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**ANNUAL GROUNDWATER MONITORING REPORT
BUCKEYE VACUUM FIELD UNIT, CASE #1R279
LEA COUNTY, NEW MEXICO**

Prepared for:

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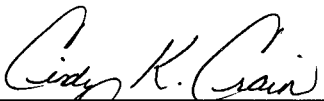

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Project Manager

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Annual Groundwater Monitoring Report
Buckeye Vacuum Field Unit, Case #1R279
Lea County, New Mexico

1.0 INTRODUCTION

ChevronTexaco Exploration and Production Company (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 the Buckeye Vacuum Field Unit (Site). The Site is located south of Buckeye, New Mexico, and is situated in the northeast quarter (NE/4), Section 1, Township 18 South, Range 34 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map.

2.0 BACKGROUND

In 1989, a total of twenty-three (23) monitoring wells were installed at the Site in order to determine the source and delineate the extent of chloride impacts to groundwater. Two extraction wells (RW-1 and RW-2) were also installed in 1989, and continuously pumped to remediate groundwater at the Site. A casing leak from producing well VG SAU #58 was determined to be the source of the chloride concentrations in groundwater, and was repaired in 1990.

Groundwater monitoring of all monitoring wells (TW-1 through TW-23) and two recovery wells (RW-1 and RW-2) was conducted in 1990, and 1998. In 1999, thirteen (13) monitoring wells were plugged and abandoned, and the remaining ten (10) monitoring wells at the Site were sampled on a quarterly basis. Monitoring well TW-23 was sampled on a monthly basis. As directed by the New Mexico Oil Conservation Division (NMOCD), six monitoring wells and two (2) extraction wells were sampled on a semi-annual basis in 2000 and 2001. Monitoring well TW-23 was sampled quarterly. Producing well VG SAU #58 was plugged and abandoned in 2000. A third extraction well (RW-3), located in the vicinity of monitoring well TW-23, was installed in 2001, and ChevronTexaco immediately began pumping from well RW-3. Groundwater monitoring continued at the Site during 2002, following a sampling schedule directed by the NMOCD. A 2002 – Groundwater Monitoring Summary and Closure Report, prepared by Highlander Environmental

Corp. (Highlander), was submitted to the NMOCD on December 20, 2002. In a letter from the NMOCD dated March 19, 2003, Site closure was denied, and continued monitoring of the wells at the Site was directed. Groundwater monitoring will continue at the Site until chloride concentrations in groundwater have been remediated to concentrations below the New Mexico Water Quality Control Commission (NMWQCC) standards for a minimum of four (4) consecutive quarters or four (4) consecutive longer term sampling events.

3.0 CURRENT ACTIVITIES

3.1 Groundwater Monitoring

LA completed quarterly monitoring at the Site for the period of May 2003 through February 2004. Depth to groundwater measurements and groundwater samples were collected from ten (10) monitoring wells (TW-9 through TW-11, TW-13 through TW-15, TW-17, TW-19, TW-20, and TW-23) and three (3) extraction wells (RW-1, RW-2 and RW-3) on May 15, 2003, November 18, 2003, and February 11, 2004. Groundwater samples were not collected for the third quarter monitoring event (August, 2003).

Depth to groundwater ranged from 121.80 feet (TW-19) to 129.07 feet (TW-20) below top of casing (TOC) on May 15, 2003, from 123.76 feet (TW-15) to 129.14 feet (TW-11) below TOC on November 18, 2003, and from 123.34 feet (TW-15) to 128.69 feet (TW-20) below TOC on February 11, 2004. The groundwater gradient was approximately 0.008 feet per foot during the May 2003 monitoring event, and approximately 0.005 feet per foot during the November 2003 and February 2004 monitoring events. During the May 2003 monitoring event, groundwater flow radiated from an area south of extraction well RW-3, to the north, south, and east. During the November 2003 and February 2004 events, the groundwater flow was toward extraction well RW-3, from the south, east and west. Table 1 provides a summary of depth to groundwater measurements. Figure 3 shows the groundwater gradient on May 15, 2003. Figure 4 shows the groundwater gradient on November 18,

2003. Figure 5 shows the groundwater gradient on February 11, 2004.

Groundwater samples were collected on May 15, 2003, from ten (10) monitoring wells (TW-9 through TW-11, TW-13 through TW-15, TW-17, TW-19, TW-20, and TW-23). The groundwater samples were hand delivered under chain-of-custody control to Environmental Lab of Texas I, Ltd. (ELOT), located in Odessa, Texas, and analyzed for chloride. 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 1 presents a summary of the chloride analysis. Appendix A presents the laboratory report.

Referring to Table 1, chloride concentrations were below the NMWQCC domestic water quality standard of 250 milligrams per liter (mg/L) in groundwater samples from all monitoring wells except well TW-23 (1440 mg/L) during May 2003. Figure 6 presents an isopleth map of chloride concentrations during the May 2003 sampling event. Appendix B presents hydrographs for monitoring well TW-23.

On November 18 and 19, 2003, groundwater samples were collected from ten (10) monitoring wells (TW-9 through TW-11, TW-13 through TW-15, TW-17, TW-19, TW-20, and TW-23). Duplicate samples were collected on November 18, 2003 from monitoring well TW-20, and TW-19 on November 19, 2003.

The groundwater samples from November 18-19, 2003, were submitted under chain-of-custody control to TraceAnalysis, Inc. (Trace), of Lubbock, Texas, and analyzed for chloride and total dissolved solids (TDS). Prior to sample collection, the wells were purged a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 1 present a summary of the chloride and TDS analysis. Appendix A presents the

laboratory report.

Referring to Table 1, chloride concentrations were below the NMWQCC domestic water quality standard of 250 mg/L in groundwater samples from all monitoring wells except wells TW-9 (442 mg/L), TW-15 (561 mg/L), TW-23 (300 mg/L) on November 18-19, 2003. Figure 7 presents an isopleth map of chloride concentrations during the November 2003 sampling event. Appendix B presents hydrographs for monitoring wells TW-9, TW-15, and TW-23.

On February 11, 2004, groundwater samples were collected from ten (10) monitoring wells (TW-9 through TW-11, TW-13 through TW-15, TW-17, TW-19, TW-20, and TW-23). A duplicate sample was collected from well TW-17. The groundwater samples were submitted under chain-of-custody control to Trace, and analyzed for chloride and TDS. Prior to sample collection, the wells were purged a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 1 presents a summary of the chloride and TDS analysis. Appendix A presents the laboratory report.

Referring to Table 1, chloride concentrations were below the NMWQCC domestic water quality standard of 250 mg/L in groundwater samples from all monitoring wells except wells TW-9 (420 mg/L) and TW-15 (419 mg/L) on February 11, 2004. Figure 8 presents an isopleth map of chloride concentrations on February 11, 2004. Control charts depicting changes in chloride concentrations over time for monitoring wells TW-9, TW-15, and TW-23 are shown in Appendix B.

3.2 Waste Management and Disposition

Purged groundwater from the sampling activities was disposed at an NMOCD permitted salt water disposal facility operated by Chapparel Services, Inc., located in Eunice, New Mexico. Approximately 30 gallons of purged groundwater was disposed following each sampling event, for a

total of approximately 90 gallons.

3.3 Groundwater Remediation

Groundwater from the Site is being pumped from extraction well (RW-3), and utilized in the cooling tower at the ChevronTexaco Carbon Dioxide (CO₂) Plant at Buckeye, New Mexico. Groundwater pumping from extraction well (RW-3) was stopped in October 2002 to allow groundwater to stabilize. On June 26, 2003, the pump in well RW-3 began an alternating pumping and recovery schedule approved by the NMOCD, in order to flush residual chloride from the capillary zone of the soil at the Site. Depth to groundwater measurements were collected frequently from all monitoring wells and recovery wells at the Site to observe any effects in groundwater levels caused by the pumping of extraction well RW-3. Table 1 presents a summary of depth to groundwater levels. Referring to Table 1, fluctuating groundwater levels were observed in all monitoring wells at the Site during the monitoring period.

4.0 CONCLUSIONS

1. Depth to groundwater ranged from 121.80 feet (TW-19) to 129.07 feet (TW-20) below top of casing (TOC) on May 15, 2003.
2. Depth to groundwater ranged from 123.76 feet (TW-15) to 129.14 feet (TW-11) below TOC on November 18, 2003.
3. Depth to groundwater ranged from 123.34 feet (TW-15) to 128.69 feet (TW-20) below TOC on February 11, 2004.
4. The groundwater gradient was approximately 0.008 feet per foot during the May 2003 monitoring event, and approximately 0.005 feet per foot during the November 2003 and February 2004 monitoring events.

During the May 2003 monitoring event, groundwater flow radiated from an area south of extraction well RW-3, to the north, south, and east. During the November 2003 and

February 2004 events, the groundwater flow was toward extraction well RW-3, from the south, east and west.

5. From the May 2003 sampling event, chloride concentrations were below the NMWQCC standard of 250 mg/L in groundwater from all sampled wells, except well TW-23 (1440 mg/L).
6. From the November 2003 sampling event, chloride concentrations were below the NMWQCC standard of 250 mg/L in groundwater from all sampled wells, except TW-9 (442 mg/L), TW-15 (561 mg/L), TW-23 (300 mg/L).
7. From the February 2004 sampling event, chloride concentrations were below the NMWQCC domestic water quality standard of 250 mg/L in groundwater samples from all monitoring wells except wells TW-9 (420 mg/L) and TW-15 (419 mg/L).

5.0 RECOMMENDATIONS

ChevronTexaco proposes to continue groundwater monitoring of the ten monitoring wells associated with the Site until groundwater from all monitoring wells shows concentrations of chloride below the NMWQCC standard for four (4) consecutive quarters. Monitoring wells TW-10, TW-11, TW-13, TW-14, TW-17, TW-19, and TW-20 have shown concentrations of chloride below the NMWQCC standard of 250 mg/L for at least the last four (4) quarters. ChevronTexaco proposes that these wells be sampled for chloride and TDS on a semi-annual (twice yearly) basis. Monitoring wells TW-9, TW-15, and TW-23 have not shown chloride concentrations below the NMWQCC standard for four (4) consecutive sampling events, and will continue to be sampled quarterly for chloride and TDS. ChevronTexaco may consider relaxing the pumping interval at recovery well RW-3 to limit drawdown to the area in the immediate vicinity of monitoring well TW-23.

TABLES

Table 1
Summary of Field and Laboratory Data
ChevronTexaco Inc., Vacuum Field Unit, Case #1R279
Lea County, New Mexico

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Monitoring Well	Sample Date	Depth-to-Groundwater Feet TOC	Pumping Rate(BPD)	Total Flow(BBLs)	Chloride (mg/L)	TDS (mg/L)
TW-9	15-May-03	129.01	--	--	120	--
	23-Jun-03	--	--	--	--	--
	02-Jul-03	128.79	--	--	--	--
	11-Jul-03	128.92	--	--	--	--
	08-Aug-03	128.64	--	--	--	--
	26-Aug-03	128.69	--	--	--	--
	03-Sep-03	128.85	1443.20	24655.00	--	--
	18-Sep-03	128.76	1476.00	31920.00	--	--
	03-Oct-03	128.77	--	38255.00	--	--
	07-Oct-03	128.97	1489.10	41083.00	--	--
	13-Oct-03	129.05	1469.40	43965.00	--	--
	21-Oct-03	128.92	1436.20	46962.00	--	--
	06-Nov-03	129.16	1628.80	55594.00	--	--
	18-Nov-03	128.97	0.00	61607.00	442	892
	03-Dec-03	128.98	1653.00	69530.00	--	--
	23-Dec-03	128.69	1416.90	78414.00	--	--
	21-Jan-04	128.77	1666.20	94242.00	--	--
	2-Feb-04	128.77	1469.00	102200.00	--	--
	11-Feb-04	128.62	0.00	107770.00	420	972
	17-Feb-04	128.49	0.00	107770.00	--	--
	09-Mar-04	128.76	0.00	115194.00	--	--
	18-Mar-04	128.77	1489.00	121755.00	--	--
TW-10	15-May-03	127.99	--	--	44.3	--
	23-Jun-03	127.75	--	--	--	--
	02-Jul-03	128.02	--	--	--	--
	11-Jul-03	128.09	--	--	--	--
	08-Aug-03	127.71	--	--	--	--
	26-Aug-03	127.80	--	--	--	--
	03-Sep-03	128.07	1443.20	24655.00	--	--
	18-Sep-03	128.01	1476.00	31920.00	--	--
	03-Oct-03	127.83	1436.60	38255.00	--	--
	07-Oct-03	128.11	1489.10	41083.00	--	--
	13-Oct-03	128.12	1469.40	43965.00	--	--
	21-Oct-03	127.97	1436.20	46962.00	--	--
	06-Nov-03	128.29	1626.80	55594.00	--	--
	19-Nov-03	128.11	0.00	61607.00	59.1	369
	03-Dec-03	128.19	1653.00	69530.00	--	--
	23-Dec-03	127.83	1416.90	78414.00	--	--
	21-Jan-04	127.94	1666.20	94242.00	--	--
	2-Feb-04	127.05	1469.00	102200.00	--	--
	11-Feb-04	127.69	0.00	107770.00	52.9	372
	17-Feb-04	127.56	0.00	107770.00	--	--
	09-Mar-04	127.92	0.00	115194.00	--	--
	18-Mar-04	127.99	1489.10	121755.00	--	--

