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REPORTS

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ANNUAL GROUNDWATER MONITORING REPORT
J. R. PHILLIPS TANK BATTERY NO. 2
LEA COUNTY, NEW MEXICO

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared for:

ChevronTexaco Exploration & Production Corporation
15 Smith Road
Midland, Texas

Prepared by:

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

April 25, 2003

Cindy K. Crain, Geologist

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Annual Groundwater Monitoring Report

J. R. Phillips Tank Battery No. 2

Lea County, New Mexico

1.0 INTRODUCTION

ChevronTexaco Exploration and Production (ChevronTexaco), as successor to Texaco Exploration and Production Inc. (Texaco), has retained Larson and Associates, Inc. (LA) to conduct groundwater remediation and monitoring activities at its J. R. Phillips Tank Battery No. 2 (Site). The Site is located in Unit Letter F (SE/4, NW/4), Section 6, Township 20 South, Range 37 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map.

2.0 BACKGROUND

In March 2000, Environmental Plus, Inc. (EPI) of Eunice, New Mexico, installed two monitoring wells (MW-1 and MW-2), to determine background chloride levels in groundwater at the Site. On April 10 and 11, 2001, LA supervised installation of four (4) monitoring wells (MW-3 through MW-6), and two additional wells (MW-7 and MW-8) were installed on April 16, 2001, to assess groundwater quality upgradient, downgradient and cross gradient to the Site. Details of that investigation were submitted to the New Mexico Oil Conservation Division (NMOCD) in a Groundwater Assessment Report dated May 24, 2001. In that report, Texaco proposed to monitor groundwater on a semi-annual schedule for a period of two (2) years, with groundwater samples to be analyzed for anions, cations and TDS, using EPA approved methods.

The proposed activities were approved by the NMOCD in a letter dated December 29, 2001, with the condition that groundwater also be analyzed for concentrations of benzene, toluene, ethylbenzene and xylenes. A copy of the letter is included in Appendix A. The NMOCD agreed to allow Texaco to monitor groundwater at the Site due to a regional groundwater impact from chloride that has affected groundwater at the Site, as well as upgradient, cross gradient and downgradient to the Site.

3.0 GROUNDWATER MONITORING

LA completed monitoring at the Site for the period of May 2002 through November 2002. On May 21, 2002 and November 12, 2002, depth to groundwater measurements were collected from all monitoring wells (MW-1 through MW-8), and a water well (WW-1) located southeast of the Site. Depth to groundwater ranged from 34.60 feet (WW-1) to 49.27 feet (MW-8) below top of casing (TOC) on the May 21st event, and from 35.03 feet (WW-1) to 43.15 feet (MW-8) on the November 12th event. The groundwater measurement of MW-8 on the May 21st event has been noted as being questionable, since the depth to water in MW-8 on May 2, 2001 was 40.35 feet below TOC, and 43.15 feet below TOC on November 12, 2002. The groundwater gradient was approximately 0.003 feet per foot during each monitoring event. Groundwater flow at the Site has remained consistent, and is from northwest to southeast. Table 1 provides a summary of depth to groundwater measurements. Figure 3 shows the groundwater gradient on May 21, 2002. Figure 4 shows the groundwater gradient on November 12, 2002.

Groundwater samples were collected on May 22 and 23, 2002, from all monitoring wells (MW-1 through MW-8). The groundwater samples were submitted under chain-of-custody control to TraceAnalysis, Inc., located in Lubbock, Texas, and were analyzed for benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX), anions, cations the total dissolved solids (TDS). Prior to sample collection, the wells were purged of a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 2 presents a summary of the BTEX analysis. Table 3 presents a summary of the inorganic analysis. Appendix B presents the laboratory report.

Referring to Table 2, BTEX was not reported above test method detection limits in any groundwater samples, except MW-4, where benzene and toluene were each detected at 0.003 milligrams per liter (mg/L), and MW-7, where toluene and xylene were detected at 0.002 mg/L and 0.001 mg/L, respectively. Referring to Table 3, chloride concentrations exceeded the New Mexico Water Quality Conservation Commission (NMWQCC) standard (250 mg/L) in all monitoring wells, as follows:

- MW-1 (6,060 mg/L)
- MW-2 (7,320 mg/L)
- MW-3 (10,800 mg/L)
- MW-4 (8,170 mg/L)
- MW-5 (6,970 mg/L)
- MW-6 (11,000 mg/L)
- MW-7 (7,420 mg/L)
- MW-8 (6,680 mg/L).

Sulfate concentrations exceeded the NMWQCC standard (600 mg/L) in all monitoring wells, as follows:

- MW-1 (1,850 mg/L)
- MW-2 (2,150 mg/L)
- MW-3 (3,920 mg/L)
- MW-4 (1,940 mg/L)
- MW-5 (2,510 mg/L)
- MW-6 (4,300 mg/L)
- MW-7 (2,280 mg/L)
- MW-8 (1,260 mg/L).

Total dissolved solids concentrations exceeded the NMWQCC standard (1,000 mg/L) in all monitoring wells, as follows:

- MW-1 (13,300 mg/L)
- MW-2 (15,700 mg/L)
- MW-3 (24,200 mg/L)
- MW-4 (18,200 mg/L)
- MW-5 (16,900 mg/L)
- MW-6 (25,500 mg/L)
- MW-7 (16,900 mg/L)
- MW-8 (13,300 mg/L).

Figure 5 shows the chloride concentrations in groundwater on May 22 and 23, 2002. Figure 7 shows the sulfate concentrations in groundwater on May 22 and 23, 2002. Figure 9 shows the TDS concentrations in groundwater on May 22 and 23, 2002.

On November 12 and 13, 2002, groundwater samples were collected from all monitoring wells (MW-1 through MW-8), and water well WW-1. A duplicate sample was also obtained from MW-1. The groundwater samples were submitted under chain-of-custody control to Environmental Lab of Texas I, Ltd., in Odessa, Texas, and analyzed for BTEX, anions, cations and TDS. Prior to sample collection, the wells were purged of a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 2 presents a summary of the BTEX analysis. Table 3 presents a summary of the inorganic analysis. Appendix B presents the laboratory report.

Referring to Table 2, the only detectable BTEX compounds were reported up gradient of the Site, in the groundwater sample from well MW-8, which reported benzene at 0.020 mg/L, toluene at 0.005 mg/L, and xylene at 0.004 mg/L. The NMWQCC human health standard for benzene is 0.01 mg/L, 0.75 mg/L for toluene, and 0.62 mg/L for xylene. Referring to Table 3, chloride concentrations

exceeded the NMWQCC standard (250 mg/L) in all monitoring wells, as follows:

- MW-1 (6,030 mg/L)
- MW-2 (6,740 mg/L)
- MW-3 (11,400 mg/L)
- MW-4 (7,890 mg/L)
- MW-5 (7,270 mg/L)
- MW-6 (10,800 mg/L)
- MW-7 (7,530 mg/L)
- MW-8 (7,270 mg/L).

The duplicate sample from MW-1 reported a chloride concentration of 5,940 mg/L. The chloride results from the WW-1 sample are anomalous, as chloride concentrations in WW-1 were 12,053 mg/L when last sampled on May 3, 2001. Concentrations will be verified on the next scheduled groundwater monitoring event (May 2003). Sulfate concentrations exceeded the NMWQCC standard (600 mg/L) in all monitoring wells, as follows:

- MW-1 (1,400 mg/L)
- MW-2 (1,780 mg/L)
- MW-3 (3,670 mg/L)
- MW-4 (1,020 mg/L)
- MW-5 (1,790 mg/L)
- MW-6 (3,660 mg/L)
- MW-7 (1,800 mg/L)
- MW-8 (1,220 mg/L)
- WW-1 (998 mg/L).

The duplicate sample from MW-1 reported a sulfate concentration of 1,480 mg/L.

Total dissolved solids concentrations exceeded the NMWQCC standard (1,000 mg/L) in all monitoring wells, as follows:

- MW-1 (12,800 mg/L)
- MW-2 (14,300 mg/L)
- MW-3 (23,600 mg/L)
- MW-4 (14,800 mg/L)
- MW-5 (14,900 mg/L)
- MW-6 (23,400 mg/L)
- MW-7 (15,700 mg/L)
- MW-8 (14,000 mg/L)
- WW-1 (15,800 mg/L).

The duplicate sample from MW-1 reported a TDS concentration of 12,300 mg/L.

For the monitoring period, groundwater levels are down, in all monitoring wells, from groundwater levels reported on May 2, 2001. The extent of the chloride, sulfate and TDS plumes have not been fully delineated at this time, although concentrations have decreased in MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, and water well WW-1 since they were originally sampled in 2001. The chloride concentration in WW-1 decreased from 12,053 mg/L during the May 3, 2002 sampling event to <5.0 mg/L during the November 12, 2002 sampling event. This anomaly may be due to a sampling error. The concentration of chloride in WW-1 will be verified during the next groundwater monitoring event, scheduled for May, 2003. Concentrations of chloride and sulfate increased slightly in MW-3 since the May 3, 2001 sampling event, and TDS concentrations decreased. Although concentrations of chloride and TDS decreased in MW-8 since the May 2, 2001 monitoring event, concentrations of sulfate have exhibited a slight increase.

Figure 6 shows the chloride concentrations in groundwater on November 12 and 13, 2002. Figure 8 shows the sulfate concentrations in groundwater on November 12 and 13, 2002. Figure 10 shows the TDS concentrations in groundwater on November 12 and 13, 2002.

4.0 WASTE MANAGEMENT AND DISPOSITION

Purged groundwater from the sampling activities was disposed at an NMOCD permitted salt water disposal (SWD) facility operated by Chapparel Services, Inc., located in Eunice, New Mexico. Approximately 130 gallons of purged groundwater was disposed following each sampling event, for a total of approximately 260 gallons.

5.0 CONCLUSIONS

1. Depth to groundwater ranged from 34.60 feet (WW-1) to 49.27 feet (MW-8) below top of casing (TOC) on the May 21, 2002 monitoring event.
2. Depth to groundwater ranged from 35.03 feet (WW-1) to 43.15 feet (MW-8) on the November 12, 2002 monitoring event.
3. The groundwater gradient was approximately 0.003 feet per foot during each monitoring event.
4. Groundwater flow at the Site has remained consistent, and is from northwest to southeast.
5. From the May 2002 sampling event, BTEX was not reported above test method detection limits in any groundwater samples, except MW-4, where benzene and toluene were each detected at 0.003 mg/L, and MW-7, where toluene and xylene were detected at 0.002 mg/L and 0.001 mg/L, respectively. Chloride, sulfate and TDS concentrations exceeded the New Mexico Water Quality Conservation Commission (NMWQCC) standard in all monitoring wells.
6. From the November 2002 sampling event, detectable benzene and toluene concentrations were reported up gradient of the Site, in the groundwater sample from well MW-8, which reported 0.020 mg/L, and 0.005 mg/L, respectively. The NMWQCC human health standard for benzene is 0.01 mg/L, and 0.75 mg/L for toluene. Chloride concentrations exceeded the NMWQCC

standard (250 mg/L) in all monitoring wells. Sulfate and TDS concentrations exeeeded the NMWQCC standard in all monitoring wells and the water well (WW-1) to the southeast of the Site.

7. The extent of the chloride, sulfate and TDS plumes have not been fully delineated at this time, although concentrations have decreased in MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, and water well WW-1 since they were originally sampled in 2001.

TABLES

Table 1: Summary of Depth-to-Groundwater Measurements from Monitoring and Water Wells
Texaco Exploration and Production Inc., J. R. Phillips Tank Battery # 2
SE/4, NW/4, Section 6, Township 20 South, Range 37 East
Lea County, New Mexico

Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	WW-1
02-May-01	39.33	39.15	39.30	40.24	38.37	39.40	39.76	40.35	33.93
21-May-02	40.37	40.14	40.57	41.09	39.53	40.22	40.85	49.27*	34.60
12-Nov-02	40.92	40.69	41.09	41.59	40.02	40.72	41.47	43.15	35.03

Notes: All measurements in feet from top-of-casing
*: Questionable Data

Table 2: Summary of BTEX Analyses of Groundwater Samples from Monitoring and Water Wells
Texaco Exploration and Production Inc., J. R. Phillips Tank Battery # 2
SE/4, NW/4, Section 6, Township 20 South, Range 37 East
Lea County, New Mexico

Well Number	Sample Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylene mg/L	Total BTEX mg/L
MW-1	04/10/00*	<0.002	<0.002	<0.002	<0.006	<0.012
	05/03/01	<0.001	<0.001	<0.001	<0.001	<0.004
	05/23/02	<0.001	<0.001	<0.001	<0.001	<0.004
	11/12/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-2	04/10/00*	<0.002	<0.002	<0.002	<0.006	<0.012
	05/03/01	<0.001	<0.001	<0.001	<0.001	<0.004
	05/22/02	<0.001	<0.001	<0.001	<0.001	<0.004
	11/12/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-3	05/03/01	<0.001	<0.001	<0.001	<0.001	<0.004
	05/23/02	<0.001	<0.001	<0.001	<0.001	<0.004
	11/13/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-4	05/03/01	0.005	<0.001	<0.001	<0.001	0.005
	05/22/02	0.003	0.003	<0.001	<0.001	0.006
	11/13/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-5	05/03/01	<0.001	<0.001	<0.001	<0.001	<0.004
	05/23/02	<0.001	<0.001	<0.001	<0.001	<0.004
	11/13/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-6	05/03/01	<0.001	<0.001	<0.001	<0.001	<0.004
	05/23/02	<0.005	<0.005	<0.005	<0.005	<0.005
	11/13/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-7	05/02/01	<0.001	<0.001	<0.001	<0.001	<0.004
	05/22/02	<0.0022	0.002	<0.001	0.001	0.005
	11/12/02	<0.001	<0.001	<0.001	<0.001	<0.004
MW-8	05/02/01	<0.001	0.002	<0.001	<0.001	0.002
	05/23/02	<0.005	<0.005	<0.005	<0.005	<0.005
	11/12/02	0.020	0.005	<0.001	0.004	<0.030
Duplicate	05/23/02	<0.001	<0.001	<0.001	<0.001	<0.004
WW-1	03/15/00*	<0.002	<0.002	<0.002	<0.006	<0.012
	05/03/01	<0.001	<0.001	<0.001	<0.001	<0.004
	11/12/02	<0.001	<0.001	<0.001	<0.001	<0.004
Duplicate	05/03/01	<0.002	<0.002	<0.002	<0.006	<0.012
(WW-1)						
Duplicate	11/13/02	<0.001	<0.001	<0.001	<0.001	<0.004
(MW-1)						

Notes: Analyses performed by Environmental Lab of Texas, Inc., Odessa, Texas

1. mg/L: Milligrams per liter (equivalent to parts per million)
2. <: Analyte not detected above test method detection limit
3. *: Analysis performed by Cardinal Laboratories, Inc., Hobbs, New Mexico

Table 3: Summary of Inorganic Analyses of Groundwater Samples from Monitoring Wells and Water Wells
Texaco Exploration and Production Inc., J. R. Phillips Tank Battery # 2
SE/4, NW/4, Section 6, Township 20 South, Range 37 East
Lea County, New Mexico

