Larson & Associates, Inc.
Environmental Consultants

July 26, 2002

Mr. Paul R. Sheeley
Environmental Engineer
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Produced Water Spill Investigation Report, Texaco Exploration and Production, Inc., Vacuum Glorietta West Unit Satellite #4, UL-F, Section 6, Township 18 South, Range 35 East, Lea County, New Mexico.

Dear Mr. Sheeley:

Texaco Exploration and Production, Inc. (Texaco) has retained Larson and Associates, Inc. (LA) to investigate a produced water spill that occurred at its Vacuum Glorietta West Unit Satellite # 4 (Site), located in Unit Letter F (SW/4, NW/4), Section 6, Township 18 South, Range 35 East, Lea County, New Mexico (Site). This report presents findings of that investigation. Figure 1 presents a location and topographic map. Figure 2 presents a detailed drawing for the Site.

Spill Reporting and Initial Actions

Texaco reported the spill to the New Mexico Oil Conservation Commission (NMOCD) in February 2002. Texaco recovered as much fluid as possible following the spill, and scraped the area to remove brine impacted soil. A backhoe was used to collect soil samples from two (2) locations following the spill cleanup. Texaco submitted the sample results to the NMOCD on February 22, 2002. The NMOCD denied Texaco's closure request, and required complete delineation of the spill in a letter dated March 26, 2002. Appendix A presents correspondence from the NMOCD.

Setting

The Site is located approximately 17 miles northwest of Hobbs, New Mexico, at an elevation approximately 3975 feet above mean sea level (AMSL). A thin veneer of unconsolidated wind-blown sand (Recent-age) covers the Site, and overlies the Ogallala formation (Tertiary-age). The Ogallala formation consists of poorly to well-cemented sand and sandstone, interbedded with clay, silt and gravel. The Ogallala formation overlies the Triassic-age Chinle formation (commonly referred to as "red bed") consisting chiefly of mudstone, shale and sandstone. Groundwater was observed at approximately 110 feet BGS in a boring (BH-7) drilled at the Site.

Current Investigation

LA collected soil samples from twelve soil borings installed at the Site between April 23 and May 1, 2002. The borings were drilled by Environmental Technology Group, Inc. using an air rotary drilling rig. Soil samples were collected at the surface, and approximately every five (5) feet using a split-spoon sampler. The borings were drilled to approximately 50 feet BGS, except boring BH-7, which was advanced until groundwater was observed at approximately 110 feet BGS. The split-spoon sampler was thoroughly washed between sample events, and the drilling

Chevplex - 216419
Facility - fPAC0605439887
incident - nPAC0605439493
application - pAC0605440O7

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rig and associated equipment (i.e., bit, rods, etc.) were washed between locations using a high-pressure hot water washer. Drill cuttings were place on the ground adjacent to the borings. The soil samples were placed in clean glass sample jars, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Environmental Lab of Texas, Inc., located in Odessa, Texas. A portion of each sample was also placed in a clean glass sample jar for headspace analysis. The headspace jars were filled approximately ¾ full, and a layer of aluminum foil was placed over the opening of the jar before replacing the cap. The headspace samples were set aside and allowed to warm up to ambient temperature before a RAE Instruments, Model 2000 photoionization detector (PID) was used to measure the concentration of organic vapors in the headspace sample. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil), and the concentration of organic vapors was displayed by the instrument in parts per million (ppm). The NMOCD allows a PID measurement of less than 100 ppm to substitute a laboratory analysis for benzene and total BTEX. However, the PID measurement cannot be used as a substitute for TPH analysis by a laboratory. Soil samples that exhibited PID readings above 100 ppm included: BH-7, 1' (>1999 ppm), BH-7, 5' (1440 ppm), BH-7, 10' (297.4 ppm), BH-7, 15' (238.6 ppm), BH-7, 20' (149.5 ppm), BH-7, 40' (137.6 ppm), BH-7, 50' (137.3 ppm), BH-8, 40' (147 ppm), BH-9, 5' (803.2 ppm), BH-9, 10' (646.8 ppm), BH-9, 15' (192.2 ppm), BH-9, 20' (182.9 ppm), BH-9, 50' (310.1 ppm), BH-11, 1' (>1999 ppm), BH-11, 5' (>1999 ppm), BH-11, 10' (>1999 ppm), BH-11, 15' (>1999 ppm), BH-11, 20' (>1999 ppm), BH-11, 40' (>1999 ppm), BH-11, 50' (>1999 ppm), BH-12, 1' (1190 ppm) and BH-12, 10' (162.9 ppm). The sample from each boring exhibiting the highest PID reading (over 100 ppm) was analyzed for BTEX and TPH by EPA methods SW-846-8021B and 8015 for gasoline range organics (GRO) and diesel range organics (DRO), respectively. Several additional samples from borings BH-7 through BH-12 were also analyzed for BTEX and TPH to define the vertical and horizontal extent of the release. All samples were analyzed for chloride using EPA method SW-846-9253. The PID readings and laboratory analysis are presented on Table 1. The PID readings are also graphically displayed on boring logs presented in Appendix B. Appendix C presents the laboratory reports.

An electromagnetic (EM) terrain conductivity survey was performed at the Site to augment data collected from the soil borings. The EM technique measures the electrical properties (i.e., conductivity) of soil and rock, as well as the electrical properties of groundwater. The EM method has been employed successfully to identify and delineate impacts to soil and groundwater involving produced water. The major factor that contributes to the conductivity of soil and rock is the conductivity of the formation water. The conductivity of the formation water depends primarily on the dissolved solids content. The EM induction technique utilizes current flow induced in the subsurface materials by a surface transmitter. An alternating electric current produced by a transmitter coil generates an alternating magnetic field that induces current flow through the earth material. The secondary magnetic field sensed by the receiver coil depends on the strength of the primary magnetic field, current frequency, distance between transmitting and receiving coils, and ground conductivity. The primary magnetic field, current frequency, and coil separation can be accounted for, leaving ground conductivity as the only unknown variable to be measured. The ground conductivity is digitally displayed in millimhos per meter (mmhos/m) at the receiver consol.

The EM survey was performed on May 16 and 22, 2002, using an EM-34 terrain conductivity meter manufactured by Geonics Limited, Missasauga, Ontario, Canada. The EM-34 meter

requires 2 persons to operate, and consists of a transmitter, transmitter coil, receiver coil and receiver consol. The EM-34 has a depth of exploration that ranges from 0 to approximately 200 feet BGS, depending on the distance of separation between the transmitter and receiver coils (coil separation) and orientation of the transmitter and receiver coils (i.e., vertical or horizontal coplanar. Shallow conductivity measurements are acquired while the transmitter and receiver coils are oriented vertical coplanar or horizontal dipole (HD) mode. Deeper conductivity measurements are acquired while the transmitter and receiver coils are oriented horizontal coplanar or vertical dipole (VD) mode. The EM-34 has a depth of exploration of 0 to 24.6 feet BGS (HD) and 0 to 49.2 feet BGS (VD) using the 10-meter coil separation. The EM-34 has a depth of exploration of 0 to 49.2 feet BGS (HD) and 0 to 98.4 feet BGS (VD) using the 20-meter coil separation. Deeper exploration depths are achieved using the 40-meter coil separation, and ranges from 0 to 98.4 feet BGS (HD) and 0 to 196.9 feet BGS (VD).

The EM-34 survey was conducted using the 10-meter (HD) and 20-meter (HD and VD) coil separations. The location of boring BH-1 was determined to be free of cultural interferences (i.e., pipelines, overhead power lines, etc.), and was selected as a background station. Background measurements were collected for the 10-meter (HD) and 20-meter (HD and VD) coil separations to compare against EM-34 measurements collected at the spill area. A sample grid measuring approximately 540,000 square feet (600 x 900 feet) was established at the Site using a Nikon total station system (TSS). Measurement stations were established inside the sample grid approximately every 100 feet for a total of fifty-four (54) stations. Three (3) EM-34 measurements were collected at each station for a total of 165 measurements, including background. The EM-34 measurement stations are shown on Figure 2. The measurements collected during the EM-34, 10-meter (HD) and 20-meter (HD and VD) surveys are presented as contoured drawings in Figure 3 (10-meter HD), Figure 4 (20-meter HD) and Figure 5 (20-meter VD). Appendix D presents the EM-34 data sheets.

Investigation Results

The NMOCD has established soil remediation action levels (RRAL) for benzene, total BTEX and TPH resulting from spills involving crude oil ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). Remediation levels for benzene, total BTEX and TPH were calculated using the following NMOCD criteria:

Criteria	Result	Ranking Score
Depth-to-Groundwater	>100 Feet	0
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
		Total: 0

The following RRALs have been assigned to the Site based on NMOCD criteria:

Benzene	**10 mg/kg**
Total BTEX	**50 mg/kg**
TPH	**5000 mg/kg**

Referring to Table 1, neither benzene, total BTEX nor TPH were reported above the RRAL in any sample. The NMOCD does not have an RRAL for chloride in soil, although it has applied

the New Mexico Water Quality Control Commission (NMWQCC) groundwater standard of 250 milligrams per liter (mg/L) as an action level for chloride in soil. The average background chloride concentration of 101.98 milligrams per kilogram (mg/kg) was determined from soil samples collected at boring BH-1. Samples from the following borings were elevated above background, as well as the cleanup level typically applied to produced water spills by the NMOCD: BH-2, 1' (1330 mg/kg), BH-3, 1' (3860 mg/kg), BH-4, 1' (860 mg/kg), BH-5, 1' (4080 mg/kg), BH-7, 1' (4320 mg/kg), BH-7, 5' (6380 mg/kg), BH-7, 10' (2750 mg/kg), BH-7, 20' (292 mg/kg), BH-9, 1' (19500 mg/kg), BH-10, 1' (762 mg/kg), BH-12, 1' (3460 mg/kg), and BH-12, 5' (762 mg/kg). The investigation determined that the vertical extent of chloride impact is generally limited to the upper 1 foot of the soil horizon, except at locations BH-7 and BH-12. The chloride impact at location BH-7 and BH-12 appears to extend to depths of approximately 10 and 5 feet, respectively. The maximum chloride concentration was found at location BH-9 at approximately 1 foot BGS (19,500 mg/kg).

Referring to Figure 3 (EM-34, 10-meter HD, 0 to 24.6 feet), the background reading was 6.8 mmhos/m. EM-34, 10-meter HD measurements within the spill area ranged from background to greater than twelve (12) times background. EM-34, 10-meter HD measurements greater than approximately three (3) times background were recorded at stations 100 east/100 south (21.8 mmhos/m), 500 east/100 south (23.0 mmhos/m) and 800 east/500 south (23.2 mmhos/m). The EM-34, 10-meter HD reading recorded at location 500 east/100 south (23.0 mmhos/m) may be attributed to metallic interference from an underground pipeline observed at the surveyed location. EM-34, 10-meter HD readings exceeded approximately seven (7) times background at location 700 east/500 south (50.0 mmhos/m). The EM-34, 10-meter HD measurement at location 300 east/200 south (86.0 mmhos/m) was greater than twelve (12) times background.

Referring to Figure 4 (EM-34, 20-meter HD, 0 to 49.2 feet), the background reading was 8.2 mmhos/m. EM-34, 20-meter HD measurements within the spill area ranged from background to greater than six (6) times background. An EM-34, 20-meter HD measurement greater than approximately three (3) times background was recorded at station 300 east/200 south (27.1 mmhos/m). EM-34, 20-meter HD measurements greater than approximately four (4) times background were recorded at stations 700 east/500 south (34.8 mmhos/m) and 800 east/600 south (40.4 mmhos/m). The EM-34, 20-meter HD measurement at location 800 east/600 south appears to be an isolated anomaly, possibly associated with interference from nearby pipelines. An EM-34, 20-meter HD measurement greater than approximately six (6) times background was recorded at station 700 east/400 south (55.6 mmhos/m).

Referring to Figure 5 (EM-34, 20-meter VD, 0 to 98.4 feet), the background reading was 14.2 mmhos/m. EM-34, 20-meter VD measurements within the spill area ranged from background to greater than twenty (20) times background. EM-34, 20-meter VD measurements greater than approximately three (3) times background were recorded at stations 100 east/0 south (45.3 mmhos/m), 500 east/200 south (45.0 mmhos/m) and 900 east/500 south (41.1 mmhos/m). EM-34, 20-meter VD measurements greater than approximately four (4) times background were recorded at stations 100 east/500 south (67.6 mmhos/m), 200 east/100 south (61.7 mmhos/m) and 300 east/300 south (56.8 mmhos/m). An EM-34, 20-meter VD measurement greater than approximately seven (7) times background was recorded at station 0 east/0 south (102.4 mmhos/m). EM-34, 20-meter VD measurements greater than approximately ten (10) times background were recorded at stations 600 east/500 south (181.0 mmhos/m) and 700 east/600

south (169.8 mmhos/m). EM-34, 20-meter VD measurements greater than approximately twenty (20) times background were recorded at stations 300 east/200 south (325.0 mmhos/m) and 600 east/400 south (280.0 mmhos/m).

The results of chloride analysis of soil samples from borings BH-5 and BH-7 appear to correlate well with EM-34, 10-meter HD and 20-meter HD measurements. The soil samples from boring BH-7 reported elevated chloride values to approximately 10 feet BGS. Soil samples from the remaining borings reported elevated chloride levels in the surface samples collected to approximately 1 foot BGS. The anomaly observed during the 10-meter HD survey at station 700 east/500 south was not observed during the EM-34, 20-meter HD and VD surveys, and is likely interference from two subsurface pipelines near the survey stations. The anomaly observed at station 600 east/400 south during the EM-34, 20-meter VD survey likely reflects interference from a pipeline since it was not observed during the EM-34, 10-meter HD and EM-34, 20-meter HD surveys.

Recommendations

The horizontal and vertical extent of impact from the spill was determined from the investigations. The impact is limited to elevated chloride in the approximate upper 1 foot of the unsaturated zone soil, except at location BH-7. The impact observed at location BH-7 appears to extend to approximately 10 feet BGS. Please call Mr. Rodney G. Bailey at (915) 687-7100 or myself at (915) 687-0901 if you have questions.

Sincerely,

Larson and Associates, Inc.

fn

Cindy K. Crain
Geologist

9/4/02

Encl ① RECOMMENDATIONS? — THIS IS NOT A RECOM — IT IS A STATEMENT. WHAT IS RECOM. TO BRING THIS TO ACCEPTABLE LEVEL? REFER TO APPENDIX 1, ITEM 1 & 2 NOT ADDRESSED

cc:

Texaco Exploration and Production Inc.
Permian Business Unit
15 Smith Road
Midland, TX 79705
Tel (915) 687-7251
Fax (915) 687-7110
bailerg@chevrontexaco.com

Rodney Bailey
HES Champion

ChevronTexaco

Date: August 1, 2002

New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs New Mexico 88240
Attn Paul Sheeley

Re: Produce Water Spill Investigation
Vacuum Glorieta West Unit Satellite #4

Dear Mr. Sheeley;

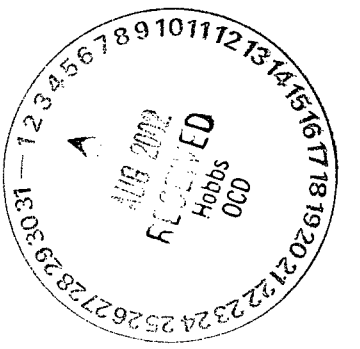
Attached is the investigation report for the above mentioned site, where a spill that occurred on 1-08-02. As the report shows the impact is limited to an elevated chloride level in the approximate upper 1 foot of the unsaturated zone soil except for BH-7 where it extends to approximately 10 feet BGS.

If you have any question please call me at 915-687-7251.

Sincerely,

Rodney Bailey

ChevronTexaco
Rodney Bailey
HES Champion



TABLES

Table 1: **Summary of BTEX, TPH and Chloride Analysis of Soil Samples**
Texaco Vacuum Unit Satellite # 4
Buckeye, Lea County, New Mexico

Borehole Number	Sample Date	Sample Depth (feet BGS)	PID (ppm)	Benzene ug/kg	Total BTEX ug/kg	DRO >C12-C35 mg/kg	GRO C6-C12 mg/kg	TPH (C6-C35) mg/kg	Chloride mg/kg
BH-1	4/23/2002	1	2.1	---	---	---	---	---	115.00
BH-1	4/23/2002	5	7.4	---	---	---	---	---	222.00
BH-1	4/23/2002	10	7.1	---	---	---	---	---	142.00
BH-1	4/23/2002	15	7.1	---	---	---	---	---	44.30
BH-1	4/23/2002	20	6.9	---	---	---	---	---	53.20
BH-1	4/23/2002	50	6.8	---	---	---	---	---	35.40
BH-2	4/23/2002	1	9.6	---	---	---	---	---	1330.00
BH-2	4/23/2002	5	8.3	---	---	---	---	---	25.30
BH-2	4/23/2002	10	7.9	---	---	---	---	---	17.70
BH-2	4/23/2002	15	8	---	---	---	---	---	26.60
BH-2	4/23/2002	20	8.4	---	---	---	---	---	17.70
BH-2	4/24/2002	50	9	---	---	---	---	---	17.70
BH-3	4/24/2002	1	34.9	---	---	---	---	---	3860.00
BH-3	4/24/2002	5	15.5	---	---	---	---	---	12.70
BH-3	4/24/2002	10	15.1	---	---	---	---	---	27.30
BH-3	4/24/2002	15	15.6	---	---	---	---	---	25.30
BH-3	4/24/2002	20	12.8	---	---	---	---	---	44.30
BH-3	4/24/2002	40	16.4	---	---	---	---	---	17.70
BH-4	4/24/2002	1	1.4	---	---	---	---	---	860.00
BH-4	4/24/2002	5	1.6	---	---	---	---	---	35.40
BH-4	4/24/2002	10	1.6	---	---	---	---	---	17.70
BH-4	4/24/2002	15	1.5	---	---	---	---	---	17.70
BH-4	4/25/2002	40	46.1	---	---	---	---	---	25.00
BH-5	4/25/2002	1	48.5	---	---	---	---	---	4080.00
BH-5	4/25/2002	5	54.9	---	---	---	---	---	35.00
BH-5	4/25/2002	10	40.3	---	---	---	---	---	18.00
BH-5	4/25/2002	15	35.2	---	---	---	---	---	25.00
BH-5	4/25/2002	20	24.6	---	---	---	---	---	18.00
BH-5	4/25/2002	50	12	---	---	---	---	---	18.00

Borehole Number	Sample Date	Sample Depth (feet BGS)	PID (ppm)	Benzene ug/kg	Total BTEX ug/kg	DRO >C12-C35 mg/kg	GRO C6-C12 mg/kg	TPH (C6-C35) mg/kg	Chloride mg/kg
BH-6	4/25/2002	1	11.5	---	---	---	---	---	27.00
BH-6	4/25/2002	5	16.6	---	---	---	---	---	18.00
BH-6	4/25/2002	10	11.8	---	---	---	---	---	18.00
BH-6	4/25/2002	15	13.1	---	---	---	---	---	18.00
BH-6	4/25/2002	20	24.7	---	---	---	---	---	18.00
BH-6	4/26/2002	40	14.2	---	---	---	---	---	21.00
BH-7	4/29/2002	1	1999	<25.0	<25.0	<10.0	<10.0	<10.0	4320.00
BH-7	4/29/2002	5	1440	---	---	---	---	---	6380.00
BH-7	4/29/2002	10	297.4	---	---	---	---	---	2750.00
BH-7	4/29/2002	15	238.6	---	---	---	---	---	142.00
BH-7	4/29/2002	20	149.5	---	---	---	---	---	292.00
BH-7	4/29/2002	40	137.6	---	---	---	---	---	39.00
BH-7	4/29/2002	50	137.3	<25.0	<25.0	193.0	<10.0	193.0	186.00
BH-7	4/29/2002	60	33.1	---	---	---	---	---	18.00
BH-7	4/29/2002	100	64.3	<25.0	<25.0	<10.0	<10.0	<10.0	18.00
BH-7	4/29/2002	110	12.7	---	---	---	---	---	18.00
BH-8	4/26/2002	1	11.5	---	---	---	---	---	35.00
BH-8	4/26/2002	5	11.5	---	---	---	---	---	18.00
BH-8	4/26/2002	10	11.2	---	---	---	---	---	18.00
BH-8	4/26/2002	15	11.4	---	---	---	---	---	20.00
BH-8	4/26/2002	20	12.7	---	---	---	---	---	18.00
BH-8	4/26/2002	40	147	<25.0	<25.0	<10.0	<10.0	<10.0	19.00
BH-9	4/26/2002	1	44.8	---	---	---	---	---	19500.00
BH-9	4/26/2002	5	803.2	<25.0	<25.0	<10.0	<10.0	<10.0	118.00
BH-9	4/26/2002	10	646.8	---	---	---	---	---	55.00
BH-9	4/26/2002	15	192.2	---	---	---	---	---	18.00
BH-9	4/26/2002	20	182.9	---	---	---	---	---	18.00
BH-9	4/26/2002	50	310.1	<25.0	<25.0	<10.0	<10.0	<10.0	18.00
BH-10	4/30/2002	1	39.4	---	---	---	---	---	762.00
BH-10	4/30/2002	5	34.2	---	---	---	---	---	20.00
BH-10	4/30/2002	10	32.9	---	---	---	---	---	14.00
BH-10	4/30/2002	15	32.6	---	---	---	---	---	35.00
BH-10	4/30/2002	20	80.2	<25.0	<25.0	---	---	---	12.00
BH-10	4/30/2002	50	34.6	---	---	---	---	---	21.00

Borehole Number	Sample Date	Sample Depth (feet BGS)	PID (ppm)	Benzene ug/kg	Total BTEX ug/kg	DRO >C12-C35 mg/kg	GRO C6-C12 mg/kg	TPH (C6-C35) mg/kg	Chloride mg/kg
BH-11	4/30/2002	1	1999	---	---	---	---	---	142.00
BH-11	4/30/2002	5	1999	<25.0	<25.0	<10.0	<10.0	<10.0	7.00
BH-11	4/30/2002	10	1999	---	---	---	---	---	18.00
BH-11	4/30/2002	15	1999	---	---	---	---	---	19.00
BH-11	4/30/2002	20	1999	<25.0	<25.0	<10.0	<10.0	<10.0	19.00
BH-11	4/30/2002	40	1999	<25.0	<25.0	<10.0	<10.0	<10.0	18.00
BH-11	4/30/2002	50	1999	---	---	---	---	---	18.00
BH-12	5/1/2002	1	1190	<25.0	<25.0	<10.0	<10.0	<10.0	3460.00
BH-12	5/1/2002	5	29.5	---	---	---	---	---	762.00
BH-12	5/1/2002	10	162.9	<25.0	<25.0	89.9	<10.0	89.9	35.00
BH-12	5/1/2002	15	39.6	---	---	---	---	---	38.00
BH-12	5/1/2002	20	73.9	---	---	---	---	---	51.00
BH-12	5/1/2002	50	11.6	<25.0	<25.0	344.0	<10.0	344.0	18.00

Notes: All analyses performed by Environmental Lab of Texas I, LTD., Midland, Texas

1. BGS: Depth in feet below ground surface
2. mg/kg: Concentration in milligrams per kilogram
3. ug/kg: Concentration in micrograms per kilogram
4. <: Concentration below test method detection limit
5. ---: No data available

FIGURES

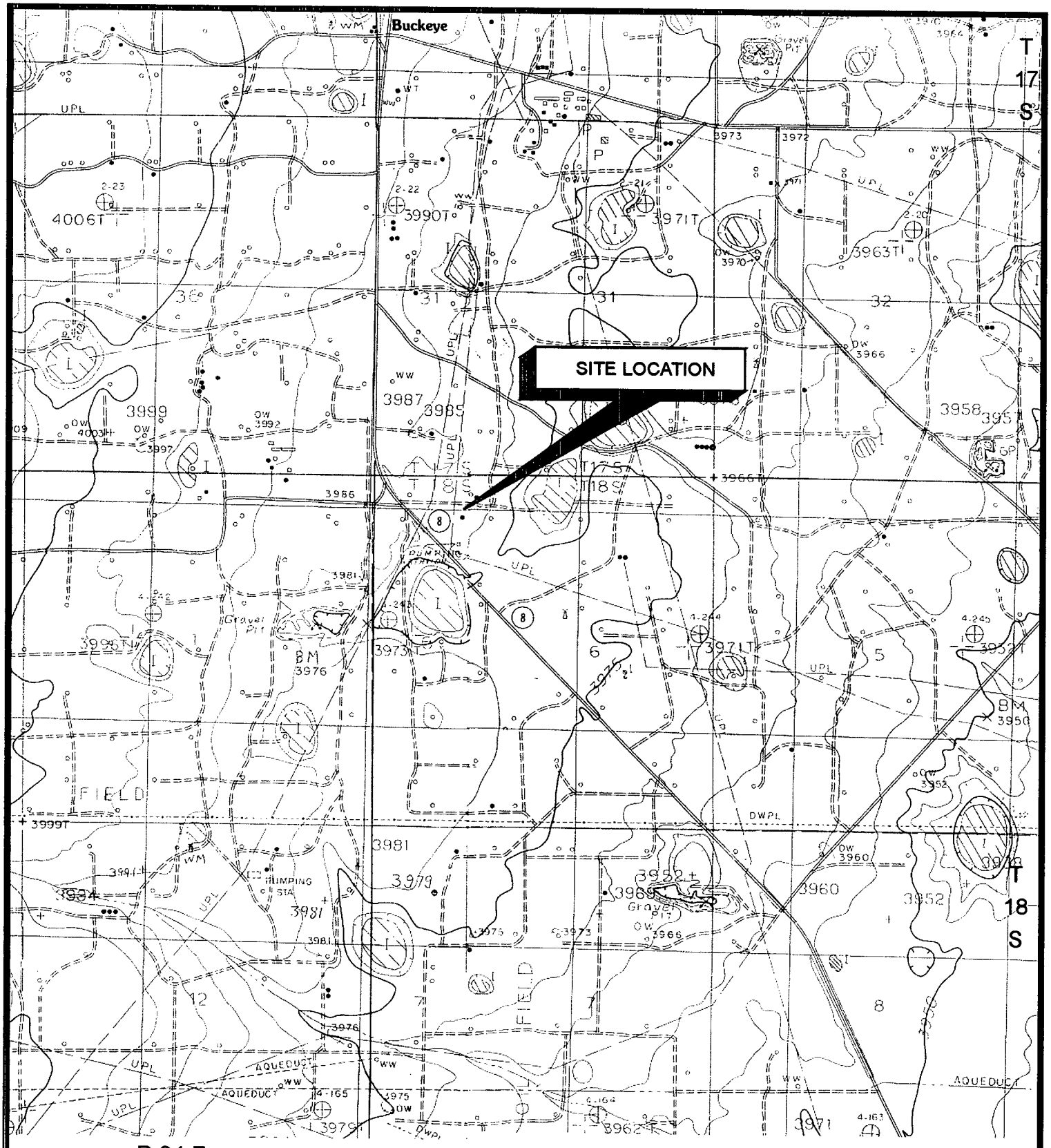


FIGURE #1

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION INC.

VACUUM UNIT SATELLITE NO. 4

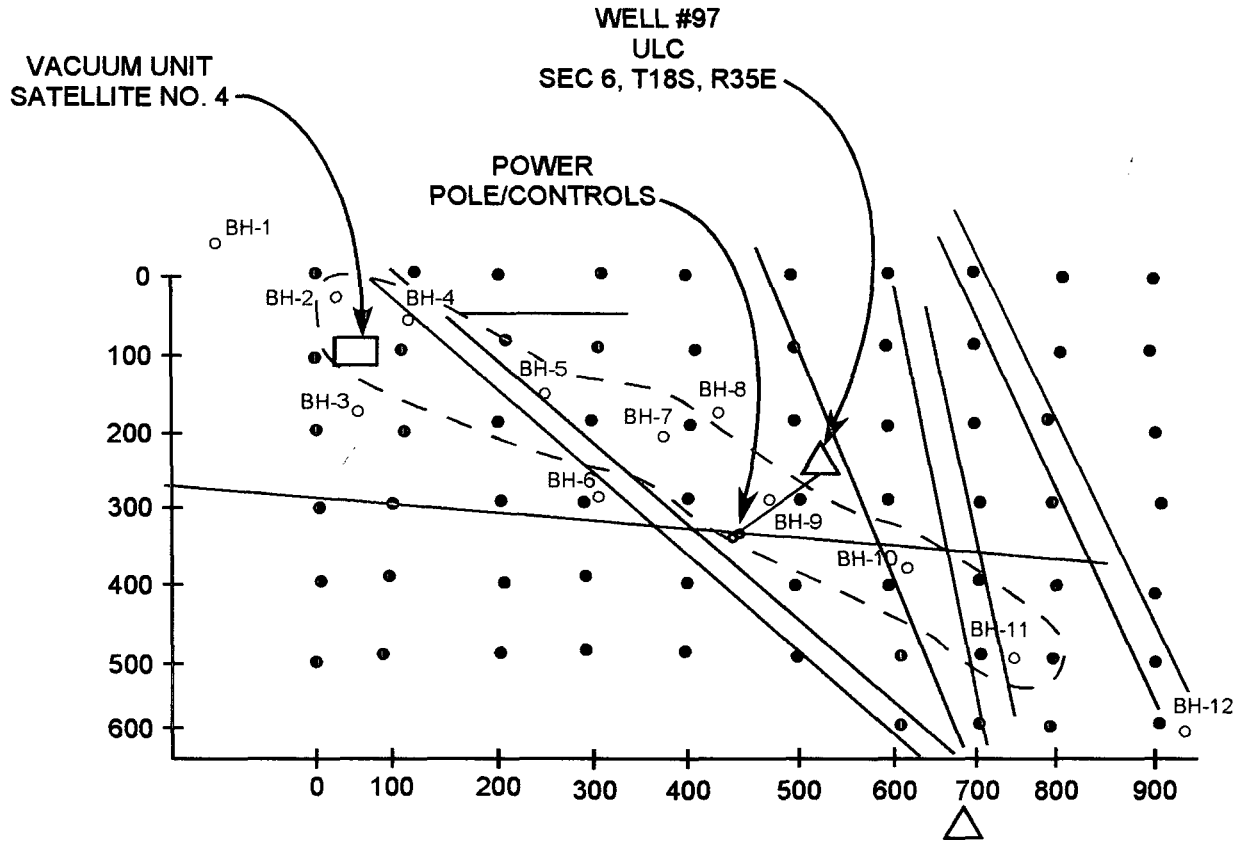
TOPOGRAPHIC MAP

TAKEN FROM U.S.G.S.
LOVINGTON SW & BUCKEYE, NEW MEXICO 1985
7.5' QUADRANGLES

SCALE: 1"=2000'

DATE 6/14/02
NAME:
FILE: 02-0106

Larson & Associates, Inc.
Environmental Consultants



LEGEND

- PIPELINE
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- SPILL AREA
- SOIL BORING LOCATIONS
- EM SURVEY POINTS

0 2500

Scale in Feet

FIGURE #2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION INC.

VACUUM UNIT SATELLITE NO. 4

SITE DETAILS

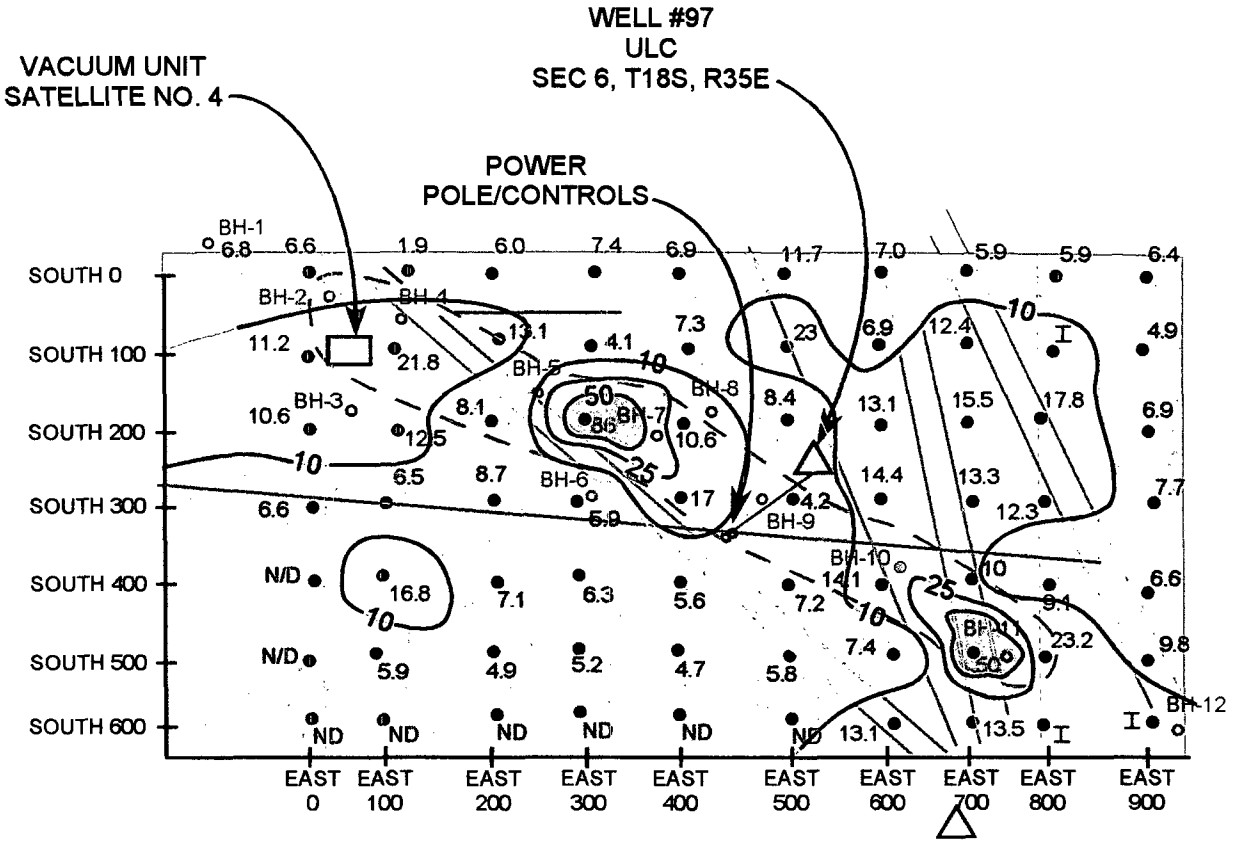
ULF, SEC 6, T18S, R35E

DATE: 6/14/02

NAME:

FILE: 02-0106

Larson & Associates, Inc.
Environmental Consultants



LEGEND

- PIPELINE
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- SPILL AREA
- BH-3 / 4.9 SOIL BORING LOCATION
- EM SURVEY POINT, and EM-34,10-METER HD READING, MMHOS/M, MAY 2002
- 25 CONTOUR of EQUAL EM-34, 10-METER HD READINGS, MMHOS/M, MAY 2002
- N/D NO DATA AVAILABLE
- 2X BACKGROUND (10-25)
- >3X BACKGROUND (25-50)
- >5X BACKGROUND (>50)

0 250'
Scale in Feet

FIGURE #3

LEA COUNTY, NEW MEXICO

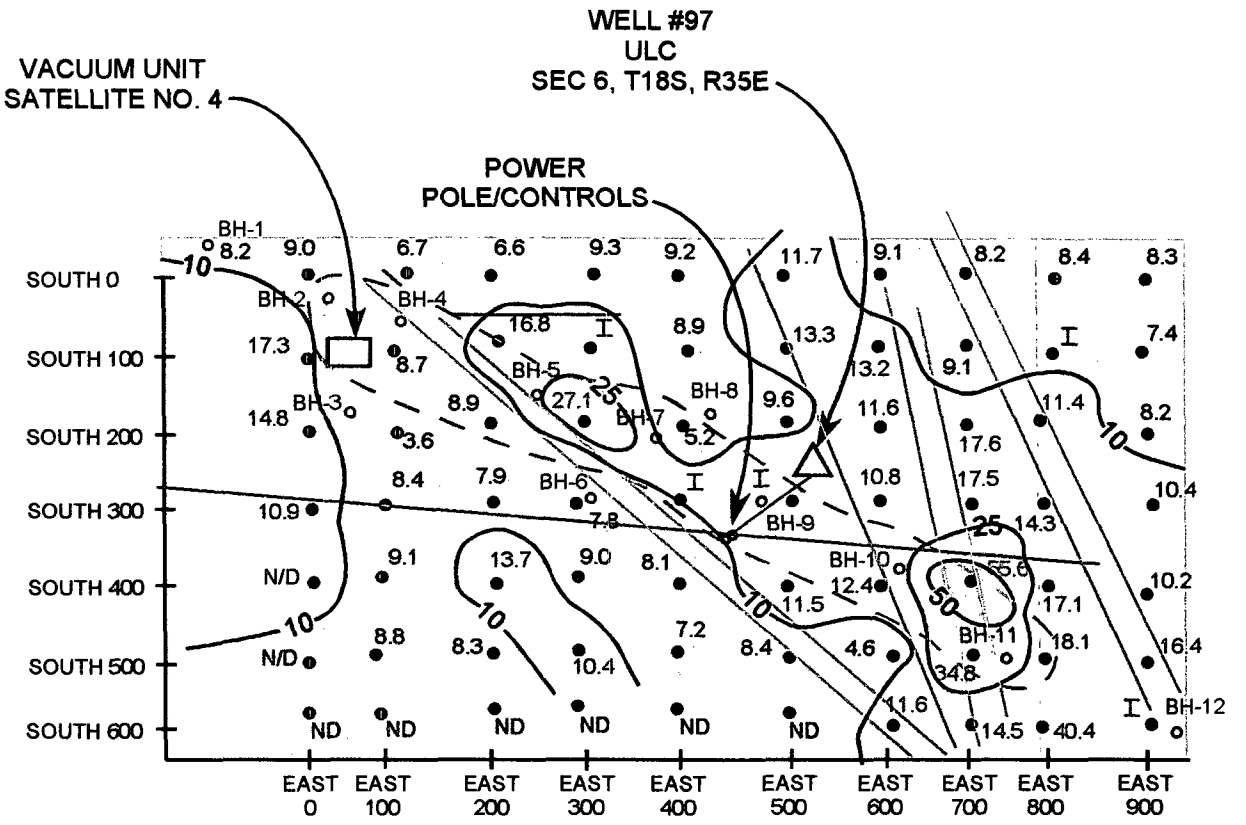
TEXACO EXPLORATION and PRODUCTION INC.

VACUUM UNIT SATELLITE NO. 4

EM-34, 10-METER HD SURVEY
(0 to 24.6 FEET)

DATE: 6/14/02
NAME:
FILE: 02-0106

Larson & Associates, Inc.
Environmental Consultants



LEGEND

- PIPELINE
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- SPILL AREA
- BH-3 / 9.1 SOIL BORING LOCATION
- EM SURVEY POINT, and EM-34, 20-METER HD READING, MMHOS/M, MAY 2002
- 25 CONTOUR of EQUAL EM-34, 20-METER HD READINGS, MMHOS/M, MAY 2002
- N/D NO DATA AVAILABLE

- 2X BACKGROUND (10-25)
- 3X BACKGROUND (25-50)
- 75X BACKGROUND (>50)

0 250'
Scale in Feet

FIGURE #4

LEA COUNTY, NEW MEXICO

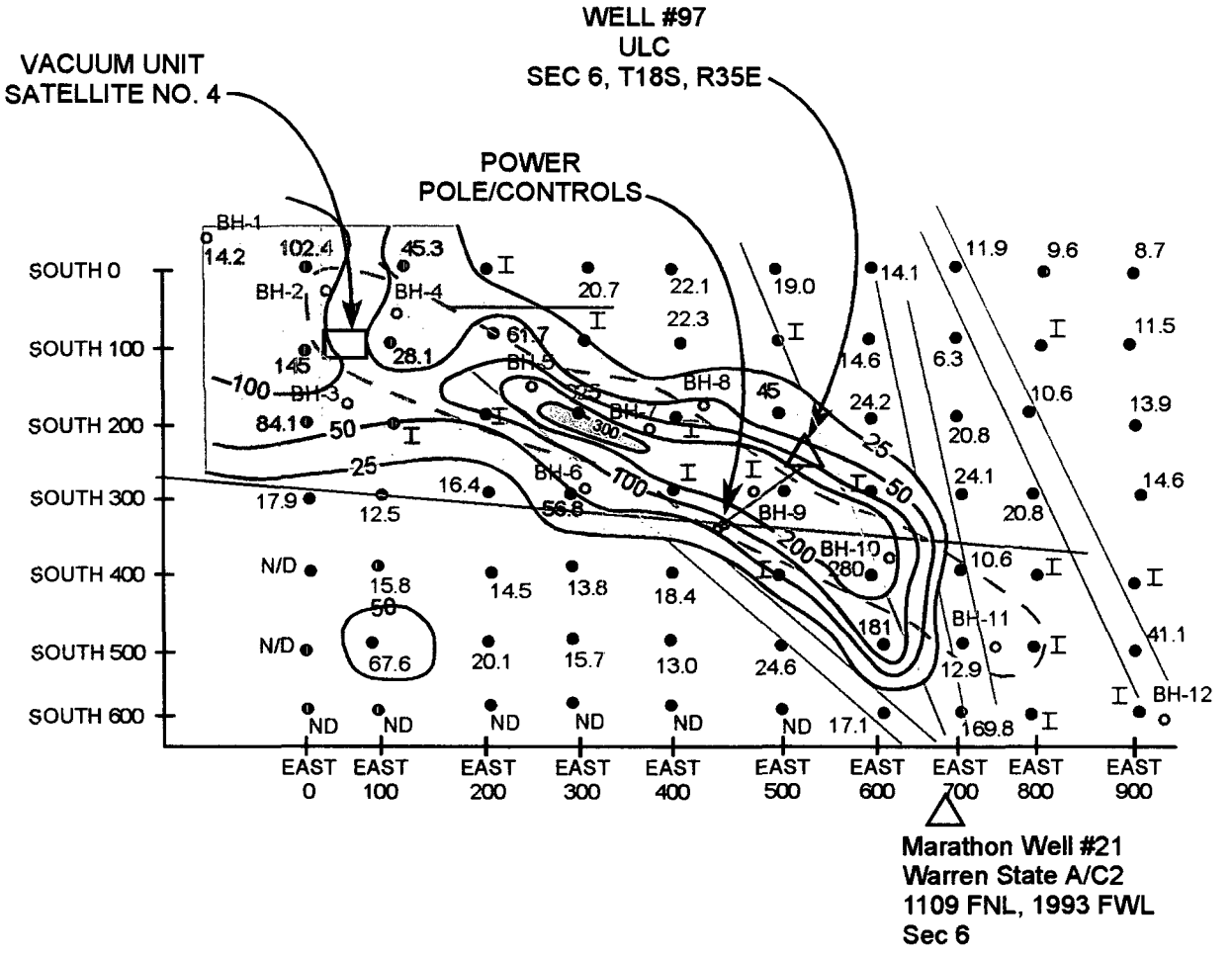
TEXACO EXPLORATION and PRODUCTION INC.

VACUUM UNIT SATELLITE NO. 4

EM-34, 20 -METER HD SURVEY
(0 to 49.2 FEET)

DATE: 6/14/02
NAME:
FILE: 02-0106

Larson & Associates, Inc.
Environmental Consultants



LEGEND

- PIPELINE
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- SPILL AREA
- BH-3 15.8 SOIL BORING LOCATION
- EM SURVEY POINT, and EM-34, 20-METER VD READING, MMHOS/M, MAY 2002
- 100 CONTOUR of EQUAL EM-34, 20-METER VD READINGS, MMHOS/M, MAY 2002
- N/D NO DATA AVAILABLE

- 2X BACKGROUND (25-50)
- 3X BACKGROUND (50-100)
- >7X BACKGROUND (100-200)
- >14X BACKGROUND (200-300)
- >20X BACKGROUND

N

0 250'
Scale in Feet

FIGURE #5

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION INC.

VACUUM UNIT SATELLITE NO. 4

EM-34, 20 -METER VD SURVEY
(0 to 98.4 FEET)

DATE: 6/14/02
NAME:
FILE: 02-0106

Larson & Associates, Inc.
Environmental Consultants

APPENDIX A

NMOCD Correspondence

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

March 26, 2002

ChevronTexaco
Attn: Rodney Bailey
POB 1150
Midland, Texas 79702

Re: Closure Plan Denial - Second Notice
Vacuum Gloretta West Unit Satellite #4
UL-F, Sec. 6 T18S-R35E.

Dear Mr. Bailey:

The New Mexico Oil Conservation Division (OCD) hereby denies your closure plan proposal dated February 22, 2002. Horizontal and vertical delineation in a 36,000 square foot surface area from a 400-barrel release needs more than two data points for an accurate three-dimensional picture of contamination.

ChevronTexaco shall submit a modified remediation plan by April 10, 2002 that includes the following:

1. ChevronTexaco shall propose a soil remediation level demonstrating that remaining chloride contamination will not cause an exceedance of the New Mexico Water Quality Control Commission (WQCC) groundwater standard of 250 mg/L [Chloride].
2. ChevronTexaco shall include copies of stated OCD "agreed" to documentation.
3. ChevronTexaco shall adhere to EPA guidelines including quality assurance and quality control in the sampling plan.
4. ChevronTexaco shall notify the OCD at least 48 hours in advance of any sampling event.

Please include a signature in all correspondences. If you have any questions or need any assistance please feel free to contact me at (505) 393-6161 x113 or email psheeeley@state.nm.us

Sincerely,

Paul Sheeley
Environmental Engineer

cc: Roger Anderson-Environmental Bureau Chief
Chris Williams-District I Supervisor
Bill Olson- OCD Hydrologist
Larry Johnson - Environmental Engineer

APPENDIX B

Soil Boring Logs

Client: Texaco

Project: Vacuum Unit Satellite No. 4

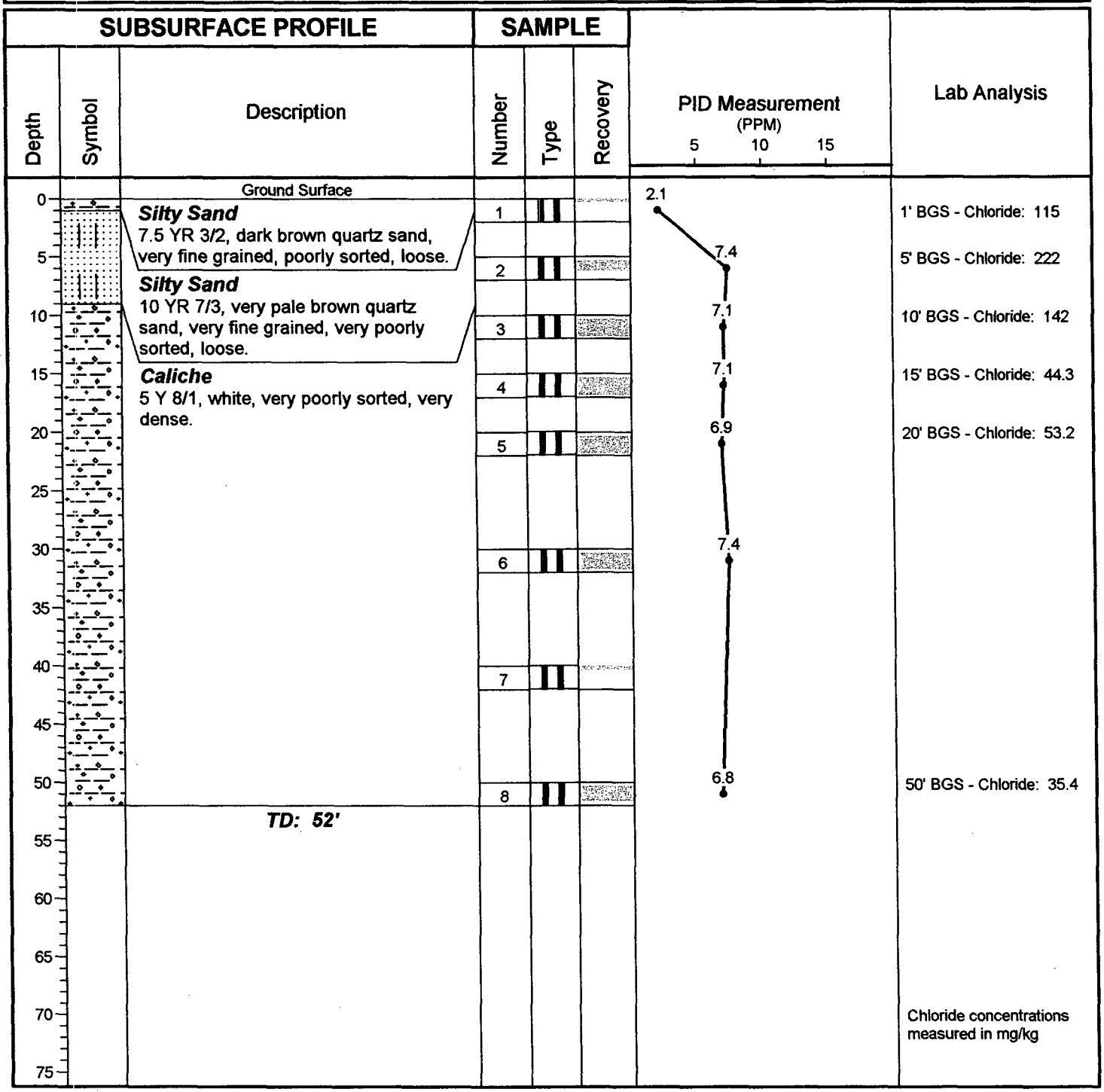
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-1

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 4/23/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-2

Geologist: Cindy K. Crain

Page: 1 of 1

SUBSURFACE PROFILE			SAMPLE				
Depth	Symbol	Description	Number	Type	Recovery	PID Measurement (PPM) 5 10 15	Lab Analysis
0		Ground Surface					
		Silty Sand 7.5 YR 3/2, dark brown quartz sand, very fine grained, poorly sorted, loose.	1			9.6	1' BGS - Chloride: 1,330
5			2			8.3	5' BGS - Chloride: 25.3
		Silty Sand 10 YR 7/3, very pale brown quartz sand, very fine grained, poorly sorted, medium density.				7.9	10' BGS - Chloride: 17.7
10			3				
15		***Silty Sand*** 7.5 YR 7/3, pink quartz sand, very fine grained, poorly sorted, medium density..	4			8.0	15' BGS - Chloride: 26.6
20			5			8.4	20' BGS - Chloride: 17.7
25		***Caliche*** 5 Y 8/1, white, very poorly sorted, very dense.					
30		***Sand*** 5 YR 6/3, light reddish brown quartz sand, very fine grained, moderately well sorted, loose.	6			8.7	
35							
40			7			9.1	
45							
50			8			9.0	50' BGS - Chloride: 17.7
		TD: 52'					
55							
60							
65							
70							Chloride concentrations measured in mg/kg
75							

Drilling Method: Air Rotary

Date Drilled: 4/23 and 4/24/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-3

Geologist: Cindy K. Crain

Depth	Description	Number	Type	Recovery	PID Measurement (PPM)	Lab Analysis
0	Ground Surface					
0	***Silty Sand*** 7.5 YR 3/2, dark brown quartz sand, very fine grained, poorly sorted, loose.	1			34.9	1' BGS - Chloride: 3,860
5		2			15.5	5' BGS - Chloride: 12.7
10	***Silty Sand*** 7.5 YR 7/3, pink quartz sand, very fine grained, poorly sorted, medium density.	3			15.1	10' BGS - Chloride: 27.3
15	***Caliche*** 5 Y 8/1, white, very poorly sorted, very dense.	4			15.6	15' BGS - Chloride: 25.3
20		5			12.8	20' BGS - Chloride: 44.3
25						
30	***Sandstone*** 10 YR 7/1, light gray quartz sandstone, fine grained, well sorted, dense.	6			16.5	
35						
40	***Sand*** 5 YR 7/6, reddish yellow quartz sand, fine grained, well sorted, loose.	7			16.4	40' BGS - Chloride: 17.7
45	***Sandstone*** 5 YR 8/1, white, very fine grained, very poorly sorted, very dense.					
50	***TD: 50'***	8				
55						
60						Chloride concentrations measured in mg/kg
65						
70						
75						

PID Measurement (PPM) scale: 5 10 15 20 25 30 35

Drilling Method: Air Rotary

Date Drilled: 4/24/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

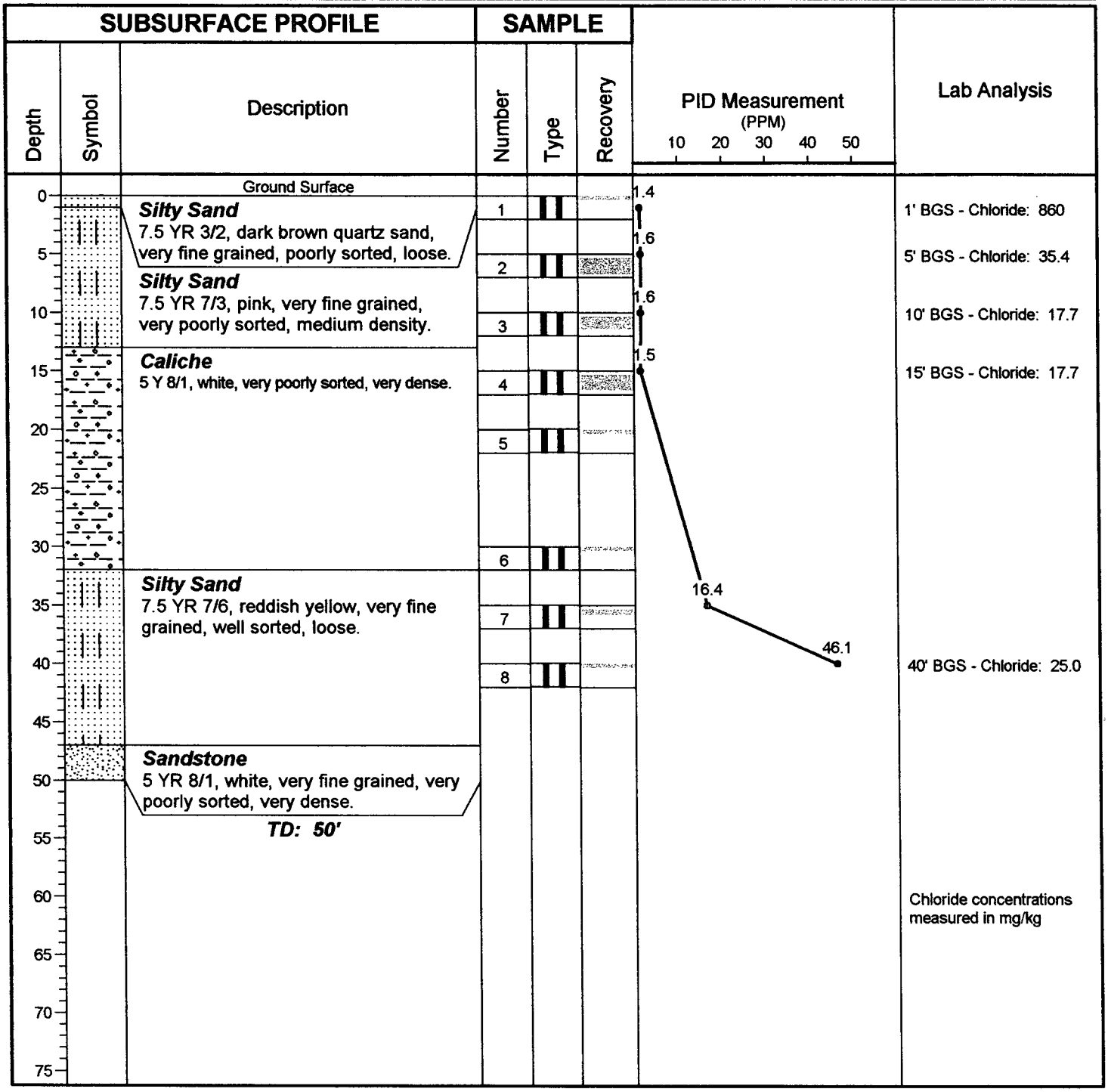
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-4

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 4/24 and 4/25/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-5

Geologist: Cindy K. Crain

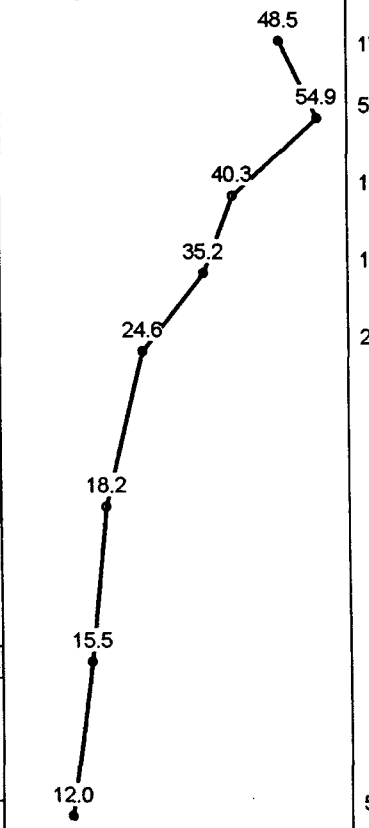
Page: 1 of 1

SUBSURFACE PROFILE

Depth	Description
0	Ground Surface
0	***Silty Sand*** 7.5 YR 3/2, dark brown, very fine grained, poorly sorted, loose.
5	
10	***Silty Sand*** 7.5 YR 7/3, pink, 20% silt, very fine grained, very poorly sorted, dense.
15	***Caliche*** 5 Y 8/1, white, very poorly sorted, very dense.
20	
25	
30	***Silty Sand*** 7.5 YR 7/6, reddish yellow, very fine grained, well sorted, loose.
35	
40	
45	
50	***TD: 51'***
55	
60	
65	
70	
75	

SAMPLE

Number	Type	Recovery
1		
2		
3		
4		
5		
6		
7		
8		



Lab Analysis
1' BGS - Chloride: 4,080
5' BGS - Chloride: 35
10' BGS - Chloride: 18
15' BGS - Chloride: 25
20' BGS - Chloride: 18
50' BGS - Chloride: 18

Chloride concentrations measured in mg/kg

Drilling Method: Air Rotary

Date Drilled: 4/25/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-6

Geologist: Cindy K. Crain

SUBSURFACE PROFILE

Depth	Symbol	Description
0		Ground Surface
0		***Silty Sand*** 7.5 YR 3/2, dark brown, very fine grained, poorly sorted, loose.
5		***Silty Sand*** 7.5 YR 7/3, pink, 20% silt, very fine grained, very poorly sorted, dense.
10		***Caliche*** 5 Y 8/1, white, very poorly sorted, very dense.
15		
20		
25		***Silty Sand*** 7.5 YR 7/6, reddish yellow, very fine grained, well sorted, loose.
30		
35		
40		
45		
50		***Sandstone*** 5 YR 8/1, white, very fine grained, very poorly sorted, very dense.
55		***TD: 50'***
60		
65		
70		
75		

SAMPLE

Number	Type	Recovery
1		
2		
3		
4		
5		
6		
7		
8		

PID Measurement (PPM)

10 20 30 40 50

11.5, 16.6, 11.8, 13.1, 24.7, 27.4, 14.2

Lab Analysis

1' BGS - Chloride: 27

5' BGS - Chloride: 18

10' BGS - Chloride: 18

15' BGS - Chloride: 18

20' BGS - Chloride: 18

40' BGS - Chloride: 21

Chloride concentrations measured in mg/kg

Drilling Method: Air Rotary

Date Drilled: 4/25 and 4/26/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

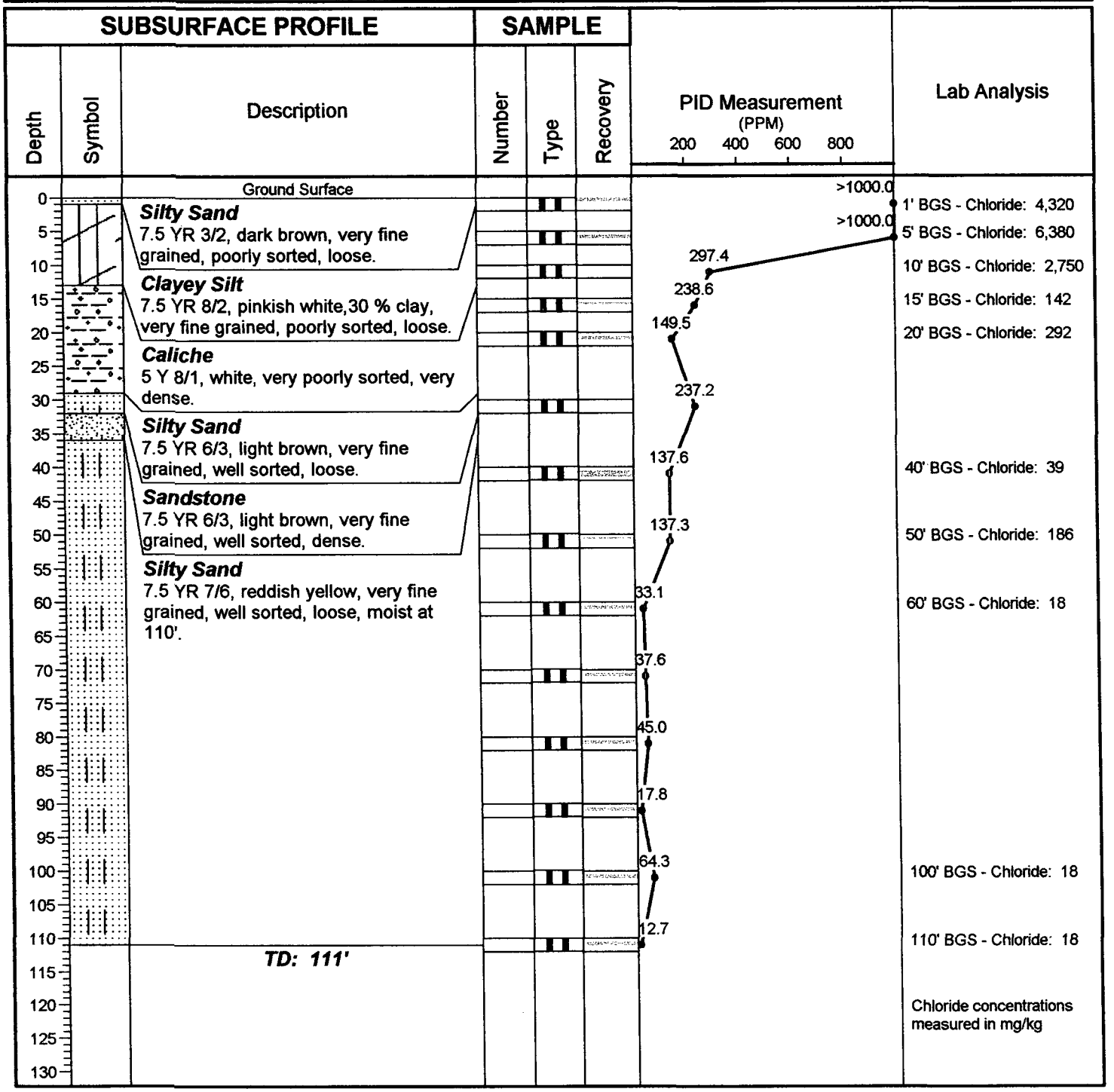
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-7

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 4/29/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

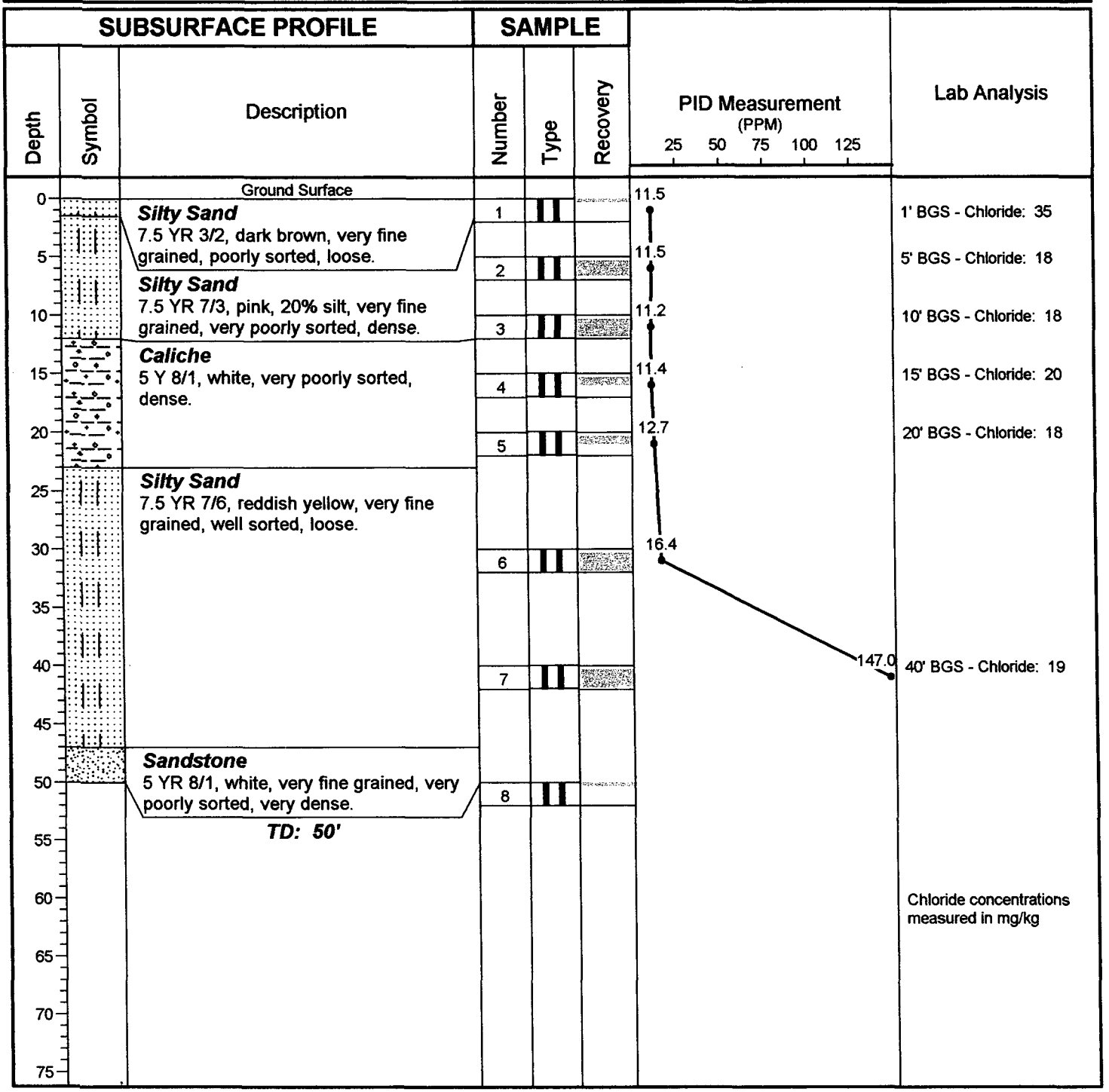
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-8

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 4/26/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

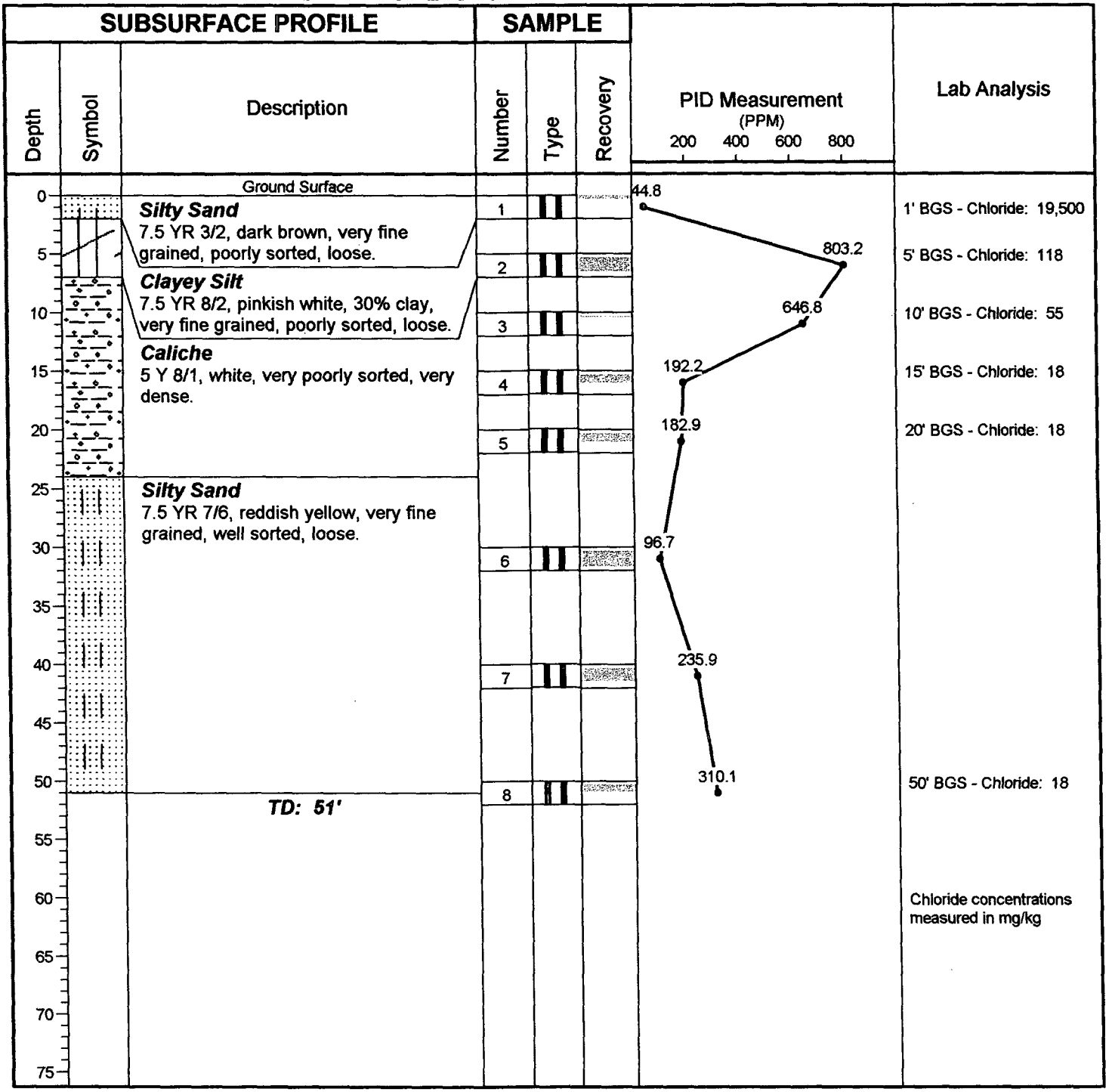
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-9

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 4/26/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

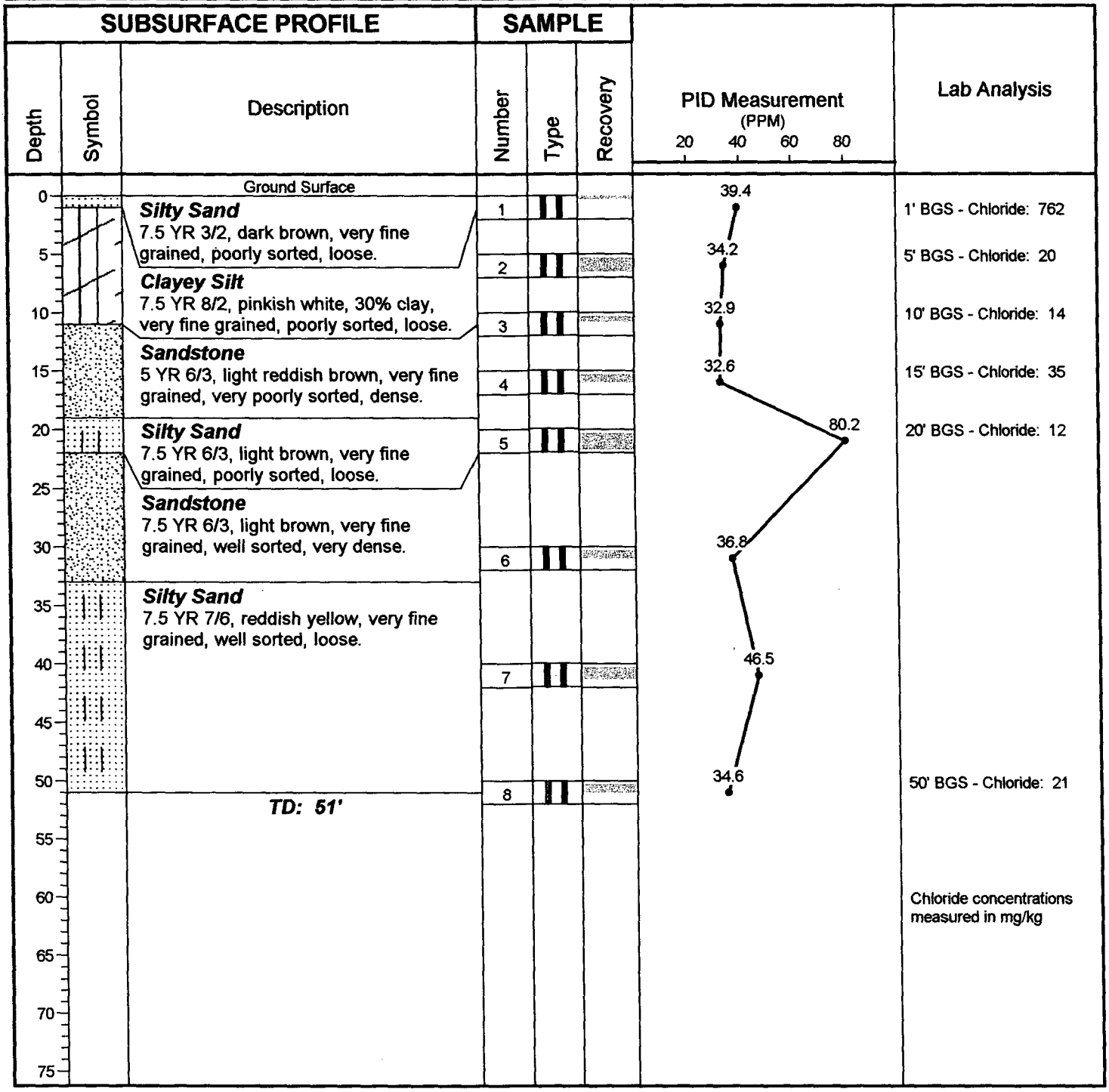
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-10

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 4/30/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-11

Geologist: Cindy K. Crain

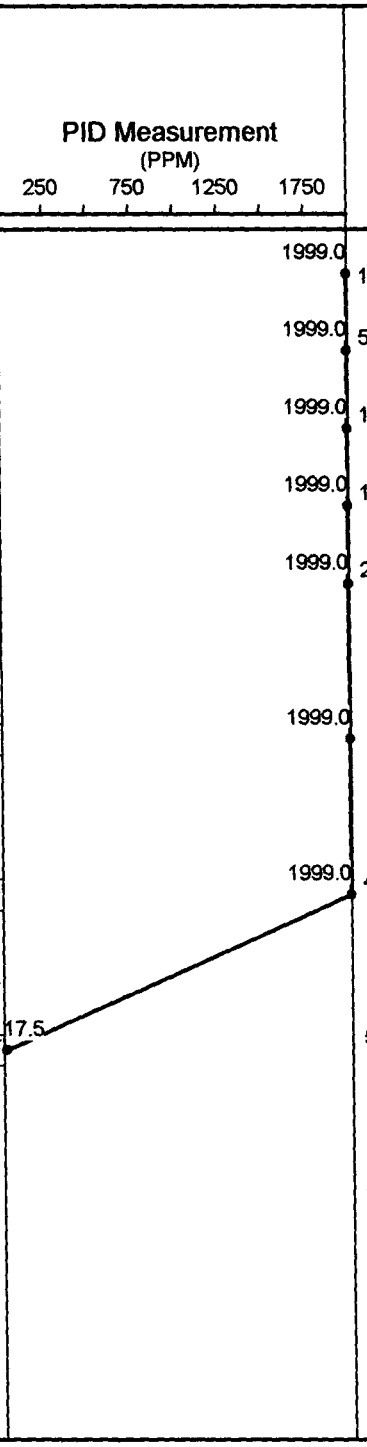
Page: 1 of 1

SUBSURFACE PROFILE

Depth	Symbol	Description
0		Ground Surface
0		***Silty Sand*** 7.5 YR 3/2, dark brown, very fine grained, poorly sorted, loose.
5		***Caliche*** 5 Y 8/1, white, very poorly sorted, very dense.
10		
15		***Silty Sand*** 7.5 YR 6/3, light brown, very fine grained, moderately well sorted, loose.
20		
25		
30		
35		
40		
45		
50		***TD: 51'***
55		
60		
65		
70		
75		

SAMPLE

Number	Type	Recovery
1		
2		
3		
4		
5		
6		
7		
8		



Lab Analysis

- 1' BGS - Chloride: 142
- 5' BGS - Chloride: 7
- 10' BGS - Chloride: 18
- 15' BGS - Chloride: 19
- 20' BGS - Chloride: 19
- 40' BGS - Chloride: 18
- 50' BGS - Chloride: 18

Chloride concentrations measured in mg/kg

Drilling Method: Air Rotary

Date Drilled: 4/30/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

Client: Texaco

Project: Vacuum Unit Satellite No. 4

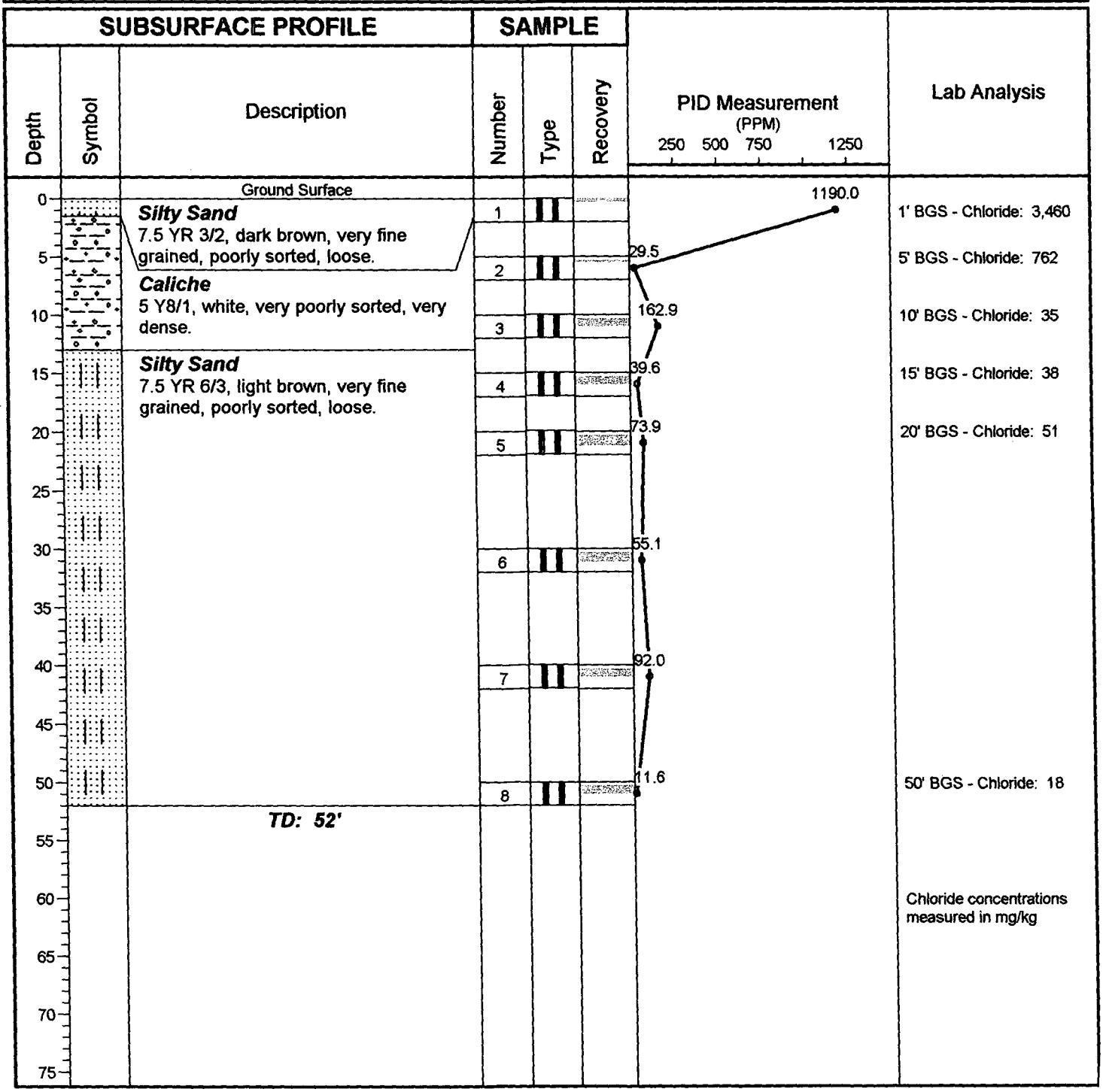
Project No: 2-0106

Location: Buckeye, New Mexico

Log of Borehole: BH-12

Geologist: Cindy K. Crain

Page: 1 of 1



Drilling Method: Air Rotary

Date Drilled: 5/1/02

Hole Size: 8-inch

Larson and Associates, Inc.
507 North Marienfeld St., Ste. 202
Midland, Texas 79701
(915) 687-0901

Checked by: CKC

Drilled by: ETGI

APPENDIX C

Laboratory Reports

ANALYTICAL REPORT

Prepared for:

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Project:	Texaco- Vacuum Unit
Order#:	G0203173
Report Date:	04/26/2002

Certificates
US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203173
Project: 2-0106
Project Name: Texaco- Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203173-01	BH-1 (1')	SOIL	4/23/02 10:05	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-02	BH-1 (5')	SOIL	4/23/02 10:20	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-03	BH - 1 (10')	SOIL	4/23/02 10:28	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-04	BH-1 (15')	SOIL	4/23/02 10:50	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-05	BH-1 (20')	SOIL	4/23/02 11:05	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-06	BH-1 (50')	SOIL	4/23/02 14:10	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-07	BH-2 (1')	SOIL	4/23/02 15:10	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-08	BH-2 (5')	SOIL	4/23/02 15:50	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203173
Project: 2-0106
Project Name: Texaco- Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203173-09	BH-2 (10')	SOIL	4/23/02 16:03	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-10	BH-2 (15')	SOIL	4/23/02 16:14	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-11	BH-2 (20')	SOIL	4/23/02 16:25	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-12	BH-2 (50')	SOIL	4/24/02 9:05	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-13	BH-3 (1')	SOIL	4/24/02 10:10	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-14	BH-3 (5')	SOIL	4/24/02 10:30	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-15	BH-3 (10')	SOIL	4/24/02 10:36	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		
0203173-16	BH-3 (15')	SOIL	4/24/02 10:45	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -1C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203173
Project: 2-0106
Project Name: Texaco- Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203173-17	BH-3 (20')	SOIL	4/24/02 10:55	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-18	BH-3 (40')	SOIL	4/24/02 12:10	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-19	BH-4 (1')	SOIL	4/24/02 14:00	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-20	BH-4 (5')	SOIL	4/24/02 14:20	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-21	BH-4 (10')	SOIL	4/24/02 14:30	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		
0203173-22	BH-4 (15')	SOIL	4/24/02 14:40	4/25/02 7:30	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -1C		

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203173
Project: 2-0106
Project Name: Texaco- Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203173-01
Sample ID: BH-1 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	115	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-02
Sample ID: BH-1 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	222	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-03
Sample ID: BH - 1 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	142	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-04
Sample ID: BH-1 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	44.3	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-05
Sample ID: BH-1 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	53.2	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-06
Sample ID: BH-1 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.4	mg/kg	1	10.0	9253	4/26/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203173
Project: 2-0106
Project Name: Texaco- Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203173-07
Sample ID: BH-2 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1330	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-08
Sample ID: BH-2 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	25.3	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-09
Sample ID: BH-2 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	17.7	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-10
Sample ID: BH-2 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	26.6	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-11
Sample ID: BH-2 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	17.7	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-12
Sample ID: BH-2 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	17.7	mg/kg	1	10.0	9253	4/26/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203173
Project: 2-0106
Project Name: Texaco- Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203173-13
Sample ID: BH-3 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	3860	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-14
Sample ID: BH-3 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	12.7	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-15
Sample ID: BH-3 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	27.3	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-16
Sample ID: BH-3 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	25.3	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-17
Sample ID: BH-3 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	44.3	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-18
Sample ID: BH-3 (40')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	17.7	mg/kg	1	10.0	9253	4/26/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain		Order#:	G0203173
LARSON AND ASSOCIATES, INC.		Project:	2-0106
P.O. BOX 50685		Project Name:	Texaco- Vacuum Unit
MIDLAND, TX 79710		Location:	Buckeye, NM

Lab ID: 0203173-19
Sample ID: BH-4 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	860	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-20
Sample ID: BH-4 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.4	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-21
Sample ID: BH-4 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	17.7	mg/kg	1	10.0	9253	4/26/02	SB

Lab ID: 0203173-22
Sample ID: BH-4 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	17.7	mg/kg	1	10.0	9253	4/26/02	SB

Approval: Raland K Tuttle 4-27-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

RL = Reporting Limit **N/A = Not Applicable**

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0203173

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0001412-01			<10.0		
Chloride-mg/kg	0001413-01			<10.0		
Chloride-mg/kg	0001414-01			<10.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0203120-01	691	500	1200	101.8%	
Chloride-mg/kg	0203173-18	17.7	500	523	101.1%	
Chloride-mg/kg	0203181-04	177	500	674	99.4%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0203120-01	691	500	1190	99.8%	0.8%
Chloride-mg/kg	0203173-18	17.7	500	523	101.1%	0.%
Chloride-mg/kg	0203181-04	177	500	682	101.%	1.2%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0001412-04		5000	5050	101.%	
Chloride-mg/kg	0001413-04		5000	5050	101.%	
Chloride-mg/kg	0001414-04		5000	5050	101.%	

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915)687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco - Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Preservative: H_2SO_4	Preservative: None	Preservative: Other (Specify)	Matrix: Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify)	Analyze For: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	TCLP: Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	TOTAL: Chlorides					RUSH TAT (Pre-Schedule)	Standard TAT
3173-01	BH-1 (1')	4-23-02	10:05	1	X					X				X										X						
02	BH-1 (5')	4-23-02	10:20	1	X					X				X										X						
03	BH-1 (10')	4-23-02	10:28	1	X					X				X										X						
04	BH-1 (15')	4-23-02	10:50	1	X					X				X										X						
05	BH-1 (20')	4-23-02	11:05	1	X					X				X										X						
06	BH-1 (50')	4-23-02	14:10	1	X					X				X										X						
07	BH-2 (1')	4-23-02	15:10	1	X					X				X										X						
08	BH-2 (5')	4-23-02	15:50	1	X					X				X										X						
09	BH-2 (10')	4-23-02	16:03	1	X					X				X										X						
10	BH-2 (15')	4-23-02	16:14	1	X					X				X										X						

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 1 °C
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/25/02	7:30			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Tony Buduthy	4-25-02	7:30

Environmental Lab of Texas, Inc.
2600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901
Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco-Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

Analyze For: TCLP: / TOTAL:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030		Chlorides					RUSH TAT (Pre-Schedule)	Standard TAT
3123-11	BH-2 (20')	4-23-02	16:25	1	X					X				X											X						
12	BH-2 (50')	4-24-02	9:05	1	X					X				X											X						
13	BH-3 (1')	4-24-02	10:10	1	X					X				X											X						
14	BH-3 (5')	4-24-02	10:30	1	X					X				X											X						
15	BH-3 (10')	4-24-02	10:36	1	X					X				X											X						
16	BH-3 (15')	4-24-02	10:45	1	X					X				X											X						
17	BH-3 (20')	4-24-02	10:55	1	X					X				X											X						
18	BH-3 (40')	4-24-02	12:10	1	X					X				X											X						
19	BH-4 (1')	4-24-02	14:00	1	X					X				X											X						
20	BH-4 (5')	4-24-02	14:20	1	X					X				X											X						

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4-25-02	7:30			
Relinquished by:	Date	Time	Received by ELOT: Kelly B Watts	4-25-02	7:30

Sample Containers Intact? (Y) N
Temperature Upon Receipt: [illegible]
Laboratory Comments:

ANALYTICAL REPORT

Prepared for:

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Project:	Texaco-Vacuum Unit
Order#:	G0203206
Report Date:	05/03/2002

Certificates
US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203206-01	BH-4 (40')	SOIL	4/25/02 9:15	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-02	BH-5 (1')	SOIL	4/25/02 10:10	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-03	BH-5 (5')	SOIL	4/25/02 10:40	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-04	BH-5 (10')	SOIL	4/25/02 11:00	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-05	BH-5 (15')	SOIL	4/25/02 11:10	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-06	BH-5 (20')	SOIL	4/25/02 11:25	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-07	BH-5 (50')	SOIL	4/25/02 12:56	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		
0203206-08	BH-6 (1')	SOIL	4/25/02 13:54	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	Rejected: No		Temp: 8.5 C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203206-09	BH-6 (5')	SOIL	4/25/02 14:23	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-10	BH-6 (10')	SOIL	4/25/02 14:35	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-11	BH-6 (15')	SOIL	4/25/02 14:43	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-12	BH-6 (20')	SOIL	4/25/02 14:55	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-13	BH-6 (40')	SOIL	4/26/02 8:00	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-14	BH-8 (1')	SOIL	4/26/02 9:18	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-15	BH-8 (5')	SOIL	4/26/02 9:50	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-16	BH-8 (10')	SOIL	4/26/02 10:00	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203206-17	BH-8 (15')	SOIL	4/26/02 10:10	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-18	BH-8 (20')	SOIL	4/26/02 10:22	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-19	BH-8 (40')	SOIL	4/26/02 11:20	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: 8015M, 8021B/5030 BTEX, Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-20	BH-9 (1')	SOIL	4/26/02 12:59	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-21	BH-9 (5')	SOIL	4/26/02 13:15	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: 8015M, 8021B/5030 BTEX, Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-22	BH-9 (10')	SOIL	4/26/02 13:21	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-23	BH-9 (15')	SOIL	4/26/02 13:29	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203206-24	BH-9 (20')	SOIL	4/26/02 13:32	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 8.5 C		
0203206-25	BH-9 (50')	SOIL	4/26/02 15:10	4/27/02 13:45	4 oz glass	Ice
	Lab Testing: 8015M 8021B/5030 BTEX Chloride	**Rejected:** No		**Temp:** 8.5 C		

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-19
Sample ID: BH-8 (40')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/1/02	1	1	CK	8015m

Parameter	Result mg/kg	RL
DRO, >C12-C35	<10.0	10.0
GRO, C6-C12	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 23:19	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203206-21
Sample ID: BH-9 (5')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/1/02	1	1	CK	8015m

Parameter	Result mg/kg	RL
DRO, >C12-C35	<10.0	10.0
GRO, C6-C12	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-21
Sample ID: BH-9 (5')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 23:40	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203206-25
Sample ID: BH-9 (50')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/1/02	1	1	CK	8015m

Parameter	Result mg/kg	RL
DRO, >C12-C35	<10.0	10.0
GRO, C6-C12	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-25
Sample ID: BH-9 (50')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 0:02	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Approval: Raland K Tuttle 5-5-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-01
Sample ID: BH-4 (40')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	25.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-02
Sample ID: BH-5 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	4080	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-03
Sample ID: BH-5 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-04
Sample ID: BH-5 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-05
Sample ID: BH-5 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	25.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-06
Sample ID: BH-5 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-07
Sample ID: BH-5 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-08
Sample ID: BH-6 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	27.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-09
Sample ID: BH-6 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-10
Sample ID: BH-6 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-11
Sample ID: BH-6 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-12
Sample ID: BH-6 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-13
Sample ID: BH-6 (40')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	21.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-14
Sample ID: BH-8 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-15
Sample ID: BH-8 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-16
Sample ID: BH-8 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-17
Sample ID: BH-8 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	20.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-18
Sample ID: BH-8 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-19
Sample ID: BH-8 (40')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	19.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-20
Sample ID: BH-9 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	19500	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-21
Sample ID: BH-9 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	118	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-22
Sample ID: BH-9 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	55.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-23
Sample ID: BH-9 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203206-24
Sample ID: BH-9 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203206
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203206-25
Sample ID: BH-9 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Approval: Raland K Tuttle 5-5-02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0203206

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0001527-02			<10.0		
CONTROL SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0001527-03		952	1080	113.4%	
CONTROL DUP SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0001527-04		952	1080	113.4%	0.%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0001527-05		1000	1180	118.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0203206

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0001533-02			<25.0		
Ethylbenzene-µg/kg	0001533-02			<25.0		
Toluene-µg/kg	0001533-02			<25.0		
p/m-Xylene-µg/kg	0001533-02			<25.0		
o-Xylene-µg/kg	0001533-02			<25.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-µg/kg	0203239-02	0	100	87.4	87.4%	
Ethylbenzene-µg/kg	0203239-02	0	100	87.2	87.2%	
Toluene-µg/kg	0203239-02	0	100	86.6	86.6%	
p/m-Xylene-µg/kg	0203239-02	0	200	184	92.%	
o-Xylene-µg/kg	0203239-02	0	100	89.4	89.4%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-µg/kg	0203239-02	0	100	98.5	98.5%	11.9%
Ethylbenzene-µg/kg	0203239-02	0	100	99.6	99.6%	13.3%
Toluene-µg/kg	0203239-02	0	100	98.4	98.4%	12.8%
p/m-Xylene-µg/kg	0203239-02	0	200	208	104.%	12.2%
o-Xylene-µg/kg	0203239-02	0	100	101	101.%	12.2%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-µg/kg	0001533-05		100	93.9	93.9%	
Ethylbenzene-µg/kg	0001533-05		100	94.3	94.3%	
Toluene-µg/kg	0001533-05		100	94.2	94.2%	
p/m-Xylene-µg/kg	0001533-05		200	197	98.5%	
o-Xylene-µg/kg	0001533-05		100	94.8	94.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0203206

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0001559-01			<5.00		
Chloride-mg/kg	0001560-01			<5.00		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0203206-01	25	714	747	101.1%	
Chloride-mg/kg	0203206-23	18	500	523	101.%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0203206-01	25	714	747	101.1%	0.%
Chloride-mg/kg	0203206-23	18	500	523	101.%	0.%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0001559-04		5000	5050	101.%	
Chloride-mg/kg	0001560-04		5000	5050	101.%	

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco - Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030		Chlorides					RUSH TAT (Pre-Schedule)	Standard TAT
020320Cw-01	BH-4 (40')	4-25-02	9:15	1	X					X				X											X						
02	BH-5 ~~(0')~~ (1')	4-25-02	10:10	1	X					X				X											X						
03	BH-5 (5')	4-25-02	10:40	1	X					X				X											X						
04	BH-5 (10')	4-25-02	11:00	1	X					X				X											X						
05	BH-5 (15')	4-25-02	11:10	1	X					X				X											X						
06	BH-5 (20')	4-25-02	11:25	1	X					X				X											X						
07	BH-5 (50')	4-25-02	12:56	1	X					X				X											X						
08	BH-6 ~~(0')~~ (1')	4-25-02	1:54p	1	X					X				X											X						
09	BH-6 (5')	4-25-02	2:23p	1	X					X				X											X						
10	BH-6 (10')	4-25-02	2:35p	1	X					X				X											X						

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/27/02	1345			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Cindy Crain	4/27/02	13:45

Sample Containers Intact? Y N
Temperature Upon Receipt: 8.5 °C
Laboratory Comments:
* 0' is actually 1'
Add BTEX + 418.1 to BH 9@50' BH 9@5' BH 8@40' as per Cindy 4-29-02 1240

Environmental Lab of Texas, Inc.
2600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco - Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Chlorides	RUSH TAT (Pre-Schedule)	Standard TAT
02b32c-11	BH-6 (15')	4-25-02	2:43p	1	X					X				X										X		
12	BH-6 (20')	4-25-02	2:55p	1	X					X				X										X		
13	BH-6 (40')	4-26-02	8:00	1	X					X				X										X		
14	BH-8 (0') (1')	4-26-02	9:18	1	X					X				X										X		
15	BH-8 (5')	4-26-02	9:50	1	X					X				X										X		
16	BH-8 (10')	4-26-02	10:00	1	X					X				X										X		
17	BH-8 (15')	4-26-02	10:10	1	X					X				X										X		
18	BH-8 (20')	4-26-02	10:22	1	X					X				X										X		
19	BH-8 (40')	4-26-02	11:20	1	X					X				X		NO		X				X		X		
20	BH-9 (0') (1')	4-26-02	12:59	1	X					X				X										X		

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/27/02	1345			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Celia Lucero	4/27/02	1345

Sample Containers Intact? Y N
Temperature Upon Receipt: 2.5°C
Laboratory Comments:

Environmental Lab of Texas, Inc.
2600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco - Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TCLP: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	TOTAL: Glycols	RUSH TAT (Pre-Schedule)	Standard TAT
01	BH-9 (5')	4-26-02	1315	1	X					X				X					X				X	X		
02	BH-9 (10')	4-26-02	1321	1	X					X				X										X		
03	BH-9 (15')	4-26-02	1329	1	X					X				X										X		
04	BH-9 (20')	4-26-02	1332	1	X					X				X										X		
05	BH-9 (50')	4-26-02	1510	1	X					X				X					X				X	X		

Special Instructions:

Sample Containers Intact? Y N
Temperature Upon Receipt: 2.5 °C
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/27/02	1345			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Celia Yvonne	4/27/02	13:45

ANALYTICAL REPORT

Prepared for:

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Project:	Texaco Vacuum Unit
Order#:	G0203241
Report Date:	05/04/2002

Certificates
US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203241-01	BH- 7 (1')	SOIL	4/29/02 9:35	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: 8015M, 8021B/5030 BTEX, Chloride	Rejected: No		Temp: -.5C		
0203241-02	BH- 7(5')	SOIL	4/29/02 9:50	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -.5C		
0203241-03	BH-7 (10')	SOIL	4/29/02 10:32	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -.5C		
0203241-04	BH- 7 (15')	SOIL	4/29/02 10:45	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -.5C		
0203241-05	BH- 7 (20')	SOIL	4/29/02 11:05	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -.5C		
0203241-06	BH- 7 (40')	SOIL	4/29/02 12:19	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -.5C		
0203241-07	BH- 7 (60')	SOIL	4/29/02 12:55	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	Rejected: No		Temp: -.5C		
0203241-08	BH- 7 (50')	SOIL	4/29/02 12:40	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: 8015M	Rejected: No		Temp: -.5C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
	8021B/5030 BTEX Chloride					
0203241-09	BH- 7 (100 ')	SOIL	4/29/02 14:30	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	8015M 8021B/5030 BTEX Chloride					
0203241-10	BH- 7 (110')	SOIL	4/29/02 14:40	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	Chloride					
0203241-11	BH- 10 (1')	SOIL	4/30/02 8:20	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	Chloride					
0203241-12	BH- 10 (5')	SOIL	4/30/02 8:53	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	Chloride					
0203241-13	BH- 10 (10')	SOIL	4/30/02 9:00	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	Chloride					
0203241-14	BH- 10 (15 ')	SOIL	4/30/02 9:10	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	Chloride					
0203241-15	BH- 10 (20 ')	SOIL	4/30/02 9:20	4/30/02 18:05	4 oz Glass	ice
	Lab Testing:	**Rejected:** No		**Temp:** -.5C		
	8021B/5030 BTEX Chloride					

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203241-16	BH- 10 (50 ')	SOIL	4/30/02 11:28	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -.5C		
0203241-17	BH- 11(1')	SOIL	4/30/02 13:00	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -.5C		
0203241-18	BH- 11 (5 ')	SOIL	4/30/02 13:10	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: 8015M 8021B/5030 BTEX Chloride	**Rejected:** No		**Temp:** -.5C		
0203241-19	BH- 11 (10 ')	SOIL	4/30/02 13:21	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -.5C		
0203241-20	BH- 11 (15 ')	SOIL	4/30/02 13:35	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -.5C		
0203241-27	BH- 11 (20 ')	SOIL	4/30/02 13:45	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: 8015M 8021B/5030 BTEX Chloride	**Rejected:** No		**Temp:** -.5C		
0203241-28	BH- 11 (50 ')	SOIL	4/30/02 14:40	4/30/02 18:05	4 oz Glass	ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** -.5C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203241-30	BH- 11 (40 ')	SOIL	4/30/02 14:20	4/30/02 18:05	4 oz Glass	ice

Lab Testing:
8015M
8021B/5030 BTEX
Chloride

Rejected: No **Temp:** -.5C

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-01
Sample ID: BH- 7 (1')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	< 10.0	10.0
GRO, C6-C12	< 10.0	10.0
TOTAL, C6-C35	<10.0	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 14:14	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203241-08
Sample ID: BH- 7 (50')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	193	10.0
GRO, C6-C12	< 10.0	10.0
TOTAL, C6-C35	193	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-08
Sample ID: BH- 7 (50')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 14:36	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203241-09
Sample ID: BH- 7 (100 ')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	< 10.0	10.0
GRO, C6-C12	< 10.0	10.0
TOTAL, C6-C35	<10.0	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-09
Sample ID: BH- 7 (100 ')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 14:58	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203241-15
Sample ID: BH- 10 (20 ')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 15:20	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-18
Sample ID: BH- 11 (5 ')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	< 10.0	10.0
GRO, C6-C12	< 10.0	10.0
TOTAL, C6-C35	<10.0	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 15:42	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203241-27
Sample ID: BH- 11 (20 ')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	< 10.0	10.0
GRO, C6-C12	< 10.0	10.0
TOTAL, C6-C35	<10.0	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-27
Sample ID: BH- 11 (20 ')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 16:04	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203241-30
Sample ID: BH- 11 (40 ')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	< 10.0	10.0
GRO, C6-C12	< 10.0	10.0
TOTAL, C6-C35	<10.0	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-30
Sample ID: BH- 11 (40 ')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001533-02		5/1/02 20:05	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Approval: Raland K Tuttle 5-5-02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-01
Sample ID: BH- 7 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	4320	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-02
Sample ID: BH- 7(5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	6380	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-03
Sample ID: BH-7 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	2750	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-04
Sample ID: BH- 7 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	142	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-05
Sample ID: BH- 7 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	292	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-06
Sample ID: BH- 7 (40')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	39.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-07
Sample ID: BH- 7 (60')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-08
Sample ID: BH- 7 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	186	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-09
Sample ID: BH- 7 (100 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-10
Sample ID: BH- 7 (110')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-11
Sample ID: BH- 10 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	762	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-12
Sample ID: BH- 10 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	20.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-07
Sample ID: BH- 7 (60')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-08
Sample ID: BH- 7 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	186	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-09
Sample ID: BH- 7 (100 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-10
Sample ID: BH- 7 (110')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-11
Sample ID: BH- 10 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	762	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-12
Sample ID: BH- 10 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	20.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203241
Project: 2-0106
Project Name: Texaco Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203241-19
Sample ID: BH- 11 (10 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-20
Sample ID: BH- 11 (15 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	19.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-27
Sample ID: BH- 11 (20 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	19.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-28
Sample ID: BH- 11 (50 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203241-30
Sample ID: BH- 11 (40 ')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

Approval: Raland K Tuttle 5-5-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0203241

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0001580-02			<10.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0203241-01	0	952	1040	109.2%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0203241-01	0	952	1010	106.1%	2.9%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0001580-05		1000	1129	112.9%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0203241

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0001533-02			<25.0		
Ethylbenzene-µg/kg	0001533-02			<25.0		
Toluene-µg/kg	0001533-02			<25.0		
p/m-Xylene-µg/kg	0001533-02			<25.0		
o-Xylene-µg/kg	0001533-02			<25.0		
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0203239-02	0	100	87.4	87.4%	
Ethylbenzene-µg/kg	0203239-02	0	100	87.2	87.2%	
Toluene-µg/kg	0203239-02	0	100	86.6	86.6%	
p/m-Xylene-µg/kg	0203239-02	0	200	184	92.%	
o-Xylene-µg/kg	0203239-02	0	100	89.4	89.4%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0203239-02	0	100	98.5	98.5%	11.9%
Ethylbenzene-µg/kg	0203239-02	0	100	99.6	99.6%	13.3%
Toluene-µg/kg	0203239-02	0	100	98.4	98.4%	12.8%
p/m-Xylene-µg/kg	0203239-02	0	200	208	104.%	12.2%
o-Xylene-µg/kg	0203239-02	0	100	101	101.%	12.2%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0001533-05		100	93.9	93.9%	
Ethylbenzene-µg/kg	0001533-05		100	94.3	94.3%	
Toluene-µg/kg	0001533-05		100	94.2	94.2%	
p/m-Xylene-µg/kg	0001533-05		200	197	98.5%	
o-Xylene-µg/kg	0001533-05		100	94.8	94.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0203241

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0001560-01			<5.00		
Chloride-mg/kg	0001561-01			<5.00		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0203206-23	18	500	523	101.%	
Chloride-mg/kg	0203241-14	35	500	541	101.2%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0203206-23	18	500	523	101.%	0.%
Chloride-mg/kg	0203241-14	35	500	541	101.2%	0.%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0001560-04		5000	5050	101.%	
Chloride-mg/kg	0001561-04		5000	5050	101.%	

Environmental Lab of Texas I, Ltd.

2600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TOTAL: TPH: 418.1 / 1005 / 1006 (8015M)	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	Chlorides	RUSH TAT (Pre-Schedule)	Standard TAT
3241-01	BH-7 (1')	4-29-02	9:35	1	X					X				X		X							X		X		
02	BH-7 (5')	4-29-02	9:50	1	X					X				X										X		
03	BH-7 (10')	4-29-02	10:32	1	X					X				X										X		
04	BH-7 (15')	4-29-02	10:45	1	X					X				X										X		
05	BH-7 (20')	4-29-02	11:05	1	X					X				X										X		
06	BH-7 (40')	4-29-02	12:19	1	X					X				X										X		
07	BH-7 (60')	4-29-02	12:55	1	X					X				X										X		
08	BH-7 (50')	4-29-02	12:40	1	X					X				X		X							X		X		
09	BH-7 (100')	4-29-02	14:30	1	X					X				X		X							X		X		
10	BH-7 (110')	4-29-02	14:40	1	X					X				X		X									X		

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: -0.5°C

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/30/02	1805			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Joanna McMurrey	4-30-2	1805

Environmental Lab of Texas I, Ltd.

2600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: / TOTAL: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	Chlorides				RUSH TAT (Pre-Schedule)	Standard TAT
3241-11	BH-10 (1')	4-30-02	8:20	1	X					X				X											X					
12	BH-10 (5')	4-30-02	8:53	1	X					X				X											X					
13	BH-10 (10')	4-30-02	9:00	1	X					X				X											X					
14	BH-10 (15')	4-30-02	9:10	1	X					X				X											X					
15	BH-10 (20')	4-30-02	9:20	1	X					X				X									X		X					
16	BH-10 (50')	4-30-02	11:28	1	X					X				X											X					
17	BH-11 (1')	4-30-02	13:00	1	X					X				X											X					
18	BH-11 (5')	4-30-02	13:10	1	X					X				X		X							X		X					
19	BH-11 (10')	4-30-02	13:21	1	X					X				X											X					
20	BH-11 (15')	4-30-02	13:35	1	X					X				X											X					

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: -0.5°C

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/30/02	1805			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jeanne Mooney	4-30-2	1805

Environmental Lab of Texas I, Ltd.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco - Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: / TOTAL: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	Chlorides	RUSH TAT (Pre-Schedule)	Standard TAT
3241-21	BH-7 (30')	4-29-02	11:48	1	X					X				X												* Hold	
22	BH-7 (70')	4-29-02	14:10	1	X					X				X												* Hold	
23	BH-7 (80')	4-29-02	14:20	1	X					X				X												* Hold	
24	BH-7 (90')	4-29-02	14:25	1	X					X				X												* Hold	
25	BH-10 (30')	4-30-02	10:02	1	X					X				X												* Hold	
26	BH-10 (40')	4-30-02	11:03	1	X					X				X												* Hold	
27	BH-11 (20')	4-30-02	13:45	1	X					X				X		X							X		X		
28	BH-11 (50')	4-30-02	14:40	1	X					X				X											X		
29	BH-11 (30')	4-30-02	13:58	1	X					X				X												* Hold	
30	BH-11 (40')	4-30-02	14:20	1	X					X				X		X							X		X		

Special Instructions:
* Hold for possible future analysis

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: -0.5°C

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	4/30/02	1805			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jeanne Mcmurrey	4-30-2	1905

ANALYTICAL REPORT

Prepared for:

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Project:	Texaco-Vacuum Unit
Order#:	G0203259
Report Date:	05/04/2002

Certificates
US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710
915-687-0456

Order#: G0203259
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0203259-01	BH-12 (1')	SOIL	5/1/02 8:15	5/2/02 11:30	4 oz glass	Ice
	Lab Testing: 8015M, 8021B/5030 BTEX, Chloride	**Rejected:** No		**Temp:** 2.0 C		
0203259-02	BH-12 (5')	SOIL	5/1/02 9:27	5/2/02 11:30	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 2.0 C		
0203259-03	BH-12 (10')	SOIL	5/1/02 9:44	5/2/02 11:30	4 oz glass	Ice
	Lab Testing: 8015M, 8021B/5030 BTEX, Chloride	**Rejected:** No		**Temp:** 2.0 C		
0203259-04	BH-12 (15')	SOIL	5/1/02 9:55	5/2/02 11:30	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 2.0 C		
0203259-05	BH-12 (20')	SOIL	5/1/02 10:05	5/2/02 11:30	4 oz glass	Ice
	Lab Testing: Chloride	**Rejected:** No		**Temp:** 2.0 C		
0203259-06	BH-12 (50')	SOIL	5/1/02 11:08	5/2/02 11:30	4 oz glass	Ice
	Lab Testing: 8015M, 8021B/5030 BTEX, Chloride	**Rejected:** No		**Temp:** 2.0 C		

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203259
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203259-01
Sample ID: BH-12 (1')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	<10.0	10.0
GRO, C6-C12	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001549-02		5/2/02 17:54	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203259-03
Sample ID: BH-12 (10')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	89.9	10.0
GRO, C6-C12	<10.0	10.0
TOTAL, C6-C35	89.9	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203259
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203259-03
Sample ID: BH-12 (10')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001549-02		5/2/02 18:16	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203259-06
Sample ID: BH-12 (50')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		5/2/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	344	10.0
GRO, C6-C12	<10.0	10.0
TOTAL, C6-C35	344	10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203259
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203259-06
Sample ID: BH-12 (50')

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0001549-02		5/2/02 18:38	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Approval: Raland K Tuttle 5-7-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0203259
Project: 2-0106
Project Name: Texaco-Vacuum Unit
Location: Buckeye, NM

Lab ID: 0203259-01
Sample ID: BH-12 (1')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	3460	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203259-02
Sample ID: BH-12 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	762	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203259-03
Sample ID: BH-12 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	35.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203259-04
Sample ID: BH-12 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	38.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203259-05
Sample ID: BH-12 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	51.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203259-06
Sample ID: BH-12 (50')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	18.0	mg/kg	1	10	9253	5/3/02	SB

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Cindy Crain	Order#:	G0203259
LARSON AND ASSOCIATES, INC.	Project:	2-0106
P.O. BOX 50685	Project Name:	Texaco-Vacuum Unit
MIDLAND, TX 79710	Location:	Buckeye, NM

Approval: Raland K Tuttle 5-6-02

Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0203259

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0001581-02			<10.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0203250-01	46.6	952	1117	112.4%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0203250-01	46.6	952	1117	112.4%	0.%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0001581-05		1000	899	89.9%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0203259

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0001549-02			<25.0		
Ethylbenzene-µg/kg	0001549-02			<25.0		
Toluene-µg/kg	0001549-02			<25.0		
p/m-Xylene-µg/kg	0001549-02			<25.0		
o-Xylene-µg/kg	0001549-02			<25.0		
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0203185-08	0	100	108	108.%	
Ethylbenzene-µg/kg	0203185-08	0	100	110	110.%	
Toluene-µg/kg	0203185-08	0	100	108	108.%	
p/m-Xylene-µg/kg	0203185-08	0	200	230	115.%	
o-Xylene-µg/kg	0203185-08	0	100	110	110.%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0203185-08	0	100	105	105.%	2.8%
Ethylbenzene-µg/kg	0203185-08	0	100	107	107.%	2.8%
Toluene-µg/kg	0203185-08	0	100	106	106.%	1.9%
p/m-Xylene-µg/kg	0203185-08	0	200	225	112.5%	2.2%
o-Xylene-µg/kg	0203185-08	0	100	108	108.%	1.8%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-µg/kg	0001549-05		100	104	104.%	
Ethylbenzene-µg/kg	0001549-05		100	112	112.%	
Toluene-µg/kg	0001549-05		100	105	105.%	
p/m-Xylene-µg/kg	0001549-05		200	224	112.%	
o-Xylene-µg/kg	0001549-05		100	112	112.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0203259

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0001561-01			<5.00		
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0203241-14	35	500	541	101.2%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0203241-14	35	500	541	101.2%	0.%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0001561-04		5000	5050	101.%	

Environmental Lab of Texas I, Ltd.

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Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cindy Crain
Company Name: Larson and Associates, Inc.
Company Address: 507 N. Marienfeld, Suite 202
City/State/Zip: Midland, TX 79701
Telephone No: (915) 687-0901 Fax No: (915) 687-0456
Sampler Signature: Cindy Crain

Project Name: Texaco - Vacuum Unit
Project #: 2-0106
Project Loc: Buckeye, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: / TOTAL: TPH: 418.1 / 8015M	1005	1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	Hold Associates	RUSH TAT (Pre-Schedule)	Standard TAT
0203259-01	BH-12 (1')	5/1/02	8:15	1	X					X				X		X									X		X		
02	BH-12 (5')	5/1/02	9:27	1	X					X				X											X		X		
03	BH-12 (10')	5/1/02	9:44	1	X					X				X		X									X		X		
04	BH-12 (15')	5/1/02	9:55	1	X					X				X											X		X		
05	BH-12 (20')	5/1/02	10:05	1	X					X				X											X		X		
06	BH-12 (50')	5/1/02	11:08	1	X					X				X		X									X		X		
07	BH-12 (30')	5/1/02	10:20	1	X					X				X														★Hold	
08	BH-12 (40')	5/1/02	10:35	1	X					X				X														★Hold	
																												cc ★	

Special Instructions:
★ Hold for possible future analysis

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: 2.0°C

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	5/2/02	11:30			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jane Moreno	5-2-2	1130

APPENDIX D

EM Survey Field Sheets

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:		**Date:**	16-May-02
Spacing (Ft):		**Start:**	1345
Direction:		**Stop:**	

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
Background					
(BH-1)		6.8	8.2	14.2	

Notes:

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	0 East	**Date:**	16-May-02
Spacing (Ft):	100	**Start:**	1403
Direction:	N - S	**Stop:**	1420

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		6.6	9.0	102.4	
100 South		11.2	17.3	145.0	
200 South		10.6	14.8	84.1	
300 South		6.6	10.9	17.9	
400 South		N/D	N/D	N/D	
500 South		N/D	N/D	N/D	
600 South		N/D	N/D	N/D	

Notes:
1. N/D: No Data Available
2. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	100 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	0750
Direction:	N - S	**Stop:**	0807

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		1.9	6.7	45.3	
100 South		21.8	8.7	28.1	
200 South		12.5	3.6	I	Pipeline (NE-SW) 10' south
300 South		6.5	8.4	12.5	
400 South		16.8	9.1	15.8	
500 South		5.9	8.8	67.6	
600 South		N/D	N/D	N/D	

Notes:
1. N/D: No data available
2. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	200 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	0824
Direction:	S - N	**Stop:**	0841

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		6.0	6.6	I	Overhead power (E-W) at station
100 South		13.1	16.8	61.7	Overhead power (E-W) 50' north
200 South		8.1	8.9	I	
300 South		8.7	7.9	16.4	Pipeline (SW-NE) at station
400 South		7.1	13.7	14.5	
500 South		4.9	8.3	20.1	
600 South		N/D	N/D	N/D	

Notes:
1. N/D: No data available
2. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	300 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	0825
Direction:	N - S	**Stop:**	0835

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		7.4	9.3	20.7	
100 South		4.1	I	I	Pipeline (SW-NE) 10' north
200 South		86.0	27.1	325	
300 South		5.9	7.8	56.8	
400 South		6.3	9.0	13.8	
500 South		5.2	10.4	15.7	Pipeline (SW-NE) 7' north
600 South		N/D	N/D	N/D	

Notes:
1. N/D: No data available
2. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	400 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	0840
Direction:	S - N	**Stop:**	0850

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		6.9	9.2	22.1	
100 South		7.3	8.9	22.3	
200 South		10.6	5.2	I	
300 South		17.0	I	I	Pipeline (SE-NW) 7' south
400 South		5.6	8.1	18.4	Pipeline (SE-NW) 4' south
500 South		4.7	7.2	13.0	
600 South		N/D	N/D	N/D	

Notes:
1. N/D: No data available
2. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	500 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	0910
Direction:	N - S	**Stop:**	0920

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		6.3	11.7	19.0	
100 South		23.0	13.3	I	Pipeline (NW-SE) at station
200 South		8.4	9.6	45.0	Pipeline (E-W) 8' north
300 South		4.2	I	I	Pipeline and power line (SE-NW)
400 South		7.2	11.5	I	Pipeline (SE-NW) 15' south
500 South		5.8	8.4	24.6	
600 South		N/D	N/D	N/D	

Notes:
1. N/D: No data available
2. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	600 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	0927
Direction:	S - N	**Stop:**	0937

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		7.0	9.1	14.1	
100 South		6.9	13.2	14.6	Pipeline (SW-NE)5' east
200 South		13.1	11.6	24.2	
300 South		14.4	10.8	I	Pipeline (NW-SE) at station
400 South		14.3	12.4	280	
500 South		7.4	4.6	181	
600 South		13.1	11.6	17.1	Pipelines (NW-SE) 20', 75' and 85'

Notes:
I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	700 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	1047
Direction:	N - S	**Stop:**	1107

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		5.9	8.2	11.9	
100 South		12.4	9.1	6.3	Pipeline (SE-NW) at station
200 South		15.5	17.6	20.8	Pipeline (SE-NW) 10' south
300 South		13.3	17.5	24.1	
400 South		10.0	55.6	10.6	
500 South		50	34.8	12.9	
600 South		13.5	14.5	169.8	Pipelines (NW-SE) at station

Notes:

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	800 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	1125
Direction:	S - N	**Stop:**	1225

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		5.9	8.4	9.6	
100 South		I	I	I	
200 South		17.8	11.4	10.6	
300 South		12.3	14.3	20.8	
400 South		9.1	17.1	I	
500 South		23.2	18.1	I	
600 South		I	40.4	I	

Notes:
1. I: Interference

Texaco Exploration and Production Inc.
Vacuum Unit Satellite No. 4
EM-34 Survey

Profile:	900 East	**Date:**	22-May-02
Spacing (Ft):	100	**Start:**	1230
Direction:	N - S	**Stop:**	1245

STATION	Scale	10-Meter HD (mmhos/meter)	20-Meter HD (mmhos/meter)	20-Meter VD (mmhos/meter)	NOTES
0 South		6.4	8.3	8.7	
100 South		4.9	7.4	11.5	
200 South		6.9	8.2	13.9	
300 South		7.7	10.4	14.6	
400 South		6.6	10.2	I	
500 South		9.8	16.4	41.1	
600 South		I	I	I	Pipeline at station

Notes:
1. I: Interference