Table 1
Summary of Field and Laboratory Data
ChevronTexaco Inc., Vacuum Field Unit, Case #R279
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Monitoring Well	Sample Date	Depth-to-Groundwater Feet TOC	Pumping Rate(BPD)	Total Flow(BBLs)	Chloride (mg/L)	TDS (mg/L)
TW-11	15-May-03	128.97	--	--	35.4	--
	23-Jun-03	128.64	--	--	--	--
	02-Jul-03	129.11	--	--	--	--
	11-Jul-03	129.04	--	--	--	--
	08-Aug-03	128.63	--	--	--	--
	26-Aug-03	128.71	--	--	--	--
	03-Sep-03	129.15	1443.20	24655.00	--	--
	18-Sep-03	127.08	1476.00	31920.00	--	--
	03-Oct-03	128.72	1436.60	38255.00	--	--
	07-Oct-03	129.10	1489.10	41083.00	--	--
	13-Oct-03	129.06	1469.40	43965.00	--	--
	21-Oct-03	127.83	1436.20	46962.00	--	--
	06-Nov-03	129.21	1626.80	55594.00	--	--
	19-Nov-03	129.14	0.00	61607.00	25.3	307
	03-Dec-03	129.20	1653.00	69530.00	--	--
	23-Dec-03	128.69	1416.90	78414.00	--	--
	21-Jan-04	128.97	1666.20	94242.00	--	--
	2-Feb-04	128.87	1469.00	102200.00	--	--
	11-Feb-04	128.67	0.00	107770.00	83.8	610
	17-Feb-04	128.37	0.00	107770.00	--	--
	09-Mar-04	128.92	0.00	115194.00	--	--
	18-Mar-04	128.97	1489.10	121755.00	--	--
TW-13	15-May-03	128.85	--	--	39.0	--
	23-Jun-03	128.77	--	--	--	--
	02-Jul-03	128.94	--	--	--	--
	11-Jul-03	128.93	--	--	--	--
	08-Aug-03	128.75	--	--	--	--
	26-Aug-03	128.80	--	--	--	--
	03-Sep-03	128.94	1443.20	24655.00	--	--
	18-Sep-03	128.91	1476.00	31920.00	--	--
	03-Oct-03	128.70	1436.60	38255.00	--	--
	07-Oct-03	128.86	1489.10	41083.00	--	--
	13-Oct-03	128.86	1469.40	43965.00	--	--
	21-Oct-03	128.82	1436.20	46962.00	--	--
	06-Nov-03	128.97	1626.80	55594.00	--	--
	18-Nov-03	128.89	0.00	61607.00	64.3	560
	03-Dec-03	128.90	1653.00	69530.00	--	--
	23-Dec-03	128.67	1416.90	78414.00	--	--
	21-Jan-04	128.73	1666.20	94242.00	--	--
	2-Feb-04	128.77	1469.00	102200.00	--	--
	11-Feb-04	128.67	0.00	107770.00	83.8	610
	17-Feb-04	128.54	0.00	107770.00	--	--
	09-Mar-04	128.82	0.00	115194.00	--	--
	18-Mar-04	128.87	1489.10	121755.00	--	--

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Monitoring Well	Sample Date	Depth-to-Groundwater Feet TOC	Pumping Rate(BPD)	Total Flow(BBLs)	Chloride (mg/L)	TDS (mg/L)
TW-14	15-May-03	126.78	--	--	65.0	--
	23-Jun-03	126.55	--	--	--	--
	02-Jul-03	127.35	--	--	--	--
	11-Jul-03	126.92	--	--	--	--
	08-Aug-03	126.52	--	--	--	--
	26-Aug-03	126.66	--	--	--	--
	03-Sep-03	127.29	1443.20	24655.00	--	--
	18-Sep-03	127.25	1476.00	31920.00	--	--
	03-Oct-03	126.75	1436.60	38255.00	--	--
	07-Oct-03	127.32	1489.10	41083.00	--	--
	13-Oct-03	127.34	1469.40	43965.00	--	--
	21-Oct-03	126.95	1436.20	46962.00	--	--
	06-Nov-03	127.47	1626.80	55594.00	--	--
	19-Nov-03	127.28	0.00	61607.00	25.4	368
	03-Dec-03	127.46	1653.00	69530.00	--	--
	23-Dec-03	126.81	1416.90	78414.00	--	--
	21-Jan.-04	127.17	1666.20	94242.00	--	--
	2-Feb.-04	127.04	1469.00	102200.00	--	--
	11-Feb.-04	127.32	0.00	107770.00	29.6	339
	17-Feb-04	126.35	0.00	107770.00	--	--
TW-15	09-Mar-04	127.01	0.00	115194.00	--	--
	18-Mar-04	127.19	1489.10	121755.00	--	--
	15-May-03	123.50	--	--	88.6	--
	23-Jun-03	123.28	--	--	--	--
	02-Jul-03	123.58	--	--	--	--
	11-Jul-03	123.65	--	--	--	--
	08-Aug-03	123.30	--	--	--	--
	26-Aug-03	123.36	--	--	--	--
	03-Sep-03	123.67	1443.20	24655.00	--	--
	18-Sep-03	123.66	1476.00	31920.00	--	--
	03-Oct-03	123.39	1436.60	38255.00	--	--
	07-Oct-03	123.61	1489.10	41083.00	--	--
	13-Oct-03	123.61	1469.40	43965.00	--	--
	21-Oct-03	123.51	1436.20	46962.00	--	--
	06-Nov-03	123.75	1626.80	55594.00	--	--
	19-Nov-03	123.76	0.00	61607.00	561	1132
	03-Dec-03	123.75	1653.00	69530.00	--	--
	23-Dec-03	123.39	1416.90	78414.00	--	--
	21-Jan.-04	123.60	1666.20	94242.00	--	--
	2-Feb.-04	123.50	1469.00	102200.00	--	--
	11-Feb.-04	123.34	0.00	107770.00	419	908
	17-Feb-04	123.11	0.00	107770.00	--	--
	09-Mar-04	123.47	0.00	115194.00	--	--
	18-Mar-04	123.59	1489.10	121755.00	--	--

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Monitoring Well	Sample Date	Depth-to-Groundwater Feet TOC	Pumping Rate(BPD)	Total Flow(BBLs)	Chloride (mg/L)	TDS (mg/L)
TW-17	15-May-03	122.87	--	--	31.9	--
	23-Jun-03	125.05	--	--	--	--
	02-Jul-03	125.52	--	--	--	--
	11-Jul-03	125.55	--	--	--	--
	08-Aug-03	125.17	--	--	--	--
	26-Aug-03	125.27	--	--	--	--
	03-Sep-03	125.56	1443.20	24655.00	--	--
	18-Sep-03	125.55	1476.00	31920.00	--	--
	03-Oct-03	125.25	1436.60	38255.00	--	--
	07-Oct-03	125.52	1489.10	41083.00	--	--
	13-Oct-03	125.50	1469.40	43965.00	--	--
	21-Oct-03	125.30	1436.20	46962.00	--	--
	06-Nov-03	125.64	1626.80	55594.00	--	--
	19-Nov-03	125.64	0.00	61607.00	26.7	295
	03-Dec-03	125.64	1653.00	69530.00	--	--
	23-Dec-03	125.33	1416.90	78414.00	--	--
	21-Jan-04	125.44	1666.20	94242.00	--	--
	2-Feb-04	125.35	1469.00	102200.00	--	--
	11-Feb-04	125.15	0.00	107770.00	24.9	294
	17-Feb-04	124.91	0.00	107770.00	--	--
	09-Mar-04	125.38	0.00	115194.00	--	--
	18-Mar-04	125.43	1489.10	121755.00	--	--
TW-19	15-May-03	121.80	--	--	35.4	--
	23-Jun-03	125.21	--	--	--	--
	02-Jul-03	126.56	--	--	--	--
	11-Jul-03	125.62	--	--	--	--
	08-Aug-03	125.23	--	--	--	--
	26-Aug-03	125.32	--	--	--	--
	03-Sep-03	126.51	1443.20	24655.00	--	--
	18-Sep-03	126.45	1476.00	31920.00	--	--
	03-Oct-03	125.82	1436.60	38255.00	--	--
	07-Oct-03	126.52	1489.10	41083.00	--	--
	13-Oct-03	126.51	1469.40	43965.00	--	--
	21-Oct-03	126.08	1436.20	46962.00	--	--
	06-Nov-03	126.69	1626.80	55594.00	--	--
	19-Nov-03	126.25	0.00	61607.00	28.3	325
	03-Dec-03	126.77	1653.00	69530.00	--	--
	23-Dec-03	125.91	1416.90	78414.00	--	--
	21-Jan-04	126.46	1666.20	94242.00	--	--
	2-Feb-04	126.21	1469.00	102200.00	--	--
	11-Feb-04	125.31	0.00	107770.00	23.7	387
	17-Feb-04	125.02	0.00	107770.00	--	--
	09-Mar-04	125.81	0.00	115194.00	--	--
	18-Mar-04	126.40	1489.10	121755.00	--	--

Table 1
Summary of Field and Laboratory Data
ChevronTexaco Inc., Vacuum Field Unit, Case #R279
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Monitoring Well	Sample Date	Depth-to-Groundwater Feet TOC	Pumping Rate(BPD)	Total Flow(BBLs)	Chloride (mg/L)	TDS (mg/L)
TW-20	15-May-03	129.07	--	--	35.4	--
	23-Jun-03	128.71	--	--	--	--
	02-Jul-03	128.83	--	--	--	--
	11-Jul-03	128.80	--	--	--	--
	08-Aug-03	128.63	--	--	--	--
	26-Aug-03	128.73	--	--	--	--
	03-Sep-03	128.88	1443.20	24655.00	--	--
	18-Sep-03	128.78	1476.00	31920.00	--	--
	03-Oct-03	128.73	1436.60	38255.00	--	--
	07-Oct-03	128.93	1489.10	41083.00	--	--
	13-Oct-03	128.96	1469.40	43965.00	--	--
	21-Oct-03	128.85	1436.20	46962.00	--	--
	06-Nov-03	129.12	1626.80	55594.00	--	--
	18-Nov-03	128.93	0.00	61607.00	26.5	328
	03-Dec-03	128.94	1653.00	69530.00	--	--
	23-Dec-03	128.66	1416.90	78414.00	--	--
	21-Jan-04	128.69	1666.20	94242.00	--	--
	2-Feb-04	128.78	1469.00	102200.00	--	--
	11-Feb-04	128.69	0.00	107770.00	25.2	353
	17-Feb-04	128.46	0.00	107770.00	--	--
	09-Mar-04	128.79	0.00	115194.00	--	--
	18-Mar-04	128.79	1489.10	121755.00	--	--
TW-23	15-May-03	124.42	--	--	1440	--
	23-Jun-03	124.31	--	--	--	--
	02-Jul-03	128.53	--	--	--	--
	11-Jul-03	124.56	--	--	--	--
	08-Aug-03	124.13	--	--	--	--
	26-Aug-03	124.26	--	--	--	--
	03-Sep-03	128.02	1443.20	24655.00	--	--
	18-Sep-03	128.02	1476.00	31920.00	--	--
	03-Oct-03	126.93	1436.60	38255.00	--	--
	07-Oct-03	128.07	1489.10	41083.00	--	--
	13-Oct-03	128.03	1469.40	43965.00	--	--
	21-Oct-03	127.37	1436.20	46962.00	--	--
	06-Nov-03	128.27	1626.80	55594.00	--	--
	19-Nov-03	125.95	0.00	61607.00	300	964
	03-Dec-03	128.45	1653.00	69530.00	--	--
	23-Dec-03	127.17	1416.90	78414.00	--	--
	21-Jan-04	128.12	1666.20	94242.00	--	--
	2-Feb-04	127.57	1469.00	102200.00	--	--
	11-Feb-04	124.16	0.00	107770.00	117	603
	17-Feb-04	123.90	0.00	107770.00	--	--
	09-Mar-04	125.20	0.00	115194.00	--	--
	18-Mar-04	130.23	1489.10	121755.00	--	--
RW-1	15-May-03	126.65	--	--	--	--
	23-Jun-03	126.56	--	--	--	--
	02-Jul-03	127.10	--	--	--	--
	11-Jul-03	5.68	--	--	--	--
	08-Aug-03	--	0.0	519,964	--	--
	26-Aug-03	--	--	--	--	--