Monitor Well	Sample Date	pH (s.u.)	Carbonate (mg/L)	Bicarbonate (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	TDS (mg/L)
NMWQCC Standard					**250**	**600**					**1000**
MW-1	10-Apr-01	7.01	0	556	7,300	2,061	445	175	44.00	5,058	15,816
	03-May-01	6.77	<2	500	6,913	2,020	323.4	172.5	52.11	3,756	14,501
	23-May-02	--	<1	494	6,060	1,850	361	154	66.40	3,750	13,300
	12-Nov-02	---	<0.10	456	6,030	1,400	235	143	67.40	3,060	12,800
MW-2	10-Apr-01	6.91	0	566	8,704	2,611	569	296	31.00	5,871	19,312
	03-May-01	6.77	<2	516	7,799	2,670	412.4	221.7	30.31	4,424	16,857
	22-May-02	--	<1	530	7,320	2,150	471	204	42.20	4,200	15,700
	12-Nov-02	---	<0.10	482	6,740	1,780	352	187	48.70	3,640	14,300
MW-3	03-May-01	6.50	<2	458	11,078	3,525	984.0	431.9	38.89	6,114	24,135
	23-May-02	--	<1	512	10,800	3,920	999	350	56.50	6,210	24,200
	13-Nov-02	---	<0.10	456	11,400	3,670	863	371	59.30	5,680	23,600
MW-4	03-May-01	6.51	<2	618	9,572	2,755	467.7	299.8	49.25	5,435	20,118
	22-May-02	--	<1	814	8,170	1,940	389	220	45.30	5,100	18,200
	13-Nov-02	---	<0.10	1020	7,890	1,020	47.1	202	21.60	3,980	14,800
MW-5	03-May-01	6.60	<2	416	8,685	3,045	430.9	237.1	44.36	4,651	18,846
	23-May-02	--	<1	496	6,970	2,510	394	200	44.00	4,680	16,900
	13-Nov-02	---	<0.10	640	7,270	1,790	266	172	43.80	3,880	14,900
MW-6	03-May-01	6.41	<2	460	11,876	4,380	1004	429.9	52.27	6,281	25,288
	23-May-02	--	<1	474	11,000	4,300	1130	483	53.00	6,060	25,500
	13-Nov-02	---	<0.10	416	10,800	3,660	936	486	57.60	5,470	23,400
MW-7	02-May-01	6.70	<2	436	8,154	2,430	599.5	289.8	34.57	4,578	18,578
	22-May-02	--	<1	440	7,420	2,280	630	264	48.50	4,390	16,900
	12-Nov-02	---	<0.10	412	7,530	1,800	512	244	55.00	3,950	15,700

Table 3: Summary of Inorganic Analyses of Groundwater Samples from Monitoring Wells and Water Wells
Texaco Exploration and Production Inc., J. R. Phillips Tank Battery # 2
SE/4, NW/4, Section 6, Township 20 South, Range 37 East
Lea County, New Mexico

Monitor Well	Sample Date	pH (s.u.)	Carbonate (mg/L)	Bicarbonate (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	TDS (mg/L)
NMWQCC Standard					**250**	**600**					**1000**
MW-8	02-May-01	6.67	<2	426	7,445	1,213	766.7	295.7	52.68	2,999	16,325
	23-May-02	--	<1	430	6,680	1,260	701	237	75.90	3,420	13,300
	12-Nov-02	---	<0.10	444	7,270	1,220	591	254	88.00	3,150	14,000
WW-1		--	--	--	13,152	--	--	--	--	--	--
	03-May-01	4.38	<2	<2	12,053	629	1419	387.3	38.95	1,486	22,571
	12-Nov-02	---	<0.10	<2.0	<5.0	998	1120	361	38.30	2,260	15,800
Duplicate (WW-1)	03-May-01	4.24	<2	<2	12,053	688	1337	323.9	42.68	1,376	21,192
Duplicate (MW-1)	13-Nov-02	---	<0.10	457	5,940	1,480	290	148	67.90	2,930	12,300

Notes: Analyses performed by Environmental Lab of Texas, Inc., Odessa, Texas

1. mg/L: Milligrams per liter (equivalent to parts per million)
2. <: Analyte not detected above test method detection limit
3. --: No data available

FIGURES

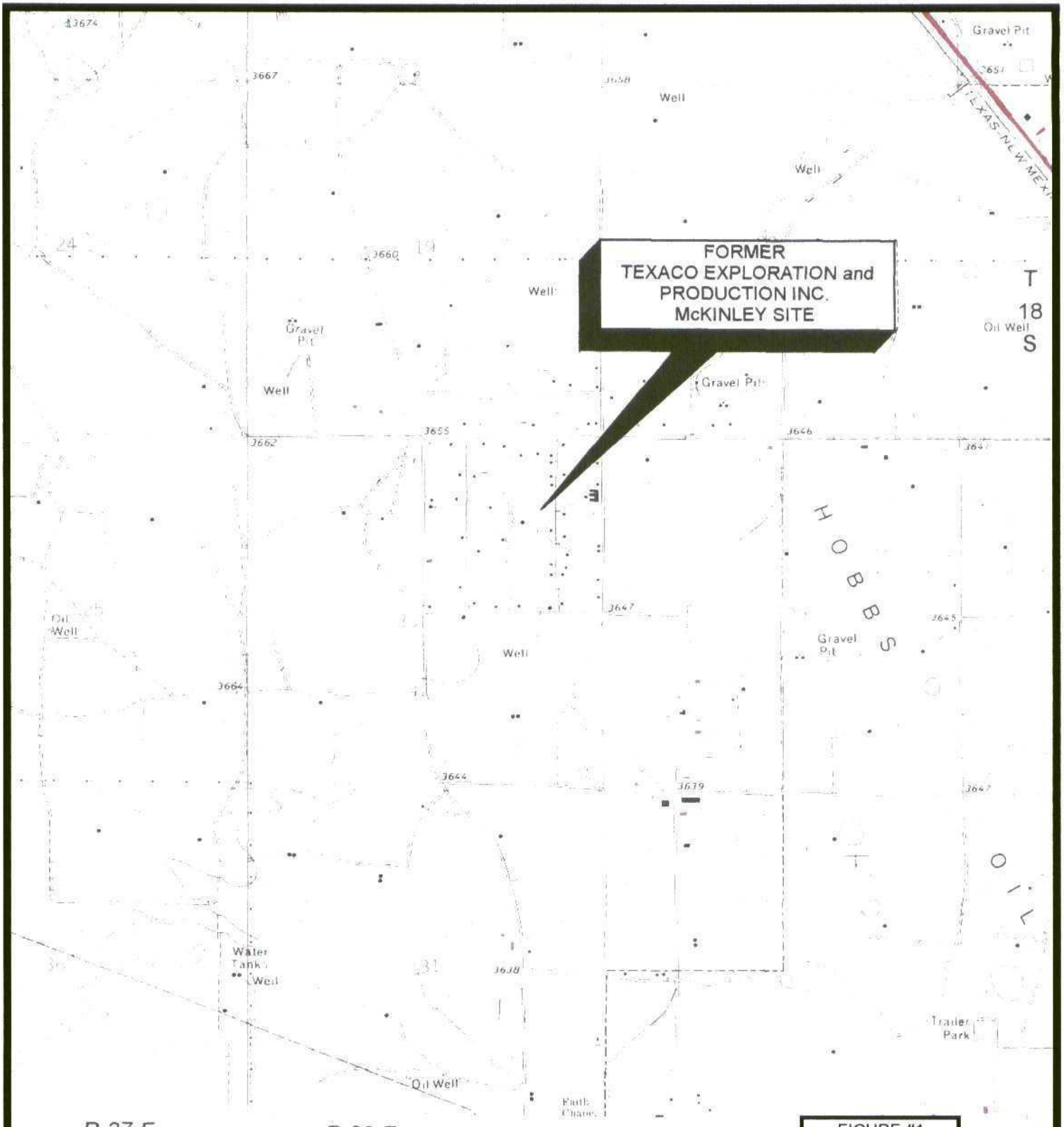


FIGURE #1

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION, INC.

McKINLEY LEASE

NW/4, SE/4, SECTION 30, T18S, R38E

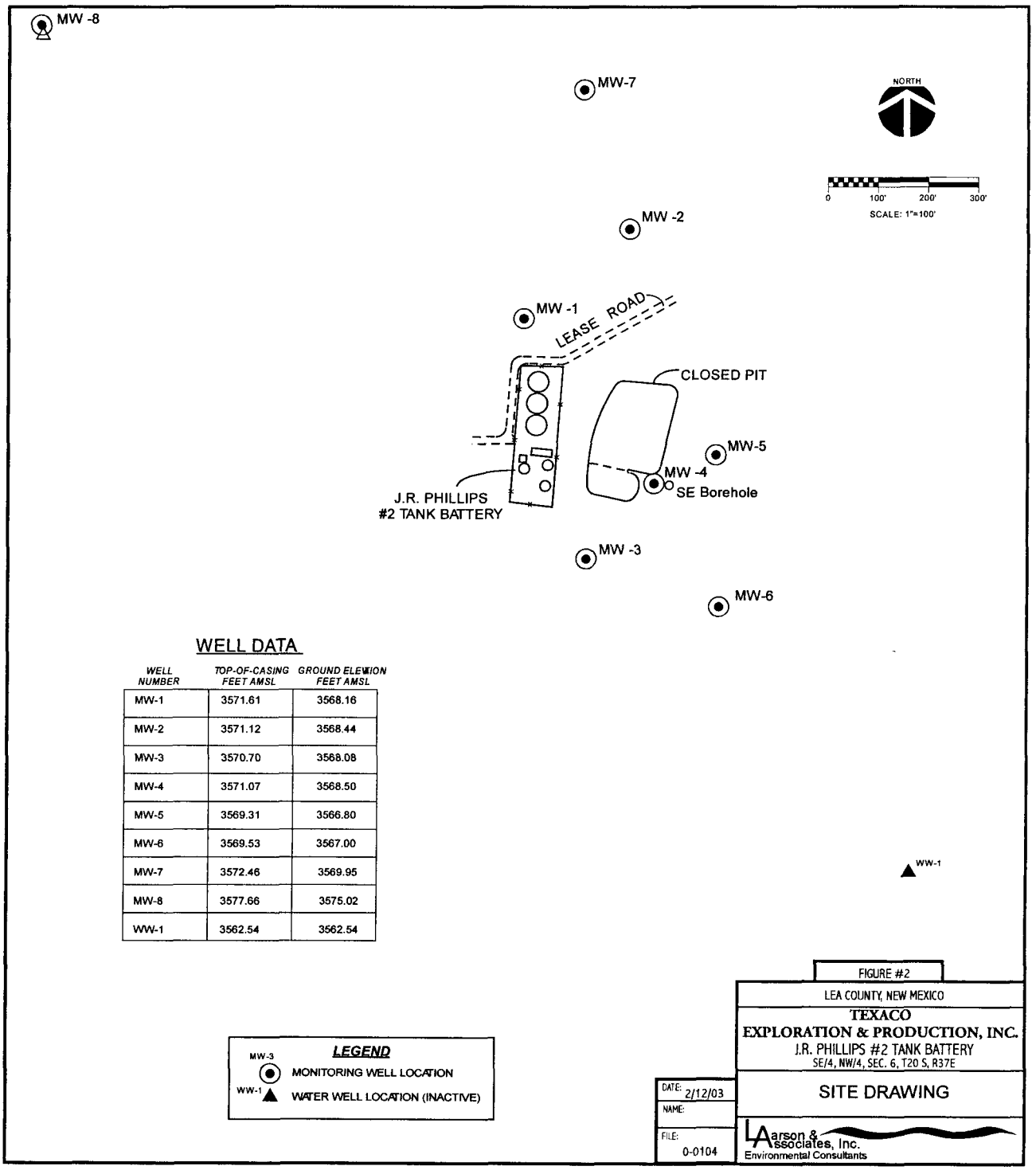
TOPOGRAPHIC MAP

TAKEN FROM U.S.G.S.
HOBBS WEST, N. MEX. 1979
7.5' QUADRANGLES

SCALE: 1"=2000'

DATE:	4/22/01
NAME:	
FILE:	2-001

LA Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-OF-CASING FEET AMSL	GROUND ELEVATION FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 — MONITORING WELL LOCATION

WW-1 — WATER WELL LOCATION (INACTIVE)

FIGURE #2

LEA COUNTY, NEW MEXICO

TEXACO

EXPLORATION & PRODUCTION, INC.

J.R. PHILLIPS #2 TANK BATTERY

SE/4, NW/4, SEC. 6, T20 S, R37E

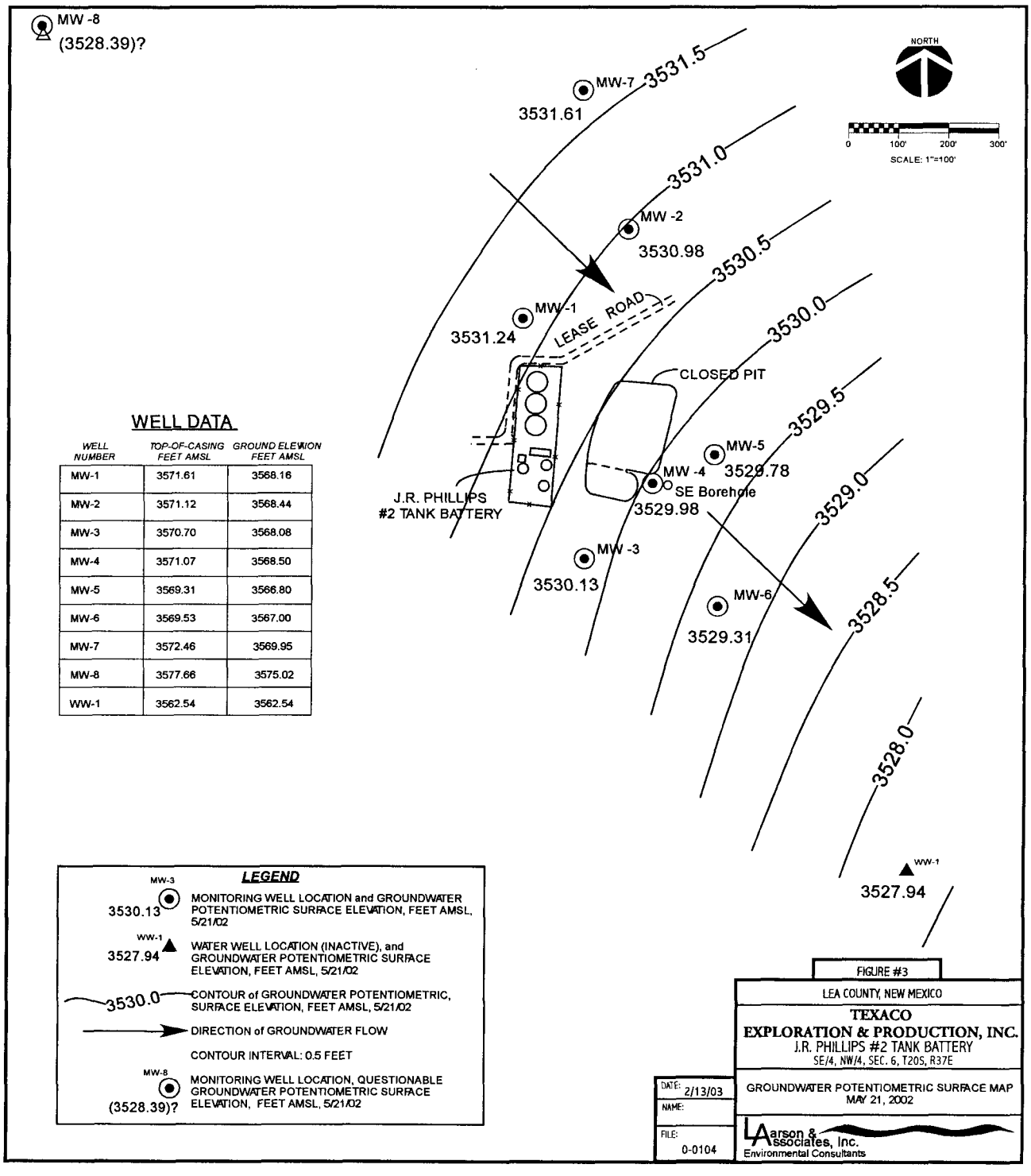
SITE DRAWING

DATE: 2/12/03

NAME:

FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



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WELL NUMBER	TOP-OF-CASING FEET AMSL	GROUND ELEVATION FEET AMSL
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MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 3530.13 — MONITORING WELL LOCATION and GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 5/21/02

WW-1 3527.94 — WATER WELL LOCATION (INACTIVE), and GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 5/21/02

3530.0 — CONTOUR of GROUNDWATER POTENTIOMETRIC, SURFACE ELEVATION, FEET AMSL, 5/21/02

DIRECTION of GROUNDWATER FLOW

CONTOUR INTERVAL: 0.5 FEET

MW-8 (3528.39)? — MONITORING WELL LOCATION, QUESTIONABLE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 5/21/02

FIGURE #3

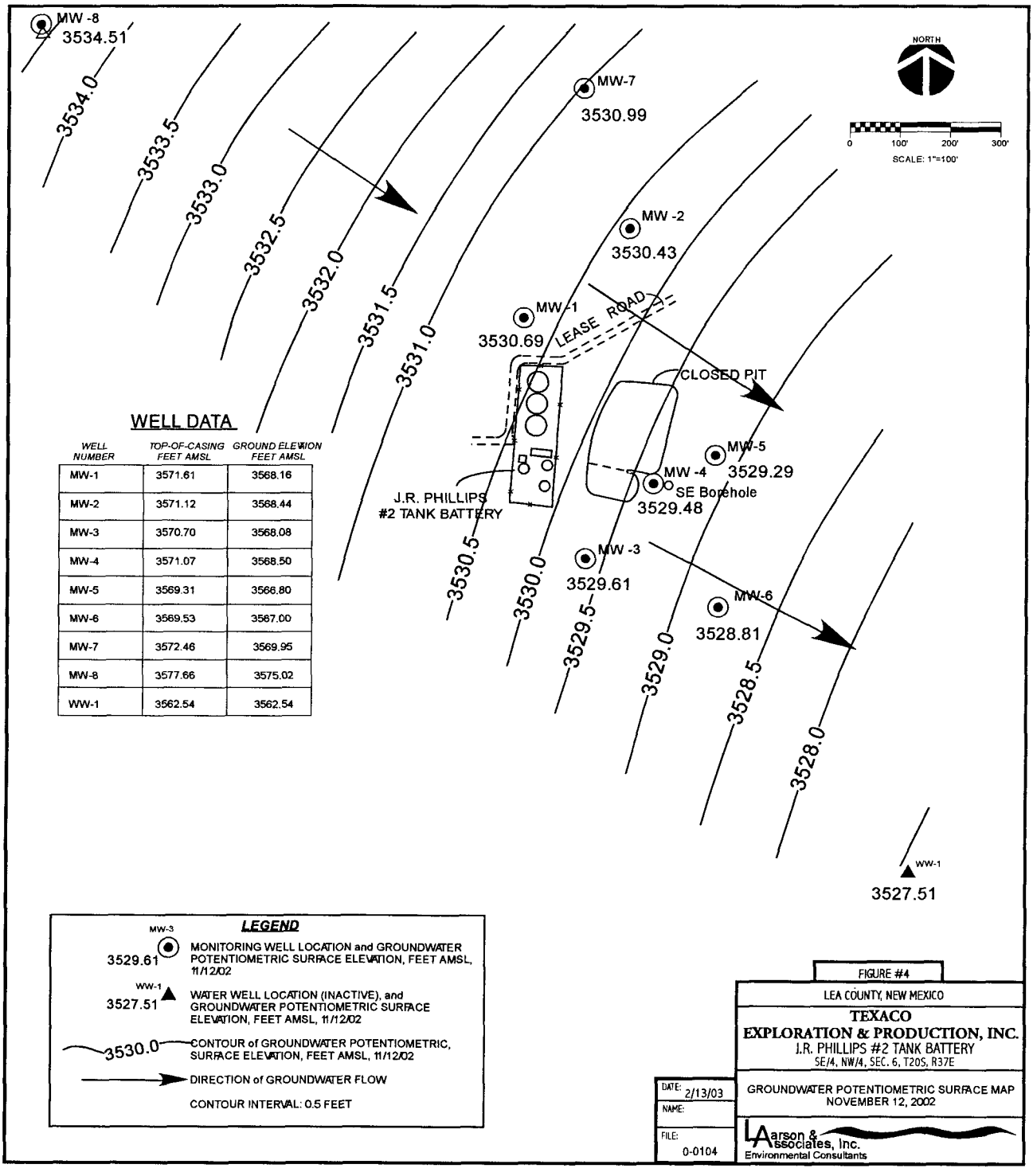
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION, INC.
J.R. PHILLIPS #2 TANK BATTERY
SE/4, NW/4, SEC. 6, T20S, R37E

GROUNDWATER POTENTIOMETRIC SURFACE MAP
MAY 21, 2002

DATE: 2/13/03
NAME:
FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



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MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 3529.61 — MONITORING WELL LOCATION and GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/12/02

WW-1 / 3527.51 — WATER WELL LOCATION (INACTIVE), and GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 11/12/02

3530.0 — CONTOUR of GROUNDWATER POTENTIOMETRIC, SURFACE ELEVATION, FEET AMSL, 11/12/02

DIRECTION of GROUNDWATER FLOW

CONTOUR INTERVAL: 0.5 FEET

FIGURE #4

LEA COUNTY, NEW MEXICO

TEXACO

EXPLORATION & PRODUCTION, INC.

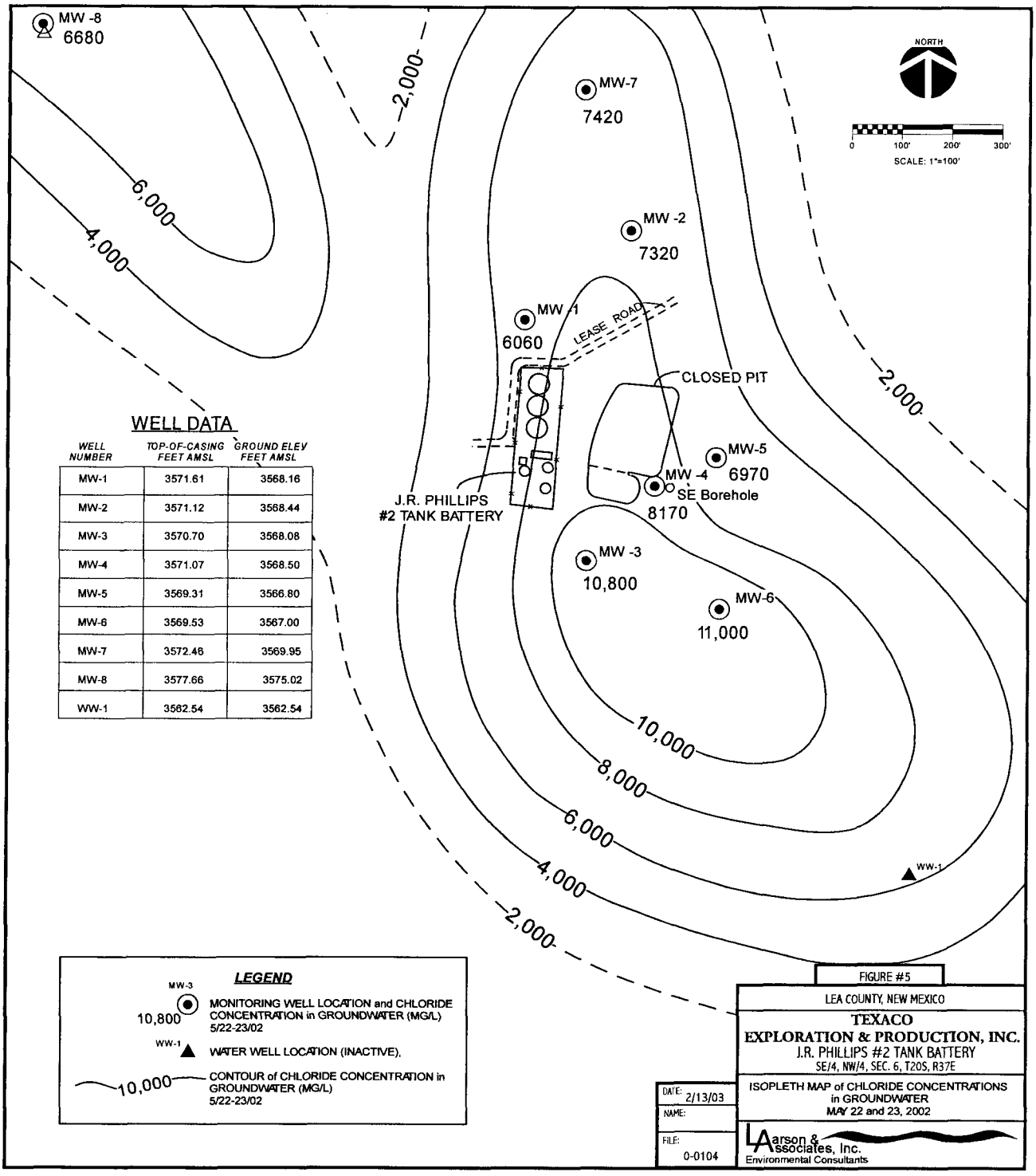
J.R. PHILLIPS #2 TANK BATTERY

SE/4, NW/4, SEC. 6, T20S, R37E

GROUNDWATER POTENTIOMETRIC SURFACE MAP
NOVEMBER 12, 2002

DATE: 2/13/03
NAME:
FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-OF-CASING FEET AMSL	GROUND ELEV FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 10,800 — MONITORING WELL LOCATION and CHLORIDE CONCENTRATION in GROUNDWATER (MG/L) 5/22-23/02

WW-1 — WATER WELL LOCATION (INACTIVE),

10,000 — CONTOUR of CHLORIDE CONCENTRATION in GROUNDWATER (MG/L) 5/22-23/02

FIGURE #5

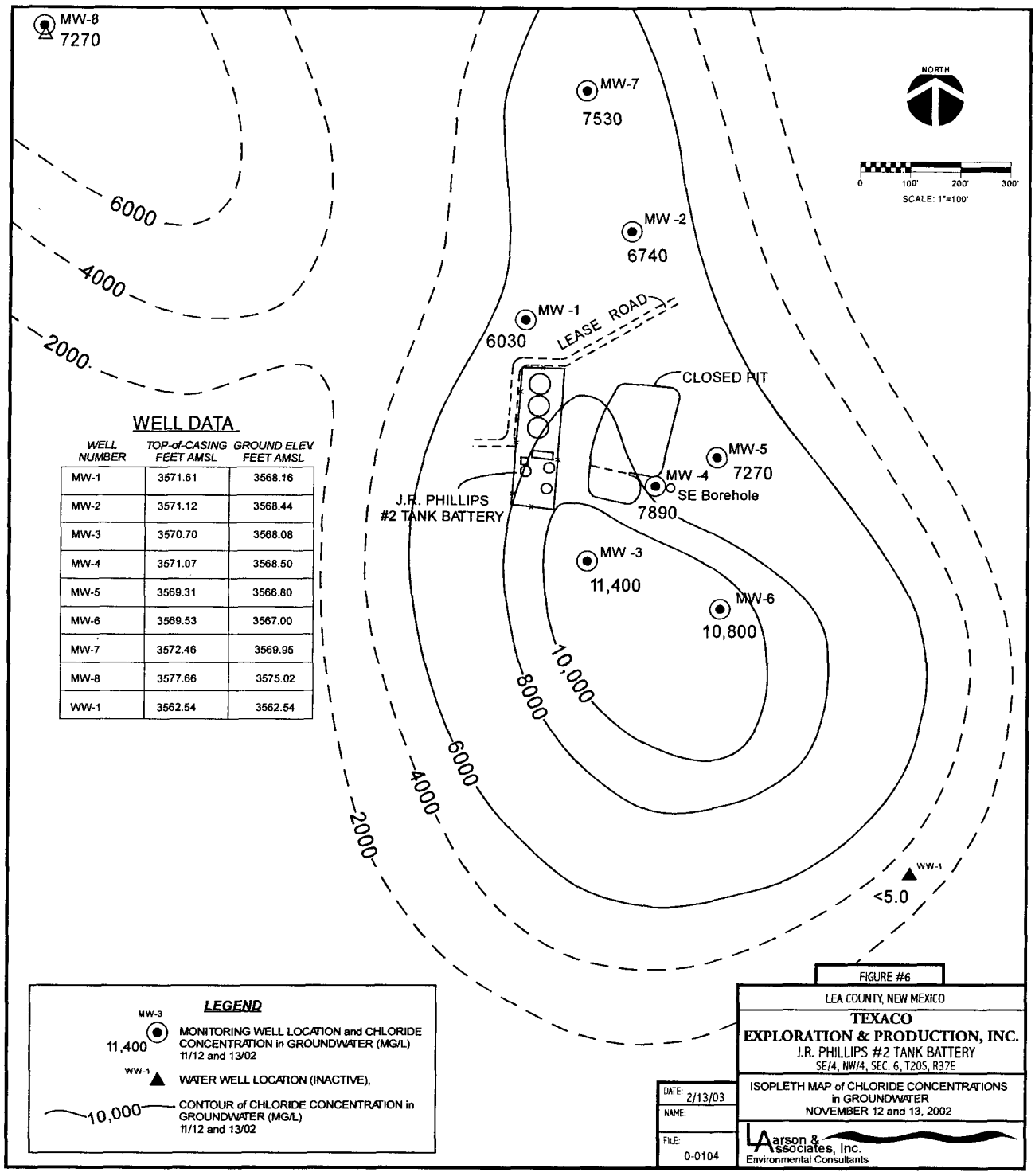
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION, INC.
J.R. PHILLIPS #2 TANK BATTERY
SE/4, NW/4, SEC. 6, T20S, R37E

ISOPLETH MAP of CHLORIDE CONCENTRATIONS in GROUNDWATER
MAY 22 and 23, 2002

DATE: 2/13/03
NAME:
FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-of-CASING FEET AMSL	GROUND ELEV FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 11,400 — MONITORING WELL LOCATION and CHLORIDE CONCENTRATION in GROUNDWATER (MG/L) 11/12 and 13/02

WW-1 — WATER WELL LOCATION (INACTIVE),

10,000 — CONTOUR of CHLORIDE CONCENTRATION in GROUNDWATER (MG/L) 11/12 and 13/02

FIGURE #6

LEA COUNTY, NEW MEXICO

TEXACO

EXPLORATION & PRODUCTION, INC.

