extent areas and remediated areas. In order to save expenses the NMOCD will accept composite samples of large remediated areas.

Bottom hole samples should be taken in the bottom of the excavated areas where Maralo plans on checking vertical extent. This should consist of a grab sample.
3. The work plan mentions that final TPH concentrations should be below 1% after treatment. Please note Maralo should conduct an on-site assessment as required by the NMOCD Guidelines. This site assessment will then determine the final clean-up standards. NMOCD's highest TPH standard is 5000 ppm unless Maralo can demonstrate that the higher level will not adversely impact the environment.
4. NMOCD approves Maralo's plan for disposing of any contaminated soils off-site, if disposed of at an approved NMOCD permitted facility. Please keep records, manifest, etc. for all waste disposed of off-site. These should be included in the final closure report along with analytical and other supporting documentation.
5. Please submit a final C-141 along with closure documents within 180 days of receipt of this letter.

If you require any further information or assistance please do not hesitate to call (505-393-6161) or write this office.

Sincerely Yours,

Wayne Price-Environmental Engineer

cc: Chris Williams-NMOCD District I Supervisor



915-888-3100
800-582-4440
FAX 915-687-3151

December 24, 1997
Proposal 971224

Mr. Phillip Smith
Maralo Oil
P.O. Box 832
Midland, TX 79702

Subject: Remediation of Maralo JalMat Site at Jal, N.M. Facility

Dear Mr. Smith:

Big D Environmental Services Corporation (Big D) is pleased to provide a quotation for the delineation and remediation of the spill site at JalMat Well Site in Jal, N.M. Big D's proposal is two-fold. First, Big D proposes to trench across the three areas shown in Figure 1 to determine the depth of contamination at each of the sites. Because the farthest point from the actual release site still contains greater than 1% (11,250 ppm) Total Petroleum Hydrocarbons (TPH), the site must be remediated. The work that was previously done has benefited the impacted areas, but the question regarding extent of contamination (both vertical and lateral) has yet to be determined. Using the trench cutting approach, one can quickly assess the extent of contamination questions. Additional samples will confirm whether additional work will be necessary in the area. The site delineation can be completed for \$1,650. The trenching and verification of extent of contamination will take approximately six to eight hours to complete and can be done immediately, if necessary. Each area will have one verification sample sent in for TPH analysis. Pictures and sample verification will be included in the report.

Secondly, Big D proposes to treat the area by mixing Oil Gator into the affected soils and tilling the resulting mixture. Hauling additional outside soils will not be required. Big D can use a tiller to break up the soils that presently contain the higher TPH levels, and the addition of Oil Gator material will stimulate the indigenous bug population should allow the TPH reduction of the impacted area. The remediation of the site will cost \$6,650. The price includes equipment, materials, labor, and lab fees. Big D believes that one application of Oil Gator is sufficient for complete treatment of the soils without having to bring in additional soils for dilution purposes. The TPH concentrations should be well below the 1% after treatment.

In the event that Maralo is interested in proceeding with both the delineation and remediation at the same time, the cost of both projects can be done for \$7,500. The mobilization costs are passed on as savings to your company. This proposal is good for sixty days.

01/08/98 15:28 ☎915 684 9836
12/24/97 15:35

MARALO MIDLAND

0005/007
NO. 320 003

Please let me know if you have any questions regarding any of the information I have provided. I can be reached at my office at (915) 688-8171 or on my mobile at 688-8142. Thank you.

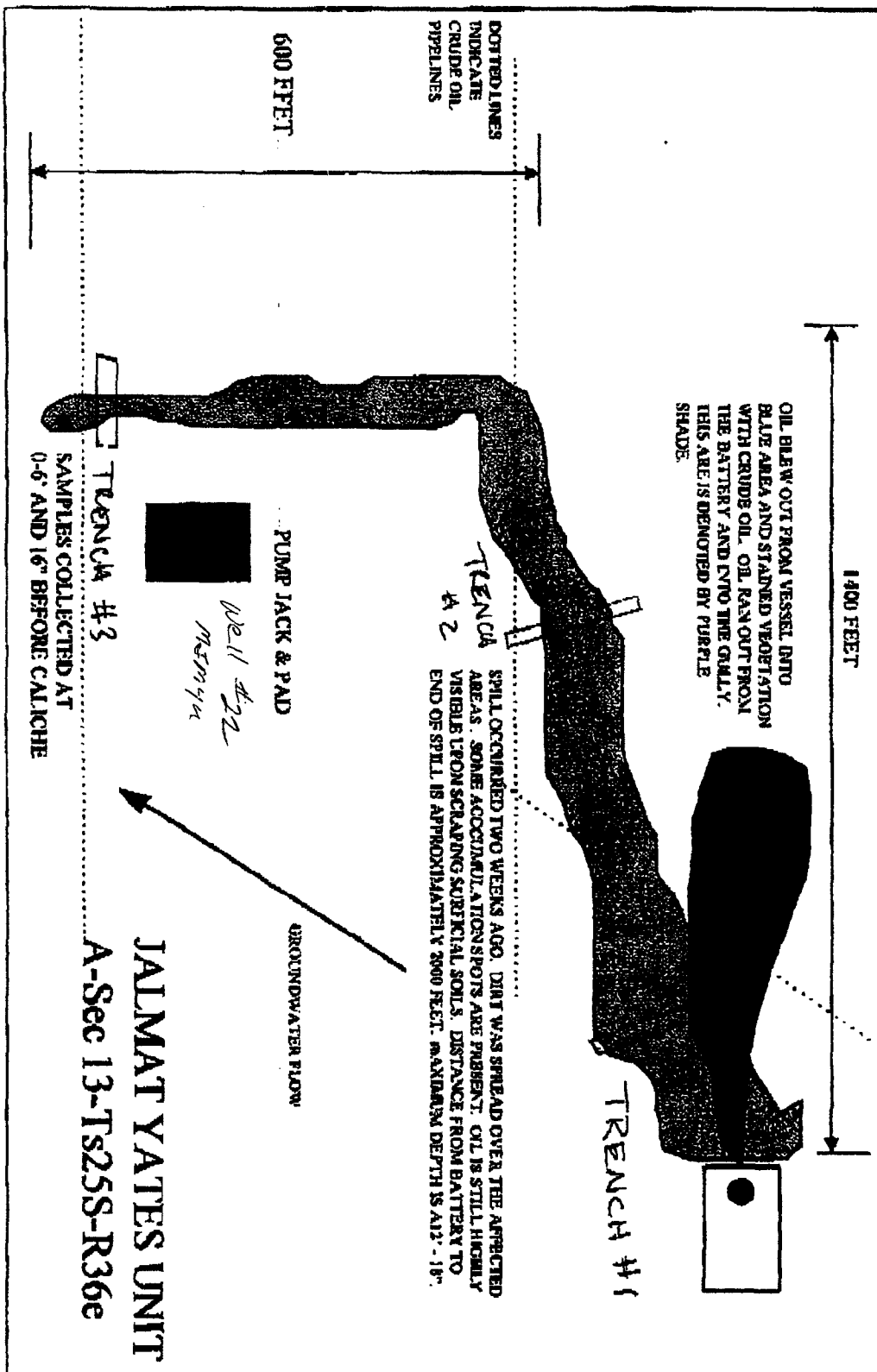
Sincerely,
Big D Environmental Services



Bo Vizcaino
Remediation Project Manager

MARALO JAL SITE DECEMBER 17, 1997

N →



ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

BIG D ENVIRONMENTAL SERVICES
ATTN: MR. BO VIZCAINO
P.O. BOX 7808
MIDLAND, TEXAS 79708
FAX: 916-687-2151

Receiving Date: 12/19/97
Sample Type: SOIL
Project #: MARALO 971218
Project Name: NONE GIVEN
Project Location: NONE GIVEN

Analysis Date: 12/22/97
Sampling Date: 12/16/97
Sample Condition: Intact

ELT#	FIELD CODE	TPH mg/kg	
13324	MARALO #1	11,250	SURFACE
13325	MARALO #2	3,940	DEEP
QUALITY CONTROL		516	How Deep? FROM WHAT LOCATION?
TRUE VALUE		521	
% PRECISION		99	

Methods: EPA 418.1

Roland K. Tuttle
Roland K. Tuttle

12-22-97
Date

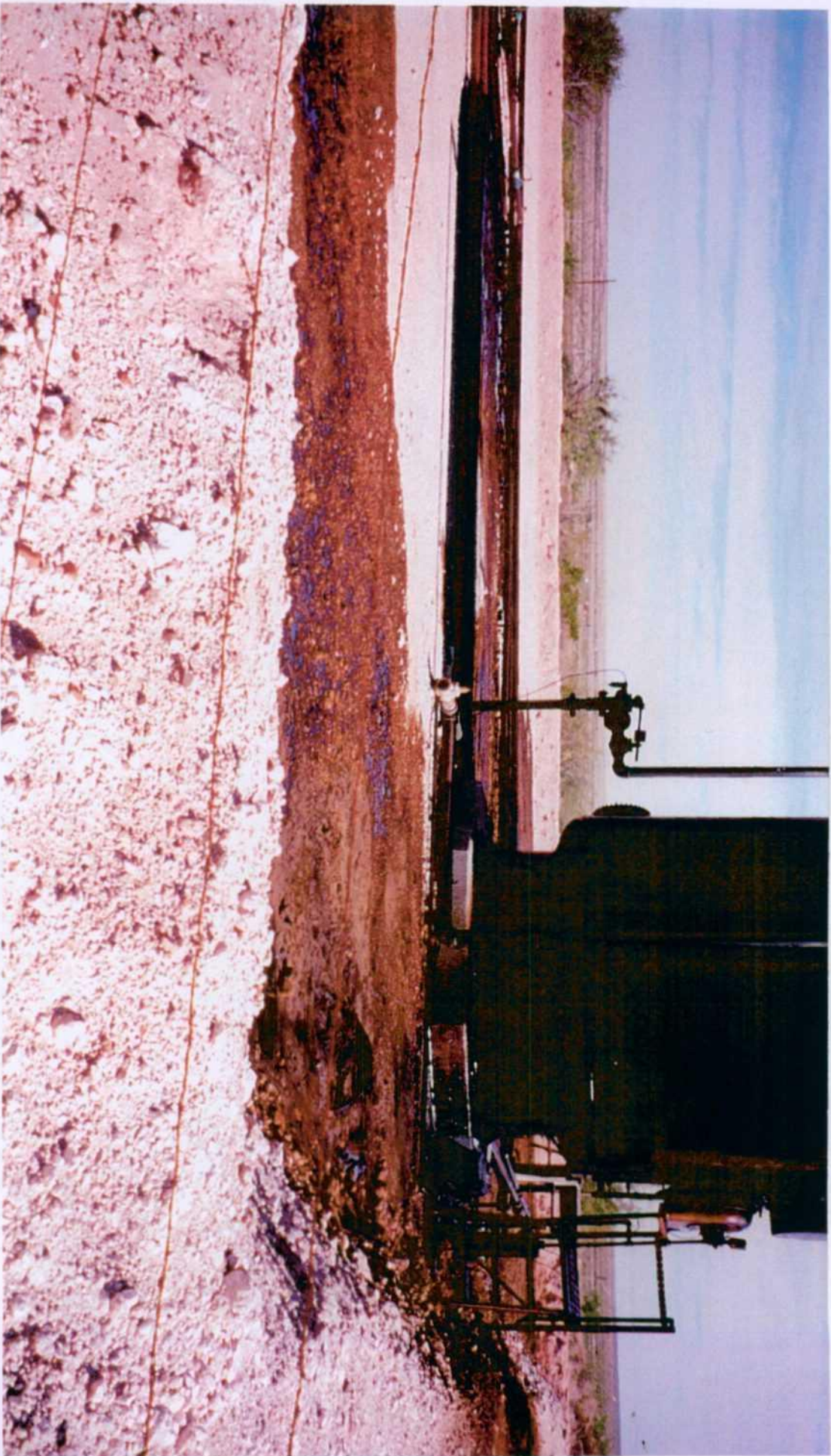
11
A



MARCO TOLMAT GATES UNIT.