Table 1
Summary of Field and Laboratory Data
ChevronTexaco Inc., Vacuum Field Unit, Case #R279
Lea County, New Mexico

Page 6 of 6

Monitoring Well	Sample Date	Depth-to-Groundwater Feet TOC	Pumping Rate(BPD)	Total Flow(BBLs)	Chloride (mg/L)	TDS (mg/L)
RW-2	15-May-03	127.21	--	--	--	--
	23-Jun-03	124.04	--	--	--	--
	02-Jul-03	127.29	--	--	--	--
	11-Jul-03	127.21	--	--	--	--
	08-Aug-03	126.85	--	--	--	--
	26-Aug-03	126.92	--	--	--	--
	03-Sep-03	127.31	1443.20	24655.00	--	--
	18-Sep-03	127.26	1476.00	31920.00	--	--
	03-Oct-03	127.11	1436.60	38255.00	--	--
	07-Oct-03	127.40	1489.10	41083.00	--	--
	13-Oct-03	127.45	1469.40	43965.00	--	--
	21-Oct-03	127.25	1436.20	46962.00	--	--
	06-Nov-03	127.56	1626.80	55594.00	--	--
	18-Nov-03	127.32	0.00	61607.00	--	--
	03-Dec-03	127.46	1653.00	69530.00	--	--
	23-Dec-03	127.05	1416.90	78414.00	--	--
	21-Jan.-04	127.20	1666.20	94242.00	--	--
	2-Feb.-04	127.21	1469.00	102200.00	--	--
	11-Feb.-04	126.84	0.00	107770.00	--	--
	17-Feb-04	126.68	0.00	107770.00	--	--
	09-Mar-04	127.08	0.00	115194.00	--	--
	18-Mar-04	127.24	1489.10	121755.00	--	--
RW-3	15-May-03	124.15	--	--	--	--
	23-Jun-03	126.91	--	--	--	--
	02-Jul-03	131.44	--	--	--	--
	11-Jul-03	123.99	--	--	--	--
	08-Aug-03	123.77	0.0	14,008	--	--
	26-Aug-03	123.80	0.0	20,743	--	--
	03-Sep-03	130.35	1,443.2	24,655	--	--
	18-Sep-03	130.41	1,476.0	31,920	--	--
	03-Oct-03	129.30	1,436.6	38,255	--	--
	07-Oct-03	130.47	1,489.1	41,083	--	--
	13-Oct-03	130.41	1,469.4	43,965	--	--
	21-Oct-03	129.67	1,436.2	46,962	--	--
	06-Nov-03	130.82	1,626.8	55,594	--	--
	18-Nov-03	125.24	0.0	61,607	--	--
	03-Dec-03	131.27	1,653.0	69,530	--	--
	23-Dec-03	129.40	1,416.9	78,414	--	--
	21-Jan.-04	130.92	1,666.2	94,242	--	--
	2-Feb.-04	129.88	1,469.0	102,200	--	--
	11-Feb.-04	123.76	0.0	107,770	--	--
	17-Feb-04	123.46	0.0	107,770	--	--
	09-Mar-04	124.53	0.0	115,194	--	--
	18-Mar-04	127.83	1,489.1	121,755	--	--
Duplicate (TW-20)	18-Nov-03	128.93	--	--	28.2	310
Duplicate (TW-19)	19-Nov-03	126.25	--	--	26.6	358
Duplicate (TW-17)	11-Feb.-04	125.15	--	--	25.4	295

Notes:

1. mg/L:

2. --:

3. TDS:

Analysis performed by Environmental Lab of Texas, Inc.

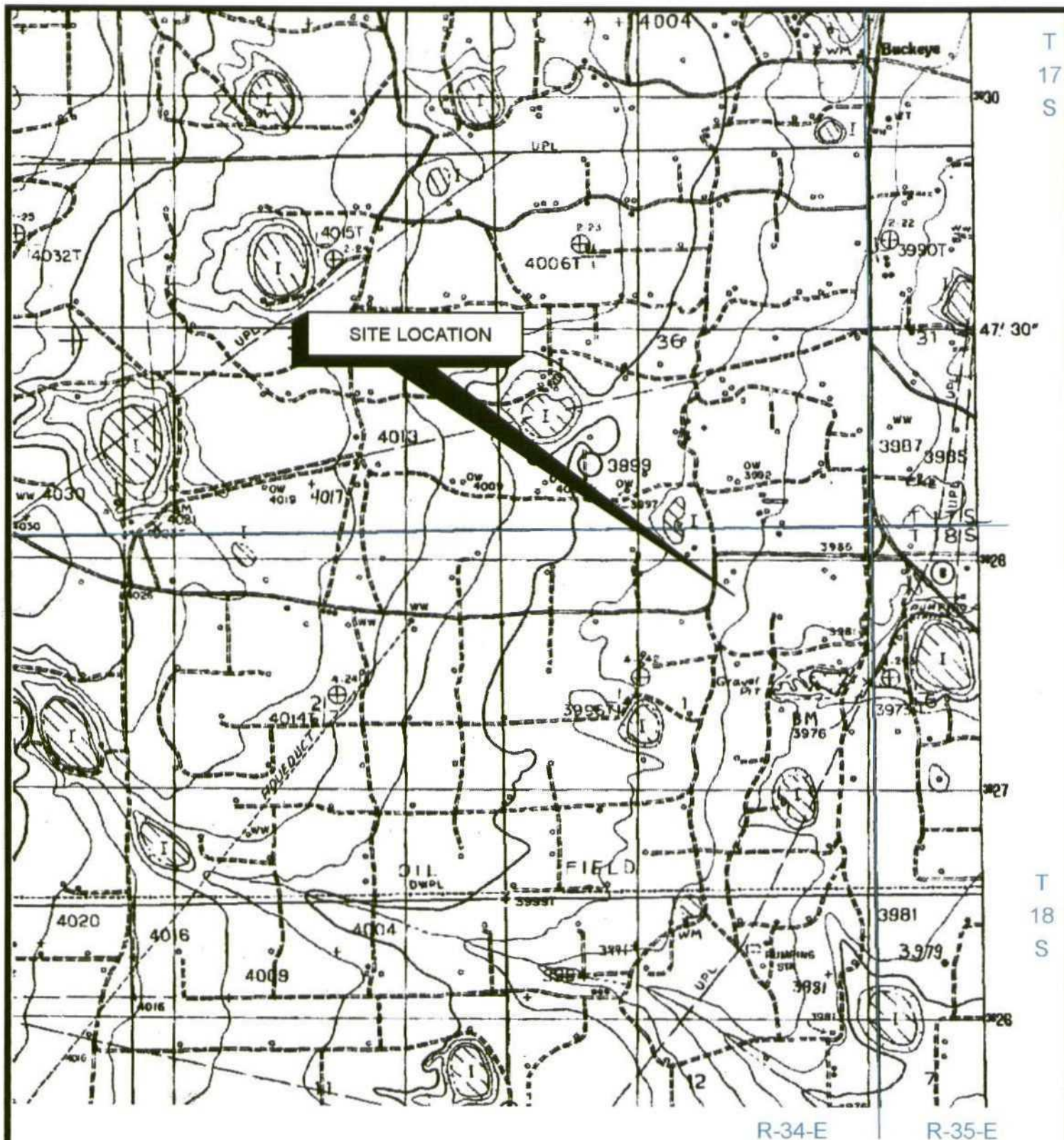
Milligrams per liter

No data available

Total dissolved solids

EW-3 pumping

FIGURES



TAKEN FROM U.S.G.S.
BUCKEYE, NEW MEXICO 1985
7.5' QUADRANGLE



SCALE: 1"=2000'