J.R. PHILLIPS #2 TANK BATTERY

SE/4, NW/4, SEC. 6, T20S, R37E

ISOPLETH MAP of CHLORIDE CONCENTRATIONS in GROUNDWATER

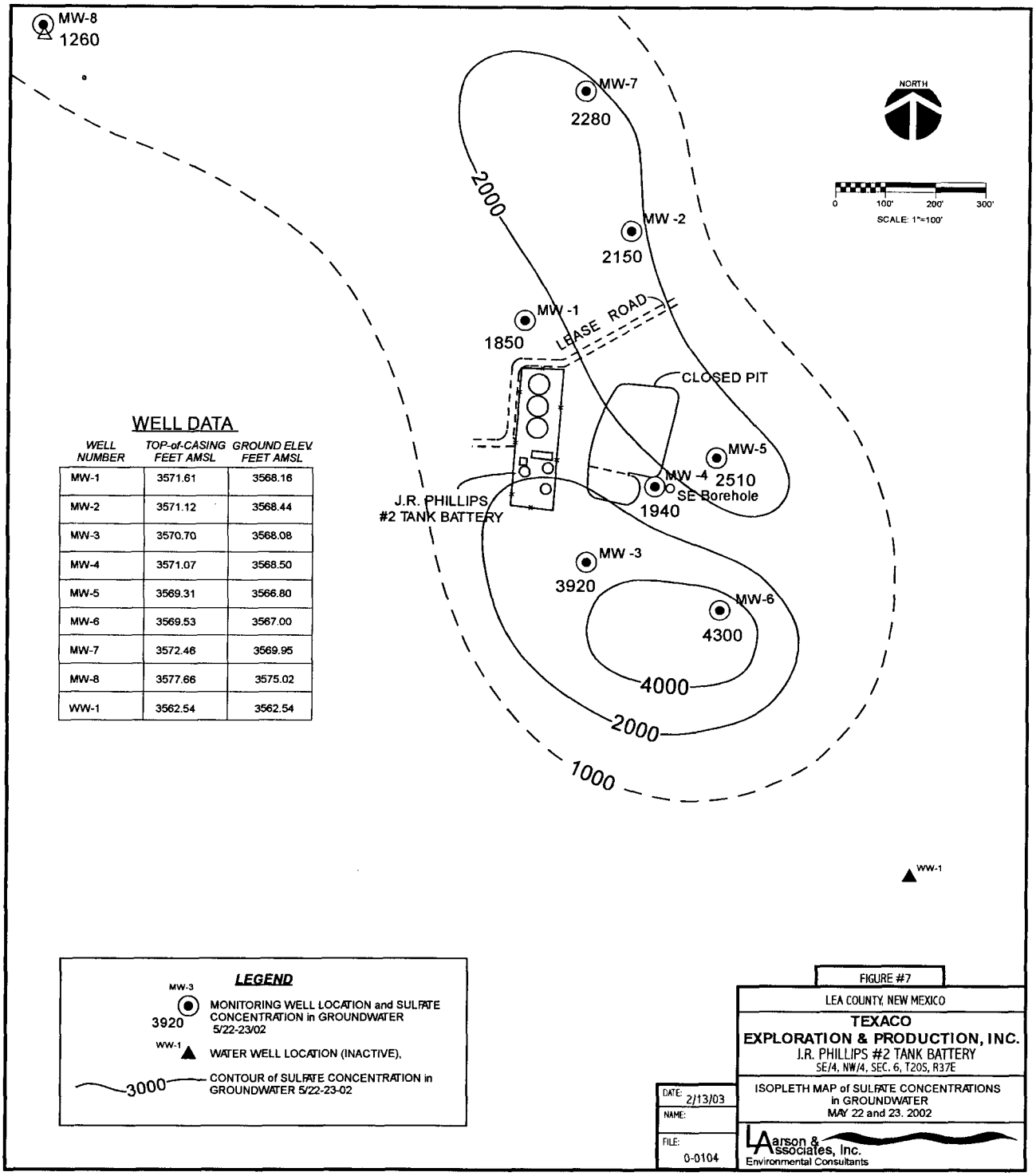
NOVEMBER 12 and 13, 2002

DATE: 2/13/03

NAME:

FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-of-CASING FEET AMSL	GROUND ELEV. FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 3920 — MONITORING WELL LOCATION and SULFATE CONCENTRATION in GROUNDWATER 5/22-23/02

WW-1 — WATER WELL LOCATION (INACTIVE),

3000 — CONTOUR of SULFATE CONCENTRATION in GROUNDWATER 5/22-23-02

FIGURE #7

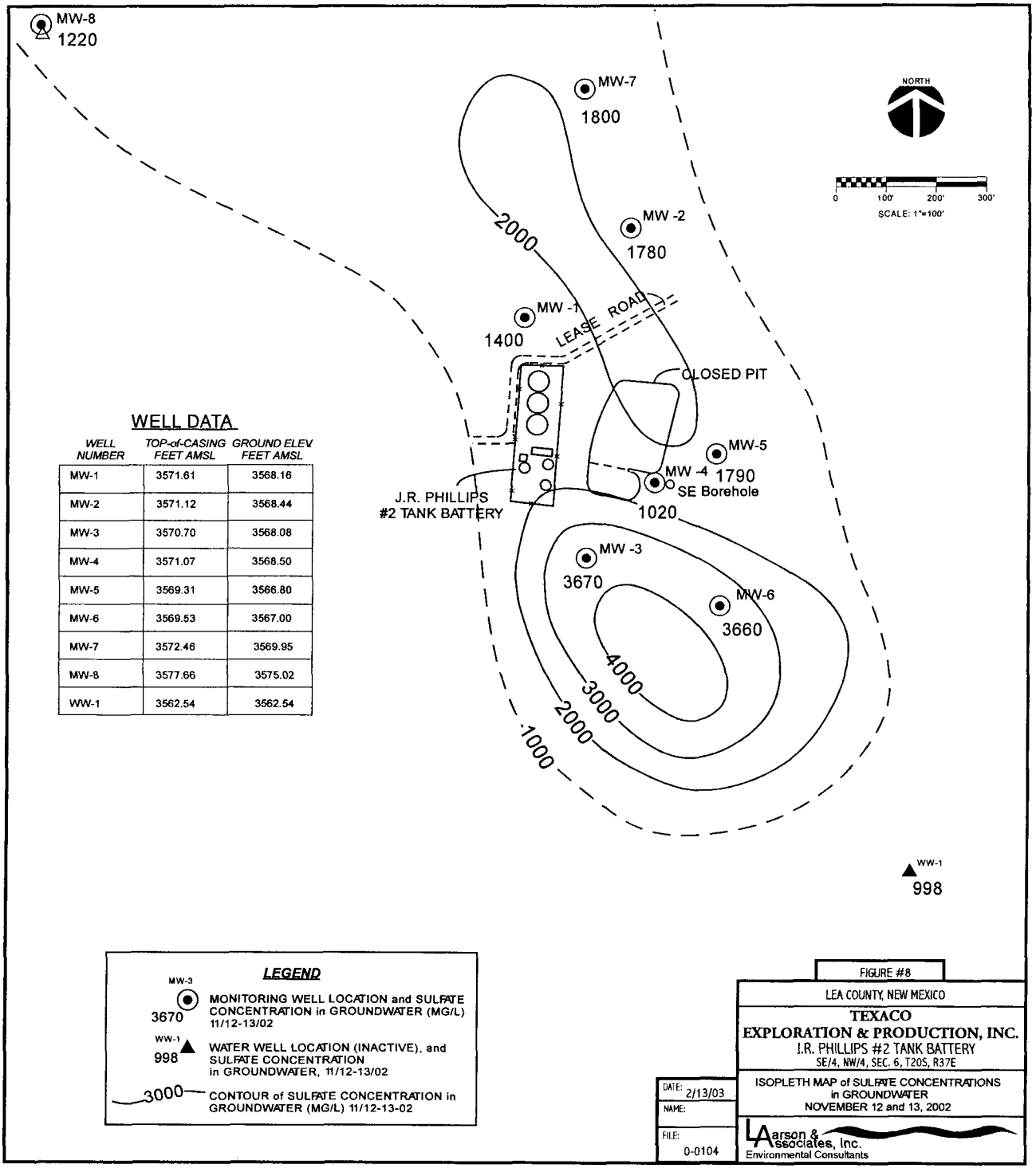
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION, INC.
J.R. PHILLIPS #2 TANK BATTERY
SE/4, NW/4, SEC. 6, T20S, R37E

ISOPLETH MAP of SULFATE CONCENTRATIONS in GROUNDWATER
MAY 22 and 23, 2002

DATE: 2/13/03
NAME:
FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-of-CASING FEET AMSL	GROUND ELEV FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 3670 — MONITORING WELL LOCATION and SULFATE CONCENTRATION in GROUNDWATER (MG/L) 11/12-13/02

WW-1 / 998 — WATER WELL LOCATION (INACTIVE), and SULFATE CONCENTRATION in GROUNDWATER, 11/12-13/02

3000 — CONTOUR of SULFATE CONCENTRATION in GROUNDWATER (MG/L) 11/12-13-02

FIGURE #8

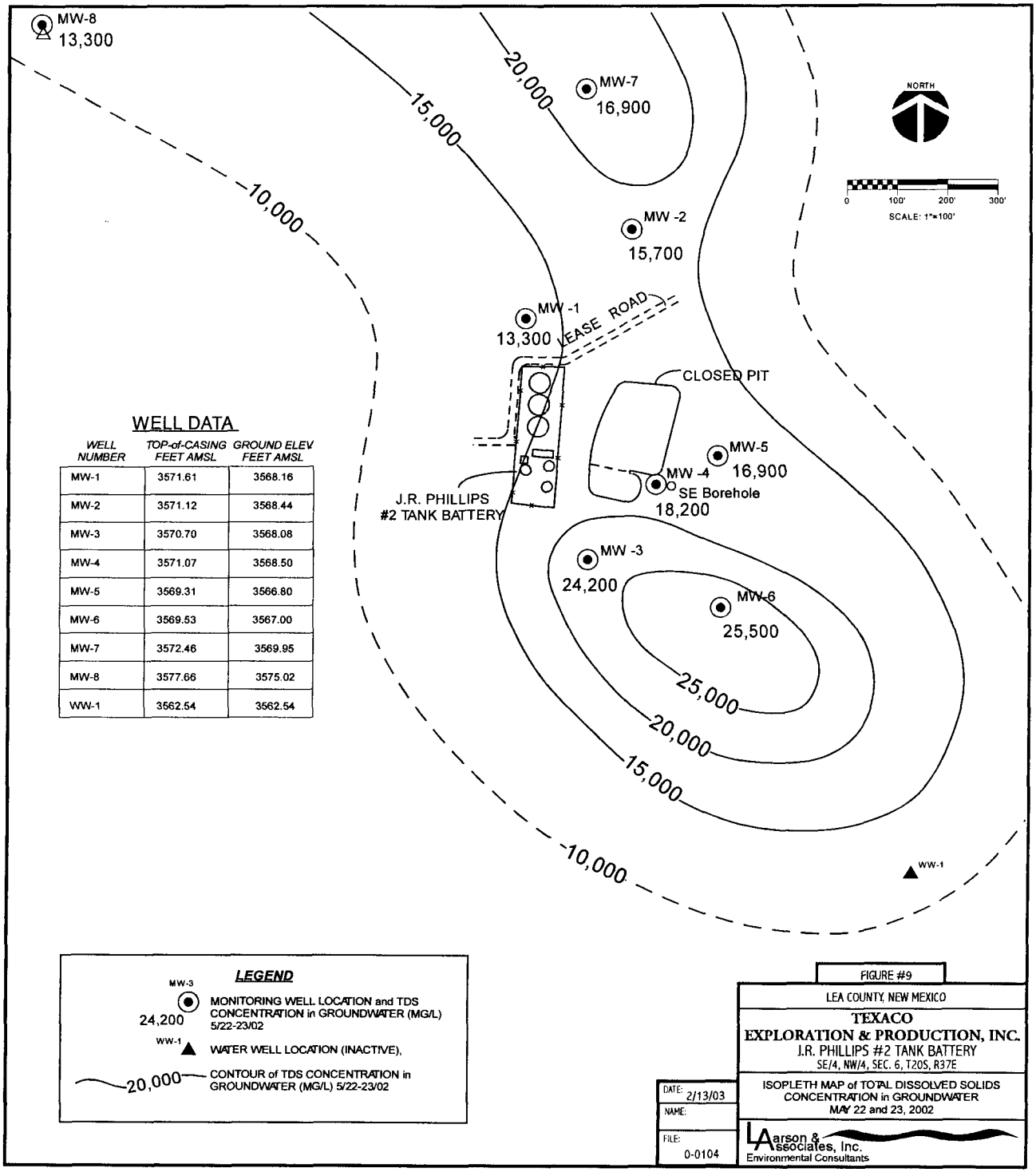
LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION, INC.
J.R. PHILLIPS #2 TANK BATTERY
SE/4, NW/4, SEC. 6, T20S, R37E

ISOPLETH MAP of SULFATE CONCENTRATIONS in GROUNDWATER
NOVEMBER 12 and 13, 2002

DATE: 2/13/03
NAME:
FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-of-CASING FEET AMSL	GROUND ELEV FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 24,200 — MONITORING WELL LOCATION and TDS CONCENTRATION in GROUNDWATER (MG/L) 5/22-23/02

WW-1 — WATER WELL LOCATION (INACTIVE),

20,000 — CONTOUR of TDS CONCENTRATION in GROUNDWATER (MG/L) 5/22-23/02

FIGURE #9

LEA COUNTY, NEW MEXICO

TEXACO

EXPLORATION & PRODUCTION, INC.

