RELEASE REPORT

REMEDIATION WORK PLAN

EOTT ENERGY CORP.
LEO (FLAP) SIMS LEAK
LEA COUNTY, NEW MEXICO

RECEIVED
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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared For:
EOTT Energy Corp.
5805 East Highway 80
Midland, Texas 79701

Environmental Technology Group, Inc. Project No. 2048C

Prepared By:
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September 12, 2000

REMEDIATION WORK PLAN - LEO (FLAP) SIMS LEAK
Lea County, New Mexico
September 12, 2000
Prepared By:
ETGI

INTRODUCTION

Environmental Technology Group, Inc. (ETGI) hereby submits a Remediation Work Plan to EOTT Energy Corp. (EOTT) for treatment of impacted soil at the above referenced project site. This plan will serve as a "Work Plan Supplement" as referenced in the "General Work Plan for Remediation of EOTT Pipeline Spills, Leaks, and Releases in New Mexico" approved by New Mexico Oil Conservation Division (NMOCD) on August 1, 2000. The regulatory basis for both the General Work Plan and this Work Plan Supplement is the August 1993 NMOCD Guidelines for Remediation of Leaks, Spills and Releases.

BACKGROUND

On January 1, 2000 an oil release of unknown quantity and release date was reported on the Leo (Flap) Sims property located in NE/4 SE/4 Section 27, Township 19S, Range 35E (32 37 46N, 102 26 13W). This is an apparent old release on the Shell Hobbs pipeline system.

Twelve soil borings were advanced at the site as depicted on Figure 1, Site Map, and a temporary monitoring well (MW-1) was completed at soil boring B-1. The soil boring and monitoring well details are included in the attachments. The subsurface at the site consists of very fine grained, well-sorted sand, interbedded with layers of hard caliche and well-lithified sandstone. A layer of clay was present at depths ranging from 23 to 28 feet bgs. Ground water was generally present at a depth of approximately 26 feet bgs.

Soil impacted to above NMOCD regulatory limits for a site with a Ranking Score greater than 19, i.e. depth to ground water and distance to surface water and wells criteria (100 mg/kg TPH and 10 mg/kg benzene pursuant to NMOCD 1993, IV.A.2.b) is detected in five of the soil borings (SB-1, SB-3, SB-4, SB-5 and SB-7). At three of the borings (SB-4, SB-5, and SB-7), impacted soil was generally limited to within five feet of the surface. At the remaining two points (SB-1 and SB-3), impacted soil was present at 0-5' depth bgs, 13'-25' depth bgs and 0-5' bgs and 25' bgs respectively. The maximum recorded soil total petroleum hydrocarbons (TPH) concentration at the site was 11,700 mg/kg at the surface of the temporary monitoring well (MW-1). The highest TPH concentration in the shallow subsurface was 2,547 mg/kg at two feet bgs in soil boring SB-1, and the highest TPH concentration at depth of 23'-25' bgs was 1,724 at the temporary monitoring well boring.

The observed extent of impacted soil (above NMOCD standards of 100 mg/kg TPH, 50 mg/kg BTEX and 10 mg/kg benzene) in each soil boring is depicted on Figure 2. In

addition, the extent of impacted soil in the subsurface and on the surface is shown in Figure 2. With a surface area of 6,480 square feet and a depth of 5 feet for the upper zone and 5 to 26 feet bgs for the deeper zone, the volume of potentially impacted soil in place was calculated to be approximately 1,200 cubic yards and 300 cubic yards respectively. Soil volumes following excavation will total approximately 2,000 cubic yards in place.

The ground water sample collected from the temporary monitoring well (MW-1) had concentrations of Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and PAH below the New Mexico Water Quality Control Commission (NMWQCC) standards found in Title 20 NMAC 6.2.III.3103. Total Dissolved Solids was 942 mg/L. The proposed remedial activities are designed to prevent the migration of petroleum constituents to the water table.

PURPOSE OF REMEDIATION

Given the rural nature of the project location and lack of receptors (i.e. residential and other populated areas, domestic groundwater use, etc.), EOTT plans to develop site-specific action levels using a risk assessment. The site-specific action levels will be used in lieu of the default NMOCD action levels, as indicated in the approved General Remediation Work Plan of August 1, 2000. The risk assessment will be conducted using USEPA protocols, and will quantify potential impacts on human health for receptor populations present in the vicinity of the release site.

ETGI proposes to mitigate site constituents to the site-specific criteria. This objective will be achieved by: Task I - Soil Excavation; Task II - Soil Shredding and Treatment; Task III - Soil Segregation and Cell Construction; Task IV - Ex-situ Stockpile Treatment Program; and Task V - Project Reporting. Details of these tasks are discussed below.

METHODOLOGY

Given the relatively shallow depth to ground water and manageable volume of impacted material, ETGI recommends that the impacted soil be excavated and treated ex-situ at the site. Since the excavation will extend to the water table, a vacuum truck will be utilized to remove any encountered ground water as a result of excavation activities and will be shipped to an approved facility for disposal. Also, given the expected volume of indurated materials, it is recommended that the excavated material be processed through a mechanical rock separation and soil shredding unit (soil shredder) in order to help separate the indurated materials from the soil during the shredding process.

In order to minimize the area required to perform on-site treatment, the impacted soil and indurated material (rock) will be segregated on site and stockpiled to a maximum height of six feet on an impermeable liner within a dike area (treatment cells). The soil shredding process will facilitate volatilization of gasoline range organics (GRO-TPH) and placement on an impermeable liner will prevent infiltration of contaminants into the site soils. In addition, bio-enhancement products (nutrients and surfactants) will be added to impacted material during the shredding process.

Both stockpiles (soil and rock) will be remediated using a combination of volatilization and bio-remediation. Following placement of the impacted material in the contained treatment cell(s), a mobile unit will be utilized to apply and inject facultative hydrocarbon reducing bacteria, bio-nutrients, surfactants and air to the stockpiles. This bio-treatment will be conducted on a bi-weekly basis.

Remediation monitoring will consist of collecting baseline samples from each of the treatment cells (stockpiled soil and indurated material) following the completion of the soil shredding process, but prior to initiation of ex-situ bio-treatment. Each stockpile will then be sampled monthly during the course of remediation in order to modify the treatment parameters and monitor progress.

At the conclusion of the remediation process verification samples will be collected at a rate of one sample per 100 cubic yards of treated material to document concentrations of TPH (GRO and DRO) and BTEX in accordance with developed site-specific action levels. Once it has been demonstrated that the standards have been achieved, the remediated soil will be used to backfill the excavation. In the backfill area the root zone will be re-established by shredding, blending, and nutrient addition to facilitate revegetation.

In addition, at the conclusion of the excavation activities, verification samples will also be collected from the base and side walls of the excavation to insure that adequate removal of impacted soil has been achieved.

ANALYSES

All soil samples (one sample per each 100 cubic yards) will be collected from the stockpiles and analyzed for TPH GRO/DRO (EPA Method 8015 Modified) and BTEX (EPA Method 8021B and 5030).

DISCUSSION OF FINDINGS

During initial investigation, twelve soil borings and one temporary monitoring well (MW-1) were drilled at the release site to delineate the vertical and lateral extent of the hydrocarbon impacted soil. Laboratory results for these soil samples indicate that TPH concentrations were below detection limit and/or NMOCD action levels for all soil samples with the exception of soil borings SB-1, SB-3, SB-4, SB-5, SB-7, and monitoring well MW-1. Benzene and BTEX concentrations for all soil samples were below NMOCD action levels. Concentrations of TPH and BTEX in Soil are provided in Table 1.

On June 6, 2000, monitoring well MW-1 was sampled for BTEX, Semi-Volatiles, and Metals. All water analyses were below New Mexico Water Quality Control Commission Groundwater Standards with the exception of chlorides (303 mg/L), chromium (0.065 mg/L), iron (28 mg/L), and manganese (0.57 mg/L), which may be representative of background conditions. Concentrations of contaminants of concern in groundwater are provided in Table 2 and 3.

CONCLUSIONS

Hydrocarbon impacted soils are confined to approximately 1,200 cubic yards at the near surface and approximately 300 cubic yards in the subsurface. The hydrocarbon impacted soils are subject to remediation to secure site closure.

FOLLOW-UP ACTIVITIES

Excavation of the impacted soil can be initiated within two weeks of the work plan approval. Once begun, excavation should take approximately two weeks. The soil shredding process should take approximately two weeks. The construction of the stockpile containment facilities and soil segregation should take approximately one week. On site soil remediation should be accomplished in approximately four months.

Project closure reporting is to be completed within 30 days of the conclusion of remediation activities. The purpose of the closure report is to document the attainment of site-specific target levels of chemicals of concern in conformance with NMOCD Guidelines for Remediation of Leaks, Spills, and Releases document 1993, and request closure by the NMOCD. The report will contain specifics of all remediations activities, progress monitoring sampling (soil and water) procedures and analytical laboratory results to ascertain that site-specific target levels of COCs have been attained.

TABLES

Table 1

CONCENTRATIONS OF TPH & BTEX IN SOIL

EOTT Energy
Leo (Flap) Sims
Lea County, New Mexico
ETGI Project # EOT2048C

All concentrations are in mg/kg

SAMPLE DATE	SAMPLE LOCATION	EPA SW 846-8015M GRO/DRO			SW 846-8021B, 5030					
		GRO C_6-C_{10}	DRO >C_{10}-C_{28}	TPH C_6-C_{28}	BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	BTEX
04/04/2000	B-1 Surface	1128	4713	5841	<0.100	9.63	5.09	8.4	5.76	28.88
	B-1 2'	1006	1541	2547	0.927	14	11.1	25.6	10.6	62.227
	B-1 5-6'	<10	47	47	<0.100	<0.100	<0.100	0.153	<0.100	0.153
	B-1 7'	<10	40	40	<0.100	0.131	<0.100	0.133	<0.100	0.264
	B-1 12'	<10	<10	<20	<0.100	0.109	<0.100	<0.100	<0.100	0.109
	B-1 15'	<10	59	59	<0.100	<0.100	<0.100	0.186	0.107	0.293
	B-1 20'	<10	62	62	<0.100	0.612	0.206	0.914	0.433	2.165
	B-1 25'	<10	<10	<20	<0.100	<0.100	<0.100	0.142	<0.100	0.142
04/10/2000	SB 2 5'	<10	<10	<20						
	SB 2 10'	<10	<10	<20						
	SB 2 15'	<10	<10	<20						
	SB 2 20'	<10	<10	<20						
	SB 2 25'	<10	<10	<20						
	SB 2 29'	<10	<10	<20						
04/10/2000	SB 3 5'	253	1162	1415	<0.100	1.99	0.676	4	2.23	8.896
	SB 3 10'	<10	22	22						
	SB 3 15'	<10	28	28						
	SB 3 20'	<10	25	25						
	SB 3 25'	239	693	932						
	SB 3 29'	<10	12	12						
04/10/2000	SB 4 5'	1111	3069	4180	<0.100	6.79	1.70	10.10	5.06	23.65
	SB 4 10'	<10	69	69	<0.100	0.338	<0.100	0.377	0.145	0.860
	SB 4 15'	<10	28	28						
	SB 4 20'	<10	<10	<20						
	SB 4 29'	<10	<10	<20						
04/10/2000	SB 5 5'	623	2009	2632	<0.100	2.67	1.5	5.5	5.51	15.180
	SB 5 10'	<10	<10	<20						
	SB 5 15'	<10	<10	<20						
	SB 5 20'	<10	<10	<20						
	SB 5 25'	<10	<10	<20						
	SB 5 29'	<10	<10	<20						
04/10/2000	SB 6 5'	<10	<10	<20						
	SB 6 10'	<10	<10	<20						
	SB 6 15'	<10	<10	<20						
	SB 6 20'	<10	<10	<20						
	SB 6 25'	<10	<10	<20						
	SB 6 28'	<10	<10	<20						
04/10/2000	SB 7 5'	635	2382	3017	<0.100	1.26	1.10	3.84	2.78	8.980
	SB 7 10'	<10	46	46						
	SB 7 15'	<10	15	15						
	SB 7 20'	<10	<10	<20						
	SB 7 25'	<10	18	18						
	SB 7 29'	<10	<10	<20						

CONCENTRATIONS OF TPH & BTEX IN SOIL

EOTT Energy
Leo (Flap) Sims
Lea County, New Mexico
ETGI Project # EOT2048C

All concentrations are in mg/kg

SAMPLE DATE	SAMPLE LOCATION	EPA SW 846-8015M GRO/DRO			SW 846-8021B, 5030					
		GRO C_6-C_{10}	DRO >C_{10}-C_{28}	TPH C_6-C_{28}	BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	BTEX
04/11/2000	SB 8 5'	<10	<10	<20						
	SB 8 10'	<10	<10	<20						
	SB 8 15'	<10	<10	<20						
	SB 8 20'	<10	<10	<20						
	SB 8 25'	<10	<10	<20						
	SB 8 27'	<10	<10	<20						
04/11/2000	SB 9 5'	<10	<10	<20						
	SB 9 10'	<10	<10	<20						
	SB 9 15'	<10	<10	<20						
	SB 9 20'	<10	<10	<20						
	SB 9 25'	<10	<10	<20						
	SB 9 27'	<10	<10	<20						
04/11/2000	SB 10 5'	<10	<10	<20						
	SB 10 10'	<10	<10	<20						
	SB 10 15'	<10	<10	<20						
	SB 10 20'	<10	<10	<20						
	SB 10 25'	<10	<10	<20						
	SB 10 29'	<10	<10	<20						
04/11/2000	SB 11 5'	<10	<10	<20						
	SB 11 10'	<10	<10	<20						
	SB 11 15'	<10	<10	<20						
	SB 11 20'	<10	<10	<20						
	SB 11 25'	<10	<10	<20						
	SB 11 29'	<10	<10	<20						
04/11/2000	SB 12 5'	<10	<10	<20						
	SB 12 10'	<10	<10	<20						
	SB 12 15'	<10	<10	<20						
	SB 12 20'	<10	<10	<20						
	SB 12 25'	<10	<10	<20						
	SB 12 28'	<10	<10	<20						
05/30/2000	MW 1 Surface	2816	8884	11700	3.78	5.91	13.8	16.1	9.76	49.35
	MW 1 3-5' C	628	1897	2525	<0.100	4.87	1.14	10.3	6.44	22.75
	MW 1 8-10' SS	<10	12	12	<0.100	0.328	<0.100	0.146	<0.100	0.474
	MW 1 13-15' SS	818	1684	2502	<0.100	8.96	4.73	17.2	7.3	38.19
	MW 1 18-20' SS	18	259	277	<0.100	0.347	0.19	1.35	0.602	2.489
	MW 1 23-25' SS	406	1318	1724	<0.100	4.03	2.37	11.2	4.18	21.78
	MW 1 28-30' SS	<10	17	17	<0.100	0.285	<0.100	0.144	<0.100	0.429
	MW 1 33-35' C	<10	10	10	<0.100	0.129	<0.100	<0.100	<0.100	0.129

Table 2

CONTAMINANTS OF CONCERN IN GROUNDWATER

EOTT Energy
Leo (Flap) Sims
Lea County, New Mexico
ETGI Project # EOT2048C

All concentrations are in mg/L

SAMPLE DATE	SAMPLE LOCATION	SW 846-8021B, 5030						EPA 375.4, 325.3, 310, 160.1				
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	BTEX	SULFATE	CHLORIDE	CARBONATE	BICARBONATE	TDS
06/03/2000	MW 1	0.002	0.001	<0.001	<0.001	<0.001	0.003	99	303	0	216	942

Table 3

CONCENTRATIONS OF SEMI-VOLATILES IN WATER/SOIL
CONCENTRATIONS OF METALS IN WATER/SOIL

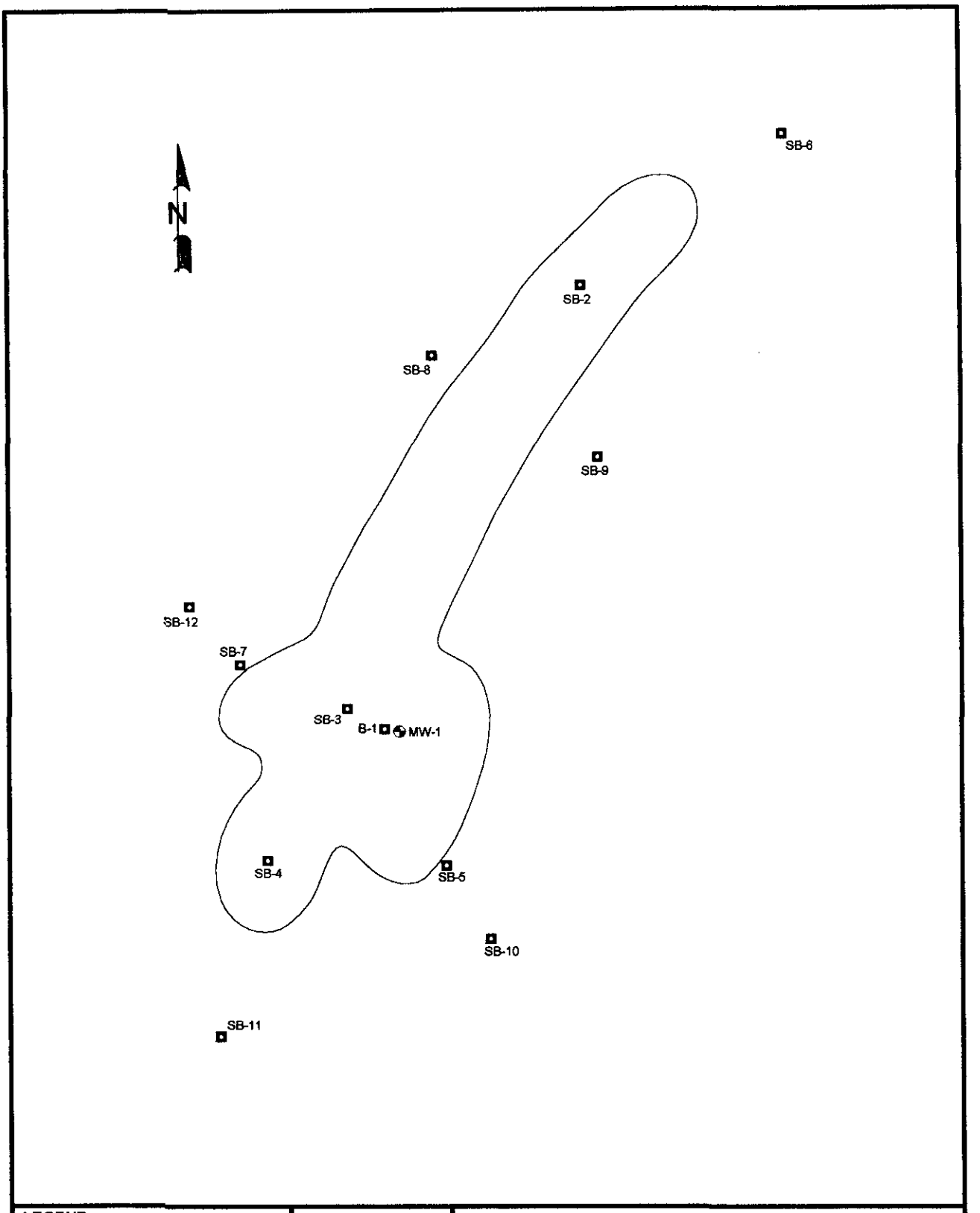
EOTT Energy
Leo (Flap) Sims
Lea County, New Mexico
ETGI Project # EOT2048C

All soil concentrations are in mg/kg
All water concentrations are in mg/L

SAMPLE DATE	SAMPLE LOCATION	SAMPLE TYPE	EPA SW846-8270C, 3510															
			Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo[a]anthracene	Chrysene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[a]pyrene	Indeno[1,2,3-cd]pyrene	Dibenz[a,h]anthracene	Benzo[g,h,i]perylene
06/03/2000	MW 1	Water	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

SAMPLE DATE	SAMPLE LOCATION	SAMPLE TYPE	EPA SW846-6010B, 7470																						
			Aluminum	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Tin	Vanadium	Zinc	Boron	Strontium
06/03/2000	MW 1	Water	45.0	0.0160	0.8440	0.0040	0.0040	359.0	0.0650	0.0280	0.0350	28.00	0.0170	93.70	0.5700	<0.002	<0.05	0.0650	20.70	0.0060	<0.005	183.0	0.0630	0.2740	0.0980	0.258	2.23

FIGURES



LEGEND:

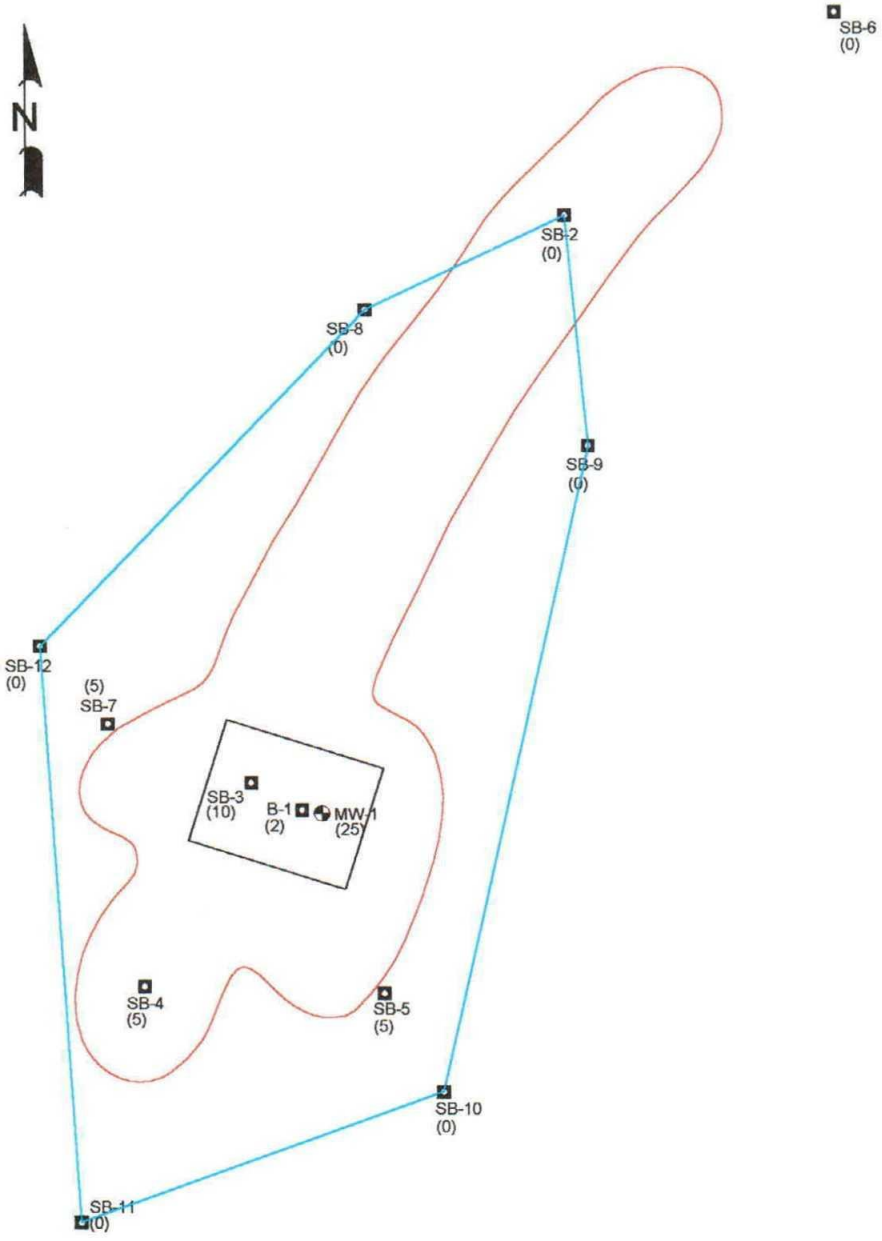
- Soil Boring Location
- Extent of Impacted Soil on Surface
- Temporary Monitoring Well

Figure 1
Site Map

EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

Scale: 1" = 20'	Prep By: JDJ	Checked By: MVS
July 6, 2000	ETGI Project # EOT 2048C	



LEGEND:

- Soil Boring Location
- (10) Thickness (in feet) of Soil with TPH > 100 mg/kg
- Extent of Impacted Soil in Subsurface
- Inferred Impacted Area at the Water Table
- Extent of Impacted Soil on Surface
- Temporary Monitoring Well

Figure 2
Apparent Thickness of Impacted Soil
EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

Scale: 1" = 20'	Prep By: JDJ	Checked By: MVS
July 6, 2000	ETGI Project # EOT 2048C	

ATTACHMENTS

Soil Boring B-1

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0		467	Strong	Heavy	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
					Hard caleche layer.
5		2.3	Slight	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
		2.0	None	None	Sand - (SP) - Tan-brown, *very fine grained, well sorted, dry,* interbedded with caleche nodules.
10		3.3	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, *interbedded with caleche nodules.*
		3.4	None	None	Sand - (SM) - Brown, very fine grained, well sorted, dry.
15		225	Strong	None	Sand - (SM) - Brown, very fine grained, well sorted, dry.
20		121	Moderate	None	Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
25	TD	13.9	Strong	None	Clay layer, soft.
30					

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 04 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

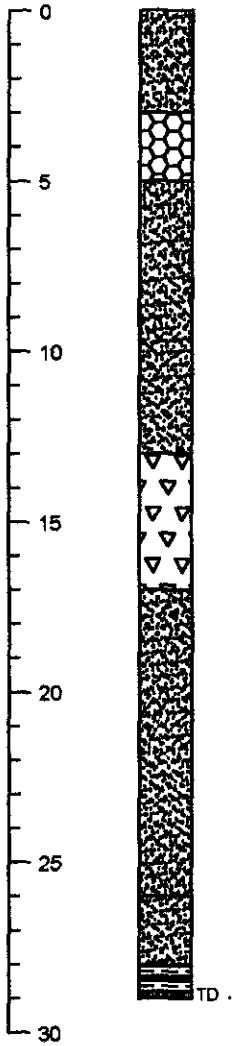
Soil Boring B-1

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 26, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-2



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0				Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
				Hard caleche layer.
5	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
10	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15	0.0	None	None	*Hard sandstone layer*
20	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
25	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
				Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
TD	0.0	None	None	Clay layer, soft.
30				

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

(oval) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 10 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-2

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 26, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-3

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
5		(135)	Strong	moderate	Hard caleche layer.
					Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
10		(41.8)	Strong	None	Hard caleche layer.
15		(18.8)	Moderate	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
20		(34.7)	None	None	Sand - (SP) - Brown, very fine grained, well sorted, dry.
25		(24.0)	Slight	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
30	TD	(12.8)	None	None	Clay layer, soft.

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

( ) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 10 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

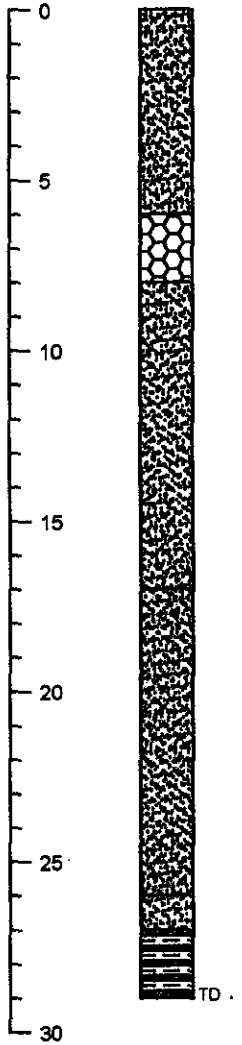
Soil Boring SB-3

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-4



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0				Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
5	835	Slight	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
				Hard caleche layer.
10	78	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15	42	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
20	14.8	Slight	None	Sand - (SP) - Brown, very fine grained, well sorted, dry.
25				Sand - (SP) - interbedded with gravel rock
TD	12.6	None	None	Clay layer, soft.

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 10 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

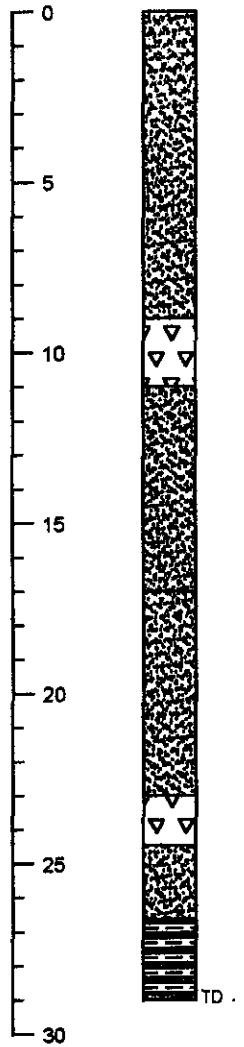
Soil Boring SB-4

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-5



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0 – 5	458	Slight	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
10	41.6	None	None	*Hard sandstone layer*
15	31.6	None	None	Sand - (SP) - Brown, very fine grained, well sorted, dry,
20	42.4	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
				Hard sandstone layer
25	9.6	None	None	Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
	5.6	None	None	Clay layer, soft.

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 10 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-5

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-6

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					
5		1.5	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
10		1.1	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
					Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
15		1.4	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
20		1.6	None	None	*Hard sandstone layer*
					Sand - (SP) - interbedded with gravel rock
25		2.0	None	None	Clay layer, soft.
	TD	0.9	None	None	Clay layer, soft.
30					

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

(oval) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 10 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-6

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2046C	

Soil Boring SB-7

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
5		(255)	Slight	None	Hard caleche layer
10		(13.1)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15		(23.4)	None	None	Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
20		(10.3)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
25		(12.6)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
					Hard sandstone layer
	TD	(0.6)	None	None	Clay layer, soft.
30					

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

( ) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 10 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-7

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-8

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					
5		(0.0)	None	None	*Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.*
10		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
20		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
25		(0.0)	None	None	Clay layer, soft.
TD		(0.0)	None	None	Clay layer, soft.
30					

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

(○) *Indicates samples selected for laboratory analysis.*

Soil Boring Details

Date Drilled 04 / 11 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-8

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-9

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
					Hard caleche layer
5		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, *interbedded with caleche nodules.*
10		(0.0)	None	None	Sand - (SP) - Brown, very fine grained, well sorted, dry.
15		(0.0)	None	None	Sand - (SP) - Brown, very fine grained, well sorted, dry.
20		(0.0)	None	None	Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
25		(0.0)	None	None	Hard caleche layer
30	TD	(0.0)	None	None	Clay layer, soft.

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

(0.0) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 11 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-9

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-10

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					*Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.*
					Hard caleche layer
5		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
10		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15		(0.0)	None	None	Sand - (SM) - Brown, very fine grained, well sorted, dry.
20		(0.0)	None	None	Sand - (SM) - Brown, very fine grained, well sorted, dry.
25		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry.
30	TD	(0.0)	None	None	*Clay layer, soft.*

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

(oval) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 11 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

Soil Boring SB-10

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

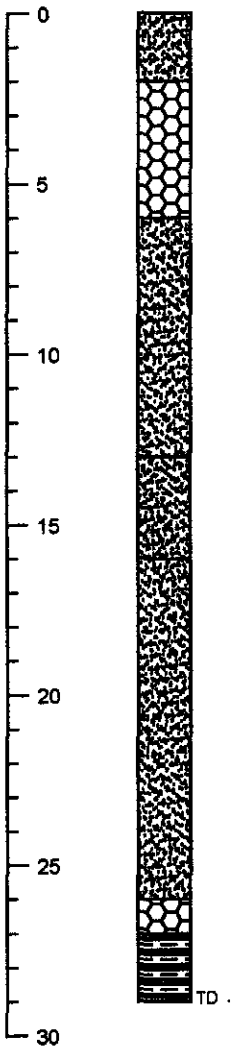
Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-11

Legend

PID — Head-space reading in ppm obtained with a photo-ionization detector.

⬭ Indicates samples selected for laboratory analysis.



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0				Sand - (SP) - *Tan-brown, very fine grained, well sorted, dry,* interbedded with caleche nodules.
5	0.0	None	None	Hard caleche layer
10	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15	0.0	None	None	Sand - (SM) - Brown, very fine grained, well sorted, dry.
20	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
25	0.0	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, *interbedded with caleche nodules.*
				Hard caleche layer
TD	0.0	None	None	Clay layer, soft.
30				

Soil Boring Details

Date Drilled 04 / 11 / 00

Plugged - Surface to TD with Bentonite *and hydrated with deionized*

Soil Boring Log Details

Soil Boring SB-11

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Soil Boring SB-12

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
					Hard caleche layer
5		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
10		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
15		(0.0)	None	None	Sand - (SP) - Tan-brown, very fine grained, well sorted, dry, interbedded with caleche nodules.
20		(0.0)	None	None	Sand - (SM) - Brown, very fine grained, well sorted, dry.
25		(0.0)	None	None	Sand - (SC) - Tan-brown, very fine grained, well sorted, dry.
30	TD .	(0.0)	None	None	Clay layer, soft.

Legend

PID Head-space reading in ppm obtained with a photo-ionization detector.

(○) Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 04 / 11 / 00

Plugged - Surface to TD with Bentonite and hydrated with deionized

Soil Boring Log Details

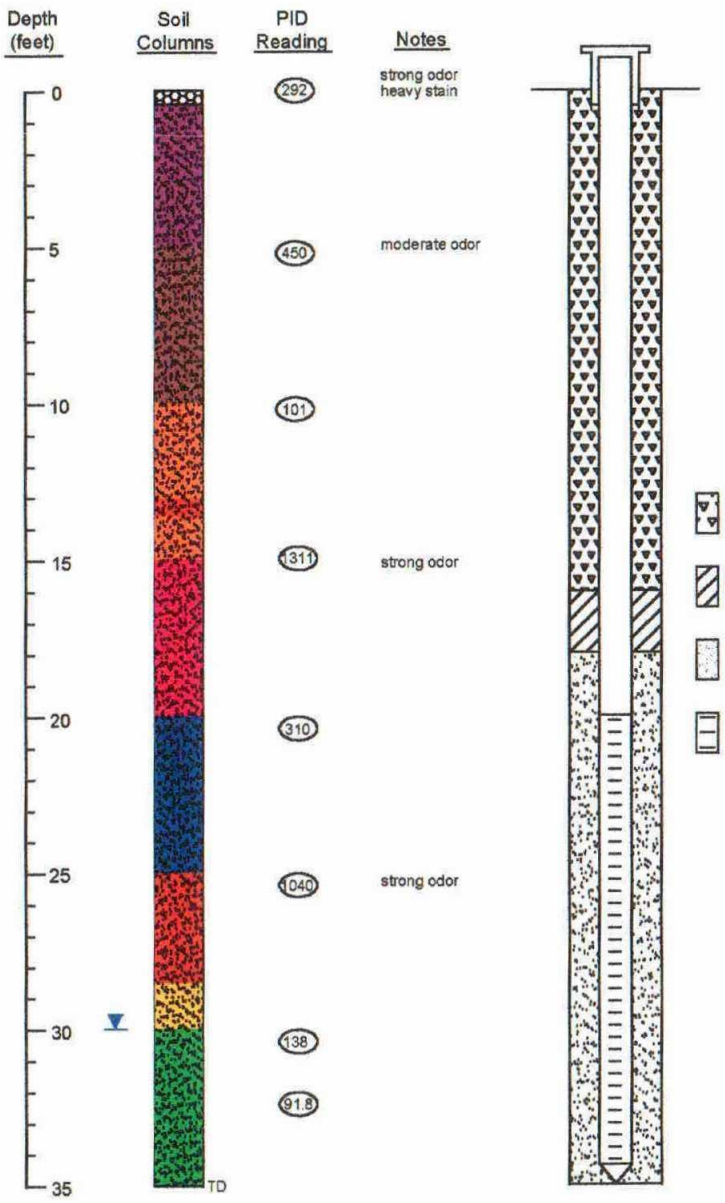
Soil Boring SB-12

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: RS	Checked By: JN
April 28, 2000	ETGI Project # EOT 2048C	