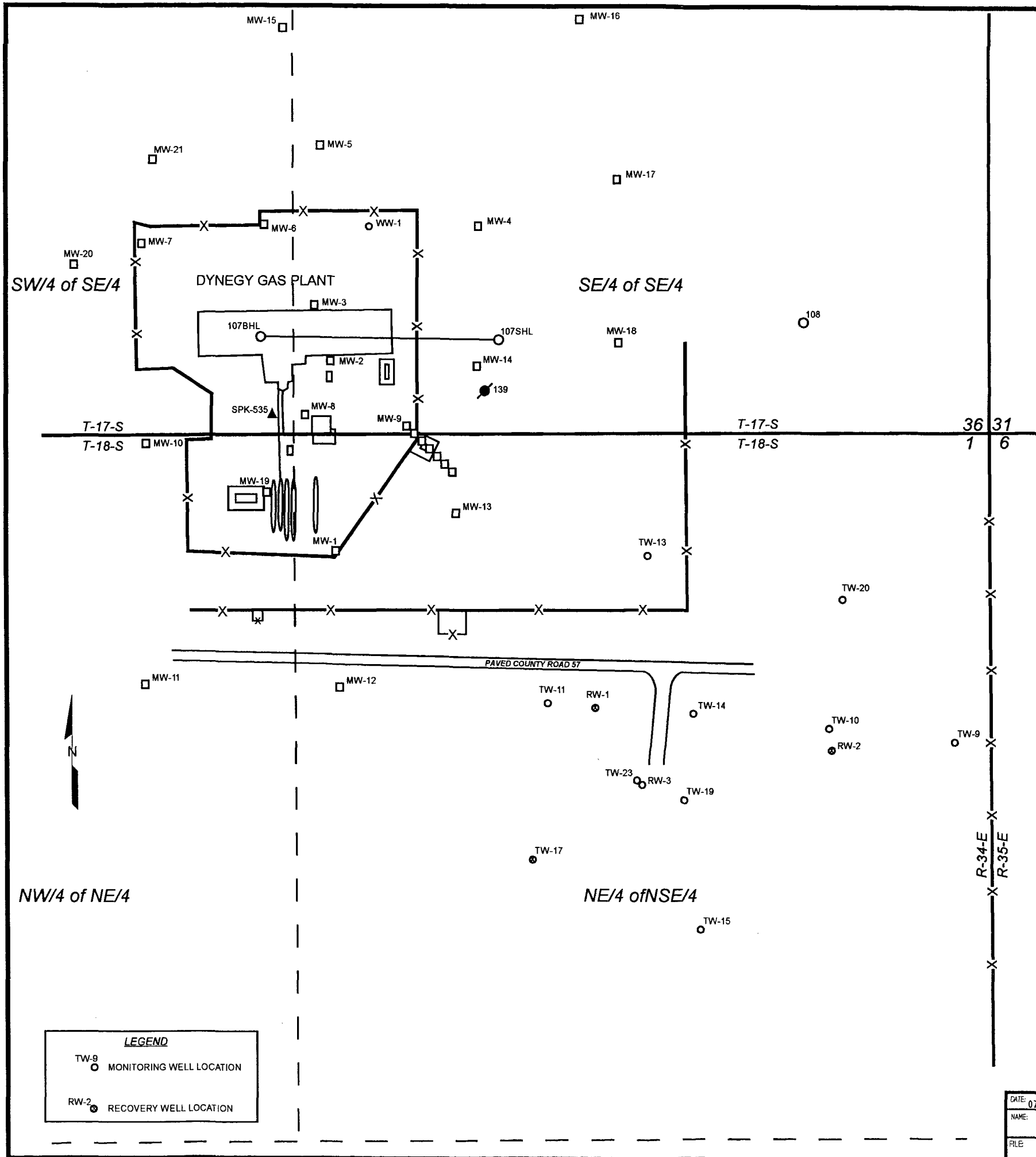
DATE: 07/18/02
NAME:
FILE: 2-0102

FIGURE #1

LEA COUNTY, NEW MEXICO
TEXACO EXPLORATION and
PRODUCTION INC.
VACUUM FIELD UNIT #1R 279
NE/4, SECTION 1, T.18S, R.34E

TOPOGRAPHIC MAP

Larson &
Associates, Inc.
Environmental Consultants



WELL DATA

WELL NUMBER	GROUND ELEV. FEET AMSL	TOP-OF CASING FEET AMSL
MW-1	3988.48	3990.85
MW-2	3988.71	3991.08
MW-3	3989.85	3991.75
MW-4	3989.25	3991.57
MW-5	3989.68	3992.12
MW-6	3989.38	3991.94
MW-7	3990.28	3992.89
MW-8	3988.83	3991.27
MW-9	3986.41	3990.40
MW-10	3989.74	3992.85
MW-11	3988.90	3991.74
MW-12	3988.61	3989.62
MW-13	3987.47	3990.80
MW-14	3988.30	3991.27
MW-15	3989.20	3992.42
MW-16	3988.60	3989.17
MW-17	3987.62	3989.92
MW-18	3987.84	3989.96
MW-19	3989.02	3991.32
MW-20	3990.42	3992.62
MW-21	3991.29	3993.71
RW-1	3985.84	3988.89
RW-2	3986.25	3987.04
RW-3	3982.72	3984.18
TW-9	3985.48	3988.69
TW-10	3985.57	3987.87
TW-11	3986.51	3989.11
TW-13	3986.57	3988.73
TW-14	3984.63	3988.77
TW-15	3981.74	3984.14
TW-17	3983.23	3986.01
TW-19	3982.34	3985.70
TW-20	3986.38	3988.40
TW-23	3981.60	3984.58
WW-1	3989.37	3990.00
SPK-533	3988.31	
SPK-534	3988.30	
SPK-535	3988.65	
BM Q-151	3975.58	

0 100 200
Scale in Feet
FIGURE #2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and
PRODUCTION INC.

VACUUM FIELD UNIT # 1R 279
NE/4, SEC 1, T18S, R34E

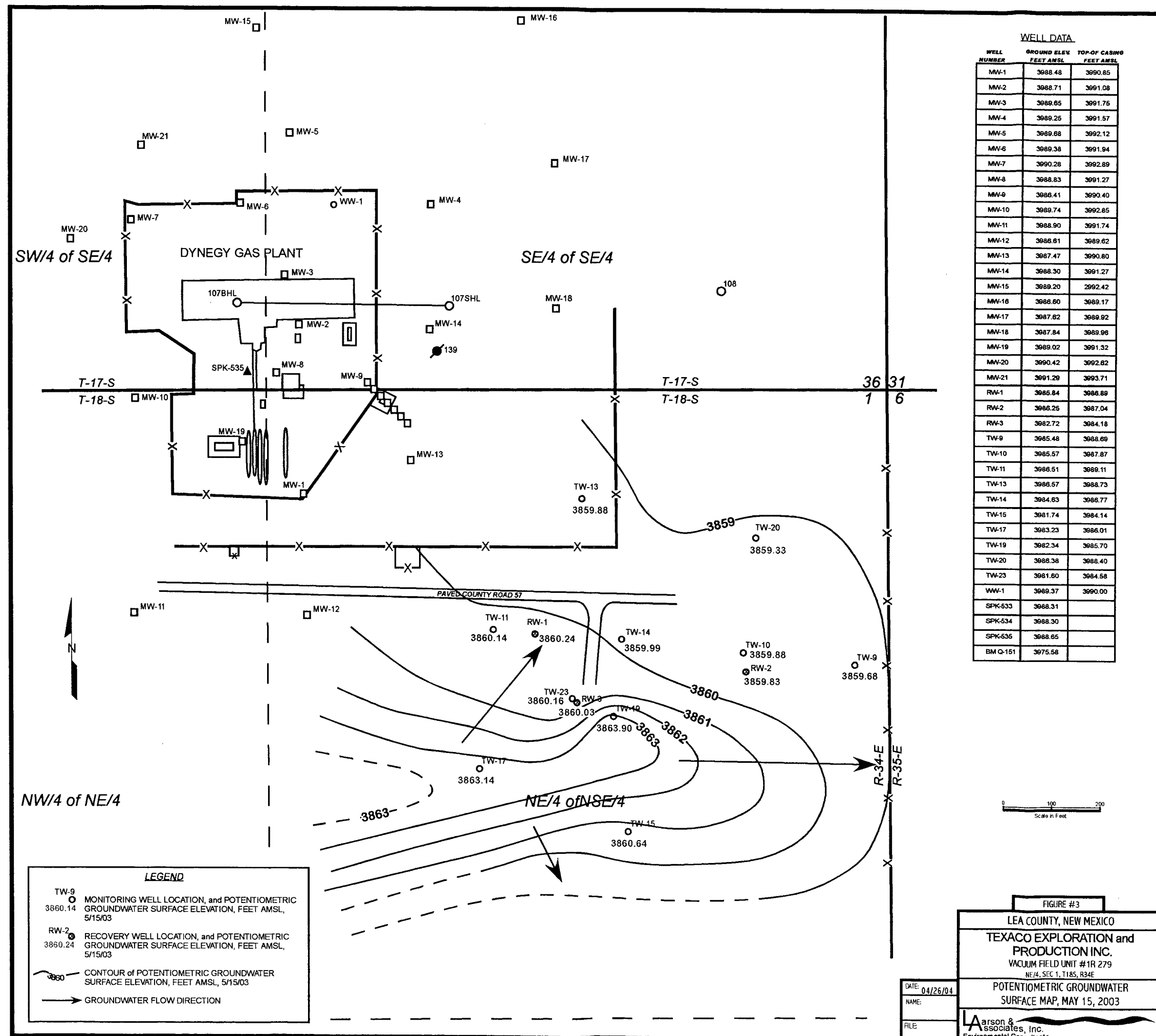
SITE DRAWING

DATE: 07/18/02

NAME:

FILE:

Larson &
Associates, Inc.
Environmental Consultants



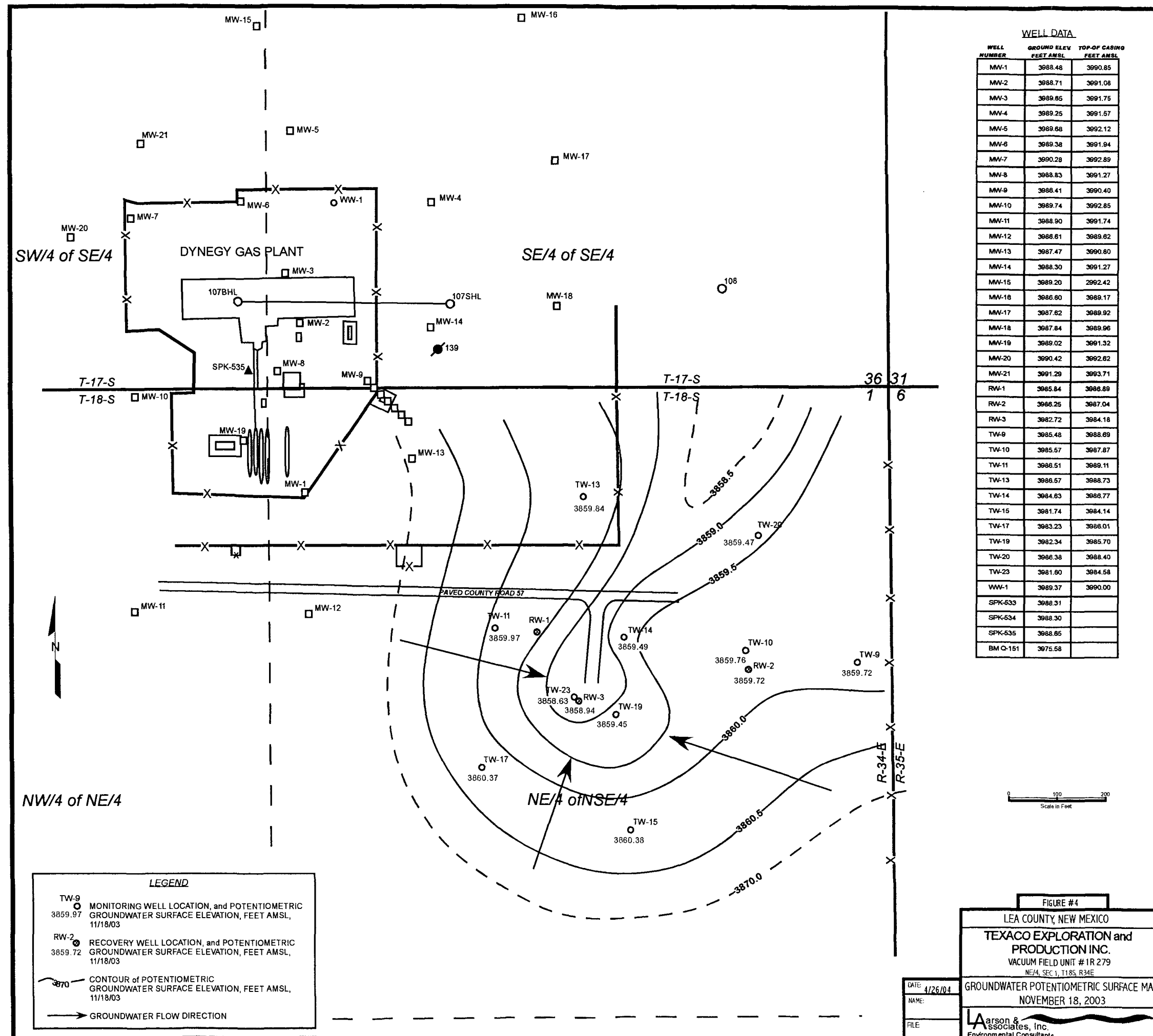
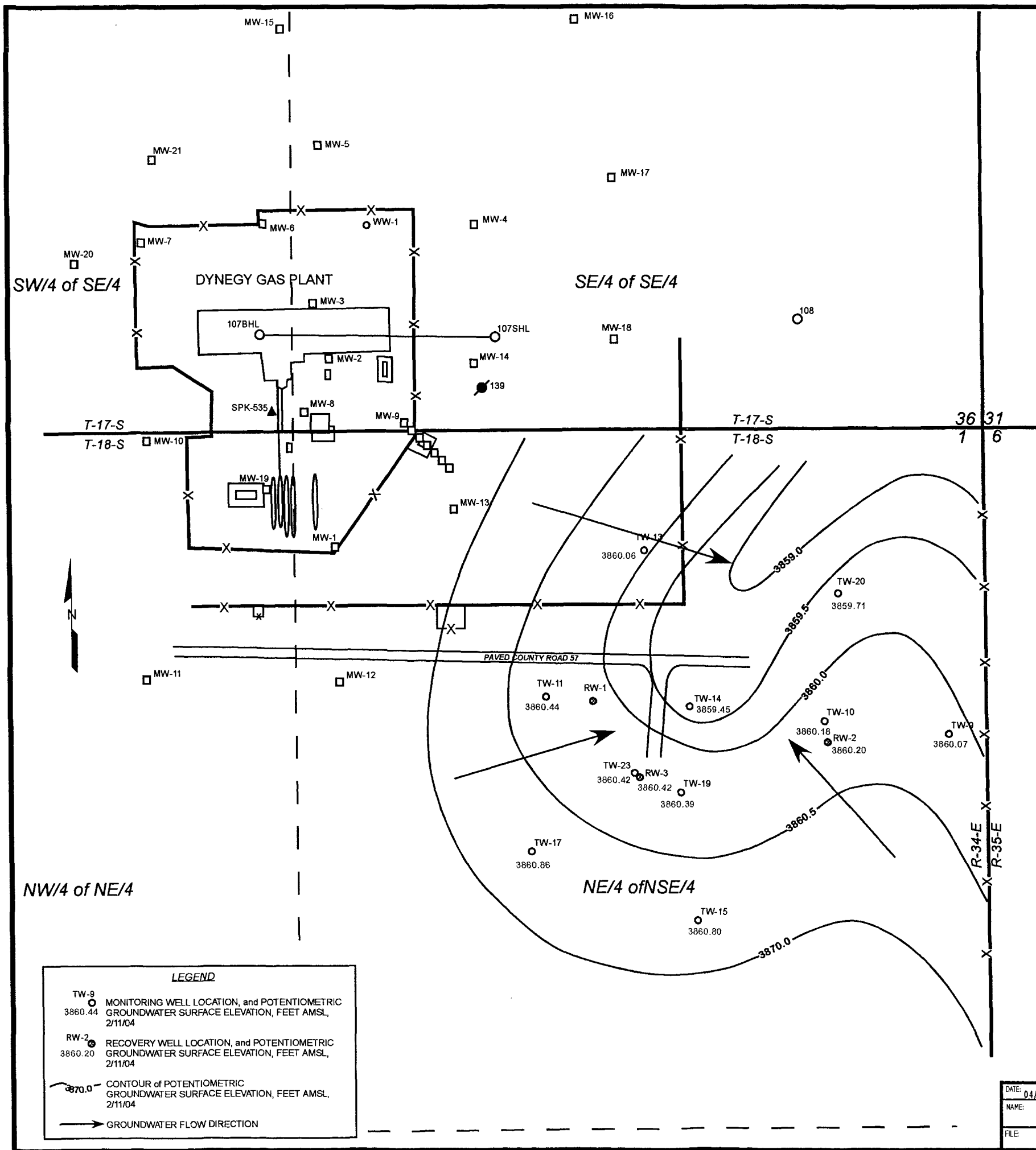


FIGURE #4
LEA COUNTY, NEW MEXICO
TEXACO EXPLORATION and PRODUCTION INC.
VACUUM FIELD UNIT #1R 279
NE/4, SEC 1, T18S R34E
GROUNDWATER POTENTIOMETRIC SURFACE MAP
NOVEMBER 18, 2003

DATE: 4/26/04
NAME:
FILE:

Larson & Associates, Inc.
Environmental Consultants

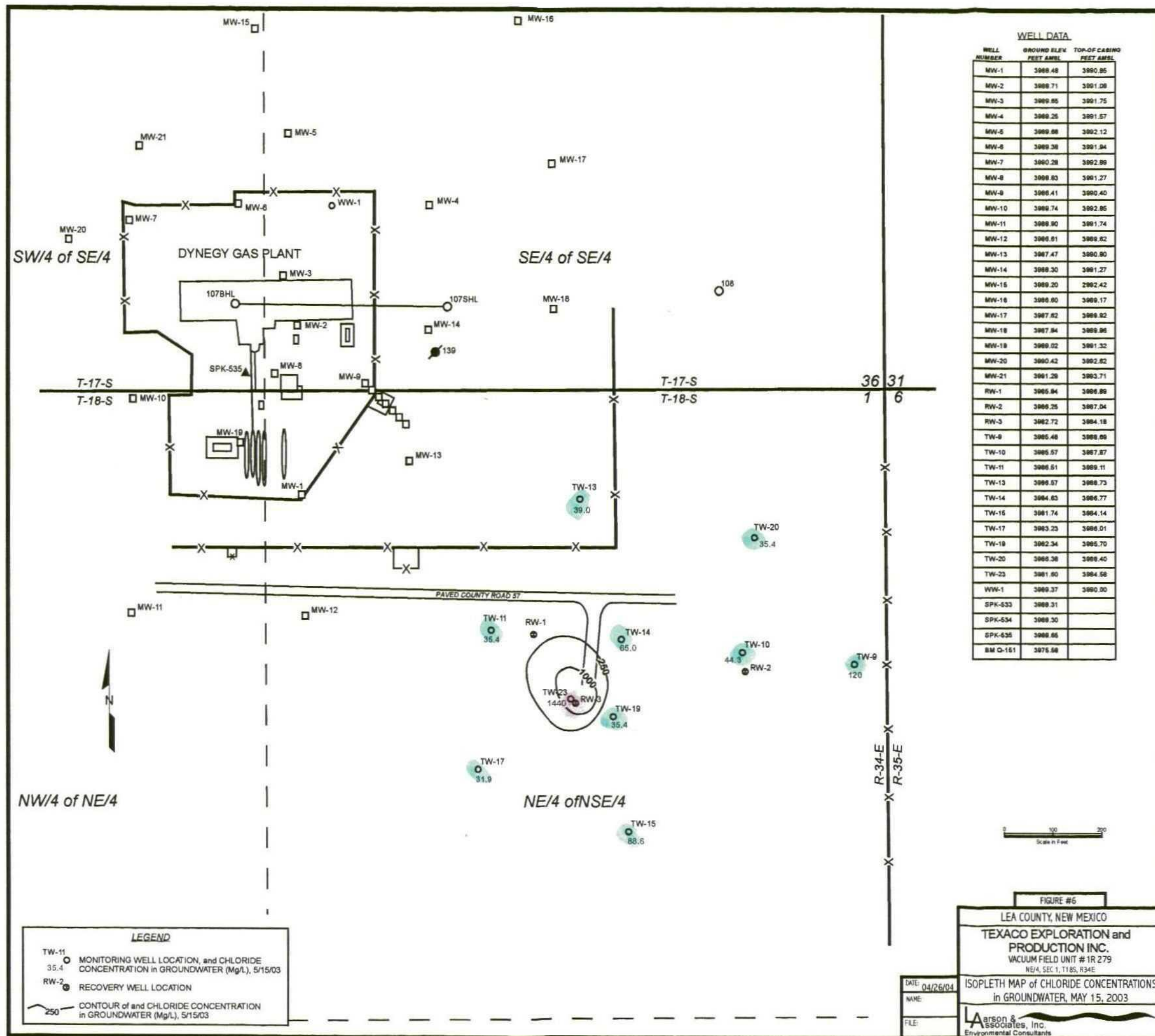


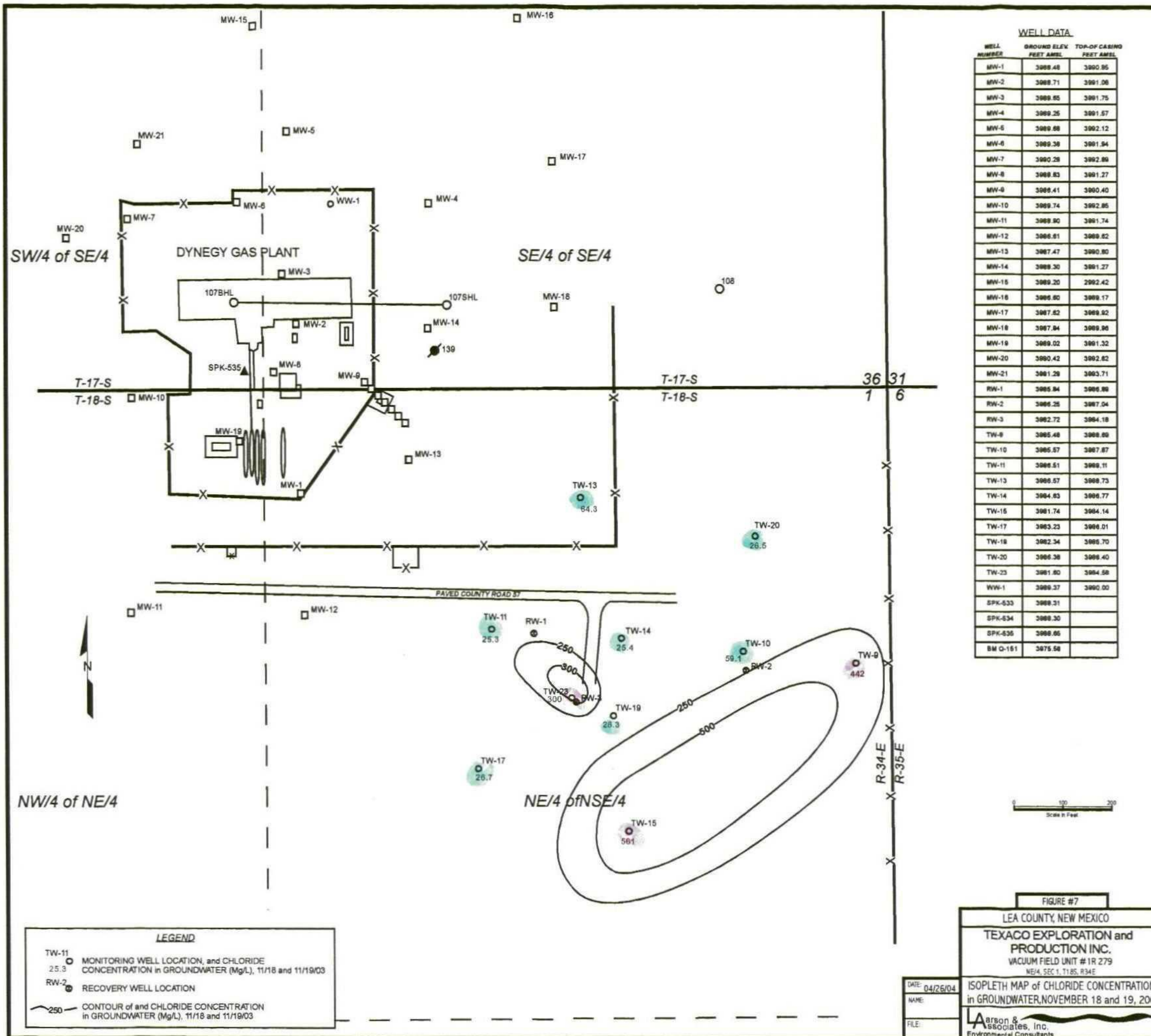
WELL DATA		
WELL NUMBER	GROUND ELEV. FEET AMSL	TOP OF CASING FEET AMSL
MW-1	3988.48	3990.85
MW-2	3988.71	3991.08
MW-3	3988.85	3991.75
MW-4	3988.25	3991.57
MW-5	3989.68	3992.12
MW-6	3989.38	3991.94
MW-7	3990.28	3992.89
MW-8	3988.83	3991.27
MW-9	3986.41	3990.40
MW-10	3989.74	3992.85
MW-11	3988.90	3991.74
MW-12	3986.61	3989.62
MW-13	3987.47	3990.80
MW-14	3988.30	3991.27
MW-15	3989.20	2992.42
MW-16	3986.80	3989.17
MW-17	3987.62	3989.92
MW-18	3987.84	3989.98
MW-19	3989.02	3991.32
MW-20	3990.42	3992.82
MW-21	3991.29	3993.71
RW-1	3985.84	3986.88
RW-2	3986.25	3987.04
RW-3	3982.72	3984.18
TW-9	3985.48	3988.69
TW-10	3985.57	3987.87
TW-11	3986.51	3989.11
TW-13	3986.57	3988.73
TW-14	3984.63	3988.77
TW-15	3981.74	3984.14
TW-17	3983.23	3986.01
TW-19	3982.34	3985.70
TW-20	3988.38	3988.40
TW-23	3981.60	3984.58
WW-1	3989.37	3990.00
SPK-533	3988.31	
SPK-534	3988.30	
SPK-535	3988.65	
BM Q-151	3975.58	