J.R. PHILLIPS #2 TANK BATTERY

SE/4, NW/4, SEC. 6, T20S, R37E

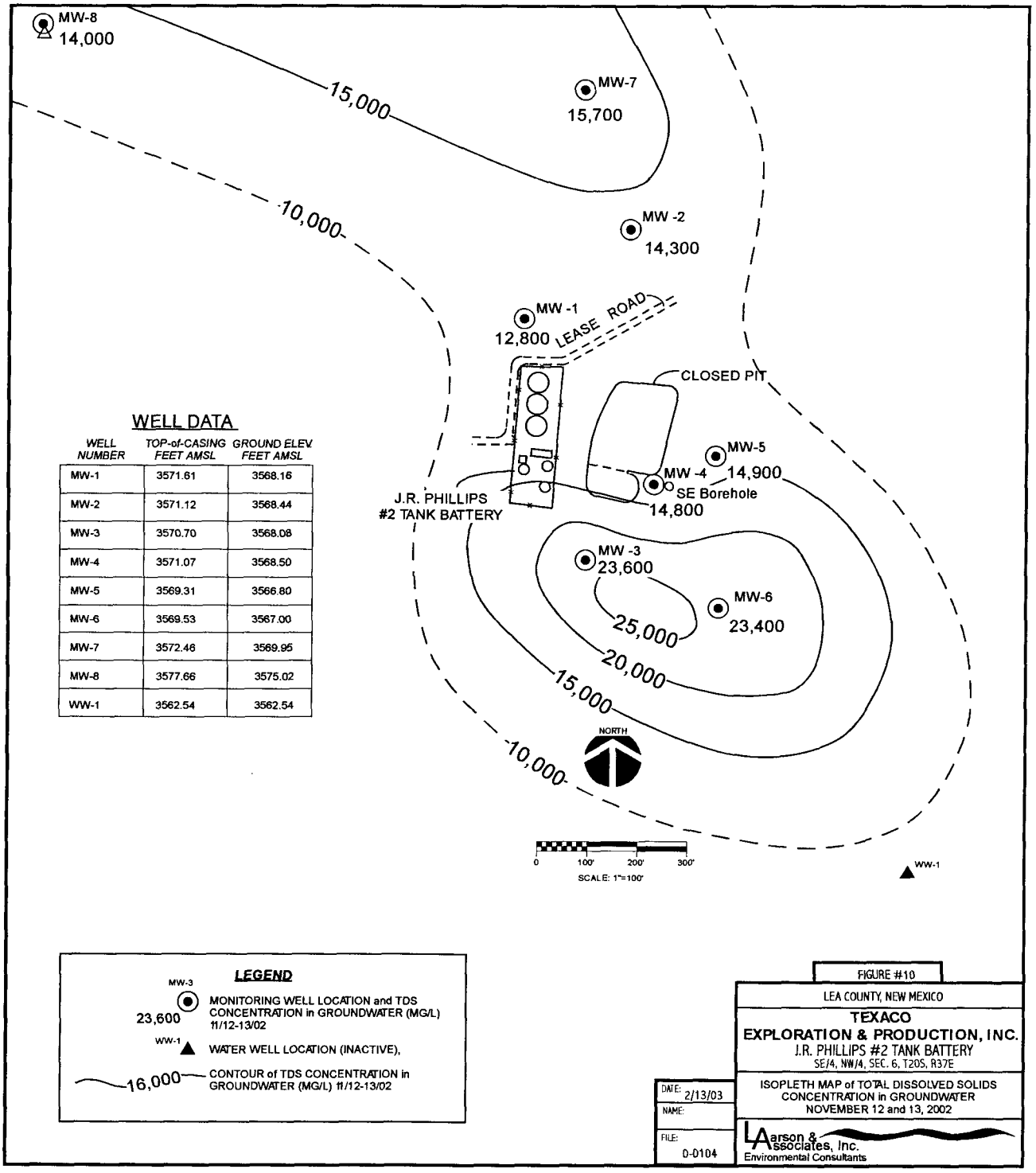
ISOPLETH MAP of TOTAL DISSOLVED SOLIDS CONCENTRATION in GROUNDWATER MAY 22 and 23, 2002

DATE: 2/13/03

NAME:

FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	TOP-of-CASING FEET AMSL	GROUND ELEV. FEET AMSL
MW-1	3571.61	3568.16
MW-2	3571.12	3568.44
MW-3	3570.70	3568.08
MW-4	3571.07	3568.50
MW-5	3569.31	3566.80
MW-6	3569.53	3567.00
MW-7	3572.46	3569.95
MW-8	3577.66	3575.02
WW-1	3562.54	3562.54

LEGEND

MW-3 / 23,600 — MONITORING WELL LOCATION and TDS CONCENTRATION in GROUNDWATER (MG/L) 11/12-13/02

WW-1 — WATER WELL LOCATION (INACTIVE),

16,000 — CONTOUR of TDS CONCENTRATION in GROUNDWATER (MG/L) 11/12-13/02

FIGURE #10

LEA COUNTY, NEW MEXICO

TEXACO
EXPLORATION & PRODUCTION, INC.
J.R. PHILLIPS #2 TANK BATTERY
SE/4, NW/4, SEC. 6, T20S, R37E

ISOPLETH MAP of TOTAL DISSOLVED SOLIDS CONCENTRATION in GROUNDWATER
NOVEMBER 12 and 13, 2002

DATE: 2/13/03
NAME:
FILE: 0-0104

Larson & Associates, Inc.
Environmental Consultants

APPENDIX A

NMOCD Correspondence

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 27, 2001

CERTIFIED MAIL
RETURN RECEIPT NO. 7000-1670-0012-5357-8116

Mr. Rodney Bailey
Texaco Exploration & Production, Inc.
500 N. Loraine
Midland, Texas 79701

RE: CASE #1R0255
J.R. PHILLIPS #2 TANK BATTERY SITE
MONUMENT, NEW MEXICO

Dear Mr. Bailey:

The New Mexico Oil Conservation Division (OCD) has reviewed Texaco Exploration & Production, Inc.'s (Texaco) May 24, 2001 "GROUNDWATER ASSESSMENT REPORT, TEXACO EXPLORATION AND PRODUCTION INC., J.R. PHILLIPS TANK BATTERY #2, SE/4, NW/4, SECTION 6, TOWNSHIP 20 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, MAY 24, 2001" which was submitted on behalf of Texaco by their consultant Larson & Associates, Inc. This document contains the results of Texaco's investigation of the extent of ground water contamination related to a former emergency pit at the J.R. Phillips #2 Tank Battery south of Monument, New Mexico. The document also contains a proposal for further ground water monitoring at the site.

The above referenced monitoring proposal is approved with the following conditions:

1. Ground water from the monitoring wells shall also be analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX).

2. Texaco shall notify the OCD at least 48 hours in advance of scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve Texaco of responsibility if the work plan fails to adequately monitor contamination related to Texaco's activities, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Texaco of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office
Mark Larson, Larson & Associates, Inc.

APPENDIX B

Laboratory Analyses and Chain of Custody Documentation

Summary Report

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, Tx. 79710

Report Date: June 13, 2002

Order ID Number: A02052310

Project Number: 00-0104
Project Name: J.B. Phillips
Project Location: Lea County, NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197712	MW-7	Water	5/22/02	12:05	5/23/02
197713	MW-4	Water	5/22/02	1:04	5/23/02
197714	MW-2	Water	5/22/02	1:32	5/23/02

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample - Field Code	MTBE (ppm)	BTEX Benzene (ppm)	BTEX Toluene (ppm)	BTEX Ethylbenzene (ppm)	BTEX M,P,O-Xylene (ppm)	BTEX Total BTEX (ppm)
197712 - MW-7	<0.001	0.0022	0.002	<0.001	0.0012	0.0054
197713 - MW-4	<0.001	0.0033	0.0028	<0.001	<0.001	0.0061
197714 - MW-2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Sample: 197712 - MW-7

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		440	mg/L as CaCo3
Total Alkalinity		440	mg/L as CaCo3
Chloride		7420	mg/L
Fluoride		1.70	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		2280	mg/L
Dissolved Calcium		630	mg/L
Dissolved Magnesium		264	mg/L
Dissolved Potassium		48.5	mg/L
Dissolved Sodium		4390	mg/L
Total Dissolved Solids		16900	mg/L

This is only a summary. Please, refer to the complete report package for quality control data.

Sample: 197713 - MW-4

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		814	mg/L as CaCo3
Total Alkalinity		814	mg/L as CaCo3
Chloride		8170	mg/L
Fluoride		1.93	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		1940	mg/L
Dissolved Calcium		389	mg/L
Dissolved Magnesium		220	mg/L
Dissolved Potassium		45.3	mg/L
Dissolved Sodium		5100	mg/L
Total Dissolved Solids		18200	mg/L

Sample: 197714 - MW-2

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		530	mg/L as CaCo3
Total Alkalinity		530	mg/L as CaCo3
Chloride		7320	mg/L
Fluoride		2.47	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		2150	mg/L
Dissolved Calcium		471	mg/L
Dissolved Magnesium		204	mg/L
Dissolved Potassium		42.2	mg/L
Dissolved Sodium		4200	mg/L
Total Dissolved Solids		15700	mg/L

Cation-Anion Balance Sheet

DATE: 6/12/02 MS

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	Bromide ppm	TDS ppm	EC µMHOs/cm
197712	630	264	4390	48.5	440	2280	7420	0	1.7		16900	
197713	389	220	5100	45.3	814	1940	8170	0	1.93		18200	
197714	471	204	4200	42.2	530	2150	7320	0	2.47		15700	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Bromide in meq/L	**Cations in meq/L**	**Anions in meq/L**	**Percentage Error**
197712	31.44	21.72	190.97	1.24	8.80	47.47	209.32	0	0.089488	0	245.37	265.68	7.948465887
197713	19.41	18.10	221.85	1.16	16.28	40.39	230.48	0	0.1015952	0	260.52	287.25	9.757502194
197714	23.50	16.79	182.70	1.08	10.60	44.76	206.50	0	0.1300208	0	224.07	261.99	15.60330156

	EC/Cation	EC/Anion				
197712	24536.719	26567.7288	range	0	to	0
197713	26052.3674	28724.80952	range	0	to	0
197714	22406.9536	26199.02208	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.69	0.64	needs to be 0.55-0.77
#DIV/0!	0.70	0.63	needs to be 0.55-0.77
#DIV/0!	0.70	0.60	needs to be 0.55-0.77

Samples 197714 was re-analyzed for both cations and anions. The new results did not bring the Percentage Error into acceptable range.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, Tx. 79710

Report Date: June 13, 2002

Order ID Number: A02052310

Project Number: 00-0104
Project Name: J.B. Phillips
Project Location: Lea County, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197712	MW-7	Water	5/22/02	12:05	5/23/02
197713	MW-4	Water	5/22/02	1:04	5/23/02
197714	MW-2	Water	5/22/02	1:32	5/23/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 13 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 197712 - MW-7

Analysis: Alkalinity | Analytical Method: E 310.1 | QC Batch: QC20646 | Date Analyzed: 5/30/02
Analyst: JSW | Preparation Method: N/A | Prep Batch: PB19692 | Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		440	mg/L as CaCo3	1	4
Total Alkalinity		440	mg/L as CaCo3	1	4

Sample: 197712 - MW-7

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC20421 | Date Analyzed: 5/23/02
Analyst: DN | Preparation Method: S 5030B | Prep Batch: PB19513 | Date Prepared: 5/23/02

Param	Flag	Result	Units	Dilution	RDL
MTBE		<0.001	mg/L	1	0.001
Benzene		0.0022	mg/L	1	0.001
Toluene		0.002	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		0.0012	mg/L	1	0.001
Total BTEX		0.0054	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0849	mg/L	1	0.10	84	70 - 130
4-BFB		0.0926	mg/L	1	0.10	92	70 - 130

Sample: 197712 - MW-7

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC20680 | Date Analyzed: 5/29/02
Analyst: JSW | Preparation Method: N/A | Prep Batch: PB19725 | Date Prepared: 5/29/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		7420	mg/L	500	1
Fluoride		1.70	mg/L	5	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		2280	mg/L	100	1

Sample: 197712 - MW-7

Analysis: Salts | Analytical Method: E 200.7 | QC Batch: QC20765 | Date Analyzed: 6/4/02
Analyst: BC | Preparation Method: S 3010A | Prep Batch: PB19516 | Date Prepared: 5/29/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		630	mg/L	1	0.50
Dissolved Magnesium		264	mg/L	1	0.50

Continued ...

... Continued Sample: 197712 Analysis: Salts

Param	Flag	Result	Units	Dilution	RDL
Dissolved Potassium		48.5	mg/L	1	0.50
Dissolved Sodium		4390	mg/L	1	0.50

Sample: 197712 - MW-7

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC20594 Date Analyzed: 5/29/02
Analyst: RS Preparation Method: N/A Prep Batch: PB19651 Date Prepared: 5/28/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		16900	mg/L	20	10

Sample: 197713 - MW-4

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20646 Date Analyzed: 5/30/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19692 Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		814	mg/L as CaCo3	1	4
Total Alkalinity		814	mg/L as CaCo3	1	4

Sample: 197713 - MW-4

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20421 Date Analyzed: 5/23/02
Analyst: DN Preparation Method: S 5030B Prep Batch: PB19513 Date Prepared: 5/23/02

Param	Flag	Result	Units	Dilution	RDL
MTBE		<0.001	mg/L	1	0.001
Benzene		0.0033	mg/L	1	0.001
Toluene		0.0028	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		0.0061	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0879	mg/L	1	0.10	87	70 - 130
4-BFB		0.0961	mg/L	1	0.10	96	70 - 130

Sample: 197713 - MW-4

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20680 Date Analyzed: 5/29/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19725 Date Prepared: 5/29/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		8170	mg/L	500	1
Fluoride		1.93	mg/L	5	0.20

Continued ...

... Continued Sample: 197713 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		1940	mg/L	100	1

Sample: 197713 - MW-4

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC20982	Date Analyzed:	6/8/02
Analyst:	BP	Preparation Method:	S 3010A	Prep Batch:	PB19858	Date Prepared:	6/7/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		389	mg/L	1	0.50
Dissolved Magnesium		220	mg/L	1	0.50
Dissolved Potassium		45.3	mg/L	1	0.50
Dissolved Sodium		5100	mg/L	1	0.50

Sample: 197713 - MW-4

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC20594	Date Analyzed:	5/29/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB19651	Date Prepared:	5/28/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		18200	mg/L	20	10

Sample: 197714 - MW-2

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC20646	Date Analyzed:	5/30/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19692	Date Prepared:	5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		530	mg/L as CaCo3	1	4
Total Alkalinity		530	mg/L as CaCo3	1	4

Sample: 197714 - MW-2

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20421	Date Analyzed:	5/23/02
Analyst:	DN	Preparation Method:	S 5030B	Prep Batch:	PB19513	Date Prepared:	5/23/02

Param	Flag	Result	Units	Dilution	RDL
MTBE		<0.001	mg/L	1	0.001
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0833	mg/L	1	0.10	83	70 - 130
4-BFB		0.0904	mg/L	1	0.10	90	70 - 130

Sample: 197714 - MW-2

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20660 Date Analyzed: 5/29/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19704 Date Prepared: 5/29/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		7320	mg/L	100	1
Fluoride		2.47	mg/L	5	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		2150	mg/L	100	1

Sample: 197714 - MW-2

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC20765 Date Analyzed: 6/4/02
Analyst: BC Preparation Method: S 3010A Prep Batch: PB19858 Date Prepared: 6/7/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		471	mg/L	1	0.50
Dissolved Magnesium		204	mg/L	1	0.50
Dissolved Potassium		42.2	mg/L	1	0.50
Dissolved Sodium		4200	mg/L	1	0.50

Sample: 197714 - MW-2

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC20594 Date Analyzed: 5/29/02
Analyst: RS Preparation Method: N/A Prep Batch: PB19651 Date Prepared: 5/28/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		15700	mg/L	20	10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC20421

Param	Flag	Results	Units	Reporting Limit
MTBE		<0.001	mg/L	0.001
Benzene		<0.001	mg/L	0.001
Toluene		<0.001	mg/L	0.001
Ethylbenzene		<0.001	mg/L	0.001
M,P,O-Xylene		<0.001	mg/L	0.001
Total BTEX		< 0.001	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0879	mg/L	1	0.10	87	70 - 130
4-BFB		0.0906	mg/L	1	0.10	90	70 - 130

Method Blank

QCBatch: QC20594

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC20646

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	4
Total Alkalinity		<4.0	mg/L as CaCo3	4

Method Blank

QCBatch: QC20660

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank

QCBatch: QC20680

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank QCBatch: QC20765

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.6	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Method Blank QCBatch: QC20982

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		0.754	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report
Duplicate Samples

Duplicate QCBatch: QC20594

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		3740	3540	mg/L	1	5	9.7

Duplicate QCBatch: QC20646

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Bicarbonate Alkalinity		106	104	mg/L as CaCo3	1	1	9.2
Total Alkalinity		106	104	mg/L as CaCo3	1	1	9.2

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC20421

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.0926	0.0876	mg/L	1	0.10	<0.001	92	5	70 - 130	20
Benzene	0.0934	0.0889	mg/L	1	0.10	<0.001	93	4	70 - 130	20
Toluene	0.0936	0.0887	mg/L	1	0.10	<0.001	93	5	70 - 130	20
Ethylbenzene	0.0945	0.0895	mg/L	1	0.10	<0.001	94	5	70 - 130	20
M,P,O-Xylene	0.282	0.271	mg/L	1	0.30	<0.001	94	3	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.0904	0.0857	mg/L	1	0.10	90	85	70 - 130
4-BFB	0.0922	0.0881	mg/L	1	0.10	92	88	70 - 130