Monitoring Well MW - 1



Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Monitoring Well Details

Date Drilled	05 - 30 - 00
Thickness of Bentonite Seal	2 ft
Lenght of PVC Well Screen	15 ft
Depth of PVC Well	35 ft
Depth of Exploratory Well	35 ft
Depth to Ground Water	30 ft

Legend

- Asphaltine - Heavy Stain, Heavy Odor, Imbedded with Caliche
- Sand - (SP) - Light Brown, very fine grained, well sorted, dry, no odor, no stain, imbedded with caliche nodules.
- Sand - (SP) - Light Brown to Tan, very fine grained, well sorted, dry, no odor, no stain, imbedded with caliche nodules.
- Sand - (SP) - Tan, very fine grained, well sorted, dry, no odor, no stain caliche layer 13'-13.5',
- Clay - (ML) - Red, sandy, silty, soft, moist to wet. (Red bed - Triassic Dockum group)
- Clay - (ML) - Red, sandy, silty, soft, moist to wet. (Red bed - Triassic Dockum group)
- Caliche - White, hard, interbedded with sand.
- Sand - (SM) - Red-Brown, Very Fine Grain, Well Sorted, Wet, No Stain, No Odor.
- Clay Layer
- Indicates samples selected for laboratory analysis.
- Indicates the PSH level measured on date.
- Indicates the ground water level measured on drilling date.
- PID Head-space reading in ppm obtained with a photo-ionization detector.

Completion Notes

1. The monitoring well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked slick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface.

Boring Log And Monitoring Well Details

Monitoring Well - 1

EOTT Energy Corp. Leo (Flap) Sims Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: JDJ	Checked By: MVS
January 27, 2000	ETGI Project # EOT 2048C	

EOTT ENERGY LLC

P.O. BOX 4666
HOUSTON, TEXAS 77210-4666

March 31, 2003

Mr. Randolph Bayliss, P.E.
Hydrologist
Oil Conservation Division
State of New Mexico
1220 Sout St. Francis Drive
Santa Fe NM 87505

Dear Mr. Bayliss;

EOTT Energy, LLC is an Operator of crude oil pipelines and terminal facilities located in the state of New Mexico. EOTT actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and workplans developed in consultation with the New Mexico Oil Conservation Division. Consistent with the rules and regulations of the New Mexico OCD, EOTT hereby submits its annual monitoring reports for the following titled sites:

TNM 98-02	Section 31, Township 19 South, Range 37 East Lea County NM
TNM 97-16	Section 12, Township 24 South, Range 37 East, Lea County NM
Monument 10	Section 32, Township 19 South, Range 37 East, Lea County NM
TNM SPS-11	Section 18, Township 18 South, Range 36 East, Lea County NM
TNM 97-18	Section 28, Township 20 South, Range 37 East, Lea County NM
HDO 90-23	Section 6, Township 20 South, Range 37 East, Lea County NM
Monument 2	Section 06 & 07, Township 20 South, Range 38 East, Lea County NM
Leo (Flap) Sims	Section 27, Township 19 South, Range 37 East, Lea County NM
Monument 11	Section 30, Township 19 South, Range 37 East, Lea County NM
Monument 17	Section 17, Township 19 South, Range 37 East, Lea County NM
TNM 98-05A	Section 26, Township 21 South, Range 37 East, Lea County NM
LF 37	Sections 19 & 20, Township 19 South, Range 37 East, Lea County NM
TNM 97-04	Section 11, Township 16 South, Range 35 East, Lea County NM
LF-59	Section 32, Township 19 South, Range 37 East, Lea County NM
Monument Barber 10" Sour	Section 32, Township 19 South, Range 37 East, Lea County NM

ETGI prepared these documents and has vouched for their accuracy and completeness, and on behalf of EOTT Energy, I have personally reviewed the documents and interviewed ETGI in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that EOTT Energy submits these Annual Compliance Monitoring Reports for the above 15 facilities.

I look forward to scheduling a meeting with you in the second or third week of March as you schedule allows, which will allow for an opportunity to review and discuss the results of the monitoring. If you have questions in the interim, please contact me at (713) 993-5047.

Sincerely,

Bill Von Drehle
Director Environmental
EOTT ENERGY LLC

Cc: Frank Hernandez

MAR 25 2003

ANNUAL MONITORING REPORT

1R 89

RK 5/18/03

EOTT ENERGY, LLC
LEO (FLAP) SIMS
LEA COUNTY, NEW MEXICO
NE4 SE4 SECTION 27, TOWNSHIP 19 SOUTH, RANGE 37 EAST

PREPARED FOR:

EOTT ENREGY, LLC
5805 EAST HIGHWAY 80
MIDLAND, TEXAS 79701

PREPARED BY:

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
2540 WEST MARLAND
HOBBS, NEW MEXICO 88240

MARCH 2003

Ken Dutton
Project Manager

Chance I. Johnson
New Mexico Regional Manager

TABLE OF CONTENTS

INTRODUCTION

Environmental Technology Group, Inc. (ETGI), on behalf of EOTT Energy, LLC (EOTT), prepared this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. This report is intended to be viewed as a complete document with figures, attachments, tables, and text. The report presents the results of the quarterly groundwater monitoring events only. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during four quarterly events in calendar year 2002 to assess the levels and extent of dissolved phase constituents. The groundwater monitoring events consisted of measuring static water levels in the monitor wells and purging and sampling of each well exhibiting sufficient recharge.

FIELD ACTIVITIES

The on-site monitoring well was gauged and sampled on February 11, May 15, August 16, and December 4, 2002. During each sampling event the monitor well designated to be sampled was purged of approximately three well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were stored in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of by either Pate Trucking, Hobbs, New Mexico or Vista Trucking, Eunice, New Mexico utilizing a licensed disposal facility (NMOCD AO SWD-730).

GROUNDWATER GRADIENT

The location of the monitor well and the groundwater elevation as measured on December 4, 2002 are depicted on Figure 2, the Site Groundwater Gradient Map. The groundwater elevation data is provided as Table 1. Groundwater gradient estimation is not available at this site due to a lack of available data. The depth to groundwater, as measured from the top of the well casing, ranged between 30.19 to 30.80 feet in the shallow alluvial aquifer.

LABORATORY RESULTS

Groundwater samples obtained during the sampling events were delivered to AnalySys, Inc., Austin, Texas for determination of Benzene, Toluene, Ethylbenzene and total Xylene (BTEX) constituent concentrations by EPA Method SW846-8260b. The groundwater chemistry data is provided as Table 2 and the Laboratory Reports are provided as Appendix A. Groundwater samples, which exceeded NMOCD regulatory standards for benzene and BTEX, are indicated on Figure 3, the NMOCD Site Map.

Laboratory results for all of the site groundwater samples, obtained during the calendar year 2002 monitoring period, indicated that benzene and BTEX concentrations were below NMOCD regulatory standards for the on-site monitoring well.

SUMMARY

This report presents the results of monitoring activities for the annual monitoring period of calendar year 2002. Groundwater elevation contours are unknown due to the existence of one monitor well on-site which preludes the data necessary for preparation of a site groundwater gradient map.

Laboratory results for all of the site groundwater samples, obtained during the calendar year 2002 monitoring period indicate that Benzene and BTEX concentrations were below NMOCD regulatory standards for the on-site monitor well.

DISTRIBUTION

Copies 1 and 2 to: Mr. William C. Olson/Randy Bayliss
New Mexico Oil Conservation Division
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Santa Fe, New Mexico 87505

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Copy Number 1

Quality Control Review

FIGURES

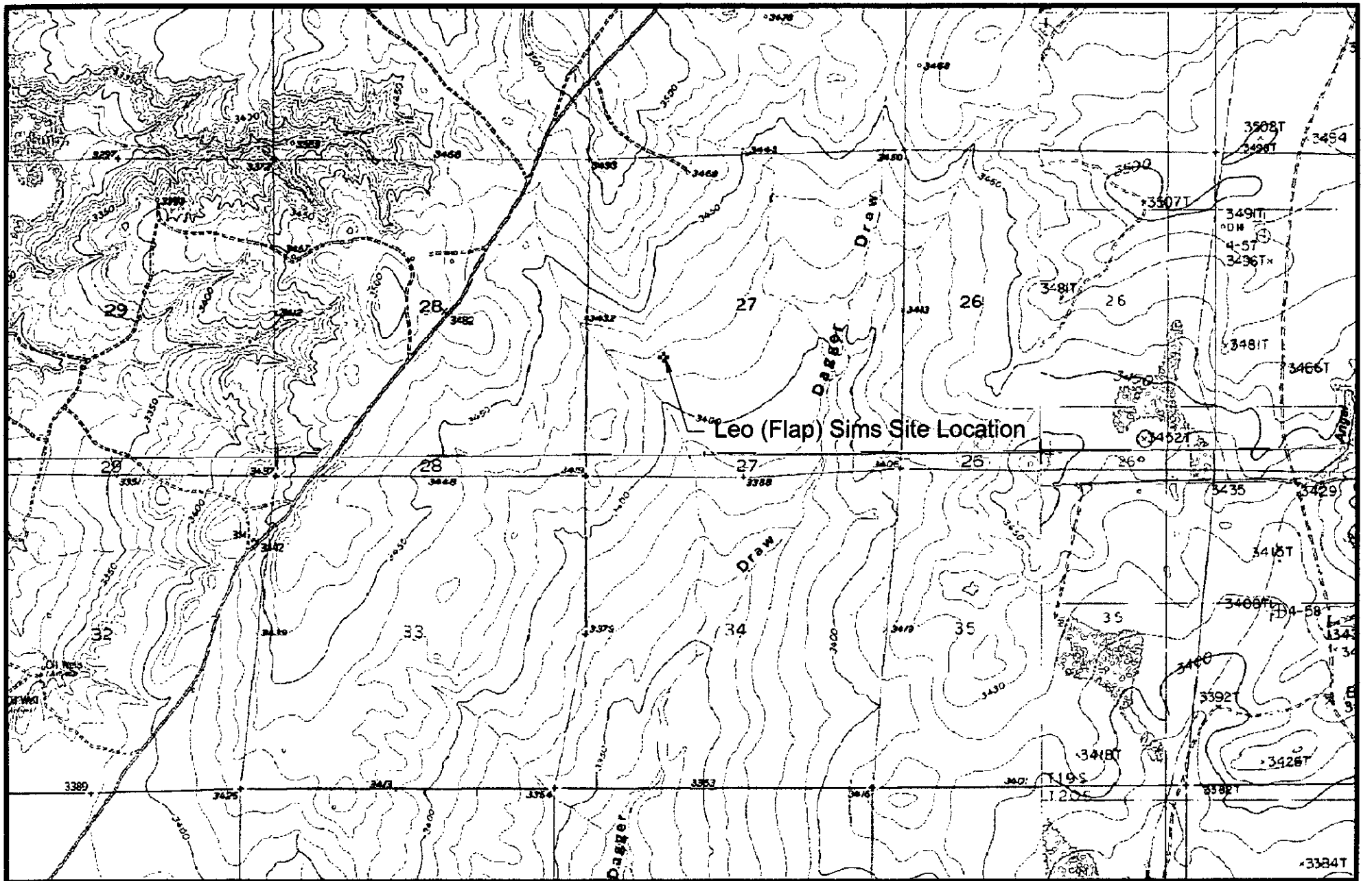
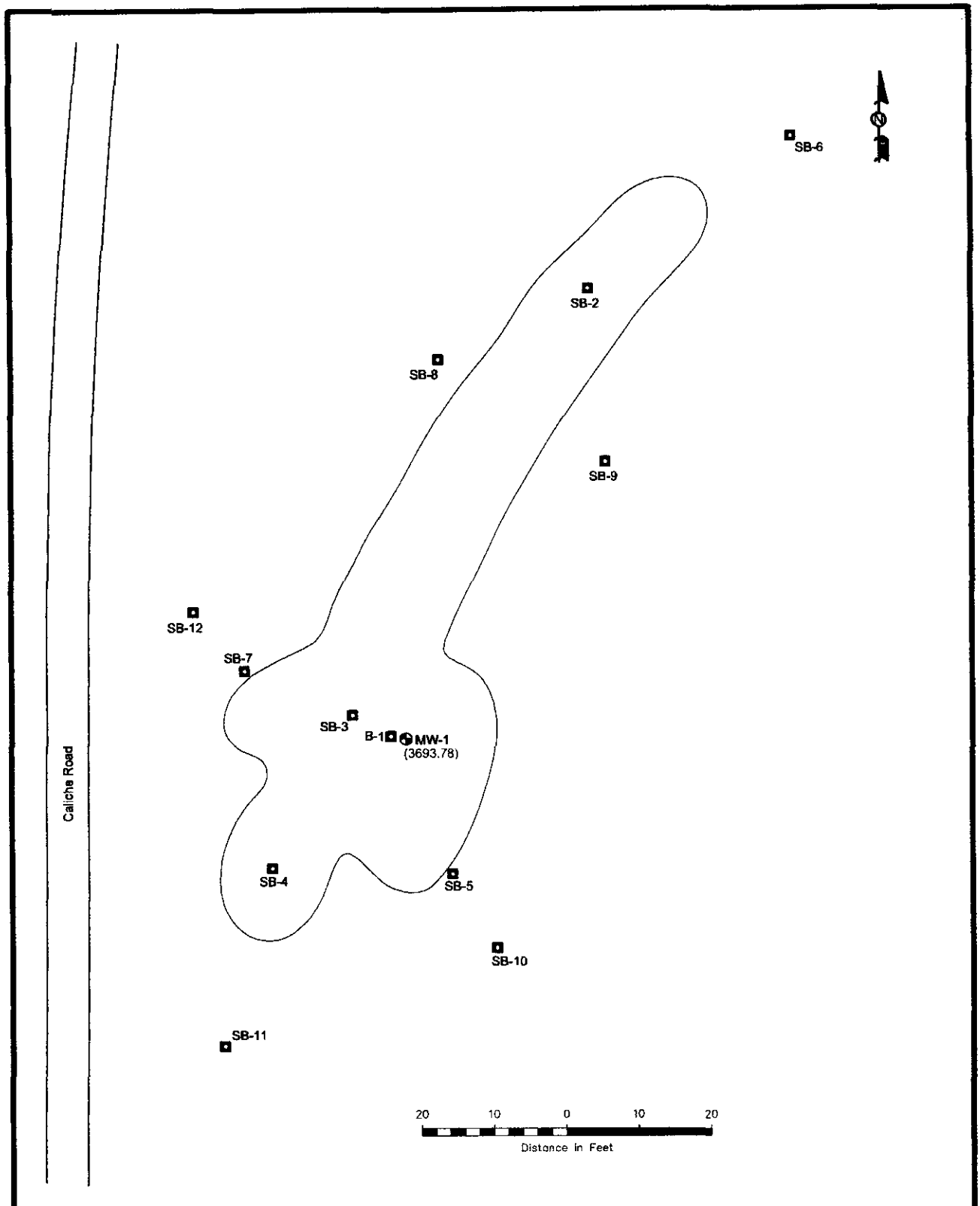


Figure 1
Site Location Map

EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

NE1/4 SE1/4 Sec 27 T19S R35E		ETGI Project #: EOT2048C
Scale: NTS	Drawn By: JDJ	Prepared By: CR
February 10, 2003	Lat. 32° 37' 46.0"N Long. 103° 76' 13.3"W	



LEGEND:

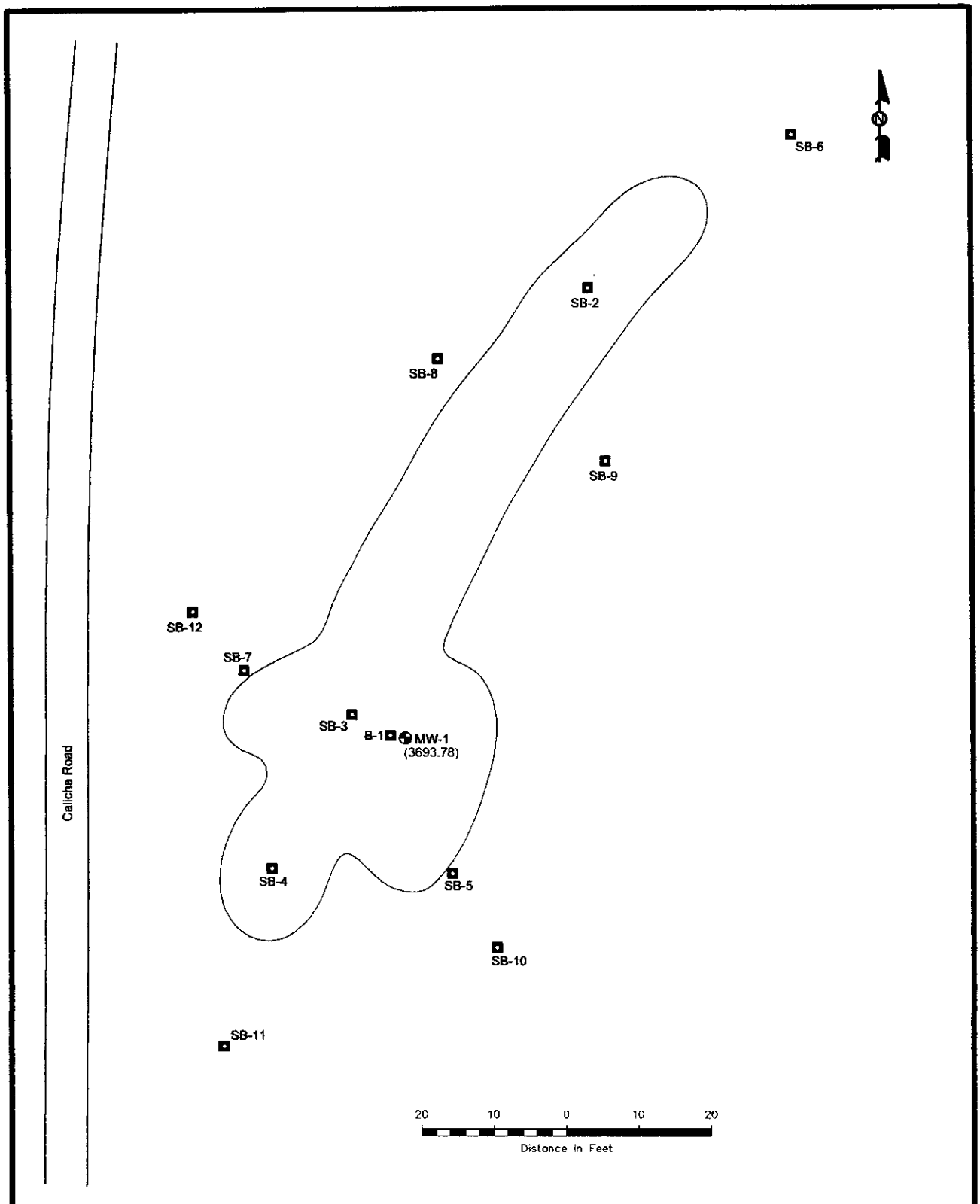
- Soil Boring Location
- Extent of Impacted Soil on Surface
- Temporary Monitoring Well
- (3696.98) Groundwater Elevation (in feet)

Figure 2
Site Groundwater Elevation Map (12/4/02)

EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

NE1/4 SE1/4 Sec 27 T19S R35E		ETGI Project #: EOT2048C
Scale: 1" = 20'	Prep By: JDJ	Checked By: CR
March 11, 2003	Lat. 32° 37' 46.0"N Long. 103° 76' 13.3"W	



LEGEND:

- Soil Boring Location
- Extent of Impacted Soil on Surface
- Temporary Monitoring Well
- (3686.97) Groundwater Elevation (in feet)

Figure 3
NMOCD Site Map
12/04/02 Elevation
EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

NE1/4 SE1/4 Sec 27 T18S R35E		ETGI Project #: EOT2048
Scale: 1" = 20'	Prep By: BN	Checked By: CR
February 10, 2003	Lat. 32° 37' 46.0"N Long. 103° 76' 13.3"W	

TABLES

TABLE 1

GROUNDWATER ELEVATION

EOTT ENERGY, LLC
LEO (FLAP) SIMS
LEA COUNTY, NEW MEXICO
ETGI PROJECT # EO 2048

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
MW - 1	06/03/00	3,724.58	ND	29.04	0.00	3,695.54
	08/31/00	3,724.58	ND	29.31	0.00	3,695.27
	11/20/00	3,724.58	ND	29.50	0.00	3,695.08
	02/27/01	3,724.58	ND	29.55	0.00	3,695.03
	05/14/01	3,724.58	ND	29.58	0.00	3,695.00
	08/13/01	3,724.58	ND	29.89	0.00	3,694.69
	10/03/01	3,724.58	ND	37.61	0.00	3,686.97
	02/11/02	3724.58	ND	30.19	0.00	3,694.39
	05/15/02	3,724.58	ND	30.23	0.00	3,694.35
	08/16/02	3,724.58	ND	30.61	0.00	3,693.97
	12/04/02	3,724.58	ND	30.80	0.00	3,693.78

TABLE 2

GROUNDWATER CHEMISTRY

EOTT ENERGY, LLC
LEO (FLAP) SIMS
LEA COUNTY, NEW MEXICO
ETGI PROJECT # EO 2048

All concentrations are in mg/L

SAMPLE LOCATION	SAMPLE DATE	Method: 8260b			
		BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES
MW - 1	06/03/00	0.002	0.001	<0.001	<0.001
	08/31/00	<0.001	<0.001	<0.001	<0.001
	11/20/00	0.004	0.006	<0.001	0.011
	02/27/01	0.004	0.006	<0.001	0.014
	05/14/01	0.006	0.003	<0.001	0.018
	08/13/01	<0.001	<0.001	<0.001	0.002
	10/03/01	0.004	0.007	<0.001	0.027
	02/11/02	0.001	<0.001	<0.001	0.011
	05/15/02	<0.001	<0.001	<0.001	0.001
	08/16/02	<0.001	<0.001	<0.001	<0.001
	12/04/02	<0.001	<0.001	<0.001	<0.001
EB - 1	08/31/00	<0.001	<0.001	<0.001	<0.001
	11/24/00	<0.001	<0.001	<0.001	<0.001
	02/27/01	<0.001	<0.001	<0.001	<0.001
	05/14/01	<0.001	<0.001	<0.001	<0.001
	10/13/01	<0.001	<0.001	<0.001	<0.001
	10/03/01	<0.001	<0.001	<0.001	<0.001
	02/11/02	<0.001	<0.001	<0.001	<0.001
	05/15/02	<0.001	<0.001	<0.001	<0.001
	08/16/02	<0.001	<0.001	<0.001	<0.001
	12/04/02	<0.001	<0.001	<0.001	<0.001

Appendix A

Laboratory Reports

ANALYSYS INC.

4221 Freidrich Lane, Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group
Attn: Camille Reynolds
Address: 2540 W. Maryland
Hobbs NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 125717 **Report Date:** 02/27/02
Project ID: Leo "Flap" Sims EOT 2048C
Sample Name: MW 1
Sample Matrix: water
Date Received: 02/19/2002 **Time:** 09:52
Date Sampled: 02/11/2002 **Time:** 10:30

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		02/20/02	8260b	---	---	---	---	---
Benzene	1.17	µg/L	1	<1	02/20/02	8260b	---	5.7	102.1	97.4	92.2
Ethylbenzene	<1	µg/L	1	<1	02/20/02	8260b	---	3.1	100.6	107	104.5
m,p-Xylenes	8.05	µg/L	1	<1	02/20/02	8260b	---	3.2	104.3	110.4	107.2
o-Xylene	2.95	µg/L	1	<1	02/20/02	8260b	---	7.1	100.3	102.9	99.7
Toluene	<1	µg/L	1	<1	02/20/02	8260b	J	5.4	99.4	96.3	91.4

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Laster

Richard Laster

1. Quality assurance data is for the sample batch which included this sample 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B =Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 = Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

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(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group **Attn:** Camille Reynolds	**Project ID:** Leo "Flap" Sims EOT 2048C **Sample Name:** MW 1	**Report#/Lab ID#:** 125717 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	91.4	80-120	---
Toluene-d8	8260b	99.9	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Exceptions Report:

Report #/Lab ID#: 125717 **Matrix:** water
Client: Environmental Tech Group **Attn:** Camille Reynolds
Project ID: Leo "Flap" Sims EOT 2048C
Sample Name: MW 1

Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

Sample Bottles & Preservation

- ☒ Sample received in appropriate container(s) and appear to be appropriately preserved.
- ☐ Sample received in appropriate container(s). State of sample preservation unknown.
- ☐ Sample received in inappropriate container(s) and/or with unknown state of preservation.

J flag Discussion

A J flag data qualifier indicates (as required under TNRCC-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Toluene	J	See J-flag discussion above.

Notes: _____

ANALYSYS INC.

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Client: Environmental Tech Group
Attn: Camille Reynolds
Address: 2540 W. Maryland
Hobbs NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 125718 **Report Date:** 02/27/02
Project ID: *Leo "Flap" Sims EOT 2048C*
Sample Name: EB 1
Sample Matrix: water
Date Received: 02/19/2002 **Time:** 09:52
Date Sampled: 02/11/2002 **Time:** 10:50

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		02/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/20/02	8260b	---	2	89.7	90.3	85.8
Ethylbenzene	<1	µg/L	1	<1	02/20/02	8260b	---	1.5	95.9	96.6	100.7
m,p-Xylenes	<1	µg/L	1	<1	02/20/02	8260b	J	2.2	95.9	97.5	98.8
o-Xylene	<1	µg/L	1	<1	02/20/02	8260b	---	1.6	95.9	96.8	102.7
Toluene	<1	µg/L	1	<1	02/20/02	8260b	---	3.9	95.7	98.8	91

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Laster

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Client: Environmental Tech Group **Attn:** Camille Reynolds	**Project ID:** Leo "Flap" Sims EOT 2048C ***Sample Name:*** EB 1	**Report#/Lab ID#:** 125718 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	93	80-120	---
Toluene-d8	8260b	97.8	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Exceptions Report:

Report #/Lab ID#: 125718 **Matrix:** water
Client: Environmental Tech Group **Attn:** Camille Reynolds
Project ID: Leo "Flap" Sims EOT 2048C
Sample Name: EB 1

Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

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Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
m,p-Xylenes	J	See J-flag discussion above.

Notes: _____

COC: 019

CHAIN-OF-CUSTODY

ANALYSYS INC.
4221 Freidrich Lane, Suite 190, Austin, TX 78744
Phone: (512) 444-5896
Fax: (512) 447-4766

Send Reports To:
Company Name ETGI
Address 2540 W MARLAND
City HOBBS State NM Zip 88240
ATTN: CAMILLE REYNOLDS
Phone (505) 397-4882 Fax (505) 397-4701

Bill to (if different):
Company Name EOTT
Address
City State Zip
ATTN:
Phone Fax

Rush Status (must be confirmed with lab mgr.):
Project Name/PO#: LEO FLAP 3rd Sampler: Simon Casas
EOT 2004BC

Analyses Requested (1)
Please attach explanatory information as required

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	BTEX 8021B	Comments
MW 1	2-11-02	1030	2		X		125717	X	
EB 1	↓	1050	↓		↓		125718	X	

(1) Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's *method of choice* and all data will be reported to ASI's normal reporting limits (LRDL/PQL). For GC MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of custody or attached to this chain-of-custody, ASI will default to Priority Pollutants or ASI's HSL list at ASI's option. Specific *compound lists must* be supplied for all GC procedures.

Temp 0.0°C

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Simon Casas	ETGI	2-19-02	1500	Melanie Humphrey	ASI	2/19/02	09:30

[Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s *standard terms*]

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Client: Environmental Tech Group
Attn: Ken Dutton
Address: 2540 W. Marland
Hobbs, NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 129583 **Report Date:** 05/21/02
Project ID: Leo "Flap" Sims EOT 2048
Sample Name: MW 1
Sample Matrix: water
Date Received: 05/17/2002 **Time:** 09:30
Date Sampled: 05/15/2002 **Time:** 09:00

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/*BTEX*	---		---		05/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/20/02	8260b	---	12.2	100.6	114.1	100
Ethylbenzene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99	105.8	102.6
m,p-Xylenes	1.24	µg/L	1	<1	05/20/02	8260b	---	2.4	100	108.4	102.1
o-Xylene	<1	µg/L	1	<1	05/20/02	8260b	J	0.8	99.2	104.7	103.4
Toluene	<1	µg/L	1	<1	05/20/02	8260b	J	12.7	107.7	107.2	106.6

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Respectfully Submitted,

Richard Laster

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(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group **Attn:** Ken Dutton	**Project ID:** Leo "Flap" Sims EOT 2048 **Sample Name:** MW 1	**Report#/Lab ID#:** 129583 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	106	80-120	---
Toluene-d8	8260b	103	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Exceptions Report:

Report #/Lab ID#: 129583 **Matrix:** water
Client: Environmental Tech Group **Attn:** Ken Dutton
Project ID: Leo "Flap" Sims EOT 2048
Sample Name: MW 1

Sample Temperature/Condition <=6°C

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Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
o-Xylene	J	See J-flag discussion above.
Toluene	J	See J-flag discussion above.

Notes:

AnalySys Inc.

4221 Freidrich Lane, Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group
Attn: Ken Dutton
Address: 2540 W. Marland
Hobbs, NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 129584 **Report Date:** 05/21/02
Project ID: Leo "Flap" Sims EOT 2048
Sample Name: EB 1
Sample Matrix: water
Date Received: 05/17/2002 **Time:** 09:30
Date Sampled: 05/15/2002 **Time:** 09:15

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		05/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/20/02	8260b	---	12.2	100.6	114.1	100
Ethylbenzene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99	105.8	102.6
m,p-Xylenes	<1	µg/L	1	<1	05/20/02	8260b	---	2.4	100	108.4	102.1
o-Xylene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99.2	104.7	103.4
Toluene	<1	µg/L	1	<1	05/20/02	8260b	---	12.7	107.7	107.2	106.6

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

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(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group **Attn:** Ken Dutton	**Project ID:** Leo "Flap" Sims EOT 2048 **Sample Name:** EB 1	**Report#/Lab ID#:** 129591 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	97.2	80-120	---
Toluene-d8	8260b	102	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

COC Ø72

CHAIN-OF-CUSTODY

AnalySys Inc.
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Send Reports To:
Company Name ETGI
Address 2540 W MARLAND
City HOBBS State NM Zip 88240
ATTN: KEN DUTTON
Phone (505) 397-4882 Fax (505) 397-4701

Bill to (if different):
Company Name EOTT
Address
City State Zip
ATTN:
Phone Fax

Rush Status (must be confirmed with lab mgr.):
Project Name/PO#: LEO "FLAP" SIMS EOT 2048 Sampler: Simon Casas

Analyses Requested (1)
Please attach explanatory information as required

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	BTEX 8021B								Comments
MW /	5-15	Ø900	2		X		129583	X								
EB /	↓	Ø915	2		X		129584	X								

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Temp: 0.0°C

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Simon Casas	ETGI	5-16-02	1600	Melanie Humphrey	ASI	5/17/02	0930

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(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group
Attn: Ken Dutton
Address: 2540 W. Marland
Hobbs, NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 132984 **Report Date:** 08/29/02
Project ID: Leo Flap Sims EO 2048C
Sample Name: MW 1
Sample Matrix: water
Date Received: 08/23/2002 **Time:** 09:45
Date Sampled: 08/16/2002 **Time:** 11:00

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		08/29/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/29/02	8260b	---	9.4	82.8	94.1	86
Ethylbenzene	<1	µg/L	1	<1	08/29/02	8260b	---	4.5	103.2	99.3	105.4
m,p-Xylenes	<1	µg/L	1	<1	08/29/02	8260b	J	1.5	106.3	95.8	104.2
o-Xylene	<1	µg/L	1	<1	08/29/02	8260b	---	3.1	112.6	99.1	108.2
Toluene	<1	µg/L	1	<1	08/29/02	8260b	---	6.1	95.5	98.6	100.7

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(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group **Attn:** Ken Dutton	**Project ID:** Leo Flap Sims EO 2048C **Sample Name:** MW 1	**Report#/Lab ID#:** 132984 **Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	118	80-120	---
Toluene-d8	8260b	107	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Exceptions Report:

Report #/Lab ID#: 132984 **Matrix:** water
Client: Environmental Tech Group **Attn:** Ken Dutton
Project ID: Leo Flap Sims EO 2048C
Sample Name: MW 1

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Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
m,p-Xylenes	J	See J-flag discussion above.

Notes:

ANALYSYS INC.

3512 Montopolis Dr., Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group
Attn: Ken Dutton
Address: 2540 W. Marland
Hobbs, NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 132985 **Report Date:** 08/29/02
Project ID: Leo Flap Sims EO 2048C
Sample Name: EB 1
Sample Matrix: water
Date Received: 08/23/2002 **Time:** 09:45
Date Sampled: 08/16/2002 **Time:** 11:15

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA[1]

Parameter	Result	Units	RQL[5]	Blank	Date	Method[6]	Data Qual[7]	Prec.[2]	Recov.[3]	CCV[4]	LCS[4]
Volatile organics-8260b/BTEX	---		---		08/28/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/28/02	8260b	---	9.4	82.8	94.4	86
Ethylbenzene	<1	µg/L	1	<1	08/28/02	8260b	---	4.5	103.2	99.3	105.4
m,p-Xylenes	<1	µg/L	1	<1	08/28/02	8260b	---	1.5	106.3	95.8	104.2
o-Xylene	<1	µg/L	1	<1	08/28/02	8260b	---	3.1	112.6	99.4	108.2
Toluene	<1	µg/L	1	<1	08/28/02	8260b	---	6.1	95.5	98.6	100.7

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Laster

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

ANALYSYS INC.

3512 Montopolis Dr., Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group	**Project ID:** Leo Flap Sims EO 2048C	**Report#/Lab ID#:** 132985
Attn: Ken Dutton	**Sample Name:** EB 1	**Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	114	80-120	---
Toluene-d8	8260b	108	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

COC: 132 Page ___ of ___ 3581

For Use On **EOTT ENERGY CORP.** F... Only

Environmental Technology Group, Inc. — Environmental Consulting & Remediation Services

4600 West Wall, Midland, TX 79703, Tel (915) 522-1139, Fax (915) 520-4310

2540 West Marland, Hobbs, NM 88242, Tel (505) 397-4882, Fax (505) 397-4701

EOTT ENERGY CORP., 5805 East Business 20, Midland, TX 79702, Tel (915) 687-3400, Fax (915) 582-2781

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST
(Circle or Specify Method No.)

Project Manager: KEN DUTTON

Project Name: LEO FLAP SIMS

Project Number: EO2048C

Project Location: LEA COUNTY, NM

Sampler Signature: Simon Casas

LAB # (Lab Use Only)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATION METHOD: HCL	HNO_3	$NaHSO_4$	ICE	NONE	SAMPLING: DATE (2002)	TIME	BTEX 8021B	TPH 418.1/TX 1005	TPH 8015M GRO/DRO	PAH 8270C (8100 New Mexico only)	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/7470	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	Volatiles 8260B	Semi Volatiles 8270C	TDS 160.1	Cations/Anions 375.4/325.2
132984	MW 1	2	V	X				X			X		8/16	1100	✓											
132985	EB 1	↓	↓	↓				↓			↓		↓	1115	↓											

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	REMARKS:
Simon Casas	8/22/02	1200	[signature]	8-22-02	1200	AX
Relinquished by:	**Date:**	**Time:**	**Received at Lab by:**	**Date:**	**Time:**	
[signature]	8-22-02	1200	Melanie Humphrey ASI	8/23/02	0945	Temp: 2.7 C

FILE

AnalySys Inc
3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group
Attn: Ken Dutton
Address: 2540 W. Marland
Hobbs, NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 137069 **Report Date:** 12/11/02
Project ID: Leo Flap Sims EO 2048
Sample Name: MW 1
Sample Matrix: water
Date Received: 12/06/2002 **Time:** 14:10
Date Sampled: 12/04/2002 **Time:** 09:10

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA [1]

Parameter	Result	Units	RQL [5]	Blank	Date	Method [6]	Data Qual. [7]	Prec. [2]	Recov. [3]	CCV [4]	LCS [4]
Volatile organics-8260b/BTEX	---		---		12/10/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/10/02	8260b	---	1.1	86.1	81.5	76.5
Ethylbenzene	<1	µg/L	1	<1	12/10/02	8260b	---	7.8	114.1	111.9	112.7
m,p-Xylenes	<1	µg/L	1	<1	12/10/02	8260b	---	8	108.8	104.1	106.7
o-Xylene	<1	µg/L	1	<1	12/10/02	8260b	---	8.5	113.8	109.8	113.6
Toluene	<1	µg/L	1	<1	12/10/02	8260b	---	0.4	96.8	91.8	94.8

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program.

Respectfully Submitted,

Richard Laster

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

ANALYSYS INC
3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group	**Project ID:** Leo Flap Sims EO 2048	**Report#/Lab ID#:** 137069
Attn: Ken Dutton	**Sample Name:** MW 1	**Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limitse	Data Qualifiers
1,2-Dichloroethane-d4	8260b	83.2	80-120	---
Toluene-d8	8260b	99.2	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

ANALYSYS INC

3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group
Attn: Ken Dutton
Address: 2540 W. Marland
Hobbs, NM 88240

Phone: 505 397-4882 **FAX:** 505 397-4701

Report#/Lab ID#: 137070 **Report Date:** 12/11/02
Project ID: Leo Flap Sims EO 2048
Sample Name: EB 1
Sample Matrix: water
Date Received: 12/06/2002 **Time:** 14:10
Date Sampled: 12/04/2002 **Time:** 09:15

REPORT OF ANALYSIS

QUALITY ASSURANCE DATA [1]

Parameter	Result	Units	RQL [5]	Blank	Date	Method [6]	Data Qual.[7]	Prec. [2]	Recov. [3]	CCV [4]	LCS [4]
Volatile organics-8260b/BTEX	---		---		12/10/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/10/02	8260b	---	1.1	86.1	81.5	76.5
Ethylbenzene	<1	µg/L	1	<1	12/10/02	8260b	---	7.8	114.1	111.9	112.7
m,p-Xylenes	<1	µg/L	1	<1	12/10/02	8260b	---	8	108.8	104.1	106.7
o-Xylene	<1	µg/L	1	<1	12/10/02	8260b	---	8.5	113.8	109.8	113.6
Toluene	<1	µg/L	1	<1	12/10/02	8260b	---	0.4	96.8	91.8	94.8

Respectfully Submitted,

Richard Laster

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

ANALYSYS INC.
3512 Montopolis Drive, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group	**Project ID:** Leo Flap Sims EO 2048	**Report#/Lab ID#:** 137070
Attn: Ken Dutton	**Sample Name:** EB 1	**Sample Matrix:** water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limitse	Data Qualifiers
1,2-Dichloroethane-d4	8260b	87.1	80-120	---
Toluene-d8	8260b	104	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

CHAIN-OF-CUSTODY

WWW.ANALYSYSINC.COM CC:2047

AnalySys Inc.

3512 Montopolis Drive, Austin, TX 78744
Phone: (512) 385-5886 Fax: (512) 385-7411

2209 N.P.I.D., Ste K, Corpus Christi, TX 78408
Phone: (361) 289-6384 Fax: (361) 289-0875

Send Reports To:

Company Name E.T.G.I
Address 2540 W. Marland
City Hobbs State NM Zip 88240
ATTN: Ken Dutton
Phone 505-397-4882 Fax 505-397-4701

Bill to (if different):

Company Name
Address
City State Zip
ATTN:
Phone Fax

Rush Status (must be confirmed with lab mgr.):
Project Name/PO#: Lea Flap Smr 801-2048 Sampler: Maurlo Campos

Analyses Requested (1)
Please attach explanatory information as required

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	BTEX 8020								Comments
MW-1	12/4/02	0910	2		X		137069	✓								
E.B.-1	↓	0915	2		X		137070	✓								

(1)Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting limits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants or ASI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

Temp: 3.5°C

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Maurlo Campos	E.T.G.I.	12/5/02	1330	Melanie Humphrey	ASI	12/6/02	14:10

Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]

• RB 11/15

LR 89

ANNUAL MONITORING REPORT

EOTT PIPELINE COMPANY
LEO (FLAP) SIMS
LEA COUNTY, NEW MEXICO

PREPARED FOR:

EOTT PIPELINE COMPANY
5805 EAST HIGHWAY 80
MIDLAND, TEXAS 79701

PREPARED BY:

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
2540 WEST MARLAND
HOBBS, NEW MEXICO 88240

APRIL 2001

TABLE OF CONTENTS

INTRODUCTION

Environmental Technology Group, Inc. (ETGI), on behalf of EOTT Energy Corp. (EOTT), prepared this annual report in compliance with the New Mexico Oil Conservation Division (OCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. The report presents the results of the quarterly ground water monitoring events only. For reference, the Site Location Map is provided as Figure 1.

Ground water monitoring was conducted during three quarterly events in calendar year 2000 to assess the levels and extent of dissolved phase constituents. The ground water monitoring events consisted of measuring static water levels in the monitoring wells and purging and sampling of each well exhibiting sufficient recharge.

FIELD ACTIVITIES

The on-site monitoring well was gauged and sampled on June 3, August 31, and November 20, 2000. During each sampling event, the monitoring well, designated to be sampled, was purged of approximately 3 well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Ground water was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of by Pate Trucking, Hobbs, New Mexico, utilizing a licensed disposal facility (OCD AO SWD-730).

GROUND WATER GRADIENT

Locations of the monitoring well as measured on November 20, 2000, are depicted on Figure 2, the Site Ground Water Gradient Map. The ground water elevation data are provided as Table 1. Ground water elevation contours are unknown due to the existence of one monitoring well on-site which preludes the data necessary for measurement of ground water elevation. The depth to ground water, as measured from the top of the well casing, ranged between 29.04 to 29.50 feet for the shallow alluvial aquifer.

LABORATORY RESULTS

Ground water samples obtained during the sampling events were hand delivered to Environmental Laboratory of Texas, Midland, Texas, for determination of benzene, toluene, ethyl benzene and total xylenes (BTEX) concentrations by EPA Method SW846-8021B. The ground water chemistry data are provided as Table 2 and the Laboratory Reports are provided as Appendix A.

Laboratory results for all of the site ground water samples, obtained during the calendar year 2000 monitoring period, indicated that Benzene and BTEX concentrations were below regulatory standards for the on-site monitoring well.

SUMMARY

This report presents the results of monitoring activities for the annual monitoring period of calendar year 2000. Ground water elevation contours are unknown due to the existence of one monitoring well on-site which preludes the data necessary for measurement of ground water elevation.

Laboratory results for all of the site ground water samples, obtained during the calendar year 2000 monitoring period, indicated that Benzene and BTEX concentrations were below regulatory standards for the on-site monitoring well.

FIGURES

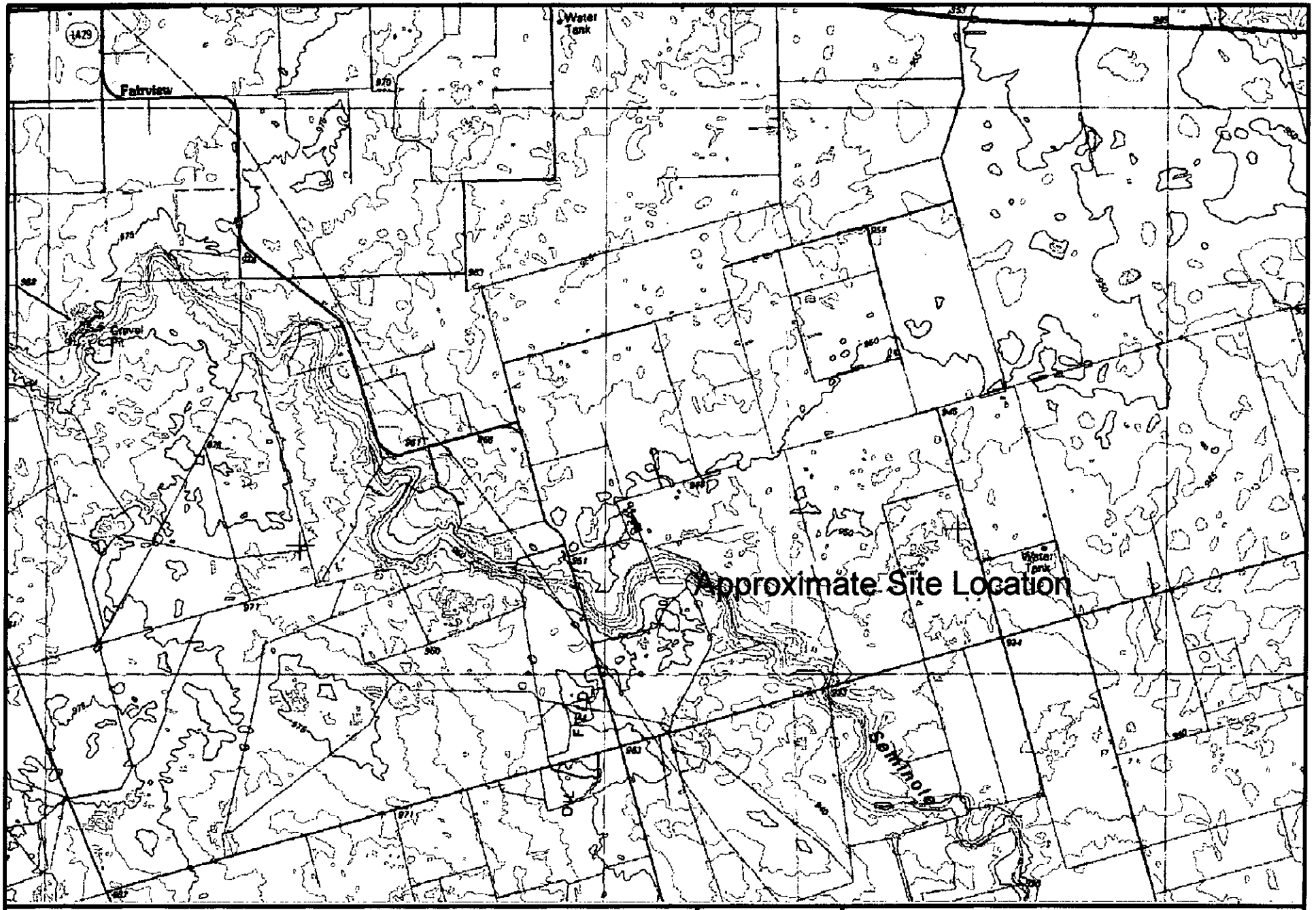
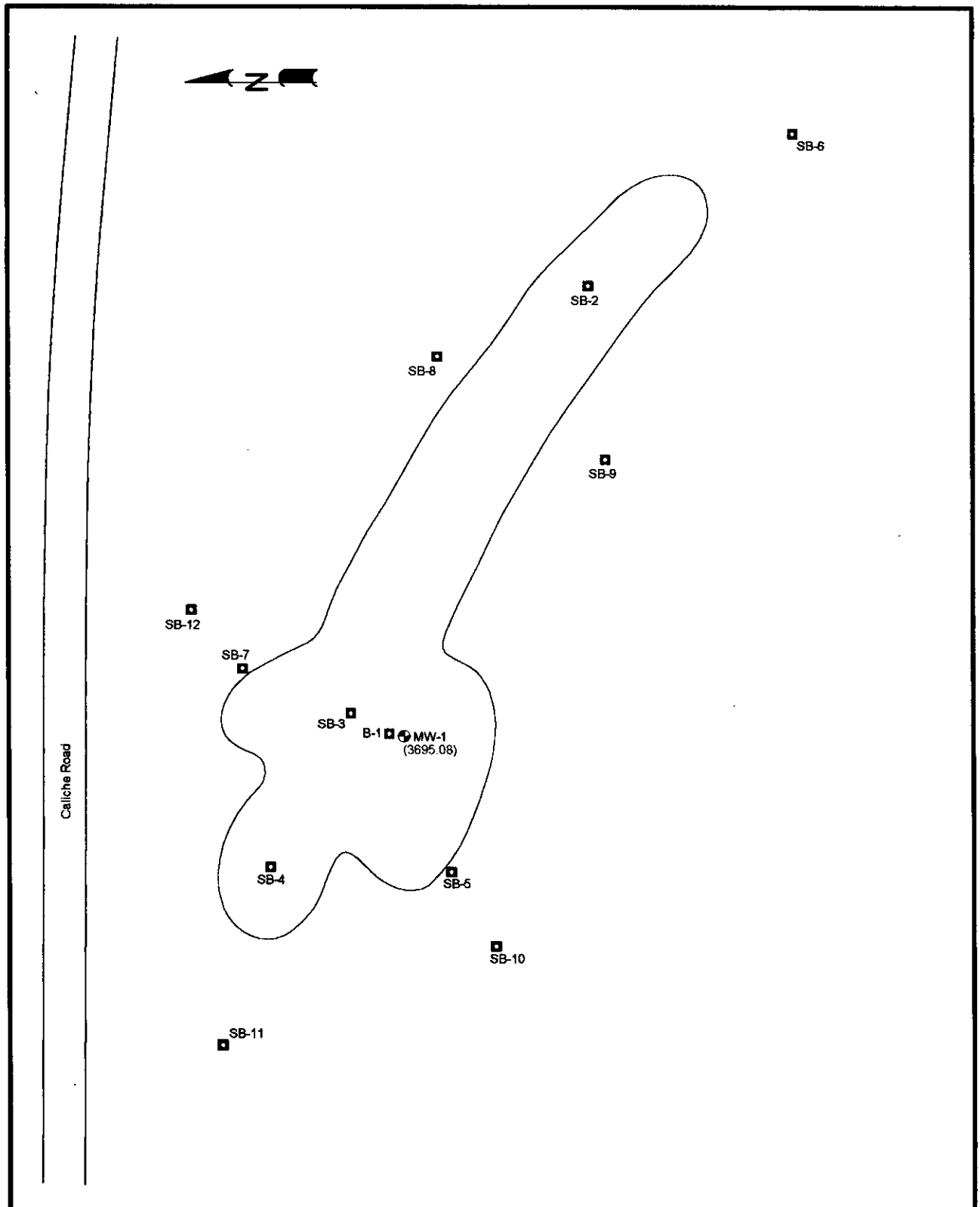


Figure 1
Site Location Map

EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

Scale: NTS	Prep By: JDJ	Checked By: BA
January 25, 2001	ETGI Project # EOT 2048C	



LEGEND:

- Soil Boring Location
- Extent of Impacted Soil on Surface
- Temporary Monitoring Well
- (3695.08) Groundwater Elevation (in feet)

Figure 2
Site Groundwater Elevation Map (11/20/00)
EOTT Energy Corp.
Leo (Flap) Sims
Lea County, NM

Environmental Technology Group, Inc.

Scale: 1" = 20'	Prep By: JDJ	Checked By: CR
November 20, 2000	ETGI Project #: EOT2048C	

TABLES

TABLE 1

GROUND WATER ELEVATION
ANNUAL REPORT

EOTT ENERGY CORPORATION
LEO (FLAP) SIMS
LEA COUNTY, NEW MEXICO
ETGI PROJECT # EOT2048C

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
MW - 1	06/03/00	3,724.58	-	29.04	0.00	3,695.54
MW - 1	08/31/00	3,724.58	-	29.31	0.00	3,695.27
MW - 1	11/20/00	3,724.58	-	29.50	0.00	3,695.08

TABLE 2

GROUND WATER CHEMISTRY
ANNUAL REPORT

EOTT ENERGY CORPORATION
LEO (FLAP) SIMS
LEA COUNTY, NEW MEXICO
ETGI PROJECT # EOT 2048C

All concentrations are in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8021B, 5030					
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	TOTAL BTEX
MW - 1	06/03/00	0.002	0.001	<0.001	<0.001	<0.001	0.003
MW - 1	08/31/00	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW - 1	11/20/00	0.004	0.006	<0.001	0.008	0.003	<0.021

APPENDIX

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: MR. JESSE TAYLOR
P.O. BOX 4845
MIDLAND, TEXAS 79704
FAX: 915-520-4310
FAX: 505-392-3760

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 32 deg. F
Project #: EOT 2048C
Project Name: Leo (Flap) Sims
Project Location: Lea County, N.M.

Sampling Date: 06/03/00
Receiving Date: 06/03/00
Analysis Date: 06/05/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
26255	MW 1	0.002	0.001	<0.001	<0.001	<0.001
% IA		96	94	96	104	96
% EA		94	94	94	100	92
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8021B,5030

Umesh Rao
Umesh Rao, Ph. D.

6/7/00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East, Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC 148

Project Manager: JESSE TAYLOR
Phone #: (505) 392-8731
FAX #: (505) 392-3760

Company Name & Address: EGL
PO BOX 4815 MIDLAND TX

Project #: EOT 204BC
Project Name: LEO (FEDERAL) SIMS

Project Location: LEA COUNTY NM
Sampler Signature: Jesse Taylor

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/8260	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS 160.1	RCI	PAH 8100	CATIONS 6010	ANIONS 300.0	HEAVY METALS 6010
	MW1	5	V	X					X	X	X			6-3	0930	X						Y		Y	Y	Y	X

Relinquished by:	Date:	Time:	Received by:
Jesse Taylor	6-3-00	1630	
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS
FAX RESULTS : HOBBS OFFICE
INVOICE EOT 10 15 M
32°F

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: BETH ALDRICH
P.O BOX 4845
MIDLAND, TEXAS 79704
FAX: 915-520-4310

SampleType: Water
Sample Condition: Intact/ Iced/ HCl/ 30 deg. F
Project #: EOT 2048C
Project Name: Flapp Simms
Project Location: Lea Co., N.M.

Sampling Date: 08/31/00
Receiving Date: 09/01/00
Analysis Date: 09/06/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L	TOTAL BTEX mg/L
30316	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
30317	EB 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	% IA	96	94	96	98	92	
	% EA	95	94	95	95	91	
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	

METHODS: SW 846-8021B,5030

Raland K. Tuttle

9-12-00
Date

Environmental Technology Group, Inc
Environmental Consulting & Remediation Services

For Use On **EOTT ENERGY CORP.** Proje ly

4600 West Wall
Midland, TX 79703
Tel (915) 522-1139
Fax (915) 520-4310

2540 West Marland
Hobbs, NM 88242
Tel (505) 397-4882
Fax (505) 397-4701

EOTT ENERGY CORP.
5805 East Business 20
Midland, TX 79702
Tel (915) 687-3400
Fax (915) 582-2781

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST
(Circle or Specify Method No.)

COC 217

Project Manager: BETH AUBRICH

Project Name: FLAP SIMMS

Project Number: EOT 2048C

Project Location: LEA COUNTY NM

Sampler Signature: Lenny Casas

LAB # (Lab Use Only)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATION METHOD: HCL	HNO_3	$NaHSO_4$	ICE	NONE		SAMPLING: DATE	TIME	BTEX 8021B/8260	TPH 418.1/TX 1005	TPH 8015M GRO/DRO	PAH 8270C (8100 New Mexico only)	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/7470	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	Volatiles 8260B	Semi Volatiles 8270C	TDS 160.1	Cations/Anions 375.4/325.3					
	MW 1	2	V	X					X			X			8-31	1010	X															
	EB 1	2	V	X					X			X			8-31	1020	X															

Relinquished by: Date: Time:
Lenny Casas 9-1-00 1405

Received by: Date: Time:

Relinquished by: Date: Time:
9-1-00 1700

Received at Lab by: Date: Time:
9-1-00 1705

REMARKS:
Email Results: EOTT
Invoice: EOTT
FAX Results

30 "F

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: BETH ALDRICH
P.O. BOX 4845
MIDLAND, TEXAS 79704
FAX: 915-520-4310
FAX: 505-397-4701

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ -3 deg. C
Project #: EOT 2048C
Project Name: Leo (Flap) Sims
Project Location: Lea County, N.M.

Sampling Date: 11/20/00
Receiving Date: 11/22/00
Analysis Date: 11/24/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
34218	MW 1	0.004	0.006	<0.001	0.008	0.003
34219	EB 1	<0.001	<0.001	<0.001	<0.001	<0.001
	%IA	86	88	91	96	89
	%EA	91	100	102	108	97
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

12-5-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 E Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC # 276

Project Manager: BETH ALDRICH
Phone #: (505) 397-4882
FAX #: (505) 397-4781

Company Name & Address: ETGI
2540 W MARLAND HOBBS NM

Project #: EOT 2048C
Project Name: LEO (FLAP) SIMS

Project Location: LEA COUNTY, NM
Sampler Signature: Simon Casas

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021/8260	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS 160.1	RCI	CATIONS 6010	ANIONS 300.0	Heavy metals 6010	PAH 8100
	MW 1	5	V	X					X	X	X			11-20	1136	X						X		X	X	X	X
	EB 1	2	V						X		X			↓	1145	X											

Relinquished by:	Date:	Time:	Received by:
Simon Casas	11-22-00	0800	Steven Baggs
Steven Baggs	11-22-00	1125	Kelly Pickford
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS: -3C
INVOICE: EOTT
FAX RESULTS: HOBBS OFFICE
MAIL RESULTS: EOTT