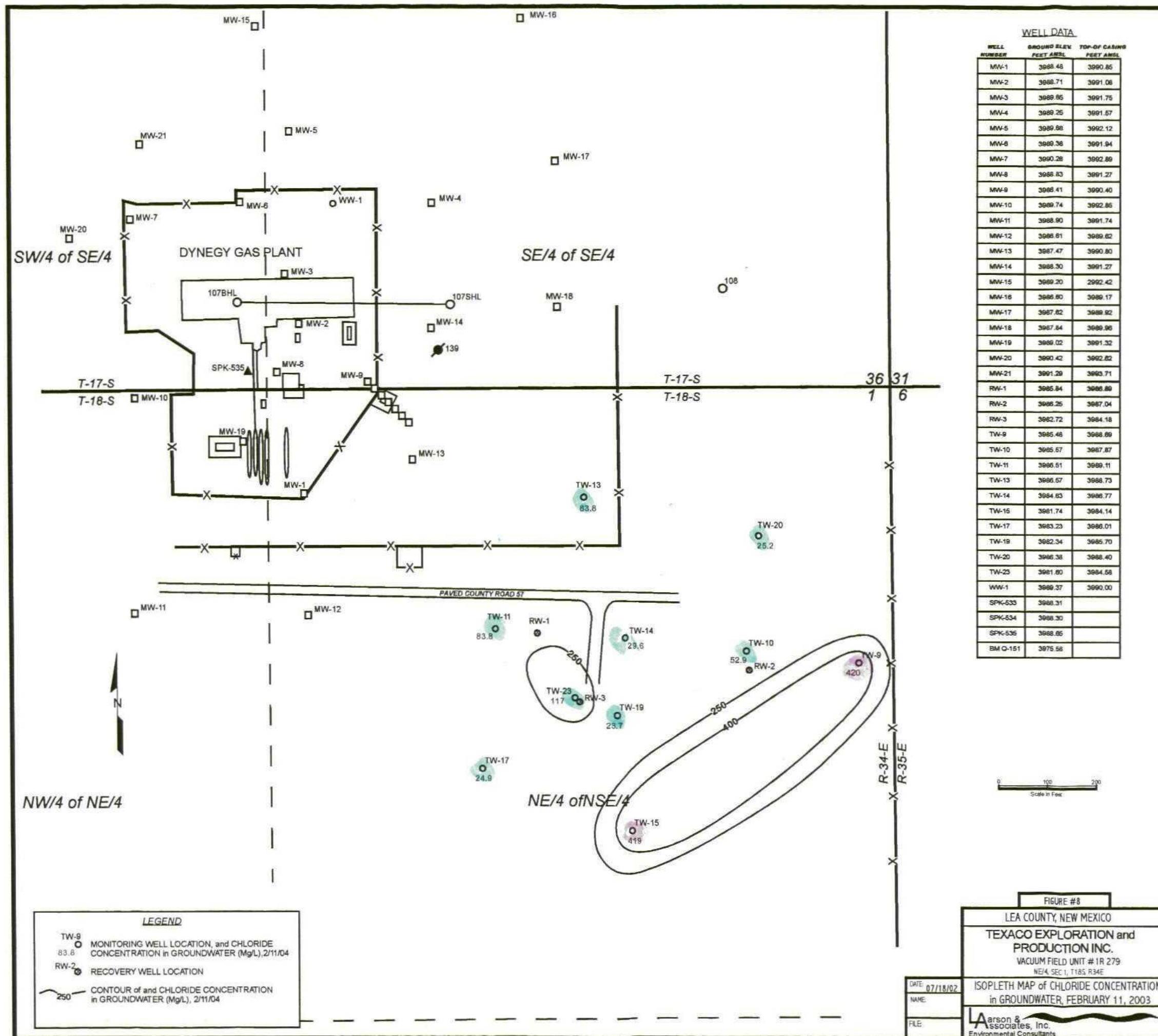
0 100 200
Scale in Feet

FIGURE #5
LEA COUNTY, NEW MEXICO
TEXACO EXPLORATION and PRODUCTION INC.
VACUUM FIELD UNIT #1R 279
NE/4, SEC 1, T18S, R34E
POTENTIOMETRIC GROUNDWATER SURFACE MAP,
FEBRUARY 11, 2003
Larson & Associates, Inc.
Environmental Consultants

DATE: 04/26/04
NAME:
FILE:







APPENDIX A

**LABORATORY ANALYSIS AND CHAIN OF CUSTODY
DOCUMENTATION**

ANALYTICAL REPORT

Prepared for:

Ray Jones
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Project: Chevron Texaco

PO#:

Order#: G0306536

Report Date: 05/21/2003

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#: G0306536
Project: 2-0124
Project Name: Chevron Texaco
Location: Buckeye Gas Plant

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.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>	<u>Date / Time</u>	<u>Container</u>	<u>Preservative</u>
			<u>Collected</u>	<u>Received</u>		
0306536-01	TW-14	WATER	5/16/03 12:30	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-02	TW-10	WATER	5/16/03 13:30	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-03	TW-9	WATER	5/16/03 14:15	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-04	TW-19	WATER	5/19/03 9:20	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-05	TW-15	WATER	5/19/03 9:45	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-06	TW-23	WATER	5/19/03 10:15	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-07	TW-17	WATER	5/19/03 10:45	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-08	TW-11	WATER	5/19/03 13:45	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

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

Order#: G0306536
Project: 2-0124
Project Name: Chevron Texaco
Location: Buckeye Gas Plant

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.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0306536-09	TW-20	WATER	5/19/03 14:50	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		
0306536-10	TW-13	WATER	5/19/03 14:45	5/20/03 8:00	1 L HDPE	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 12 C		

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Ray Jones
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0306536
Project: 2-0124
Project Name: Chevron Texaco
Location: Buckeye Gas Plant

Lab ID: 0306536-01
Sample ID: TW-14

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	65.0	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-02
Sample ID: TW-10

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	44.3	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-03
Sample ID: TW-9

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	120	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-04
Sample ID: TW-19

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	35.4	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-05
Sample ID: TW-15

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	88.6	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-06
Sample ID: TW-23

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	1440	mg/L	1	5.00	9253	5/21/03	SB

RL = Reporting Limit N/A = Not Applicable

Page 1 of 2

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Ray Jones
LARSON AND ASSOCIATES, INC.
P.O. BOX 50685
MIDLAND, TX 79710

Order#: G0306536
Project: 2-0124
Project Name: Chevron Texaco
Location: Buckeye Gas Plant

Lab ID: 0306536-07
Sample ID: TW-17

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	31.9	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-08
Sample ID: TW-11

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	35.4	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-09
Sample ID: TW-20

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	35.4	mg/L	1	5.00	9253	5/21/03	SB

Lab ID: 0306536-10
Sample ID: TW-13

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	39.0	mg/L	1	5.00	9253	5/21/03	SB

Approval: *Raland K Tuttle* 5-22-03
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.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0306536

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0005594-01			<5.00		
MS	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0306536-01	65	167	230	98.8%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0306536-01	65	167	233	100.6%	1.3%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0005594-04		5000	4960	99.2%	

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
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FAX 915•585•4944

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Cindy Crain
Larson and Associates, Inc.
P. O. Box 50685
Midland, Tx 79710

Report Date: December 1, 2003

Work Order: 3112012

Client Name: Chev Tx
Project Name: Buckeye CL
Project Number: 2-0124

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
21835	TW-13	water	2003-11-18	12:25	2003-11-20
21836	TW-20	water	2003-11-18	13:08	2003-11-20
21837	TW-9	water	2003-11-18	13:38	2003-11-20
21838	TW-10	water	2003-11-19	10:11	2003-11-20
21839	TW-14	water	2003-11-19	10:40	2003-11-20
21840	TW-11	water	2003-11-19	11:15	2003-11-20
21841	TW-17	water	2003-11-19	11:42	2003-11-20
21842	TW-15	water	2003-11-19	12:07	2003-11-20
21843	TW-19	water	2003-11-19	12:30	2003-11-20
21844	TW-23	water	2003-11-19	12:55	2003-11-20
21845	Dup	water	2003-11-18	00:00	2003-11-20
21846	Dup	water	2003-11-19	00:00	2003-11-20

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.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Report

Sample: 21835 - TW-13

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5981	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5351	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		64.3	mg/L	5	0.500

Sample: 21835 - TW-13

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		560.0	mg/L	1	10.00

Sample: 21836 - TW-20

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5981	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5351	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		26.5	mg/L	5	0.500

Sample: 21836 - TW-20

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		328.0	mg/L	1	10.00

Sample: 21837 - TW-9

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5981	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5351	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		442	mg/L	10	0.500

Sample: 21837 - TW-9

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		892.0	mg/L	2	10.00

Sample: 21838 - TW-10

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5981	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5351	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		59.1	mg/L	5	0.500

Sample: 21838 - TW-10

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		369.0	mg/L	1	10.00

Sample: 21839 - TW-14

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5981	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5351	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		25.4	mg/L	5	0.500

Sample: 21839 - TW-14

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW

Prep Batch: 5299 Date Prepared: 2003-11-24 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		368.0	mg/L	1	10.00

Sample: 21840 - TW-11

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 5982 Date Analyzed: 2003-11-25 Analyzed By: JSW
Prep Batch: 5352 Date Prepared: 2003-11-24 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		25.3	mg/L	5	0.500

Sample: 21840 - TW-11

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 5916 Date Analyzed: 2003-11-25 Analyzed By: JSW
Prep Batch: 5299 Date Prepared: 2003-11-24 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		307.0	mg/L	1	10.00

Sample: 21841 - TW-17

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 5982 Date Analyzed: 2003-11-25 Analyzed By: JSW
Prep Batch: 5352 Date Prepared: 2003-11-24 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		26.7	mg/L	5	0.500

Sample: 21841 - TW-17

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 5916 Date Analyzed: 2003-11-25 Analyzed By: JSW
Prep Batch: 5299 Date Prepared: 2003-11-24 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		295.0	mg/L	1	10.00

Sample: 21842 - TW-15

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5997	Date Analyzed:	2003-11-26	Analyzed By:	JSW
Prep Batch:	5364	Date Prepared:	2003-11-25	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		561	mg/L	50	0.500

Sample: 21842 - TW-15

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1132	mg/L	2	10.00

Sample: 21843 - TW-19

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5982	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5352	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		28.3	mg/L	5	0.500

Sample: 21843 - TW-19

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		325.0	mg/L	1	10.00

Sample: 21844 - TW-23

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5982	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5352	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		300	mg/L	10	0.500

Sample: 21844 - TW-23

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5916	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5299	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		964.0	mg/L	2	10.00

Sample: 21845 - Dup

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5982	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5352	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		28.2	mg/L	5	0.500

Sample: 21845 - Dup

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5917	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5300	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		310.0	mg/L	1	10.00

Sample: 21846 - Dup

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	5982	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5352	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		26.6	mg/L	5	0.500

Sample: 21846 - Dup

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	5917	Date Analyzed:	2003-11-25	Analyzed By:	JSW
Prep Batch:	5300	Date Prepared:	2003-11-24	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		358.0	mg/L	1	10.00

Method Blank (1) QC Batch: 5916

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 5917

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 5981

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 5982

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 5997

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Duplicate (1) QC Batch: 5916

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1048	964.0	mg/L	2	8	14.2

Duplicate (1) QC Batch: 5917

continued ...

duplicate continued ...

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1854	1732	mg/L	2	7	14.2

Laboratory Control Spike (LCS-1) QC Batch: 5981

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.1	12.2	mg/L	1	12.5	<1.49	97	1	90 - 110	20

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

Laboratory Control Spike (LCS-1) QC Batch: 5982

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.8	11.8	mg/L	1	12.5	<1.49	94	0	90 - 110	20

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

Laboratory Control Spike (LCS-1) QC Batch: 5997

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.4	12.9	mg/L	1	12.5	<1.49	99	4	90 - 110	20

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

Matrix Spike (MS-1) QC Batch: 5981

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1100	1090	mg/L	50	12.5	491	97	1	56.4 - 130	20

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

Matrix Spike (MS-1) QC Batch: 5982

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	405	404	mg/L	10	12.5	300	84	0	56.4 - 130	20

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

Matrix Spike (MS-1) QC Batch: 5997

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1230	1220	mg/L	50	12.5	561	107	1	56.4 - 130	20

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

Standard (ICV-1) QC Batch: 5916

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1009	101	90 - 110	2003-11-25

Standard (CCV-1) QC Batch: 5916

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1061	106	90 - 110	2003-11-25

Standard (ICV-1) QC Batch: 5917

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1061	106	90 - 110	2003-11-25

Standard (CCV-1) QC Batch: 5917

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1036	104	90 - 110	2003-11-25

Standard (ICV-1) QC Batch: 5981

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.8	94	90 - 110	2003-11-25

Standard (CCV-1) QC Batch: 5981

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.8	94	90 - 110	2003-11-25

Standard (ICV-1) QC Batch: 5982

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.8	94	90 - 110	2003-11-25

Standard (CCV-1) QC Batch: 5982

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.8	94	90 - 110	2003-11-25

Standard (ICV-1) QC Batch: 5997

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	13.2	106	90 - 110	2003-11-26

