

# **Closure Compliance Report**

*Project:*

**Max Friess # 1  
T17S, R31E, Section 30, UL-B  
Eddy County, New Mexico**

**January 24, 2007**

*Prepared for:*

**Merit Energy Company  
P.O. Box 69  
Loco Hills, New Mexico 88255**

## **Jim Hollon Consulting**

14034 W. Co. Rd. 123, Odessa, Texas 79765  
(432)631-5768 Fax (432)563-1166  
Jim.Hollon@SBCGlobal.net

## Jim Hollon Consulting

14034 W. Co. Rd. 123, Odessa, Texas 79765

(432)631-5768 Fax (432)563-01166

Jim.Hollon@sbcglobal.net

January 24, 2007

Merit Energy Company  
P.O. Box 69  
Loco Hills, New Mexico 88255

Attn: Mr. Dwain Wall

Phone: (505) 677-2327

Fax: (505) 677-2162

Re: Closure Compliance Report  
Max Friess # 1 site  
T17S, R31E, Section 30, UL – B, 660 FNL, 1980 FEL  
Eddy County, New Mexico  
5 miles east of Loco Hills, NM

Dear Mr. Wall:

Jim Hollon Consulting is pleased to submit four copies of the Closure Compliance Report for the above referenced site.

I appreciate the opportunity to participate in the site remediation project at the Max Friess # 1 well site for Merit Energy Company. Please contact me at (432) 631-5768 if you have questions regarding the information provided in the report.

Sincerely,

Jim Hollon

## TABLE OF CONTENTS

	Page No.
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b>2.0 FIELD ACTIVITIES .....</b>	<b>3</b>
<b>3.0 DATA EVALUATION .....</b>	<b>3</b>
<b>4.0 FINDINGS AND RECOMMENDATIONS .....</b>	<b>4</b>

### LIST OF APPENDICES

- Appendix A: Figure 1- Topographic Map  
Figure 2 – Aerial Photograph
- Appendix B: Analytical Summary Tables, Laboratory Data Sheets, Chain-of-Custody
- Appendix C: Photographs
- Appendix D: Regulatory Reports

## Closure Compliance Report

### Max Friess # 1 T17S, R31E, Section 30, UL-B Eddy County, New Mexico

#### 1.0 INTRODUCTION

This site is located in Eddy County, New Mexico approximately five miles east of Loco Hills. The site is approximately one half mile south of Merit Energy's field office and northeast of the Max Friess # 1 well location (Figure 1). The surrounding area is native rangeland in a sand hill region and is overseen by the Bureau of Land Management.

The release consisted of approximately 250 barrels of produced water from a four inch steel injection line. The water surfaced and flowed down the right-of-way for the line then followed the road leading to the Fren # 23 well location. The water affected a long, narrow trail approximately eight feet wide by 450 feet long, until reaching the well location where it spread out covering an area approximately 50 feet by 50 feet. During the initial response, approximately 100 barrels of water were recovered.

#### 1.1 Site Description

<b>Site Name</b>	Max Friess # 1
<b>Site Location/GPS</b>	Eddy County, New Mexico / 32.81097° N, 103.90694° W
<b>General Site Description</b>	The release was contained to the line's right-of-way, the road and well location for the Fren # 23. The surrounding area is sandy rangeland with sparse vegetation.

A topographic map (Figure 1) and an aerial photograph (Figure 2) are included in Appendix A.

#### 1.2 Scope of Services

The Scope of Services for Jim Hollon Consulting (JHC) as requested by Merit Energy (Merit) included:

- Development of a work plan;
- Collection of confirmation soil samples in the area of concern; and
- Submittal of a Closure Compliance Report summarizing field activities, analytical results, site maps and photos.

### 1.3 Regulatory Framework

Crude oil facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). Contamination of soil due to a surface release of crude oil is addressed within a NMOCD guideline titled *Guidelines for Remediation of Leaks, Spills and Releases*. Remediation standards for chloride contamination have not been published and are handled by the local district office on a case by case basis.