Laboratory Control Spikes

QCBatch: QC20660

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.52	11.56	mg/L	1	12.50	<1.0	92	0	90 - 110	20
Fluoride	2.44	2.44	mg/L	1	2.50	<0.2	97	0	90 - 110	20
Nitrate-N	2.35	2.37	mg/L	1	2.50	<0.2	94	0	90 - 110	20
Sulfate	11.62	11.71	mg/L	1	12.50	<1.0	92	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20680

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.59	11.63	mg/L	1	12.50	<1.0	92	0	90 - 110	20
Fluoride	2.43	2.42	mg/L	1	2.50	<0.2	97	0	90 - 110	20
Nitrate-N	2.37	2.39	mg/L	1	2.50	<0.2	94	0	90 - 110	20
Sulfate	11.58	11.61	mg/L	1	12.50	<1.0	92	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20765

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	102	97.6	mg/L	1	100	<0.5	102	4	75 - 125	20
Dissolved Magnesium	97.1	98.5	mg/L	1	100	<0.5	97	1	75 - 125	20
Dissolved Potassium	99.3	98.5	mg/L	1	100	<0.6	99	0	75 - 125	20
Dissolved Sodium	100	97.2	mg/L	1	100	<0.5	100	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20982

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	97	101	mg/L	1	100	<0.5	97	4	75 - 125	20
Dissolved Magnesium	97.3	97.6	mg/L	1	100	<0.5	97	0	75 - 125	20
Dissolved Potassium	101	104	mg/L	1	100	0.754	101	2	75 - 125	20
Dissolved Sodium	103	103	mg/L	1	100	<0.5	103	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20660

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[1] 12152	12055.5	mg/L	1	6250	7320	77	2	48 - 127	20
Fluoride	[2] 1260	1203.09	mg/L	1	1250	2.47	100	4	82 - 101	20
Nitrate-N	[3] 1240	1246.69	mg/L	1	1250	<0.2	99	0	87 - 100	20
Sulfate	[4] 7838	7796	mg/L	1	6250	2150	91	0	59 - 121	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20680

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	13944.53	13866.03	mg/L	1	6250	8170	92	1	48 - 127	20
Fluoride	1261.95	1262.72	mg/L	1	1250	1.93	100	0	82 - 101	20
Nitrate-N	1231.52	1235.59	mg/L	1	1250	<0.2	98	0	87 - 100	20
Sulfate	7651.18	7573.71	mg/L	1	6250	1940	91	1	59 - 121	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20765

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	846	776	mg/L	1	100	701	184	46	75 - 125	20
Dissolved Magnesium	356	[5] 316	mg/L	1	100	237	108	45	75 - 125	20

Continued ...

[1]This sample was spiked at a *500; but *100 was reported. The RPD = 1 and the %EA = 93
[2]This sample was spiked at a *500; but *5 was reported. The RPD = 5 and the %EA = 101
[3]This sample was spiked at a *500; but *5 was reported. The RPD = 1 and the %EA = 99
[4]This sample was spiked at a *500; but *100 was reported. The RPD = 1 and the %EA = 92
[5]MS RECOVERY INVALID DUE TO MATRIX EFFECT, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Potassium	[6] 203	193	mg/L	1	100	75.9	133	7	75 - 125	20
Dissolved Sodium	[7] 3630	3240	mg/L	1	100	3420	510	123	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20421

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0879	87	85 - 115	5/23/02
Benzene		mg/L	0.10	0.0918	91	85 - 115	5/23/02
Toluene		mg/L	0.10	0.0916	91	85 - 115	5/23/02
Ethylbenzene		mg/L	0.10	0.0922	92	85 - 115	5/23/02
M,P,O-Xylene		mg/L	0.30	0.275	91	85 - 115	5/23/02

CCV (2)

QCBatch: QC20421

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0871	87	85 - 115	5/23/02
Benzene		mg/L	0.10	0.0901	90	85 - 115	5/23/02
Toluene		mg/L	0.10	0.0904	90	85 - 115	5/23/02
Ethylbenzene		mg/L	0.10	0.0911	91	85 - 115	5/23/02
M,P,O-Xylene		mg/L	0.30	0.272	90	85 - 115	5/23/02

ICV (1)

QCBatch: QC20421

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0908	90	85 - 115	5/23/02
Benzene		mg/L	0.10	0.0911	91	85 - 115	5/23/02
Toluene		mg/L	0.10	0.0916	91	85 - 115	5/23/02
Ethylbenzene		mg/L	0.10	0.0924	92	85 - 115	5/23/02
M,P,O-Xylene		mg/L	0.30	0.278	92	85 - 115	5/23/02

[6]MS RECOVERY INVALID DUE TO MATRIX EFFECT, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.
[7]MS RECOVERY INVALID DUE TO MATRIX EFFECT, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.

CCV (1) QCBatch: QC20594

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	962	96	90 - 110	5/29/02

ICV (1) QCBatch: QC20594

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	982	98	90 - 110	5/29/02

CCV (1) QCBatch: QC20646

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	5/30/02
Carbonate Alkalinity		mg/L as CaCo3	0	228	0	90 - 110	5/30/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	16	0	90 - 110	5/30/02
Total Alkalinity		mg/L as CaCo3	250	244	97	90 - 110	5/30/02

ICV (1) QCBatch: QC20646

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	5/30/02
Carbonate Alkalinity		mg/L as CaCo3	0	224	0	90 - 110	5/30/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	16	0	90 - 110	5/30/02
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	5/30/02

CCV (1) QCBatch: QC20660

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.54	92	90 - 110	5/29/02
Fluoride		mg/L	2.50	2.41	96	90 - 110	5/29/02
Nitrate-N		mg/L	2.50	2.35	94	90 - 110	5/29/02
Sulfate		mg/L	12.50	11.79	94	90 - 110	5/29/02

ICV (1) QCBatch: QC20660

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.62	92	90 - 110	5/29/02
Fluoride		mg/L	2.50	2.42	96	90 - 110	5/29/02
Nitrate-N		mg/L	2.50	2.37	94	90 - 110	5/29/02
Sulfate		mg/L	12.50	11.53	92	90 - 110	5/29/02

CCV (1) QCBatch: QC20680

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.62	92	90 - 110	5/29/02
Fluoride		mg/L	2.50	2.42	96	90 - 110	5/29/02
Nitrate-N		mg/L	2.50	2.37	94	90 - 110	5/29/02
Sulfate		mg/L	12.50	11.53	92	90 - 110	5/29/02

ICV (1) QCBatch: QC20680

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.48	91	90 - 110	5/29/02
Fluoride		mg/L	2.50	2.45	98	90 - 110	5/29/02
Nitrate-N		mg/L	2.50	2.34	93	90 - 110	5/29/02
Sulfate		mg/L	12.50	11.71	93	90 - 110	5/29/02

CCV (1) QCBatch: QC20765

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.9	99	90 - 110	6/4/02
Dissolved Magnesium		mg/L	25	23.9	95	90 - 110	6/4/02
Dissolved Potassium		mg/L	25	24.6	98	90 - 110	6/4/02
Dissolved Sodium		mg/L	25	24.8	99	90 - 110	6/4/02

ICV (1) QCBatch: QC20765

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.6	98	95 - 105	6/4/02
Dissolved Magnesium		mg/L	25	25.0	100	95 - 105	6/4/02
Dissolved Potassium		mg/L	25	25.4	101	95 - 105	6/4/02

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Sodium		mg/L	25	24.4	97	95 - 105	6/4/02

CCV (1)

QCBatch: QC20982

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25	100	90 - 110	6/8/02
Dissolved Magnesium		mg/L	25	24.5	98	90 - 110	6/8/02
Dissolved Potassium		mg/L	25	25	100	90 - 110	6/8/02
Dissolved Sodium		mg/L	25	25.4	101	90 - 110	6/8/02

ICV (1)

QCBatch: QC20982

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.6	102	95 - 105	6/8/02
Dissolved Magnesium		mg/L	25	25.9	103	95 - 105	6/8/02
Dissolved Potassium		mg/L	25	25	100	95 - 105	6/8/02
Dissolved Sodium		mg/L	25	25.2	100	95 - 105	6/8/02

Summary Report

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, Tx. 79710

Report Date: June 13, 2002

Order ID Number: A02052422

Project Number: 00-0104
Project Name: J.B. Phillips
Project Location: Lea County, NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197874	MW-1	Water	5/23/02	11:50	5/24/02
197875	MW-3	Water	5/23/02	12:25	5/24/02
197876	MW-5	Water	5/23/02	13:00	5/24/02
197877	MW-6	Water	5/23/02	13:45	5/24/02
197878	MW-8	Water	5/23/02	11:15	5/24/02
197879	Dup. 1	Water	5/23/02	:	5/24/02

0 This report consists of a total of 3 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX				
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)
197874 - MW-1	<0.001	<0.001	<0.001	<0.001	<0.001
197875 - MW-3	<0.001	<0.001	<0.001	<0.001	<0.001
197876 - MW-5	<0.001	<0.001	<0.001	<0.001	<0.001
197877 - MW-6	<0.005	<0.005	<0.005	<0.005	<0.005
197878 - MW-8	<0.005	<0.005	<0.005	<0.005	<0.005
197879 - Dup. 1	<0.001	<0.001	<0.001	<0.001	<0.001

Sample: 197874 - MW-1

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		494	mg/L as CaCo3
Total Alkalinity		494	mg/L as CaCo3
Chloride		6060	mg/L
Fluoride	1	<10	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		1850	mg/L
Dissolved Calcium		361	mg/L
Dissolved Magnesium		154	mg/L

Continued on next page ...

[1]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Sample 197874 continued ...

Param	Flag	Result	Units
Dissolved Potassium		66.4	mg/L
Dissolved Sodium		3750	mg/L
Total Dissolved Solids		13300	mg/L

Sample: 197875 - MW-3

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		512	mg/L as CaCo3
Total Alkalinity		512	mg/L as CaCo3
Chloride		10800	mg/L
Fluoride	2	<10	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		3920	mg/L
Dissolved Calcium		999	mg/L
Dissolved Magnesium		350	mg/L
Dissolved Potassium		56.5	mg/L
Dissolved Sodium		6210	mg/L
Total Dissolved Solids		24200	mg/L

Sample: 197876 - MW-5

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		496	mg/L as CaCo3
Total Alkalinity		496	mg/L as CaCo3
Chloride		6970	mg/L
Fluoride	3	<10	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		2510	mg/L
Dissolved Calcium		394	mg/L
Dissolved Magnesium		200	mg/L
Dissolved Potassium		44.0	mg/L
Dissolved Sodium		4680	mg/L
Total Dissolved Solids		16900	mg/L

Sample: 197877 - MW-6

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3

Continued on next page ...

[2]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.
[3]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Sample 197877 continued ...

Param	Flag	Result	Units
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		474	mg/L as CaCo3
Total Alkalinity		474	mg/L as CaCo3
Chloride		11000	mg/L
Fluoride	4	<10	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		4300	mg/L
Dissolved Calcium		1130	mg/L
Dissolved Magnesium		483	mg/L
Dissolved Potassium		53	mg/L
Dissolved Sodium		6060	mg/L
Total Dissolved Solids		25500	mg/L

Sample: 197878 - MW-8

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		430	mg/L as CaCo3
Total Alkalinity		430	mg/L as CaCo3
Chloride		6680	mg/L
Fluoride	5	<10	mg/L
Nitrate-N		<0.2	mg/L
Sulfate		1260	mg/L
Dissolved Calcium		701	mg/L
Dissolved Magnesium		237	mg/L
Dissolved Potassium		75.9	mg/L
Dissolved Sodium		3420	mg/L
Total Dissolved Solids		13300	mg/L

[4]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.
[5]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Cation-Anion Balance Sheet

DATE: 6/12/02

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	Bromide ppm	TDS ppm	EC µMHOs/cm
197874	361	154	3750	66.4	494	1850	6060	0	0		13300	
197875	999	350	6210	56.5	512	3920	10800	0	0		24200	
197876	394	200	4680	44	496	2510	6970	0	0		16900	
197877	1130	483	6060	53	474	4300	11000	0	0		25500	
197878	701	237	3420	75.9	430	1260	6680	0	0		13300	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Bromide in meq/L	**Cations in meq/L**	**Anions in meq/L**	**Percentage Error**
197874	18.01	12.67	163.13	1.70	9.88	38.52	170.95	0	0	0	195.51	219.35	11.49281533
197875	49.85	28.80	270.14	1.45	10.24	81.61	304.67	0	0	0	350.23	396.52	12.39779452
197876	19.66	16.46	203.58	1.13	9.92	52.26	196.62	0	0	0	240.82	258.80	7.19649469
197877	56.39	39.75	263.61	1.36	9.48	89.53	310.31	0	0	0	361.10	409.32	12.51720226
197878	34.98	19.50	148.77	1.94	8.60	26.23	188.44	0	0	0	205.19	223.28	8.440190252

	EC/Cation	EC/Anion				
197874	19551.0072	21934.96	range	0	to	0
197875	35023.187	39652.24	range	0	to	0
197876	24082.412	25880.19	range	0	to	0
197877	36109.881	40931.6	range	0	to	0
197878	20519.4152	22327.6	range	0	to	0

TDS/EC	TDS/Cat	TDS/Anion	
#DIV/0!	0.68	0.61	needs to be 0.55-0.77
#DIV/0!	0.69	0.61	needs to be 0.55-0.77
#DIV/0!	0.70	0.65	needs to be 0.55-0.77
#DIV/0!	0.71	0.62	needs to be 0.55-0.77
#DIV/0!	0.65	0.60	needs to be 0.55-0.77

Samples 197874, 197875, and 197877 were re-analyzed for both cations and anions. The new results did not bring the Percentage Error into acceptable range.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, Tx. 79710

Report Date: June 13, 2002

Order ID Number: A02052422

Project Number: 00-0104
Project Name: J.B. Phillips
Project Location: Lea County, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197874	MW-1	Water	5/23/02	11:50	5/24/02
197875	MW-3	Water	5/23/02	12:25	5/24/02
197876	MW-5	Water	5/23/02	13:00	5/24/02
197877	MW-6	Water	5/23/02	13:45	5/24/02
197878	MW-8	Water	5/23/02	11:15	5/24/02
197879	Dup. 1	Water	5/23/02	:	5/24/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 197874 - MW-1

Analysis: Alkalinity | Analytical Method: E 310.1 | QC Batch: QC20647 | Date Analyzed: 5/30/02
Analyst: JSW | Preparation Method: | Prep Batch: PB19693 | Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		494	mg/L as CaCo3	1	4
Total Alkalinity		494	mg/L as CaCo3	1	4

Sample: 197874 - MW-1

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC20514 | Date Analyzed: 5/24/02
Analyst: CG | Preparation Method: S 5030B | Prep Batch: PB19586 | Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0897	mg/L	1	0.10	89	70 - 130
4-BFB		0.0969	mg/L	1	0.10	96	70 - 130

Sample: 197874 - MW-1

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC20425 | Date Analyzed: 5/24/02
Analyst: JSW | Preparation Method: N/A | Prep Batch: PB19520 | Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		6060	mg/L	500	1
Fluoride	[1]	<10	mg/L	50	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		1850	mg/L	50	1

Sample: 197874 - MW-1

Analysis: Salts | Analytical Method: E 200.7 | QC Batch: QC20982 | Date Analyzed: 6/8/02
Analyst: BP | Preparation Method: S 3010A | Prep Batch: PB19858 | Date Prepared: 6/7/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		361	mg/L	1	0.50

Continued ...