Standard (CCV-1) QC Batch: 5997

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.7	94	90 - 110	2003-11-26

CLIENT NAME: <u>Chesle</u>				SITE MANAGER: <u>Arson & Associates</u>		CHAIN-OF-CUSTODY RECORD	
PROJECT NO: <u>2-0124</u>				PROJECT NAME: <u>Buckeye CL</u>		LAB. PO #	
DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PARAMETERS/METHOD NUMBER
11/19/03	1225				TC-13	2	105
11/19	1308				TC-20	1	Chlorides
11/19	1338				TC-9	1	
11/19	1411				TC-10	1	
11/19	1410				TC-14	1	
11/19	1415				TC-11	1	
11/19	1412				TC-17	1	
11/19	1307				TC-15	1	
11/19	1230				TC-19	1	
11/19	1355				TC-23	1	
11/19					TC-25	1	
11/19					TC-26	1	
11/19					TC-27	1	
11/19					TC-28	1	
11/19					TC-29	1	
11/19					TC-30	1	
11/19					TC-31	1	
11/19					TC-32	1	
11/19					TC-33	1	
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11/19					TC-94	1	
11/19					TC-95	1	
11/19					TC-96	1	
11/19					TC-97	1	
11/19					TC-98	1	
11/19					TC-99	1	
11/19					TC-100	1	

3112012

21835-46

3/12/02

CLIENT NAME: <u>Chesix</u>				SITE MANAGER: <u>Carly Brown</u>				PARAMETERS/METHOD NUMBER				CHAIN—OF—CUSTODY RECORD			
PROJECT NO.: <u>2-0124</u>				PROJECT NAME: <u>Buckeye ch.</u>				NUMBER OF CONTAINERS				LAB. I.D. NUMBER (LAB USE ONLY)			
PAGE 1 OF 1				LAB. PO #				REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)				LAB. I.D. NUMBER (LAB USE ONLY)			
DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	RECEIVED BY: (Signature)	DATE: 11/19/03	TIME: 1635	RECEIVED BY: (Signature)	DATE: 11/19/03	TIME: 1635	FEDEX	BUS	UPS	OTHER: 524155
11/13	1205	1			TW-13										
11/13	1308				TW-20										
11/14	1338				TW-9										
11/17	1811				TW-10										
11/19	1820				TW-14										
11/19	1115				TW-11										
11/19	1142				TW-17										
11/19	1207				TW-15										
11/19	1230				TW-19										
11/19	1355				TW-23										
11/18					Drop										
11/19					Drop										
COMMENTS: <u>Subanalyses</u>															
RECEIVING LABORATORY: <u>Subanalyses</u>															
ADDRESS: <u>Subanalyses</u>															
CITY: <u>Subanalyses</u>															
STATE: <u>Subanalyses</u>															
ZIP: <u>Subanalyses</u>															
CONTACT: <u>Subanalyses</u>															
RECEIVED BY: (Signature) <u>Brenda Ward</u>															
DATE: <u>11/20/03</u> TIME: <u>10:02</u>															
LA CONTACT PERSON: <u>Subanalyses</u>															
SAMPLE CONDITION WHEN RECEIVED: <u>Subanalyses</u>															
SAMPLE TYPE: <u>Subanalyses</u>															

24 samples - HS

12/2/02

3594

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Cindy Crain
Larson and Associates, Inc.
P. O. Box 50685
Midland, Tx 79710

Report Date: February 20, 2004

Work Order: 4021312

Client Name: Chev Tx
Project Name: Buckeye CL
Project Number: 2-0124

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
27351	TW-19	water	2004-02-11	09:53	2004-02-13
27352	TW-23	water	2004-02-11	09:30	2004-02-13
27353	TW-15	water	2004-02-11	10:18	2004-02-13
27354	TW-17	water	2004-02-11	10:50	2004-02-13
27355	TW-11	water	2004-02-11	11:25	2004-02-13
27356	TW-14	water	2004-02-11	12:37	2004-02-13
27357	TW-10	water	2004-02-11	13:09	2004-02-13
27358	TW-9	water	2004-02-11	13:32	2004-02-13
27359	TW-20	water	2004-02-11	13:59	2004-02-13
27360	TW-13	water	2004-02-11	14:20	2004-02-13
27364	Dup	water	2004-02-11	00:00	2004-02-13

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.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Report

Sample: 27351 - TW-19

Analysis: Chloride (IC)
QC Batch: 7584
Prep Batch: 6789

Analytical Method: E 300.0
Date Analyzed: 2004-02-16
Date Prepared: 2004-02-13

Prep Method: N/A
Analyzed By: JSW
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		23.7	mg/L	5	0.500

Sample: 27351 - TW-19

Analysis: TDS
QC Batch: 7626
Prep Batch: 6822

Analytical Method: SM 2540C
Date Analyzed: 2004-02-17
Date Prepared: 2004-02-16

Prep Method: N/A
Analyzed By: JSW
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		387.0	mg/L	1	10.00

Sample: 27352 - TW-23

Analysis: Chloride (IC)
QC Batch: 7584
Prep Batch: 6789

Analytical Method: E 300.0
Date Analyzed: 2004-02-16
Date Prepared: 2004-02-13

Prep Method: N/A
Analyzed By: JSW
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		117	mg/L	10	0.500

Sample: 27352 - TW-23

Analysis: TDS
QC Batch: 7626
Prep Batch: 6822

Analytical Method: SM 2540C
Date Analyzed: 2004-02-17
Date Prepared: 2004-02-16

Prep Method: N/A
Analyzed By: JSW
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		603.0	mg/L	1	10.00

Sample: 27353 - TW-15

Analysis: Chloride (IC)
QC Batch: 7584
Prep Batch: 6789

Analytical Method: E 300.0
Date Analyzed: 2004-02-16
Date Prepared: 2004-02-13

Prep Method: N/A
Analyzed By: JSW
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		419	mg/L	10	0.500

Sample: 27353 - TW-15

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	7626	Date Analyzed:	2004-02-17	Analyzed By:	JSW
Prep Batch:	6822	Date Prepared:	2004-02-16	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		908.0	mg/L	2	10.00

Sample: 27354 - TW-17

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	7584	Date Analyzed:	2004-02-16	Analyzed By:	JSW
Prep Batch:	6789	Date Prepared:	2004-02-13	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		24.9	mg/L	5	0.500

Sample: 27354 - TW-17

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	7626	Date Analyzed:	2004-02-17	Analyzed By:	JSW
Prep Batch:	6822	Date Prepared:	2004-02-16	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		294.0	mg/L	1	10.00

Sample: 27355 - TW-11

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	7584	Date Analyzed:	2004-02-16	Analyzed By:	JSW
Prep Batch:	6789	Date Prepared:	2004-02-13	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		25.3	mg/L	5	0.500

Sample: 27355 - TW-11

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	7626	Date Analyzed:	2004-02-17	Analyzed By:	JSW

Prep Batch: 6822 Date Prepared: 2004-02-16 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		267.0	mg/L	1	10.00

Sample: 27356 - TW-14

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 7584 Date Analyzed: 2004-02-16 Analyzed By: JSW
Prep Batch: 6789 Date Prepared: 2004-02-13 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		29.6	mg/L	5	0.500

Sample: 27356 - TW-14

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 7626 Date Analyzed: 2004-02-17 Analyzed By: JSW
Prep Batch: 6822 Date Prepared: 2004-02-16 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		339.0	mg/L	1	10.00

Sample: 27357 - TW-10

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 7584 Date Analyzed: 2004-02-16 Analyzed By: JSW
Prep Batch: 6789 Date Prepared: 2004-02-13 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		52.9	mg/L	5	0.500

Sample: 27357 - TW-10

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 7626 Date Analyzed: 2004-02-17 Analyzed By: JSW
Prep Batch: 6822 Date Prepared: 2004-02-16 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		372.0	mg/L	1	10.00

Sample: 27358 - TW-9

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 7584 Date Analyzed: 2004-02-16 Analyzed By: JSW
Prep Batch: 6789 Date Prepared: 2004-02-13 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		420	mg/L	10	0.500

Sample: 27358 - TW-9

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 7626 Date Analyzed: 2004-02-17 Analyzed By: JSW
Prep Batch: 6822 Date Prepared: 2004-02-16 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		972.0	mg/L	2	10.00

Sample: 27359 - TW-20

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 7584 Date Analyzed: 2004-02-16 Analyzed By: JSW
Prep Batch: 6789 Date Prepared: 2004-02-13 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		25.2	mg/L	5	0.500

Sample: 27359 - TW-20

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 7626 Date Analyzed: 2004-02-17 Analyzed By: JSW
Prep Batch: 6822 Date Prepared: 2004-02-16 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		353.0	mg/L	1	10.00

Sample: 27360 - TW-13

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 7584 Date Analyzed: 2004-02-16 Analyzed By: JSW
Prep Batch: 6789 Date Prepared: 2004-02-13 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		83.8	mg/L	10	0.500

Sample: 27360 - TW-13

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	7626	Date Analyzed:	2004-02-17	Analyzed By:	JSW
Prep Batch:	6822	Date Prepared:	2004-02-16	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		610.0	mg/L	1	10.00

Sample: 27364 - Dup

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	7633	Date Analyzed:	2004-02-18	Analyzed By:	JSW
Prep Batch:	6830	Date Prepared:	2004-02-17	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		25.4	mg/L	5	0.500

Sample: 27364 - Dup

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	7625	Date Analyzed:	2004-02-17	Analyzed By:	JSW
Prep Batch:	6821	Date Prepared:	2004-02-16	Prepared By:	JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		295.0	mg/L	1	10.00

Method Blank (1) QC Batch: 7584

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 7625

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 7626

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 7633

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Duplicate (1) QC Batch: 7625

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1550	1716	mg/L	2	10	8.7

Duplicate (1) QC Batch: 7626

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	954.0	972.0	mg/L	2	2	8.7

Laboratory Control Spike (LCS-1) QC Batch: 7584

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.5	11.4	mg/L	1	12.5	<0.337	92	1	90 - 110	20

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

Laboratory Control Spike (LCS-1) QC Batch: 7633

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.6	11.6	mg/L	1	12.5	<0.337	93	0	90 - 110	20

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

Matrix Spike (MS-1) QC Batch: 7584

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	193	193	mg/L	10	12.5	83.8	87	0	74.3 - 118	20

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

Matrix Spike (MS-1) QC Batch: 7633

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	841	843	mg/L	50	12.5	278	90	0	74.3 - 118	20

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

Standard (ICV-1) QC Batch: 7584

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-02-16

Standard (CCV-1) QC Batch: 7584

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-02-16

Standard (ICV-1) QC Batch: 7625

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	984.0	98	90 - 110	2004-02-17

Standard (CCV-1) QC Batch: 7625

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1006	101	90 - 110	2004-02-17

Standard (ICV-1) QC Batch: 7626

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1006	101	90 - 110	2004-02-17

Standard (CCV-1) QC Batch: 7626

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1014	101	90 - 110	2004-02-17

Standard (ICV-1) QC Batch: 7633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.6	93	90 - 110	2004-02-18

Standard (CCV-1) QC Batch: 7633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-02-18

4021312-1 of 1

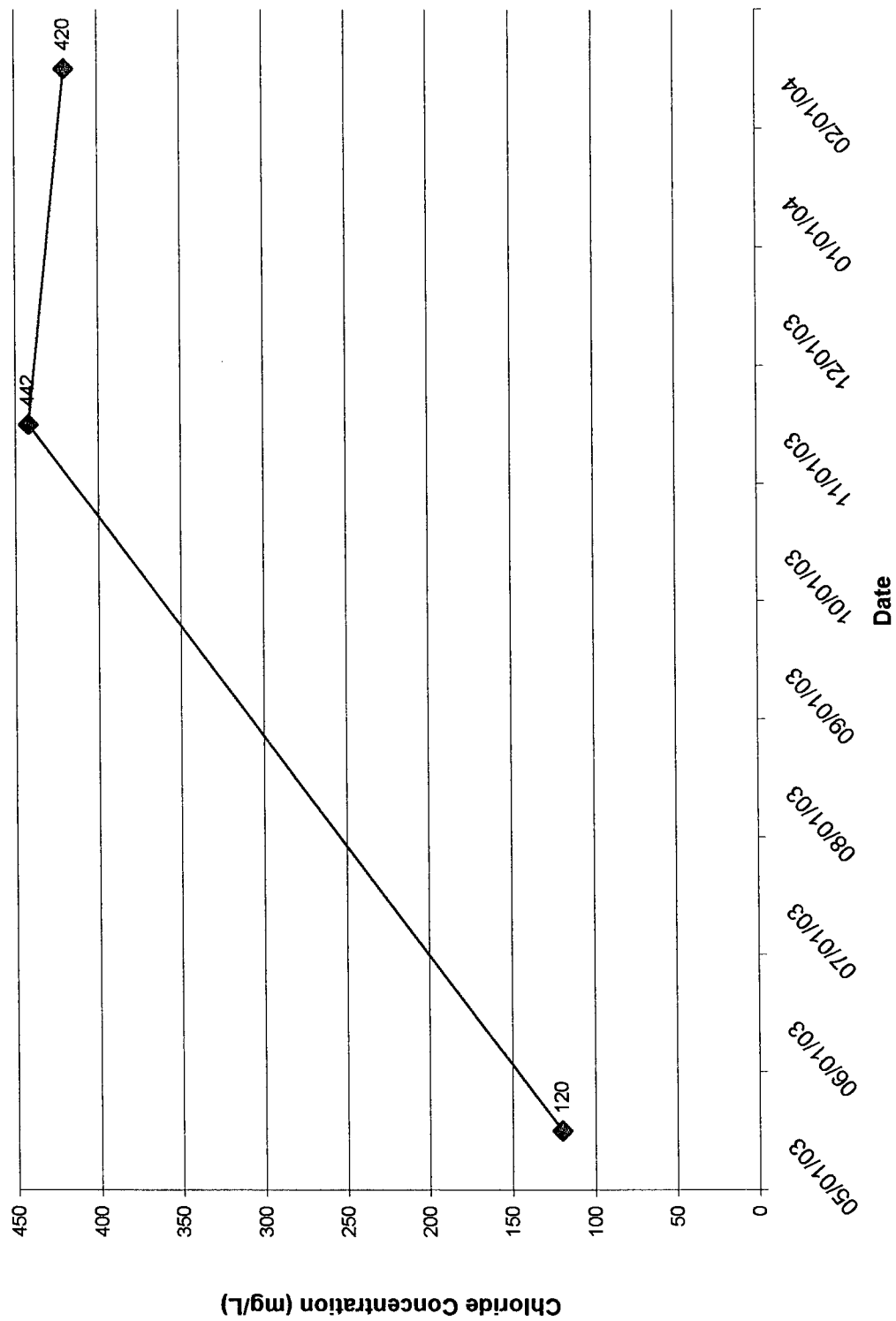
CLIENT NAME: <u>Chas TX</u>				SITE MANAGER: <u>Buckeye Chain</u>		CHAIN-OF-CUSTODY RECORD	
PROJECT NO.: <u>2-0124</u>				PROJECT NAME: <u>Buckeye CL</u>		PARAMETERS/METHOD NUMBER	
PAGE 1 OF 1				LAB. PO #		NUMBER OF CONTAINERS	
DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	LAB. ID. NUMBER (LAB USE ONLY)	REMARKS I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE
2/11	0953	✓			TW-19	27351	
	0930	✓			TW-23	52	
	1018	✓			TW-15	53	
	1050	✓			TW-17	54	
	1125	✓			TW-11	55	
	1237	✓			TW-14	56	
	1309	✓			TW-10	57	
	1332	✓			TW 9	58	
					TW-2		
	1355	✓			TW-20	59	
	1428	✓			TW-13	60	
RECEIVED BY: (Signature) <u>[Signature]</u> DATE: <u>2/11/04</u> TIME: <u>1420</u> RELINQUISHED BY: (Signature) <u>[Signature]</u> DATE: <u>2/11/04</u> TIME: <u>1745</u> COMMENTS: <u>27364</u>							
RECEIVED BY: (Signature) <u>[Signature]</u> DATE: <u>2/12/04</u> TIME: <u>0850</u> SAMPLE SHIPPED BY: (Circle) <u>BUS</u> FEDEX <u>20</u> ARBILL-# <u>9524092</u> HAND DELIVERED <u>20</u> OTHER: <u>20</u> WHITE - RECEIVING LAB YELLOW - RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT) PINK - PROJECT MANAGER GOLD - QA/QC COORDINATOR							
RECEIVING LABORATORY: <u>[Signature]</u> RECEIVED BY: (Signature) <u>[Signature]</u> ADDRESS: <u>[Signature]</u> STATE: <u>TX</u> ZIP: <u>75001</u> CITY: <u>[Signature]</u> PHONE: <u>[Signature]</u> CONTACT: <u>[Signature]</u> SAMPLE CONDITION WHEN RECEIVED: <u>[Signature]</u> LA CONTACT PERSON: <u>[Signature]</u> SAMPLE TYPE: <u>[Signature]</u>							

10 samples - 151 one star 9524092 22

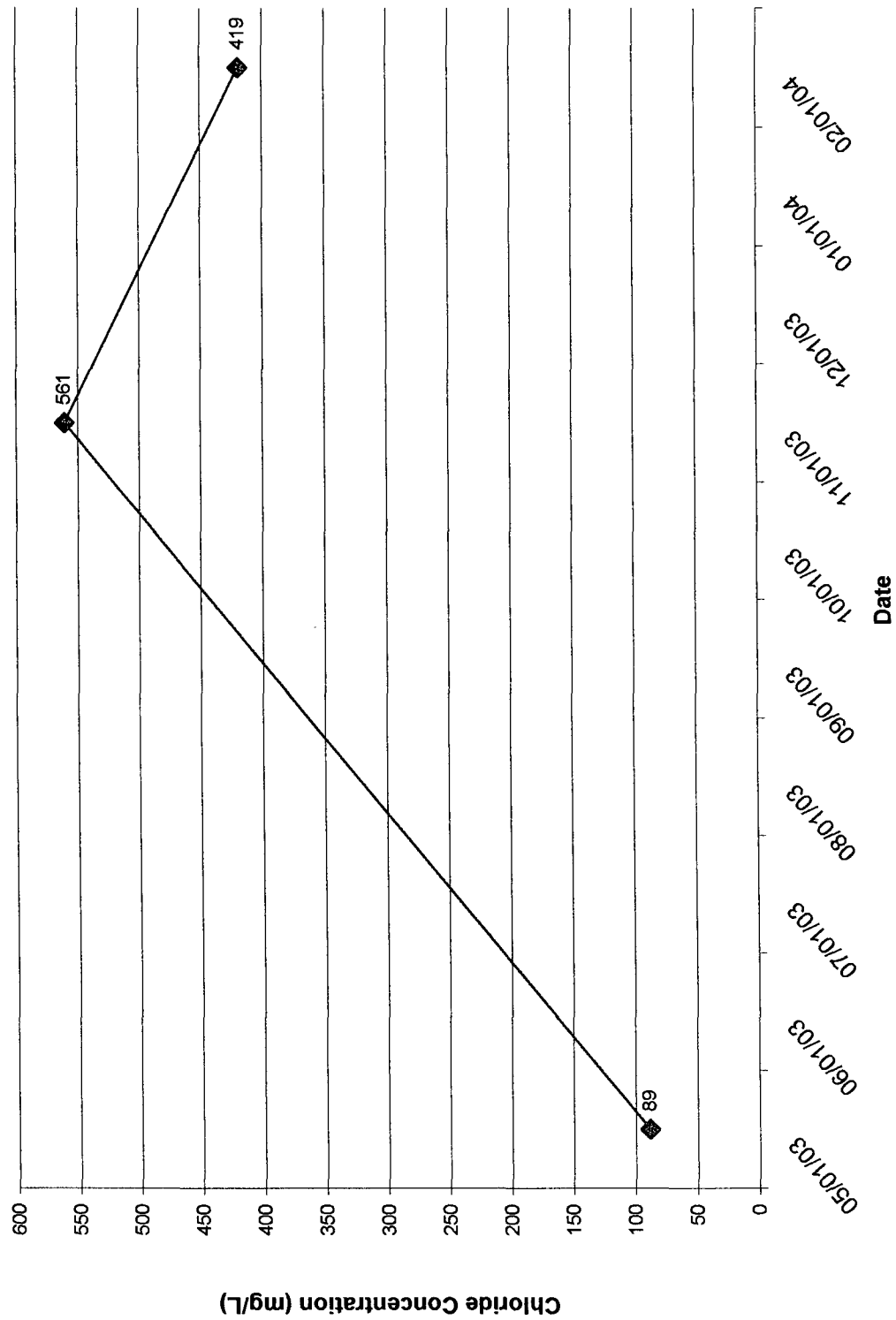
APPENDIX B

HYDROGRAPHS OF CHLORIDE CONCENTRATIONS

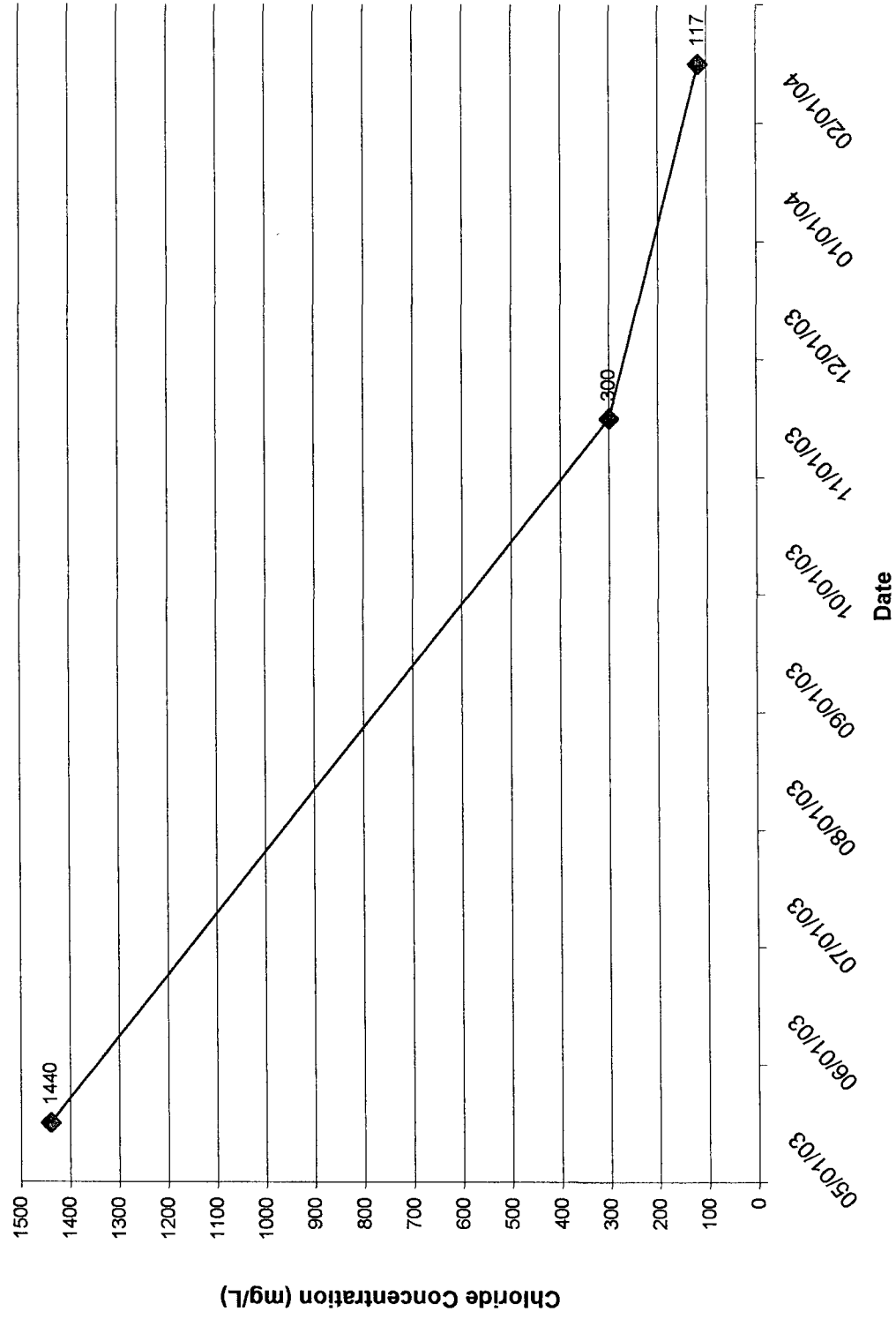
TW-9 Hydrograph of Chloride Concentrations



TW-15 Hydrograph of Chloride Concentrations



TW-23 Hydrograph of Chloride Concentrations



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