1R - 411

REPORTS

DATE:

12/8/2001

E.O.T.T. ENERGY CORPORATION

SITE INVESTIGATION

CLAY OSBORN JALMAT #22A
Ref. # 2000-10614

SW¼ NW¼ UL-E Section 18 T25S R37E
~½ mile Northwest of Jal
Lea County, New Mexico
Latitude: 32°07'58"N Longitude: 103°12'38"W

December 8, 2001

Prepared by

Environmental Plus, Inc.
2100 Avenue O
P.O. Box 1558
Eunice, New Mexico 88231
Tele 505•394•3481 FAX 505•394•2601

Table of Contents

1.0 INTRODUCTION

This site is located in Unit Letter E, in the SW of the NW of Section 18 T25S R37E, approximately mile northwest of Jal, Lea County New Mexico at Latitude 32°07'58"N and Longitude 103°12'38"W. Clay and Gerry Osborn who live in the ranch headquarters approximately 1 mile east of the site own the property. A topographical map is included in Attachment I. The leak is historical and the crude oil release and recovery volumes unknown. Photographs are included as Attachment IV.

2.0 ENVIRONMENTAL MEDIA CHARACTERIZATION

Chemical parameters of the soil and ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) approved **"General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000"** and the NMOCD guidelines published in the following documents;

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for **contaminants/constituents of concern** (CoCs), i.e., TPH, Benzene, and the sum of Benzene, Toluene, Ethyl Benzene, and total Xylene (BTEX), will be determined based on the NMOCD Ranking Criteria as follows;

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- Wellhead Protection Area, i.e., distance from fresh water supply wells.
- Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

2.1 GEOLOGICAL DESCRIPTION

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by blow sand.

2.2 ECOLOGICAL DESCRIPTION

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (Querqus harvardi) interspersed with Honey Mesquite (Prosopis glandulosa) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and

typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

2.3 AREA GROUND WATER

The unconfined ground water aquifer is estimated to occur beneath the site at approximately 70.0'bgs and is consistent with information provided by the New Mexico Tech Geoinformation website, (www.geoinfo.nmt.edu/.esrimap), the New Mexico Office of the State Engineer, and other local information available for the site. Copies of the State Engineer's Average Depth to Ground Water Reports for Range 36E and 37E in Township 25 are included in Attachment II. According to the USGS, the ground water elevation decreases generally to the southeast.

2.4 AREA WATER WELLS

There are no water wells within 1000 horizontal feet of the site. A Texas-New Mexico Pipeline installed monitor well, referred to as the Clay Osborn Pond Reference Well is located ~1100 horizontal feet southeast of the site.

2.5 AREA SURFACE WATER BODIES

During historic Texas-New Mexico Pipeline remediation activities associated with the Clay Osborn 22A and/or 22B sites during the 1990's, the dirt tank was constructed to contain run-off from the land farm up-gradient of the earthen basin. This basin, used by livestock and wildlife, contains water for most of the year but is intermittent and seasonal. The earthen basin is located approximately 890 horizontal feet southeast of the Jalmat #22A site.

3.0 NMOCD SITE RANKING

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water from the lower most contamination, the NMOCD ranking score for the site is 20 points with the soil remedial goals highlighted below in the Site Ranking Matrix.

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-1000 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*
Ground water Score = 10	*Wellhead Protection Area Score= 0*	*Surface Water Score= 10*
Site Rank (1+2+3) = 10 + 0 + 10 = 20 points		

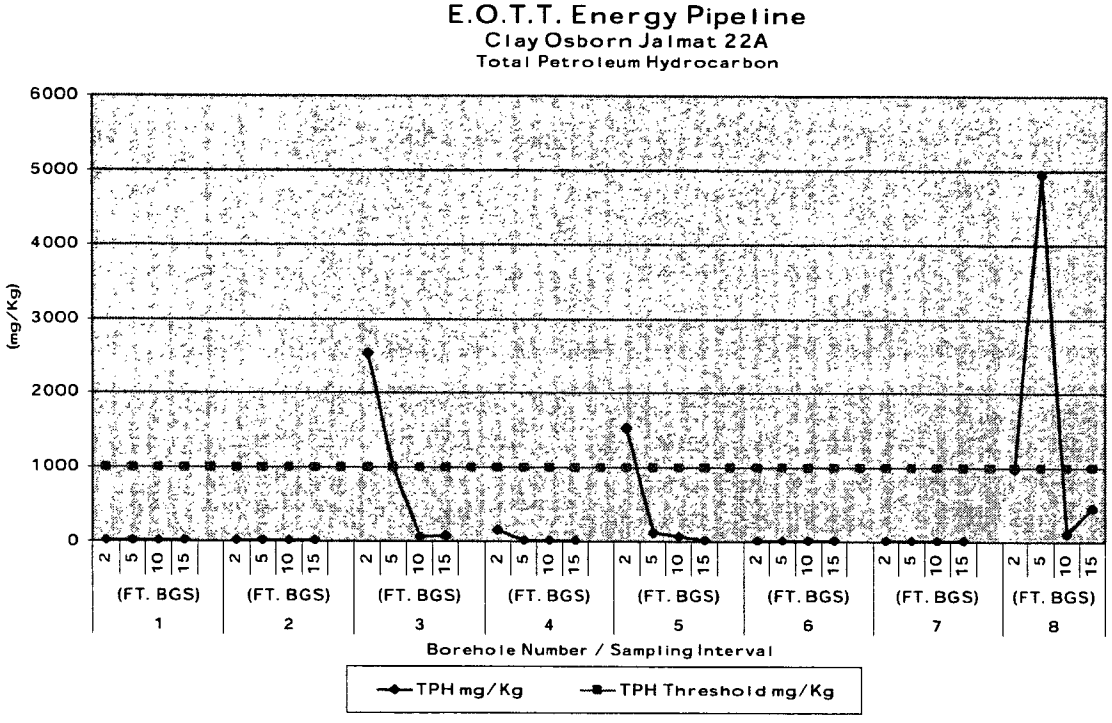
Total Site Ranking Score and Acceptable Remedial Goal Concentrations

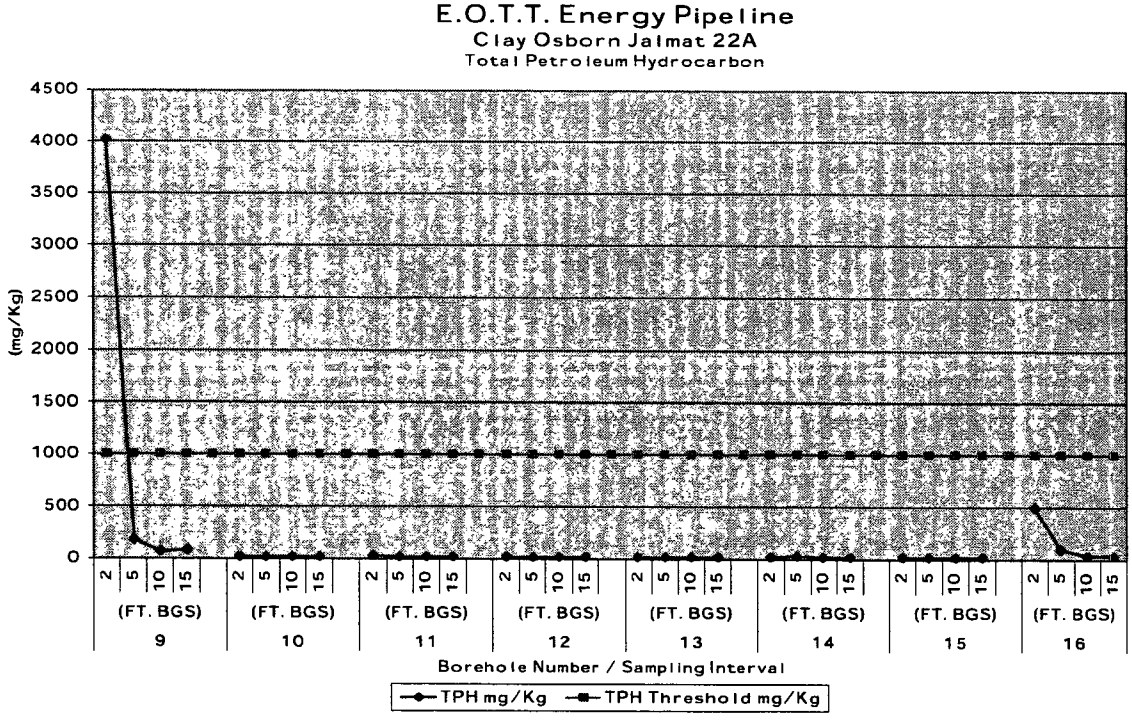
Parameter	>19	10-19	0-9
Benzene[1]	**10 ppm**	10 ppm	10 ppm
BTEX[1]	**50 ppm**	50 ppm	50 ppm
TPH	**100 ppm**	1000 ppm	5000 ppm

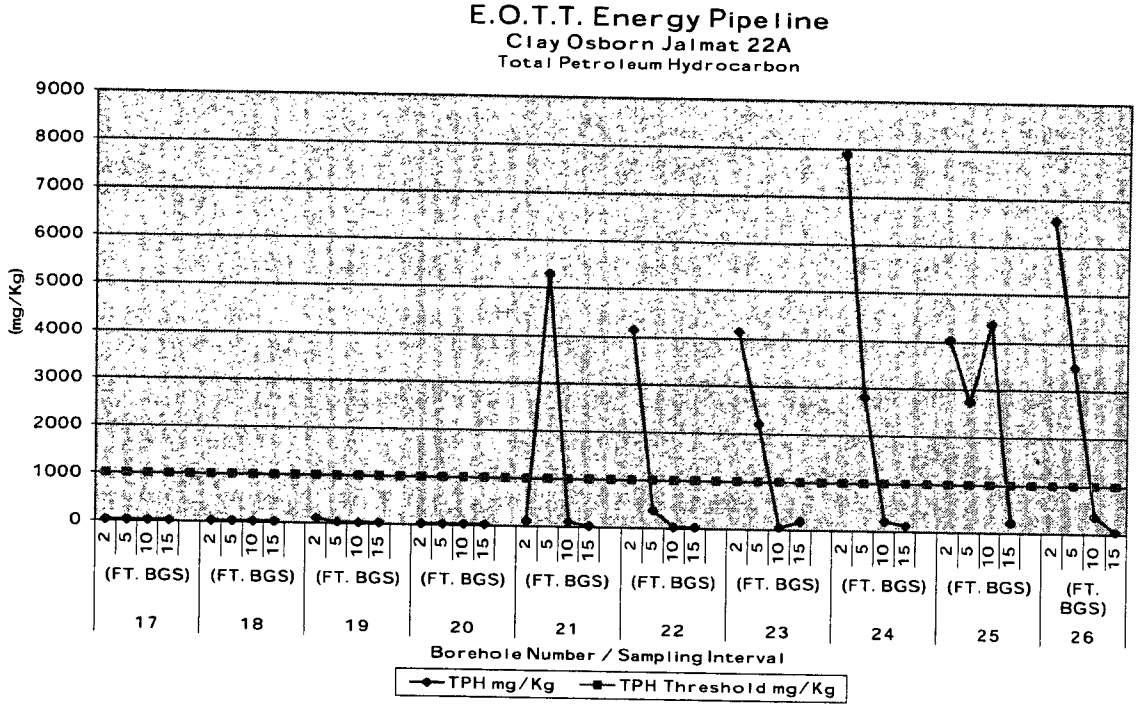
[1]100 ppm field VOC headspace measurement may be substituted for lab analysis

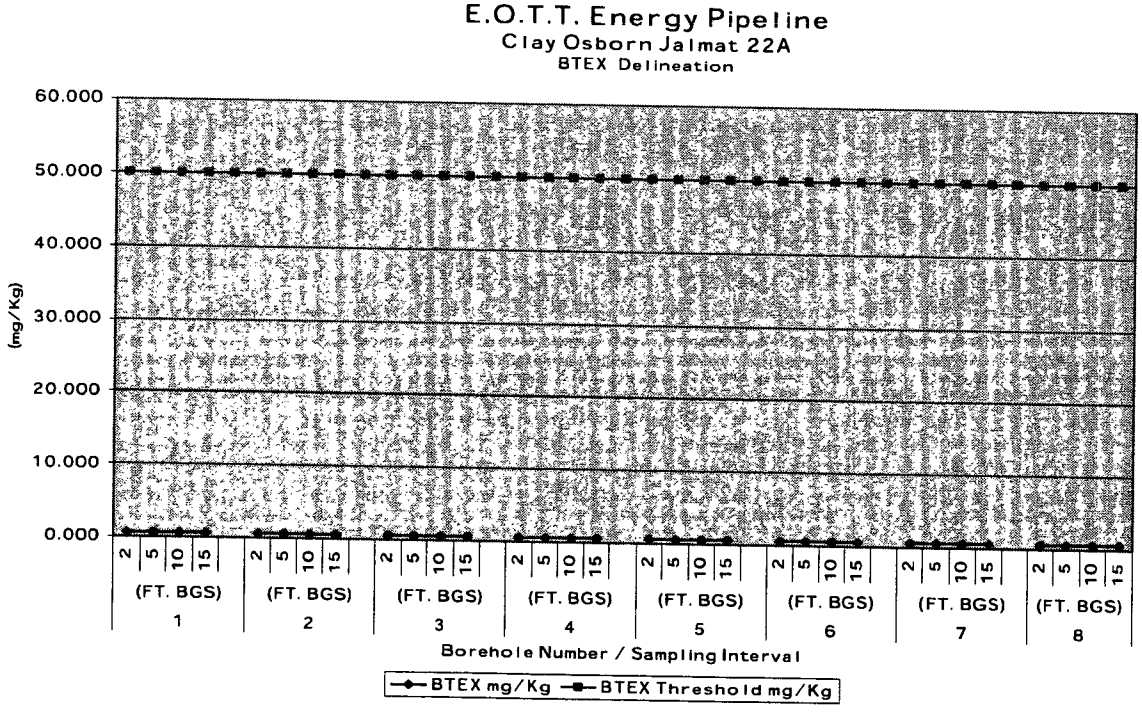
4.0 SUBSURFACE SOIL INVESTIGATION

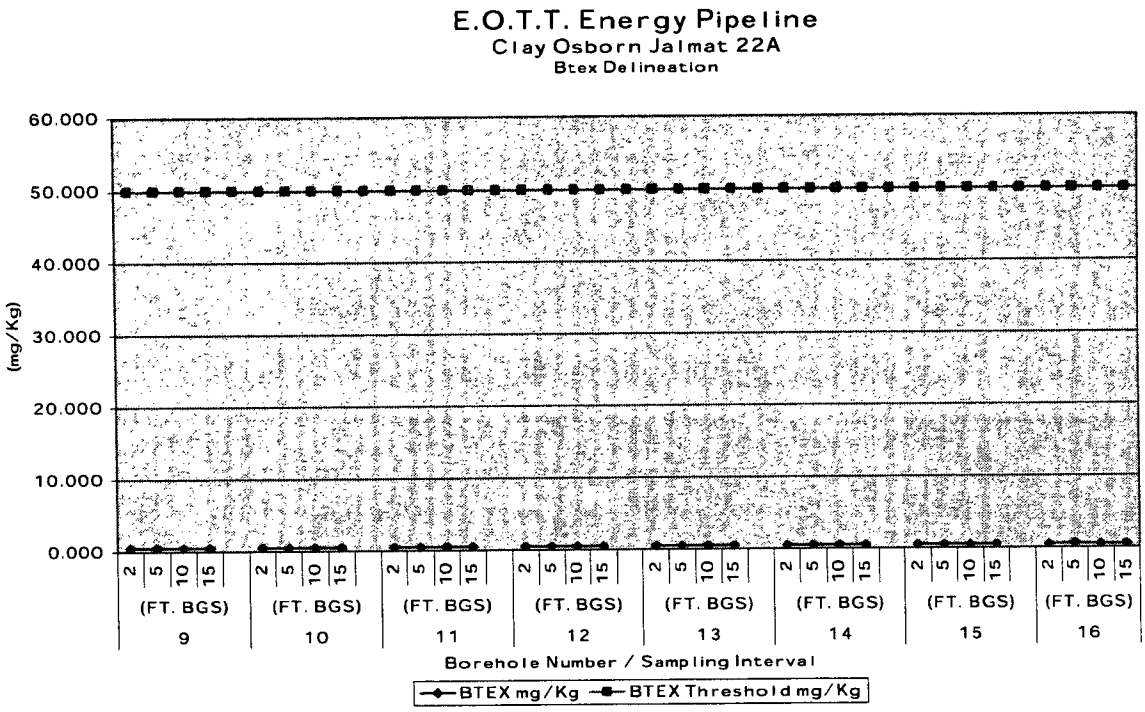
Strategically located boreholes were sampled discretely at 5' vertical intervals using a hollow stem auger and stainless steel sample probe with a vinyl sleeve. All samples were jarred immediately and refrigerated with the remainder decanted into a zip lock bag for Volatile Organic Constituent (VOC) Headspace analysis using a calibrated Photoionization Detector (PID). Sampling equipment was decontaminated routinely between sampling iterations. The site sample location map is included in Attachment I. The visible spill area perimeter defines the horizontal extent of CoC contamination and involves approximately 23,437 ft^2. Vertical contamination above 100 mg/Kg TPH^{8015m} was detected to 15'bgs in the boreholes in the eastern ? of the flow path where the spill apparently pooled and to 10'bgs in the central part of the flow path. The remainder of the site is generally impacted to the 2'bgs interval. The nominal BTEX results attest to the historical nature of the site. Estimated affected expanded (post-excavation) soil volume is 8950yd^3, i.e., 5156 yd^3 to 15'bgs, 2604 yd^3 to 10'bgs, and 1190 yd^3 to 2'bgs. The original analytical reports are provided and summarized in Attachment III. The data is illustrated below.

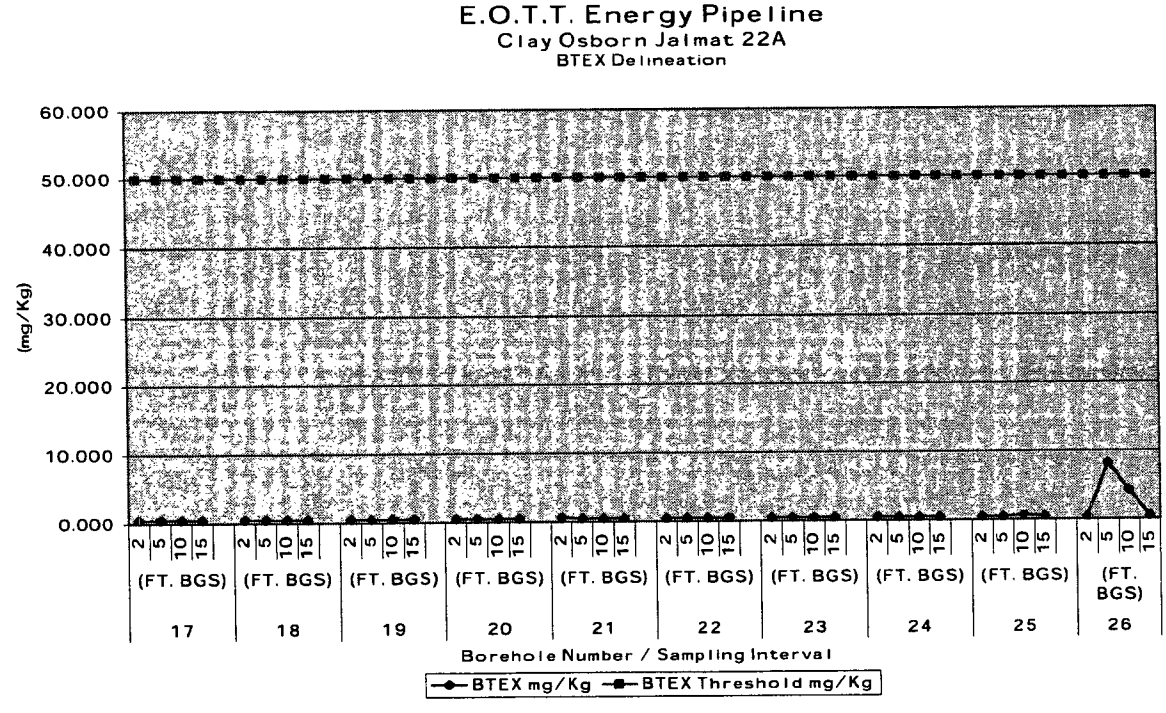

E.O.T.T. Energy Pipeline
Clay Osborn Jalmat 22A
Total Petroleum Hydrocarbon
6000
5000
4000
3000
2000
1000
0
(mg/Kg)
2 5 10 15
(FT. BGS)
1
2
3
4
5
6
7
8
Borehole Number / Sampling Interval
TPH mg/Kg
TPH Threshold mg/Kg


E.O.T.T. Energy Pipeline
Clay Osborn Jalmat 22A
Total Petroleum Hydrocarbon
4500
4000
3500
3000
2500
2000
1500
1000
500
0
(mg/Kg)
2 5 10 15
(FT. BGS)
9
10
11
12
13
14
15
16
Borehole Number / Sampling Interval
TPH mg/Kg
TPH Threshold mg/Kg


E.O.T.T. Energy Pipeline
Clay Osborn Jalmat 22A
Total Petroleum Hydrocarbon
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
(mg/Kg)
2 5 10 15
(FT. BGS)
17
18
19
20
21
22
23
24
25
26
Borehole Number / Sampling Interval
TPH mg/Kg
TPH Threshold mg/Kg


E.O.T.T. Energy Pipeline
Clay Osborn Jalmat 22A
BTEX Delineation
60.000
50.000
40.000
30.000
20.000
10.000
0.000
(mg/Kg)
2 5 10 15
(FT. BGS)
1
2
3
4
5
6
7
8
Borehole Number / Sampling Interval
BTEX mg/Kg
BTEX Threshold mg/Kg

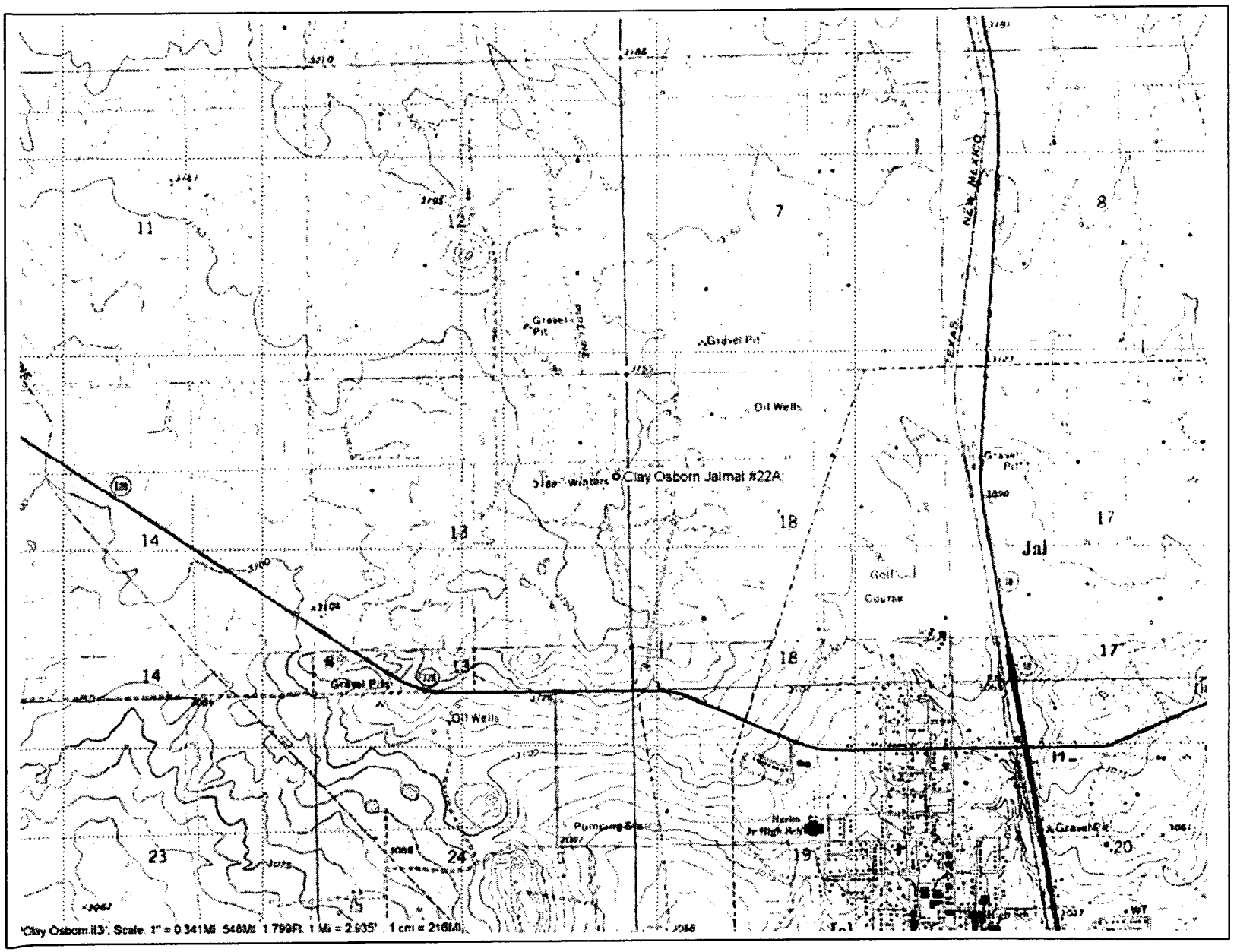

E.O.T.T. Energy Pipeline
Clay Osborn Jalmat 22A
Btex Delineation
60.000
50.000
40.000
30.000
20.000
10.000
0.000
(mg/Kg)
2 5 10 15
(FT. BGS)
9
10
11
12
13
14
15
16
Borehole Number / Sampling Interval
BTEX mg/Kg
BTEX Threshold mg/Kg

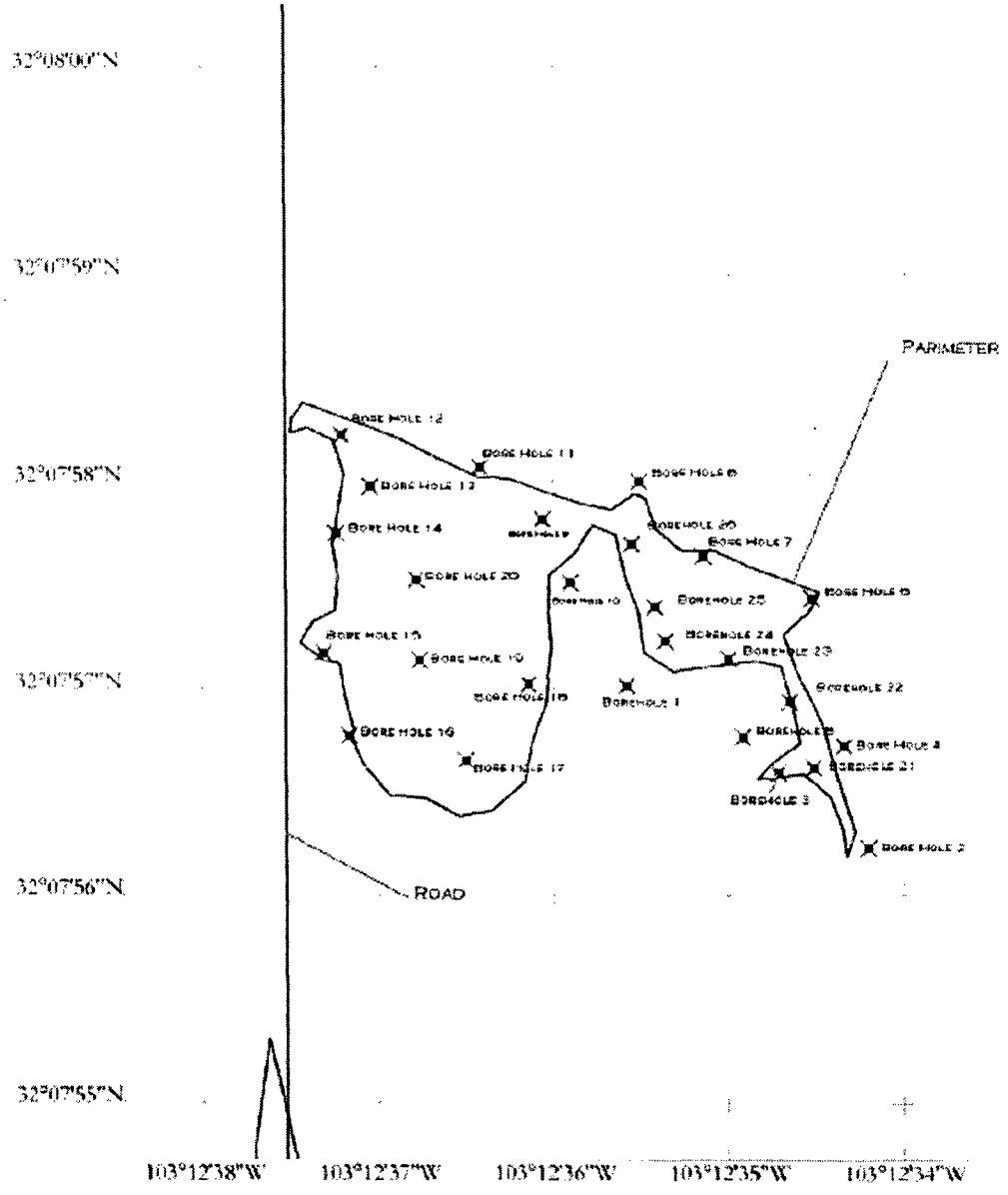

E.O.T.T. Energy Pipeline
Clay Osborn Jalmat 22A
BTEX Delineation
60.000
50.000
40.000
30.000
20.000
10.000
0.000
(mg/Kg)
2 5 10 15
(FT. BGS)
17
18
19
20
21
22
23
24
25
26
Borehole Number / Sampling Interval
BTEX mg/Kg
BTEX Threshold mg/Kg

5.0 Ground Water Investigation

The soil investigation did not warrant a ground water investigation at this site.

Attachment I: Site Maps


Clay Osborn Jalmat #22A
Oil Wells
Gravel Pit
Golf Course
Jal
NEW MEXICO
TEXAS
Winters
Oil Wells
Gravel Pit
Pumping Station
Clay Osborn.tif: Scale: 1" = 0.341Mi 548Mi 1.799Ft 1 Mi = 2.935" 1 cm = 216Mi



Clay Osborn Jalmat 22A

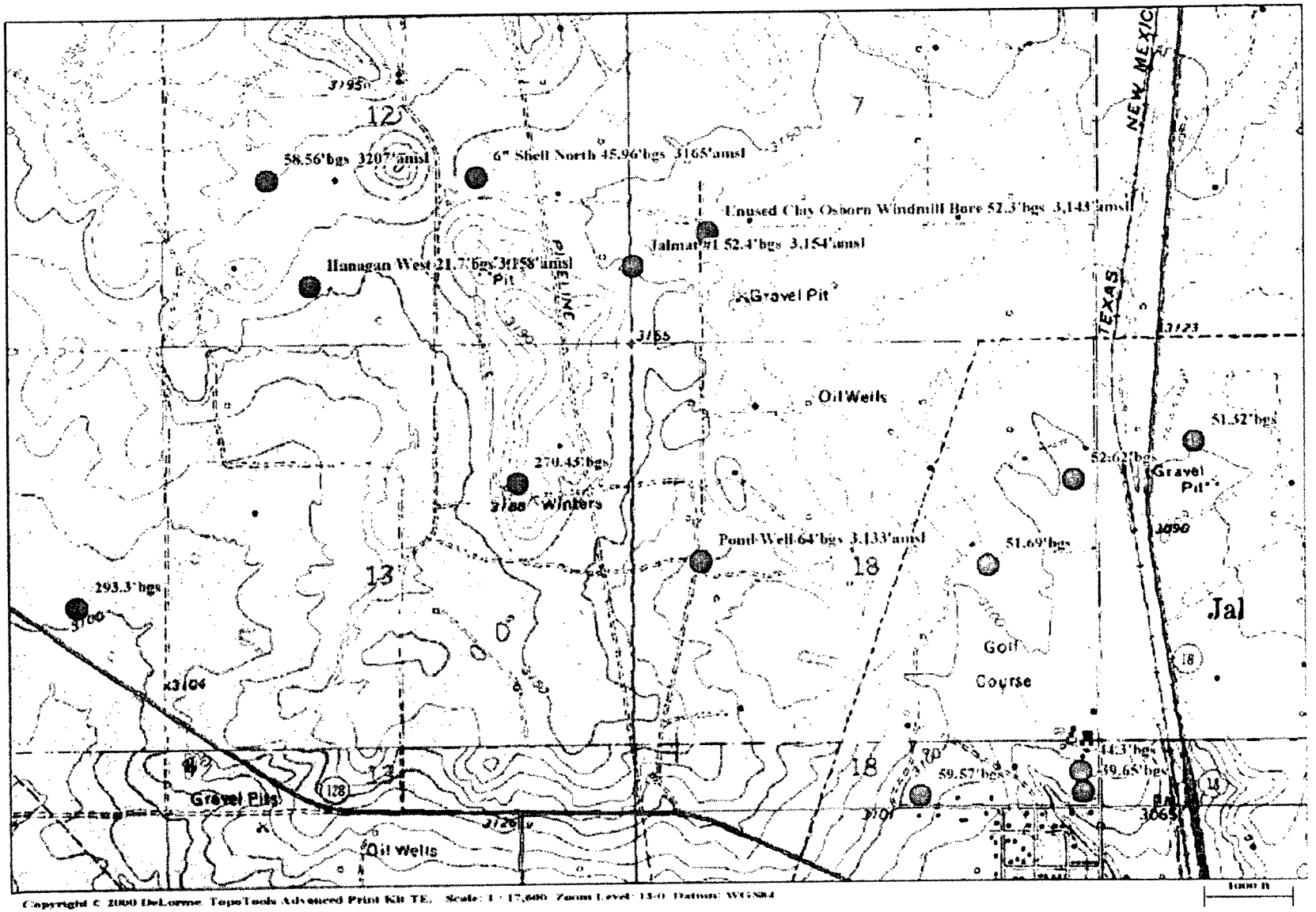
Lat/Long
WGS 1984

N

Scale 1:1,000
0 0.020
Miles

Multiple Files
11/10/2001
GPS Pathfinder® Office
Trimble.

Attachment II: Average Depth to Ground Water Reports and Well Map


58.56'bgs 3207'amsl
6" Shell North 45.96'bgs 3165'amsl
Unused Clay Osborn Windmill Bore 52.3'bgs 3,143'amsl
Jalmat #1 52.4'bgs 3,154'amsl
Hanagan West 21.7'bgs 3158'amsl
Pit
Gravel Pit
NEW MEXIC
TEXAS
Oil Wells
270.45'bgs
Winters
Pond Well 64'bgs 3,133'amsl
51.69'bgs
51.32'bgs
Gravel Pit
293.3'bgs
Jal
Golf
Course
Gravel Pits
Oil Wells
59.57'bgs
14.3'bgs
49.65'bgs
Copyright © 2000 DeLorme. TopoTools Advanced Print Kit TE. Scale: 1 : 17,600 Zoom Level: 13.0 Datum: WGS84

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 25S Range: 36E Sections: 12,13,1,2,11,14,23,24

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 12/29/2001

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg

No Records found, try again

New Mexico Office of the State Engineer

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 25S Range: 37E Sections: 7,6,5,8,18,17,20,19

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report | Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 12/29/2001

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	25S	37E	19				9	37	63	44
CP	25S	37E	20				6	23	60	36

Record Count: 15

Attachment III: Original Analytical Reports And Summaries

E.O.T.T. Energy Pipeline Clay Osborn Jalmat 22A

Borehole	Sampling Interval (FT. BGS[1])	SAMPLE ID#	Date	Lithology	HEADSPACE VOC[2] (ppm)	GRO[3] mg/Kg	DRO[4] mg/Kg	TPH[5] mg/Kg	BTEX mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ehtyl Benzene mg/Kg	m,p-Xylene mg/Kg	o-Xylene mg/Kg
1	2	**ECO22AGP1-02**	**7/27/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	**0.515**	**0.100**	**0.115**	**0.100**	**0.100**	**0.100**
	5	**ECO22AGP1-05**	**7/27/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	10	**ECO22AGP1-10**	**7/27/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	**0.521**	**0.100**	**0.121**	**0.100**	**0.100**	**0.100**
	15	**ECO22AGP1-15**	**7/27/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	**0.553**	**0.100**	**0.153**	**0.100**	**0.100**	**0.100**
2	2	ECO22AGP2-02	7/27/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP2-05	7/27/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP2-10	7/27/2000	Sand	N/A	10	10	*20.000*	0.530	0.100	0.130	0.100	0.100	0.100
	15	ECO22AGP2-15	7/27/2000	Sand	N/A	10	10	*20.000*	0.543	0.100	0.143	0.100	0.100	0.100
3	2	**ECO22AGP3-02**	**7/27/2000**	**Sand**	**N/A**	**50**	**2493**	**2543.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	5	**ECO22AGP3-05**	**7/27/2000**	**Sand**	**N/A**	**50**	**957**	**1007.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	10	**ECO22AGP3-10**	**7/27/2000**	**Sand**	**N/A**	**10**	**57**	**67.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	15	**ECO22AGP3-15**	**7/27/2000**	**Sand**	**N/A**	**10**	**74**	**84.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
4	2	ECO22AGP4-02	7/28/2000	Sand	N/A	10	151	161.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP4-05	7/28/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP4-10	7/28/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP4-15	7/28/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
5	2	**ECO22AGP5-02**	**7/28/2000**	**Sand**	**N/A**	**10**	**1520**	**1530.000**	**0.579**	**0.100**	**0.179**	**0.100**	**0.100**	**0.100**
	5	**ECO22AGP5-05**	**7/28/2000**	**Sand**	**N/A**	**10**	**114**	**124.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	10	**ECO22AGP5-10**	**7/28/2000**	**Sand**	**N/A**	**10**	**65**	**75.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	15	**ECO22AGP5-15**	**7/28/2000**	**Sand**	**N/A**	**10**	**11**	**21.000**	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
6	2	ECO22AGP6-02	7/28/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP6-05	7/28/2000	Sand	N/A	10	10	*20.000*	0.508	0.100	0.100	0.108	0.100	0.100
	10	ECO22AGP6-10	7/28/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP6-15	7/28/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
7	2	**ECO22AGP7-02**	**7/28/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	**0.514**	**0.100**	**0.111**	**0.103**	**0.100**	**0.100**
	5	**ECO22AGP7-05**	**7/28/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	10	**ECO22AGP7-10**	**7/28/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
	15	**ECO22AGP7-15**	**7/28/2000**	**Sand**	**N/A**	**10**	**10**	***20.000***	***0.500***	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
8	2	ECO22AGP8-02	7/28/2000	Sand	N/A	10	976	986.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP8-05	7/28/2000	Sand	N/A	50	4898	**4948.000**	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP8-10	7/28/2000	Sand	N/A	10	102	112.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP8-15	7/28/2000	Sand	N/A	10	451	461.000	*0.500*	0.100	0.100	0.100	0.100	0.100

[1]bgs – below ground surface

[2]VOC–Volatile Organic Contaminants/Constituents

[3]GRO-Gasoline Range Organics C_6-C_{10}

[4]DRO-Diesel Range Organics C_{10}-C_{28}

[5]TPH-Total Petroleum Hydrocarbon = GRO+DRO.

[6]Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

[7]Italicized values are < the instrument detection limit.

[8]N/A Not Analyzed

Reported detection limits are considered "de minimus" values and are included in the GRO/DRO and BTEX summations.

E.O.T.T. Energy Pipeline Clay Osborn Jalmat 22A

Borehole	Sampling Interval (FT. BGS[1])	SAMPLE ID#	Date Taken	Lithology	HEADSPACE VOC[2] (ppm)	GRO[3] mg/Kg	DRO[4] mg/Kg	TPH[5] mg/Kg	BTEX mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ehtyl Benzene mg/Kg	m,p-Xylene mg/Kg
9	2	ECO22AGP9-02	7/28/2000	Sand	N/A	50	3970	4020.000	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP9-05	7/28/2000	Sand	N/A	10	170	180.000	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP9-10	7/28/2000	Sand	N/A	10	56	66.000	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP9-15	7/28/2000	Sand	N/A	10	70	80.000	0.502	0.100	0.100	0.102	0.100
10	2	ECO22AGP10-02	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP10-05	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP10-10	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP10-15	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
11	2	ECO22AGP11-02	7/31/2000	Sand	N/A	10	19	29.000	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP11-05	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP11-10	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP11-15	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
12	2	ECO22AGP12-02	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP12-05	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP12-10	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP12-15	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
13	2	ECO22AGP13-02	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP13-05	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP13-10	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP13-15	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
14	2	ECO22AGP14-02	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP14-05	7/31/2000	Sand	N/A	10	21	31.000	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP14-10	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP14-15	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
15	2	ECO22AGP15-02	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP15-05	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP15-10	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP15-15	7/31/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100
16	2	ECO22AGP16-02	8/1/2000	Sand	N/A	10	484	494.000	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP16-05	8/1/2000	Sand	N/A	10	85	95.000	0.586	0.100	0.117	0.153	0.116
	10	ECO22AGP16-10	8/1/2000	Sand	N/A	10	24	34.000	*0.500*	0.100	0.100	0.100	0.100
	15	ECO22AGP16-15	8/1/2000	Sand	N/A	10	24	34.000	*0.500*	0.100	0.100	0.100	0.100

[1]bgs – below ground surface

[2]VOC–Volatile Organic Contaminants/Constituents

[3]GRO-Gasoline Range Organics C_6-C_{10}

[4]DRO-Diesel Range Organics C_{10}-C_{28}

[5]TPH-Total Petroleum Hydrocarbon = GRO+DRO.

[6]Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

[7]Italicized values are < the instrument detection limit.

[8]N/A Not Analyzed

Reported detection limits are considered "de minimus" values and are included in the GRO/DRO and BTEX summations.

E.O.T.T. Energy Pipeline Clay Osborn Jalmat 22A

Borehole	Sampling Interval (FT. BGS[1])	SAMPLE ID#	Date Taken	Lithology	HEADSPACE VOC[2] (ppm)	GRO[3] mg/Kg	DRO[4] mg/Kg	TPH[5] mg/Kg	BTEX mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ehtyl Benzene mg/Kg	m,p-Xylene mg/Kg	o-Xylene mg/Kg
17	2	ECO22AGP17-02	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP17-05	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP17-10	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP17-15	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
18	2	ECO22AGP18-02	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP18-05	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP18-10	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP18-15	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
19	2	ECO22AGP19-02	8/1/2000	Sand	N/A	50	50	100.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP19-05	8/1/2000	Sand	N/A	10	14	24.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP19-10	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP19-15	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
20	2	ECO22AGP20-02	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP20-05	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP20-10	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP20-15	8/1/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
21	2	ECO22AGP21-02	8/2/2000	Sand	N/A	10	98	108.000	0.588	0.100	0.188	0.100	0.100	0.100
	5	ECO22AGP21-05	8/2/2000	Sand	N/A	50	5240	5290.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP21-10	8/2/2000	Sand	N/A	10	87	97.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP21-15	8/2/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
22	2	ECO22AGP22-02	8/2/2000	Sand	N/A	50	4098	4148.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP22-05	8/2/2000	Sand	N/A	10	357	367.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP22-10	8/2/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP22-15	8/2/2000	Sand	N/A	10	10	*20.000*	*0.500*	0.100	0.100	0.100	0.100	0.100
23	2	ECO22AGP23-02	8/2/2000	Sand	N/A	92	4052	4144.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP23-05	8/2/2000	Sand	N/A	161	2040	2201.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP23-10	8/2/2000	Sand	N/A	10	30	40.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP23-15	8/2/2000	Sand	N/A	10	168	178.000	*0.500*	0.100	0.100	0.100	0.100	0.100
24	2	ECO22AGP24-02	8/3/2000	Sand	N/A	74	7823	7897.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	5	ECO22AGP24-05	8/3/2000	Sand	N/A	135	2678	2813.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	10	ECO22AGP24-10	8/3/2000	Sand	N/A	10	202	212.000	*0.500*	0.100	0.100	0.100	0.100	0.100
	15	ECO22AGP24-15	8/3/2000	Sand	N/A	10	109	119.000	*0.500*	0.100	0.100	0.100	0.100	0.100

[1]bgs – below ground surface

[2]VOC–Volatile Organic Contaminants/Constituents

[3]GRO-Gasoline Range Organics C_6-C_{10}

[4]DRO-Diesel Range Organics C_{10}-C_{28}

[5]TPH-Total Petroleum Hydrocarbon = GRO+DRO.

[6]Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

[7]Italicized values are < the instrument detection limit.

[8]N/A Not Analyzed

Reported detection limits are considered "de minimus" values and are included in the GRO/DRO and BTEX summations.

E.O.T.T. Energy Pipeline Clay Osborn Jalmat 22A

Borehole	Sampling Interval (FT. BGS[1])	SAMPLE ID#	Date Taken	Lithology	HEADSPACE VOC[2] (ppm)	GRO[3] mg/Kg	DRO[4] mg/Kg	TPH[5] mg/Kg	BTEX mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ehtyl Benzene mg/Kg	m,p-Xylene mg/Kg
25	2	ECO22AGP25-02	8/3/2000	Sand	N/A	50	3980	**4030.000**	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP25-05	8/3/2000	Sand	N/A	120	2621	**2741.000**	*0.500*	0.100	0.100	0.100	0.100
	10	ECO22AGP25-10	8/3/2000	Sand	N/A	331	4040	**4371.000**	0.599	0.100	0.100	0.100	0.143
	15	ECO22AGP25-15	8/3/2000	Sand	N/A	10	208	218.000	*0.500*	0.100	0.100	0.100	0.100
26	2	ECO22AGP26-02	8/3/2000	Sand	N/A	214	6346	**6560.000**	*0.500*	0.100	0.100	0.100	0.100
	5	ECO22AGP26-05	8/3/2000	Sand	N/A	543	2947	**3490.000**	8.155	0.100	0.645	1.040	3.480
	10	ECO22AGP26-10	8/3/2000	Sand	N/A	15	348	363.000	4.201	0.100	0.934	0.505	1.820
	15	ECO22AGP26-15	8/3/2000	Sand	N/A	10	28	38.000	*0.500*	*0.100*	*0.100*	*0.100*	*0.100*

[1]bgs – below ground surface

[2]VOC–Volatile Organic Contaminants/Constituents

[3]GRO-Gasoline Range Organics C_6-C_{10}

[4]DRO-Diesel Range Organics C_{10}-C_{28}

[5]TPH-Total Petroleum Hydrocarbon = GRO+DRO.

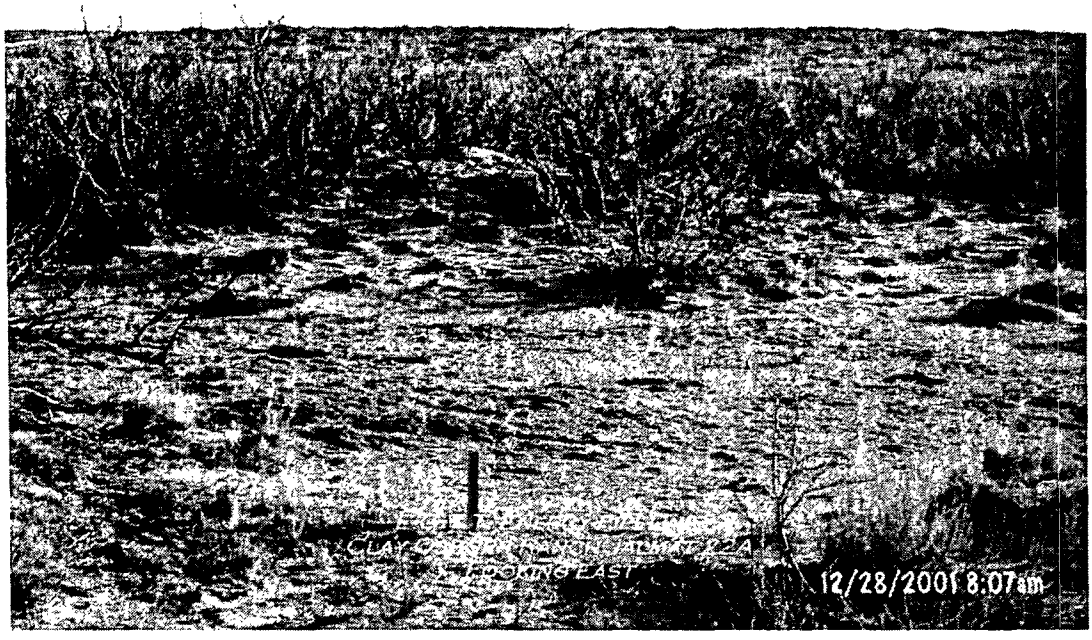
[6]Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

[7]Italicized values are < the instrument detection limit.

[8]N/A Not Analyzed

Reported detection limits are considered "de minimus" values and are included in the GRO/DRO and BTEX summations.

Attachment IV: Photographs


12/28/2001 8:07am


E.O.T.T. ENERGY PIPELINE
CLAY OSBORN RANCH JALMAT 22A
LOOKING EAST
12/28/2001 8:07am

Attachment V: Site Information and Metrics Form

Site Information and Metrics

SITE: Clay Osborn Jalmat #22A	Assigned Site Reference #2000-10614
Company: EOTT Energy Pipeline	
Company Street Address: 5805 E. Highway 80, Midland, Texas 79701	
Company Mailing Address: P.O. Box 1660	
Company City, State, Zip: Midland, Texas 79702	
Company Representative: Wayne Brunette	
Company Representative Telephone: 915.553.7557	
Company Telephone: 915.684.3479 Fax: 915.684.3456	
Fluid volume released (bbls) =?	
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days.	
(Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #22A	
Source of contamination: Pipe Line	
Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn	
LSP Dimensions: affected area = 340' X 150'	
LSP Area = 23,437 ft^2	
Latitude: 32°07'58"N	
Longitude: 103°12'38"W	
Elevation above mean sea level: ~3,150'amsl	
Location- Unit or : SW of NW UL-E	
Location- Section = 18	
Location- Township = 25S	
Location- Range = 37E	
Surface water body within 1000 ' radius of site: Intermittent earthen livestock watering tank 890' East	
Domestic water wells within 1000' radius of site: None	
Agricultural water wells within 1000' radius of site: None	
Public water supply wells within 1000' radius of site: None	
Depth from land surface to ground water (DG): ~70	
Depth of contamination (DC): 15'bgs	
Depth to ground water (DG – DC = DtGW) 55'bgs	

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-1000 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*
Ground water Score = 10	*Wellhead Protection Area Score= 0*	*Surface Water Score= 10*
Site Rank (1+2+3) = 10 + 0 +10 = 20 points		

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	10-19	0-9
Benzene[1]	**10 ppm**	10 ppm	10 ppm
BTEX[1]	**50 ppm**	50 ppm	50 ppm
TPH	**100 ppm**	1000 ppm	5000 ppm

[1]100 ppm field VOC headspace measurement may be substituted for lab analysis