[1]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

... *Continued* Sample: 197874 Analysis: Salts

Param	Flag	Result	Units	Dilution	RDL
Dissolved Magnesium		154	mg/L	1	0.50
Dissolved Potassium		66.4	mg/L	1	0.50
Dissolved Sodium		3750	mg/L	1	0.50

Sample: 197874 - MW-1

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC20689 Date Analyzed: 5/31/02
Analyst: RS Preparation Method: N/A Prep Batch: PB19729 Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		13300	mg/L	20	10

Sample: 197875 - MW-3

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20647 Date Analyzed: 5/30/02
Analyst: JSW Preparation Method: Prep Batch: PB19693 Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		512	mg/L as CaCo3	1	4
Total Alkalinity		512	mg/L as CaCo3	1	4

Sample: 197875 - MW-3

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20514 Date Analyzed: 5/24/02
Analyst: CG Preparation Method: S 5030B Prep Batch: PB19586 Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.089	mg/L	1	0.10	89	70 - 130
4-BFB		0.0967	mg/L	1	0.10	96	70 - 130

Sample: 197875 - MW-3

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20425 Date Analyzed: 5/24/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19520 Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		10800	mg/L	500	1

Continued ...

... *Continued* Sample: 197875 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Fluoride	[2]	<10	mg/L	50	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		3920	mg/L	100	1

Sample: 197875 - MW-3

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC20982	Date Analyzed:	6/8/02
Analyst:	BP	Preparation Method:	S 3010A	Prep Batch:	PB19858	Date Prepared:	6/7/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		999	mg/L	1	0.50
Dissolved Magnesium		350	mg/L	1	0.50
Dissolved Potassium		56.5	mg/L	1	0.50
Dissolved Sodium		6210	mg/L	1	0.50

Sample: 197875 - MW-3

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC20689	Date Analyzed:	5/31/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB19729	Date Prepared:	5/30/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		24200	mg/L	50	10

Sample: 197876 - MW-5

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC20647	Date Analyzed:	5/30/02
Analyst:	JSW	Preparation Method:		Prep Batch:	PB19693	Date Prepared:	5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		496	mg/L as CaCo3	1	4
Total Alkalinity		496	mg/L as CaCo3	1	4

Sample: 197876 - MW-5

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20514	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB19586	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

[2]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.09	mg/L	1	0.10	90	70 - 130
4-BFB		0.0959	mg/L	1	0.10	95	70 - 130

Sample: 197876 - MW-5

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20425 Date Analyzed: 5/24/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19520 Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		6970	mg/L	500	1
Fluoride	[3]	<10	mg/L	50	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		2510	mg/L	100	1

Sample: 197876 - MW-5

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC20765 Date Analyzed: 6/4/02
Analyst: BC Preparation Method: S 3010A Prep Batch: PB19516 Date Prepared: 5/29/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		394	mg/L	1	0.50
Dissolved Magnesium		200	mg/L	1	0.50
Dissolved Potassium		44.0	mg/L	1	0.50
Dissolved Sodium		4680	mg/L	1	0.50

Sample: 197876 - MW-5

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC20689 Date Analyzed: 5/31/02
Analyst: RS Preparation Method: N/A Prep Batch: PB19729 Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		16900	mg/L	50	10

Sample: 197877 - MW-6

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC20647 Date Analyzed: 5/30/02
Analyst: JSW Preparation Method: Prep Batch: PB19693 Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		474	mg/L as CaCo3	1	4
Total Alkalinity		474	mg/L as CaCo3	1	4

[3]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Sample: 197877 - MW-6

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20514	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB19586	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0805	mg/L	5	0.10	80	70 - 130
4-BFB		0.0892	mg/L	5	0.10	89	70 - 130

Sample: 197877 - MW-6

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20425	Date Analyzed:	5/24/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19520	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		11000	mg/L	500	1
Fluoride	[4]	<10	mg/L	50	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		4300	mg/L	100	1

Sample: 197877 - MW-6

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC20982	Date Analyzed:	6/8/02
Analyst:	BP	Preparation Method:	S 3010A	Prep Batch:	PB19858	Date Prepared:	6/7/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		1130	mg/L	1	0.50
Dissolved Magnesium		483	mg/L	1	0.50
Dissolved Potassium		53	mg/L	1	0.50
Dissolved Sodium		6060	mg/L	1	0.50

Sample: 197877 - MW-6

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC20689	Date Analyzed:	5/31/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB19729	Date Prepared:	5/30/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		25500	mg/L	50	10

[4]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Sample: 197878 - MW-8

Analysis: Alkalinity | Analytical Method: E 310.1 | QC Batch: QC20647 | Date Analyzed: 5/30/02
Analyst: JSW | Preparation Method: | Prep Batch: PB19693 | Date Prepared: 5/30/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		430	mg/L as CaCo3	1	4
Total Alkalinity		430	mg/L as CaCo3	1	4

Sample: 197878 - MW-8

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC20514 | Date Analyzed: 5/24/02
Analyst: CG | Preparation Method: S 5030B | Prep Batch: PB19586 | Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0824	mg/L	5	0.10	82	70 - 130
4-BFB		0.0915	mg/L	5	0.10	91	70 - 130

Sample: 197878 - MW-8

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC20425 | Date Analyzed: 5/24/02
Analyst: JSW | Preparation Method: N/A | Prep Batch: PB19520 | Date Prepared: 5/24/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		6680	mg/L	500	1
Fluoride	[5]	<10	mg/L	50	0.20
Nitrate-N		<0.2	mg/L	5	0.20
Sulfate		1260	mg/L	50	1

Sample: 197878 - MW-8

Analysis: Salts | Analytical Method: E 200.7 | QC Batch: QC20982 | Date Analyzed: 6/8/02
Analyst: BP | Preparation Method: S 3010A | Prep Batch: PB19858 | Date Prepared: 6/7/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		701	mg/L	1	0.50
Dissolved Magnesium		237	mg/L	1	0.50
Dissolved Potassium		75.9	mg/L	1	0.50
Dissolved Sodium		3420	mg/L	1	0.50

[5]This sample is reported <10 at *50 for flouride because the chloride and sulfate peaks are to high in concentration.

Sample: 197878 - MW-8

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC20689	Date Analyzed:	5/31/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB19729	Date Prepared:	5/30/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		13300	mg/L	20	10

Sample: 197879 - Dup. 1

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20514	Date Analyzed:	5/24/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB19586	Date Prepared:	5/24/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.081	mg/L	1	0.10	81	70 - 130
4-BFB		0.0867	mg/L	1	0.10	86	70 - 130

Quality Control Report
Method Blank

Method Blank

QCBatch: QC20425

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank

QCBatch: QC20514

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.001	mg/L	0.001
Toluene		<0.001	mg/L	0.001
Ethylbenzene		<0.001	mg/L	0.001
M,P,O-Xylene		<0.001	mg/L	0.001
Total BTEX		<0.001	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0908	mg/L	1	0.10	90	70 - 130
4-BFB		0.095	mg/L	1	0.10	95	70 - 130

Method Blank

QCBatch: QC20647

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	4
Total Alkalinity		<4.0	mg/L as CaCo3	4

Method Blank

QCBatch: QC20689

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC20765

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.6	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Method Blank

QCBatch: QC20982

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		0.754	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report
Duplicate Samples

Duplicate

QCBatch: QC20647

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Bicarbonate Alkalinity		224	226	mg/L as CaCo3	1	0	9.2
Total Alkalinity		224	226	mg/L as CaCo3	1	0	9.2

Duplicate

QCBatch: QC20689

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		24900	24200	mg/L	1	2	9.7

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC20425

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.48	11.48	mg/L	1	12.50	<1.0	91	0	90 - 110	20
Fluoride	2.38	2.42	mg/L	1	2.50	<0.2	95	1	90 - 110	20
Nitrate-N	2.35	2.35	mg/L	1	2.50	<0.2	94	0	90 - 110	20
Sulfate	11.60	11.70	mg/L	1	12.50	<1.0	92	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20514

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.0935	0.0876	mg/L	1	0.10	<0.001	93	6	70 - 130	20
Benzene	0.0952	0.0836	mg/L	1	0.10	<0.001	95	12	70 - 130	20
Toluene	0.0947	0.0856	mg/L	1	0.10	<0.001	94	10	70 - 130	20
Ethylbenzene	0.095	0.0872	mg/L	1	0.10	<0.001	95	8	70 - 130	20
M,P,O-Xylene	0.284	0.263	mg/L	1	0.30	<0.001	94	7	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.0923	0.0845	mg/L	1	0.10	92	84	70 - 130
4-BFB	0.0915	0.0856	mg/L	1	0.10	91	85	70 - 130

Laboratory Control Spikes

QCBatch: QC20765

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	102	97.6	mg/L	1	100	<0.5	102	4	75 - 125	20
Dissolved Magnesium	97.1	98.5	mg/L	1	100	<0.5	97	1	75 - 125	20
Dissolved Potassium	99.3	98.5	mg/L	1	100	<0.6	99	0	75 - 125	20
Dissolved Sodium	100	97.2	mg/L	1	100	<0.5	100	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20982

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	97	101	mg/L	1	100	<0.5	97	4	75 - 125	20
Dissolved Magnesium	97.3	97.6	mg/L	1	100	<0.5	97	0	75 - 125	20
Dissolved Potassium	101	104	mg/L	1	100	0.754	101	2	75 - 125	20
Dissolved Sodium	103	103	mg/L	1	100	<0.5	103	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20425

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[6] 20899.98	21013.99	mg/L	1	12500	6680	113	0	48 - 127	20
Fluoride	128.11	122.27	mg/L	1	125	<10	102	4	82 - 101	20
Nitrate-N	121.22	123.78	mg/L	1	125	<0.2	96	2	87 - 100	20
Sulfate	1804.10	1806.90	mg/L	1	625	1260	87	0	59 - 121	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20765

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	846	776	mg/L	1	100	701	184	46	75 - 125	20
Dissolved Magnesium	356	[7] 316	mg/L	1	100	237	108	45	75 - 125	20
Dissolved Potassium	[8] 203	193	mg/L	1	100	75.9	133	7	75 - 125	20
Dissolved Sodium	[9] 3630	3240	mg/L	1	100	3420	510	123	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20425

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.48	91	90 - 110	5/24/02
Fluoride		mg/L	2.50	2.37	94	90 - 110	5/24/02
Nitrate-N		mg/L	2.50	2.34	93	90 - 110	5/24/02
Sulfate		mg/L	12.50	11.63	93	90 - 110	5/24/02

ICV (1)

QCBatch: QC20425

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.60	92	90 - 110	5/24/02
Fluoride		mg/L	2.50	2.42	96	90 - 110	5/24/02
Nitrate-N		mg/L	2.50	2.36	94	90 - 110	5/24/02
Sulfate		mg/L	12.50	11.69	93	90 - 110	5/24/02

[6]This sample was spiked at a *1000; but *500 was reported. The RPD = 1 and the %EA = 91
[7]MS RECOVERY INVALID DUE TO MATRIX EFFECT, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.
[8]MS RECOVERY INVALID DUE TO MATRIX EFFECT, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.
[9]MS RECOVERY INVALID DUE TO MATRIX EFFECT, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.

CCV (1) QCBatch: QC20514

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0912	91	85 - 115	5/24/02
Benzene		mg/L	0.10	0.0907	90	85 - 115	5/24/02
Toluene		mg/L	0.10	0.0917	91	85 - 115	5/24/02
Ethylbenzene		mg/L	0.10	0.0923	92	85 - 115	5/24/02
M,P,O-Xylene		mg/L	0.30	0.275	91	85 - 115	5/24/02

CCV (2) QCBatch: QC20514

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0903	90	85 - 115	5/24/02
Benzene		mg/L	0.10	0.085	85	85 - 115	5/24/02
Toluene		mg/L	0.10	0.0875	87	85 - 115	5/24/02
Ethylbenzene		mg/L	0.10	0.0896	89	85 - 115	5/24/02
M,P,O-Xylene		mg/L	0.30	0.268	89	85 - 115	5/24/02

ICV (1) QCBatch: QC20514

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0949	94	85 - 115	5/24/02
Benzene		mg/L	0.10	0.0907	90	85 - 115	5/24/02
Toluene		mg/L	0.10	0.0929	92	85 - 115	5/24/02
Ethylbenzene		mg/L	0.10	0.0946	94	85 - 115	5/24/02
M,P,O-Xylene		mg/L	0.30	0.283	94	85 - 115	5/24/02

CCV (1) QCBatch: QC20647

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	5/30/02
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	90 - 110	5/30/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	10	0	90 - 110	5/30/02
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	5/30/02

ICV (1) QCBatch: QC20647

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	5/30/02
Carbonate Alkalinity		mg/L as CaCo3	0	228	0	90 - 110	5/30/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	16	0	90 - 110	5/30/02
Total Alkalinity		mg/L as CaCo3	250	244	97	90 - 110	5/30/02

CCV (1) QCBatch: QC20689

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1000	100	90 - 110	5/31/02

ICV (1) QCBatch: QC20689

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	982	98	90 - 110	5/31/02

CCV (1) QCBatch: QC20765

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.9	99	90 - 110	6/4/02
Dissolved Magnesium		mg/L	25	23.9	95	90 - 110	6/4/02
Dissolved Potassium		mg/L	25	24.6	98	90 - 110	6/4/02
Dissolved Sodium		mg/L	25	24.8	99	90 - 110	6/4/02

ICV (1) QCBatch: QC20765

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.6	98	95 - 105	6/4/02
Dissolved Magnesium		mg/L	25	25.0	100	95 - 105	6/4/02
Dissolved Potassium		mg/L	25	25.4	101	95 - 105	6/4/02
Dissolved Sodium		mg/L	25	24.4	97	95 - 105	6/4/02

CCV (1) QCBatch: QC20982

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25	100	90 - 110	6/8/02
Dissolved Magnesium		mg/L	25	24.5	98	90 - 110	6/8/02
Dissolved Potassium		mg/L	25	25	100	90 - 110	6/8/02
Dissolved Sodium		mg/L	25	25.4	101	90 - 110	6/8/02

ICV (1)

QCBatch: QC20982

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.6	102	95 - 105	6/8/02
Dissolved Magnesium		mg/L	25	25.9	103	95 - 105	6/8/02
Dissolved Potassium		mg/L	25	25	100	95 - 105	6/8/02
Dissolved Sodium		mg/L	25	25.2	100	95 - 105	6/8/02

197712-14

A0205 2310

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc.
Environmental Consultants
Fax: 915-687-0456
915-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME: Texaco

SITE MANAGER: Mark Larson

PROJECT NO.: 0-0104

PROJECT NAME: J.R. Phillips

PAGE 1 OF 1

LAB. PO # —

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	Anions/Cations	TDS	BTEX 2081	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
5-22-02	12:05	X			MW-7 197712	4	X	X	X		1 lite unpreserved
X	1:04	X			MW-4 713	4	X	X	X		2 voa HCL
X	1:32	X			MW-2 714	4	X	X	X		