Soils which are impacted by petroleum constituents are scored according to the ranking criteria to determine their relative threat to public health, fresh water, and the environment. Such limits are defined by the depth to groundwater, wellhead protection area, and distance to surface water. Based on these ranking criteria, the remediation action level at this site is as follows:

Depth to Ground Water	>200 feet	Ranking Score = 0
(As defined as vertical distance from lowermost contaminants to seasonal high water level)		

Wellhead Protection Area	>1000 feet to water source >200 feet to domestic well	Ranking Score = 0
--------------------------	--	-------------------

Distance to Surface Water	>1000 feet	Ranking Score = 0
---------------------------	------------	-------------------

Total Ranking Score = 0

Based on total ranking criteria of 0, the following remediation levels apply:

Benzene = 10 ppm

BTEX = 50 ppm

TPH = 5,000 ppm

Chlorides = Site Specific

### 1.4 Standard of Care

Services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. JHC makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that JHC can not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

## **2.0 FIELD ACTIVITIES**

### **2.1 Site Remediation**

Immediately upon discovery of the release, vacuum trucks were summoned to begin recovery of the water. Squeegees were utilized to collect all free water and push it to the vacuum trucks. A total of 100 barrels was recovered. The area was left to dry to a point where a backhoe could operate on it.

On September 25, 2006, a backhoe began excavating the affected soils. The soils were loaded into a dump truck and delivered to CRI between Hobbs and Carlsbad, New Mexico for disposal. The area was backfilled with soils from the affected area and windblown sand from the surrounding well locations.

Two days later, on September 27, 2006, samples were collected from three points, SP 1, SP 2 and SP 3, along the affected area at depths of two feet and four feet below ground surface (bgs). The samples were analyzed for chloride. The samples collected from SP 1 and SP 3 at 2' and 4' bgs had chloride concentrations of 277 mg/kg and below. The samples collected from SP 2 at 2' and 4' bgs had chloride concentrations of 1,020 mg/kg and 2,420 mg/kg, respectively. Following receipt of the analytical results, additional soil was excavated from the area surrounding the SP 2 sample point and delivered to CRI for disposal. The excavation was backfilled with windblown sand from the Fren # 23 well location.

On November 13, 2006, one sample was collected from SP 2 at four feet bgs and analyzed for chloride. The sample had a chloride concentration of 1,870 mg/kg.

### **2.2 Soil Sampling**

The soil sampling program included the collection of seven grab soil samples from the impacted area on two separate occasions. The soil samples were analyzed for chloride using EPA Method 300.0. The soil samples were placed in laboratory prepared glassware and sealed with the identification label. The samples and completed chain-of-custody forms were relinquished to Environmental Lab of Texas in Odessa, Texas for analysis. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix B.

## **3.0 DATA EVALUATION**

The samples collected from SP 1 and SP 3 at 2' and 4' bgs indicated chloride concentrations of 277 mg/kg and below. The initial samples collected from SP 2 at 2' and 4' bgs indicated concentrations of 1,020 mg/kg and 2,420 mg/kg, respectively. Following the additional

Merit Energy Company  
Max Friess # 1 Site  
January 24, 2007

## Jim Hollon Consulting

excavation the sample collected from SP 2 at 4' bgs had a chloride concentration of 1,870 mg/kg. The laboratory results are presented in Appendix B, Table 1.

### 4.0 FINDINGS AND RECOMMENDATIONS

Jim Hollon Consulting submits this closure compliance report to Merit which documents the site closure activities. Based on results of the field activities and laboratory analysis, it is recommended Merit submit this report to the NMOCD as documentation that remediation was completed to NMOCD standards and recommends that Merit request a "no further action" letter for this site.

## **DISTRIBUTION**

Copy 1:       Mike Bratcher  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division, District 2  
1301 W. Grand  
Artesia, NM 88210

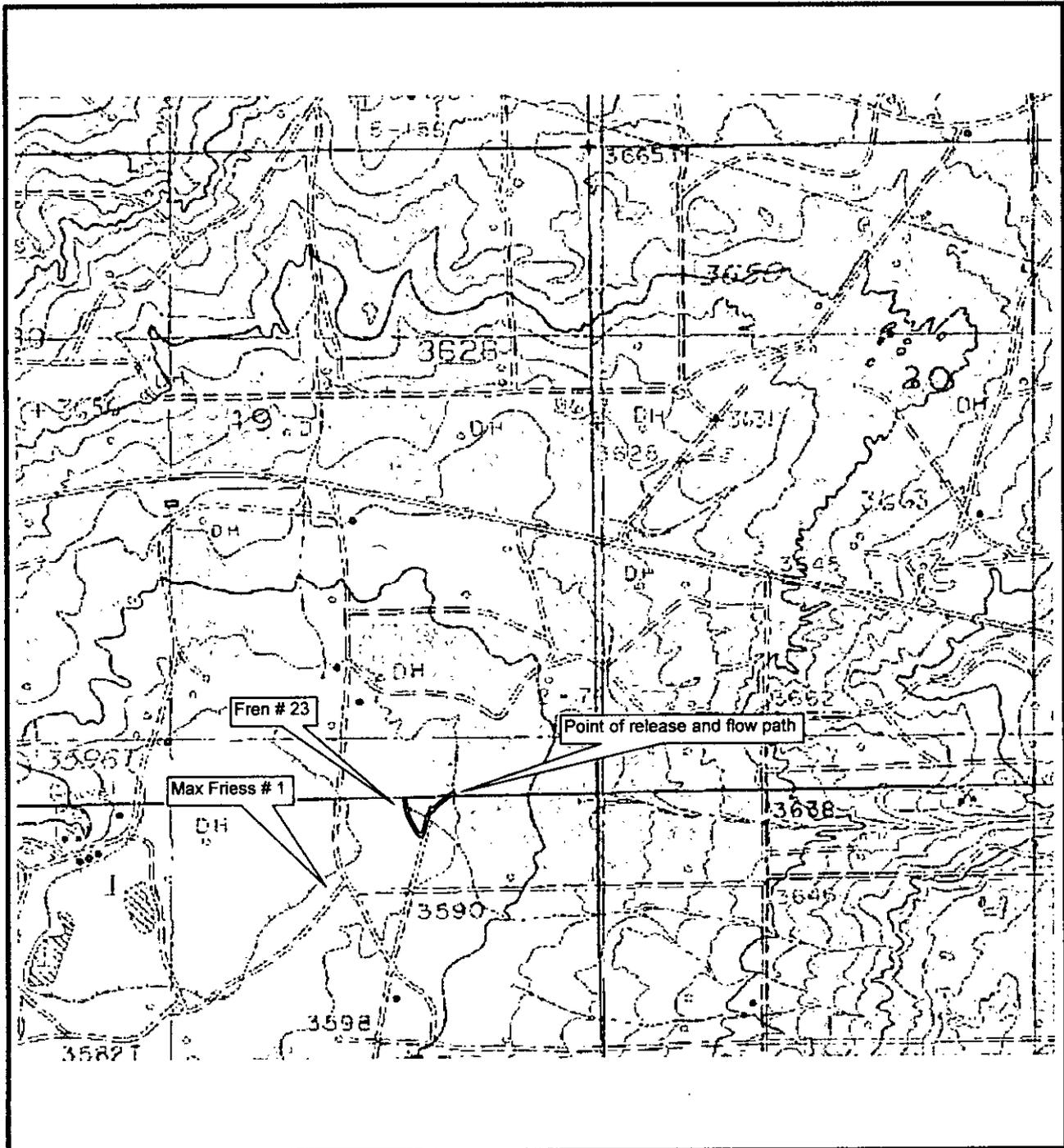
Copy 2:       Jim Amos  
Bureau of Land Management  
620 E. Greene  
Carlsbad, NM 88220

Copy 3 & 4:   Dwain Wall  
Merit Energy Company  
P.O. Box 69  
Loco Hills, NM 88255

Copy 5:       Jim Hollon  
Jim Hollon Consulting  
14034 W. Co. Rd. 123  
Odessa, TX 79765

**APPENDIX A**

**Figure 1 – Topographic Map**  
**Figure 2 – Aerial Photograph**



Source: Terraserver	<b>Merit Energy Company</b>	Figure 1 Topographic Map
Dated: July 1, 1985		
Scale: 1" = 400 yards	<b>Max Friess # 1</b>	
	0.5 mile south of mile marker 137 on US Hwy 82	Prepared By: Jim Hollon Consulting



Source: Terraserver		<b>Merit Energy Company</b>	Figure 2
Dated October 22, 1996			Aerial Photograph
Scale: 1" = 400 yards		<b>Max Friess # 1</b>	Prepared By: Jim Hollon Consulting
↑ <b>N</b>		0.5 mile south of mile marker 137 on US Hwy 82	

**APPENDIX B**

**Analytical Summary Tables  
Laboratory Data Sheets  
Laboratory Chain of Custody Documents**

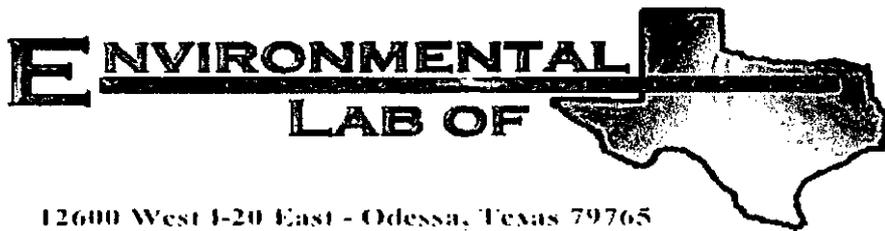
Table 1

**CONCENTRATIONS OF CHEMICALS OF CONCERN IN SOIL**

Merit Energy  
Max Friess # 1 Site  
Loco Hills, Eddy County, New Mexico

*All concentrations are in mg/kg*

Sample Date	Sample Location	Sample Depth	Total Chlorides EPA 300.0
9/27/2006	SP 1	2'	213
		4'	277
	SP 2	2'	1,020
		4'	2,420
	SP 3	2'	53.2
		4'	43
11/13/2006	SP 2	4'	1,870



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Jim Hollon (for)

Merit Energy Company

P.O. Box 300

Whiteface, TX 79379

Project: Max Friess #1

Project Number: None Given

Location: Loco Hills

Lab Order Number: 6I28004

Report Date: 09/29/06

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Max Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP 1- 2'	6I28004-01	Soil	09/27/06 11:00	09-28-2006 09:35
SP 1- 4'	6I28004-02	Soil	09/27/06 11:05	09-28-2006 09:35
SP 2- 2'	6I28004-03	Soil	09/27/06 11:10	09-28-2006 09:35
SP 2- 4'	6I28004-04	Soil	09/27/06 11:15	09-28-2006 09:35
SP 3- 2'	6I28004-05	Soil	09/27/06 11:20	09-28-2006 09:35
SP 3- 4'	6I28004-06	Soil	09/27/06 11:25	09-28-2006 09:35

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Max Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

**General Chemistry Parameters by EPA / Standard Methods  
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP 1- 2' (6128004-01) Soil</b>									
Chloride	213	20.0	mg/kg Wet	2	E162805	09/28/06	09/29/06	SW 846 9253	
<b>SP 1- 4' (6128004-02) Soil</b>									
Chloride	277	20.0	mg/kg Wet	2	E162805	09/28/06	09/29/06	SW 846 9253	
<b>SP 2- 2' (6128004-03) Soil</b>									
Chloride	1020	20.0	mg/kg Wet	2	E162805	09/28/06	09/29/06	SW 846 9253	
<b>SP 2- 4' (6128004-04) Soil</b>									
Chloride	2420	20.0	mg/kg Wet	2	E162805	09/28/06	09/29/06	SW 846 9253	
<b>SP 3- 2' (6128004-05) Soil</b>									
Chloride	53.2	20.0	mg/kg Wet	2	E162805	09/28/06	09/29/06	SW 846 9253	
<b>SP 3- 4' (6128004-06) Soil</b>									
Chloride	42.5	20.0	mg/kg Wet	2	E162805	09/28/06	09/29/06	SW 846 9253	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 2 of 4

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Max Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EI62805 - Water Extraction</b>										
<b>Blank (EI62805-BLK1)</b> Prepared: 09/28/06 Analyzed: 09/29/06										
Chloride	ND	20.0	mg/kg Wet							
<b>LCS (EI62805-BS1)</b> Prepared: 09/28/06 Analyzed: 09/29/06										
Chloride	92.5	5.00	mg/kg Wet	100		92.5	80-120			
<b>Matrix Spike (EI62805-MS1)</b> Source: 6I28002-01 Prepared: 09/28/06 Analyzed: 09/29/06										
Chloride	4720	20.0	mg/kg Wet	500	4210	102	80-120			
<b>Matrix Spike Dup (EI62805-MSD1)</b> Source: 6I28002-01 Prepared: 09/28/06 Analyzed: 09/29/06										
Chloride	4700	20.0	mg/kg Wet	500	4210	98.0	80-120	0.425	20	
<b>Reference (EI62805-SRM1)</b> Prepared: 09/28/06 Analyzed: 09/29/06										
Chloride	51.0		mg/kg	50.0		102	80-120			

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Max Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By: \_\_\_\_\_

*Raland K Tuttle*

Date: \_\_\_\_\_

9/29/2006

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.



**Environmental Lab of Texas**  
 Variance/ Corrective Action Report- Sample Log-In

Client: Merit Energy  
 Date/ Time: 9/28/06 9:35  
 Lab ID #: 6128004  
 Initials: CK

**Sample Receipt Checklist**

	Yes	No	Client Initials
#1 Temperature of container/ cooler?			17.6 °C
#2 Shipping container in good condition?	<del>Yes</del>	No	
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	<del>Not Present</del>
#4 Custody Seals intact on sample bottles/ container?	<del>Yes</del>	No	Not Present
#5 Chain of Custody present?	<del>Yes</del>	No	
#6 Sample instructions complete of Chain of Custody?	<del>Yes</del>	No	
#7 Chain of Custody signed when relinquished/ received?	<del>Yes</del>	No	
#8 Chain of Custody agrees with sample label(s)?	<del>Yes</del>	No	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<del>Yes</del>	No	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<del>Yes</del>	No	
#11 Containers supplied by ELOT?	<del>Yes</del>	No	
#12 Samples in proper container/ bottle?	<del>Yes</del>	No	See Below
#13 Samples properly preserved?	<del>Yes</del>	No	See Below
#14 Sample bottles intact?	<del>Yes</del>	No	
#15 Preservations documented on Chain of Custody?	<del>Yes</del>	No	
#16 Containers documented on Chain of Custody?	<del>Yes</del>	No	
#17 Sufficient sample amount for indicated test(s)?	<del>Yes</del>	No	See Below
#18 All samples received within sufficient hold time?	<del>Yes</del>	No	See Below
#19 VOC samples have zero headspace?	Yes	No	<del>Not Applicable</del>

**Variance Documentation**

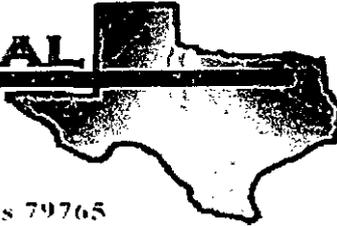
Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Jim Hollon (for)

Merit Energy Company

P.O. Box 300

Whiteface, TX 79379

Project: Friess #1

Project Number: None Given

Location: Loco Hills

Lab Order Number: 6K14009

Report Date: 11/16/06

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-2@ 4'	6K14009-01	Soil	11/13/06 11:00	11-14-2006 13:40

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

**General Chemistry Parameters by EPA / Standard Methods  
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-2@ 4' (6K14009-01) Soil									
Chloride	1870	40.0	mg/kg	80	EK61508	11/15/06	11/15/06	EPA 300.0	

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

Project: Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EK61508 - Water Extraction</b>										
<b>Blank (EK61508-BLK1)</b> Prepared & Analyzed: 11/15/06										
Chloride	ND	0.500	mg/kg							
<b>LCS (EK61508-BS1)</b> Prepared & Analyzed: 11/15/06										
Chloride	10.1	0.500	mg/kg	10.0		101	80-120			
<b>Calibration Check (EK61508-CCV1)</b> Prepared & Analyzed: 11/15/06										
Chloride	10.5		mg/L	10.0		105	80-120			
<b>Duplicate (EK61508-DUP1)</b> Source: 6K13008-01 Prepared & Analyzed: 11/15/06										
Chloride	561	10.0	mg/kg		553			1.44	20	
<b>Duplicate (EK61508-DUP2)</b> Source: 6K14009-01 Prepared & Analyzed: 11/15/06										
Chloride	1910	40.0	mg/kg		1870			2.12	20	
<b>Matrix Spike (EK61508-MS1)</b> Source: 6K13008-01 Prepared & Analyzed: 11/15/06										
Chloride	769	10.0	mg/kg	200	553	108	80-120			
<b>Matrix Spike (EK61508-MS2)</b> Source: 6K14009-01 Prepared & Analyzed: 11/15/06										
Chloride	2830	40.0	mg/kg	800	1870	120	80-120			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 3 of 4

Merit Energy Company  
P.O. Box 300  
Whiteface TX, 79379

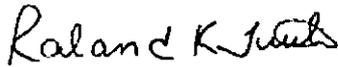
Project: Friess #1  
Project Number: None Given  
Project Manager: Jim Hollon (for)

Fax: (806) 229-2583

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:



Date:

11/16/2006

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.



**Environmental Lab of Texas**  
**Variance/ Corrective Action Report- Sample Log-In**

Client: Mont Energy  
 Date/ Time: 11/14/06 13:40  
 ID #: UK4009  
 Initials: UK

**Sample Receipt Checklist**

	Yes	No	Client Initials
Temperature of container/ cooler?			5.0 °C
Shipping container in good condition?	<u>Yes</u>	No	
Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>
Custody Seals intact on sample bottles/ container?	Yes	No	<u>Not Present</u>
Chain of Custody present?	<u>Yes</u>	No	
Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
Containers supplied by ELOT?	<u>Yes</u>	No	
Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
Samples properly preserved?	<u>Yes</u>	No	See Below
Sample bottles intact?	<u>Yes</u>	No	
Preservations documented on Chain of Custody?	<u>Yes</u>	No	
Containers documented on Chain of Custody?	<u>Yes</u>	No	
Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>
VOC samples have zero headspace?	Yes	No	<u>Not Applicable</u>

**Variance Documentation**

Contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_  
 Reasoning: \_\_\_\_\_

Corrective Action Taken:

\_\_\_\_\_

\_\_\_\_\_

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

**APPENDIX C**

**Photographs**

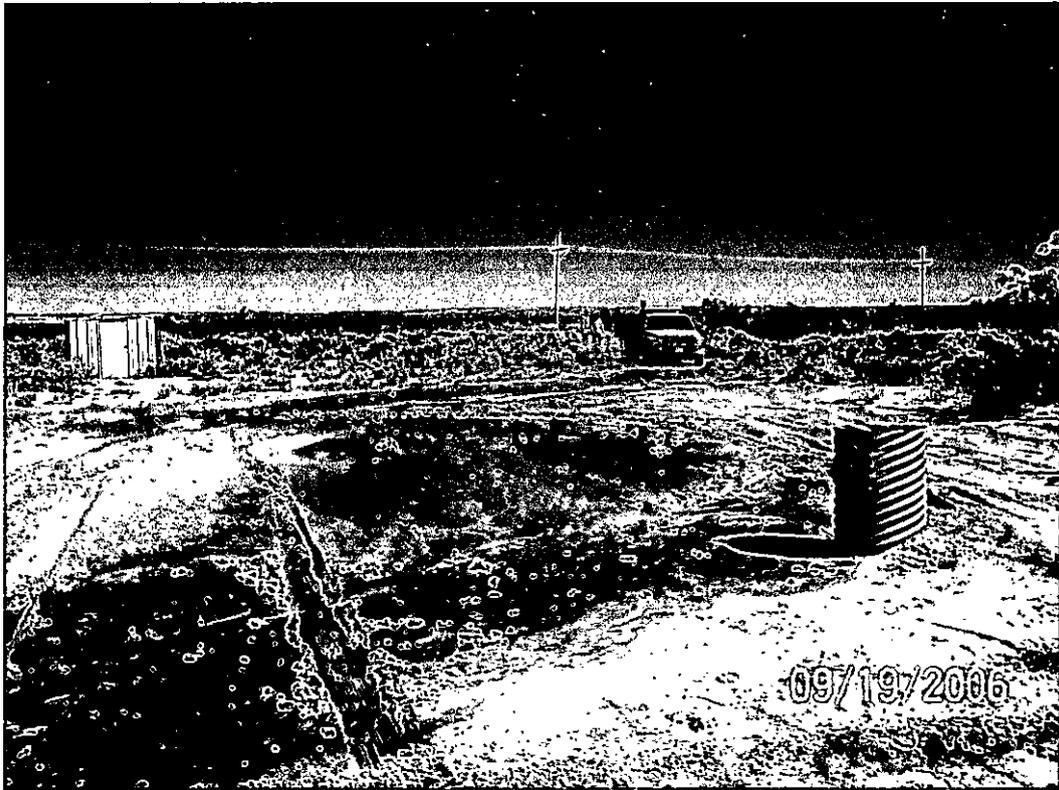


Figure 1. Point of origin

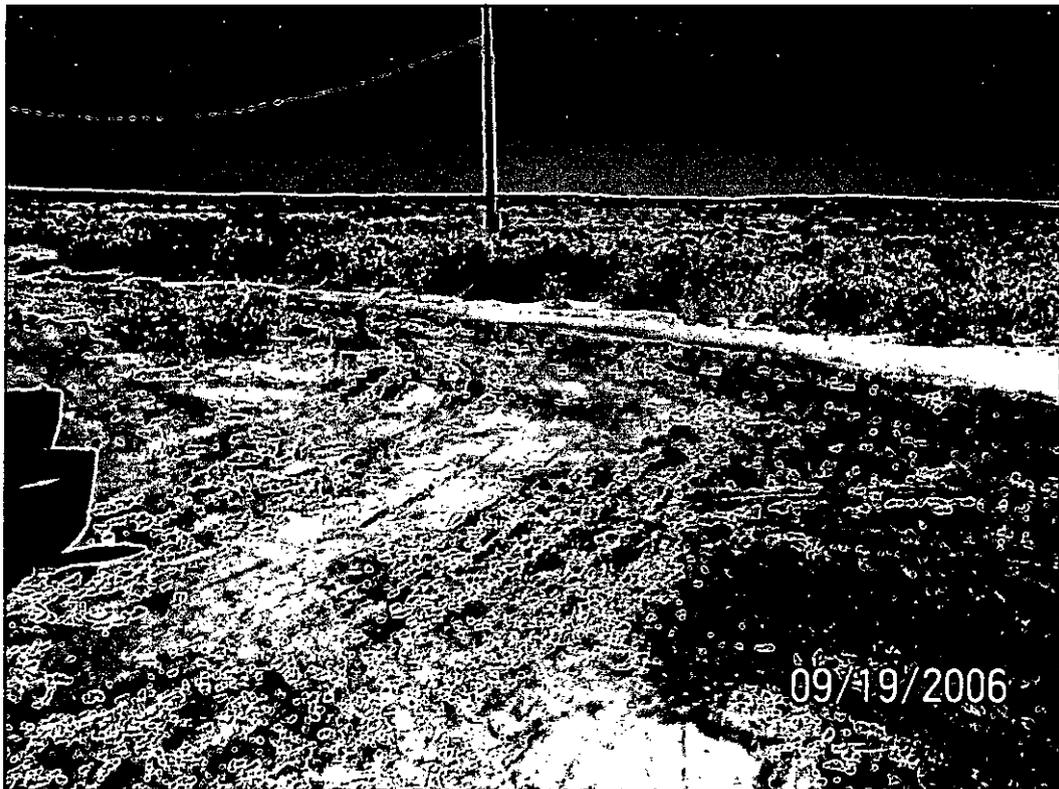


Figure 2. View to south



**Figure 3. Fren # 23 well location**



**Figure 4. End of release**

**APPENDIX D**

**Regulatory Reports**