11/6/97

"B"



MARSH JALMOT gates unit 11-6-97

17
"D"



MARALO VALLEY UNIT 11-6-97

"C1"
D



MARALO TREATMENT PLANT 11/6/97

E



MARSHLAND 11-6-99 "E"

11
11
11



MARPO TALMAT GALE'S UNIT, 11/6/97



"G"

MARALO JALMAT YATES UNIT. 11/6/97 "G"

H
" "



MARALO PALMAT YATES UNIT. 11-6-97 "H"



3/25/01 MARALO JALMAT YATES UNIT.



MARALO TAL MAT YATES UNIT.
3/25/01 LOOKING SOUTH ACROSS ROAD FROM TB. NOTE: TOP SOIL GONE.



MARALO Jmyn 3/25/01 Looking SE From T.B. Note no top soil.



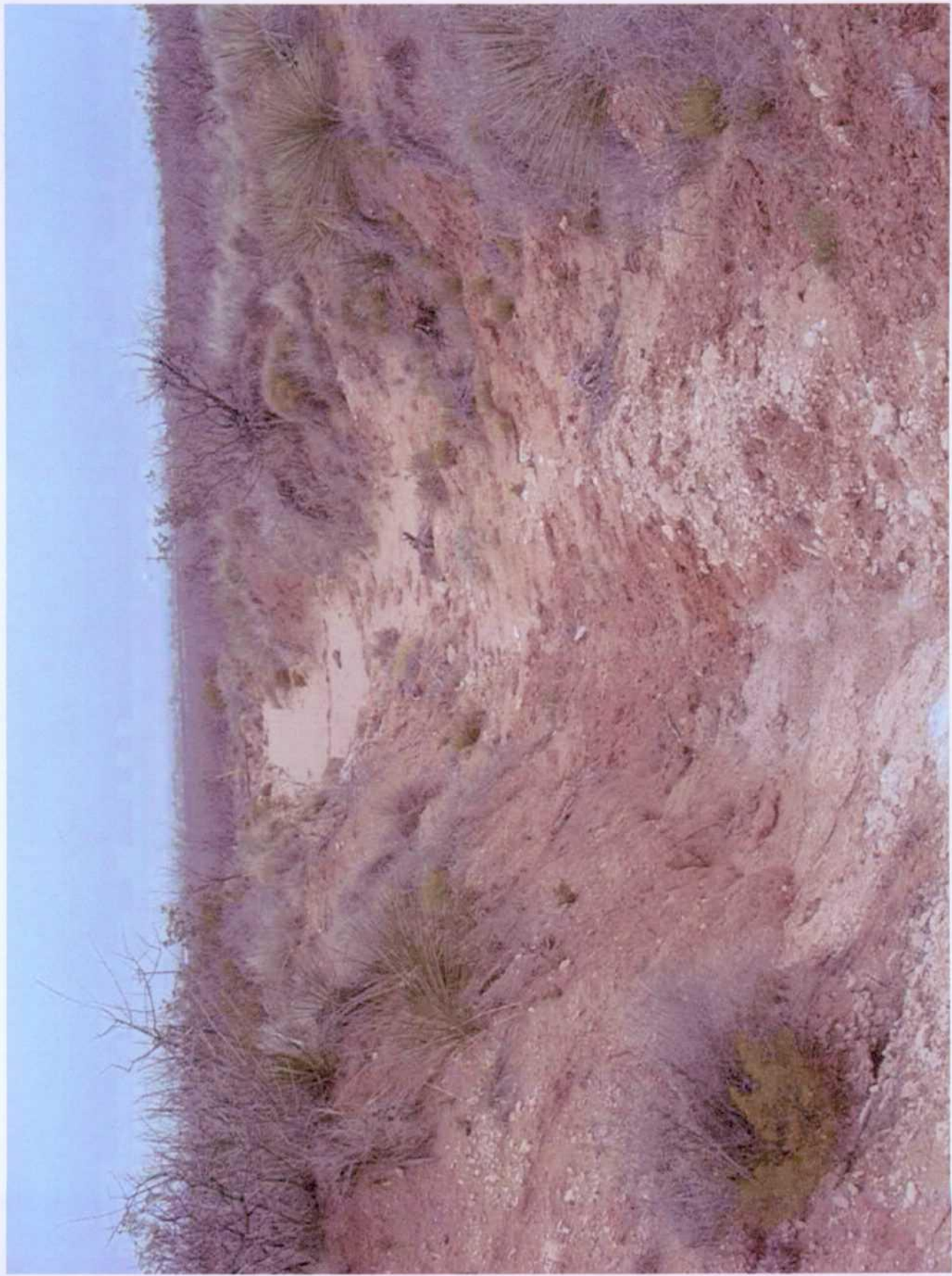
MARALO JMYU 3/25/01 LOOKING SE FROM T.B. NOTE: NO TOP SOIL & WASH
GOING SE.. SEE MARALO JMYU PICTURE 'E' 11-6-97 (NO WASH OR GULLY)



MARALO JALMAT YATES UNIT 3/25/01 Oil Diat in Bottom of WASH



MARRA10 JM44 3/25/01 OIL CONTAMINATED SOIL IN BOTTOM OF WASH.



MARALO JMY4 3/25/01

MRALO Jm4u 3/25/01 Oil Contaminated Soil Bottom of Wash.



MARALO 3/25/01



MARLCO TALMAY GATES UNIT 3125/01 OIL CONTAMINATED SOIL BOTTOM OF WASH
SOS OF WELL # 22.



MARLB STAL MAT 4815 UNIT 3/25/01 Flowline Leaking west of well #22.



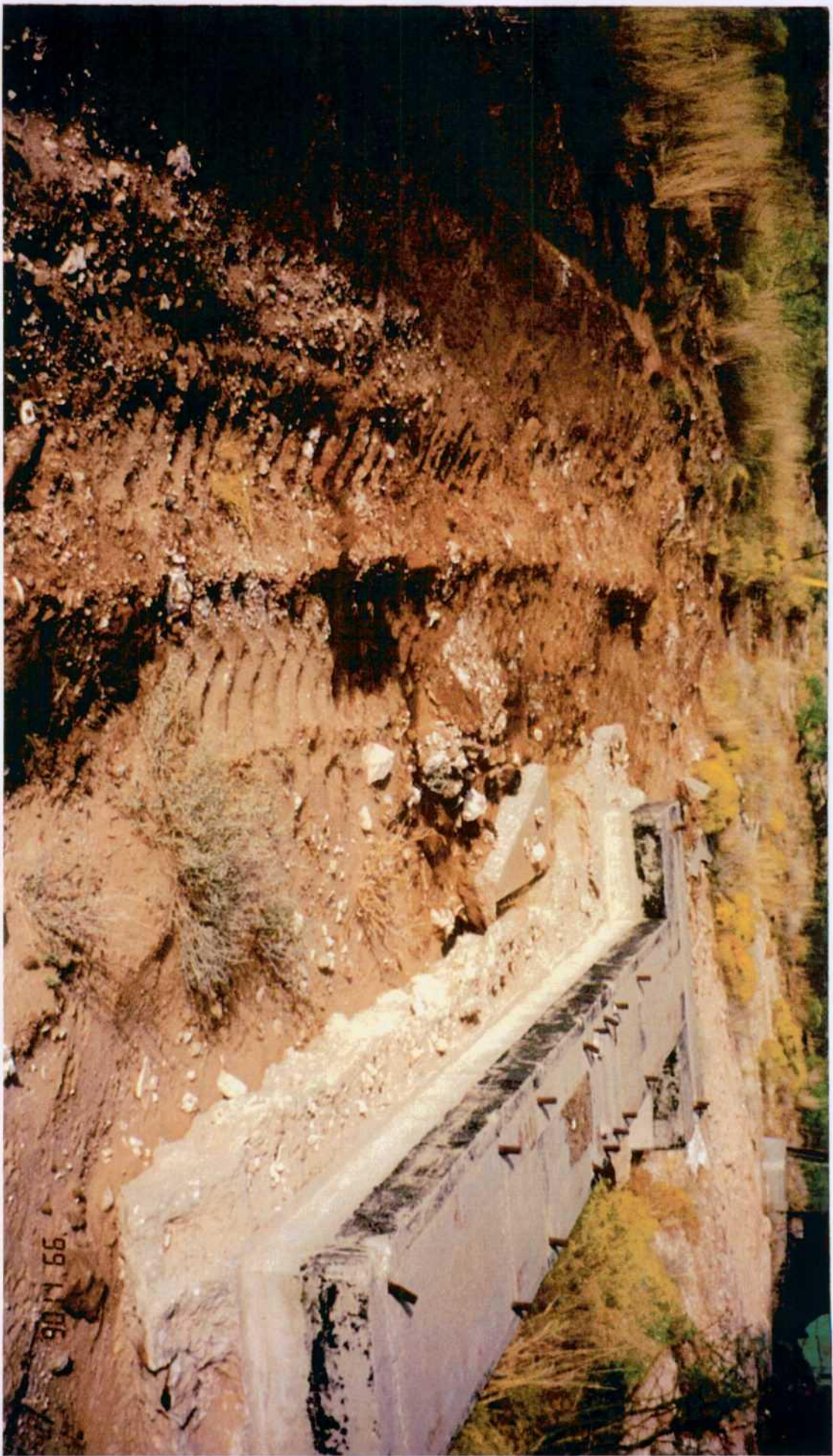
MARALO TOLMATESQUIT. 3/25/01 Flowline along. on line from well #22
LEAK ROAD South to wash then east past well #22. LEAK was NOT Reported.
35-60 BBIS Oil & WATER out. This Road over top of spill from 78.





MARALO JALMAT YATES unit, 11/6/99
 Flow Line LEAK (not Reported)
 35-60 BBLs oil & water out.

MARALO TAILMNT UNIT 11-6-99



99 11 06

MARALO FALMPT WILES UNIT 11/6/99

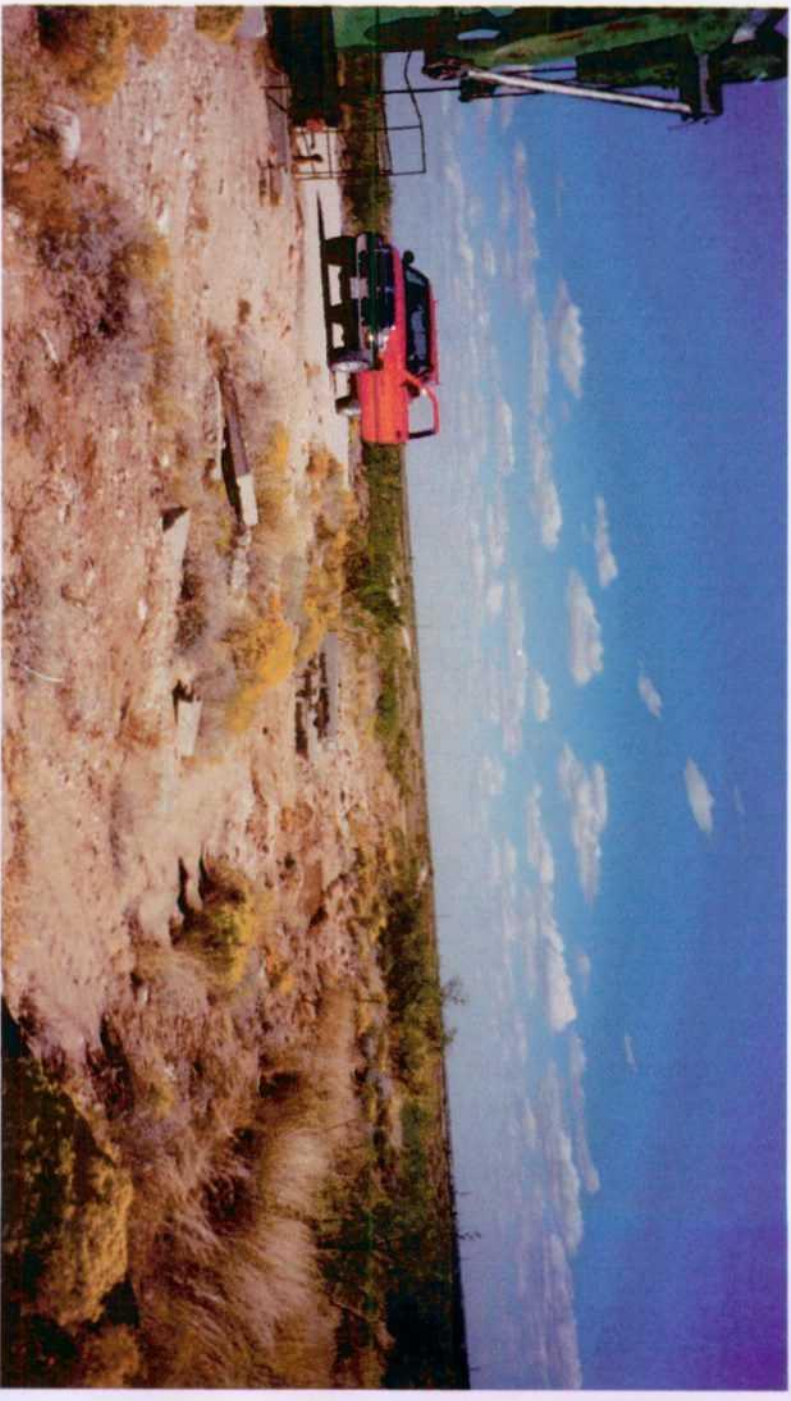




MARALO TALMAT YATES UNIT. 11-6-99
Flow Line LEAK FROM Well #22



MARALO TALMAT YATES UNIT.
Well #22 Flow Line Leak.



MARCO TOLMAT GATES UNIT 11/4/95 Flowline Leak From
Well #22

1R294

ALCOA

JALMAT YATES UNIT #10
1260' FSL 1250' FEL
SEC. 7, T25S, R37E
LEA CO., NM

05/20/2004



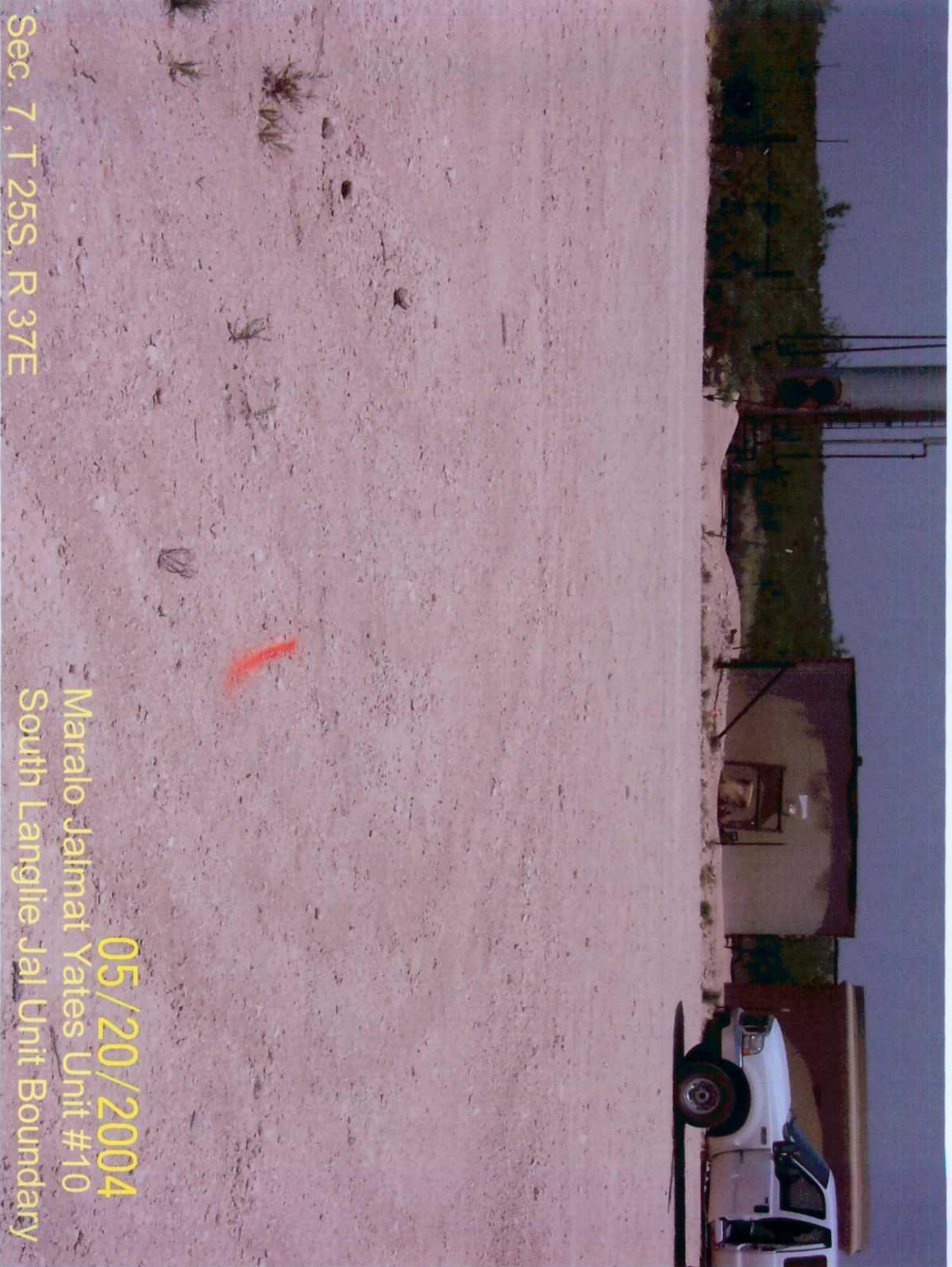
05/20/2004



Sec. 7, T25S, R37E

05/20/2004

Maralo Jalmat Yates Unit #10
South Langlie Jal Unit Boundary



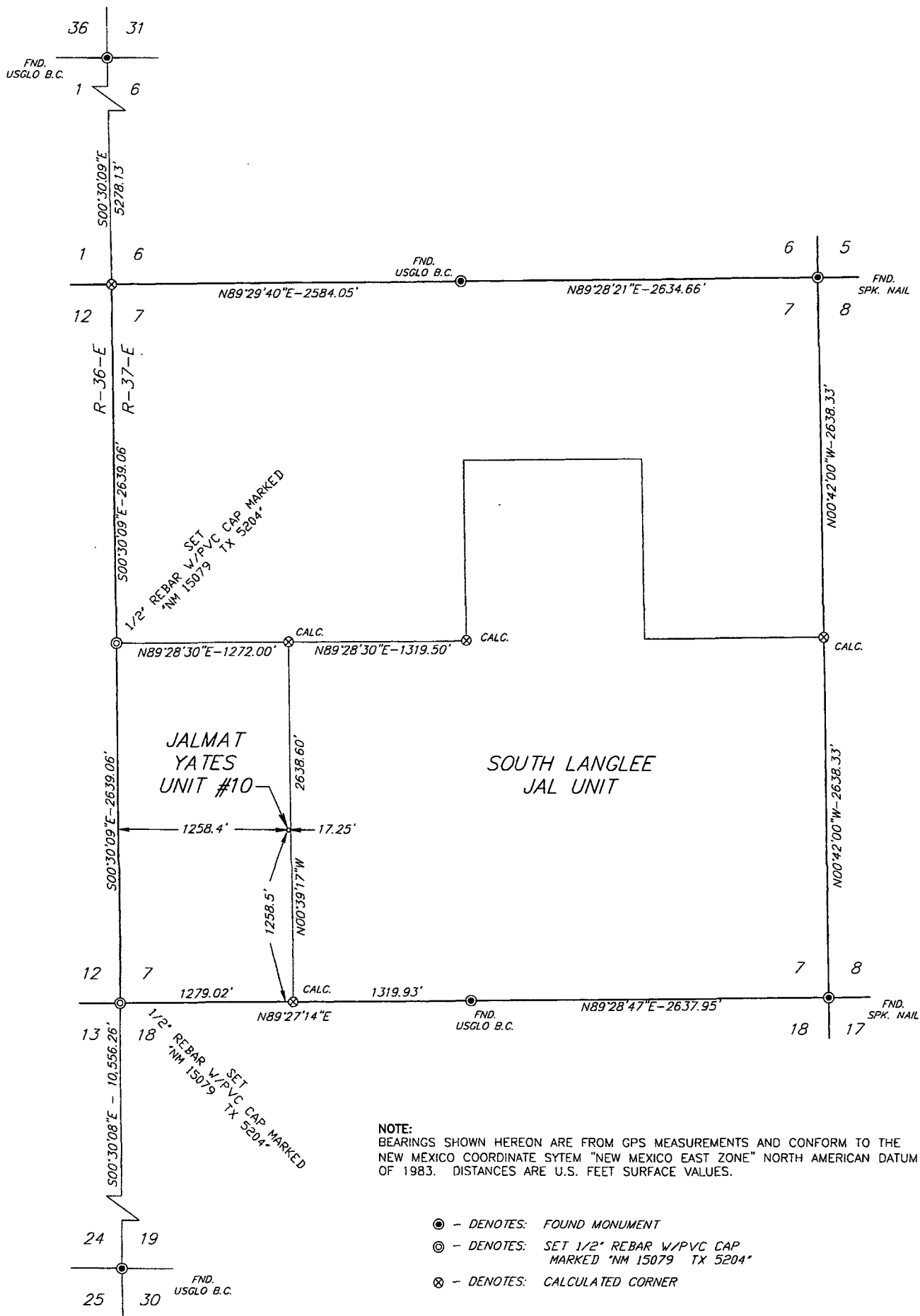
Sec. 7, T 25S, R 37E

05/20/2004

Maralo Jalmat Yates Unit #10

South Langlie Jal Unit Boundary

SECTION 7, TOWNSHIP 25 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



I HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

Terry J. Aseel 5/21/04

TERRY J. ASEEL, N.M. R.P.S. No. 15079

ASEEL SURVEYING AND CONSULTING
P.O. BOX 393, HOBBS, NEW MEXICO



1000' 0 1000' 2000 FEET
SCALE: 1"=1000'

CLAY OSBORN

LOCATE EXISTING WELL
MARALO, INC. - JALMAT YATES UNIT #10 IN
THE SOUTHWEST QUARTER OF SECTION 7,
TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM,
LEA COUNTY, NEW MEXICO

Survey Date: 05/19/2004

W.O. Number: 040519WL

File: 040519WL.DWG

Date: 05/20/2004

Drafted By: Curtis Griffin



















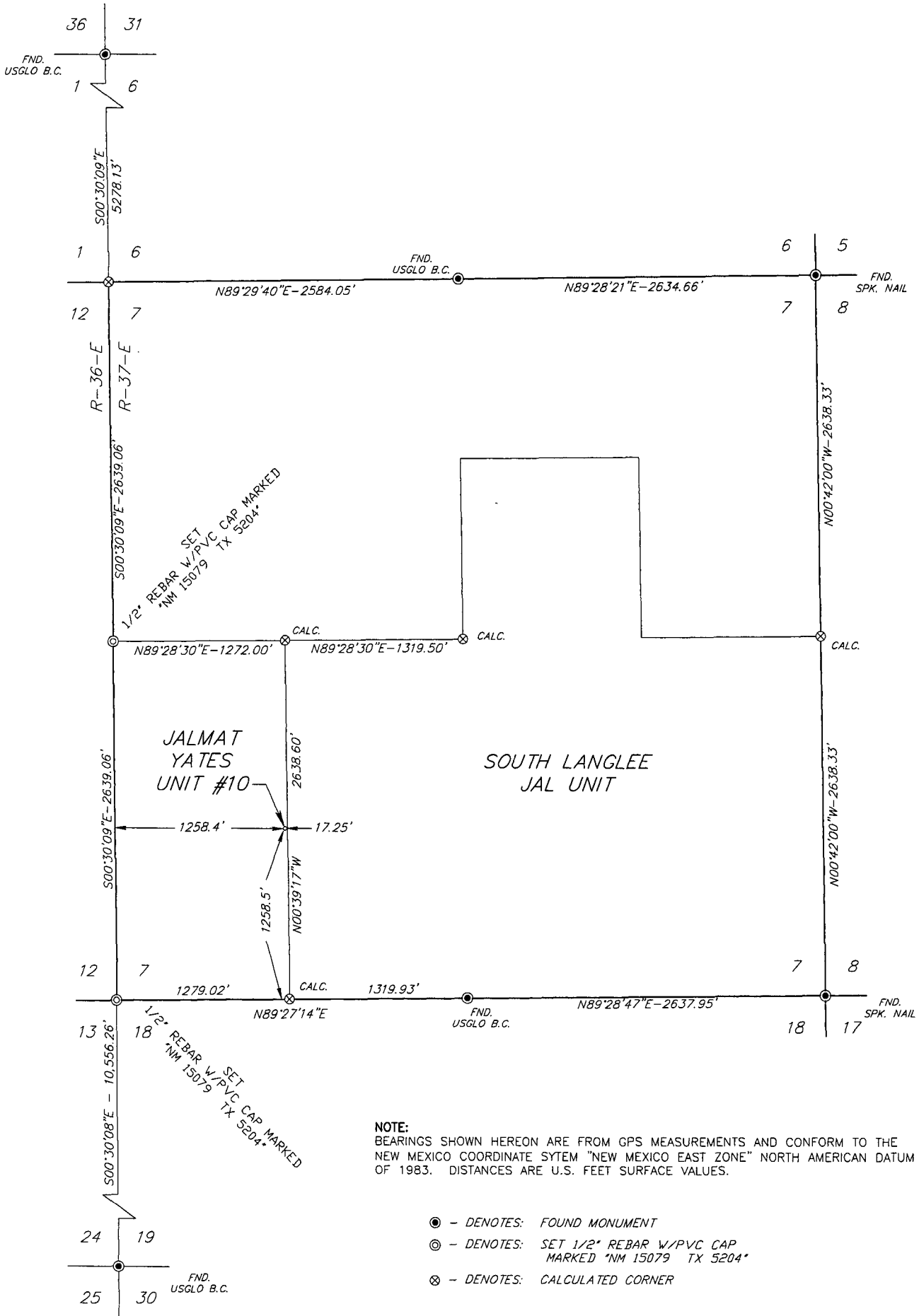
3. 1. 2002



3.1.2002



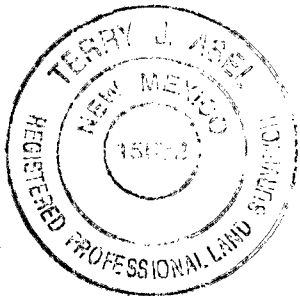
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



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Terry J. Abel 5/24/04
TERRY J. ABEL N.M. R.P.S. No. 15079

ASEL SURVEYING AND CONSULTING
P.O. BOX 393, HOBBS, NEW MEXICO



1000' 0 1000' 2000 FEET
SCALE: 1"=1000'

CLAY OSBORN

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MARALO, INC. - JALMAT YATES UNIT #10 IN
THE SOUTHWEST QUARTER OF SECTION 7,
TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM,
LEA COUNTY, NEW MEXICO

Survey Date: 05/19/2004

W.O. Number: 040519WL

Date: 05/20/2004

File: 040519WL.DWG
Drafted By: Curtis Griffin



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
DISTRICT I HOBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-0720

Jennifer A. Salisbury
CABINET SECRETARY

December 4, 1997

Mr. Phillip Smith
Maralo, Inc.
P.O. Box 832
Midland, Texas 79702

Re: NMOCD C-141 Jalmat Yates Unit
A-Sec 13-Ts25s-R36e

Dear Mr. Smith:

New Mexico Oil Conservation Division (NMOCD) is in receipt of the C-141 subsequent spill report for the above referenced location. Per our telephone conversation please find enclosed a list of NMOCD permitted disposal sites.

The NMOCD has reviewed your C-141 and has determined that the contaminated soil picked up should be disposed of off-site at an approved site or treated on site. Please provide to the NMOCD within 30 days of receipt of this letter a work plan addressing the on-site contamination. Also, please provide analytical results for TPH and BTEX of the composite area where the leak occurred. Please take these samples below where the leak occurred. This will indicate the vertical extent of the contamination for ground water protection. The NMOCD requires this information so as to provide you with the proper closure report as required by rule 116.

If you require any further information or assistance please do not hesitate to call (505-393-6161) or write this office.

Sincerely Yours,

Wayne Price-Environmental Engineer

cc: Chris Williams-NMOCD District I Supervisor
Gary Wink-NMOCD Field Rep. II-Hobbs, NM
Charlie Perrin-NMOCD Field Rep. I (Jal area)

attachments- list of NMOCD permitted disposal facilities; cc C-141;

SURFACE WASTE MANAGEMENT FACILITIES

located in Southeast NM
permitted by NMOCB rule 711

C & C Landfarm

Box 55

Monument, New Mexico 88265

Contact: Mr. Jimmy Cooper

505-397-2045

505-369-7108 mobil

Location: Southeast of Monument, NM

sec 3-Ts 20s-R 37 e

Lea Co. NM

Controlled Recovery Inc.

P.O. Box 369

Hobbs, New Mexico 88240

Contact: Billy Charo-Office Manager

505-393-1079

Location: Half way between Hobbs & Carlsbad NM

sec 27-Ts 20s-R 32 e

Lea Co. NM

Environmental Plus, Inc. (EPI)

P.O. Box 969

Eunice, New Mexico 88231

Contact: Mr. Charlie Bettis

505-394-2588

Location: South of Eunice, NM

sec 14,15- Ts 22s- R 37 e

Lea Co. NM

Gandy Marley, Inc.

P.O. Box 827

Tatum, New Mexico 88267

Contact: Mr. Larry Gandy

505-398-4960

Location: Half way between Tatum and Roswell NM

of Hwy 380, sec 4,5,8,9- Ts 11 s - R 31 e

Chavez Co. NM

Goo-Yea Landfarm, Inc.

P.O. Box 25547

Albuquerque, New Mexico 87125

Contact: Mr. Royce Cooper, Jr.

Mr. Steve Dyer-Rhino Environmental Ser.

1-800-762-0241

Location: 7 miles N of Bronco, Tx.

sec 14-Ts 11s-R 38 e

Lea Co. NM

Loco Hills Water Disposal

P.O. Box 68

Loco Hills, NM 88255

Contact: James R. Maloney

505-677-2118

Location: Loco Hills, NM 88255

Eddy Co. NM

Parabo, INC.

P.O. Box 1737

Eunice, New Mexico 88231

Contact: Donna Roach

505-394-2511

Location: 5 mi. east of Eunice, NM

sec 29-Ts 21s-R38 e

Lea Co. NM

Box 1940
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-14
Originated 2/13/97

Submit 2 copies to
Appropriate District
Office in accordance
with Rule 116 on
back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name MARALO, INC.	Contact PHILLIP SMITH, OPERATIONS MANAGER
Address P. O. BOX 832, MIDLAND, TX 79702	Telephone No. (915) 684-7441
Facility Name JALMAT YATES UNIT	Facility Type WATERFLOOD BATTERY

Surface Owner CLAY OSBORNE	Mineral Owner NOT APPLICABLE	Lease No. -
--------------------------------------	--	-----------------------

LOCATION OF RELEASE

Unit Letter A	Section 13	Township 25S	Range 36E	Feet from the 1050	North/South Line NORTH	Feet from the 1100	East/West Line EAST	County LEA
-------------------------	----------------------	------------------------	---------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	----------------------

NATURE OF RELEASE

Type of Release OIL	Volume of Release 95 BBLS	Volume Recovered 45 BBLS
Source of Release HEATER TREATER	Date and Hour of Occurrence 11-06-97 2:15 AM MST	Date and Hour of Discovery 11-06-97 9:00 AM MST
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OIL CONSERVATION DIVISION, HOBBS, NM.	
By Whom? BOYD CHESSER	Date and Hour 11-06-97 12:15 PM	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 50 BBLS	

If a Watercourse was Impacted, Describe Fully.*

GULLY REMEDIATED AS STATED BELOW.

Describe Cause of Problem and Remedial Action Taken.*

CAUSE: HOLE IN HEATER TREATER

**REMEDIAL ACTION: PICK UP ALL LIQUID VOLUMES WITH VACUUM TRUCK. DUG UP CONTAMINATED DIRT WITH BACKHOE.
REPLACED DIRT WITH TOP SOIL FROM SPOT ON RANCH WHERE LAND OWNER APPROVED.**

Describe Area Affected and Cleanup Action Taken.*

AREA AFFECTED: DITCH ACROSS THE ROAD TO THE SOUTH OF THE BATTERY.

CLEANUP ACTION: SAME AS ABOVE IN REMEDIAL ACTION

Describe General Conditions Prevailing (Temperature, Precipitation, etc.).*

70° WITH SUN AND NO PRECIPITATION.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Phillip Smith*

Printed Name: **PHILLIP SMITH**

OIL CONSERVATION DIVISION

Approved by
District Supervisor:

Title: **OPERATIONS MANAGER**

Approval Date:

Expiration Date:

Date: **NOVEMBER 12, 1997** Phone: **(915) 684-7441**

Conditions of Approval:

Attached ☐

* Attach Additional Sheets If Necessary

District I - (505) 393-6161
Box 1940
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

Submit 2 copies to
Appropriate District
Office in accordance
with Rule 116 on
back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name MARALO, INC.	Contact PHILLIP SMITH, OPERATIONS MANAGER	
Address P. O. BOX 832, MIDLAND, TX 79702	Telephone No. (915) 684-7441	
Facility Name JALMAT YATES UNIT	Facility Type WATERFLOOD BATTERY	
Surface Owner CLAY OSBORNE	Mineral Owner NOT APPLICABLE	Lease No. -

LOCATION OF RELEASE

Unit Letter A	Section 13	Township 25S	Range 36E	Feet from the 1050	North/South Line NORTH	Feet from the 1100	East/West Line EAST	County LEA
-------------------------	----------------------	------------------------	---------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	----------------------

NATURE OF RELEASE

Type of Release OIL	Volume of Release 95 BBLS	Volume Recovered 45 BBLS
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Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OIL CONSERVATION DIVISION, HOBBS, NM.	
By Whom? BOYD CHESSE	Date and Hour 11-06-97 12:15 PM	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 50 BBLS	
If a Watercourse was Impacted, Describe Fully.* GULLY REMEDIATED AS STATED BELOW.		
Describe Cause of Problem and Remedial Action Taken.* CAUSE: HOLE IN HEATER TREATER REMEDIAL ACTION: PICK UP ALL LIQUID VOLUMES WITH VACUUM TRUCK. DUG UP CONTAMINATED DIRT WITH BACKHOE. REPLACED DIRT WITH TOP SOIL FROM SPOT ON RANCH WHERE LAND OWNER APPROVED.		
Describe Area Affected and Cleanup Action Taken.* AREA AFFECTED: DITCH ACROSS THE ROAD TO THE SOUTH OF THE BATTERY. CLEANUP ACTION: SAME AS ABOVE IN REMEDIAL ACTION		
Describe General Conditions Prevailing (Temperature, Precipitation, etc).* 70° WITH SUN AND NO PRECIPITATION.		

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
Signature: *Phillip Smith*

Printed Name:
PHILLIP SMITH

Title:
OPERATIONS MANAGER

Date:
NOVEMBER 12, 1997

Phone: **(915) 684-7441**

OIL CONSERVATION DIVISION

Approved by
District Supervisor:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

(505) 393-6161
980
NM 88241-1980
II - (505) 748-1283
South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

Submit 2 copies to
Appropriate District
Office in accordance
with Rule 116 on
back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name MARALO, LLC	Contact PHILLIP SMITH, OPERATIONS MANAGER	
Address P. O. BOX 832, MIDLAND, TX 79702	Telephone No. (915) 684-7441	
Facility Name JAL MAT YATES WATER STATION AT BATTERY	Facility Type PRODUCED WATER HOLDING TANKS	
Surface Owner CLAY OSBORN	Mineral Owner -	Lease No. -

LOCATION OF RELEASE

Unit Letter B	Section 13	Township 25S	Range 36E	Feet from the	North/South Line	Feet from the	East/West Line	County LEA
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^{~130'}
NATURE OF RELEASE

Type of Release PRODUCED WATER	Volume of Release 100 BBLs	Volume Recovered -0-
Source of Release OVERFLOW TANK (CATCHES DRIP OFF PUMPS)	Date and Hour of Occurrence 0100 07/17/99	Date and Hour of Discovery 0900 07/18/99
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? GARY WINK, OCD/HOBBS	
By Whom? WARREN HUNT, MARALO, LLC/PUMPER	Date and Hour 0900 07/21/99	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully (Attach Additional Sheets If Necessary)

N/A

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)

CAUSE: OVERFLOW TANK HAD LEAK IN SIDE OF TANK

ACTION: OVERFLOW TANK REPAIRED

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)

AREA AFFECTED: 10' X 70' WATER DID NOT RUN OUT OF BATTERY YARD AND WAS CONTAINED BEFORE DIKES WERE NEEDED.

CLEANUP ACTION: WATER SOAKED INTO GROUND. NO OIL INVOLVED, NO CLEANUP REQUIRED.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Dorothea Logan</i>	OIL CONSERVATION DIVISION	
Printed Name: DOROTHEA LOGAN	Approved by <i>Donna Williams</i> District Supervisor	Environmental Engineer Specialist
Title: REGULATORY ANALYST	Approval Date: 12-6-99	Expiration Date:
Date: AUGUST 23, 1999	Phone: (915) 684-7441	Conditions of Approval: Attached <input type="checkbox"/>

116.A. NOTIFICATION

(1) The Division shall be notified of any unauthorized release occurring during the drilling, producing, storing, disposing, injecting, transporting, servicing or processing of crude oil, natural gases, produced water, condensate or oil field waste including Regulated NORM, or other oil field related chemicals, contaminants or mixture thereof, in the State of New Mexico in accordance with the requirements of this Rule. [1-1-50...2-1-96; A, 3-15-97]

(2) The Division shall be notified in accordance with this Rule with respect to any release from any facility of oil or other water contaminant, in such quantity as may with reasonable probability be detrimental to water or cause an exceedance of the standards in 19 NMAC 15.A.19. B(1), B(2) or B(3). [3-15-97]

116.B. REPORTING REQUIREMENTS: Notification of the above releases shall be made by the person operating or controlling either the release or the location of the release in accordance with the following requirements: [5-22-73...2-1-96; A, 3-15-97]

(1) A Major Release shall be reported by giving both immediate verbal notice and timely written notice pursuant to Paragraphs C(1) and C(2) of this Rule. A Major Release is:

- (a) an unauthorized release of a volume, excluding natural gases, in excess of 25 barrels;
- (b) an unauthorized release of any volume which:
 - (i) results in a fire;
 - (ii) will reach a water course;
 - (iii) may with reasonable probability endanger public health; or
 - (iv) results in substantial damage to property or the environment;
- (c) an unauthorized release of natural gases in excess of 500 mcf; or
- (d) a release of any volume which may with reasonable probability be detrimental to water or cause an exceedance of the standards in 19 NMAC 15.A.19. B(1), B(2) or B(3). [3-15-97]

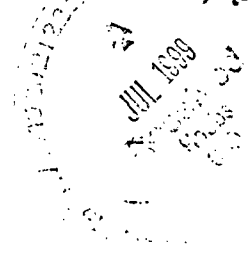
(2) A Minor Release shall be reported by giving timely written notice pursuant to Paragraph C(2) of this Rule. A Minor Release is an unauthorized release of a volume, greater than 5 barrels but not more than 25 barrels; or greater than 50 mcf but less than 500 mcf of natural gases. [3-15-97]

116.C. CONTENTS OF NOTIFICATION

(1) Immediate verbal notification required pursuant to Paragraph B shall be reported within twenty-four (24) hours of discovery to the Division District Office for the area within which the release takes place. In addition, immediate verbal notification pursuant to Subparagraph B.(1).(d). shall be reported to the Division's Environmental Bureau Chief. This notification shall provide the information required on Division Form C-141. [5-22-73...2-1-96; A, 3-15-97]

(2) Timely written notification is required to be reported pursuant to Paragraph B within fifteen (15) days to the Division District Office for the area within which the release takes place by completing and filing Division Form C-141. In addition, timely written notification required pursuant to Subparagraph B.(1).(d). shall also be reported to the Division's Environmental Bureau Chief within fifteen (15) days after the release is discovered. The written notification shall verify the prior verbal notification and provide any appropriate additions or corrections to the information contained in the prior verbal notification. [5-22-73...2-1-96; A, 3-15-97]

116.D. CORRECTIVE ACTION: The responsible person must complete Division approved corrective action for releases which endanger public health or the environment. Releases will be addressed in accordance with a remediation plan submitted to and approved by the Division or with an abatement plan submitted in accordance with Rule 19 (19 NMAC 15.A.19). [3-15-97]





NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
DISTRICT I HOBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-0720

Jennifer A. Salisbury
CABINET SECRETARY

August 2, 1999

Maralo, LLC
Attn: Dorothea Logan
P.O. Box 832
Midland, Tx 79702

Re: C-141: Submitted on July 21, 1999
UL B-Sec 13-Ts25S-R36E

Dear Mrs. Logan:

The New Mexico Oil Conservation Division (NMOCD) is in receipt of the C-141 referenced above that was submitted by Maralo. Enclosed within this packet is a copy of the C-141, and a copy of the leaks and spills guidelines. **Please submit to NMOCD a corrective action plan and/or a remediation plan (using the guidelines to assist you in this matter) within 15 days from receipt of this letter. Please include Chlorides in the sampling activities.** If you have any further questions, or need any assistance please do not hesitate to write or call me at (505-393-6161 ext...113).

Sincerely,

Donna Williams
Environmental Engineer Specialist
Cc: Wayne Price; Chris Williams;

August 23, 1999



Donna Williams
Environmental Engineer Specialist
Oil Conservation Division
District 1 Hobbs
1625 N. French Drive
Hobbs, NM 88240


RE: C-141 Final Report
UL B-Sec 13-T25S-R36E

In response to your letter dated August 2, 1999, attached please find the attached Final Report which is submitted after Maralo, LLC personnel meet with you at the above site on August 20, 1999.

Dirt work for contouring and continued remediation is in process. A final site approval visit is to be conducted in December, 1999.

Thank you for your recommendations and assistance in this regard.

Sincerely,


Dorothea Logan
Regulatory Analyst
Maralo, LLC

cc: Phillip Smith, Maralo LLC Operations Manager
Boyd Chesser, Supervisor

JAN-10-02 02:24PM FROM-MARALO

1-915-684-9836

T-092 P.02/02 F-687

1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210District III
1000 Rio Brazos Road, Aztec, NM 87410District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505Form C-141
Revised March 17, 1999Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company MARALO, LLC	Contact PHILLIP SMITH, OPERATIONS MANAGER
Address P. O. BOX 832, MIDLAND, TX 79702	Telephone No. (915) 684-7441
Facility Name JALMAT YATES UNIT WATER STATION	Facility Type WATERFLOOD BATTERY
Surface Owner CLAY OSBORN	Mineral Owner -
Lease No. -	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	13	25S	36E	330	NORTH	1650	EAST	LEA

NATURE OF RELEASE

Type of Release WATER, SKIM OF OIL	Volume of Release 300 BW, < 1 BO	Volume Recovered 200 BW (EST.)
Source of Release SPLIT SUCTION HOSE AT WATER STATION	Date and Hour of Occurrence 01/09/02 11AM MST	Date and Hour of Discovery 01/09/02 11AM MST
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? SYLVIA DICKEY/MNOCD HOBBS, NM	
By Whom? DOROTHEA LOGAN, MARALO LLC REGULATORY	Date and Hour 01/09/02, 2:20PM CST	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. LESS THAN 15 BW (CANNOT BE RECOVERED)	

If a Watercourse was Impacted, Describe Fully.*

WATER DISCHARGED INTO DRY, NARROW DITCH 2' X 750' IMPACT AREA.

Describe Cause of Problem and Remedial Action Taken.*

CAUSE: CRACKED SUCTION HOSE
ACTION: REPLACED SUCTION HOSE

Describe Area Affected and Cleanup Action Taken.*

FOOTAGE: 50' X 600'
AREA: SPLASHED ONTO FLAT GROUND, WATER SPREAD TO OPPOSITE END OF LOCATION
CLEANUP: PICKED UP STANDING WATER, SURFACE DIRT RAKED

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

OIL CONSERVATION DIVISION

Signature: <i>Dorothea Logan</i>	Approved by District Supervisor:	
Printed Name: DOROTHEA LOGAN	Approval Date:	Expiration Date:
Title: REGULATORY ANALYST	Conditions of Approval:	
Date: JANUARY 10, 2002 Phone: 915-684-7441	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

MARALO

PCB's?



1/9/2002

INSIDE OF FENCED AREA

2:40:43 PM

JANUARY 9, 2002

JALMAT YATES UNIT

MARALO

Pump
house
w/ these
tanks
left side



1/9/2002

FROM EAST, INSIDE OF FENCED AREA

JALMAT YATES UNIT

2:41:02 PM

JANUARY 9, 2002

MARALO



1/9/2002

JALMAT YATES UNIT

2:41:55 PM

JANUARY 9, 2002

MARALO



1/9/2002

2:43:02 PM

JANUARY 9, 2002

JALMAT YATES UNIT

MARALO



1/9/2002

JALMAT YATES UNIT

2:46:19 PM

JANUARY 9, 2002

MARALO



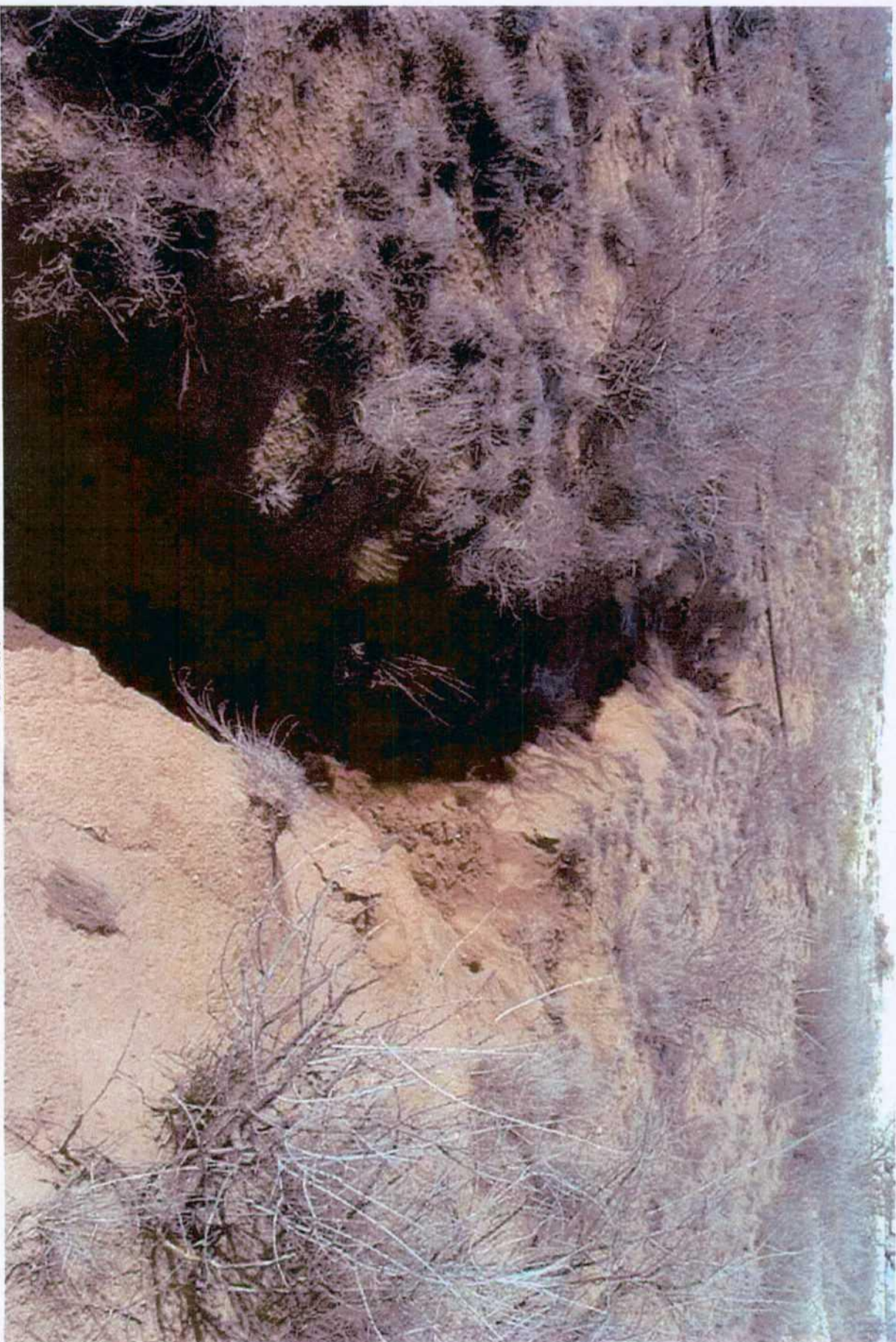
1/9/2002

JALMAT YATES UNIT

2:48:03 PM

JANUARY 9, 2002

MARALO



1/9/2002

2:48:56 PM

JANUARY 9, 2002

JALMAT YATES UNIT

MARALO



MARALU



South Side, Looking North

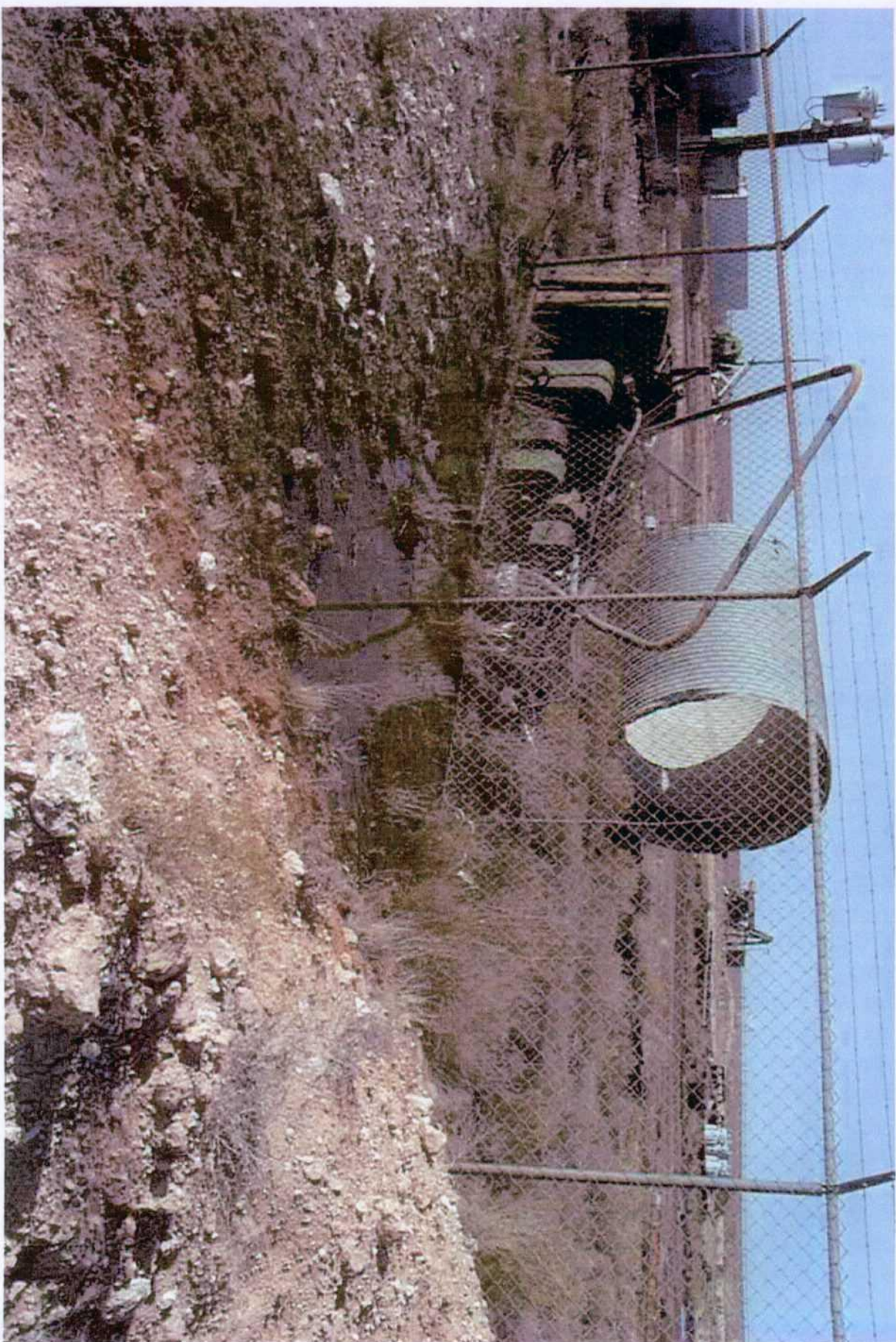
MAKALU



JALMAT YATES UNIT

JANUARY 9, 2002

MARALO



MAKALU



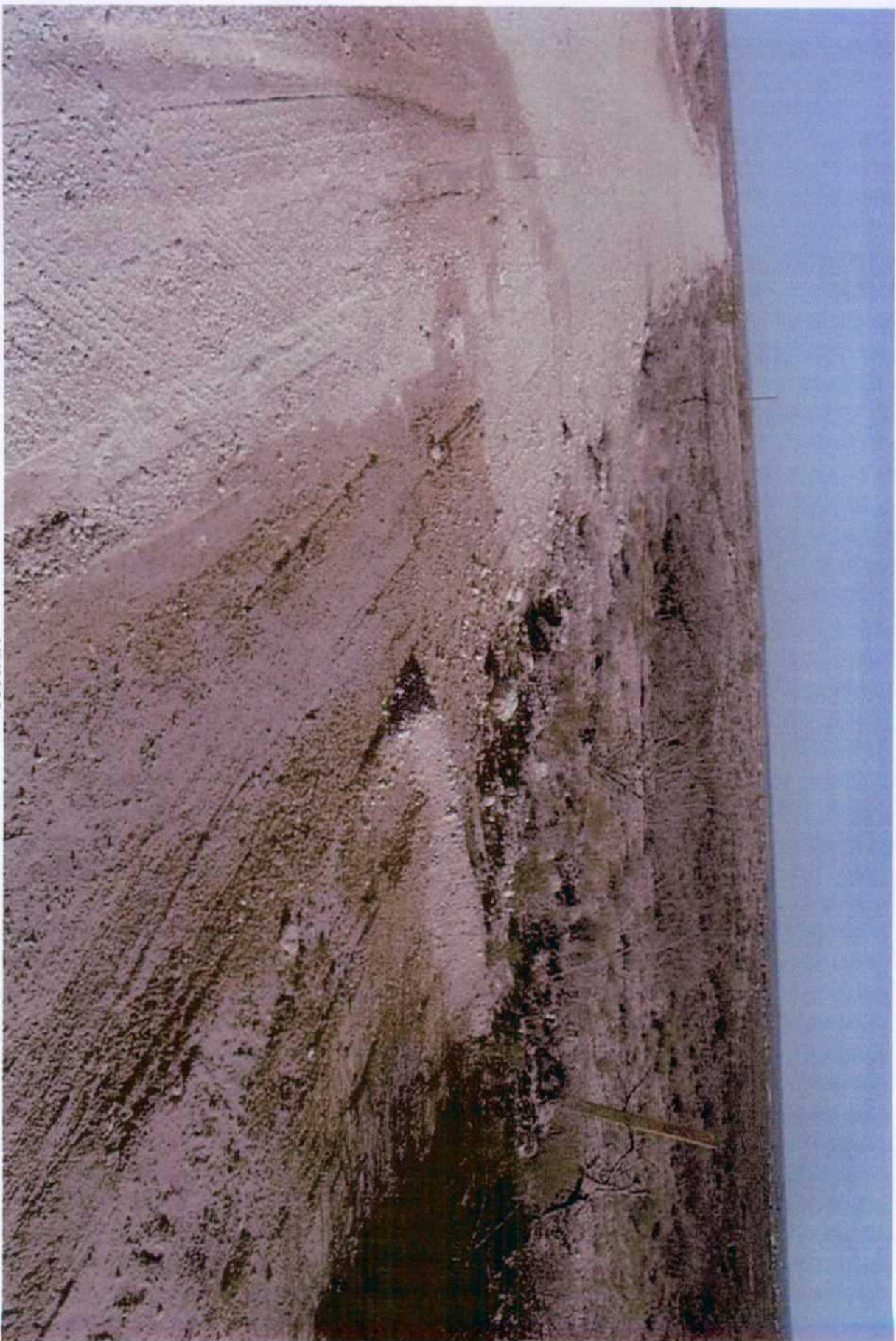
1/9/2002

JALMAT YATES UNIT

2:36:53 PM

JANUARY 9, 2002

MAKALU



1/9/2002

JALMAT YATES UNIT

2:34:44 PM

JANUARY 9, 2002

MARALO



1/9/2002

JALMAT YATES UNIT

2:34:22 PM

JANUARY 9, 2002

MARALO



1/9/2002

JALMAT YATES UNIT

2:32:28 PM

JANUARY 9, 2002

MARALO



1/9/2002

EAST SIDE OF FENCED LAND

ALMAT YATES UNIT

2:38:50 PM

JANUARY 9, 2002

MARALO



EAST OUTSIDE DO YARD

JALMAT YATES UNIT

2:39:39 PM

JANUARY 9, 2002

MARALO



1/9/2002

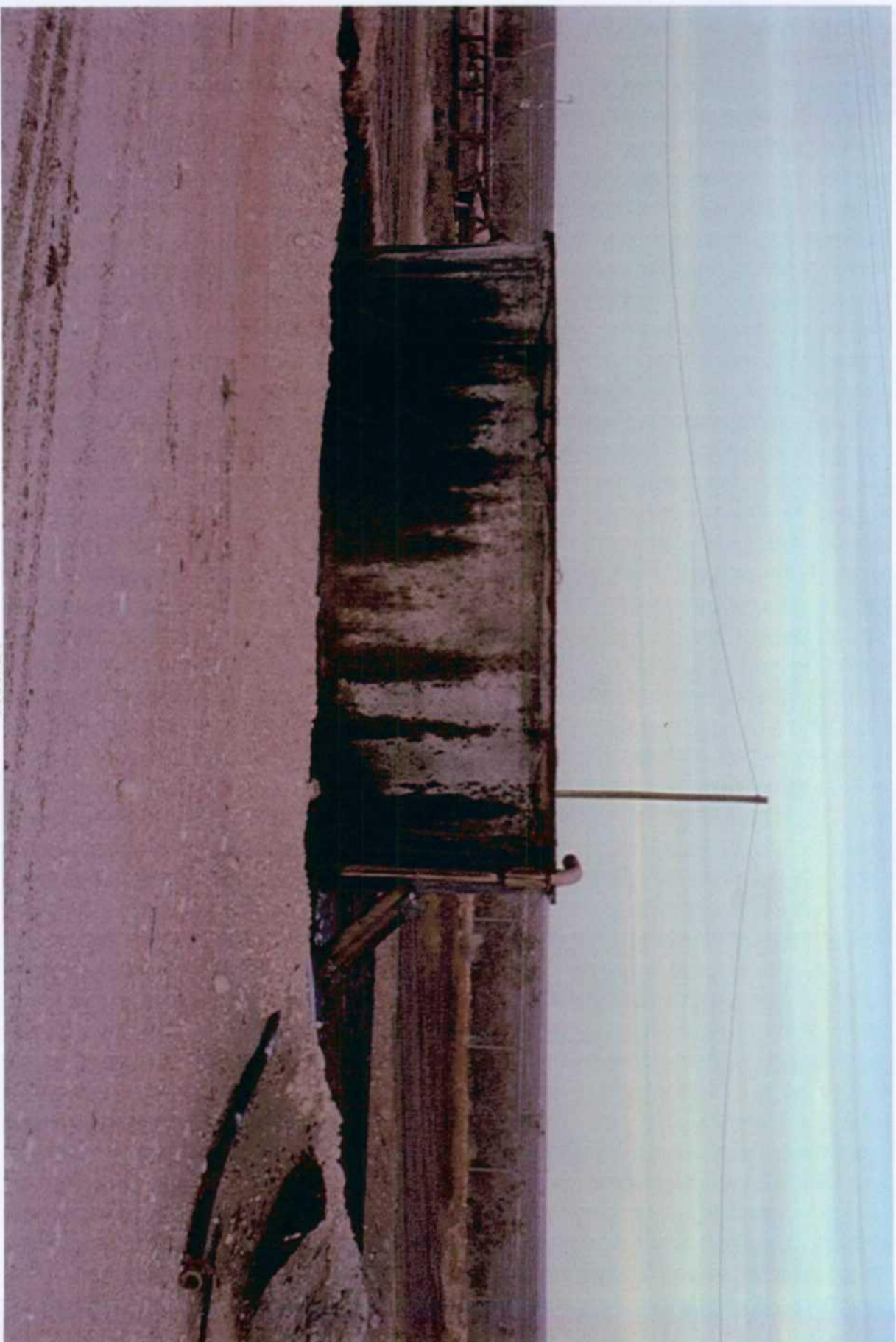
EAST SIDE, OUTSIDE OF FENCE 4 KFD

JALMAT YATES UNIT

2:39:58 PM

JANUARY 9, 2002

MARALO



1/9/2002

FREE OIL STRIPPED INSIDE OF BEACH

JALMAT YATES UNIT

4:53:21 PM

JANUARY 9, 2002

MARALO



1/9/2002

JALMAT YATES UNIT

4:55:23 PM

JANUARY 9, 2002

MARALO

← Pump House



1/9/2002

JALMAT YATES UNIT

4:55:32 PM

JANUARY 9, 2002

MARALO



1/9/2002

JALMAT YATES UNIT

4:55:56 PM

JANUARY 9, 2002

MARALO

INSIDE
JALMAT
UNIT



1/9/2002

JALMAT YATES UNIT

4:56:26 PM

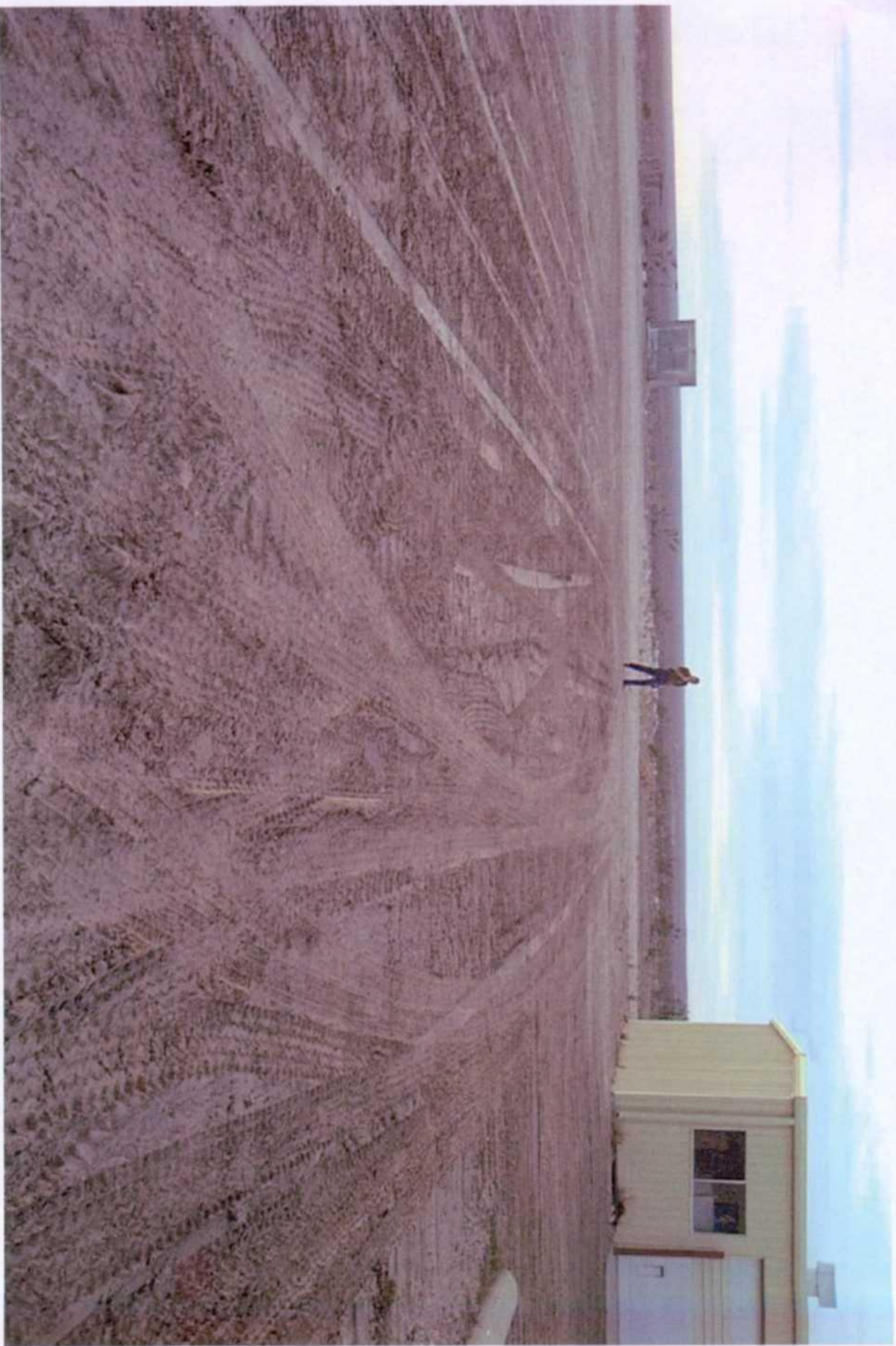
JANUARY 9, 2002

MARALO



1/9/2002

MARALO

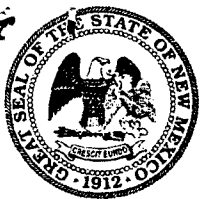


1/9/2002

JALMAT YATES UNIT

4:57:06 PM

JANUARY 9, 2002



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

February 6, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-4065

Mr. Phillip Smith
Maralo, LLC
P.O. Box 832
Midland, Texas 79702

RE: CASE #1R0294
JAL MAT YATES UNIT TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Smith:

The New Mexico Oil Conservation Division (OCD) has reviewed the following Maralo, LLC (Maralo) documents:

- October 26, 2000 correspondence titled "YOUR LETTER DATED AND FAXED OCTOBER 24, 2000, MARALO, LLC JAL MAT YATES UNIT TANK BATTERY SITE."
- November 10, 2000 correspondence titled "YOUR LETTER DATED OCTOBER 24, 2000, MARALO, LLC JAL MAT YATES UNIT TANK BATTERY SITE."
- December 18, 2000 correspondence titled "YOUR LETTER DATED OCTOBER 24, 2000, ITEM #4, MARALO, LLC JALMAT YATES UNIT TANK BATTERY SITE."

These documents contain Maralo's reporting on spill incidents and remedial actions taken related to spills of crude oil and produced water at Maralo's Jal Mat Yates Unit Tank Battery in Unit A, Section 13, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. The OCD has also reviewed Clay Osborn's January 29, 2000 correspondence to Maralo titled "JAL MAT YATES UNIT TANK BATTERY SITE" which states Mr. Osborn's objections to Maralo's remediation plan.

The OCD has the following comments and requirements regarding investigation and remediation of contamination at the site:

1. Since Maralo has not been able to implement a soil blending remediation action for the offsite flowline spill, the OCD requires that Maralo submit an alternate remediation plan for this offsite contamination.
2. Regarding the April 17, 2000 spill within the tank battery firewall, the information provided is not sufficient to demonstrate that contaminants have not and will not migrate vertically and cause ground water to exceed the standards. Ground water data from a spill investigation west of the Jal Mat Yates Unit Battery shows that shallow ground water is present at a depth of approximately 21 feet. Ground water data from other investigations east of the Jal Mat Yates Unit Battery discovered ground water at depths ranging from approximately 33 to 64 feet. In addition, an OCD inspection of the site showed that the location of the soil sampling point used to demonstrate contaminant concentrations present in the soils was not within the tank berm area where there is evidence of prior tank spills. Therefore, the OCD requires that Maralo submit a plan to investigate the extent of contamination within the tank berm.
3. Regarding the September 11, 2000 spill of oil and produced water into Maralo Water Supply Well #2, the water sample taken after 6 hours of well purging was not analyzed for any oil-related constituents. In addition, the water sample for general chemical and physical properties does not appear to have been analyzed using EPA approved methods. The OCD requires that Maralo resample the water well and provide the OCD with a copy of the sampling procedures and analytical results. The water samples shall be obtained and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), and major cations and anions using EPA approved methods and quality assurance /quality control procedures.

Please submit the above information to the OCD Santa Fe Office by March 6, 2001 with a copy provided to the OCD Hobbs District Office.

If you have any questions or comments, please contact me at (505) 827-7154.

Sincerely,



William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office
Clay Osborn



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

October 24, 2000

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-3655

Mr. Phillip Smith
Maralo, LLC
P.O. Box 832
Midland, Texas 79702

**RE: JAL MAT YATES UNIT TANK BATTERY SITE
JAL, NEW MEXICO**

Dear Mr. Smith:

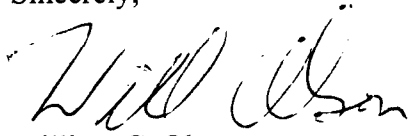
The New Mexico Oil Conservation Division (OCD) has reviewed Maralo, LLC's (Maralo) October 5, 2000 C-141 and the accompanying September 29, 2000 correspondence to Maralo from their consultant R.E. Environmental Services, Inc. These documents contain Maralo's report of a September 27, 2000 spill of crude oil and produced water from a flowline adjacent to the Jal Mat Yates Unit Tank Battery in Unit A, Section 13, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. The documents also contain Maralo's proposed plan for remediation of contamination at the site.

The above-referenced remediation plan is approved with the following conditions:

1. Maralo shall remediate all contaminated soils in excess of 250 mg/l of chloride and the recommended benzene, toluene, ethylbenzene, xylene (BTEX) and total petroleum hydrocarbon (TPH) remediation levels as contained in the OCD's Guidelines For Remediation Of Leaks, Spills And Releases unless Maralo can demonstrate that the remaining contaminants have not and will not migrate vertically so as to cause an exceedance of the standards of OCD Rule 19.B.
2. All blended soils shall be remediated to a concentration less than 250 mg/l of chloride and the recommended BTEX and TPH remediation levels as contained in the OCD's Guidelines For Remediation Of Leaks, Spills And Releases unless Maralo can demonstrate that the remaining contaminants will not migrate vertically in the future so as to cause an exceedance of the standards of OCD Rule 19.B.

If you have any questions or comments, please contact me at (505) 827-7154.

Sincerely,

A handwritten signature in black ink, appearing to read "Will Olson". The signature is fluid and cursive, with the first name "Will" and last name "Olson" clearly distinguishable.

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office