SAMPLED BY: (Signature) Ryan Reese DATE: 5-22-02 TIME: 5:00

RELINQUISHED BY: (Signature) Ryan Reese DATE: 5-22-02 TIME: 1800

RECEIVED BY: (Signature) Helen Shelton DATE: 5/22/02 TIME: 1800

RELINQUISHED BY: (Signature) Helen Shelton DATE: 5/22/02 TIME: 1830

RECEIVED BY: (Signature) DATE: ____ TIME: ____

SAMPLE SHIPPED BY: (Circle) Greyhound
FEDEX (BUS) AIRBILL #: ____
HAND DELIVERED UPS OTHER: ____

COMMENTS:

TURNAROUND TIME NEEDED: normal

RECEIVING LABORATORY: Trace Analysis
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP: 79424
CONTACT: Helen PHONE: 800-378-1296

RECEIVED BY: (Signature) Vick [illegible]
DATE: 5-23-02 TIME: 10:00

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

SAMPLE CONDITION WHEN RECEIVED:

LA CONTACT PERSON: (915) 687-0901 Mark Larson

SAMPLE TYPE:

MA 12 samples HS Bus 1135664 7760 2.0 [illegible]

197874-79

AO2052422

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc.
Environmental Consultants
Fax: 915-687-0456
915-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME: Texaco

SITE MANAGER: Mark Larson

PROJECT NO.: 0-0104

PROJECT NAME: J.R. Phillips

PAGE 1 OF 1

LAB. PO #

PARAMETERS/METHOD NUMBER

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	Anions, Cations	T.D.S.	BTEX 8021	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
5-23-02	11:50	X			MW-1 197874	4	X	X	X		2 plastic unfiltered + unpreserved VOAs HCL
X	12:25	X			MW-3 75	4	X	X	X		
X	1:00	X			MW-5 76	4	X	X	X		
X	1:45	X			MW-6 77	4	X	X	X		
X	11:15	X			MW-8 78	4	X	X	X		
X		X			Dup. 1 79	2			X		

SAMPLED BY: (Signature) — DATE: 5-23-02 TIME: 5:00

RELINQUISHED BY: (Signature) — DATE: 5-23-02 TIME: 5:00

RECEIVED BY: (Signature) — DATE: 5/23 TIME: 5:45

RELINQUISHED BY: (Signature) — DATE: 5/23 TIME: 5:50

RECEIVED BY: (Signature) — DATE: TIME:

SAMPLE SHIPPED BY: (Circle) Greyhound FEDEX BUS HAND DELIVERED UPS OTHER:

AIRBILL #: 163-566-778

COMMENTS:

TURNAROUND TIME NEEDED

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

RECEIVING LABORATORY: Trace Analysis
ADDRESS: 6701 Aberdeen Ave St. #9
CITY: Lubbock STATE: TX ZIP: 79424
CONTACT: Helen PHONE: (806) 794 1296

RECEIVED BY: (Signature)
DATE: 5-24-02 TIME: 10:00

SAMPLE CONDITION WHEN RECEIVED:

LA CONTACT PERSON: (915) 687-0901
Mark Larson

SAMPLE TYPE:

1/1/B F/P

ANALYTICAL REPORT

Prepared for:

CINDY CRAIN
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Project:	Texaco/ J.R. Phillips
PO#:	
Order#:	G0205023
Report Date:	11/21/2002

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

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, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0205023-01	MW-8	WATER	11/12/02 11:35	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-02	MW-1	WATER	11/12/02 12:00	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-03	MW-7	WATER	11/12/02 12:30	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-04	MW-2	WATER	11/12/02 15:30	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-05	WW-1	WATER	11/12/02 18:00	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

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

Order#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

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, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
	Total Dissolved Solids (TDS)					
0205023-06	MW-3	WATER	11/13/02 11:00	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-07	MW-4	WATER	11/13/02 12:00	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-08	MW-5	WATER	11/13/02 12:45	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-09	MW-6	WATER	11/13/02 13:45	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					
	Cations					
	Total Dissolved Solids (TDS)					
0205023-10	Duplicate	WATER	11/13/02	11/14/02 8:03	See COC	See COC
	Lab Testing:	**Rejected:** No		**Temp:** 4.5 C		
	8021B/5030 BTEX					
	Anions					

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

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

Order#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

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, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
	Cations					
	Total Dissolved Solids (TDS)					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

CINDY CRAIN
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-01
Sample ID: MW-8

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/20/02 10:15	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	**0.020**	0.001
Ethylbenzene	**<0.001**	0.001
Toluene	**0.005**	0.001
p/m-Xylene	**0.002**	0.001
o-Xylene	**0.002**	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	114%	80	120
Bromofluorobenzene	97%	80	120

Lab ID: 0205023-02
Sample ID: MW-1

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 18:25	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	**<0.001**	0.001
Ethylbenzene	**<0.001**	0.001
Toluene	**<0.001**	0.001
p/m-Xylene	**<0.001**	0.001
o-Xylene	**<0.001**	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	89%	80	120

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-03
Sample ID: MW-7

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 18:45	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	99%	80	120
Bromofluorobenzene	97%	80	120

Lab ID: 0205023-04
Sample ID: MW-2

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 19:05	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	90%	80	120
Bromofluorobenzene	88%	80	120

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-05
Sample ID: WW-1

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 19:25	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	84%	80	120
Bromofluorobenzene	83%	80	120

Lab ID: 0205023-06
Sample ID: MW-3

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 19:45	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	94%	80	120

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-07
Sample ID: MW-4

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 20:06	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	90%	80	120
Bromofluorobenzene	85%	80	120

Lab ID: 0205023-08
Sample ID: MW-5

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 20:26	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	98%	80	120
Bromofluorobenzene	96%	80	120

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-09
Sample ID: MW-6

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 20:46	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	99%	80	120
Bromofluorobenzene	100%	80	120

Lab ID: 0205023-10
Sample ID: Duplicate

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003821-02		11/19/02 21:06	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	93%	80	120

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#:	**G0205023**
Project:	**0-0104**
Project Name:	**Texaco/ J.R. Phillips**
Location:	**None Given**

Approval: Raland K Tuttle 11-22-02
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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-01
Sample ID: MW-8

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	591	mg/L	100	1.0	6010B	11/20/2002	11/20/02	SM
Magnesium	254	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	88.0	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	3150	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-02
Sample ID: MW-1

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	235	mg/L	100	1.0	6010B	11/20/2002	11/20/02	SM
Magnesium	143	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	67.4	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	3060	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-03
Sample ID: MW-7

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	512	mg/L	100	1.0	6010B	11/20/2002	11/20/02	SM
Magnesium	244	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	55.0	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	3950	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-04
Sample ID: MW-2

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	352	mg/L	100	1.0	6010B	11/20/2002	11/20/02	SM
Magnesium	187	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	48.7	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	3640	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-05
Sample ID: WW-1

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	1120	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM
Magnesium	361	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	38.3	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	2260	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-06
Sample ID: MW-3

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	863	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM
Magnesium	371	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	59.3	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	5680	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-07
Sample ID: MW-4

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	47.1	mg/L	10	0.10	6010B	11/20/2002	11/20/02	SM
Magnesium	202	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	21.6	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	3980	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-08
Sample ID: MW-5

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	266	mg/L	100	1.0	6010B	11/20/2002	11/20/02	SM
Magnesium	172	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	43.8	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	3880	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-09
Sample ID: MW-6

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	936	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM
Magnesium	486	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	57.6	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	5470	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Lab ID: 0205023-10
Sample ID: Duplicate

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Calcium	290	mg/L	100	1.0	6010B	11/20/2002	11/20/02	SM
Magnesium	148	mg/L	100	0.10	6010B	11/20/2002	11/20/02	SM
Potassium	67.9	mg/L	10	0.50	6010B	11/20/2002	11/20/02	SM
Sodium	2930	mg/L	1000	10.0	6010B	11/20/2002	11/20/02	SM

Approval: Raland K Tuttle 11-22-02
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.

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-01
Sample ID: MW-8

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	444	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	7270	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1220	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	14000	mg/L	1	10.0	160.1	11/15/02	TAL

Lab ID: 0205023-02
Sample ID: MW-1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	456	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	6030	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1400	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	12800	mg/L	1	10.0	160.1	11/15/02	TAL

Lab ID: 0205023-03
Sample ID: MW-7

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	412	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	7530	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1800	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	15700	mg/L	1	10.0	160.1	11/15/02	TAL

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-04
Sample ID: MW-2

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	482	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	6740	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1780	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	14300	mg/L	1	10.0	160.1	11/15/02	TAL

Lab ID: 0205023-05
Sample ID: WW-1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	<2.00	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	<5.00	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	998	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	15800	mg/L	1	5.0	160.1	11/15/02	TAL

Lab ID: 0205023-06
Sample ID: MW-3

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	456	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	11400	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	3670	mg/L	50	25.0	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	23600	mg/L	1	10.0	160.1	11/15/02	TAL

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-07
Sample ID: MW-4

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	1020	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	7890	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1020	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	14800	mg/L	1	10.0	160.1	11/15/02	TAL

Lab ID: 0205023-08
Sample ID: MW-5

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	640	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	7270	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1790	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	14900	mg/L	1	10.0	160.1	11/15/02	TAL

Lab ID: 0205023-09
Sample ID: MW-6

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	416	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	10800	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	3660	mg/L	50	25.0	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	23400	mg/L	1	10.0	160.1	11/15/02	TAL

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#: G0205023
Project: 0-0104
Project Name: Texaco/ J.R. Phillips
Location: None Given

Lab ID: 0205023-10
Sample ID: Duplicate

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	457	mg/L	1	2.00	310.1	11/14/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
Chloride	5940	mg/L	1	5.00	9253	11/14/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/14/02	SB
SULFATE, 375.4	1480	mg/L	25	12.5	375.4	11/14/02	SB

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	12300	mg/L	1	10.0	160.1	11/15/02	TAL

Approval: Raland K Tuttle 11-22-02
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

8021B/5030 BTEX

Order#: G0205023

BLANK WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L	0003821-02			<0.001		
Ethylbenzene-mg/L	0003821-02			<0.001		
Toluene-mg/L	0003821-02			<0.001		
p/m-Xylene-mg/L	0003821-02			<0.001		
o-Xylene-mg/L	0003821-02			<0.001		
CONTROL WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-mg/L	0003821-03		0.1	0.096	96.%	
Ethylbenzene-mg/L	0003821-03		0.1	0.099	99.%	
Toluene-mg/L	0003821-03		0.1	0.098	98.%	
p/m-Xylene-mg/L	0003821-03		0.2	0.208	104.%	
o-Xylene-mg/L	0003821-03		0.1	0.101	101.%	
CONTROL DUP WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-mg/L	0003821-04		0.1	0.090	90.%	6.5%
Ethylbenzene-mg/L	0003821-04		0.1	0.092	92.%	7.3%
Toluene-mg/L	0003821-04		0.1	0.092	92.%	6.3%
p/m-Xylene-mg/L	0003821-04		0.2	0.194	97.%	7.%
o-Xylene-mg/L	0003821-04		0.1	0.093	93.%	8.2%
SRM WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-mg/L	0003821-05		0.1	0.103	103.%	
Ethylbenzene-mg/L	0003821-05		0.1	0.107	107.%	
Toluene-mg/L	0003821-05		0.1	0.106	106.%	
p/m-Xylene-mg/L	0003821-05		0.2	0.225	112.5%	
o-Xylene-mg/L	0003821-05		0.1	0.108	108.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0205023

BLANK WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L	0003761-01			<2.00		
Carbonate Alkalinity-mg/L	0003762-01			<0.10		
Chloride-mg/L	0003765-01			<5.00		
Hydroxide Alkalinity-mg/L	0003763-01			<0.10		
SULFATE, 375.4-mg/L	0003767-01			<0.50		
DUPLICATE WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Bicarbonate Alkalinity-mg/L	0205023-01	444		443		0.2%
Carbonate Alkalinity-mg/L	0205023-01	0		<0.10		0.%
Hydroxide Alkalinity-mg/L	0205023-01	0		<0.10		0.%
SULFATE, 375.4-mg/L	0204999-01	2.8		2.9		3.5%
MS WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/L	0205023-01	7270	5000	12200	98.6%	
MSD WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/L	0205023-01	7270	5000	12100	96.6%	0.8%
SRM WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Bicarbonate Alkalinity-mg/L	0003761-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L	0003762-04		0.05	0.0496	99.2%	
Chloride-mg/L	0003765-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L	0003763-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L	0003767-04		50	53.2	106.4%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0205023

BLANK WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L	0003826-02			<0.010		
Magnesium-mg/L	0003826-02			<0.001		
Potassium-mg/L	0003826-02			<0.050		
Sodium-mg/L	0003826-02			<0.010		
DUPLICATE WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Calcium-mg/L	0205023-01	591		590		0.2%
Magnesium-mg/L	0205023-01	254		252		0.8%
Potassium-mg/L	0205023-01	88		87.4		0.7%
Sodium-mg/L	0205023-01	3150		3120		1.%
SRM WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Calcium-mg/L	0003826-05		2	2.16	108.%	
Magnesium-mg/L	0003826-05		2	2.15	107.5%	
Potassium-mg/L	0003826-05		2	1.86	93.%	
Sodium-mg/L	0003826-05		2	1.80	90.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0205023

BLANK WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0003788-01			<5.0		
DUPLICATE WATER	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Total Dissolved Solids (TDS)-mg/L	0205023-01	14000		14100		0.7%

CHAIN—OF—CUSTODY RECORD

CLIENT NAME: Texaco

SITE MANAGER: Cindy Crain

PROJECT NO.: 0-0104

PROJECT NAME: J.R. Phillips

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LAB. PO #

Larson & Associates, Inc.
Environmental Consultants
Fax: 915-687-0456
915-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	Anions	Cations	TDS	BTEX	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
11-12	1135	✓			mw-8	3	✓	✓	✓	✓	0205023-01	1 unpres, 2 preserved
" "	1200	✓			mw-1	3	✓	✓	✓	✓	02	" " " "
" "	1230	✓			mw-7	3	✓	✓	✓	✓	03	" " " "
" "	1530	✓			mw-2	3	✓	✓	✓	✓	04	" " " "
" "	1800	✓			ww-1	3	✓	✓	✓	✓	05	" " " "
11-13	1100	✓			mw-3	3	✓	✓	✓	✓	06	" " " "
" "	1200	✓			mw-4	3	✓	✓	✓	✓	07	" " " "
" "	1295	✓			mw-5	3	✓	✓	✓	✓	08	" " " "
" "	1345	✓			mw-6	3	✓	✓	✓	✓	09	" " " "
4					Duplicate	3	✓	✓	✓	✓	10	" " " "

SAMPLED BY: (Signature) Michael Holmes
DATE: 11-13-02
TIME: 0900

RELINQUISHED BY: (Signature)
DATE:
TIME:

RECEIVED BY: (Signature)
DATE:
TIME:

RELINQUISHED BY: (Signature) Michael Holmes
DATE: 11-14-02
TIME: 0803

RECEIVED BY: (Signature)
DATE:
TIME:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #:
HAND DELIVERED UPS OTHER:

COMMENTS:

TURNAROUND TIME NEEDED

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

RECEIVING LABORATORY: Elot
ADDRESS: 12600 W I-20 East
CITY: Odessa STATE: TX ZIP: 79763
CONTACT: PHONE: 563/800

RECEIVED BY: (Signature) Jane McMurray
DATE: 11-14-02 TIME: 0803

SAMPLE CONDITION WHEN RECEIVED: 4.5°C

LA CONTACT PERSON: Cindy Crain

SAMPLE TYPE: