1R - 468

REPORTS

DATE:

4/2006

GENERAL REMEDIATION WORK PLAN

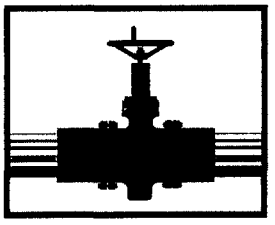
Clay Osborn
Rocky Top Ranch Sites
Jal, Lea County, New Mexico
Sections 7, 12 and 13, T25S R36E
Sections 7 and 18, T25S R37E

April 2006

Prepared For:

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Prepared By:



PLAINS
PIPELINE, L.P.

Plains Pipeline, L.P.
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TABLE OF CONTENTS

1.0 BACKGROUND

Plains Pipeline, L.P. (Plains) is the owner/operator of several pipelines present on the Clay Osborn Rocky Top Ranch property located in Jal, New Mexico. These pipeline assets were acquired by Eott Energy (later renamed Link Energy) from Shell and from Texas-New Mexico Pipe Line Company (TNMPLC) between 1993 and 1999. Plains acquired the Link Energy assets on April 1, 2004.

The Rocky Top Ranch is located in southern Lea County, New Mexico approximately ¾-mile northwest of Jal and made up of the SE¼ of Section 7, the S½ of Section 12 and the entire Section 13 of Township 25 South (T25S) and Range 36 East (R36E) and the S½ of Section 7 and the entire Section 18 of T25S and R37E.

This General Work Plan is provided for NMOCD review and approval. A list of the ten (10) sites that are the subject of this General Work Plan is included in Table 1 in Attachment A. A Site Location Map is included as Figure 1 in Attachment B. Please note that a site-specific work plan will be prepared for each site and will include a summary of the investigation data, categorization of the site based on site-specific characteristics, and a detailed summary of the proposed remedial activities.

2.0 PLAN OBJECTIVES

Plains proposes to remediate crude oil impacted sites at the Rocky Top Ranch, consistent with the remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) "*NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993.*" In addition, when applicable, appropriate risk-based thresholds for the contaminants of concern (CoCs) will be proposed based on the relative risk posed by the CoC residuals to local groundwater, area water wells, surface water bodies and impacts on surface reclamation success.

Plains has prepared the following general work plan for typical or standardized soil remediation objectives that will: 1) limit the amount of surface impact to the areas surrounding each of the remediation sites; 2) be effective on all the sites so that remediation at each site can be conducted in a similar manner; 3) be in accordance with New Mexico Oil Conservation Division (NMOCD) general soil remediation guidelines and accepted practices for the area; and 4) use risk-based remediation principles when and where practical. Information gathered during the subsurface site investigations conducted in these impacted areas in 2001 revealed three (3) potential remediation scenarios: 1) sites where the surface areas have restored themselves naturally, the surface expression of the release is difficult to identity, and the impacts are limited to the surface and/or shallow soils; 2) sites where impacts are limited in depth and total excavation and treatment of the impacted soil is practical; and, 3) sites where soil impacts are deeper and partial excavation of the impacted soil with risk-based closure is warranted. The investigation data also indicates that soil impacts are generally deeper at the source of pipeline leak and shallower along the

flowpath. Prior to initiating any remedial activities at these sites, several of the sites will require soil delineation and evaluation of potential groundwater impacts. Each remediation scenario is described further in Section 5.0 below.

3.0 INVESTIGATION AND DELINEATION OF NEW SITES

There are four (4) previously, uninvestigated historical sites that are potentially subject to remediation. Plains will conduct a site investigation at each location to delineate the vertical and horizontal extent of soil impacts and assess the potential impact to groundwater. In the event one or more of the six (6) previously identified sites requires additional delineation prior to or during the soil remediation phase of work, Plains will conduct these activities. The site-specific Work Plan for each site will contain details of the proposed investigation activities such as location, number and depth of soil borings as well as a sampling and analysis plan.

4.0 PROPOSED TPH AND BTEX REMEDIAL GOALS

Based on the results of the previous investigation activities, the site-specific remedial goals in soil are 10 mg/Kg for benzene, 50 mg/Kg for BTEX and 100 mg/Kg for TPH. However, for those sites where risk-based closure will be proposed, Plains will install an impermeable liner at a depth of 10 to 15 feet bgs to isolate the deeper soil impacts and the treated soils, and the site-specific remedial goals of 10 mg/Kg benzene, 50 mg/Kg BTEX, and 100 mg/Kg TPH will only apply to the sidewalls (lateral extent) of the excavation. For soils excavated, treated, and utilized as backfill over a liner, the site-specific remedial goals will be 10 mg/Kg benzene, 50 mg/Kg BTEX, and 2,000 mg/Kg TPH.

NO
1,000 ppm

5.0 REMEDIATION STRATEGIES

5.1 SURFACE RESTORATION SITES (SCENARIO 1)

For at least one of the known sites, the investigation data indicates the surface area has restored itself naturally, the surface expression of the release is difficult to identity, the impacts are limited to the surface and/or shallow soils, and there is no threat to groundwater. Listed below are the typical steps involved for a site in this category.

- Scrape the surface asphaltines where apparent and remove;
- Blend the underlying 1 to 2 feet of soil with native soil and contour;
- Do not disturb areas that have already re-vegetated.

5.2 TOTAL EXCAVATION (SCENARIO 2)

At several of the sites, investigation data indicates that soil impacts are limited in vertical extent (i.e. 10 to 15 feet in depth) and total excavation of the impacted soil is practical. Listed below are the typical steps involved for a site in this category.

- Excavation of impacted soil to below site guidelines.
- Collect and analyze soil samples from the walls and floor of the excavation to confirm that the remediation has met the site guidelines.
- Relocation of excavated soil to the centralized soil treatment area for blending and aeration.
- Collect and analyze treated soil to confirm that the soil treatment activities have met the site guidelines.
- Prepare a risk-based closure proposal for submittal and approval by the NMOCD.
- Install an impermeable liner in the bottom of the excavation to isolate the excavated/treated soils from the underlying non-impacted soils to prevent vertical migration of petroleum hydrocarbons and allow these soils to further attenuate over time (see liner detail below).
- Backfill the excavation with treated soil and restore the area to as close as possible to pre-spill conditions.

5.3 LIMITED EXCAVATION AND RISK-BASED CLOSURE (SCENARIO 3)

At several of the sites, investigation data indicates that soil impacts in the source area extend to between 10 feet and 45 feet below ground surface and excavation of all of the impacted soil to below NMOCD guidelines is not practical for these sites. Several of these sites also have an impacted "flowpath" area where the depth of the soil impacts are generally less than 10 feet in depth and excavation of the flowpath area is practical. Listed below are the typical steps involved for a site in this category.

- Excavation of impacted soil to approximately 10 feet below ground surface where investigation data indicates deeper soil impacts remain.
- If portions of the impacted area (flowpath for example) appear to be shallow, then excavate the impacted soil from shallow impacted areas to below NMOCD guidelines.
- Collect and analyze soil samples from the walls and floor of the excavation to confirm that the horizontal extent of the soil remediation effort has met the site guidelines.
- Relocation of excavated soil to the centralized soil treatment area for blending and aeration.
- Collect and analyze treated soil to confirm that the soil treatment activities have met the site guidelines.
- Prepare a risk-based closure proposal for submittal and approval by the NMOCD.
- Install an impermeable liner in the bottom of the excavation to isolate the impacted soil and prevent vertical migration of petroleum hydrocarbons (see liner details below).
- Backfill the excavation with treated soil and restore the area to as close as possible to pre-spill conditions.

5.4 LINER DETAILS

Soils impacted above site standards will be isolated from the near surface environment with the installation of an oversized 20 mil polyethylene liner that is impermeable and impervious to water and petroleum hydrocarbon. Establishment of the 3-foot wide clean area buffer around the contaminated soil in the floor of the excavation will be determined using a calibrated photoionization detector (PID) and confirmed by laboratory analysis of grab samples collected around the perimeter of the excavation. The liner shall be cushioned above and below with a 3 to 4-inch layer of sand or a geotextile to protect it from puncture and tearing during the backfilling process. After the liner has been properly installed, the excavation will be backfilled with soil remediated to acceptable levels in the soil treatment area, contoured to the natural grade and seeded with a seed mix acceptable to the landowner.

6.0 SAMPLING AND LABORATORY ANALYSIS

The Work Plan soil sampling program will consist in general of the collection of an appropriate number of confirmation soil samples from the walls and floor of the excavations and from the treated soil stockpiles. Each site-specific Work Plan will include details as to the number and location of confirmation soil samples. Soil samples will be analyzed for TPH gasoline range organics (GRO) and TPH diesel range organics (DRO) utilizing EPA Method SW-846 #8015 and benzene, toluene, ethylbenzene and xylene (BTEX) using EPA Method SW-846 #8021b.

The soil samples collected will be placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler which was secured with a custody seal. The samples and completed chain-of-custody forms will be relinquished to the selected laboratory for analysis.

7.0 CENTRALIZED SOIL TREATMENT FACILITY

Plains proposes to utilize the soil landfarm area currently located adjacent to the Jalmat #22A site as a centralized soil treatment and processing area. Prior to transporting the excavated soil to this area, the existing soil in the landfarm will be pushed up into stockpiles with a bulldozer to be later utilized as blending material during the soil treatment process. Soil excavated from each of the remediation sites will be loaded and transported to this centralized soil treatment facility where the soil will be blended, screened, and/or aerated to reduce contaminant concentrations to Work Plan limits (10 mg/Kg benzene, 50 mg/Kg BTEX, and 2,000 mg/Kg TPH). Treated soils will be segregated into approximate 500 cubic yard stockpiles.

To verify that the soil treatment process has met the Work Plan objectives, a composite soil sample will be collected and analyzed from each 500 cubic yard stockpile. Soil samples will be analyzed for TPH gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA Method SW-846 #8015 and benzene, toluene, ethylbenzene and xylene (BTEX) using EPA Method SW-846 #8021b. If laboratory results indicate the stockpile sample is below the site-specific remediation goals, the stockpiled soil will be flagged as ready to be utilized for backfill over a liner. In the event the

stockpile analytical results indicate TPH and/or BTEX results above the site-specific remediation goals, then the stockpile will be reprocessed and the sampling/verification procedure will be repeated.

8.0 BACKFILL AND SITE RESTORATION

Upon verification that the excavation activities have met the goals of the Work Plan, each site will be backfilled with treated soil that has also met the objective of the Work Plan for reuse as backfill. The backfill will be placed and compacted in lifts and the surface will be contoured to match the surrounding area. The site will be reseeded with a native grasses.

9.0 NOTIFICATIONS

At least 48-hours prior to collecting laboratory samples, Plains will notify the Hobbs, New Mexico office of the NMOCD of the intent to collect laboratory samples.

10.0 REPORTING

Remediation and monitoring activities and analytical information will be summarized in a closure report for each individual release site and submitted to the NMOCD requesting "no further action" be required at that particular site.

11.0 SITE RESTORATION

After the sites have been backfilled, the landfarm area and remediated release site will be reseeded. Follow-up inspections will be made at least quarterly to verify acceptable revegetation of the landfarmed area and the other areas disturbed during remediation of the sites.

TABLES

Plains Pipeline, L.P. Clay Osborn – Rocky Top Ranch Sites Jal, Lea County, New Mexico		
Site Name	**Legal Description**	**GPS Coordinates**
Jalmat #1	Section 7, T25N, R37E	Lat : 32.1403 N Long : 103.2106 W
Jalmat #2	Section 7, T25N, R37E	Lat : 32.1408 N Long : 103.2106 W
Jalmat #3	Section 7, T25N, R37E	Lat : 32.1378 N Long : 103.2106 W
Jalmat #22A	Section 18, T25N, R37E	Lat : 32.~~1328~~ N ~~1329~~ 1328 Long : 103.2106 W
Jalmat #22B	Section 18, T25N, R37E	Lat : 32.1319 N Long : 103.2106 W
Shell North 6" (East of Road)	Section 12, T25N, R36E	Lat : 32.1428 N Long : 103.2161 W
TM –245-2	Section 18, T25N, R37E	Lat : 32.1314 N Long : 103.2105 W
DT-27	Section 7, T25N, R37E	Lat : 32.1402 N Long : 103.2104W
SH 0193-2	Section 12, T25N, R36E	Lat : 32.1418 N Long : 103.2125 W
SH 0184-1	Section 18, T25N, R37E	Lat : 32.1313 N Long : 103.1983 W

IR-412

IR-411

IR-83

FIGURES

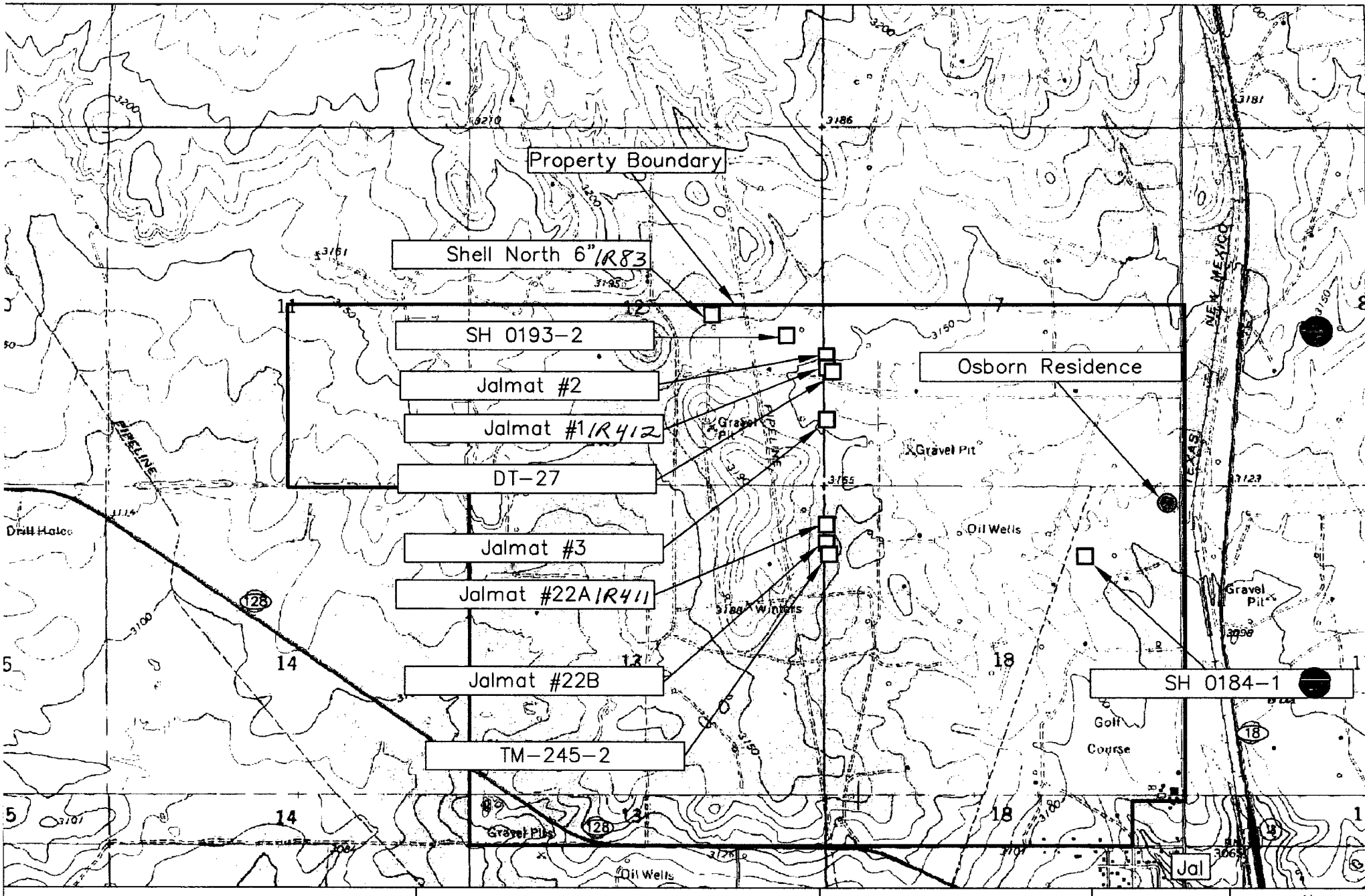


Figure 1 Area Map Plains Pipeline, L.P. Clay Osborn Rocky Top Ranch	Lea County, New Mexico SE¼ Sec. 11, S½ Sec. 12, & 13 T25S R36E S½ Sec. 7 and Sec. 18, T25S R37E Elevation: ~3,100 feet amsl	DWG By: Daniel Dominguez January 2006	REVISED:
		0 2000 4000 Feet	SHEET 1 of 1

AGREEMENT OF SETTLEMENT AND RELEASE

THIS AGREEMENT OF SETTLEMENT AND RELEASE (the "Agreement'), made and entered into as of the ____ day of _____, 2006, by WILBUR C. OSBORN and GERALDINE B. OSBORN, for the benefit of TEXAS-NEW MEXICO PIPELINE COMPANY INC., SHELL PIPELINE COMPANY LP, TEXACO PIPELINE INC., SHELL PIPE LINE LLC (DE) TEXACO TRADING AND TRANSPORTATION INC., EQUILON ENTERPRISES LLC d/b/a SHELL OIL PRODUCTS US, EQUILON PIPELINE COMPANY LLC n/k/a SHELL PIPELINE COMPANY LP, SHELL OIL COMPANY, PLAINS PIPELINE, L.P. and all other "Released Entities" as further defined below:

RECITALS

(A) Landowners are the owners of the "Property" (further defined in Exhibit 1 hereto) or have the legal right and authority, through binding legal agreements, to control or act on behalf of any other interest holders of the Property, including the right to settle and release any and all claims with respect to the Property.

(B) The term "Released Entities" shall mean and include TEXAS-NEW MEXICO PIPELINE COMPANY INC. INC., SHELL PIPELINE COMPANY LP, TEXACO PIPELINE INC., SHELL PIPE LINE LLC (DE) TEXACO TRADING AND TRANSPORTATION INC., EQUILON ENTERPRISES LLC d/b/a SHELL OIL PRODUCTS US, EQUILON PIPELINE COMPANY LLC n/k/a SHELL PIPELINE COMPANY LP, SHELL OIL COMPANY, PLAINS PIPELINE, L.P., and all their respective successors, assignees, representatives, officers, directors, employees, agents, principals, parents, subsidiaries, affiliates, partners, members,

predecessors, insurers, including American International Specialty Lines Insurance Company, servants, and attorneys, including Miller Stratvert P.A., Thompson & Knight, LLP and Locke, Lidell & Sapp. This release shall be fully binding and a complete settlement between the Plaintiffs and Released Entities, their respective executors, administrators, personal representatives, heirs, successors, assignees, representatives, agents and all parties represented by or claiming through such Parties.

(C) The term "Landowners" shall mean and include WILBUR C. OSBORN and GERALDINE B. OSBORN, including any future owner of any interest in the Property claiming under the present interest holders in the Property, and the respective executors, administrators, personal representatives, heirs, devisees, successors and assigns of each and any of said persons, and any and all persons for whom said persons own and/or control any property interest, including lessors of surface rights in the Property.

(D) The Landowners desire to enter into this Agreement with respect to the Property.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS THAT, for and in consideration of Ten Dollars and no/100 ($10.00) and other good and valuable consideration, WILBUR C. OSBORN and GERALDINE B. OSBORN, individually, and as representatives of all Landowners as hereinabove defined, do hereby release and agree as follows:

LANDOWNERS ON BEHALF OF THEMSELVES OR ANY OTHER ENTITIES HEREBY COMPLETELY RELEASE AND FOREVER DISCHARGE THE RELEASED ENTITIES (AS DEFINED ABOVE) to the full extent permitted by law from any and all claims, liabilities, demands, obligations, actions, causes of action or complaints of whatever nature which were brought, or which could have been brought by the Landowners, whether known or

unknown, arising from, or which are the subject of, WILBUR C. OSBORN and GERALDINE B. OSBORN v. TEXAS-NEW MEXICO PIPELINE COMPANY, INC.; TEXACO PIPELINE INC., SHELL PIPELINE COMPANY, L.P.; SHELL PIPELINE GP LLC; SHELL PIPELINE CORPORATION/SHELL PIPELINE LLC (DE), NO. CIV-04-1-34 LCS/KBM, UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW MEXICO, or arising from or relating to the Property including but not limited to future movement or migration of any contamination which is on or under the Property (as hereinafter defined); provided however that Plaintiffs do not release Plains Pipeline, L.P. ("Plains") from damages which might arise as a result of their future operations on the Property after the date of this Agreement. The Osborns acknowledge that this release covers all damages related to the remediation of the sites listed in Exhibit B by Plains and any other areas associated with the remediation so long as Plains complies with the separate Access Agreement to be entered into between Wilbur C. Osborn and Geraldine B. Osborn and Plains. This release does not cover damages resulting from a breach of the Access Agreement.

1. Landowners' release and discharge against the Released Entities is intended to be as broad a release of claims against the predecessors, successors, parents, subsidiaries and affiliates of the Release Entities and all of the officers, directors, employees and agents of such companies, as is permitted by law. All Released Entities shall have standing to enforce the release terms of this Agreement, and Landowners to the Property stipulate that the other Released Entities are intended beneficiaries of this Agreement.

2. To the full extent permitted by law, the terms and provisions of this Agreement are and shall be covenants running with the land binding upon the undersigned and any and every other current or future person or legal entity within the definition of the term

Landowners to the end that all who hereafter deal with the Property will have notice of and be subject to this Agreement.

IN WITNESS WHEREOF, this Agreement is executed as of the day and year first above written.

WILBUR C. OSBORN and
GERALDINE B. OSBORN

By: _____
WILBUR C. OSBORN

By: _____
GERALDINE B. OSBORN

SUBSCRIBED and SWORN TO before me on this the ____ day of _____, 2006, by WILBUR C. OSBORN.

_____
NOTARY PUBLIC, State of _____
Notary's Printed Name: _____

My commission expires:

_____

SUBSCRIBED and SWORN TO before me on this the ____ day of _____, 2006, by GERALDINE B. OSBORN.

_____
NOTARY PUBLIC, State of _____
Notary's Printed Name: _____

My commission expires:

_____

P:\6000-6999\6768\33991\Settlement Documents\FINAL EXHIBIT A Settlement Agmt & Rel 042506.doc

Exhibit 1

LEGAL DESCRIPTION

(DEEDED)

Section 1, Township 25, Range 36, 160.0 Acres being the Southwest quarter.

Section 11, Township 25, Range 36, 160 Acres Being the Southeast quarter.

Section 12, Township 25, Range 36, 320 Acres being the South half.

Section 13, Township 25, Range 36, being the entire section.

Section 7, Township 25, Range 37, 317.32 Acres being Lots 3-4, and the East half of the Southwest quarter, and the Southeast quarter of said section 7.

Section 18, Township 25, Range 37, 155.76 acres being Lots 1, 2, 3, 4. 203.40 acres Located in the East half of the West half, and the West half of the East half. Tract beginning 1321.2 feet West of the Northeast corner section, thence West approximately 2638.8 feet, South approximately 5280 feet, East approximately 718 feet, North 19 deg. 46 min. East approximately 5613.9 to the point of beginning.

Section 18, Township 25, Range 37 1.0 Acres located in the Northeast quarter. Beginning South 89 deg. 57 min. West 50 feet, and North 0 deg. 3 min. West 1165 feet from the Southeast corner of the Northeast quarter of section 18, thence South 89 deg. 57 min. West 210 feet, North 0 deg. 3 min. West 197.8 feet, North 84

OS002221

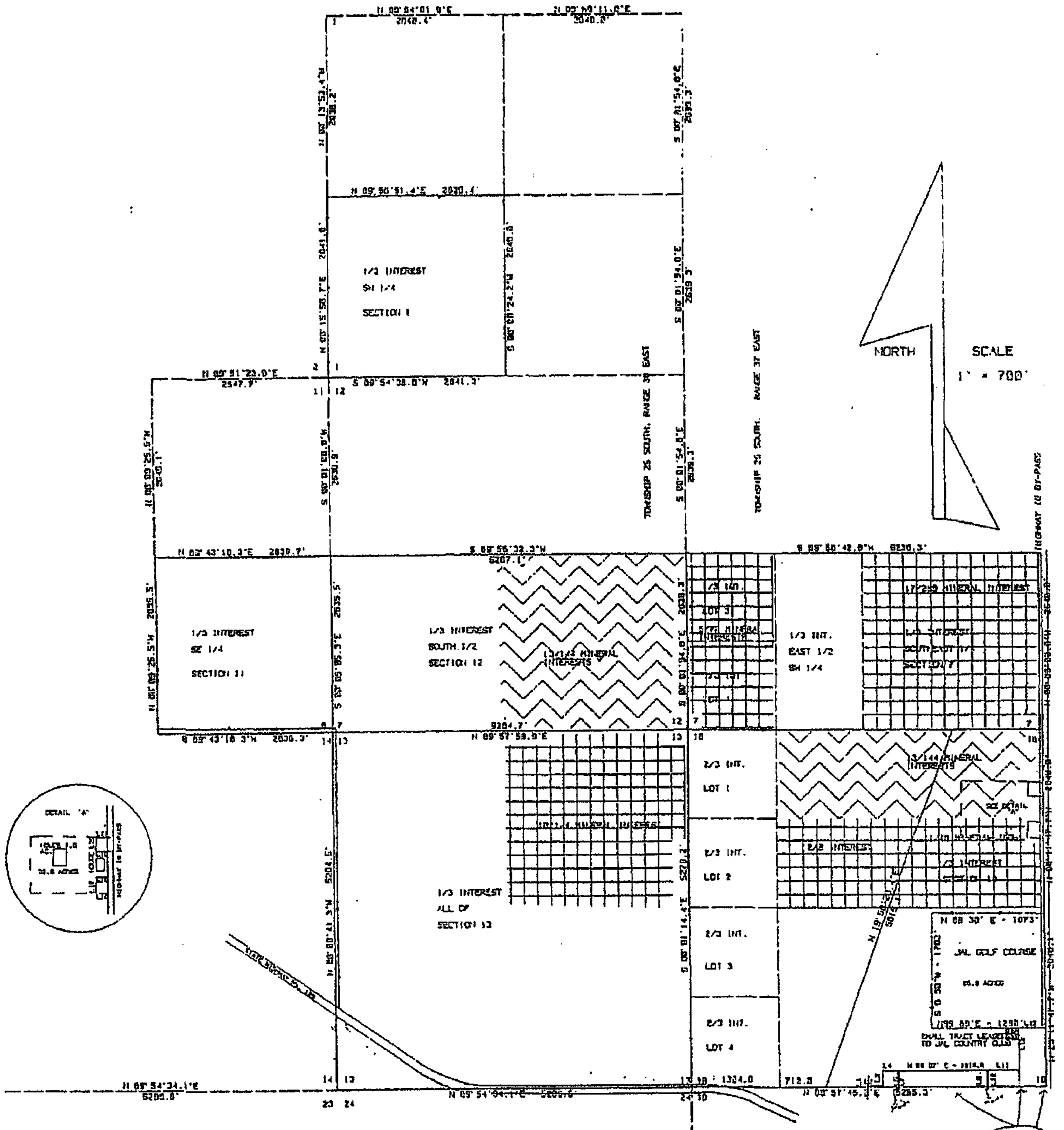
OK

deg. 27 min. East 211 feet, South 0 deg. 3 min. East 218 feet to the point of beginning.

Section 18, Township 25, Range 37, 255.99 acres located in the East half. Tract beginning at the Northeast corner of section 18, thence South 89 deg. 52 min. West 1321.2 feet to the intersect of the Jal corporate boundary, thence South 19 deg. 46 min. West along Jal corp. Boundary line 5610.7 feet more or less to the South line of section 18, East along said line 602 feet, more or less, to the South quarter corner of section 18, North 20 feet, East 230 feet, North 210 feet, East 210 feet, South 210 feet, East 20 feet, North 210 feet, East 1310 feet, South 198 feet, more or less, East 10 feet, North 198 feet, East 440 feet, North 400.6 feet, East 20 feet, North 222 feet, East 400 feet to the East Line of Section 18, North along the East line of Section 18, to a point 1165 feet North of the East quarter corner of Section 18, South 89 deg. 57 min. West 260 feet, North 0 deg. 3 min. West 179.8 feet, North 84 deg. 27 min. East 211 feet, South 0 deg. 3 min. East 218 feet, North 89 deg. 57 min. East 50 feet to the East line of Section 18, thence North along said line 419 feet, West 210 feet, North 210 feet, East 210 feet, to the East line of Section 18, North along said East line to the Northeast corner of section 18, and the point of beginning.

OS002282

OK



PLAT OF SW 1/4 SECTION 1, THE SE 1/4 OF SECTION 11, AND THE SOUTH 1/2 OF SECTION 12, ALL OF SECTION 13, T-25-S, R-36-E, N.M.P.M., AND SOUTH 1/2 OF SECTION 7, AND ALL OF SECTION 18 EXCEPT AS SHOWN ON THE PLAT, T-25-S, R-37-E, N.M.P.M., LEA COUNTY, NEW MEXICO.

I, TRUMAN GASKIN, DO HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY MADE ON THE GROUND, UNDER MY SUPERVISION ON THE DAY OF THE 12 th MONTH OF 1982, AND IS TO THE BEST OF MY KNOWLEDGE TRUE AND CORRECT.

TRUMAN GASKIN, REGISTERED PUBLIC SURVEYOR
NEW MEXICO No. 2126

LINE	BEARING	DISTANCE
L1	NORTH	25.0
L2	EAST	230.0
L3	NORTH	210.0
L4	EAST	218.0
L5	SOUTH	210.0
L6	EAST	25.0
L7	NORTH	210.0
L8	SOUTH	210.0
L9	EAST	10.0
L10	NORTH	210.0
L11	EAST	440.0
L12	NORTH	032.6
L13		
L14		
L15	EAST	400.0
L16	S 89 57' W	210.0
L17	N 00 03' W	197.0
L18	N 04 27' E	211.0
L19	WEST	210.0
L20	NORTH	210.0
L21	EAST	210.0

EXHIBIT B

1) Jalmat #1

2) TM 0245-2

3) Jalmat #22B

4) Jalmat #22A

5) Jalmat 2

6) DT-27

7) Jalmat #3

8) East half Shell 6" (east of road)

9) SH 0193-2

10) SH 0184-1

PLAINS MARKETING, L.P.

May 12, 2006

Mr. Ed Martin
State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

1R-468

Re: Plains Pipeline, L.P.
Document Submittal
Clay Osborn - Rocky Top Ranch
Jal, Lea County, New Mexico

Dear Mr. Martin:

Plains Pipeline, L.P. (Plains) is pleased to submit the attached Document Submittal for the soil remediation project sites located on the Osborn's Rocky Top Ranch in Jal, Lea County, New Mexico. These documents include the original soil investigation report, annual groundwater monitoring reports (where monitor wells are present), and various correspondences. Plains assumes this information is already in your files; however, for convenience purposes we have prepared one document containing the reports.

Should you have any questions or comments, please contact me at (713) 646-4657.

Sincerely,

Jeffrey P. Dann, P.G.
Sr. Environmental Specialist
Plains All American

Attachment: Document Submittal

File: n/jeff-files/Osborn-RockyTopRanch/DocumentSubmittal CovrLtr.doc

E.O.T.T. ENERGY CORPORATION

SITE INVESTIGATION AND REMEDIATION PROPOSAL

CLAY OSBORN JALMAT #22B
Ref. # 2000-10616

SW¼ NW¼ UL-E Section 18 T25S R37E
~½ mile Northwest of Jal
Lea County, New Mexico
Latitude: 32°07'55"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 SW¼ of the NW¼ of Section 18 T25S R37E, approximately ½ mile northwest of Jal, Lea County New Mexico at Latitude 32°07'55"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 ~1000 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 and is located approximately 890 horizontal feet southeast of the Jalmat #22B 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

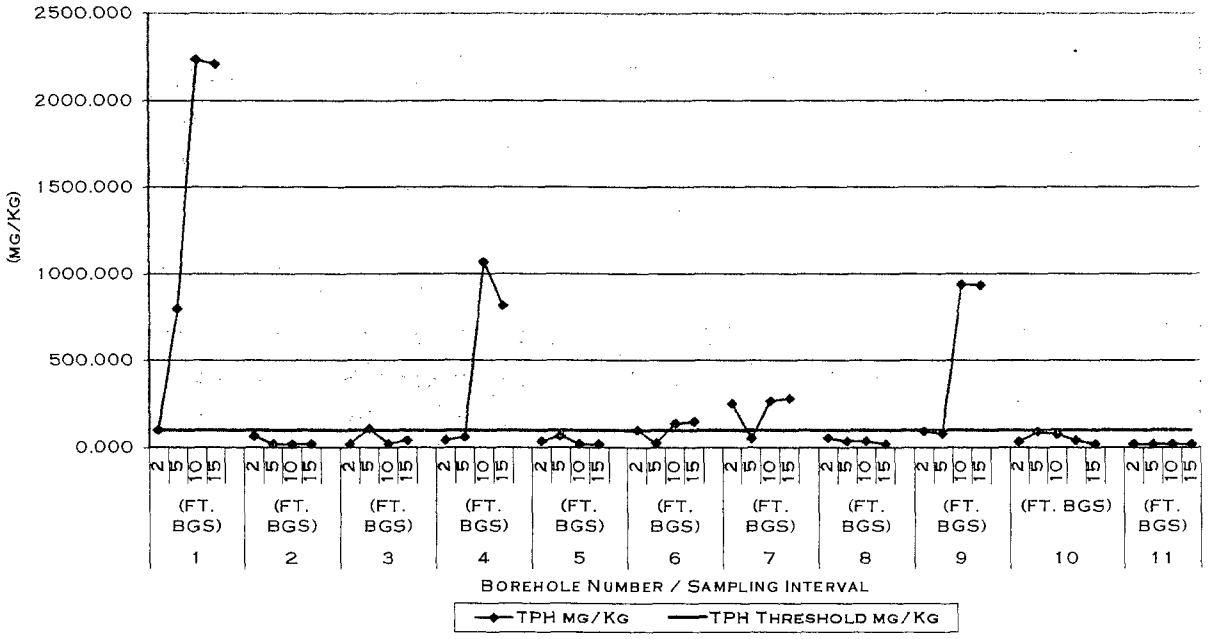
Parameter	>19		
Benzene[1]	**10 ppm**		
BTEX[1]	**50 ppm**		
TPH	**100 ppm**		

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

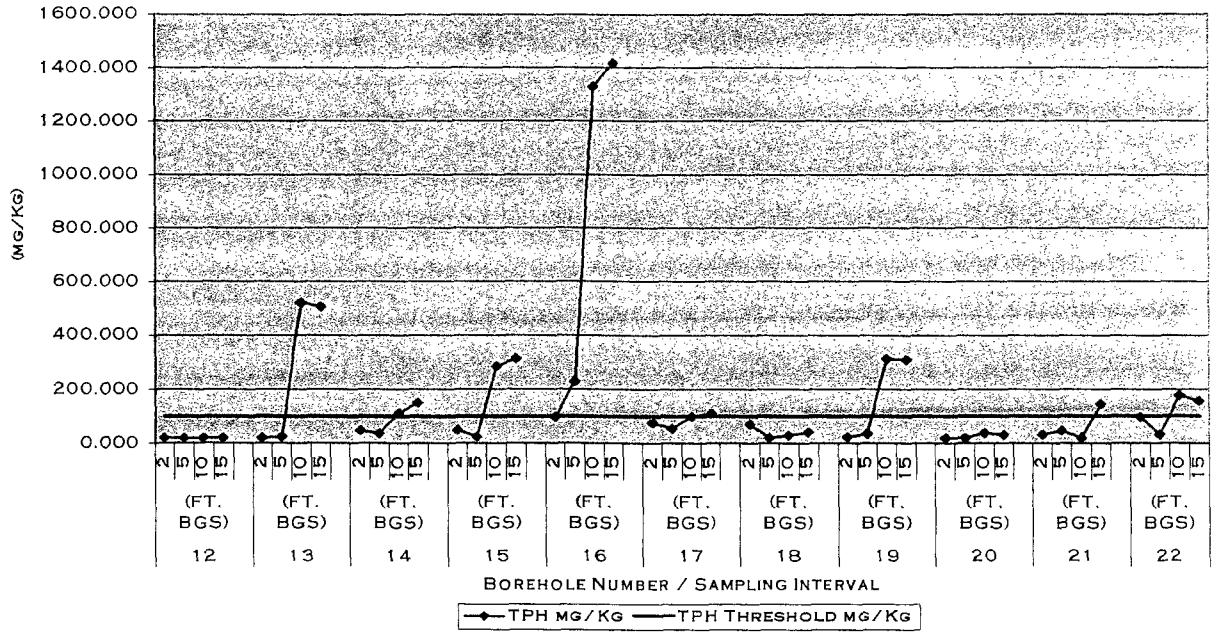
4.0 SUBSURFACE SOIL INVESTIGATION

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 horizontal extent of contamination extends laterally beyond the visible spill area perimeter having been covered with soil. Subsurface contamination was delineated to generally pervade the area circumscribed by a line connecting BH1, BH15, BH22, BH13, and BH6 and comprises ~35,613 ft^2. The visible affected surface area is ~10,941ft^2. Vertical contamination above 100 mg/Kg TPH^{8015m} was detected to 15'bgs as described previously, however the increasing concentration gradient at the BH16, central to the site, indicates the need to delineate beyond the 15'bgs interval. Moreover, the nominal BTEX results attest to the historical nature of the site. Estimated affected expanded (post-excavation) soil volume down to 15 'bgs is 23,742yd^3. The original analytical reports are provided and summarized in Attachment III. The data is illustrated below.

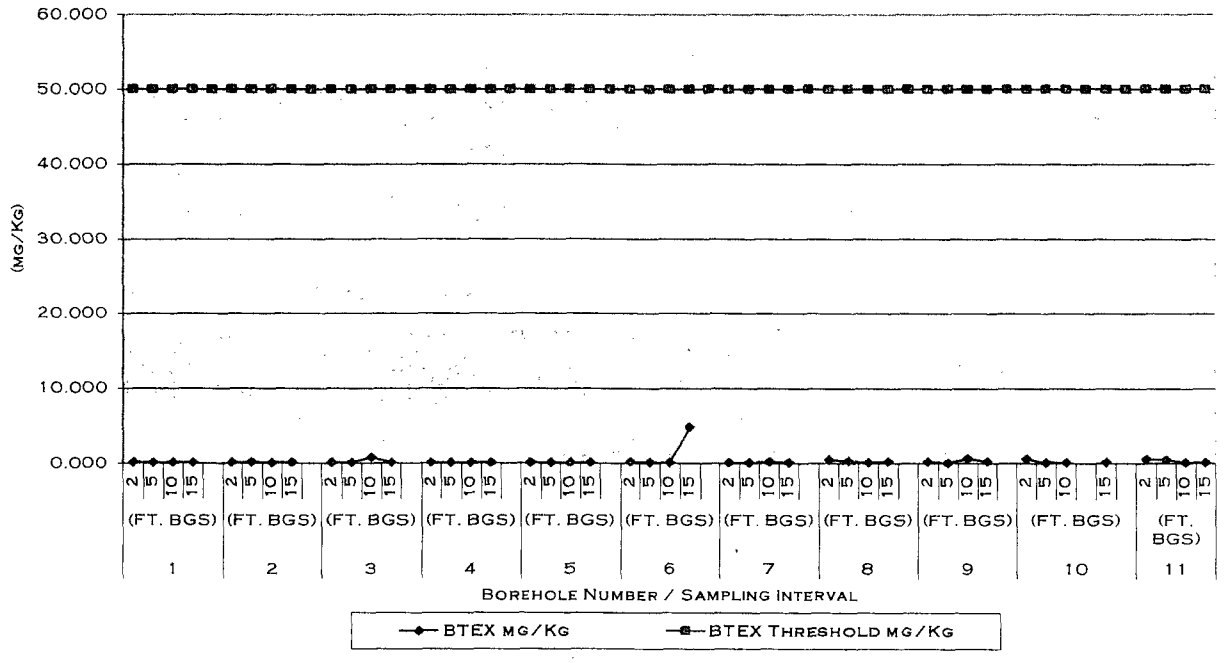
E.O.T.T. ENERGY PIPELINE
CLAY OSBORN JALMAT #22B
TOTAL PETROLEUM HYDROCARBON 8015M DELINEATION



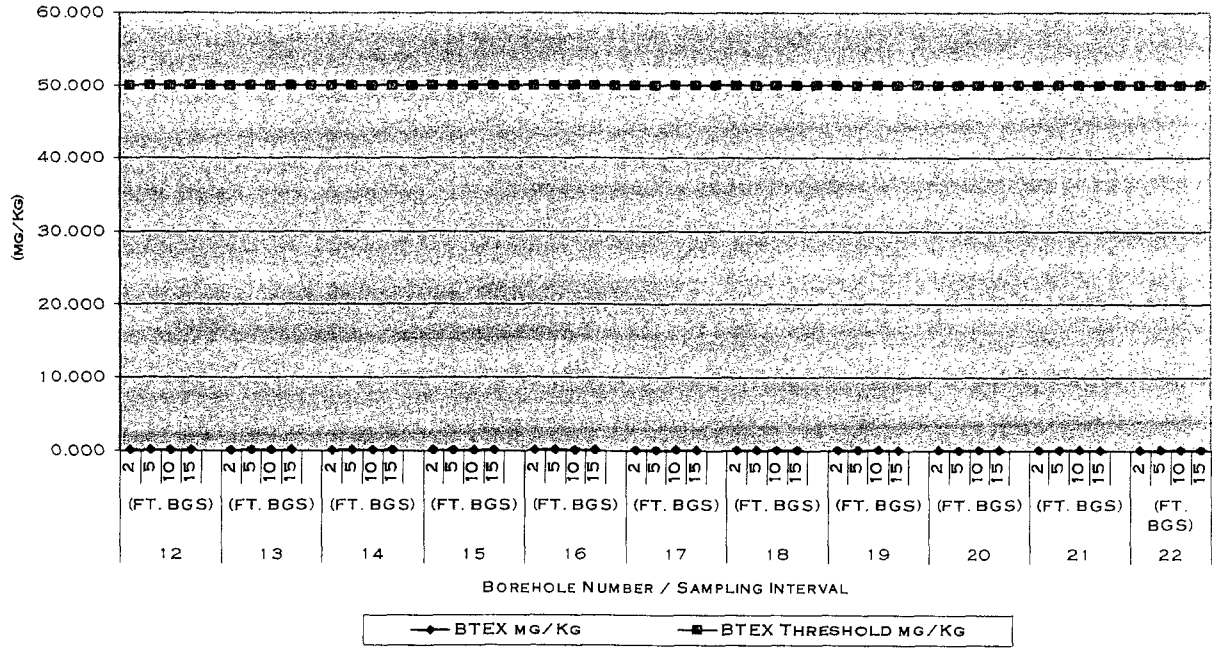
E.O.T.T. ENERGY PIPELINE
CLAY OSBORN JALMAT #22B
TOTAL PETROLEUM HYDROCARBON 8015M DELINEATION



E.O.T.T. ENERGY PIPELINE
CLAY OSBORN JALMAT 22B
BTEX DELINEATION



E.O.T.T. ENERGY PIPELINE
CLAY OSBORN JALMAT #22B
BTEX DELINEATION



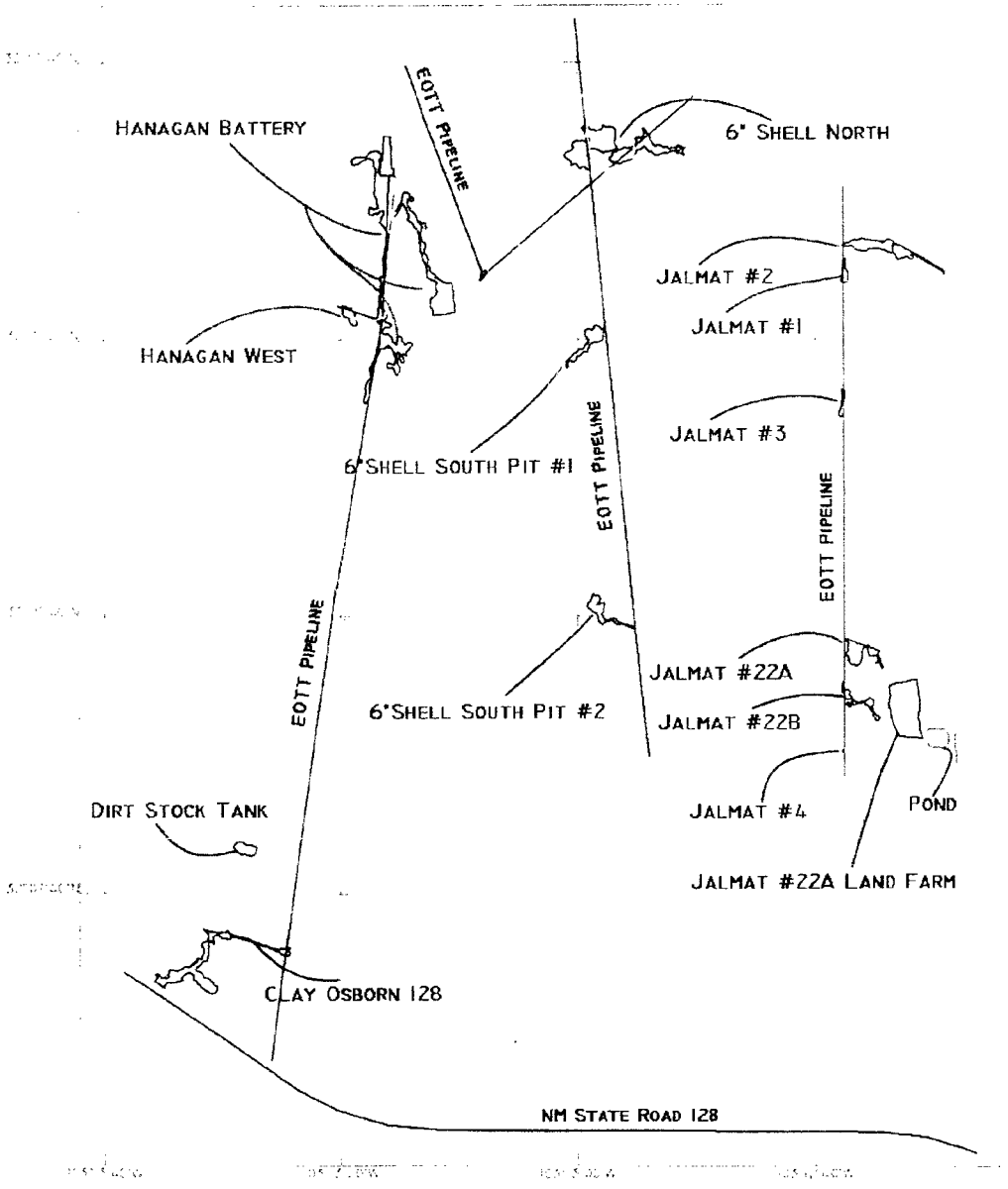
5.0 GROUND WATER INVESTIGATION

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

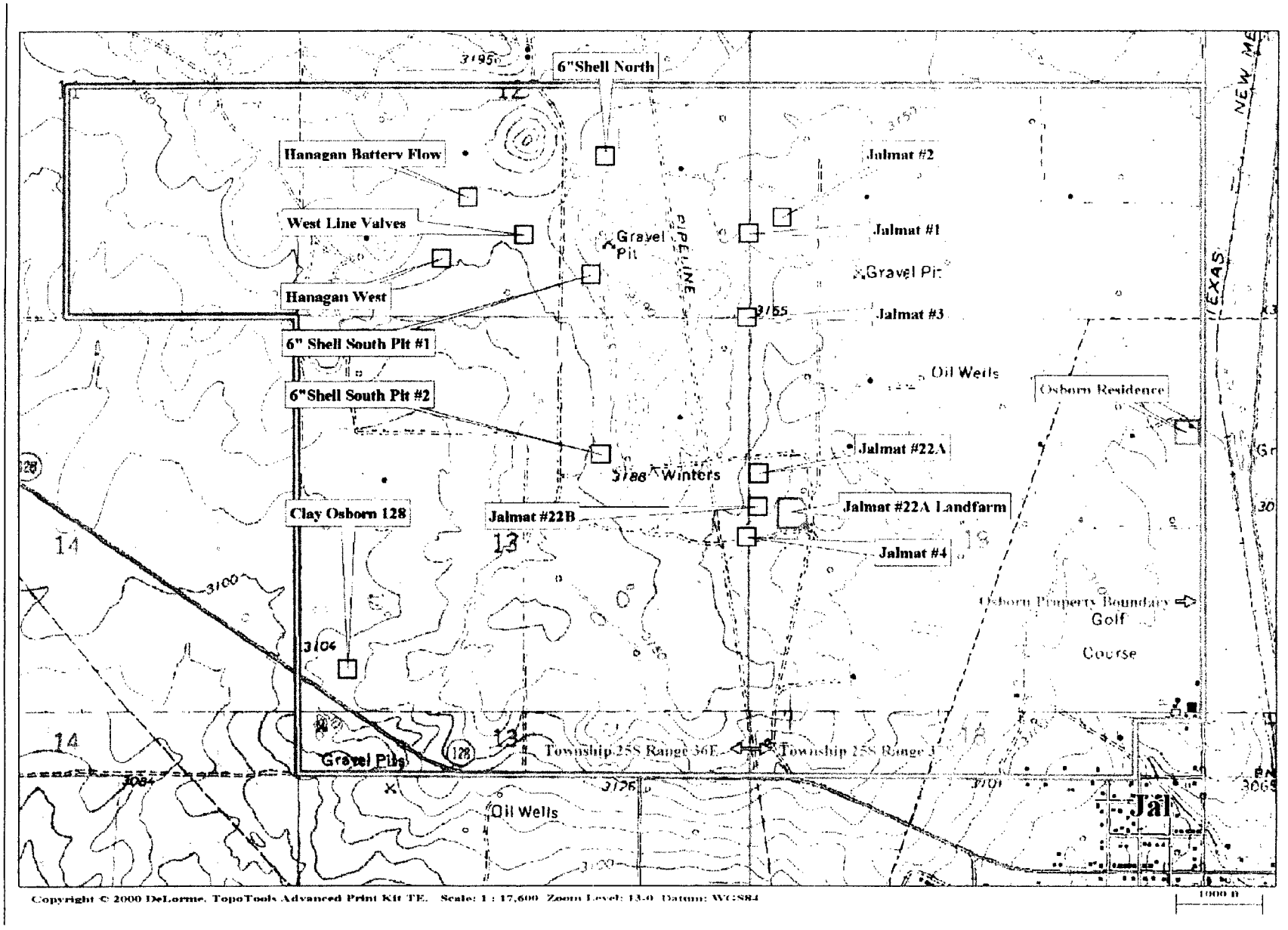
6.0 REMEDIATION PROPOSAL

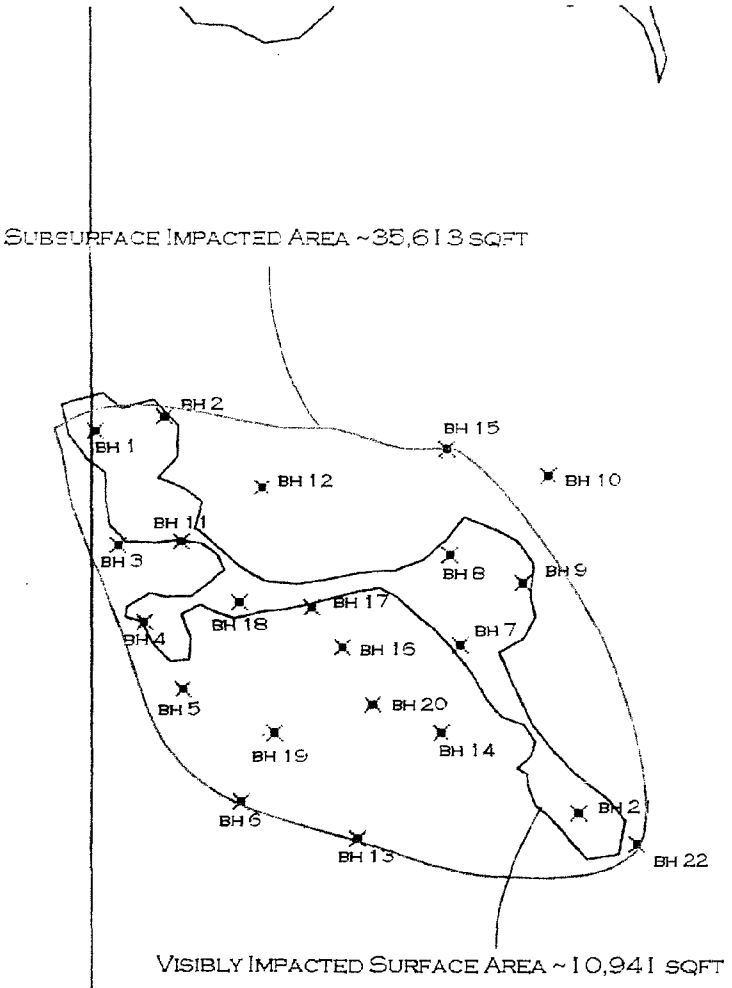
It is proposed to excavate contaminated soil down to 15'bgs, land spread adjacent to the site in the existing soil lift, install a horizontally oversized 2 foot thick impermeable clay barrier, compacted and tested to 95% of the Proctor density, and backfill with local clean soil. The land-farmed soil will be disked and possibly amended with bio-accelerants and blended with local clean soil to accelerate attenuation in less than one year. The bio-cell will be monitored monthly until acceptable CoC concentrations are achieved, at which time the cell will be contoured to the natural grade and reseeded.

Attachment I: Site Maps



E.O.T.T. ENERGY PIPELINE
CLAY OSBORN RANCH REMEDIATION SITES
T25S-R36E & R37E NORTHWEST OF JAL LEA COUNTY, NM


6"Shell North
Hanagan Battery Flow
West Line Valves
Hanagan West
6" Shell South Plt #1
6"Shell South Plt #2
Clay Osborn 128
Jalmat #22B
Jalmat #2
Jalmat #1
Gravel Pit
Gravel Pit
Jalmat #3
Oil Wells
Osborn Residence
Jalmat #22A
Winters
Jalmat #22A Landfarm
Jalmat #4
Osborn Property Boundary
Golf
Course
Gravel Pits
Township 25S Range 36E
Township 25S Range 3
Oil Wells
Jal
NEW ME
TEXAS
PIPELINE
Copyright © 2000 DeLorme. TopoTools Advanced Print Kit TE. Scale: 1 : 17,600 Zoom Level: 13.0 Datum: WGS84



Clay Osborn Jalmat 22B

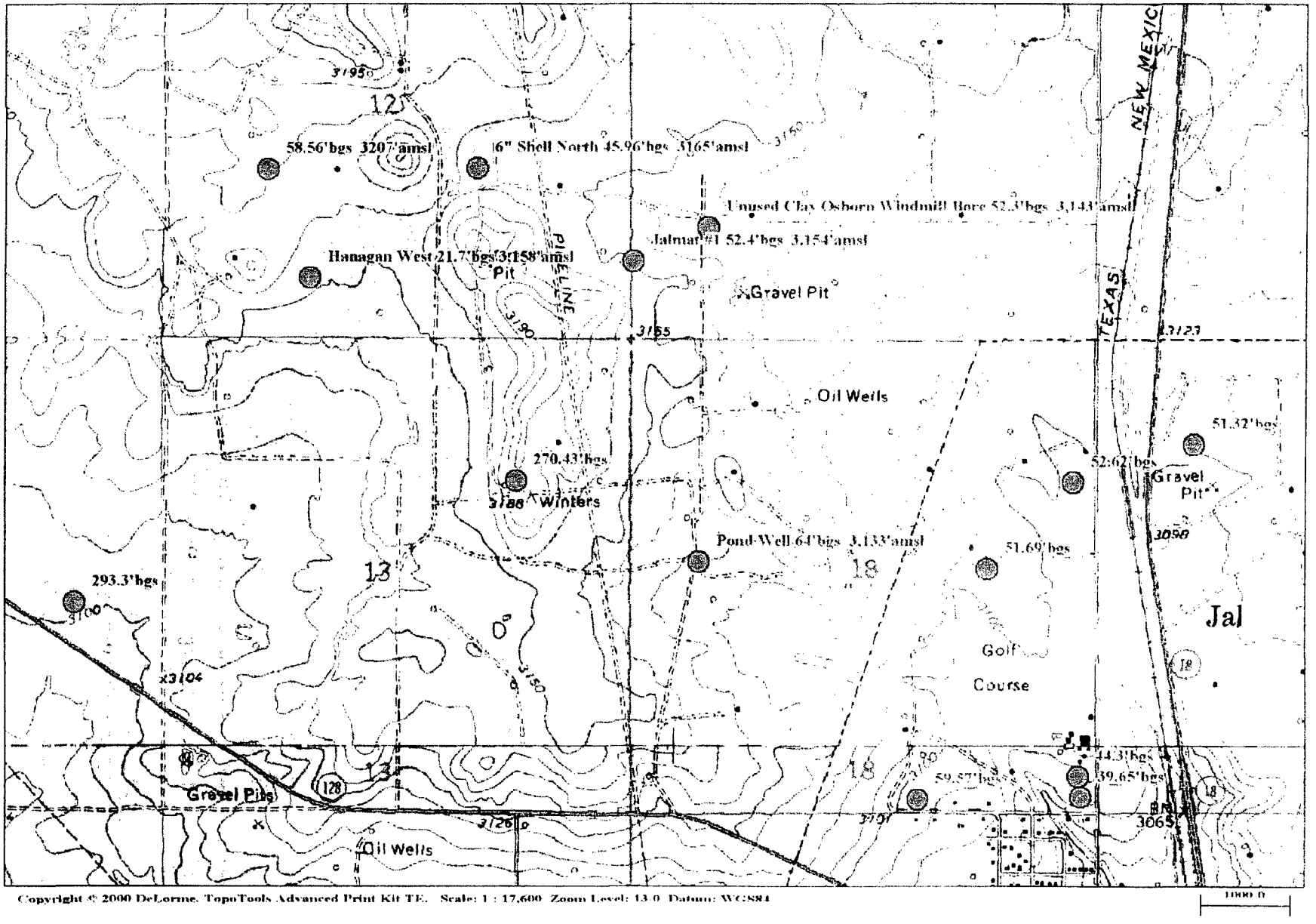
Lat/Long
WGS 1984

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
Oil Wells
270.43'bgs
Winters
Pond-Well 64'bgs 3,133'amsl
293.3'bgs
51.32'bgs
52.62'bgs
Gravel Pit
51.69'bgs
Jal
Golf Course
44.3'bgs
39.65'bgs
59.57'bgs
Gravel Pits
Oil Wells
NEW MEXICO
TEXAS
PIPELINE
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

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
CP	25S	37E	19				9	27	63	44
CP	25S	37E	21				6	23	60	34

Record Count: 15

http://164.64.214.10/awdProd/awd.html?email_address=enviplus1@aol.com&tws=25S&r... 12/29/2001

Attachment III: Original Analytical Reports And Summaries

E.O.T.T. Energy Pipeline Clay Osborn Jalmat #22B

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	**EC022BGP1-02**	**8/4/2000**	**Sand**	1.7	50	50	100.0	0.139	0.025	0.039	0.025	0.025	0.025
	5	**EC022BGP1-05**	**8/4/2000**	**Sand**	5.2	50	749	**799.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP1-10**	**8/4/2000**	**Sand**	22.0	114	2119	**2233.0**	0.161	0.025	0.061	0.025	0.025	0.025
	15	**EC022BGP1-15**	**8/4/2000**	**Sand**	0.2	107	2100	**2207.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
2	2	EC022BGP2-02	8/4/2000	Sand	1.1	10	56	66.0	0.130	0.025	0.030	0.025	0.025	0.025
	5	EC022BGP2-05	8/4/2000	Sand	1.1	10	11	21.0	0.135	0.025	0.035	0.025	0.025	0.025
	10	EC022BGP2-10	8/4/2000	Sand	0.5	10	10	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP2-15	8/4/2000	Sand	0.0	10	10	*20.0*	0.128	0.025	0.028	0.025	0.025	0.025
3	2	**EC022BGP3-02**	**8/4/2000**	**Sand**	0.0	10	10	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	**EC022BGP3-05**	**8/4/2000**	**Sand**	0.0	10	100	**110.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP3-10**	**8/4/2000**	**Sand**	0.0	10	13	23.0	0.786	0.055	0.131	0.145	0.323	0.132
	15	**EC022BGP3-15**	**8/4/2000**	**Sand**	0.0	10	31	41.0	*0.125*	0.025	0.025	0.025	0.025	0.025
4	2	EC022BGP4-02	8/4/2000	Sand	0.0	10	35	45.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP4-05	8/4/2000	Sand	0.0	10	51	61.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP4-10	8/4/2000	Sand	0.0	10	1059	**1069.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP4-15	8/4/2000	Sand	0.0	10	809	**819.0**	0.133	0.025	0.033	0.025	0.025	0.025
5	2	**EC022BGP5-02**	**8/4/2000**	**Sand**	0.0	10	28	38.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	**EC022BGP5-05**	**8/4/2000**	**Sand**	0.0	10	57	67.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP5-10**	**8/4/2000**	**Sand**	0.0	10	10	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	**EC022BGP5-15**	**8/4/2000**	**Sand**	0.0	10	10	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
6	2	EC022BGP6-02	8/7/2000	Sand	0.0	50	50	**100.0**	0.213	0.025	0.103	0.025	0.032	0.028
	5	EC022BGP6-05	8/7/2000	Sand	0.0	10	17	27.0	0.180	0.025	0.080	0.025	0.025	0.025
	10	EC022BGP6-10	8/7/2000	Sand	0.0	10	128	**138.0**	0.129	0.025	0.029	0.025	0.025	0.025
	15	EC022BGP6-15	8/7/2000	Sand	0.0	10	139	**149.0**	4.860	0.025	4.760	0.025	0.025	0.025
7	2	**EC022BGP7-02**	**8/7/2000**	**Sand**	0.0	100	152	**252.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	**EC022BGP7-05**	**8/7/2000**	**Sand**	0.0	10	43	53.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP7-10**	**8/7/2000**	**Sand**	0.0	10	259	**269.0**	0.202	0.025	0.079	0.034	0.025	0.039
	15	**EC022BGP7-15**	**8/7/2000**	**Sand**	0.0	10	274	**284.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
8	2	EC022BGP8-02	8/7/2000	Sand	0.0	10	45	55.0	0.469	0.025	0.177	0.025	0.170	0.072
	5	EC022BGP8-05	8/7/2000	Sand	0.0	10	27	37.0	0.347	0.028	0.128	0.053	0.086	0.052
	10	EC022BGP8-10	8/7/2000	Sand	0.0	10	26	36.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP8-15	8/7/2000	Sand	0.0	10	10	*20.0*	0.269	0.025	0.118	0.025	0.063	0.038

[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 #22B

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
9	2	EC022BGP9-02	8/7/2000	Sand	0.0	*10*	83	93.0	0.191	0.025	0.091	0.025	0.025	0.025
	5	EC022BGP9-05	8/7/2000	Sand	0.0	*10*	69	79.0	0.130	0.025	0.030	0.025	0.025	0.025
	10	EC022BGP9-10	8/7/2000	Sand	0.0	*10*	930	**940.0**	0.659	0.025	0.122	0.083	0.291	0.138
	15	EC022BGP9-15	8/7/2000	Sand	0.0	*10*	924	**934.0**	0.264	0.025	0.060	0.034	0.089	0.056
10	2	EC022BGP10-02	8/7/2000	Sand	0.0	*10*	25	35.0	0.590	0.025	0.129	0.077	0.247	0.112
	5	EC022BGP10-05	8/7/2000	Sand	0.0	*10*	81	91.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP10-10	8/7/2000	Sand	0.0	*10*	67	77.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP10-15	8/7/2000	Sand	0.0	*10*	32	42.0	0.170	0.025	0.070	0.025	0.025	0.025
11	2	EC022BGP11-02	8/7/2000	Sand	0.0	*10*	*10*	*20.0*	0.593	0.025	0.078	0.029	0.061	0.400
	5	EC022BGP11-05	8/7/2000	Sand	0.0	*10*	*10*	*20.0*	0.500	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP11-10	8/7/2000	Sand	0.0	*10*	*10*	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP11-15	8/7/2000	Sand	0.0	*10*	*10*	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
12	2	EC022BGP12-02	8/9/2000	Sand	0.0	*10*	*10*	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP12-05	8/9/2000	Sand	0.0	*10*	*10*	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP12-10	8/9/2000	Sand	0.0	*10*	*10*	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP12-15	8/9/2000	Sand	0.0	*10*	*10*	*20.0*	0.126	0.025	0.026	0.025	0.025	0.025
13	2	EC022BGP13-02	8/9/2000	Sand	0.0	*10*	*10*	*20.0*	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP13-05	8/9/2000	Sand	0.0	*10*	14	24.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP13-10	8/9/2000	Sand	0.0	*10*	512	**522.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP13-15	8/9/2000	Sand	0.0	*10*	497	**507.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
14	2	EC022BGP14-02	8/9/2000	Sand	0.0	*10*	38	48.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP14-05	8/9/2000	Sand	0.0	*10*	26	36.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP14-10	8/9/2000	Sand	0.0	*10*	103	**113.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP14-15	8/9/2000	Sand	0.0	*10*	140	**150.0**	0.128	0.025	0.025	0.025	0.028	0.025
15	2	EC022BGP15-02	8/9/2000	Sand	0.0	*10*	40	50.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP15-05	8/9/2000	Sand	0.0	*10*	14	24.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP15-10	8/9/2000	Sand	0.0	*10*	275	**285.0**	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP15-15	8/9/2000	Sand	0.0	*10*	305	**315.0**	0.136	0.025	0.036	0.025	0.025	0.025
16	2	EC022BGP16-02	8/9/2000	Sand	0.0	*10*	87	97.0	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP16-05	8/9/2000	Sand	0.0	*10*	219	**229.0**	0.156	0.025	0.056	0.025	0.025	0.025
	10	EC022BGP16-10	8/9/2000	Sand	0.0	*10*	1319	**1329.0**	0.134	0.025	0.025	0.025	0.034	0.025
	15	EC022BGP16-15	8/9/2000	Sand	0.0	*10*	1407	**1417.0**	*0.125*	0.025	0.025	0.025	0.025	0.025

[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 #22B

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	**EC022BGP17-02**	**8/9/2000**	**Sand**	0.0	10	66	76.000	0.131	0.025	0.031	0.025	0.025	0.025
	5	**EC022BGP17-05**	**8/9/2000**	**Sand**	0.0	10	44	54.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP17-10**	**8/9/2000**	**Sand**	0.0	10	90	100.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	**EC022BGP17-15**	**8/9/2000**	**Sand**	0.0	10	101	**111.000**	*0.125*	0.025	0.025	0.025	0.025	0.025
18	2	EC022BGP18-02	8/10/2000	Sand	0.0	10	60	70.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP18-05	8/10/2000	Sand	0.0	10	10	*20.000*	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP18-10	8/10/2000	Sand	0.0	10	20	30.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP18-15	8/10/2000	Sand	0.0	10	31	41.000	0.136	0.025	0.036	0.025	0.025	0.025
19	2	**EC022BGP19-02**	**8/10/2000**	**Sand**	0.0	10	12	22.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	**EC022BGP19-05**	**8/10/2000**	**Sand**	0.0	10	25	35.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP19-10**	**8/10/2000**	**Sand**	0.0	10	303	**313.000**	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	**EC022BGP19-15**	**8/10/2000**	**Sand**	0.0	10	300	**310.000**	*0.125*	0.025	0.025	0.025	0.025	0.025
20	2	EC022BGP20-02	8/10/2000	Sand	0.0	10	10	*20.000*	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP20-05	8/10/2000	Sand	0.0	10	10	*20.000*	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP20-10	8/10/2000	Sand	0.0	10	27	37.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP20-15	8/10/2000	Sand	0.0	10	22	32.000	0.134	0.025	0.034	0.025	0.025	0.025
21	2	**EC022BGP21-02**	**8/10/2000**	**Sand**	0.0	10	21	31.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	**EC022BGP21-05**	**8/10/2000**	**Sand**	0.0	10	36	46.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	**EC022BGP21-10**	**8/10/2000**	**Sand**	0.0	10	10	*20.000*	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	**EC022BGP21-15**	**8/10/2000**	**Sand**	0.0	10	136	**146.000**	0.137	0.025	0.037	0.025	0.025	0.025
22	2	EC022BGP22-02	8/10/2000	Sand	0.0	10	86	96.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	5	EC022BGP22-05	8/10/2000	Sand	0.0	10	21	31.000	*0.125*	0.025	0.025	0.025	0.025	0.025
	10	EC022BGP22-10	8/10/2000	Sand	0.0	10	168	**178.000**	*0.125*	0.025	0.025	0.025	0.025	0.025
	15	EC022BGP22-15	8/10/2000	Sand	0.0	10	147	**157.000**	0.129	0.025	0.029	0.025	0.025	0.025

[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.

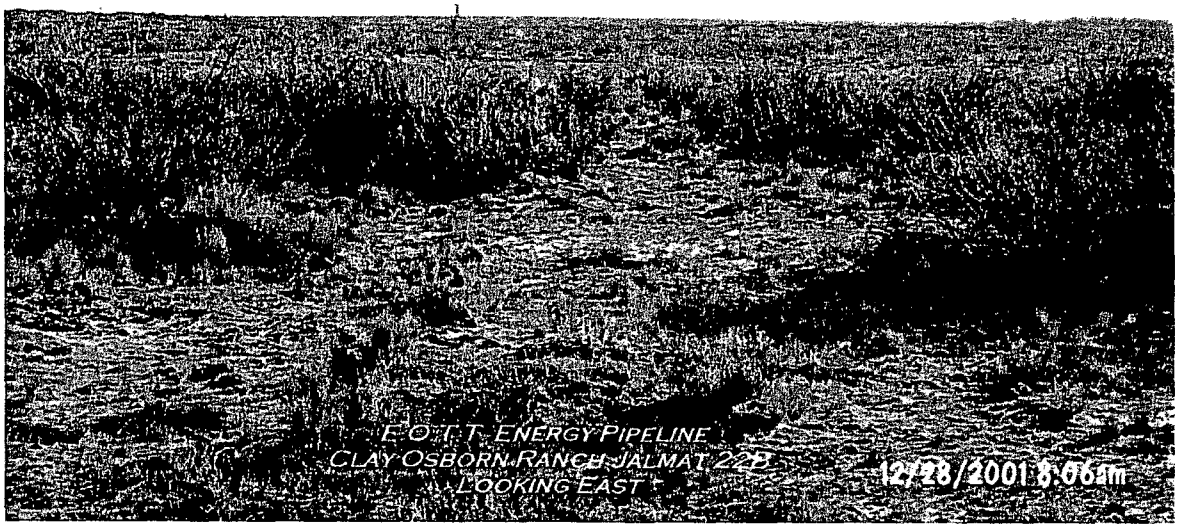
[6]Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

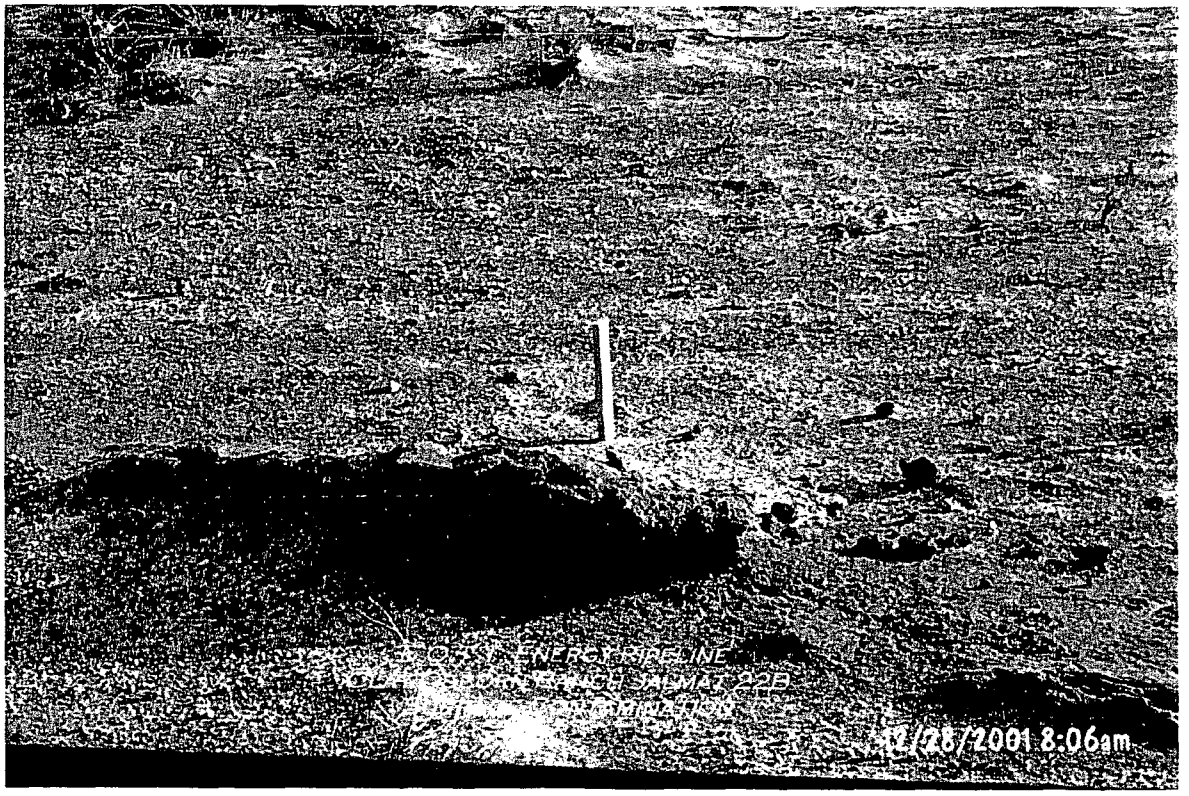
[7]Italicized values are < the instrument detection limit.

[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


E.O.T.T. ENERGY PIPELINE
CLAY OSBORN RANCH JALMAT 22B
LOOKING EAST
12/28/2001 8:06am


12/28/2001 8:06am

Attachment V: Site Information and Metrics Form

Site Information and Metrics

SITE: Clay Osborn Jalmat #22B	Assigned Site Reference #2000-10616
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 #22B	
Source of contamination: Pipe Line	
Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn	
LSP Dimensions: affected area = 370' X 60'	
LSP Area = Visible surface=10,941 ft² Subsurface=35,613 ft²	
Latitude: 32°07'55"N	
Longitude: 103°12'38"W	
Elevation above mean sea level: ~3,149'amsl	
Location- Unit or ¼¼: SW¼ of NW¼ UL-E	
Location- Section = 18	
Location- Township = 25S	
Location- Range = 37E	
Surface water body within 1000 ' radius of site: Intermittent earthen livestock watering tank 650' 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		
Benzene[1]	**10 ppm**		
BTEX[1]	**50 ppm**		
TPH	**100 ppm**		

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

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79765
(915) 563-[redacted] FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette
Phone #: (915) 556-0190
FAX #: (915) 682-3456

Company Name & Address: Eott
Project Name: Clay Osborn Site 22 B
Project #:
Project Location: Sec 12 T25S R36E SE
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	HONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH 8015 M
29065	Eco22 B GP1-02	1			X						X			8-4-00	800	X	X
29066	ECO 22 BG-P1-05	1			X						X			8-4-00	820	X	X
29067	ECO 22 BGP1-10	1			X						X			8-4-00	840	X	X
29068	ECO22BGP1-15	1			X						X			8-4-00	900	X	X
29069	ECO22BGP2-02	1			X						X			8-4-00	930	X	X
29070	ECO22BGP2-05	1			X						X			8-4-00	950	X	X
29071	ECO22BGP2-10	1			X						X			8-4-00	1010	X	X
29072	ECO22BGP2-15	1			X						X			8-4-00	1030	X	X
29073	ECO22BGP3-02	1			X						X			8-4-00	1100	X	X
29074	ECO22BGP3-05	1			X						X			8-4-00	1120	X	X
29075	ECO22BGP3-10	1			X						X			8-4-00	1140	X	X

ANALYSIS REQUEST

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	NCI

Relinquished by:	Date:	Time:	Received by:
[signature]	8-11-00	8:00	Roger Moore
Roger Moore	8-11-2000		
		15:35	Received by Laboratory: [signature]

REMARKS: 41°F

Environmental Lab of Texas, Inc.

12600 west I-20 East Odessa, Texas 79765
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Burnett

Phone #: (915) 556-0190
FAX #: (915) 684-3456

Company Name & Address: Eott

Project #:

Project Name: Clay Osborn Site 22 B

Project Location: Sec 12 T25S R36E SE

Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	HONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B/5030	TPH 8015	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	NCI
29076	EC022 BGP 3-15	1			X						X			8-4-00	1200	X	X						
29077	EC022 BGP 4-02	1			X						X			8-4-00	1230	X	X						
29078	EC022 BGP 4-05	1			X						X			8-4-00	1250	X	X						
29079	EC022 BGP 4-10	1			X						X			8-4-00	130	X	X						
29080	EC022 BGP 4-15	1			X						X			8-4-00	200	X	X						
29081	EC022 BGP 5-02	1			X						X			8-4-00	220	X	X						
29082	EC022 BGP 5-05	1			X						X			8-4-00	240	X	X						
29083	EC022 BGP 5-10	1			X						X			8-4-00	300	X	X						
29084	EC022 BGP 5-15	1			X						X			8-4-00	330	X	X						
29085	EC022 BGP 6-02	1			X						X			8-7-00	800	X	X						
29086	EC022 BGP 6-05	1			X						X			8-7-00	820	X	X						

Relinquished by:	Date:	Time:	Received by:
	8-11-00	8:00	Roger Boone
Relinquished by: Roger Boone	Date: 8-11-2000	Time:	Received by:
Relinquished by:	Date:	Time: 15:35	Received by Laboratory:

REMARKS 4/1 ef

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette
Phone #: (915) 556-0190
FAX #: (915) 684-3456

Company Name & Address: EOTT
Project #:
Project Name: Clay Osborn Site 22 B

Project Location: Sec 12 T25S R36E SE
Sampler Signature:

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/5030	TPH 8015	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	RCI
29087	EC022 BGP 0-10	1			X						X			8-7-00	840	X	X						
29088	EC022 BGP 0-15	1			X						X			8-7-00	900	X	X						
29089	EC022 BGP 7-02	1			X						X			8-7-00	930	X	X						
29090	EC022 BGP 7-05	1			X						X			8-7-00	950	X	X						
29091	EC022 BGP 7-10	1			X						X			8-7-00	1010	X	X						
29092	EC022 BGP 7-15	1			X						X			8-7-00	1030	X	X						
29093	EC022 BGP 8-02	1			X						X			8-7-00	1100	X	X						
29094	EC022 BGP 8-05	1			X						X			8-7-00	1120	X	X						
29095	EC022 BGP 8-10	1			X						X			8-7-00	1140	X	X						
29096	EC022 BGP 8-15	1			X						X			8-7-00	1200	X	X						
29097	EC022 BGP 9-00	1			X						X			8-7-00	100	X	X						

Relinquished by:	Date:	Times:	Received by:
[signature]	8-11-00	8:00	Roger Boone
Roger Boone	8-11-2000		
		15:[illegible]35	[signature]

REMARKS 41°F

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-[illegible]00 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Bruncttc
Phone #: (915) 556-0190
FAX #: (915) 684-3456

Company Name & Address: EOTT
Project #:
Project Name: Clay Osborn Site 22 B
Project Location: Sec 12 T25S R36E SE
Sampler Signature:

ANALYSIS REQUEST

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/5030	TPH 8015	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	RCI
29098	EC022 BGP 9-05	1			X						X			8-7-00	120	X	X						
29099	EC022 BGP 9-10	1			X						X			8-7-00	140	X	X						
29100	EC022 BGP 9-15	1			X						X			8-7-00	200	X	X						
29101	EC022 BGP 12-02	1			X						X			8-7-00	215	X	X						
29102	EC022 BGP 12-05	1			X						X			8-7-00	230	X	X						
29103	EC022 BGP 10-10	1			X						X			8-7-00	245	X	X						
29104	EC022 BGP 10-15	1			X						X			8-7-00	300	X	X						
29105	EC022 BGP 11-02	1			X						X			8-7-00	315	X	X						
29106	EC022 BGP 11-05	1			X						X			8-7-00	335	X	X						
29107	EC022 BGP 11-10	1			X						X			8-7-00	348	X	X						
29108	EC022 BGP 11-15	1			X						X			8-7-00	415	X	X						

Relinquished by:	Date:	Time:	Received by:
[signature]	8-11-00	8:00	Roger Boone
Roger Boone	8-11-2000		
		15:35	[signature]

REMARKS 41°F

Environmental Lab of Texas, Inc.

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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Bruncttc
Phone #: (915) 556-0190
FAX #: (915) 684-3456

Company Name & Address: EOTT
Project #:
Project Name: Clay Osborn Site 22 B

Project Location: Sec 12 T25S R36E SE
Sampler Signature:

ANALYSIS REQUEST

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 8021/5030	TPH 8015	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	RCI
29109	EC022 BGP 12-03	1			X						X			8-9-00	800	X	X						
29110	EC022 BGP 12-05	1			X						X			8-9-00	820	X	X						
29111	EC022 BGP 12-10	1			X						X			8-9-00	840	X	X						
29112	EC022 BGP 12-15	1			X						X			8-9-00	900	X	X						
29113	EC022 BGP 13-02	1			X						X			8-9-00	930	X	X						
29114	EC022 BGP 13-05	1			X						X			8-9-00	950	X	X						
29115	EC022 BGP 13-10	1			X						X			8-9-00	1010	X	X						
29116	EC022 BGP 13-15	1			X						X			8-9-00	1030	X	X						
29117	EC022 BGP 14-02	1			X						X			8-9-00	1050	X	X						
29118	EC022 BGP 14-05	1			X						X			8-9-00	1110	X	X						
29119	EC022 BGP 14-10	1			X						X			8-9-00	1130	X	X						

Relinquished by:	Date:	Times:	Received by:
[signature]	8-11-00	8:00	[signature]
Roger Moore	8-11-000		
		15:35	[signature]

REMARKS: 4195

Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763
(915) 563-[illegible]00 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette

Phone #: (915) 556-0190

FAX #: (915) 684-3456

Company Name & Address: EOTT

Project Name: Clay Osborn Site 22B

Project #:

Project Location: Sec 12 T25S R36E SE

Sampler Signature: [signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	MATRIX: SOIL	MATRIX: AIR	MATRIX: SLUDGE	MATRIX: OTHER	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8020/5030	TPH [redacted] 80.15	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	RCI
29120	EC022 BGP 14-15	1			X						X			8-9-00	1200	X	X						
29121	EC022 BGP 15-02	1			X						X			8-9-00	100	X	X						
29122	EC022 BGP 15-05	1			X						X			8-9-00	120	X	X						
29123	EC022 BGP 15-10	1			X						X			8-4-00	140	X	X						
29124	EC022 BGP 15-15	1			X						X			8-9-00	200	X	X						
29125	EC022 BGP 16-02	1			X						X			8-4-00	215	X	X						
29126	EC022 BGP 16-05	1			X						X			8-9-00	230	X	X						
29127	EC022 BGP 16-10	1			X						X			8-9-00	245	X	X						
29128	EC022 BGP 16-15	1			X						X			8-9-00	300	X	X						
29129	EC022 BGP 17-02	1			X						X			8-9-00	315	X	X						
29130	EC022 BGP 17-05	1			X						X			8-9-00	330	X	X						

Relinquished by:	Date:	Time:	Received by:
[signature]	8-11-00	8:00	Roger Boone
Roger Boone	8-11-2000		
		15:45	Received by Laboratory: [signature]

REMARKS: 41°F

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-[illegible]00 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Bruncttr
Phone #: (915) 556-0140
FAX #: (915) 684-3456

Company Name & Address: EOTT
Project #: Clay Osborn Site 22 B
Project Name: [illegible]
Project Location: Sec 12 T25S R36E SE
Sampler Signature:

ANALYSIS REQUEST

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/5030	TPH 8015	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	RCI
29131	EC022 BGP 17-16	1			X						X			8-9-00	3:45	X	X						
29132	EC022 BGP 17-15	1			X						X			8-[illegible]00	4:00	X	X						
29133	EC022 BGP 18-02	1			X						X			8-10-00	9:00	X	X						
29134	EC022 BGP 18-05	1			X						X			8-10-00	9:20	X	X						
29135	EC022 BGP 18-10	1			X						X			8-10-00	9:40	X	X						
29136	EC022 BGP 18-15	1			X						X			8-10-00	10:00	X	X						
29137	EC022 BGP 19-02	1			X						X			8-10-00	10:30	X	X						
29138	EC022 BGP 19-05	1			X						X			8-10-00	10:50	X	X						
29139	EC022 BGP 19-10	1			X						X			8-10-00	11:10	X	X						
29140	EC022 BGP 19-15	1			X						X			8-10-00	11:30	X	X						
29141	EC022 BGP 20-02	1			X						X			8-10-00	11:45	X	X						

Relinquished by:	Date:	Times:	Received by:
[illegible]	8-11-00	8:00	Roger Boone
Roger Boone	8-11-2000		
		15:35	Received by Laboratory: [illegible]

REMARKS: 41°F

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79765
(915) 563-[illegible] FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Bruntle
Phone #: (915) 556-0190
FAX #: (915) 684-3456

Company Name & Address: EOTT
Project #:
Project Name: Clay Osborn Site 22 B

Project Location: Sec 12 T-55 R-36E SE
Sampler Signature:

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/5030	TPH 8015	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	RCI
29142	EC022 BGP 20-05	1			X						X			8-10-00	12:00	X	X						
29143	EC022 BGP 20-10	1			X						X			8-10-00	12:15	X	X						
29144	EC022 BGP 20-15	1			X						X			8-10-00	12:30	X	X						
29145	EC022 BGP 21-02	1			X						X			8-10-00	1:30	X	X						
29146	EC022 BGP 21-05	1			X						X			8-10-00	1:50	X	X						
29147	EC022 BGP 21-10	1			X						X			8-10-00	2:10	X	X						
29148	EC022 BGP 21-15	1			X						X			8-10-00	2:30	X	X						
29149	EC022 BGP 22-02	1			X						X			8-10-00	2:50	X	X						
29150	EC022 BGP 22-05	1			X						X			8-10-00	3:10	X	X						
29151	EC022 BGP 22-10	1			X						X			8-10-00	3:30	X	X						
29152	EC022 BGP 22-15	1			X						X			8-10-00	3:50	X	X						

Relinquished by:	Date:	Times:	Received by:
[signature]	8-11-00	8:00	Roger Boone
Roger Boone	8-11-2000		
		15:35	Received by Laboratory: [signature]

REMARKS: 41°F

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22B
Project Location: Sec 12 T25S R36E SE

Sampling Date: 08/04/00
Receiving Date: 08/11/00
Analysis Date: 08/17/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
29065	EC022BGP1-02	<0.025	0.039	<0.025	<0.025	<0.025
29066	EC022BGP1-05	<0.025	<0.025	<0.025	<0.025	<0.025
29067	EC022BGP1-10	<0.025	0.061	<0.025	<0.025	<0.025
29068	EC022BGP1-15	<0.025	<0.025	<0.025	<0.025	<0.025
29069	EC022BGP2-02	<0.025	0.030	<0.025	<0.025	<0.025
29070	EC022BGP2-05	<0.025	0.035	<0.025	<0.025	<0.025
29071	EC022BGP2-10	<0.025	<0.025	<0.025	<0.025	<0.025
29072	EC022BGP2-15	<0.025	0.028	<0.025	<0.025	<0.025
29073	EC022BGP3-02	<0.025	<0.025	<0.025	<0.025	<0.025
29074	EC022BGP3-05	<0.025	<0.025	<0.025	<0.025	<0.025
29075	EC022BGP3-10	0.055	0.131	0.145	0.323	0.132
29076	EC022BGP3-15	<0.025	<0.025	<0.025	<0.025	<0.025
29077	EC022BGP4-02	<0.025	<0.025	<0.025	<0.025	<0.025
29078	EC022BGP4-05	<0.025	<0.025	<0.025	<0.025	<0.025
29079	EC022BGP4-10	<0.025	<0.025	<0.025	<0.025	<0.025
29080	EC022BGP4-15	<0.025	0.033	<0.025	<0.025	<0.025
29081	EC022BGP5-02	<0.025	<0.025	<0.025	<0.025	<0.025
29082	EC022BGP5-05	<0.025	<0.025	<0.025	<0.025	<0.025
29083	EC022BGP5-10	<0.025	<0.025	<0.025	<0.025	<0.025
29084	EC022BGP5-15	<0.025	<0.025	<0.025	<0.025	<0.025
	% IA	101	101	103	110	100
	% EA	85	85	91	97	93
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: SW 846-8021B,5030

Raland K. Tuttle

8-29-00
Date

ENVIRONMENTAL LAB OF , INC.

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ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22B
Project Location: Sec 12 T25S R36E SE

Sampling Date: 08/07/00
Receiving Date: 08/11/00
Analysis Date: 08/18/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
29085	EC022BGP6-02	<0.025	0.103	<0.025	0.032	0.028
29086	EC022BGP6-05	<0.025	0.080	<0.025	<0.025	<0.025
29087	EC022BGP6-10	<0.025	0.029	<0.025	<0.025	<0.025
29088	EC022BGP6-15	<0.025	4.76	<0.025	<0.025	<0.025
29089	EC022BGP7-02	<0.025	<0.025	<0.025	<0.025	<0.025
29090	EC022BGP7-05	<0.025	<0.025	<0.025	<0.025	<0.025
29091	EC022BGP7-10	<0.025	0.079	0.034	<0.025	0.039
29092	EC022BGP7-15	<0.025	<0.025	<0.025	<0.025	<0.025
29093	EC022BGP8-02	<0.025	0.177	<0.025	0.170	0.072
29094	EC022BGP8-05	0.028	0.128	0.053	0.086	0.052
29095	EC022BGP8-10	<0.025	<0.025	<0.025	<0.025	<0.025
29096	EC022BGP8-15	<0.025	0.118	<0.025	0.063	0.038
	% IA	100	100	99	102	95
	% EA	95	97	102	110	103
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: SW 846-8021B,5030

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Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22B
Project Location: Sec 12 T25S R36E SE

Sampling Date: 08/07/00
Receiving Date: 08/11/00
Analysis Date: 08/19/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
29097	EC022BGP9-02	<0.025	0.091	<0.025	<0.025	<0.025
29098	EC022BGP9-05	<0.025	0.030	<0.025	<0.025	<0.025
29099	EC022BGP9-10	<0.025	0.122	0.083	0.291	0.138
29100	EC022BGP9-15	<0.025	0.060	0.034	0.089	0.056
29101	EC022BGP10-02	<0.025	0.129	0.077	0.247	0.112
29102	EC022BGP10-05	<0.025	<0.025	<0.025	<0.025	<0.025
29103	EC022BGP10-10	<0.025	<0.025	<0.025	<0.025	<0.025
29104	EC022BGP10-15	<0.025	0.070	<0.025	<0.025	<0.025
29105	EC022BGP11-02	<0.025	0.078	0.029	0.061	0.040
29106	EC022BGP11-05	<0.025	<0.025	<0.025	<0.025	<0.025
% IA		108	107	106	110	103
% EA		97	88	92	112	92
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: SW 846-8021B,5030

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Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22B
Project Location: Sec 12 T25S R36E SE

Sampling Date: See Below
Receiving Date: 08/11/00
Analysis Date: 08/19/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
29107	EC022BGP11-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/07/00
29108	EC022BGP11-15	<0.025	<0.025	<0.025	<0.025	<0.025	08/07/00
29109	EC022BGP12-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29110	EC022BGP12-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29111	EC022BGP12-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29112	EC022BGP12-15	<0.025	0.026	<0.025	<0.025	<0.025	08/09/00
29113	EC022BGP13-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29114	EC022BGP13-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29115	EC022BGP13-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29116	EC022BGP13-15	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29117	EC022BGP14-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29118	EC022BGP14-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29119	EC022BGP14-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29120	EC022BGP14-15	<0.025	<0.025	<0.025	0.028	<0.025	08/09/00
29121	EC022BGP15-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29122	EC022BGP15-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29123	EC022BGP151-0	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29124	EC022BGP15-15	<0.025	0.036	<0.025	<0.025	<0.025	08/09/00
29125	EC022BGP16-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
	% IA	108	107	106	110	103	
	% EA	93	99	102	110	103	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: SW 846-8021B,5030

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Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22B
Project Location: Sec 12 T25S R36E SE

Sampling Date: See Below
Receiving Date: 08/11/00
Analysis Date: 08/20/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
29126	EC022BGP16-05	<0.025	0.056	<0.025	<0.025	<0.025	08/09/00
29127	EC022BGP16-10	<0.025	<0.025	<0.025	0.034	<0.025	08/09/00
29128	EC022BGP16-15	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29129	EC022BGP17-02	<0.025	0.031	<0.025	<0.025	<0.025	08/09/00
29130	EC022BGP17-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29131	EC022BGP17-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29132	EC022BGP17-15	<0.025	<0.025	<0.025	<0.025	<0.025	08/09/00
29133	EC022BGP18-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29134	EC022BGP18-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29135	EC022BGP18-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29136	EC022BGP18-15	<0.025	0.036	<0.025	<0.025	<0.025	08/10/00
29137	EC022BGP19-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29138	EC022BGP19-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29139	EC022BGP19-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29140	EC022BGP19-15	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29141	EC022BGP20-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29142	EC022BGP20-05	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29143	EC022BGP20-10	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
29144	EC022BGP20-15	<0.025	0.034	<0.025	<0.025	<0.025	08/10/00
29145	EC022BGP21-02	<0.025	<0.025	<0.025	<0.025	<0.025	08/10/00
	% IA	107	103	102	104	99	
	% EA	98	100	105	113	105	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: SW 846-8021B,5030

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8-30-00
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Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22B
Project Location: Sec 12 T25S R36E SE

Sampling Date: 08/10/00
Receiving Date: 08/11/00
Analysis Date: 08/21/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
29146	EC022BGP21-05	<0.025	<0.025	<0.025	<0.025	<0.025
29147	EC022BGP21-10	<0.025	<0.025	<0.025	<0.025	<0.025
29148	EC022BGP21-15	<0.025	0.037	<0.025	<0.025	<0.025
29149	EC022BGP22-02	<0.025	<0.025	<0.025	<0.025	<0.025
29150	EC022BGP22-05	<0.025	<0.025	<0.025	<0.025	<0.025
29151	EC022BGP22-10	<0.025	<0.025	<0.025	<0.025	<0.025
29152	EC022BGP22-15	<0.025	0.029	<0.025	<0.025	<0.025
% IA		102	103	98	100	95
% EA		90	94	93	96	95
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: SW 846-8021B,5030

Raland K. Tuttle

8-30-00
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Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22 B
Project Location: Sec 12 T25S R36E

Sampling Date: 08/04/00
Receiving Date: 08/11/00
Analysis Date: 08/15/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
29065	EC022BGP1-02	<50	<50
29066	EC022BGP1-05	<50	749
29067	EC022BGP1-10	114	2112
29068	EC022BGP1-15	107	2100
29069	EC022BGP2-02	<10	56
29070	EC022BGP2-05	<10	11
29071	EC022BGP2-10	<10	<10
29072	EC022BGP2-15	<10	<10
29073	EC022BGP3-02	<10	<10
29074	EC022BGP3-05	<10	100
29075	EC022BGP3-10	<10	13
29076	EC022BGP3-15	<10	31
29077	EC022BGP4-02	<10	35
29078	EC022BGP4-05	<10	51
29079	EC022BGP4-10	<10	1059
	% IA	110	116
	% EA	100	116
	BLANK	<10	<10

METHODS: SW 846-8015M

Raland K. Tuttle

8-30-00
Date

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Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22 B
Project Location: Sec 12 T25S R36E

Sampling Date: See Below
Receiving Date: 08/11/00
Analysis Date: 08/16/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
29080	EC022BGP4-15	<10	809	08/04/00
29081	EC022BGP5-02	<10	28	08/04/00
29082	EC022BGP5-05	<10	57	08/04/00
29083	EC022BGP5-10	<10	<10	08/04/00
29084	EC022BGP5-15	<10	<10	08/04/00
29085	EC022BGP6-02	<50	<50	08/07/00
29086	EC022BGP6-05	<10	17	08/07/00
29087	EC022BGP6-10	<10	128	08/07/00
29088	EC022BGP6-15	<10	139	08/07/00
29089	EC022BGP7-02	<100	152	08/07/00
29090	EC022BGP7-05	<10	43	08/07/00
	% IA	87	105	
	% EA	81	106	
	BLANK	<10	<10	

METHODS: SW 846-8015M

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8-30-00
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Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22 B
Project Location: Sec 12 T25S R36E

Sampling Date: See Below
Receiving Date: 08/11/00
Analysis Date: 08/17/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
29091	EC022BGP7-10	<10	259	08/07/00
29092	EC022BGP7-15	<10	274	08/07/00
29093	EC022BGP8-02	<10	45	08/07/00
29094	EC022BGP8-05	<10	27	08/07/00
29095	EC022BGP8-10	<10	26	08/07/00
29096	EC022BGP8-15	<10	<10	08/07/00
29097	EC022BGP9-02	<10	83	08/07/00
29098	EC022BGP9-05	<10	69	08/07/00
29099	EC022BGP9-10	<10	930	08/07/00
29100	EC022BGP9-15	<10	924	08/07/00
29101	EC022BGP10-02	<10	25	08/07/00
29102	EC022BGP10-05	<10	81	08/07/00
29103	EC022BGP10-10	<10	67	08/07/00
29104	EC022BGP10-15	<10	32	08/07/00
29105	EC022BGP11-02	<10	<10	08/07/00
29106	EC022BGP11-05	<10	<10	08/07/00
29107	EC022BGP11-10	<10	<10	08/07/00
29108	EC022BGP11-15	<10	<10	08/07/00
29109	EC022BGP12-02	<10	<10	08/09/00
29110	EC022BGP12-05	<10	<10	08/09/00
	% IA	82	97	
	% EA	97	104	
	BLANK	<10	<10	

METHODS: SW 846-8015M

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Project #: None Given
Project Name: Clay Osborn Site 22 B
Project Location: Sec 12 T25S R36E

Sampling Date: 08/09/00
Receiving Date: 08/11/00
Analysis Date: 08/18/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
29111	EC022BGP12-10	<10	<10
29112	EC022BGP12-15	<10	<10
29113	EC022BGP13-02	<10	<10
29114	EC022BGP13-05	<10	14
29115	EC022BGP13-10	<10	512
29116	EC022BGP13-15	<10	497
29117	EC022BGP14-02	<10	38
29118	EC022BGP14-05	<10	26
29119	EC022BGP14-10	<10	103
29120	EC022BGP14-15	<10	140
29121	EC022BGP15-02	<10	40
29122	EC022BGP15-05	<10	14
29123	EC022BGP15-10	<10	275
29124	EC022BGP15-15	<10	305
29125	EC022BGP16-02	<10	87
29126	EC022BGP16-05	<10	219
29127	EC022BGP16-10	<10	1319
29128	EC022BGP16-15	<10	1407
29129	EC022BGP17-02	<10	66
29130	EC022BGP17-05	<10	44
	% IA	94	98
	% EA	89	99
	BLANK	<10	<10

METHODS: SW 846-8015M

Raland K. Tuttle

8-30-00
Date

12600 West I-20 East • Odessa, Texas 79765 • (915) 563-1800 • Fax (915) 563-1713

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 41 deg. F
Project #: None Given
Project Name: Clay Osborn Site 22 B
Project Location: Sec 12 T25S R36E

Sampling Date: See Below
Receiving Date: 08/11/00
Analysis Date: 08/19/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
29131	EC022BGP17-10	<10	90
29132	EC022BGP17-15	<10	101
29133	EC022BGP18-02	<10	60
29134	EC022BGP18-05	<10	<10
29135	EC022BGP18-10	<10	20
29136	EC022BGP18-15	<10	31
29137	EC022BGP19-02	<10	12
29138	EC022BGP19-05	<10	25
29139	EC022BGP19-10	<10	303
29140	EC022BGP19-15	<10	300
29141	EC022BGP20-02	<10	<10
29142	EC022BGP20-05	<10	<10
29143	EC022BGP20-10	<10	27
29144	EC022BGP20-15	<10	22
29145	EC022BGP21-02	<10	21
29146	EC022BGP21-05	<10	36
29147	EC022BGP21-10	<10	<10
29148	EC022BGP21-15	<10	136
29149	EC022BGP22-02	<10	86
29150	EC022BGP22-05	<10	21
29151	EC022BGP22-10	<10	168
29152	EC022BGP22-15	<10	147
	% IA	94	103
	% EA	86	101
	BLANK	<10	<10

METHODS: SW 846-8015M

Raland K. Tuttle

8-30-00
Date