

**GW - 114**

---

**MONITORING  
REPORTS**

**DATE:**

2/98

---

**QUARTERLY AND ANNUAL REPORT  
DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NEW MEXICO**

**February 27, 1998**

Prepared For:

Dowell, a division of Schlumberger  
Technology Corporation  
300 Schlumberger Drive  
Sugar Land, Texas 77478

Prepared By:



611 Skyline Road  
Laramie, Wyoming 82070

701 Antler Drive  
Suite 233  
Casper, WY 82601

1901 Energy Court  
Suite 270  
Gillette, WY 82718

1849 Terra Avenue  
Sheridan, WY 82801

Western Water Consultants, Inc. has conducted its work and presents these findings in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation and no warranty or guarantee is made or intended.

## TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION .....	1
2.0 DRILLING.....	2
2.1 Monitoring Well Installation .....	2
2.2 Lithology .....	3
2.3 Field Screening .....	3
2.4 Soil Vapor Extraction and Air Sparge Well Installation .....	3
2.5 Waste Water and Drill Cuttings Disposal.....	4
3.0 GROUND-WATER MONITORING .....	5
3.1 Static Water Level .....	5
3.2 Ground-water Sampling .....	5
4.0 REMEDIATION SYSTEM MODIFICATIONS .....	6
4.1 SVE Systems Operations.....	6
5.0 RESULTS AND DISCUSSION .....	7
6.0 RECOMMENDATIONS .....	8

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 - Monitoring Well Locations .....	9
2 – Cross-Section A-A'	10
3 – Cross-Section B-B'	11
4 – Site Map and Location of Monitoring and Remediation Wells.....	12
5 – Potentiometric Surface Map .....	13
6 – Site Map Unit 3 SVE System Modification.....	14
7 – Site Map Unit 1 SVE System Modification.....	15
8 – Site Map Unit 2 SVE System Modification.....	16
9 – SVE Operation Timeline 07/01/96 thru 12/31/96.....	17
10 – SVE Operation Timeline 01/01/97 thru 06/30/97.....	18
11 – SVE Operation Timeline 07/01/97 thru 12/31/97.....	19

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 – Static Water Levels for the Dowell Facility in Hobbs, New Mexico .....	20
2 – Chemicals Detected in Ground-Water Samples, Dowell Facility, Hobbs, New Mexico .....	21
3 – SVE System Air Sample Data from the Dowell Schlumberger Facility, Hobbs, New Mexico .....	23

## LIST OF APPENDICES

### Appendix

- A – Well Completion Logs
- B – Laboratory Data Reports
- C – Isoconcentration Map and Plots

## **1.0 INTRODUCTION**

## **1.0 INTRODUCTION**

This report documents remedial activities performed in 1997 at the Dowell, a division of Schlumberger Technology Corporation facility in Hobbs, New Mexico. Field work conducted by Western Water Consultants, Inc. (WWC) during the 4 quarters of 1997 consisted of air and ground-water monitoring, ground-water and remediation well installation, and remediation system modifications and systems operation. Fourth quarter analytical data is included in this report. Analytical data for the first three quarters of 1997 are presented in the reports dated March 31, 1997, July 3, 1997, and September 8, 1997. In addition, a report dated August 5, 1997 was submitted detailing soil vapor extraction (SVE) system modifications.

## **2.0 DRILLING**

## **2.0 DRILLING**

From May 10 - 27, 1997, 6 additional 2-inch diameter ground-water monitoring wells (MW-10 - MW-15) were installed to investigate the condition of the groundwater (Figure 1). An air rotary drill rig with a 5 1/8-inch diameter bit was used to drill the wells. Total depths of the wells ranged from 85 to 208 feet below ground surface. To eliminate the potential for adverse impacts between wells, drilling equipment was decontaminated prior to beginning each well.

### **2.1 Monitoring Well Installation**

Monitoring well MW-11 was drilled as an exploratory boring to investigate the lithology of the middle and lower sections of the Ogallala Aquifer. Drilling was terminated when the Chinle Formation locally referred to as the "red beds" were contacted. The investigation was conducted specifically to determine if a hard siliceous sandstone encountered when drilling wells in other areas of Hobbs was also present beneath the facility. To prevent impacts to the deeper section of the aquifer, MW-11 was drilled up-gradient of any source areas.

An indurated siliceous sandstone was encountered when drilling MW-11 at 131 feet below ground surface (Figure 2). Surface casing was installed through the sandstone layer and grouted in place prior to drilling down to the "red beds". This approach was taken to isolate the deeper aquifer if the sandstone was acting as a aquitard. MW-11 was completed with 10 feet of screen installed in the basal gravel of the Ogallala Aquifer. The total depth of the well was 208 feet at the Ogallala and "red bed" contact.

The same sandstone present in MW-11 at 131' was also found in MW-10 at approximately the same depth. MW-10 was completed with 10 feet of 20 slot screen set on top of the sandstone (Figures 2 and 3). The installation of MW-10 allows ground-water quality to be collected above the sandstone and compared against water quality in MW-11 from the base of the aquifer.

Monitoring wells MW-12 through MW-15 were installed to determine the lateral extent of ground-water contamination (Figure 1). Total depths of the monitoring wells range from 83 to 85 feet below ground surface. The top of casing elevations for all monitoring wells were tied into "the City of Hobbs Control Datum" and the North American Vertical Datum. Lithologic and well completion data are illustrated on well logs in Appendix A.

### **2.2 Lithology**

Drill cuttings were logged by a WWC geologist for sediment type, grain size, color, structure, moisture, and hydrocarbon contamination. The upper 130 feet of lithology was consistent with other areas where drilling was performed. Sandstones become more numerous with depth and are weak to moderately indurated. The lithology from 130 to 208 feet consists of a few well indurated sandstones (131' and 158'), clay and sandy clays, and sand and gravel at the base. The "red beds" were a soft red to reddish brown clay. Lithologic logs are presented ad Appendix A.

### **2.3 Field Screening**

The presence or absence of hydrocarbon contamination was determined by visual and olfactory inspection of the cuttings and by screening with an Environmental Instruments 580D photoionization detector (PID) during logging. Evidence of hydrocarbon impact was not observed or detected with the PID during the drilling process.

### **2.4 Soil Vapor Extraction and Air Sparge Well Installation**

WWC supervised the drilling and installation of 5 deep SVE wells and 6 air sparge wells from May 10 – 27, 1997 (Figure 4.). The deep SVE wells were completed with 2 inch diameter Schedule 40 PVC casing and 25 feet of 20 slot screen. Total depths of the wells were 70 feet below ground surface.

The air sparge wells were completed with 1 inch diameter Schedule 80 PVC casing, 1 foot of 20 slot screen, and a 9/16 silica sand filter pack. Total depths ranged from 83 – 85 feet below ground surface. Well completion diagrams for the SVE and air sparge wells are provided as Appendix A.

## **2.5 Waste Water and Drill Cuttings Disposal**

Purge water from well development and fluids produced during drilling were collected and stored in a frac tank on site. Drill cuttings were also collected and stockpiled on site. Samples were collected from the frac tank and stockpiled soil for characterization prior to disposal. The samples were analyzed by the toxicity characteristic leaching procedure (TCLP) for volatile and semi-volatile organics, metals, and RCRA characteristics. Results of the laboratory analysis determined the water and soil were nonhazardous. Authorization was granted by the NMOCD to dispose of the water and cuttings at the Controlled Recovery Incorporated facility near Hobbs. Laboratory data reports for the analyses are presented in Appendix B.

### **3.0 GROUND-WATER MONITORING**

### **3.0 GROUND-WATER MONITORING**

Ground-water monitoring was performed 4 times in 1997 by WWC personnel. The fourth quarter monitoring event was performed October 15 - 16, 1997. Results of the previous sampling events for 1997 were presented in reports to the NMOCD dated March 31, 1997, July 3, 1997, and September 8, 1997.

#### **3.1 Static Water Level**

Static water levels were measured 3-4 times in 1997 from all new and existing monitoring wells with an oil/water interface probe. The latest water level measurements are presented in Table 1 along with historic water level data for comparison. The probe was decontaminated between wells with Simple Green and a distilled water rinse.

A map of the potentiometric surface generated from the 4th quarter water level elevations is depicted on Figure 5. The ground-water flow direction is to the northeast with a hydraulic gradient of 0.005 which is consistent with earlier determinations of ground-water flow.

#### **3.2 Ground-water Sampling**

Ground-water samples were collected from all new and existing wells during quarterly monitoring events in 1997. Three well volumes of ground-water were purged from each well using a submersible pump. Purge water was placed into two galvanized steel stock tanks on site and allowed to evaporate. The submersible pump was decontaminated with a Simple Green solution and clean water rinse between wells.

Samples were collected using disposable polyethylene bailers after the well was purged. Ground-water samples were analyzed for volatile organic compounds by EPA Method 8260. During the fourth quarter monitoring event duplicate samples were collected from MW-4 and MW-15. The analytical results for the fourth quarter monitoring event are provided in Table 2 along with historical data for comparison. Laboratory analytical reports are presented in Appendix B.

## **4.0 REMEDIATION SYSTEM MODIFICATIONS**

## **4.0 REMEDIATION SYSTEM MODIFICATIONS**

The week of June 23 – 26, 1997, WWC connected 5 deep and 2 shallow SVE wells into the existing systems. Three deep SVE wells were plumbed into the existing system in the former UST area and 2 deep SVE wells were plumbed into the existing system in the former waste water collection area. In addition, 2 shallow SVE wells (1-8 and 1-9) were plumbed into the former waste water collection area system and the acid dock system. These shallow SVE wells were installed in 1995 and were plumbed in now to expand the coverage of the present systems.

All piping connecting the SVE wells is 2-inch Schedule 40 PVC. SVE wells in the former waste water pond and acid dock area remain connected to internal combustion AcuVac units. The AcuVac unit in the former UST area was replaced with an electric blower. The layout of the piping in each of the 3 SVE areas are presented on Figures 6, 7, and 8. The piping in each of the areas was buried and routed to avoid obstacles or avoid cutting concrete or asphalt.

The air sparge wells (AS-1 to AS-6) were connected to a new 10 horsepower blower at the former UST SVE system during the week of October 13 – 17, 1997. The layout of the piping is presented on Figure 6. Piping connecting the air sparge wells is 2-inch Schedule 40 PVC. All of the piping was buried to prevent damage from traffic.

### **4.1 SVE Systems Operations**

Air samples were collected from the 3 SVE systems 4 to 5 times during the 1997 year. Time lines are provided (Figures 9, 10, and 11) which document when samples were collected, system shut downs for routine maintenance, or when systems were shut down for repairs since startup periods. Air quality results are provided in Table 3. Laboratory data reports are presented as part of Appendix B.

## **5.0 RESULTS AND DISCUSSION**

## **5.0 RESULTS AND DISCUSSION**

As shown on Table 2, concentrations of volatile aromatic and chlorinated hydrocarbons in most monitoring wells were within the range of historic concentration variations. Over the past 2 sampling events of 1997 halocarbon and BTEX concentrations in MW-2 have declined slightly. Total halocarbons concentrations have also steadily declined in MW-4 since November of 1996. Low contaminant levels continue to be detected in MW-13 but are absent in both MW-14 and MW-15. The difference between contaminant concentrations in MW-8 and MW-10 indicates the possibility of a separate free phase product layer occurring with depth as unlikely.

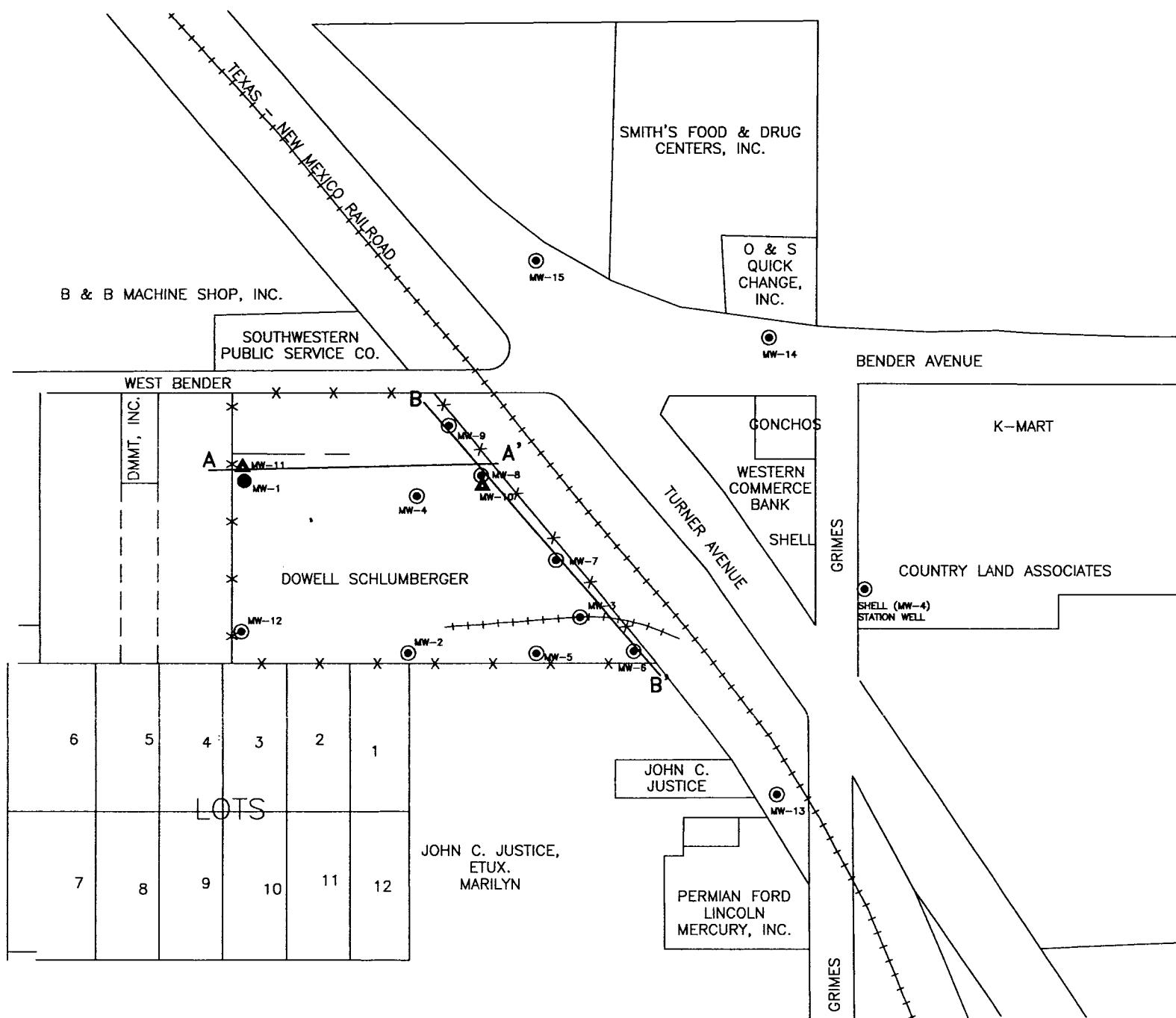
To illustrate the areal extent of the halocarbons, an isoconcentration map for total halocarbon concentrations has been constructed. There has been no change in the distribution pattern over the past year. Plots have also been constructed matching static water levels versus the various halocarbon concentrations in individual wells. The isoconcentration map and plots are presented as Appendix C.

## **6.0 RECOMMENDATIONS**

## **6.0 RECOMMENDATIONS**

Hydrocarbons remain absent in the ground-water at monitoring wells MW-14 and MW-15 and halocarbon concentrations are declining in the UST area. Because of this, Dowell is recommending that the ground-water continue to be monitored quarterly but the number of wells sampled be reduced. Dowell is proposing that sampling be performed on MW-3, MW-5, MW-10, MW-11, and MW-12 only during the fourth quarter of each year. Ground-water samples would be collected from all other monitoring wells quarterly and analyzed by EPA Method 8260. Static water levels would be collected from all monitoring on a quarterly basis.

## **FIGURES**



### EXPLANATION

- MW-4 (circle) SHALLOW MONITORING WELL LOCATION AND IDENTIFICATION
- MW-1 (dot) ABANDONED MONITORING WELL
- MW-11 (triangle) DEEP MONITORING WELL LOCATIONS

A-A' CROSS-SECTION LOCATION

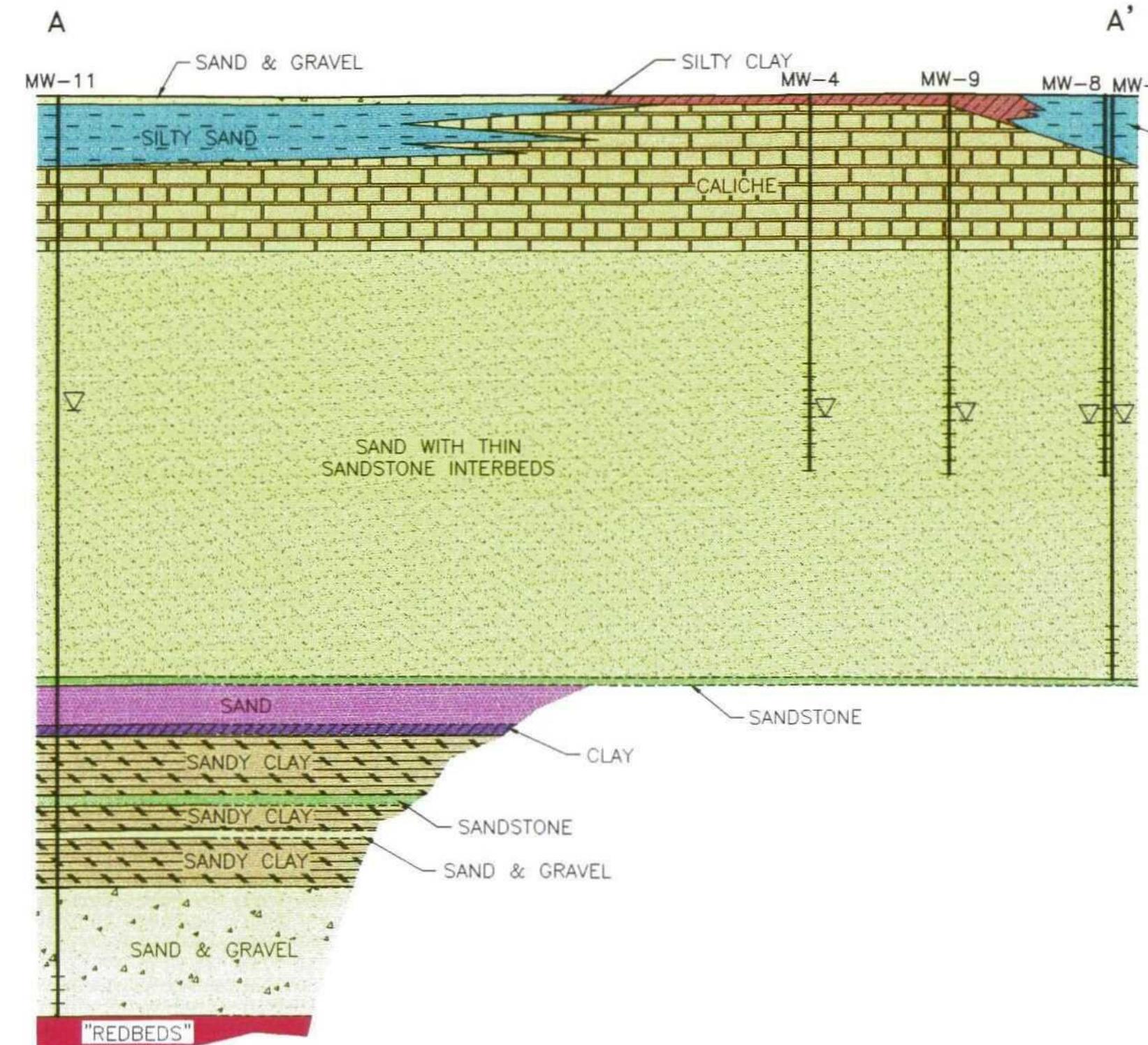


SCALE

**FIGURE 1**  
MONITORING WELL LOCATIONS

DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NM

Western Water Consultants, Inc. W W C Engineering  
Engineering Environmental Mining Water Resources



A'

### EXPLANATION

MW-7	MONITORING WELL LOCATION AND IDENTIFICATION
—	SCREENED INTERVAL
▽	STATIC WATER LEVEL (10/15/97)
---	GEOLOGIC CONTACT (DASHED WHERE INFERRED)
[Yellow square]	SAND & GRAVEL
[Red hatched square]	SILTY CLAY
[Blue dashed square]	SILTY SAND
[Yellow brick pattern square]	CALICHE
[Yellow stippled square]	SAND WITH THIN SANDSTONE INTERBEDS
[Green square]	SANDSTONE
[Purple square]	SAND
[Dark purple square]	CLAY
[Yellow wavy pattern square]	SANDY CLAY

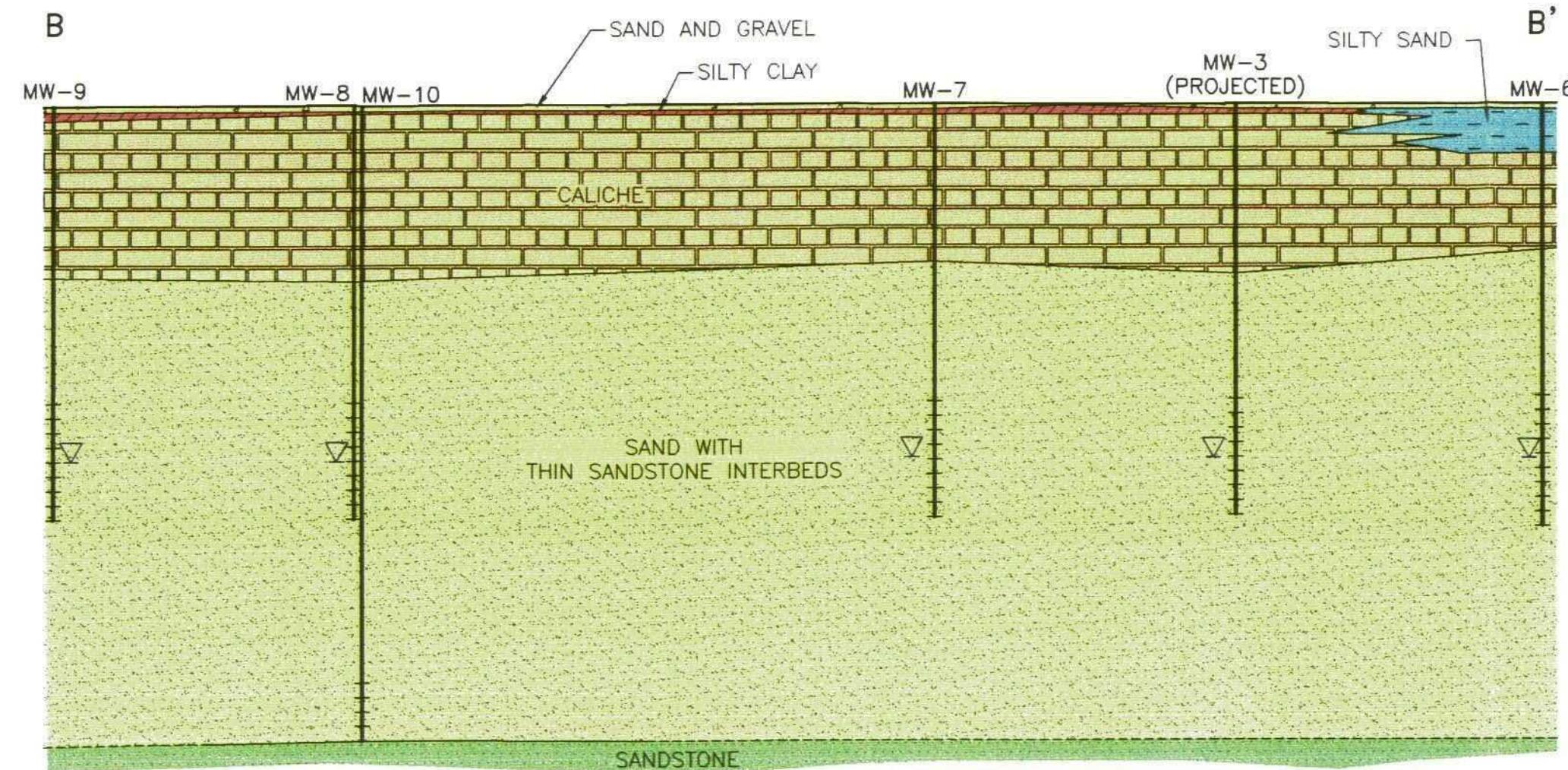
30 FT.  
0 60 FT.  
SCALE

FIGURE 2

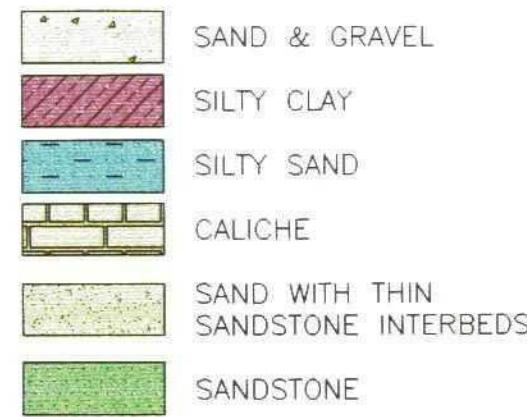
CROSS-SECTION A-A'

DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NM

Western Water Consultants, Inc. Engineering Environmental Mining Water Resources



### EXPLANATION



- MW-7 MONITORING WELL LOCATION AND IDENTIFICATION
- SCREENED INTERVAL
- MW-7 SCREENED INTERVAL
- ▼ STATIC WATER LEVEL (10/15/97)
- GEOLOGIC CONTACT (DASHED WHERE INFERRED)

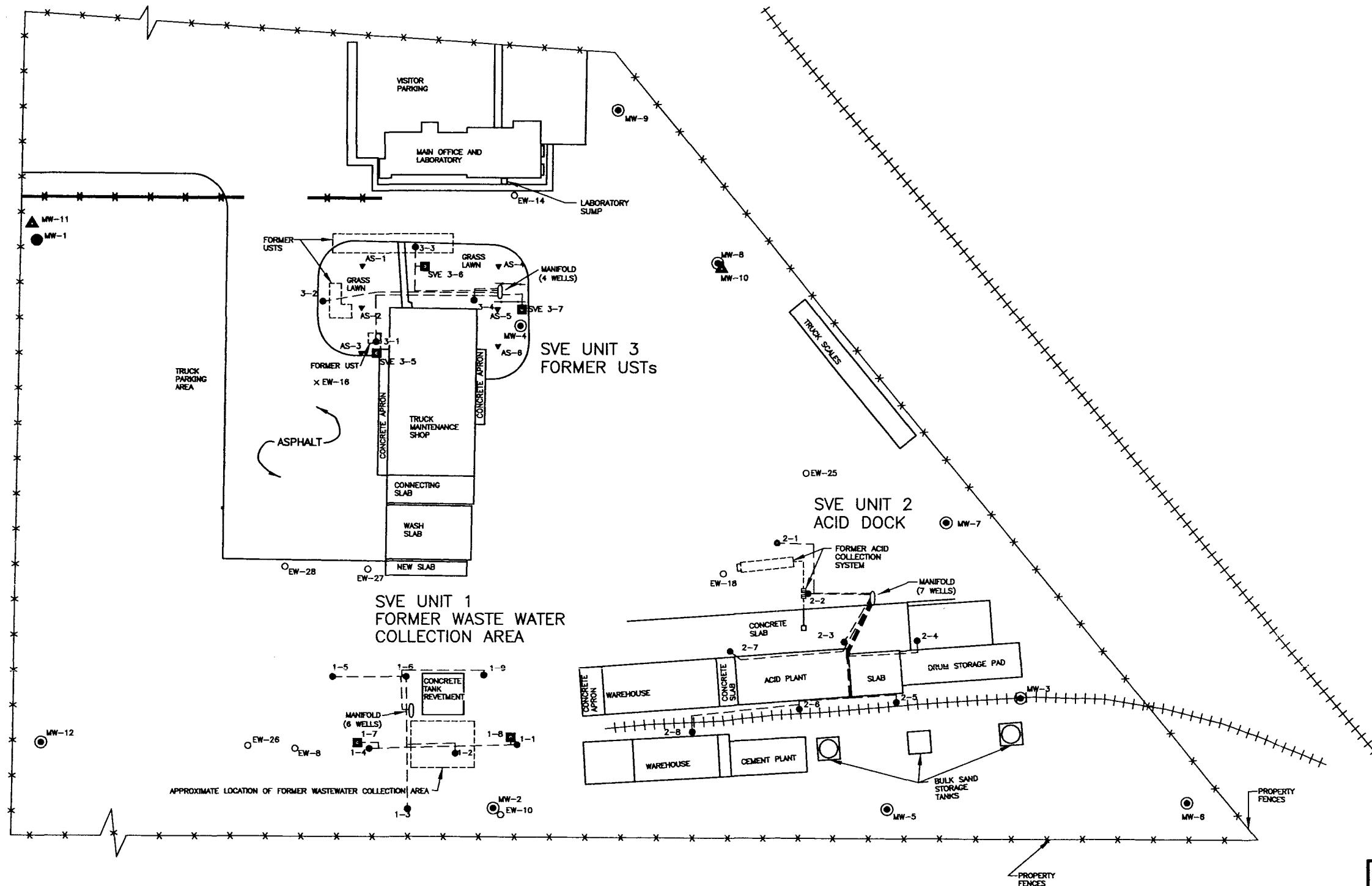
30 FT.  
0 60 FT.  
SCALE

**FIGURE 3**

CROSS-SECTION B-B'

DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NM

Western Water Consultants, Inc. W W C Engineering  
Engineering Environmental Mining Water Resources



0 80 FT.  
SCALE

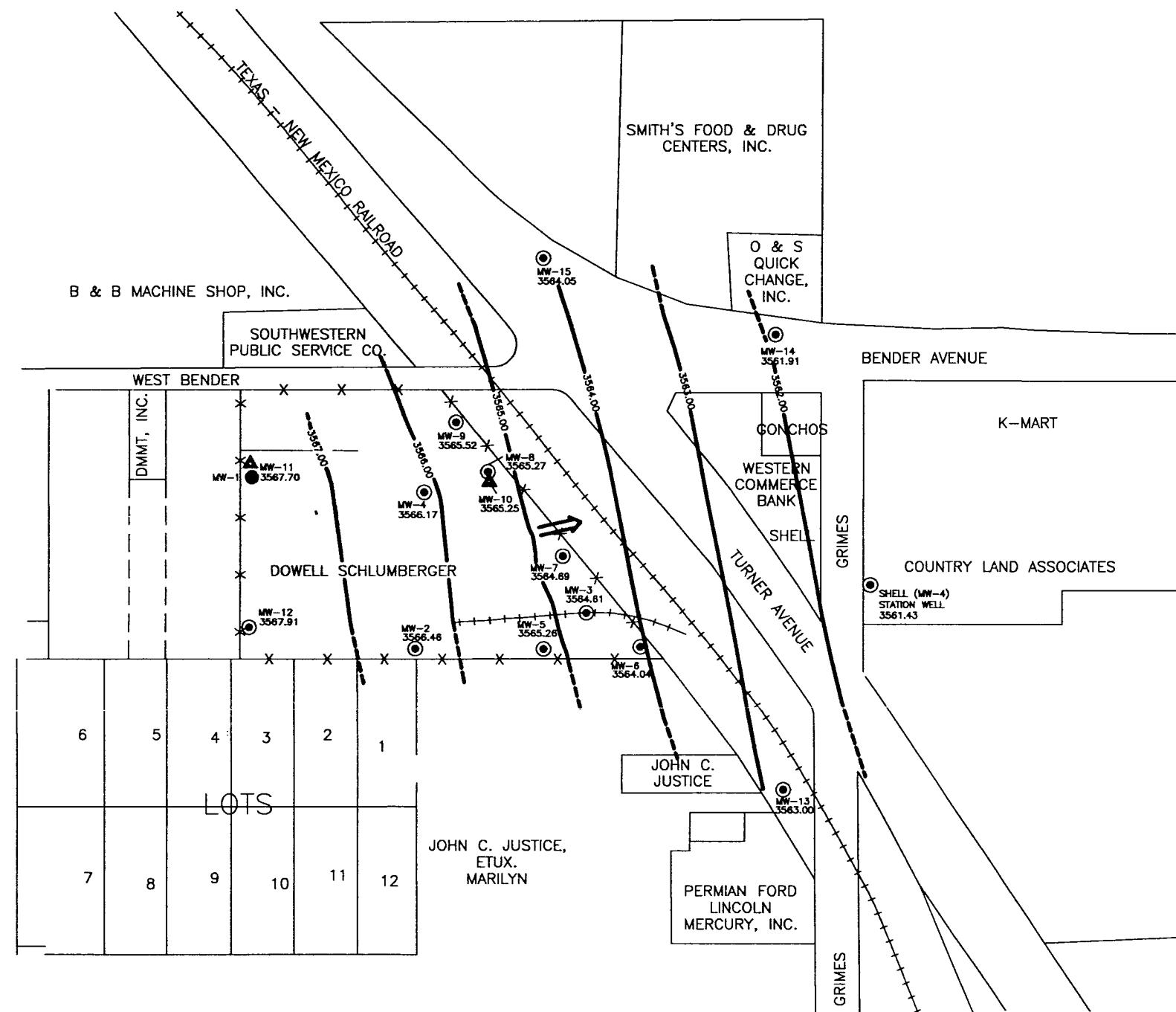
EXPLANATION

- DEEP SVE WELL
- SHALLOW SVE WELL
- ▼ AS-5 AIR SPARGING WELL
- SOIL BORING
- × COMPLETED AS A FUTURE SVE WELL
- MW-3 SHALLOW MONITORING WELL LOCATION AND IDENTIFICATION
- ▲ MW-11 DEEP MONITORING WELL LOCATION AND IDENTIFICATION
- MW-1 ABANDONED MONITORING WELL
- FENCED ENCLOSURE
- - - 2" PVC PIPING

**FIGURE 4**

SITE MAP AND  
LOCATION OF MONITORING AND  
REMEDIATION WELLS

DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NM



### EXPLANATION

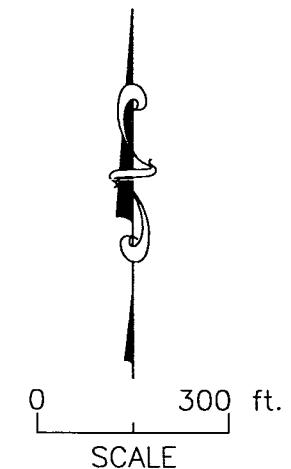
MW-14  
3562.33 ● SHALLOW MONITORING WELL LOCATION,  
IDENTIFICATION, AND POTENTIOMETRIC  
SURFACE ELEVATION

MW-1 ● ABANDONED MONITORING WELL

MW-11  
3567.85 ▲ DEEP MONITORING WELL LOCATION  
IDENTIFICATION AND POTENTIOMETRIC  
SURFACE ELEVATION

— 3565.50 POTENTIOMETRIC SURFACE CONTOURS  
AND ELEVATION (DASHED WHERE  
INFERRRED)

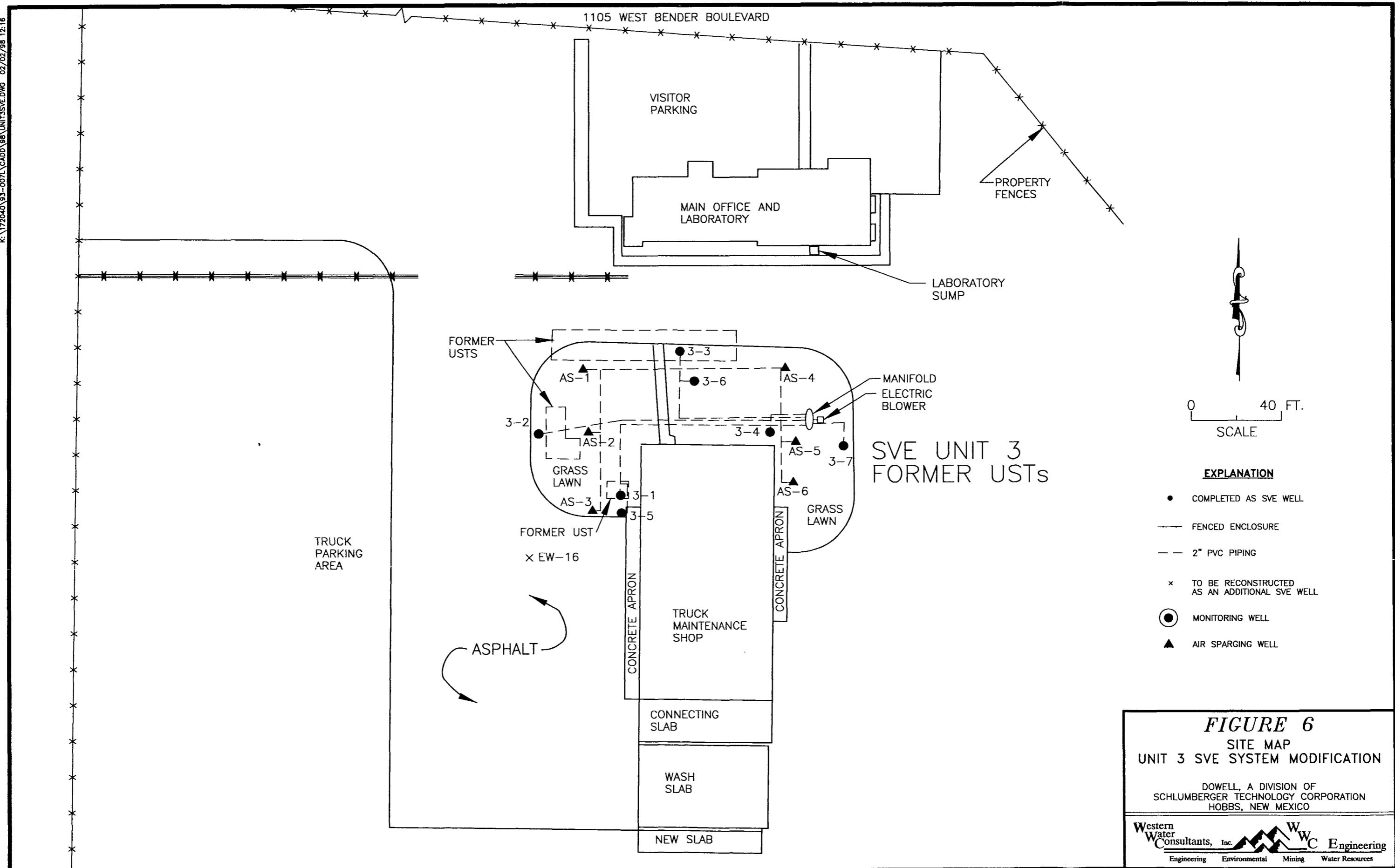
↔ GROUND-WATER FLOW DIRECTION

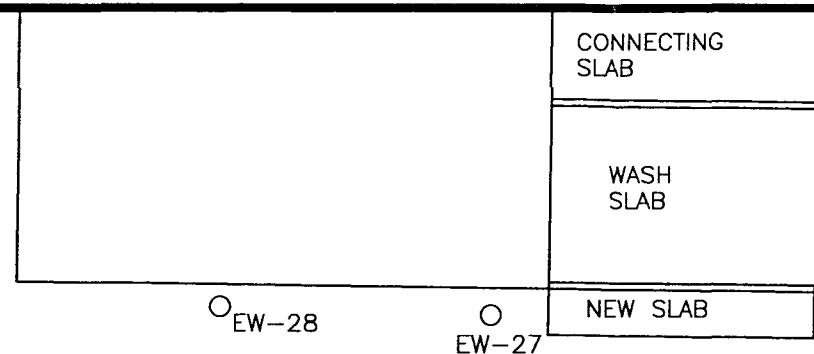


**FIGURE 5**  
POTENTIOMETRIC SURFACE MAP  
(10/15/97)

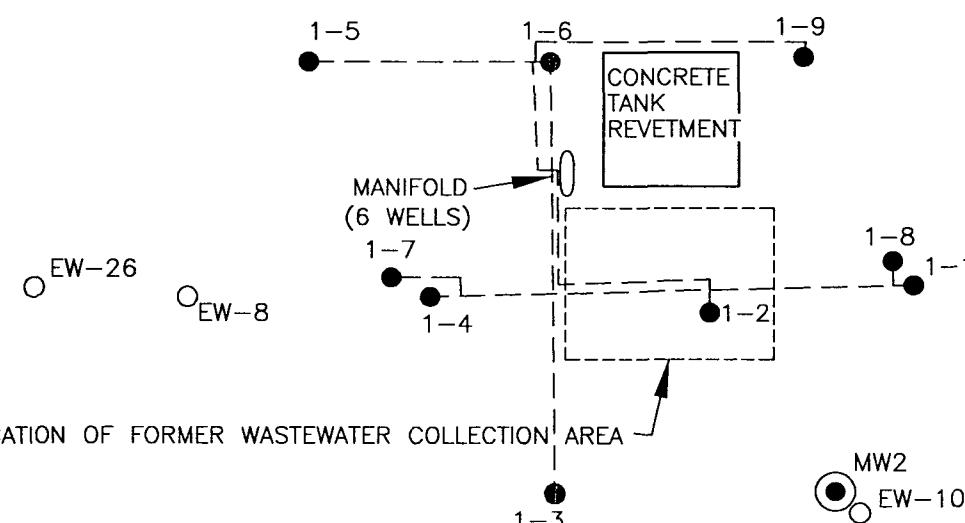
DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NM

Western Water Consultants, Inc. Engineering Environmental Mining Water Resources



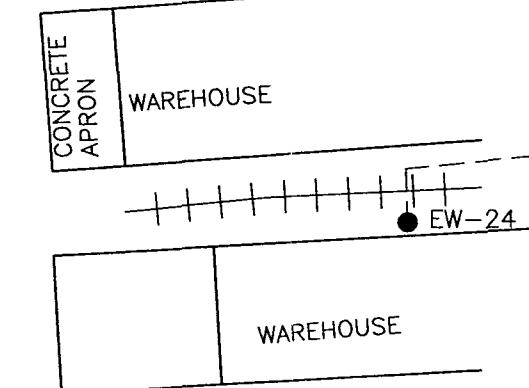


SVE UNIT 1  
FORMER WASTE WATER  
COLLECTION AREA



APPROXIMATE LOCATION OF FORMER WASTEWATER COLLECTION AREA

PROPERTY  
FENCES



0 40 FT.  
SCALE

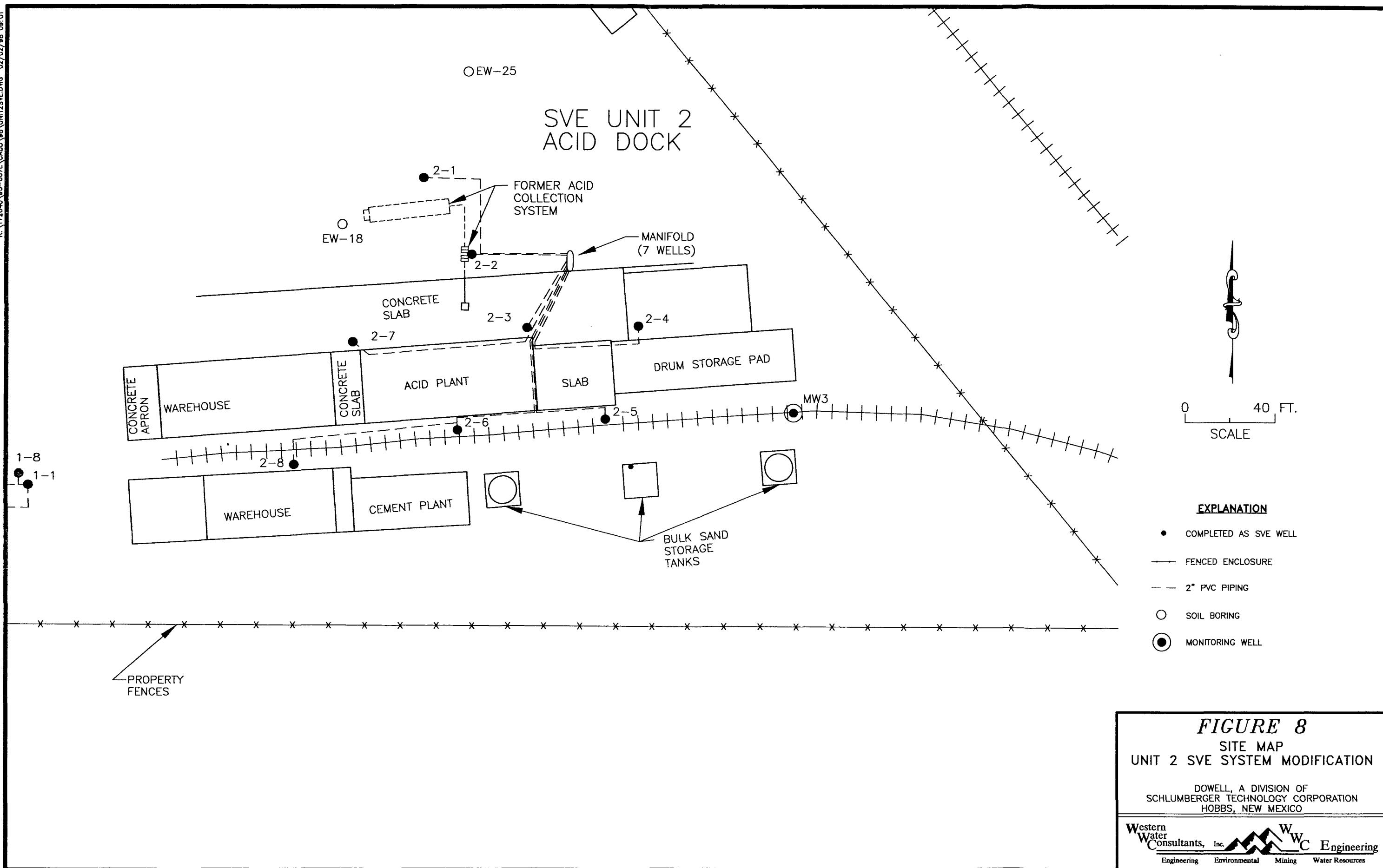
**EXPLANATION**

- COMPLETED AS SVE WELL
- FENCED ENCLOSURE
- - - 2" PVC PIPING
- SOIL BORING
- (●) MONITORING WELL

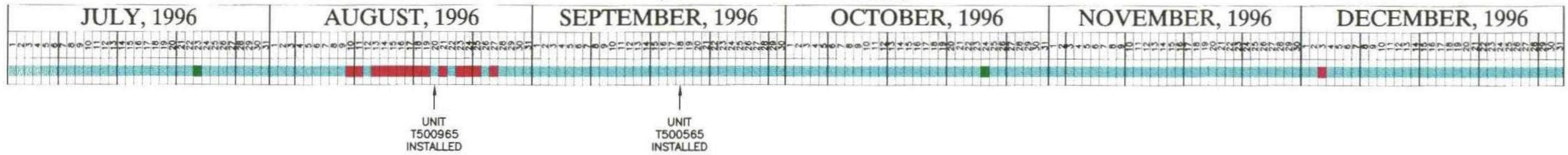
**FIGURE 7**  
SITE MAP  
UNIT 1 SVE SYSTEM MODIFICATION

DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION  
HOBBS, NEW MEXICO

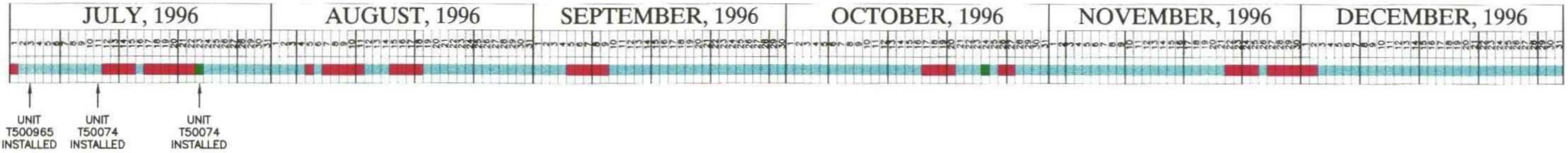
Western Water Consultants, Inc.   
Engineering Environmental Mining Water Resources



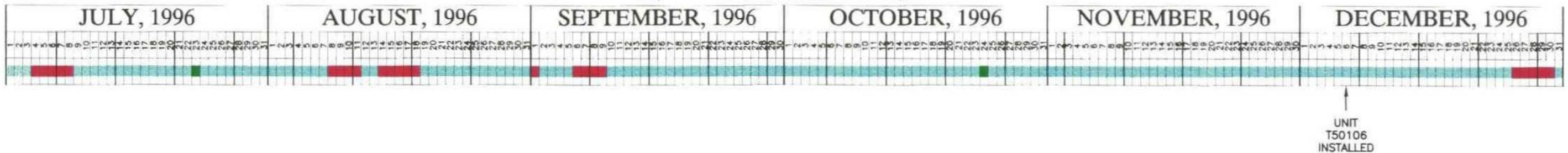
### FORMER LAGOON, UNIT 1 (OPERATION PERCENTAGE 92%)



### ACID PLANT, UNIT 2 (OPERATION PERCENTAGE 77%)



### FORMER UST, UNIT 3 (OPERATION PERCENTAGE 87%)



#### EXPLANATION

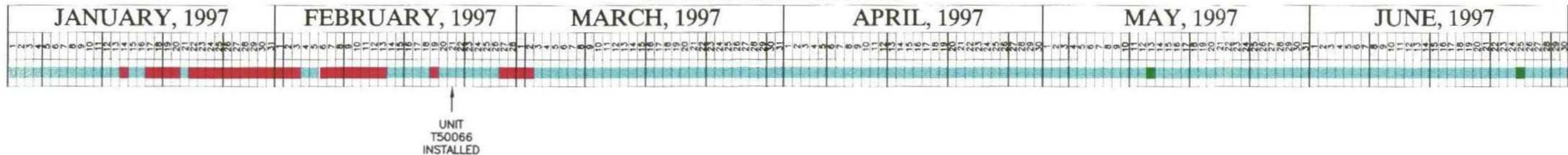
- UNIT IS RUNNING EXCEPT FOR BRIEF SHUTDOWNS FOR ROUTINE MAINTENANCE
- UNIT IS NOT OPERATING
- AIR SAMPLES COLLECTED

**FIGURE 9**  
SVE OPERATION TIMELINE  
07/01/96 THRU 12/31/96

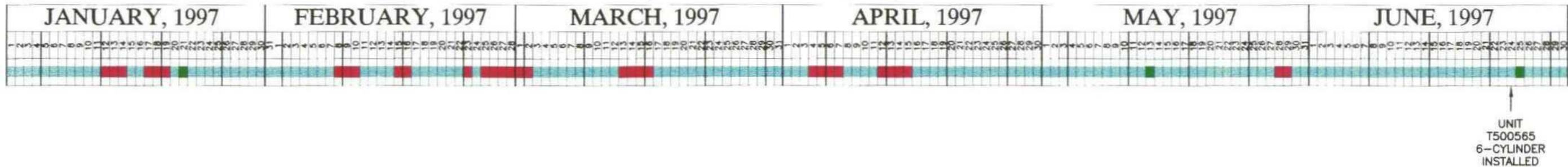
DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION



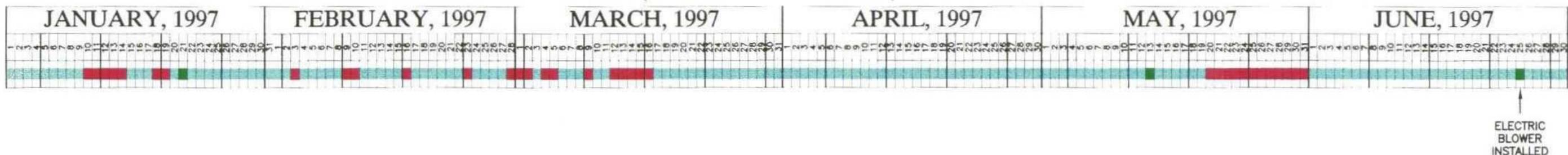
## FORMER WASTE WATER LAGOON, UNIT 1 (OPERATION PERCENTAGE 83%)



## ACID DOCK, UNIT 2 (OPERATION PERCENTAGE 82%)



## FORMER USTs, UNIT 3 (OPERATION PERCENTAGE 81%)



### EXPLANATION

UNIT IS RUNNING EXCEPT FOR BRIEF SHUTDOWNS FOR ROUTINE MAINTENANCE

UNIT IS NOT OPERATING

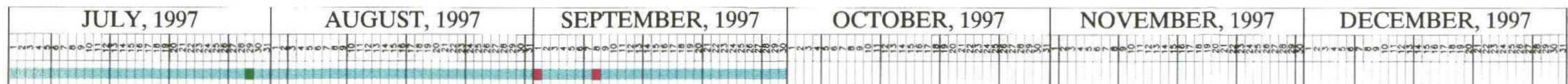
AIR SAMPLES COLLECTED

**FIGURE 10**  
SVE OPERATION TIMELINE  
01/01/97 THRU 06/30/97

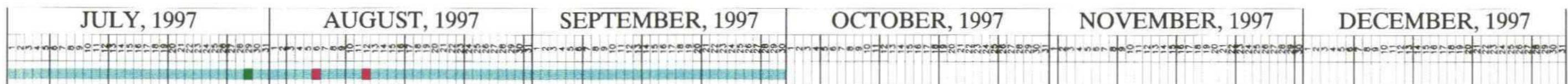
DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION

Western Water Consultants, Inc. Engineering Environmental Mining Water Resources

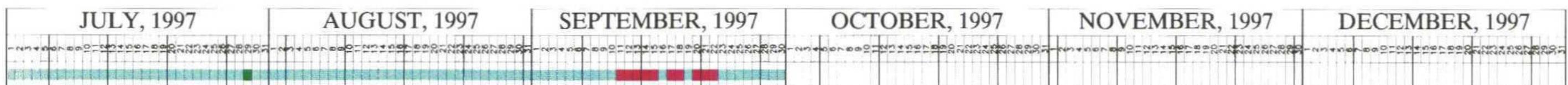
## FORMER LAGOON, UNIT 1



## ACID PLANT, UNIT 2



## FORMER UST, UNIT 3



### EXPLANATION

- UNIT IS RUNNING EXCEPT FOR BRIEF SHUTDOWNS FOR ROUTINE MAINTENANCE
- UNIT IS NOT OPERATING
- AIR SAMPLES COLLECTED

**FIGURE 11**  
SVE OPERATION TIMELINE  
07/01/97 THRU 12/31/97

DOWELL, A DIVISION OF  
SCHLUMBERGER TECHNOLOGY CORPORATION



## **TABLES**

**Table 1. Static Water Levels for the Dowell Facility in Hobbs, New Mexico**

Well Number	Top of Casing Elevations (ft)	Date Measured	Total Depth (ft)	Depth to Water (ft)	*Static Water Elevation (ft)	Difference From Prior Level (ft)	Water Column (ft)
Abandoned	3638.52	10/25/96	84	70.22	3568.30		13.78
		11/21/96		70.17	3568.35	0.05	13.83
		01/22/97		70.44	3568.08	-0.27	13.56
		05/22/97					
MW-1	3637.26	10/25/96	85	70.03	3567.23		14.97
		11/21/96		70.03	3567.23	0.00	14.97
		01/22/97		70.26	3567.00	-0.23	14.74
		05/21/97		70.53	3566.73	-0.27	14.47
		07/28/97		70.69	3566.57	-0.16	14.31
		10/15/97		70.80	3566.46	-0.11	14.20
MW-2	3638.28	10/25/96	85	72.88	3565.40		12.12
		11/21/96		72.89	3565.39	-0.01	12.11
		01/22/97		73.10	3565.18	-0.21	11.90
		05/21/97		73.40	3564.88	-0.30	11.60
		07/28/97		73.54	3564.74	-0.14	11.46
		10/15/97		73.67	3564.61	-0.13	11.33
MW-3	3639.20	10/25/96	85	72.41	3566.79		12.59
		11/21/96		72.37	3566.83	0.04	12.63
		01/22/97		72.60	3566.60	-0.23	12.40
		05/21/97		72.87	3566.33	-0.27	12.13
		07/28/97		72.93	3566.27	-0.06	12.07
		10/15/97		73.03	3566.17	-0.10	11.97
MW-4	3637.70	01/22/97	85	71.90	3565.80		13.10
		05/21/97		72.21	3565.49	-0.31	12.79
		07/28/97		72.36	3565.34	-0.15	12.64
		10/15/97		72.44	3565.26	-0.08	12.56
MW-5	3637.52	01/22/97	85	72.88	3564.64		12.12
		05/21/97		73.22	3564.30	-0.34	11.78
		07/28/97		73.44	3564.08	-0.22	11.56
		10/15/97		73.48	3564.04	-0.04	11.52
MW-6	3638.62	01/22/97	85	73.31	3565.31		11.69
		05/21/97		73.63	3564.99	-0.32	11.37
		07/28/97		73.80	3564.82	-0.17	11.20
		10/15/97		73.93	3564.69	-0.13	11.07
MW-7	3638.71	01/22/97	85	72.78	3565.93		12.22
		05/21/97		73.12	3565.59	-0.34	11.88
		07/28/97		73.31	3565.40	-0.19	11.69
		10/15/97		73.44	3565.27	-0.13	11.56
MW-8	3638.76	01/22/97	85	72.57	3566.19		12.43
		05/21/97		72.89	3565.87	-0.32	12.11
		07/28/97		73.08	3565.68	-0.19	11.92
		10/15/97		73.24	3565.52	-0.16	11.76
MW-9	3638.86	05/27/97	130.5	73.33	3565.53		57.17
		07/28/97		73.49	3565.37	-0.16	57.01
		10/15/97		73.61	3565.25	-0.12	56.89
MW-10	3638.55	05/26/97	208	70.70	3567.85		137.30
		07/28/97		70.89	3567.66	-0.19	137.11
		10/15/97		70.85	3567.70	0.04	137.15
MW-11	3636.15	05/26/97	85	68.05	3568.10		16.95
		07/28/97		68.14	3568.01	-0.09	16.86
		10/15/97		68.24	3567.91	-0.10	16.76
MW-12	3635.39	05/21/97	84	72.31	3563.08		11.69
		07/28/97		72.39	3563.00	-0.08	11.61
		10/15/97		72.63	3562.76	-0.24	11.37
MW-13	3637.19	05/21/97	85	74.86	3562.33		10.14
		07/28/97		75.06	3562.13	-0.20	9.94
		10/15/97		75.28	3561.91	-0.22	9.72
MW-14	3636.57	05/21/97	85	72.09	3564.48		12.91
		07/28/97		72.28	3564.29	-0.19	12.72
		10/15/97		72.52	3564.05	-0.24	12.48
Shell Station MW-4	3637.69	05/25/97	82.6	75.97	3561.72		6.63
		07/28/97		76.15	3561.54	-0.18	6.45
		10/15/97		76.26	3561.43	-0.11	6.34

Note: Top of casing survey elevations are based on the "City of Hobbs Control Datum" and the North American Vertical Datum

Table 2. Chemicals Detected in Ground-Water Samples, Dowell Facility, Hobbs, New Mexico

Well Number	Date Sampled	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	PCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	TOTAL XYLENES (mg/L)	NAPHTHA-LENE (mg/L)
MW-1 abandoned	10/25/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)
	11/21/98 01/22/97	0.008 0.006	ND(0.001) ND(0.001)	ND(0.001) ND(0.001)	ND(0.007) ND(0.002)	ND(0.002) ND(0.001)	ND(0.002) ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
MW-2 duplicate	10/25/98	0.259	0.002	0.012	0.014	0.044	ND(0.002)	ND(0.002)	0.042	0.016	0.049	0.027
	11/21/98 01/22/97	0.288 0.322	ND(0.005) ND(0.005)	0.015 0.030	0.024 0.049	0.044 0.247	ND(0.002) ND(0.005)	ND(0.002) ND(0.005)	0.044	0.016	0.048 0.016	0.006 ND(0.005)
MW-3 duplicate	05/23/97	0.082	ND(0.005)	0.011	0.017	0.083	ND(0.001)	ND(0.001)	0.019	0.009	0.014	0.005
	06/25/97 07/28/97	0.039 0.590	ND(0.001) ND(0.002)	0.007 0.009	0.014 0.027	0.057 0.180	ND(0.001)	ND(0.001)	0.008	0.004	0.003	0.001
MW-4 duplicate	07/28/97	0.031	ND(0.002)	0.004	0.011	0.007	ND(0.002)	ND(0.002)	0.011	0.005	0.007	0.001
	10/16/97 11/21/98	0.012 0.110	ND(0.002) ND(0.005)	0.007 0.010	0.012 0.015	0.044 0.042	ND(0.002) ND(0.002)	ND(0.002) ND(0.002)	0.007 0.016	0.016 0.014	0.049 0.048	0.007 0.006
MW-5 duplicate	01/22/97	0.088	0.037	0.019	0.019	0.028	ND(0.002)	ND(0.002)	0.002	0.016	0.027	0.001
	05/23/97 06/25/97	0.062 0.047	ND(0.002) ND(0.002)	0.010 0.018	0.018 0.018	0.014 0.015	ND(0.001)	ND(0.001)	0.009	0.004	0.016	0.001
MW-6 duplicate	07/28/97	0.044	ND(0.002)	0.018	0.018	0.187	ND(0.001)	ND(0.001)	0.039	0.022	0.039	0.002
	10/16/97 10/16/97	0.037 0.031	ND(0.002) ND(0.005)	0.014 0.011	0.014 0.103	0.124 0.623	ND(0.002) ND(0.005)	ND(0.002) ND(0.005)	0.008 0.941	0.005 0.980	0.027 0.557	0.002 ND(0.005)
MW-7 duplicate	01/23/97	0.180	0.002	0.020	0.012	3.528	ND(0.002)	ND(0.002)	0.005	0.005	ND(0.004)	ND(0.002)
	05/23/97 07/28/97	0.180 0.241	ND(0.002) ND(0.004)	0.002 0.004	0.018 0.069	3.980 0.694	ND(0.002)	ND(0.002)	0.002	0.002	ND(0.004)	ND(0.002)
MW-8 duplicate	01/23/97	0.085	ND(0.002)	0.001	0.004	2.590	ND(0.002)	ND(0.002)	0.005	0.040	ND(0.004)	ND(0.002)
	05/22/97 07/28/97	0.087 0.258	ND(0.001) ND(0.003)	0.001 0.004	0.003 0.072	0.027 0.058	ND(0.002)	ND(0.002)	0.011 0.002	0.011 0.002	ND(0.004)	ND(0.002)
MW-9 duplicate	01/23/97	0.047	ND(0.001)	0.008	0.004	0.003	ND(0.001)	ND(0.001)	0.008	0.008	ND(0.004)	ND(0.002)
	05/23/97 07/28/97	0.087 0.214	ND(0.001) ND(0.003)	0.001 0.004	0.008 0.069	0.027 0.052	ND(0.002)	ND(0.002)	0.017 0.050	0.018 0.051	0.038 0.023	0.008 ND(0.005)
MW-10 duplicate	01/16/97	0.082	ND(0.002)	0.001	0.002	0.003	ND(0.001)	ND(0.001)	0.004	0.004	ND(0.004)	ND(0.002)
	10/16/97 10/16/97	0.081 0.073	ND(0.005) ND(0.005)	0.001 0.001	0.027 0.025	0.021 0.019	ND(0.002)	ND(0.002)	0.017 0.019	0.008 0.008	0.033 0.033	0.008 ND(0.005)
MW-11 duplicate	01/23/97	0.068	ND(0.001)	0.005	0.280	0.810	ND(0.001)	ND(0.001)	0.045	0.045	ND(0.004)	ND(0.002)
	05/23/97 07/28/97	0.082 0.077	ND(0.001) ND(0.002)	0.002 0.001	0.1360 0.975	4.150 3.600	ND(0.001)	ND(0.001)	0.805 0.774	0.805 0.758	ND(0.01) ND(0.1)	ND(0.02) ND(0.2)
MW-12 duplicate	01/16/97	0.081	ND(0.1)	0.077	0.001	1.120	ND(0.1)	ND(0.1)	0.050	0.050	ND(0.1)	ND(0.2)
	10/16/97 10/16/97	0.065	ND(0.2)	0.050	0.061	0.110	ND(0.2)	ND(0.2)	0.081	0.018	0.030	0.055
MW-13 duplicate	01/23/97	0.011	ND(0.001)	0.063	0.028	0.810	ND(0.001)	ND(0.001)	0.045	0.004	ND(0.001)	ND(0.002)
	05/23/97 07/28/97	0.026 0.033	ND(0.01) ND(0.02)	0.007 0.007	0.1360 0.975	4.520 4.570	ND(0.01)	ND(0.01)	0.805 0.758	0.147 0.121	ND(0.01) ND(0.1)	ND(0.02) ND(0.2)
MW-14 duplicate	01/16/97	0.021	ND(0.02)	0.021	0.008	0.090	ND(0.002)	ND(0.002)	0.005	0.005	ND(0.004)	ND(0.002)
	10/16/97 10/16/97	0.0186J 0.0186J	ND(0.02) ND(0.02)	0.002 0.002	0.066 0.068	0.116 0.124	ND(0.002)	ND(0.002)	0.021 0.021	0.004 0.004	ND(0.004)	ND(0.002)
MW-15 duplicate	01/23/97	0.023	ND(0.02)	0.00198J	0.00198J	0.0180	ND(0.005)	ND(0.005)	0.018	0.0030J	ND(0.005)	ND(0.005)
	05/23/97 07/28/97	0.023	ND(0.02)	0.00170J	0.00192J	0.027	ND(0.002)	ND(0.002)	0.027	0.003	ND(0.002)	ND(0.002)
MW-16 duplicate	01/16/97	0.082	ND(0.002)	0.001	0.002	0.023	ND(0.001)	ND(0.001)	0.017	0.008	ND(0.004)	ND(0.002)
	10/16/97 10/16/97	0.081 0.073	ND(0.005) ND(0.005)	0.025 0.025	0.027 0.019	0.021 0.019	ND(0.002)	ND(0.002)	0.018 0.018	0.003 0.003	ND(0.004)	ND(0.002)
MW-17 duplicate	01/23/97	0.047	ND(0.001)	0.008	0.004	0.014	ND(0.001)	ND(0.001)	0.004	0.008J	ND(0.001)	ND(0.002)
	05/22/97 07/28/97	0.087 0.214	ND(0.001) ND(0.003)	0.00186J 0.0038J	0.00186J 0.0088	0.023 0.070	ND(0.002)	ND(0.002)	0.023 0.070	0.017 0.059	ND(0.004)	ND(0.002)
MW-18 duplicate	01/16/97	0.082	ND(0.002)	0.001	0.002	0.003	ND(0.001)	ND(0.001)	0.004	0.004	ND(0.004)	ND(0.002)
	10/16/97 10/16/97	0.081 0.073	ND(0.005) ND(0.005)	0.025 0.025	0.027 0.019	0.021 0.019	ND(0.002)	ND(0.002)	0.018 0.018	0.003 0.003	ND(0.004)	ND(0.002)
MW-19 duplicate	01/23/97	0.011	ND(0.001)	0.063	0.280	0.810	ND(0.01)	ND(0.01)	0.480	0.045	ND(0.001)	ND(0.002)
	05/23/97 07/28/97	0.082 0.077	ND(0.01) ND(0.02)	0.007 0.007	1.360 0.975	4.150 3.600	ND(0.01)	ND(0.01)	0.805 0.774	0.147 0.121	ND(0.01) ND(0.1)	ND(0.02) ND(0.2)
MW-20 duplicate	01/16/97	0.021	ND(0.02)	0.021	0.008	0.090	ND(0.002)	ND(0.002)	0.045	0.004J	ND(0.001)	ND(0.002)
	10/16/97 10/16/97	0.0186J 0.0186J	ND(0.02) ND(0.02)	0.002 0.002	0.066 0.068	0.116 0.124	ND(0.002)	ND(0.002)	0.021 0.021	0.104 0.141	ND(0.004)	ND(0.002)

**Table 2. Chemicals Detected in Ground-Water Samples, Dowell Facility, Hobbs, New Mexico**

Well Number	Date Sampled	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	PCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	TOTAL XYLEMES (mg/L)	NAPHTHA-LENE (mg/L)
MW-10 duplicate	05/28/97	0.004 ND(0.002)	ND(0.002) ND(0.002)	0.007 0.008	0.028 0.028	ND(0.002) ND(0.002)	0.0012J 0.0013J	0.004 0.007	ND(0.002) ND(0.002)	ND(0.004) ND(0.004)	ND(0.004)	ND(0.002)
	07/28/97	0.003 ND(0.002)	ND(0.002) ND(0.002)	0.008 0.008J	0.014 0.008	ND(0.002) ND(0.002)	0.00198J 0.00108J	0.0015J 0.00108J	ND(0.002) ND(0.002)	ND(0.004) ND(0.004)	ND(0.004)	ND(0.002)
	10/18/97											ND(0.002)
												ND(0.002)
MW-11	05/24/97	0.0008J	ND(0.001)	0.0088J	0.002	ND(0.001)	ND(0.001)	0.002	ND(0.001)	0.0010J	ND(0.001)	ND(0.001)
	07/28/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	0.003	0.0085J	0.008	ND(0.001)	ND(0.001)
	10/18/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	0.002	0.00048J	0.00302J	ND(0.001)	ND(0.001)
MW-12	05/25/97	ND(0.001)	ND(0.001)	ND(0.001)	0.001	ND(0.001)	ND(0.001)	0.0058J	0.0052J	0.0027J	ND(0.002)	ND(0.001)
	07/28/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
MW-13	05/24/97	ND(0.001)	ND(0.001)	0.012	0.010	ND(0.001)	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/28/97	ND(0.001)	ND(0.001)	0.012	0.009	ND(0.001)	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/18/97	ND(0.001)	ND(0.001)	0.015	0.013	ND(0.001)	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
	10/18/97	ND(0.002)	ND(0.002)	0.011	0.013	ND(0.002)	ND(0.002)	0.00108J	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)
MW-14	05/25/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
	07/28/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
	07/28/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
	10/18/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
MW-15	05/25/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
	07/28/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
	10/18/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)
*SO4	05/25/97	0.021	ND(0.01)	0.024	ND(0.01)	0.0058J	ND(0.02)	ND(0.02)	ND(0.02)	0.468	0.470	1.836
	07/28/97	0.020	ND(0.02)	0.020	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	0.411	0.138	0.805
	10/18/97	0.0180J	ND(0.02)	0.022	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	0.322	0.039	0.713

Notes:

Only commonly detected compounds are listed. Other compounds that have been detected infrequently are included in the laboratory reports.

ND - Not Detected at detection limit shown in parentheses.

J - Detected at concentration below the method detection limit.

\*SO4 = Shell Service Station monitoring well MW-4

1,1-DCA - 1,1-Dichloroethane

1,2-DCA - 1,2-Dichloroethane

1,1-DCE - 1,1-Dichloroethene

PCE - Tetrachloroethene

TCA - 1,1,1-Trichloroethane

TCE - Trichloroethylene

TABLE 3. SVE System Air Sample Data from the Dowell Schlumberger Facility, Hobbs, New Mexico.

Sample I.D.	Date Sampled	Sample Location	Benzene (mg/m <sup>3</sup> )	Toluene (mg/m <sup>3</sup> )	Ethyleneglycol (mg/m <sup>3</sup> )	Total Xylene (mg/m <sup>3</sup> )	1,1-DCE (mg/m <sup>3</sup> )	1,1-DCA (mg/m <sup>3</sup> )	Chloromethane (mg/m <sup>3</sup> )	1,1,1-TCA (mg/m <sup>3</sup> )	Vinyl Chloride (mg/m <sup>3</sup> )	TCE (mg/m <sup>3</sup> )	PCE (mg/m <sup>3</sup> )	BTEX Input (mg/m <sup>3</sup> )	Total BTEX Output (mg/m <sup>3</sup> )	Total Input Halocarbons (mg/m <sup>3</sup> )	Total Output Halocarbons (mg/m <sup>3</sup> )
<b>FORMER LAGOON</b>																	
007-AREA 1	11/02/94	Pilot	ND(0.1)	1	0.35	29.80	0.487	20.7			36.5						
Unit 1 (7/95) Input	07/13/95	Input	28	256	30.6	111.2	46.2	48.3	ND(0.2)	450	ND(0.2)	1.23	135	425.8	680.73		
Unit 1 (7/95) Exhaust		Exhaust	0.83	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.83	0		
Unit 1 (8/95) Input	08/12/95	Input	18.3	46.4	20	51.4	23.9	35.2	ND(0.2)	216.6	ND(0.2)	1.3	19	136.1	296		
Unit 1 (8/95) Exhaust		Exhaust	1.9	ND(0.2)	ND(0.2)	ND(0.2)	5	ND(0.2)	12.8	ND(0.2)	35.7	ND(0.2)	3.7			57.2	
Unit 1 Input 9/95-1	09/07/95	Input	19.1	118.3	16.6	91.2	56.7	34.8	ND(0.2)	283	ND(0.2)	2.73	111.8	245.2	489.03		
Unit 1 Output 9/95-1		Exhaust	6.5	2.9	0.6	3.4	ND(0.2)	ND(0.2)	6.8	ND(0.2)	8.6	ND(0.2)	6	13.4		21.4	
Unit 1 Output 9/95-2		Exhaust	1.3	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.3		0	
Unit 1 Int	11/29/95	Before Cat	1.01	ND(0.43)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.01	0	
Unit 1 Output		After Cat	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	15.3	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0	15.3	
93007-WARP/Drain	04/11/96	Input	ND(0.2)	11.4	19.1	81.5	9.7	11.4	ND(0.2)	116	ND(0.2)	ND(0.2)	120	214.6	257.1		
93007-WARP/Exh.4/96		Exhaust	1	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	4.1	ND(0.2)	1.2	ND(0.2)	0.5	1	5.8	
93007-WPINPUT/7/96	07/23/96	Input	2.8	49.5	2.6	11.2	6.9	6.1	ND(0.5)	64.6	ND(0.5)	0.4	17.9	66.1	95.9	3.7	
93007-WPEXHST/7/96		Exhaust	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	2.4	ND(0.3)	0.7	ND(0.3)	0.6	0		
WP-INPUT/10/96	10/24/96	Input	2.07	44	12.1	77.1	4.9	4.9	ND(0.2)	74.4	ND(0.2)	1.02	51.9	135.27	132.22		
WP-OUTPUT-1/0/96		Exhaust	1.02	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	3.02	ND(0.2)	2.97	ND(0.2)	0.832	1.02	6.822	
93-007-WP-INP.5/97	05/13/97	Input	5.7	95.5	19.7	109.4	9.1	10.2	ND(5.0)	74.1	ND(5.0)	66.3	ND(5.0)	230.3	148.4		
93-007-WP-INP.6/97	06/25/97	Input	18.7	104	33.9	176.3	17	22	ND(5.0)	156	ND(5.0)	97.3	ND(5.0)	332.9	249.2		
93007-WP.7/97	07/29/97	Input	5.90J	33	5.50J	24.3	6.10J	6.90J	ND(10.0)	76.1	ND(10.0)	ND(10.0)	ND(10.0)	25.5	57.3	24.3	
93007-WP.10/97	10/14/97	Input	10.6	90.2	26.4	150.4	5.4	9.05	ND(5.0)	126	ND(5.0)	81	ND(5.0)	277.6	220.45		
93007-WP.1/98	01/06/98	Input	8.92	58	19.2	103.3	4.86	8.54	ND(2.0)	125	ND(2.0)	68.4	ND(2.0)	189.42	206.8		
<b>ACID PLANT</b>																	
007-AREA 2	11/02/94	Pilot	4.5	23.2	11.4	4.4	12.2				88.5				30.5		
Unit 2 (7/95) Input	07/13/95	Input	3.13	27.2	12.9	46.18	1.52	1.53	ND(0.2)	3.39	ND(0.2)	ND(0.2)	ND(0.2)	6.91	89.41	13.35	
Unit 2 (7/95) Exhaust		Exhaust	ND(0.2)	0.26	ND(0.2)	1.5	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.76		0	
Unit 2 (8/95) Input	08/12/95	Input	1.42	24.8	10.4	48.5	5.1	1.6	ND(0.2)	7	ND(0.2)	8.9	ND(0.2)	85.12	22.6		
Unit 2 (8/95) Exhaust		Exhaust	ND(0.2)	0.5	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.5	0		
Unit 2 Output 9/95	09/07/95	Exhaust	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0	0		
93007-ACDKINPT.4/96	04/11/96	Input	0.7	17.7	5.6	30.3	1.9	0.6	ND(0.2)	5.5	ND(0.2)	0.3	19	54.3	27.3		
93007-ACDKExh.4/96		Exhaust	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0	0		
93007ADINPUT/7/96	07/23/96	Input	ND(0.3)	1	ND(0.3)	1.1	0.8	ND(0.3)	ND(0.5)	0.9	ND(0.5)	ND(0.3)	ND(0.3)	1.6	2.1	3.3	
93007ADEXHST/7/96		Exhaust	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.5)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	0	0		
AD-INPUT-10/96	10/24/96	Input	0.61	4.51	0.88	5.62	1.69	0.55	ND(0.2)	1.48	ND(0.2)	3.33	ND(0.2)	11.62	7.05		
AD-OUTPUT-10/96		Exhaust	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.4)	ND(0.2)	ND(0.2)	ND(0.2)	0.477	ND(0.2)	ND(0.2)	ND(0.2)	0	0.477		
93007-AD-INPUT-1/97	01/21/97	Input	ND(1.0)	5.67	ND(1.0)	2.38	ND(1.0)	ND(1.0)	ND(1.0)	1.34	ND(1.0)	8.86	ND(1.0)	8.05	10.2		
93007-AD-EXH-1/97		Exhaust	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0	0		
93-007-AD-INP.5/97	05/13/97	Input	ND(1.0)	4.06	ND(1.0)	3.88	2.19	ND(1.0)	ND(1.0)	2.08	ND(1.0)	10.3	ND(1.0)	7.94	14.58		
93-007-AD-INP.6/97	06/25/97	Input	ND(1.0)	4.2	1.66	11.88	1.25	0.46J	ND(1.0)	2.39	ND(1.0)	6.15	ND(1.0)	17.74	9.79		
93007-AD.7/97	07/29/97	Input	ND(1.0)	3.46	0.71J	4.5	ND(1.0)	ND(1.0)	1.45	ND(1.0)	2.88	7.96	ND(1.0)	4.33			
93007-AD.10/97	10/14/97	Input	ND(1.0)	1.31	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.74	ND(1.0)	1.31	ND(1.0)	1.74			
93007-AD.1/98	01/06/98	Input	ND(1.0)	6.4	2.46	16.36	ND(1.0)	ND(1.0)	3.98	ND(1.0)	ND(1.0)	7.29	ND(1.0)	25.22	11.27		

TABLE 3. SVE System Air Sample Data from the Dowell Schlumberger Facility, Hobbs, New Mexico.

Sample I.D.	Date Sampled	Sample Location	Ethylbenzene	Toluene	Benzene	Xylene	Total (mg/m <sup>3</sup> )	1,1-DCE (mg/m <sup>3</sup> )	1,1-DCA (mg/m <sup>3</sup> )	Chloromethane (mg/m <sup>3</sup> )	1,1,1-TCA (mg/m <sup>3</sup> )	Vinyl Chloride (mg/m <sup>3</sup> )	PCE (mg/m <sup>3</sup> )	TCE (mg/m <sup>3</sup> )	BTEX (mg/m <sup>3</sup> )	Total Input	Total Output	Total Halocarbons (mg/m <sup>3</sup> )	
<b>FORMER UST</b>																			
007-AREA 3	11/02/94	Pilot	1.2	5.7	5.5	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	0.49	0.49		
Unit 3 (7/95) Input	7/13/95	Input	2.98	1.77	6.64	281	10.9	ND(0.2)	215	ND(0.2)	2.68	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	870	15.84	1379.58	
Unit 3 (7/95) Exhaust		Exhaust	2.89	1.41	0.72	7.88	0.27	ND(0.2)	17.2	ND(0.2)	0.87	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	2.76	12.9	21.1	
Unit 3 (8/95) Input	8/12/95	Input	0.4	1.9	0.9	4.9	506	15.6	ND(0.2)	579	ND(0.2)	2.1	ND(0.2)	ND(0.2)	ND(0.2)	636	8.1	1738.7	
Unit 3 (8/95) Exhaust		Exhaust	4.9	ND(0.2)	ND(0.2)	2.8	ND(0.2)	48	ND(0.2)	35	0.8	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	21.5	4.9	108.1	
Unit 3 Input 9/95-1	09/07/95	Input	ND(0.2)	ND(0.2)	ND(0.2)	593.4	13.3	ND(0.2)	492	ND(0.2)	2	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	444.4	0	1545.1	
Unit 3 Output 9/95-1		Exhaust	1.1	0.5	ND(0.2)	56.2	ND(0.2)	ND(0.2)	31.9	ND(0.2)	0.9	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	81.4	1.6	170.4	
Unit 3 Int	11/29/95	Before Cat	1.01	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	13	ND(0.2)	35.6	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	9.7	1.01	58.3	
Unit 3 Output		After Cat	1.01	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	13	ND(0.2)	10.5	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	14.5	1.01	41.21	
93007-TKShpExh.4/96	04/11/96	Input	ND(0.2)	0.9	0.5	3.4	99.4	ND(0.2)	ND(0.2)	254	ND(0.2)	1	ND(0.2)	ND(0.2)	ND(0.2)	611	4.8	965.4	
93007-TKShpExh.4/96		Exhaust	0.6	ND(0.2)	ND(0.2)	0.9	ND(0.2)	ND(0.2)	10.1	ND(0.2)	6.8	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	8.5	0.6	26.7	
93007-TSExHST.7/96	07/23/96	Input	ND(0.3)	ND(0.3)	ND(0.3)	47.1	4.8	ND(0.5)	ND(0.5)	ND(0.3)	0.5	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	46.2	0	98.6	
93007-TSExHST.7/96		Exhaust	0.4	ND(0.3)	ND(0.3)	1.3	ND(0.3)	ND(0.3)	6.6	ND(0.3)	2.2	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	2.8	0.4	12.9	
UST-INPU-T-10/96	10/24/96	Input	0.35	0.24	1.01	57.6	4.37	ND(0.2)	97.7	ND(0.2)	17.9	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.95	338.67		
UST-OUTPUT-10/96		Exhaust	4.83	ND(0.2)	ND(0.2)	ND(0.4)	ND(0.2)	ND(0.2)	4.86	ND(0.2)	2.59	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.62	4.83	8.87	
93007-UST-1NP-1/97	1/21/97	Input	ND(1.0)	ND(1.0)	ND(1.0)	30	2.8	ND(1.0)	63.3	ND(1.0)	0.58J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	205	0	301.1	
93007-UST-EXH-1/97		Exhaust	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	6.19	0	8.69	
93-007-UST-1NP-5/97	05/13/97	Input	ND(25.0)	ND(25.0)	ND(25.0)	ND(25.0)	ND(25.0)	ND(25.0)	ND(25.0)	ND(25.0)	41.8	ND(25.0)	ND(25.0)	ND(25.0)	ND(25.0)	155	0	196.8	
93-007-UST-COMP 6/97	06/25/97	Input	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	68.2	10.5	ND(1.0)	125	ND(1.0)	1.11	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	335	0	539.81
93007-UST-7/97	07/29/97	Input	ND(10.0)	ND(10.0)	ND(10.0)	ND(20.0)	10.4	ND(10.0)	ND(10.0)	30	ND(10.0)	148	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)	188.4	0	
93007-UST-1/98	01/06/98	Input	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	3.85J	ND(5.0)	ND(5.0)	8.25	ND(5.0)	102	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	110.25	0	

**INDIVIDUAL SVE WELLS**Notes: mg/m<sup>3</sup> = milligrams per cubic meter

ND=Not Detected at detection limit shown in parentheses.

DCA=Dichloroethane

DCE=Dichloroethene

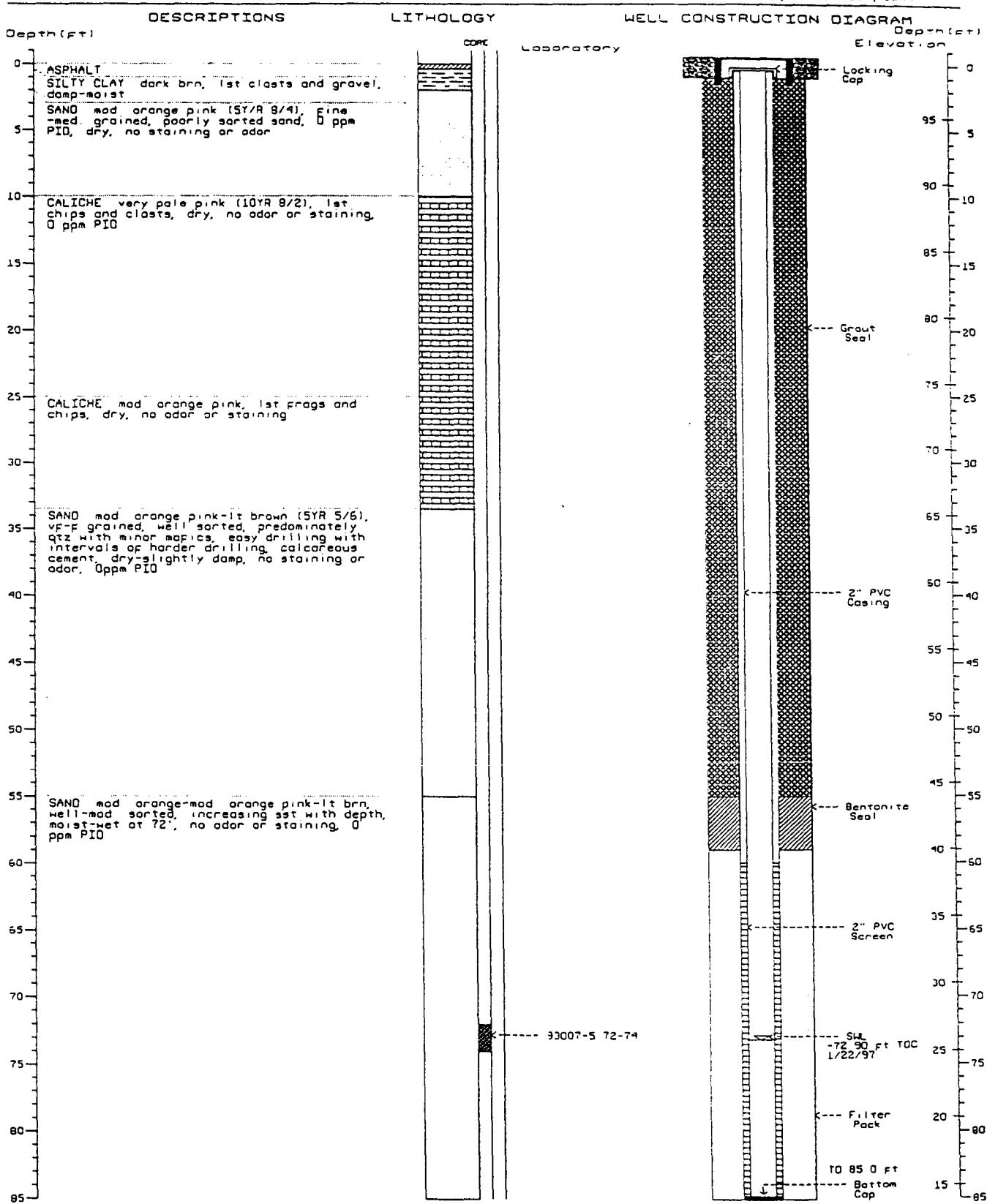
**APPENDIX A**

**WELL COMPLETION LOGS**

# MONITORING WELL 93007 MW-5

**LOCATION** Dowell Facility, Hobbs, New Mexico  
 In the road between sand silos and south property fence  
 1105 West Bender Boulevard  
**LOG** Western Water Consultants Inc (Kevin Matteson)  
**DRILLER** Eades Drilling (Allen Eades)  
**DRILLERS LICENSE No.** NA  
**INSTALLATION DATE** January 20, 1997

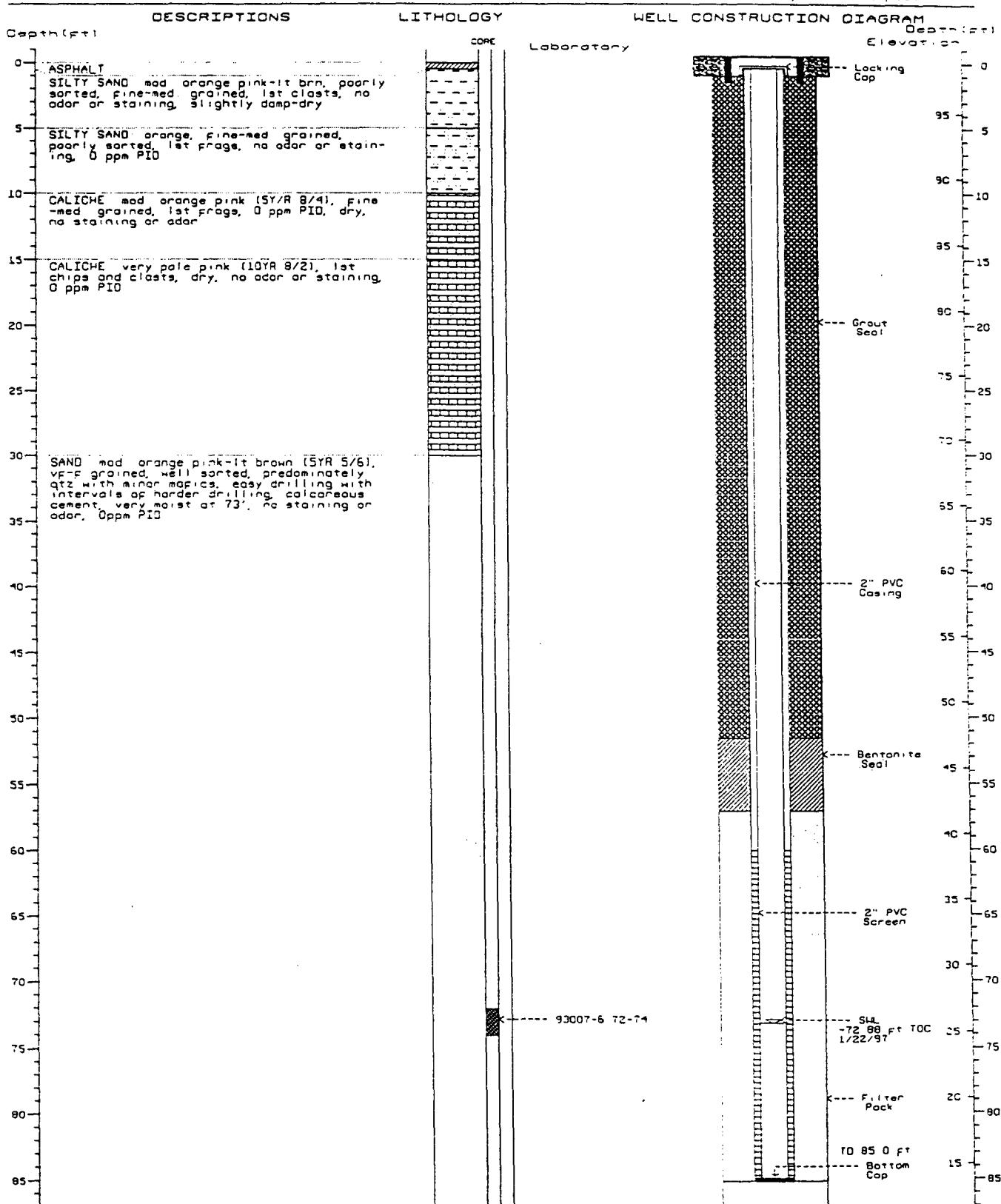
**WELL OWNER** Dowell Schlumberger (JN 93007 2)  
**DRILLING MET-CD** Air-Rotary, 6 1/8 in 00  
**CASING** 2 in Dia. Flush Joint Sch 40 PVC  
**SCREEN** Filtered Slotted Casing, 0 D20 in  
**FILTER PACK** 8/16 Mesh Silica Sand  
**TOP OF CASING ELEVATION** 98.79 Feet  
 (Reference Datum Arbitrary = 100.00 Feet)



# MONITORING WELL 93007 MW-6

LOCATION Dowell Facility, Hobbs, New Mexico  
 In southwest corner of the property  
 1105 West Bender Boulevard  
 LOG Western Water Consultants Inc (Kevin Mattson)  
 DRILLER Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No. NA  
 INSTALLATION DATE January 20, 1997

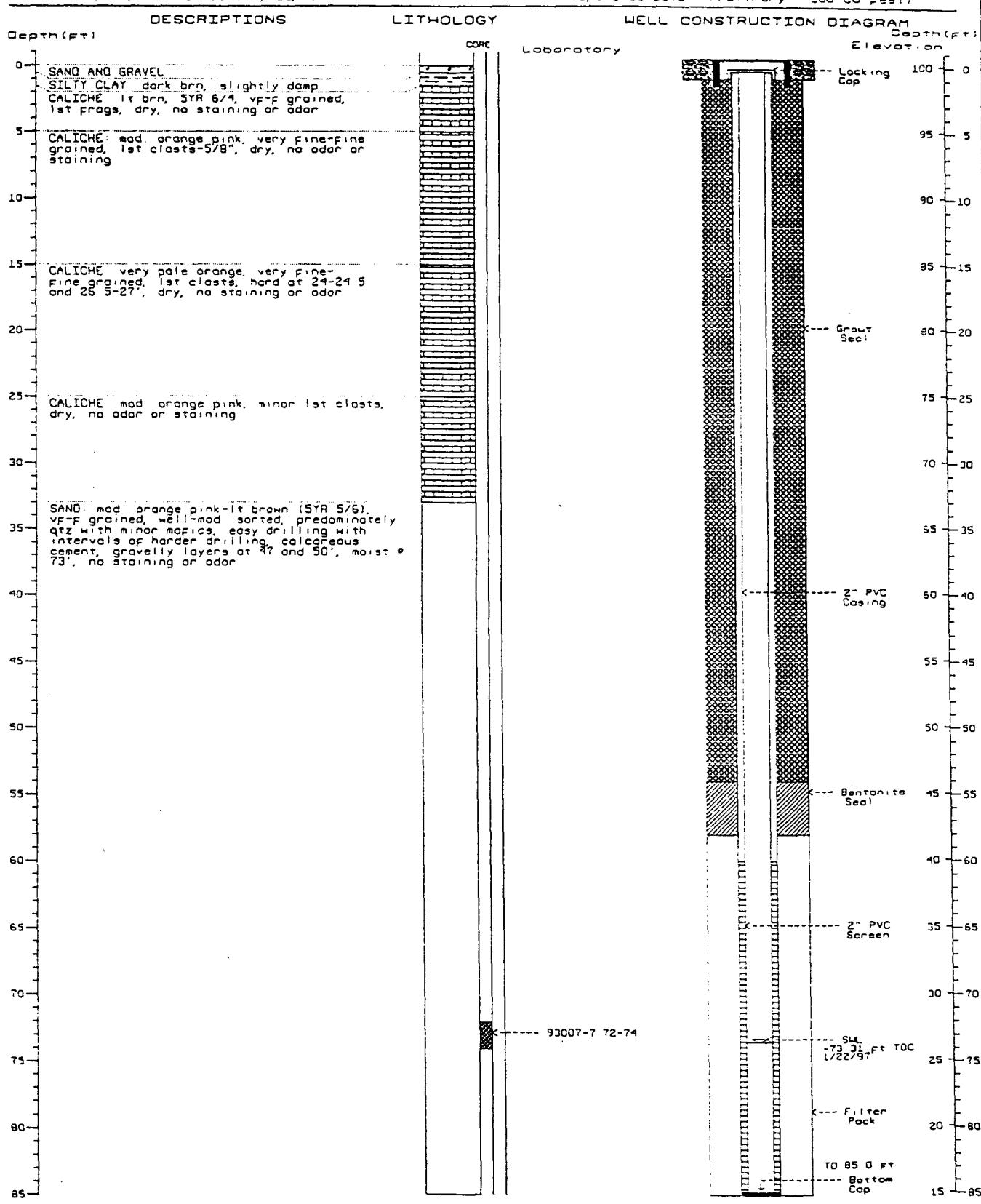
WELL OWNER Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD Air Rotary, 6 1/8 in. OD  
 CASING 2 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN Filter, Slotted Casing, 0.020 in.  
 FILTER PACK 3/16 Mesh Silica Sand  
 TOP OF CASING ELEVATION 98.61 feet  
 (Reference Datum Arbitrary = 100.00 feet)



# MONITORING WELL 93007 MW-7

LOCATION Dowell Facility, Hobbs, New Mexico  
 Near the south end of the truck scales  
 1105 West Bender Boulevard  
 LOG Western Water Consultants Inc (Kevin Mattson)  
 DRILLER Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No. NA  
 INSTALLATION DATE January 21, 1997

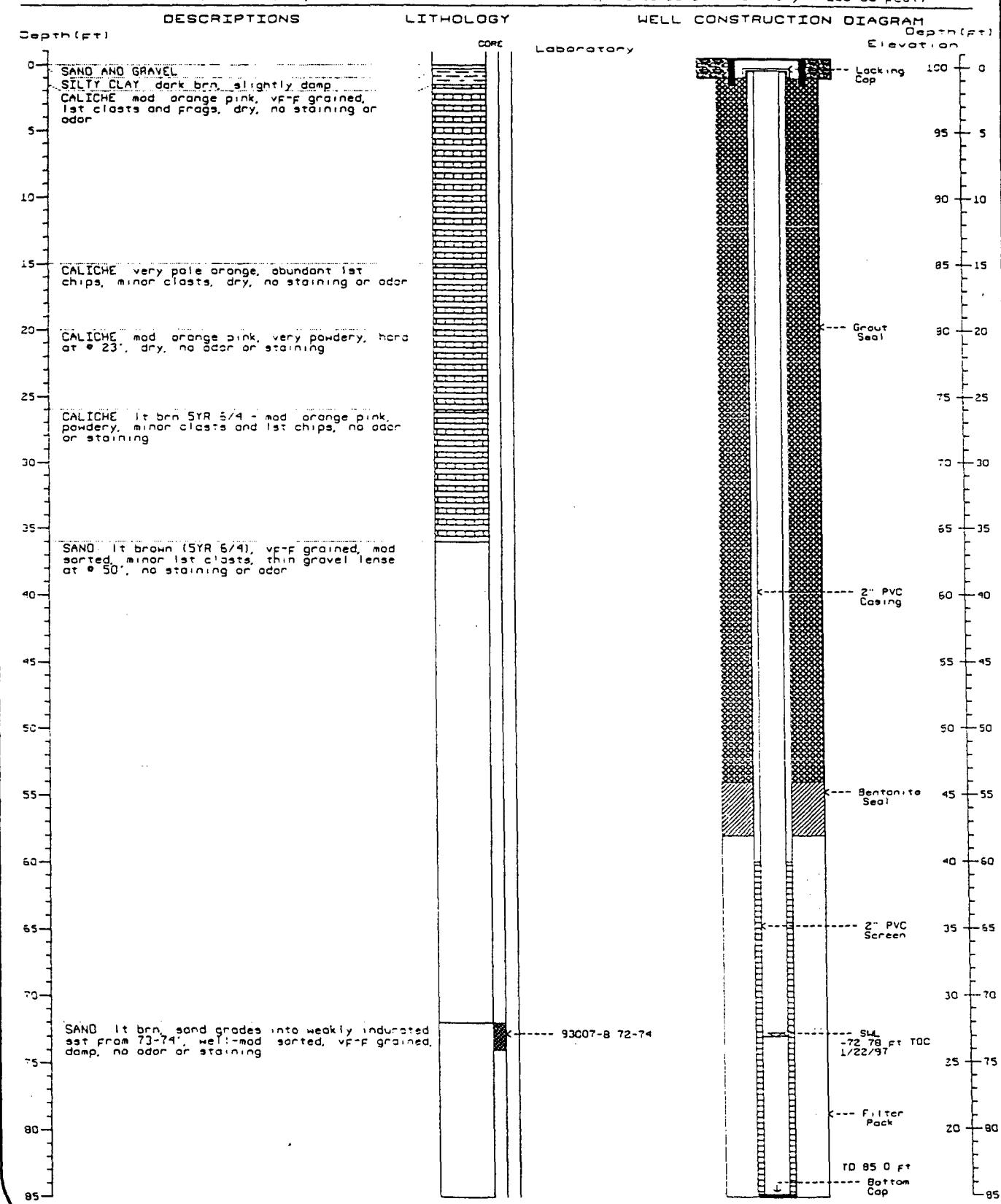
WELL OWNER Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD Air Rotary, 6 1/8 in. 00  
 CASING 2 in. C or Flush Joint Sch. 40 PVC  
 SCREEN Factory Slotted Casing, 0.020 in.  
 FILTER PACK 3/16 Mesh Silica Sand  
 TOP OF CASING ELEVATION 99.71 feet  
 (Reference Datum Arbitrary = 100.00 feet)



# MONITORING WELL 93007 MW-8

LOCATION Dowell Facility, Hobbs, New Mexico  
 Near the north end of the truck scales  
 1105 West Bender Boulevard  
 LOG Western Water Consultants Inc (Kevin Mattson)  
 DRILLER Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No. NA  
 INSTALLATION DATE January 21, 1997

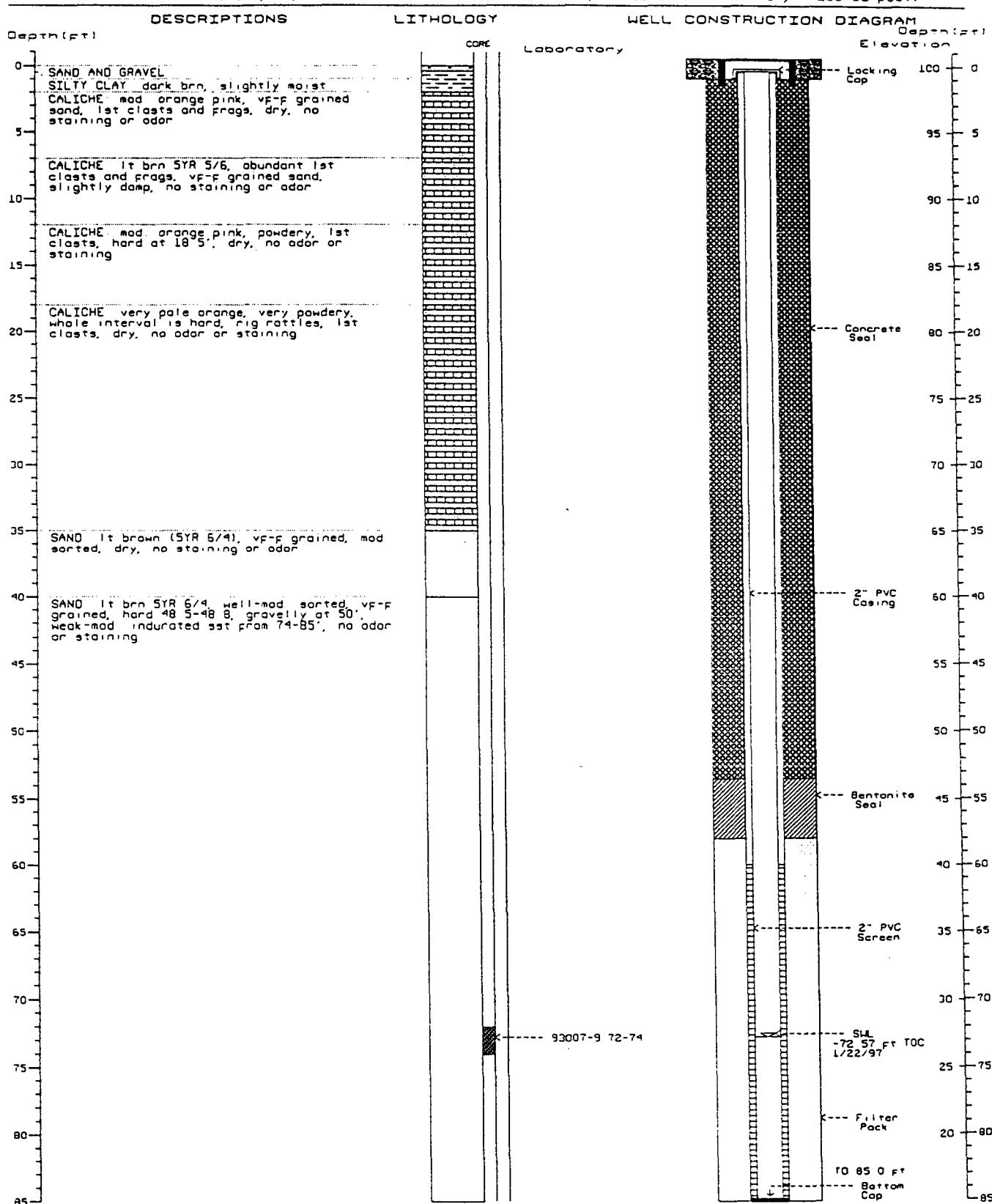
WELL OWNER Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD Air Rotary, 6 1/8 in. 00  
 CASING 2 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN Factory Slotted Casing, 0.020 in.  
 FILTER PACK 3/16 Mesh Silica Sand  
 TOP OF CASING ELEVATION 99.80 Feet  
 (Reference Datum Arbitrary = 100.00 feet)



# MONITORING WELL 93007 MW-9

LOCATION Dowell Facility, Hobbs, New Mexico  
 Northeast corner of the property  
 1105 West Bender Boulevard  
 LOG Western Water Consultants Inc (Kevin Mattson)  
 DRILLER Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No. NA  
 INSTALLATION DATE January 21, 1997

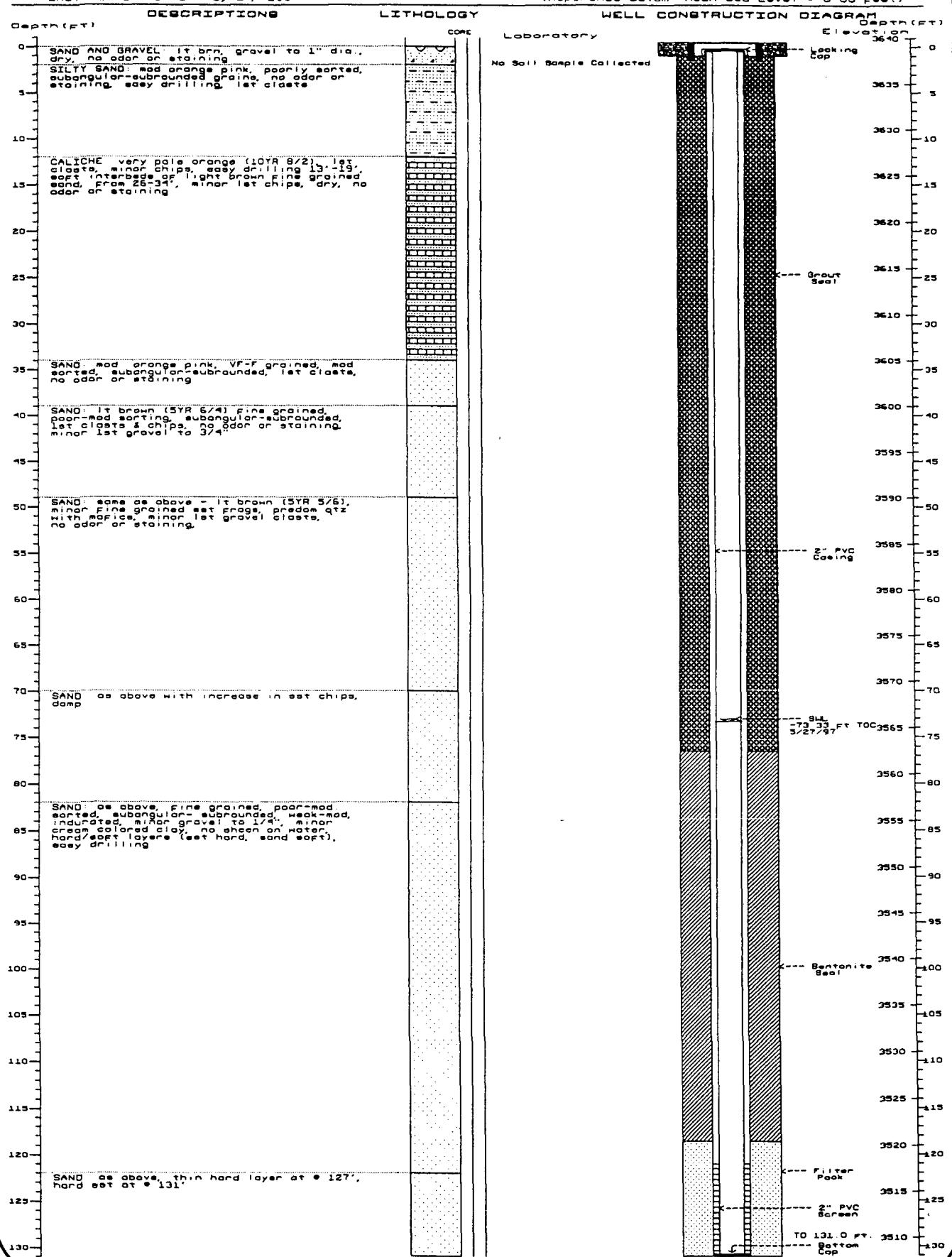
WELL OWNER Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD Air Rotary, 6 1/8 in. 00  
 CASING 2 in. Old Flush Joint Sch. 40 PVC  
 SCREEN Factory Slotted Casing, 0.020 in.  
 FILTER PACK 8/16 Mesh Silica Sand  
 TOP OF CASING ELEVATION 99.85 feet  
 (Reference Datum Arbitrary = 100.00 feet)



# MONITORING WELL 93007 MW-10

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Next to MW-8  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Matteon)  
 DRILLER: Eddes Drilling (Allen Eddes)  
 DRILLERS LICENSE No. NA  
 INSTALLATION DATE May 24, 1997

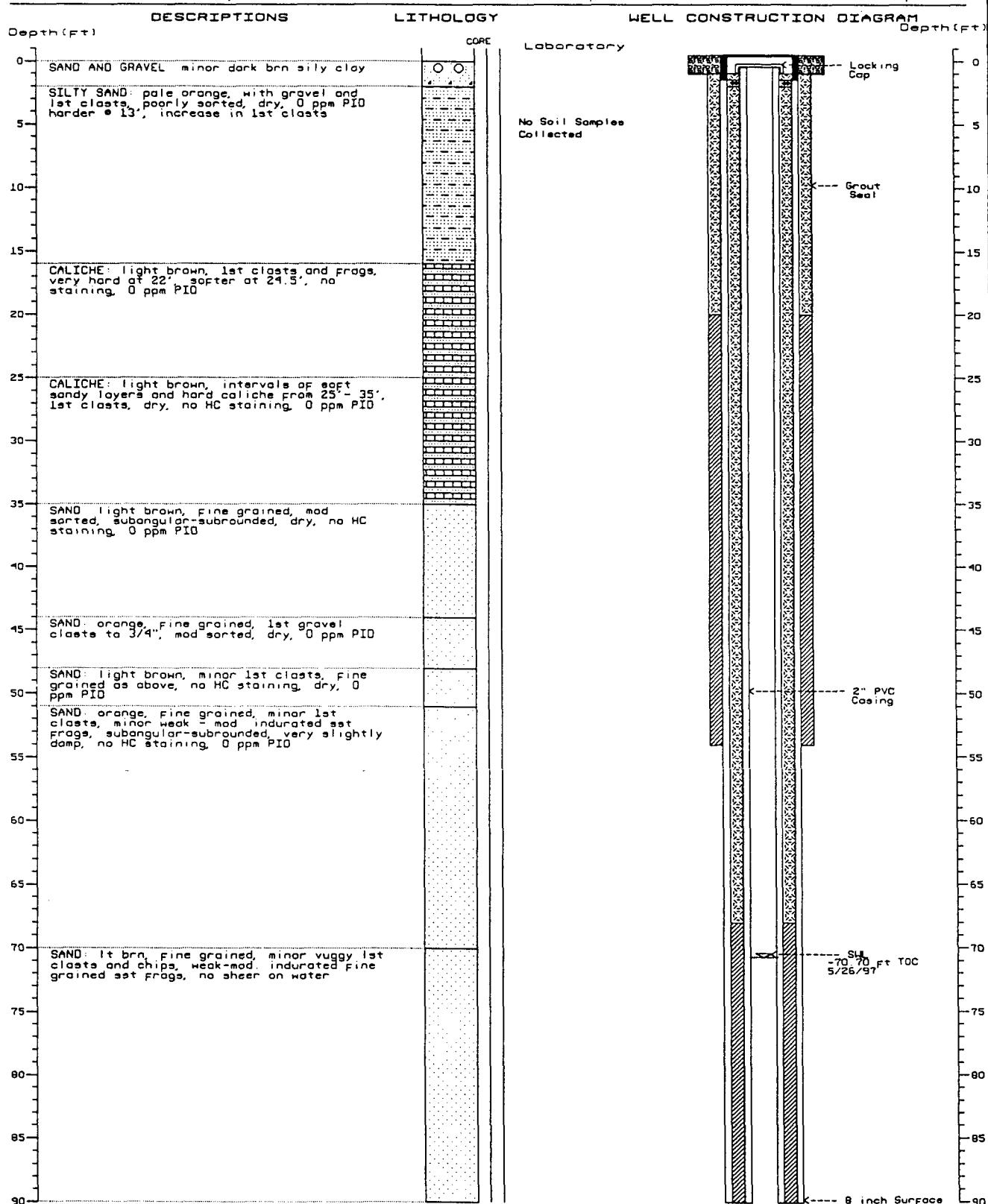
WELL OWNER: Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. 00  
 CASING: 2 in. Old Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing: 0.020 in.  
 FILTER PACK: 12/20 Mesh Silica Sand  
 TOP OF CASING ELEVATION: 3638.86 Feet  
 (Reference Datum: Mean Sea Level = 0.00 Feet)



# MONITORING WELL 93007 MW-11

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Next to MW-1  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 14, 1997

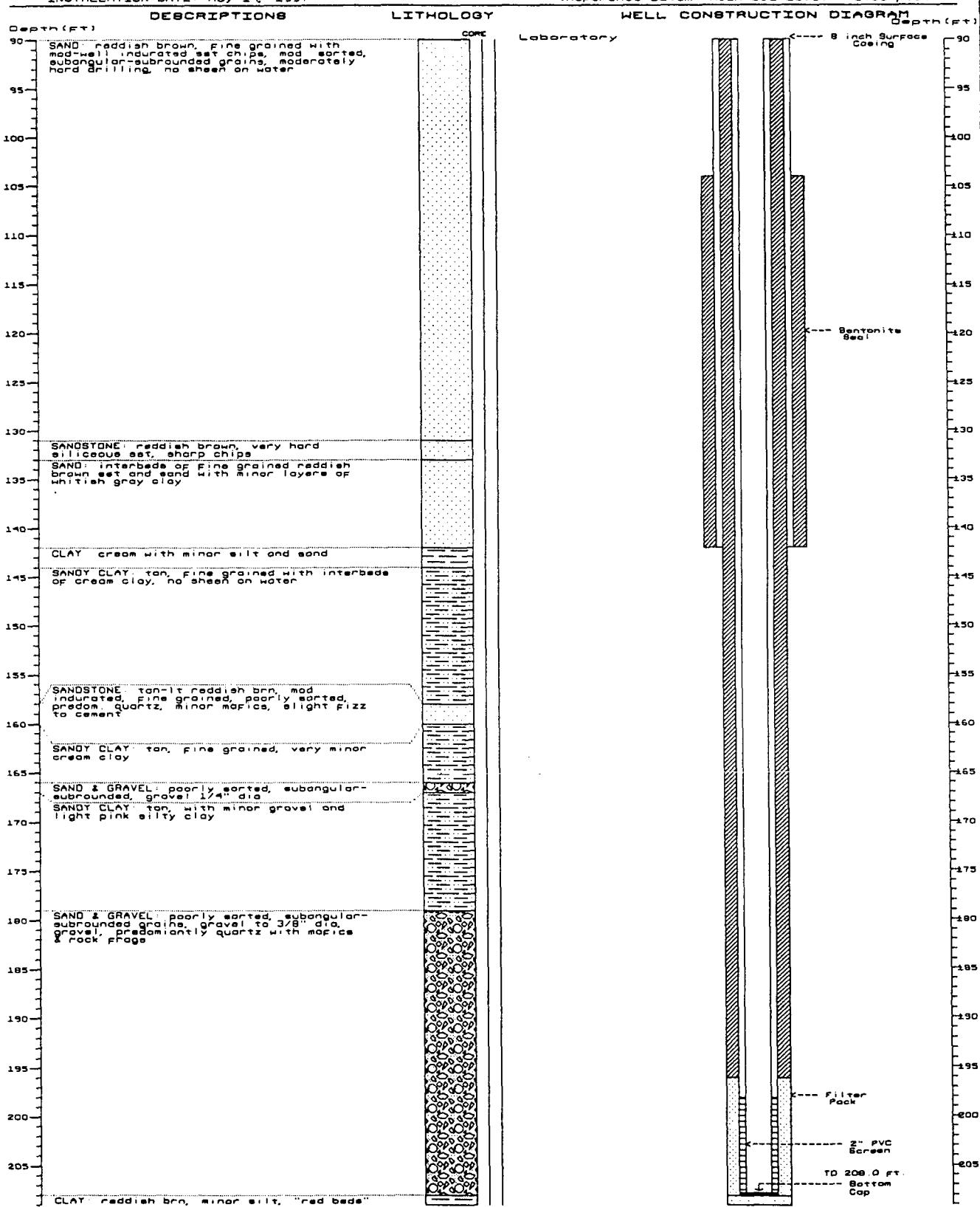
WELL OWNER: Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. 00  
 CASING: 2 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing, 0.020 in.  
 FILTER PACK: 12/20 Mesh Silica Sand  
 TOP OF CASING ELEVATION: 3638.55 feet  
 (Reference Datum: Mean Sea Level = 0.00 feet)



### MONITORING WELL 93007 MW-11 Continued

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Next to MW-11  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Matteon)  
 DRILLER: Eddes Drilling (Allen Eddes)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 14, 1997

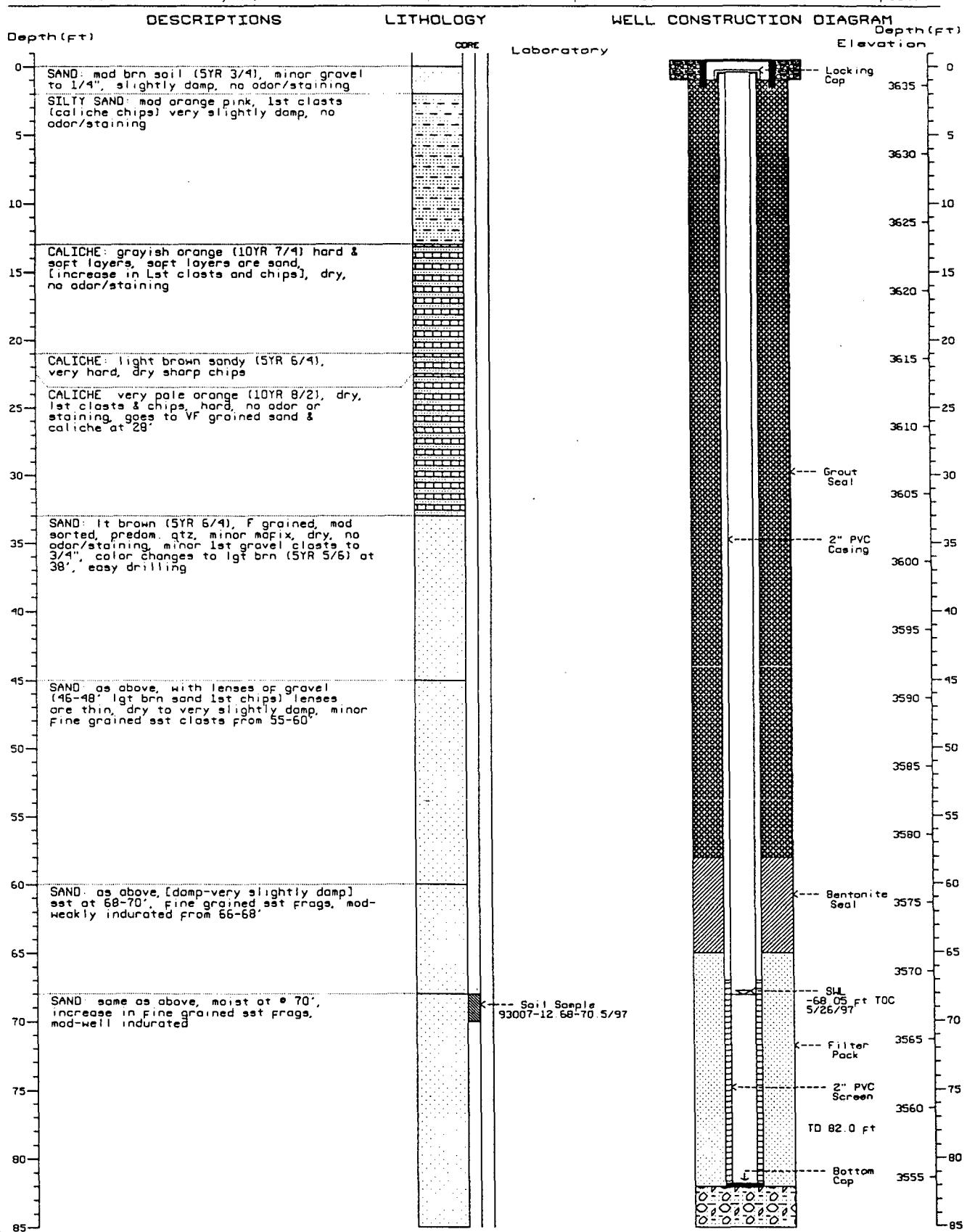
WELL OWNER: Dowell Schlumberger (UN 93007 2)  
 DRILLING METHOD: Air Rotating, 1/8" I.D.  
 CASING: 2" I.D. Drill Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing, 0.020 in.  
 FILTER PACK: 12/20 Mesh Silica Sand  
 TOP OF CASING ELEVATION: 3638.55 Feet  
 (Reference Datum: Mean Sea Level = 0.00 Feet)



# MONITORING WELL 93007 MW-12

LOCATION Dowell Facility, Hobbs, New Mexico  
 SW corner of yard  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 23, 1997

WELL OWNER: Dowell Schlumberger (JN 93007 2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. OD  
 CASING: 2 in. Dia. Flush Joint Sch 40 PVC  
 SCREEN: Factory Slotted Casing, 0 D20 in  
 FILTER PACK: 12/20 Mesh Silica Sand  
 TOP OF CASING ELEVATION: 3636.15 feet  
 (Reference Datum: Mean Sea Level = 0.00 feet)

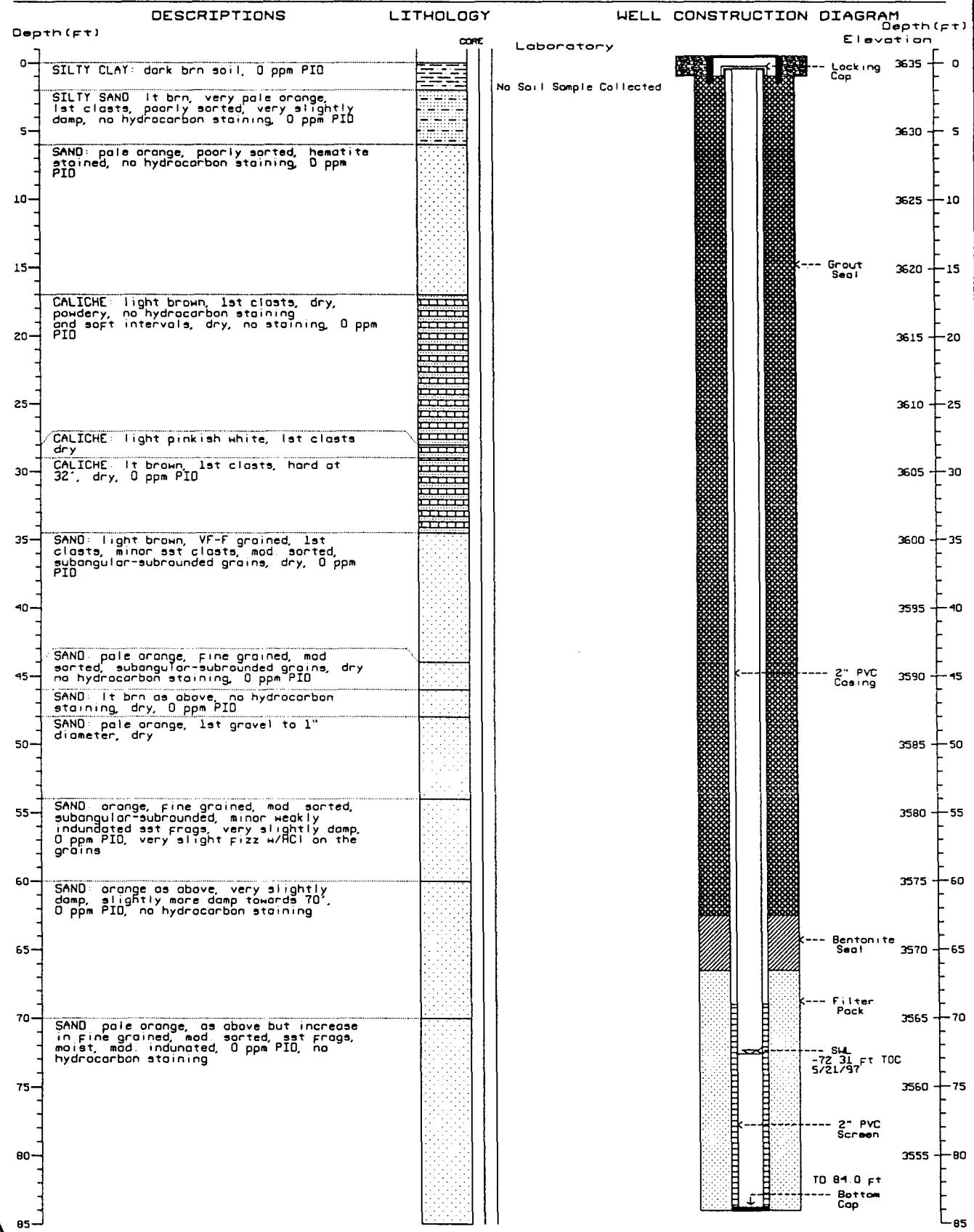


# MONITORING WELL 93007 MW-13

LOCATION: Dowell Facility, Hobbs, New Mexico  
T18S, R38E, Sec 21, SE1/4

LOG: Western Water Consultants Inc (Kevin Mattson)  
DRILLER: Eades Drilling (Allen Eades)  
DRILLERS LICENSE No.: NA  
INSTALLATION DATE: May 14, 1997

WELL OWNER: Dowell Schlumberger (JN 93007 2)  
DRILLING METHOD: Air Rotary, 6 1/8 in OD  
CASING: 2 in Dia. Flush Joint Sch 40 PVC  
SCREEN: Factory Slotted Casing; 0.020 in  
FILTER PACK: 12/20 Mesh Silica Sand  
TOP OF CASING ELEVATION: 3635.39 feet  
(Reference Datum: Mean Sea Level = 0.00 feet)

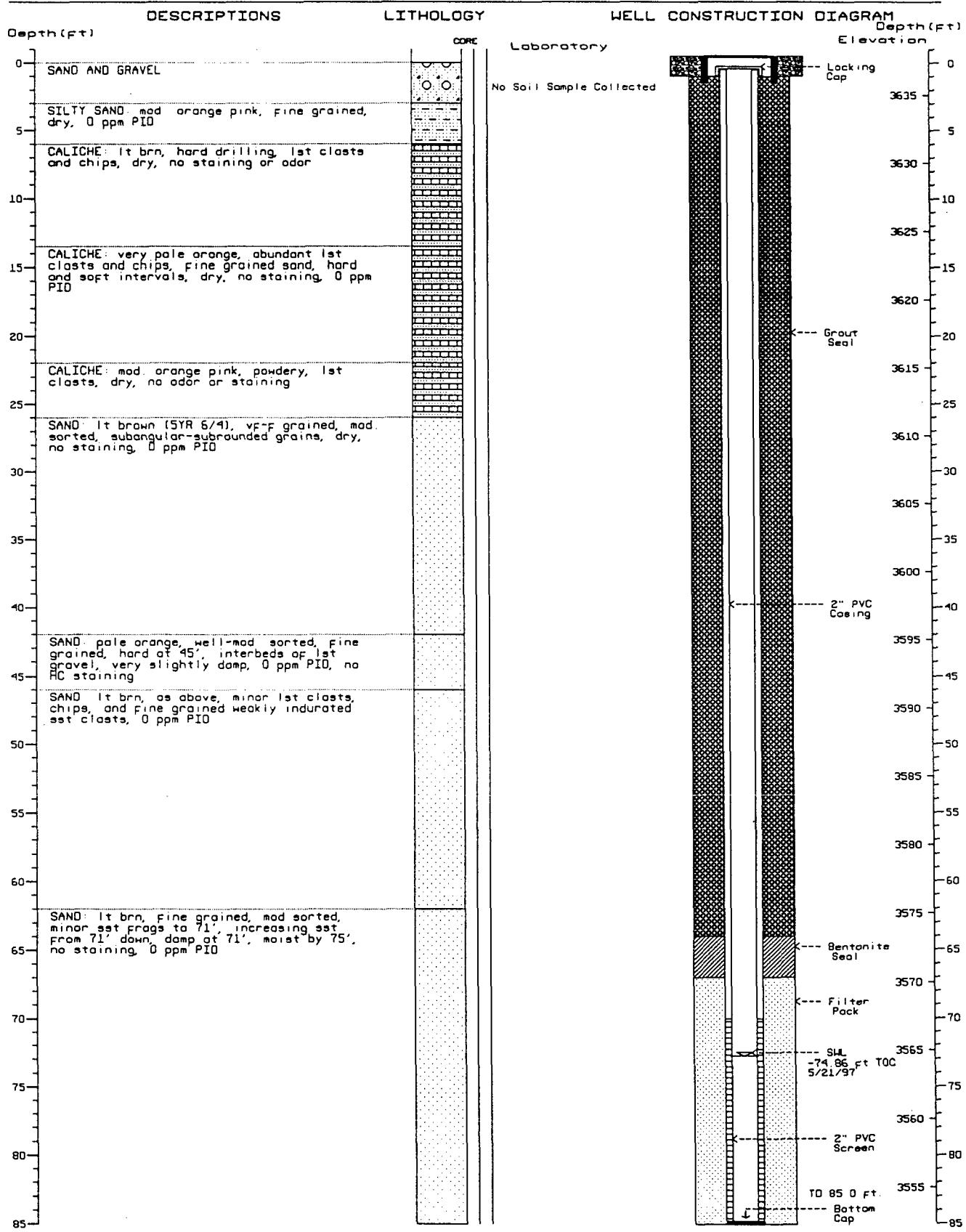


# MONITORING WELL 93007 MW-14

LOCATION: Dowell Facility, Hobbs, New Mexico  
T18S, R38E, Sec 21, SE.

LOG Western Water Consultants Inc. (Kevin Mattson)  
DRILLER: Eades Drilling (Allen Eades)  
DRILLERS LICENSE No.: NA  
INSTALLATION DATE May 14, 1997

WELL OWNER: Dowell Schlumberger (JN 93007 2)  
DRILLING METHOD: Air Rotary, 6 1/8 in. OD  
CASING: 2 in Dia. Flush Joint Sch 40 PVC  
SCREEN: Factory Slotted Casing, 0.020 in  
FILTER PACK: 12/20 Mesh Silica Sand  
TOP OF CASING ELEVATION: 3637.19 feet  
(Reference Datum: Mean Sea Level = 0.00 feet)

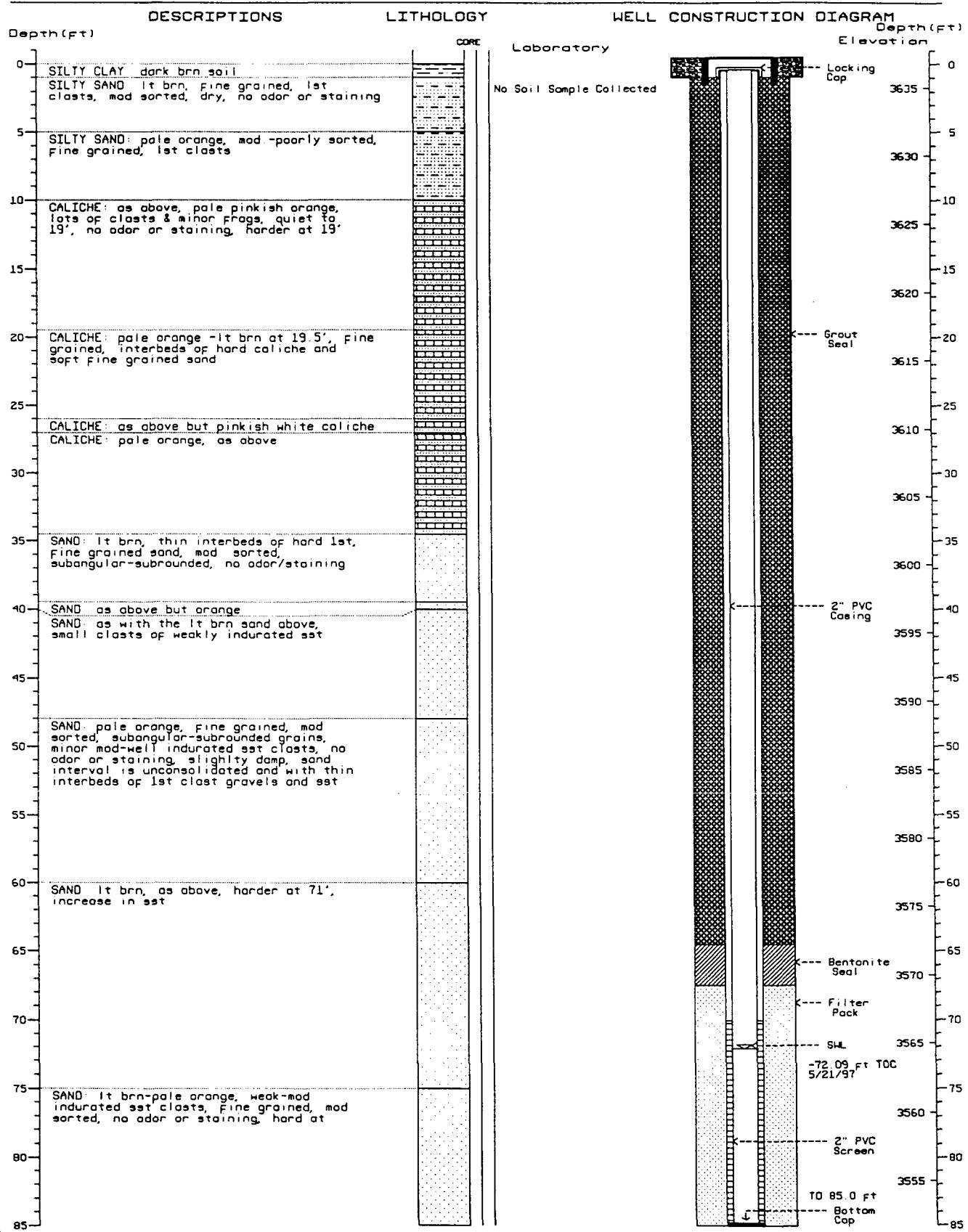


# MONITORING WELL 93007 MW-15

LOCATION Dowell Facility, Hobbs, New Mexico  
T18S, R38E, Sec 21, SE.

LOG: Western Water Consultants Inc (Kevin Mattson)  
DRILLER: Eades Drilling (Allen Eades)  
DRILLERS LICENSE No NA  
INSTALLATION DATE May 13, 1997

WELL OWNER: Dowell Schlumberger (JN 93007 2)  
DRILLING METHOD: Air Rotary, 6 1/8 in OD  
CASING: 2 in. Dia. Flush Joint Sch 40 PVC  
SCREEN: Factory Slotted Casing, 0.020 in  
FILTER PACK: 12/20 Mesh Silica Sand  
TOP OF CASING ELEVATION 3636.57 Feet  
(Reference Datum Mean Sea Level = 0.00 feet)



# SOIL VAPOR EXTRACTION WELL 1-7

LOCATION: Dowell Schlumberger Facility, Hobbs, NM

1105 West Bender Boulevard

LOG: Western Water Consultants Inc. (Kevin Mattson)

DRILLER: Eades Drilling (Alan Eades)

DRILLERS LICENSE No.: NA

INSTALLATION DATE: May 12, 1997

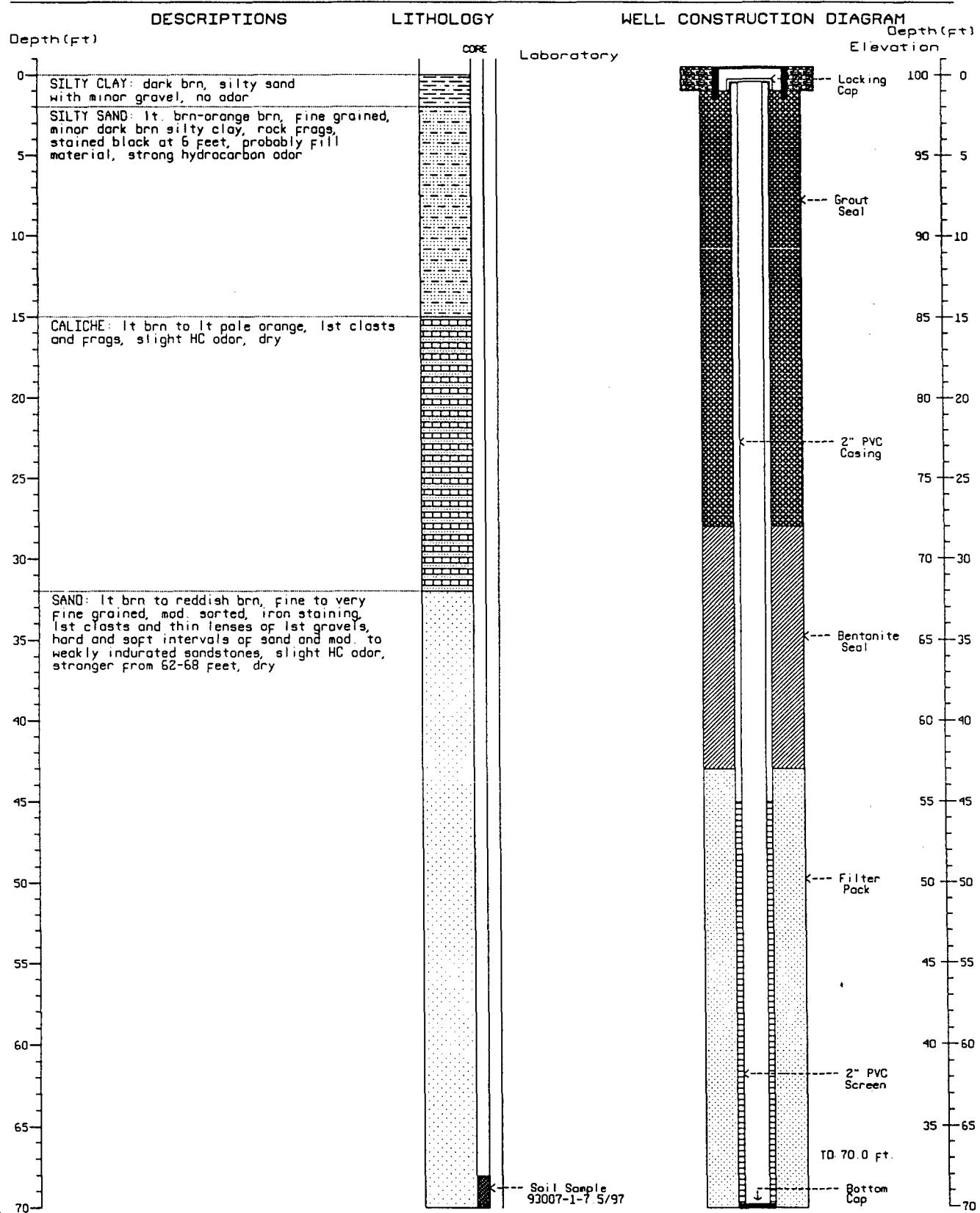
WELL OWNER: Dowell Schlumberger (JN 93007)

DRILLING METHOD: Ingersoll Rand, 6 1/8 in. OD

CASING: 2 in Dia. Flush Joint Sch 40 PVC

SCREEN: Factory Slotted Casing; 0.020 in.

FILTER PACK: 12/20 Mesh Silica Sand

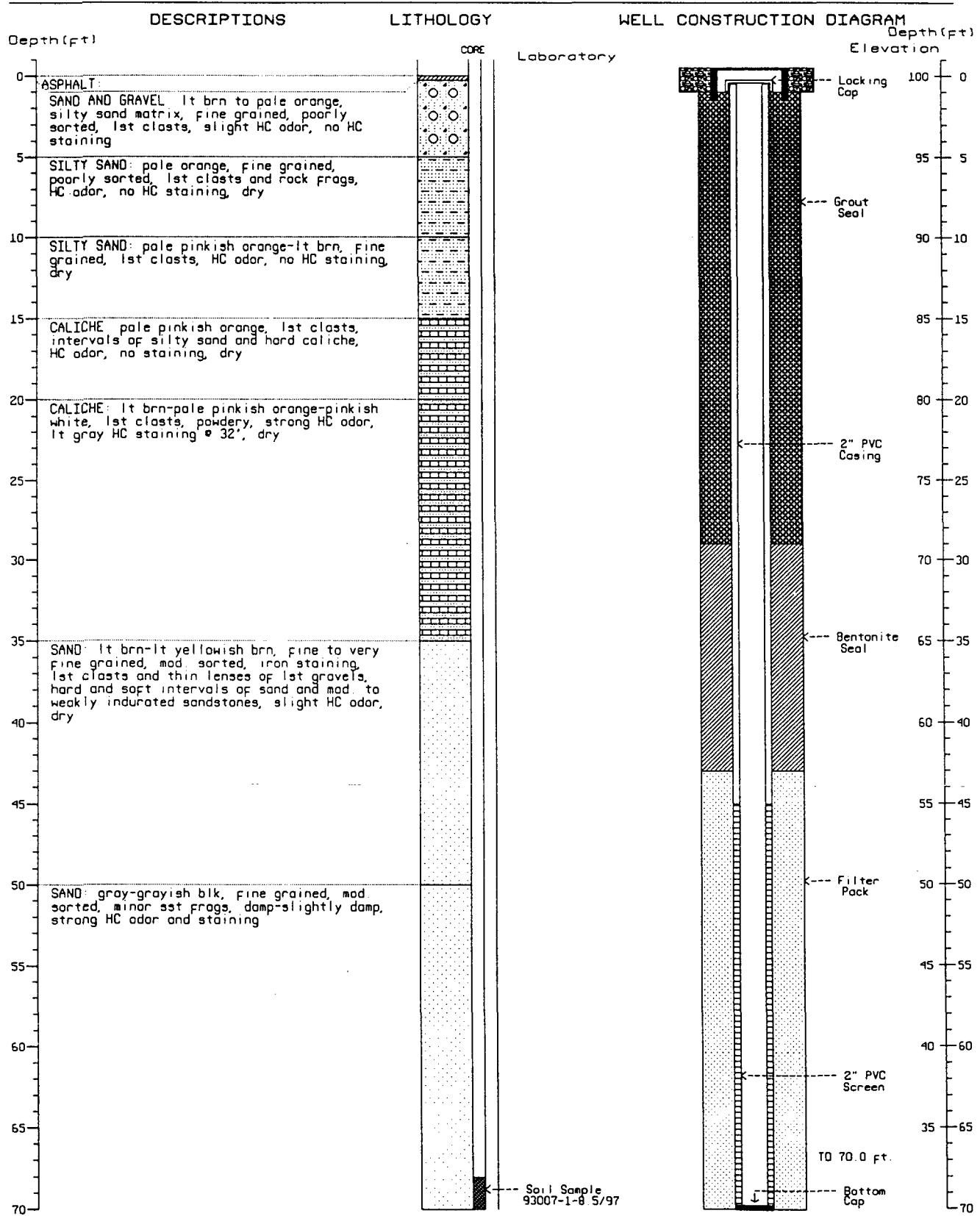


# SOIL VAPOR EXTRACTION WELL 1-8

LOCATION: Dowell Schlumberger Facility, Hobbs, NM  
1105 West Bender Boulevard

LOG: Western Water Consultants Inc. (Kevin Mattson)  
DRILLER Eades Drilling (Alan Eades)  
DRILLERS LICENSE No.: NA  
INSTALLATION DATE May 12, 1997

WELL OWNER: Dowell Schlumberger (JN 93007)  
DRILLING METHOD: Ingersoll Rand, 6 1/8 in. 00  
CASING: 2 in. Dia. Flush Joint Sch. 40 PVC  
SCREEN: Factory Slotted Casing: 0.020 in  
FILTER PACK: 12/20 Mesh Silica Sand

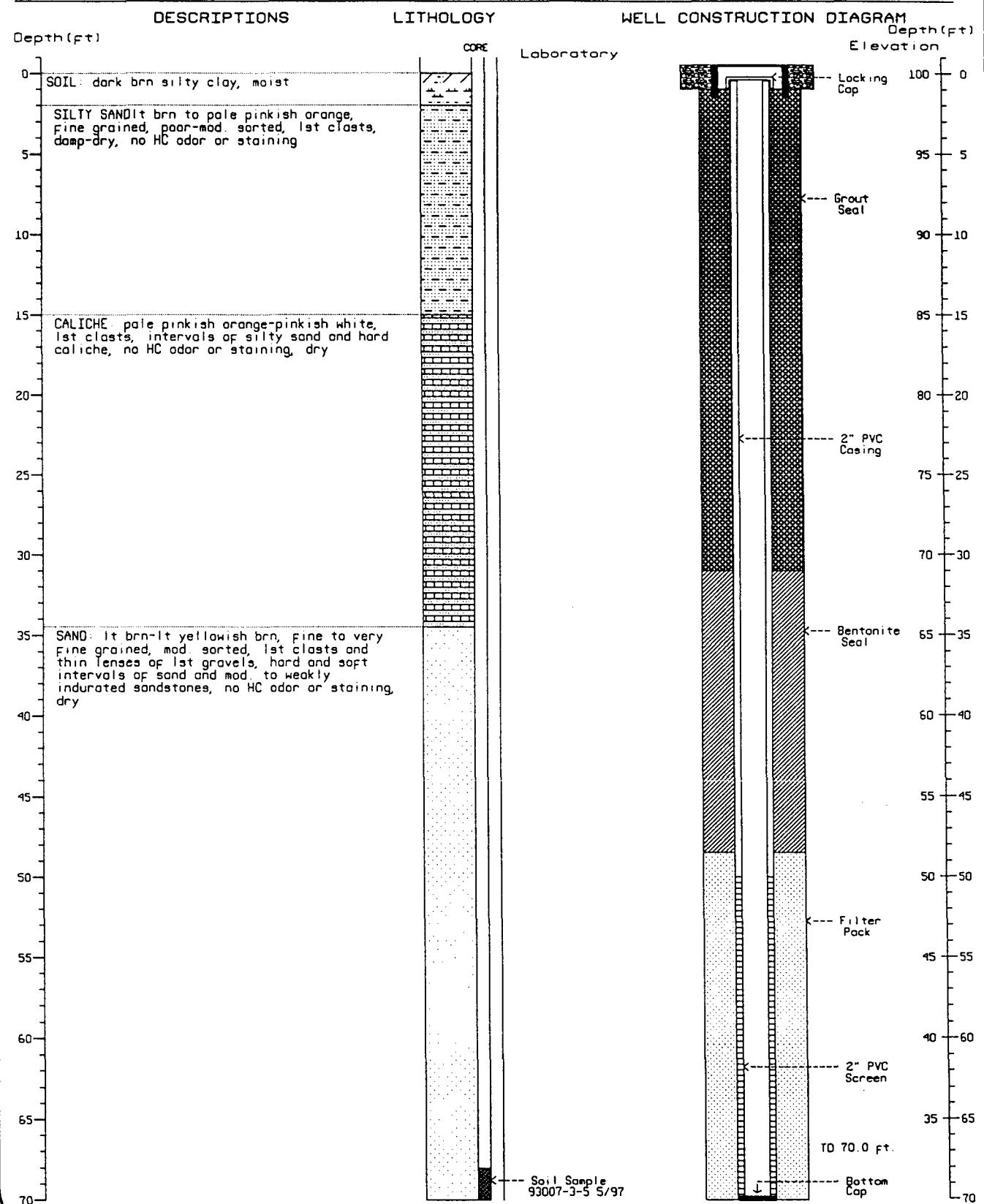


# SOIL VAPOR EXTRACTION WELL 3-5

LOCATION: Dowell Schlumberger Facility, Hobbs, NM  
1105 West Bender Boulevard

LOG: Western Water Consultants Inc. (Kevin Mattson)  
DRILLER: Eades Drilling (Alan Eades)  
DRILLERS LICENSE No.: NA  
INSTALLATION DATE: May 12, 1997

WELL OWNER: Dowell Schlumberger (JN 93007)  
DRILLING METHOD: Ingersoll Rand, 6 1/8 in. OD  
CASING: 2 in. Dia. Flush Joint Sch. 40 PVC  
SCREEN: Factory Slotted Casing; 0.020 in  
FILTER PACK: 12/20 Mesh Silica Sand

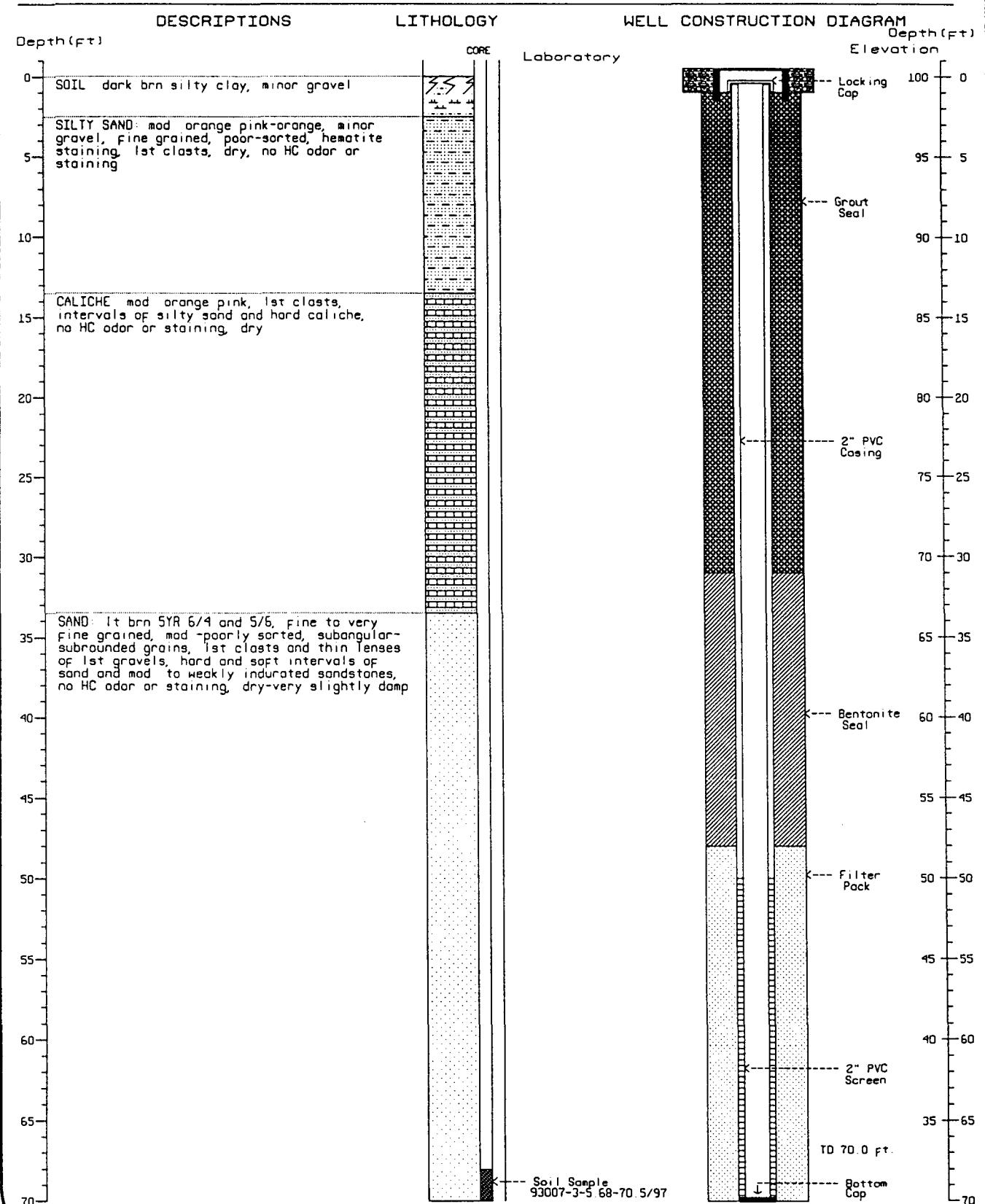


# SOIL VAPOR EXTRACTION WELL 3-6

LOCATION: Dowell Schlumberger Facility, Hobbs, NM  
1105 West Bender Boulevard

LOG: Western Water Consultants Inc (Kevin Mattson)  
DRILLER: Eades Drilling (Alan Eades)  
DRILLERS LICENSE No. NA  
INSTALLATION DATE May 25, 1997

WELL OWNER: Dowell Schlumberger (JN 93007)  
DRILLING METHOD: Ingersoll Rand, 6 1/8 in. 00  
CASING: 2 in. Dia. Flush Joint Sch. 40 PVC  
SCREEN: Factory Slotted Casing; 0.020 in.  
FILTER PACK: 12/20 Mesh Silica Sand

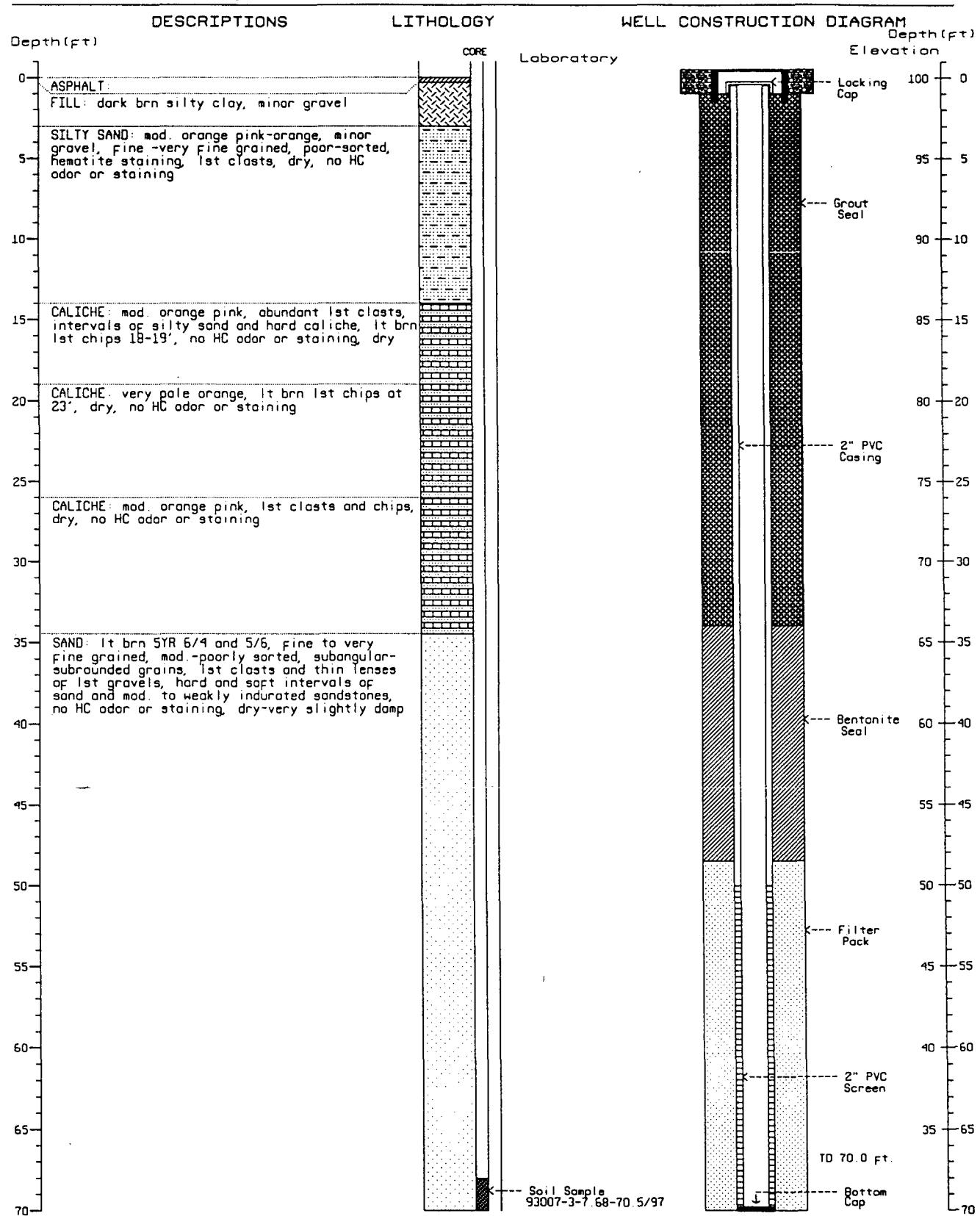


# SOIL VAPOR EXTRACTION WELL 3-7

LOCATION: Dowell Schlumberger facility, Hobbs, NM  
1105 West Bender Boulevard

LOG: Western Water Consultants Inc. (Kevin Mattson)  
DRILLER: Eades Drilling (Alan Eades)  
DRILLERS LICENSE No. NA  
INSTALLATION DATE May 24, 1997

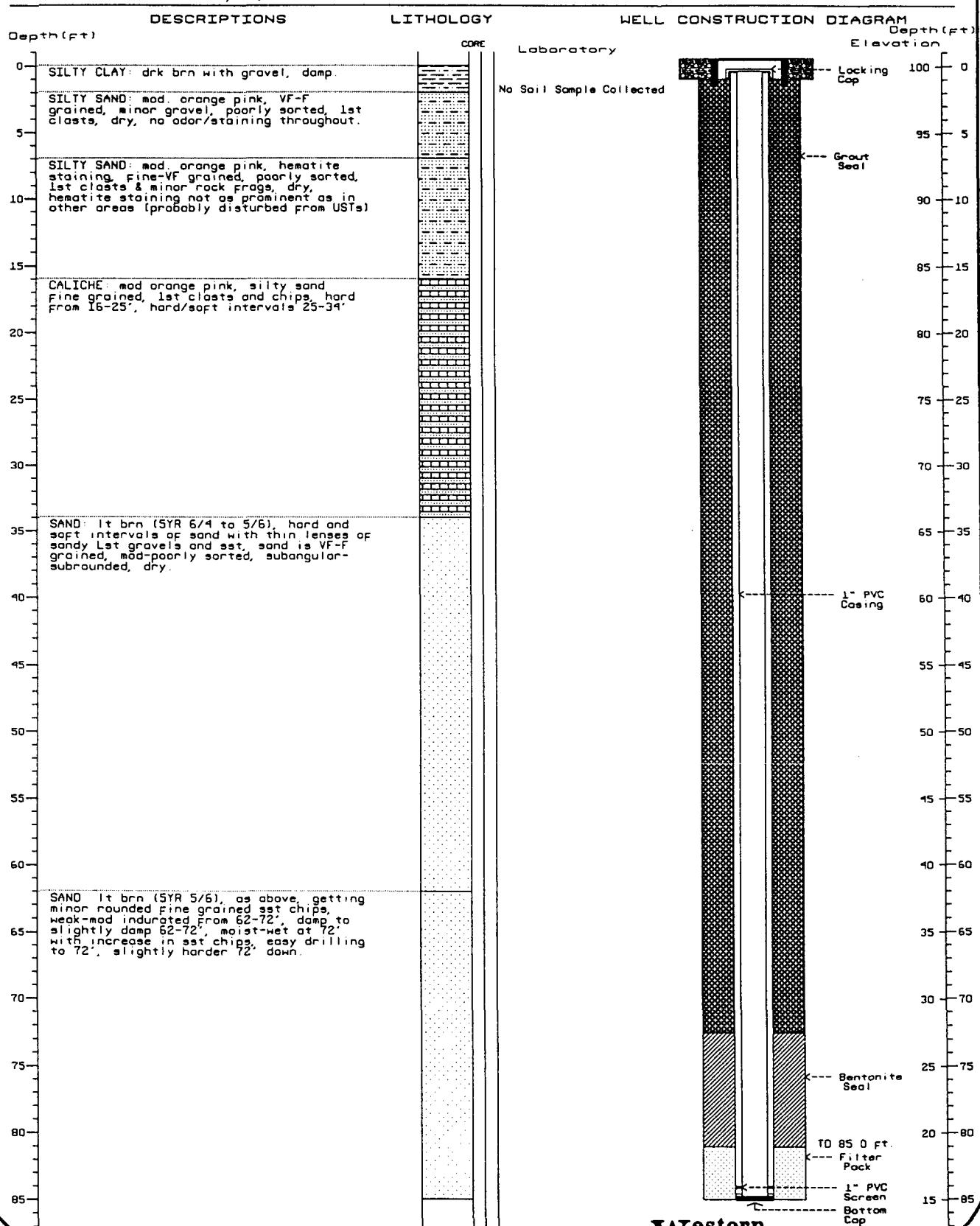
WELL OWNER: Dowell Schlumberger (JN 93007)  
DRILLING METHOD: Ingersoll Rand, 6 1/8 in.  
CASING: 2 in Dia. Flush Joint Sch. 40 PVC  
SCREEN: Factory Slotted Casing, 0.020 in  
FILTER PACK 12/20 Mesh Silica Sand



# AIR SPARGING WELL 93007 AS-1

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Former UST area  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 25, 1997

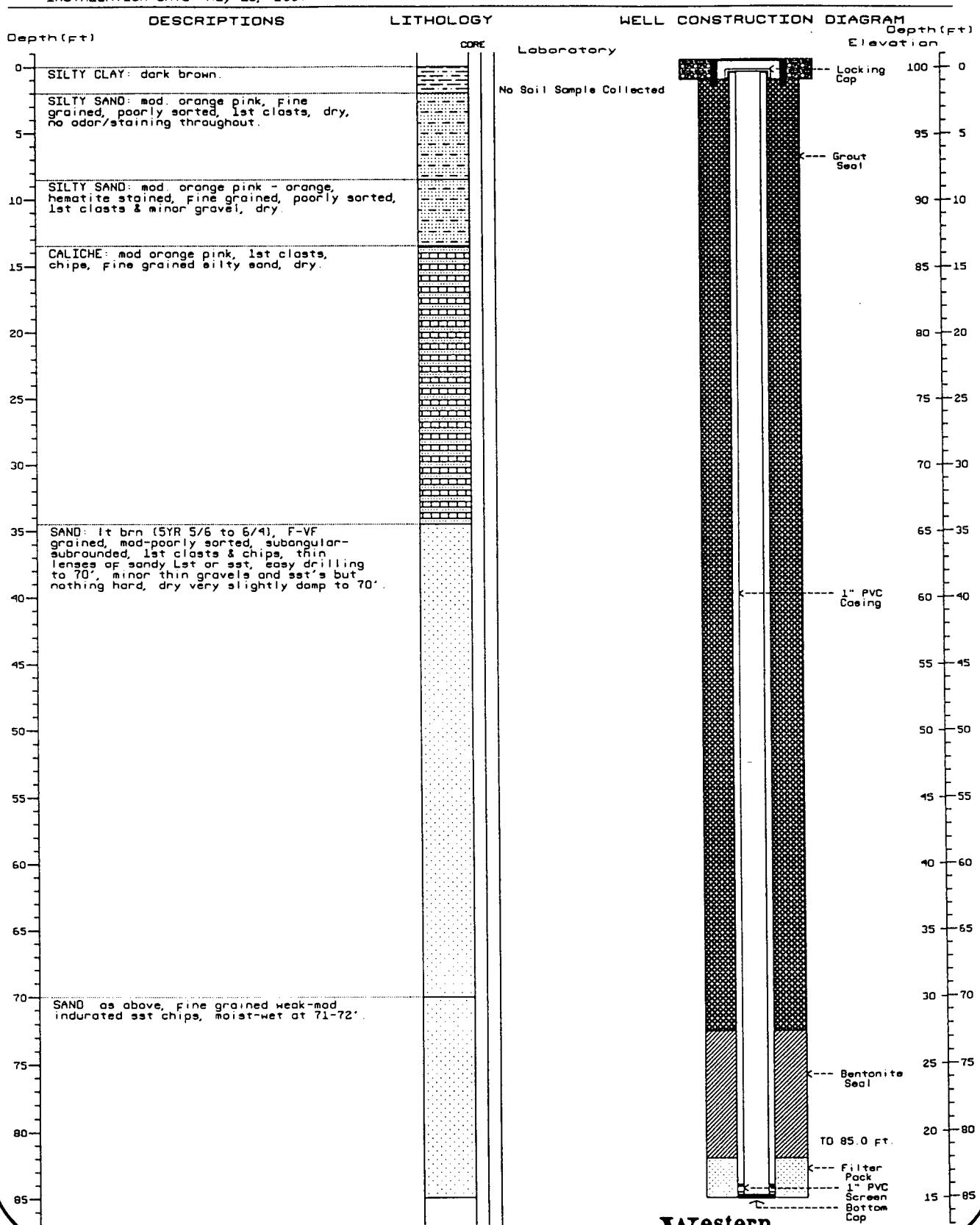
WELL OWNER: Dowell Schlumberger (JN 93007.2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in OD  
 CASING: 1 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing; 0.020 in.  
 FILTER PACK: 8/16 Mesh Silica Sand



# AIR SPARGING WELL 93007 AS-2

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Former UST area  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 26, 1997

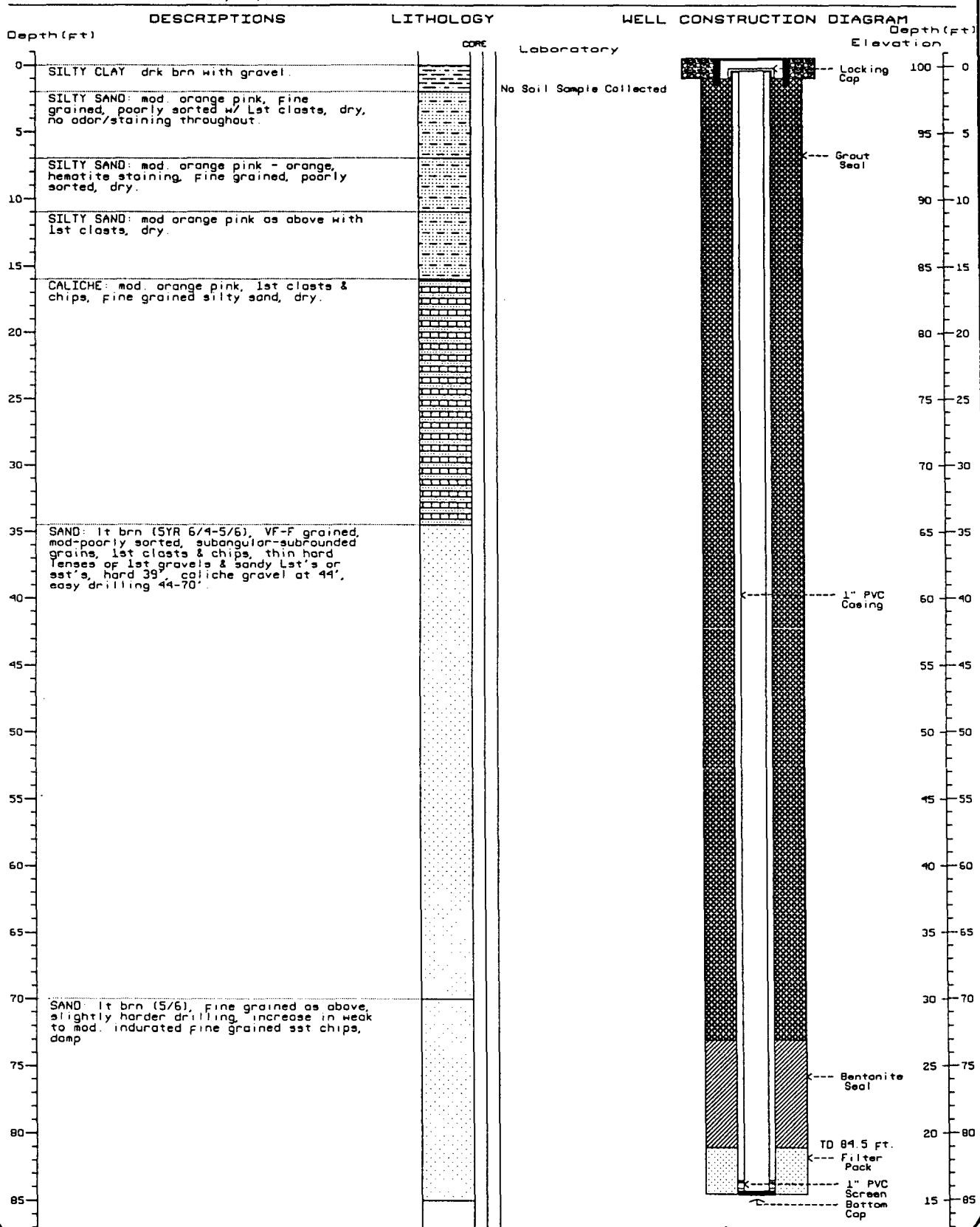
WELL OWNER: Dowell Schlumberger (JN 93007.2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. OD PVC  
 CASING: 1 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing; 0.020 in.  
 FILTER PACK: 8/16 Mesh Silica Sand



# AIR SPARGING WELL 93007 AS-3

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Former UST area  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 26, 1997

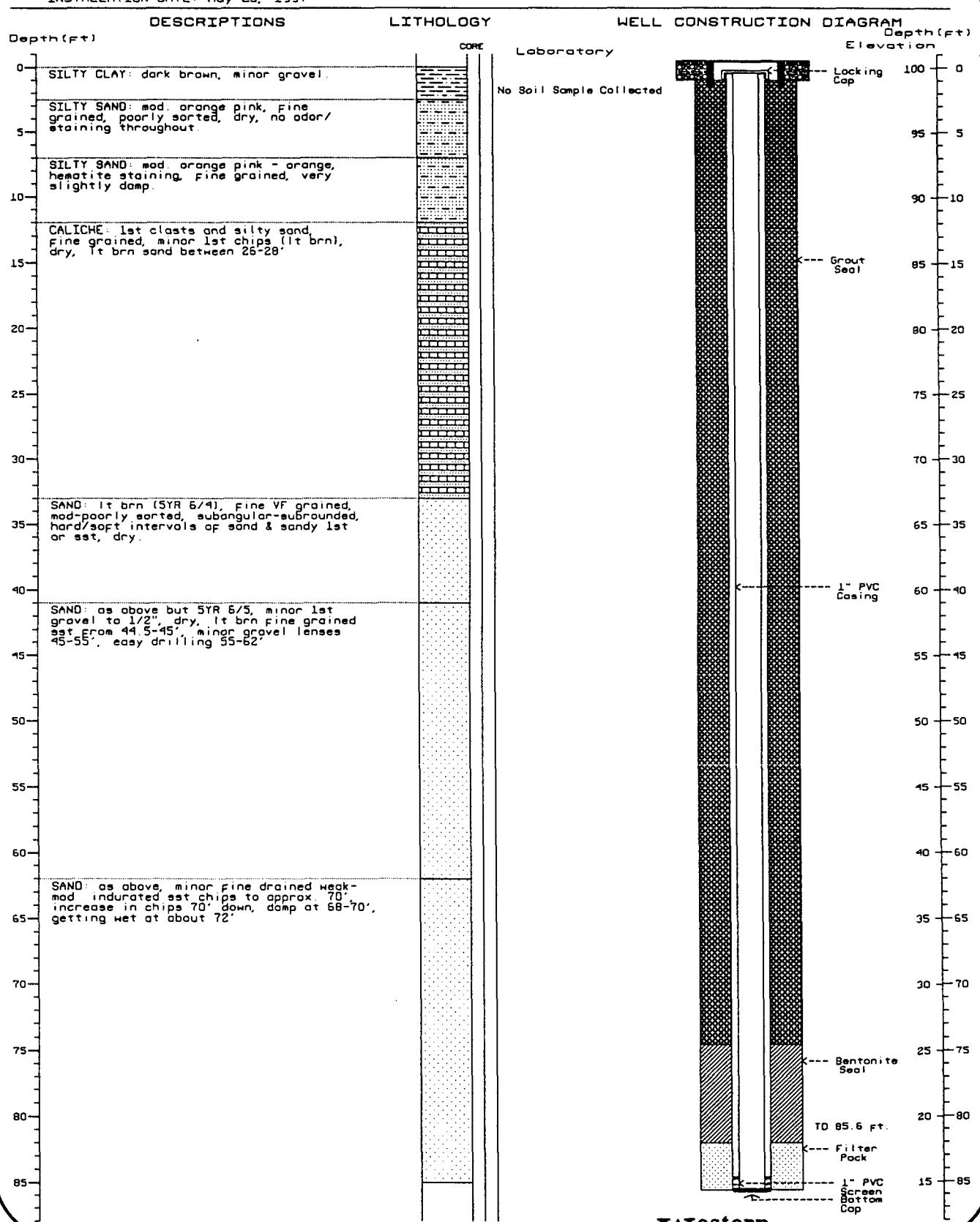
WELL OWNER: Dowell Schlumberger (JN 93007.2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. OD  
 CASING: 1 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing; 0.020 in.  
 FILTER PACK: 8/16 Mesh Silica Sand



# AIR SPARGING WELL 93007 AS-4

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Former UST area  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mottson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 25, 1997

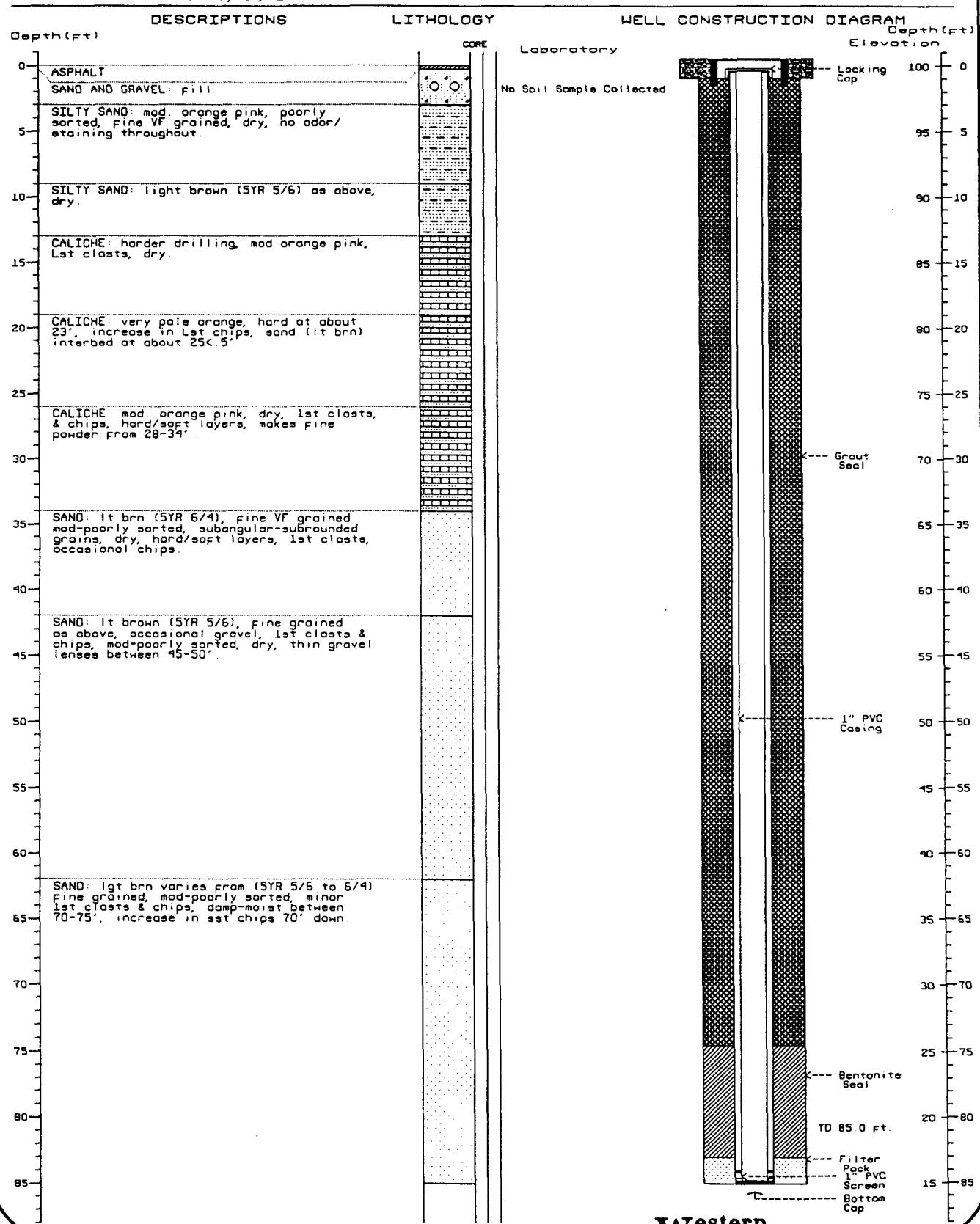
WELL OWNER: Dowell Schlumberger (JN 93007.2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. 00  
 CASING: 1 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing; 0.020 in.  
 FILTER PACK: 8/16 Mesh Silica Sand



# AIR SPARGING WELL 93007 AS-5

LOCATION Dowell Facility, Hobbs, New Mexico  
 Former UST area  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No.: NA  
 INSTALLATION DATE: May 24, 1997

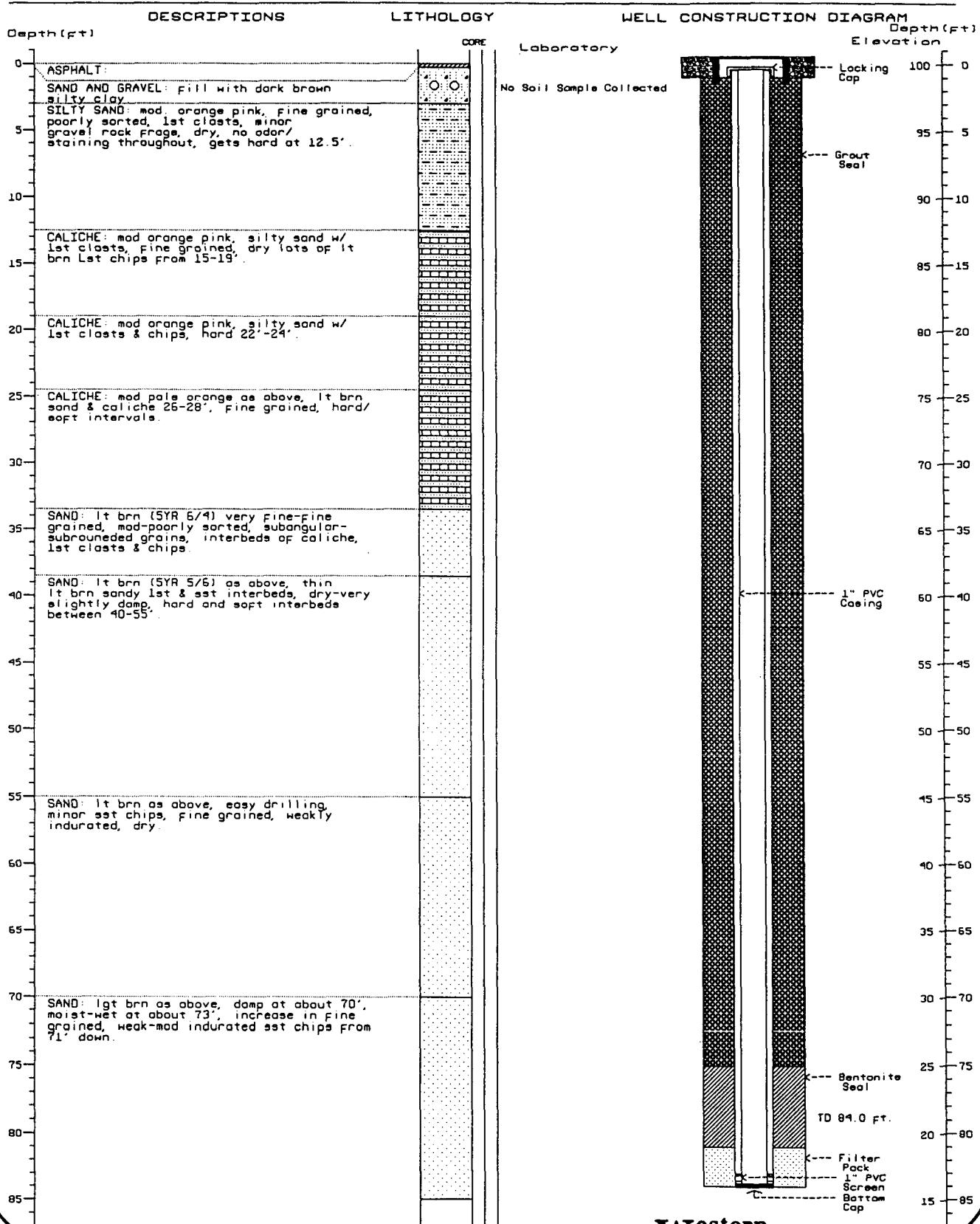
WELL OWNER: Dowell Schlumberger (JN 93007.2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. OD  
 CASING: 1 in. Dia. Flush Joint Sch. 40 PVC  
 SCREEN: Factory Slotted Casing; 0.020 in.  
 FILTER PACK: 8/16 Mesh Silica Sand



# AIR SPARGING WELL 93007 AS-6

LOCATION: Dowell Facility, Hobbs, New Mexico  
 Former UST area  
 1105 West Bender Boulevard  
 LOG: Western Water Consultants Inc. (Kevin Mattson)  
 DRILLER: Eades Drilling (Allen Eades)  
 DRILLERS LICENSE No : NA  
 INSTALLATION DATE: May 24, 1997

WELL OWNER: Dowell Schlumberger (JN 93007.2)  
 DRILLING METHOD: Air Rotary, 6 1/8 in. .00  
 CASING: 1 in. Dia. Flush Joint Sch 40 PVC  
 SCREEN: Factory Slotted Casing, 0.020 in.  
 FILTER PACK: 8/16 Mesh Silica Sand



**APPENDIX B**

**LABORATORY DATA REPORTS**



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: Western Water Consultants  
Sample ID: 93007-2.10/97  
Laboratory ID: C97-63853  
Matrix: Water  
Dilution Factor: 2

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

MW-2

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	2.0
74-87-3	Chloromethane	ND	2.0
75-01-4	Vinyl chloride (Chloroethene)	ND	2.0
74-83-9	Bromomethane	ND	2.0
75-00-3	Chloroethane	ND	2.0
75-69-4	Trichlorofluoromethane	ND	2.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>1.90</b>	J 2.0
75-09-2	Methylene chloride (Dichloromethane)	ND	2.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>12.2</b>	2.0
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.0
74-97-5	Bromoform (Trichloromethane)	ND	2.0
67-66-3	Chloroform (Trichloromethane)	ND	2.0
594-20-7	2,2 - Dichloropropane	ND	2.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>22.8</b>	2.0
107-06-2	1,2 - Dichloroethane	ND	2.0
563-58-6	1,1 - Dichloropropene	ND	2.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.0
71-43-2	<b>Benzene</b>	<b>2.24</b>	2.0
74-95-3	Dibromomethane	ND	2.0
78-87-5	1,2 - Dichloropropane	ND	2.0
79-01-6	Trichloroethene	ND	2.0
75-27-4	Bromodichloromethane	ND	2.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.0
79-00-5	1,1,2 - Trichloroethane	ND	2.0
108-88-3	<b>Toluene</b>	<b>0.64</b>	J 2.0
106-93-4	1,2 - Dibromoethane	ND	2.0
142-28-9	1,3 - Dichloropropane	ND	2.0
124-48-1	Dibromochloromethane	ND	2.0
127-18-4	<b>Tetrachloroethene</b>	<b>11.5</b>	2.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.0
108-90-7	Chlorobenzene	ND	2.0
100-41-4	<b>Ethylbenzene</b>	<b>1.30</b>	J 2.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	4.0
75-25-2	Bromoform (Tribromomethane)	ND	2.0
100-42-5	Styrene (Ethenylbenzene)	ND	2.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>1.02</b>	J 2.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.0
96-18-4	1,2,3 - Trichloropropane	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-2.10/97  
 Laboratory ID: C97-63853

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*MW-2*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.0
108-86-1	Bromobenzene	ND	2.0
103-65-1	n - Propylbenzene	ND	2.0
95-49-8	2 - Chlorotoluene	ND	2.0
106-43-4	4 - Chlorotoluene	ND	2.0
108-67-8	1,3,5 - Trimethylbenzene	ND	2.0
98-06-6	tert - Butylbenzene	ND	2.0
95-63-6	1,2,4 - Trimethylbenzene	ND	2.0
135-98-8	sec - Butylbenzene	ND	2.0
541-73-1	1,3 - Dichlorobenzene	ND	2.0
106-46-7	1,4 - Dichlorobenzene	ND	2.0
99-87-6	4-Isopropyltoluene	ND	2.0
95-50-1	1,2 - Dichlorobenzene	ND	2.0
104-51-8	n - Butylbenzene	ND	2.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	10.0
120-82-1	1,2,4 - Trichlorobenzene	ND	2.0
91-20-3	Naphthalene	ND	2.0
87-68-3	Hexachlorobutadiene	ND	2.0
87-61-6	1,2,3 - Trichlorobenzene	ND	2.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1006701	827952	122%	50 - 200 %
Fluorobenzene	1575249	1469329	107%	50 - 200 %
1,4 - Difluorobenzene	1652223	1439497	115%	50 - 200 %
Chlorobenzene - d5	1248987	1170721	107%	50 - 200 %
1,4 - Dichlorobenzene - d4	623076	553925	112%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.34	93.4%	86 - 118 %
Toluene - d8	10.4	104%	88 - 110 %
4 - Bromofluorobenzene	9.76	97.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.99	99.9%	80 - 120 %

### REFERENCES

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC CAS\97\_63853.xls

Analyst: yw  
 Reviewed: sec



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93007-3.10/97  
Laboratory ID: C97-63854  
Matrix: Water  
Dilution Factor: 2

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

M.W.-3

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	2.0
74-87-3	Chloromethane	ND	2.0
75-01-4	Vinyl chloride (Chloroethene)	ND	2.0
74-83-9	Bromomethane	ND	2.0
75-00-3	<b>Chloroethane</b>	<b>0.96</b>	J 2.0
75-69-4	Trichlorofluoromethane	ND	2.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>8.24</b>	2.0
75-09-2	Methylene chloride (Dichloromethane)	ND	2.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>21.9</b>	2.0
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	<b>cis - 1,2 - Dichloroethene</b>	<b>2.84</b>	2.0
74-97-5	Bromoform (Tetrachloromethane)	ND	2.0
67-66-3	Chloroform (Trichloromethane)	ND	2.0
594-20-7	2,2 - Dichloropropane	ND	2.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>10.7</b>	2.0
107-06-2	1,2 - Dichloroethane	ND	2.0
563-58-6	1,1 - Dichloropropene	ND	2.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.0
71-43-2	<b>Benzene</b>	<b>1.02</b>	J 2.0
74-95-3	Dibromomethane	ND	2.0
78-87-5	1,2 - Dichloropropane	ND	2.0
79-01-6	Trichloroethene	ND	2.0
75-27-4	Bromodichloromethane	ND	2.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.0
79-00-5	1,1,2 - Trichloroethane	ND	2.0
108-88-3	Toluene	ND	2.0
106-93-4	1,2 - Dibromoethane	ND	2.0
142-28-9	1,3 - Dichloropropane	ND	2.0
124-48-1	Dibromochloromethane	ND	2.0
127-18-4	<b>Tetrachloroethene</b>	<b>21.6</b>	2.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.0
108-90-7	Chlorobenzene	ND	2.0
100-41-4	Ethylbenzene	ND	2.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	4.0
75-25-2	Bromoform (Tribromomethane)	ND	2.0
100-42-5	Styrene (Ethenylbenzene)	ND	2.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.0
96-18-4	1,2,3 - Trichloropropane	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-3.10/97  
 Laboratory ID: C97-63854

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*mw -3*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.0
108-86-1	Bromobenzene	ND	2.0
103-65-1	n - Propylbenzene	ND	2.0
95-49-8	2 - Chlorotoluene	ND	2.0
106-43-4	4 - Chlorotoluene	ND	2.0
108-67-8	1,3,5 - Trimethylbenzene	ND	2.0
98-06-6	tert - Butylbenzene	ND	2.0
95-63-6	1,2,4 - Trimethylbenzene	ND	2.0
135-98-8	sec - Butylbenzene	ND	2.0
541-73-1	1,3 - Dichlorobenzene	ND	2.0
106-46-7	1,4 - Dichlorobenzene	ND	2.0
99-87-6	4-Isopropyltoluene	ND	2.0
95-50-1	1,2 - Dichlorobenzene	ND	2.0
104-51-8	n - Butylbenzene	ND	2.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	10.0
120-82-1	1,2,4 - Trichlorobenzene	ND	2.0
91-20-3	<b>Naphthalene</b>	<b>2.10</b>	2.0
87-68-3	Hexachlorobutadiene	ND	2.0
87-61-6	1,2,3 - Trichlorobenzene	ND	2.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1061931	827952	128%	50 - 200 %
Fluorobenzene	1632135	1469329	111%	50 - 200 %
1,4 - Difluorobenzene	1716799	1439497	119%	50 - 200 %
Chlorobenzene - d5	1281914	1170721	109%	50 - 200 %
1,4 - Dichlorobenzene - d4	651714	553925	118%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.20	92.0%	86 - 118 %
Toluene - d8	10.5	105%	88 - 110 %
4 - Bromofluorobenzene	9.76	97.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.99	99.9%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**Client: **Western Water Consultants**

Sample ID: 93007-4.10/97

Laboratory ID: C97-63855

Matrix: Water

Dilution Factor: 20

mw -4

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	20.0
74-87-3	Chloromethane	ND	20.0
75-01-4	Vinyl chloride (Chloroethene)	ND	20.0
74-83-9	Bromomethane	ND	20.0
75-00-3	Chloroethane	ND	20.0
75-69-4	Trichlorofluoromethane	ND	20.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>103</b>	20.0
75-09-2	Methylene chloride (Dichloromethane)	ND	20.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	20.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>30.6</b>	20.0
78-93-3	2 - Butanone (MEK)	ND	200
156-59-2	cis - 1,2 - Dichloroethene	ND	20.0
74-97-5	Bromochloromethane	ND	20.0
67-66-3	<b>Chloroform (Trichloromethane)</b>	<b>14.2</b>	J 20.0
594-20-7	2,2 - Dichloropropane	ND	20.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>225</b>	20.0
107-06-2	<b>1,2 - Dichloroethane</b>	<b>11.4</b>	J 20.0
563-58-6	1,1 - Dichloropropene	ND	20.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	20.0
71-43-2	Benzene	ND	20.0
74-95-3	Dibromomethane	ND	20.0
78-87-5	1,2 - Dichloropropane	ND	20.0
79-01-6	Trichloroethene	ND	20.0
75-27-4	Bromodichloromethane-	ND	20.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	20.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	20.0
79-00-5	1,1,2 - Trichloroethane	ND	20.0
108-88-3	Toluene	ND	20.0
106-93-4	1,2 - Dibromoethane	ND	20.0
142-28-9	1,3 - Dichloropropane	ND	20.0
124-48-1	Dibromochloromethane	ND	20.0
127-18-4	<b>Tetrachloroethene</b>	<b>1,170</b>	20.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	20.0
108-90-7	Chlorobenzene	ND	20.0
100-41-4	Ethylbenzene	ND	20.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	40.0
75-25-2	Bromoform (Tribromomethane)	ND	20.0
100-42-5	Styrene (Ethenylbenzene)	ND	20.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	20.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	20.0
96-18-4	1,2,3 - Trichloropropane	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-4.10/97  
 Laboratory ID: C97-63855

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

MW - A

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	20.0
108-86-1	Bromobenzene	ND	20.0
103-65-1	n - Propylbenzene	ND	20.0
95-49-8	2 - Chlorotoluene	ND	20.0
106-43-4	4 - Chlorotoluene	ND	20.0
108-67-8	1,3,5 - Trimethylbenzene	ND	20.0
98-06-6	tert - Butylbenzene	ND	20.0
95-63-6	1,2,4 - Trimethylbenzene	ND	20.0
135-98-8	sec - Butylbenzene	ND	20.0
541-73-1	1,3 - Dichlorobenzene	ND	20.0
106-46-7	1,4 - Dichlorobenzene	ND	20.0
99-87-6	4-Isopropyltoluene	ND	20.0
95-50-1	1,2 - Dichlorobenzene	ND	20.0
104-51-8	n - Butylbenzene	ND	20.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	100
120-82-1	1,2,4 - Trichlorobenzene	ND	20.0
91-20-3	Naphthalene	ND	20.0
87-68-3	Hexachlorobutadiene	ND	20.0
87-61-6	1,2,3 - Trichlorobenzene	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1076540	827952	130%	50 - 200 %
Fluorobenzene	1657924	1469329	113%	50 - 200 %
1,4 - Difluorobenzene	1722760	1439497	120%	50 - 200 %
Chlorobenzene - d5	1294874	1170721	111%	50 - 200 %
1,4 - Dichlorobenzene - d4	633801	553925	114%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.04	90.4%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.60	96.0%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.85	98.5%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**Client: **Western Water Consultants**

Sample ID: 93007-5.10/97

Laboratory ID: C97-63856

Matrix: Water

Dilution Factor: 10

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

Mw-S

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )	
75-71-8	Dichlorodifluoromethane	ND	10.0	
74-87-3	Chloromethane	ND	10.0	
75-01-4	Vinyl chloride (Chloroethylene)	ND	10.0	
74-83-9	Bromomethane	ND	10.0	
75-00-3	Chloroethane	ND	10.0	
75-69-4	Trichlorofluoromethane	ND	10.0	
75-35-4	<b>1,1 - Dichloroethene</b>	<b>66.0</b>	10.0	
75-09-2	Methylene chloride (Dichloromethane)	ND	10.0	
156-60-5	trans - 1, 2 - Dichloroethene	ND	10.0	
75-34-3	<b>1,1 - Dichloroethane</b>	<b>214</b>	10.0	
78-93-3	2 - Butanone (MEK)	ND	100	
156-59-2	cis - 1,2 - Dichloroethene	ND	10.0	
74-97-5	Bromochloromethane	ND	10.0	
67-66-3	Chloroform (Trichloromethane)	ND	10.0	
594-20-7	2,2 - Dichloropropane	ND	10.0	
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>38.9</b>	10.0	
107-06-2	<b>1,2 - Dichloroethane</b>	<b>3.80</b>	J	10.0
563-58-6	1,1 - Dichloropropene	ND	10.0	
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	10.0	
71-43-2	<b>Benzene</b>	<b>58.3</b>		10.0
74-95-3	Dibromomethane	ND	10.0	
78-87-5	1,2 - Dichloropropane	ND	10.0	
79-01-6	Trichloroethene	ND	10.0	
75-27-4	Bromodichloromethane	ND	10.0	
10061-01-5	cis - 1,3 - Dichloropropene	ND	10.0	
10061-02-6	trans - 1,3 - Dichloropropene	ND	10.0	
79-00-5	1,1,2 - Trichloroethane	ND	10.0	
108-88-3	Toluene	ND	10.0	
106-93-4	1,2 - Dibromoethane	ND	10.0	
142-28-9	1,3 - Dichloropropane	ND	10.0	
124-48-1	Dibromochloromethane	ND	10.0	
127-18-4	<b>Tetrachloroethene</b>	<b>69.9</b>		10.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	10.0	
108-90-7	Chlorobenzene	ND	10.0	
100-41-4	<b>Ethylbenzene</b>	<b>26.8</b>		10.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>7.90</b>		20.0
75-25-2	Bromoform (Tribromomethane)	ND	10.0	
100-42-5	Styrene (Ethenylbenzene)	ND	10.0	
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	10.0	
79-34-5	1,1,2,2 - Tetrachloroethane	ND	10.0	
96-18-4	1,2,3 - Trichloropropane	ND	10.0	

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-5.10/97  
 Laboratory ID: C97-63856

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

MW-5

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	10.0
108-86-1	Bromobenzene	ND	10.0
103-65-1	n - Propylbenzene	ND	10.0
95-49-8	2 - Chlorotoluene	ND	10.0
106-43-4	4 - Chlorotoluene	ND	10.0
108-67-8	<b>1,3,5 - Trimethylbenzene</b>	<b>5.20</b>	J 10.0
98-06-6	tert - Butylbenzene	ND	10.0
95-63-6	<b>1,2,4 - Trimethylbenzene</b>	<b>11.1</b>	10.0
135-98-8	sec - Butylbenzene	ND	10.0
541-73-1	1,3 - Dichlorobenzene	ND	10.0
106-46-7	1,4 - Dichlorobenzene	ND	10.0
99-87-6	4-Isopropyltoluene	ND	10.0
95-50-1	1,2 - Dichlorobenzene	ND	10.0
104-51-8	n - Butylbenzene	ND	10.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	50.0
120-82-1	1,2,4 - Trichlorobenzene	ND	10.0
91-20-3	<b>Naphthalene</b>	<b>10.5</b>	10.0
87-68-3	Hexachlorobutadiene	ND	10.0
87-61-6	1,2,3 - Trichlorobenzene	ND	10.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1054890	827952	127%	50 - 200 %
Fluorobenzene	1642822	1469329	112%	50 - 200 %
1,4 - Difluorobenzene	1700429	1439497	118%	50 - 200 %
Chlorobenzene - d5	1270074	1170721	108%	50 - 200 %
1,4 - Dichlorobenzene - d4	625172	553925	113%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.07	90.7%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.71	97.1%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.0	100%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93007-6.10/97  
Laboratory ID: C97-63857  
Matrix: Water  
Dilution Factor: 2

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

Mw-LC

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	2.0
74-87-3	Chloromethane	ND	2.0
75-01-4	Vinyl chloride (Chloroethene)	ND	2.0
74-83-9	Bromomethane	ND	2.0
75-00-3	Chloroethane	ND	2.0
75-69-4	Trichlorofluoromethane	ND	2.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>25.4</b>	2.0
75-09-2	Methylene chloride (Dichloromethane)	ND	2.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>82.1</b>	2.0
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	<b>cis - 1,2 - Dichloroethene</b>	<b>3.16</b>	2.0
74-97-5	Bromochloromethane	ND	2.0
67-66-3	<b>Chloroform (Trichloromethane)</b>	<b>2.38</b>	2.0
594-20-7	2,2 - Dichloropropane	ND	2.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>5.68</b>	2.0
107-06-2	<b>1,2 - Dichloroethane</b>	<b>1.70</b>	J 2.0
563-58-6	1,1 - Dichloropropene	ND	2.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.0
71-43-2	<b>Benzene</b>	<b>2.92</b>	2.0
74-95-3	Dibromomethane	ND	2.0
78-87-5	1,2 - Dichloropropane	ND	2.0
79-01-6	<b>Trichloroethene</b>	<b>1.96</b>	J 2.0
75-27-4	Bromodichloromethane	ND	2.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.0
79-00-5	1,1,2 - Trichloroethane	ND	2.0
108-88-3	Toluene	ND	2.0
106-93-4	1,2 - Dibromoethane	ND	2.0
142-28-9	1,3 - Dichloropropane	ND	2.0
124-48-1	Dibromochloromethane	ND	2.0
127-18-4	<b>Tetrachloroethene</b>	<b>18.5</b>	2.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.0
108-90-7	Chlorobenzene	ND	2.0
100-41-4	Ethylbenzene	ND	2.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	4.0
75-25-2	Bromoform (Tribromomethane)	ND	2.0
100-42-5	Styrene (Ethenylbenzene)	ND	2.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.0
96-18-4	1,2,3 - Trichloropropane	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-6.10/97  
 Laboratory ID: C97-63857

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

MW-6

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.0
108-86-1	Bromobenzene	ND	2.0
103-65-1	n - Propylbenzene	ND	2.0
95-49-8	2 - Chlorotoluene	ND	2.0
106-43-4	4 - Chlorotoluene	ND	2.0
108-67-8	1,3,5 - Trimethylbenzene	ND	2.0
98-06-6	tert - Butylbenzene	ND	2.0
95-63-6	1,2,4 - Trimethylbenzene	ND	2.0
135-98-8	sec - Butylbenzene	ND	2.0
541-73-1	1,3 - Dichlorobenzene	ND	2.0
106-46-7	1,4 - Dichlorobenzene	ND	2.0
99-87-6	4-Isopropyltoluene	ND	2.0
95-50-1	1,2 - Dichlorobenzene	ND	2.0
104-51-8	n - Butylbenzene	ND	2.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	10.0
120-82-1	1,2,4 - Trichlorobenzene	ND	2.0
91-20-3	<b>Naphthalene</b>	<b>2.88</b>	2.0
87-68-3	Hexachlorobutadiene	ND	2.0
87-61-6	1,2,3 - Trichlorobenzene	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1053307	827952	127%	50 - 200 %
Fluorobenzene	1644729	1469329	112%	50 - 200 %
1,4 - Difluorobenzene	1716441	1439497	119%	50 - 200 %
Chlorobenzene - d5	1285838	1170721	110%	50 - 200 %
1,4 - Dichlorobenzene - d4	659843	553925	119%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.25	92.5%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.97	99.7%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.97	99.7%	80 - 120 %

### **REFERENCES**

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**Client: **Western Water Consultants**

Sample ID: 93007-7.10/97

Laboratory ID: C97-63858

Matrix: Water

Dilution Factor: 5

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

MW-7

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>49.9</b>	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>64.8</b>	5.0
78-93-3	2 - Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	1,1,1 - Trichloroethane	ND	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	<b>Benzene</b>	<b>3.00</b>	J
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	<b>Trichloroethene</b>	<b>17.9</b>	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	<b>1,1,2 - Trichloroethane</b>	<b>2.30</b>	5.0
108-88-3	Toluene	ND	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	<b>Tetrachloroethene</b>	<b>90.9</b>	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	<b>Chlorobenzene</b>	<b>2.25</b>	5.0
100-41-4	Ethylbenzene	ND	5.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-7.10/97  
 Laboratory ID: C97-63858

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

MW-7

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	n - Propylbenzene	ND	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	1,3,5 - Trimethylbenzene	ND	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	1,2,4 - Trimethylbenzene	ND	5.0
135-98-8	sec - Butylbenzene	ND	5.0
541-73-1	1,3 - Dichlorobenzene	ND	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	<b>Naphthalene</b>	57.3	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2,3 - Trichlorobenzene	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1024755	— 827952	124%	50 - 200 %
Fluorobenzene	1603713	1469329	109%	50 - 200 %
1,4 - Difluorobenzene	1648914	1439497	115%	50 - 200 %
Chlorobenzene - d5	1226648	1170721	105%	50 - 200 %
1,4 - Dichlorobenzene - d4	605199	553925	109%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.00	90.0%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.71	97.1%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.85	98.5%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC.CAS\97\_63853.xls

Analyst: YW  
 Reviewed: sec



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: **Western Water Consultants**  
Sample ID: 93007-8.10/97  
Laboratory ID: C97-63859  
Matrix: Water  
Dilution Factor: 200

*MW-S*

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	200
74-87-3	Chloromethane	ND	200
75-01-4	Vinyl chloride (Chloroethylene)	ND	200
74-83-9	Bromomethane	ND	200
75-00-3	Chloroethane	ND	200
75-69-4	Trichlorofluoromethane	ND	200
75-35-4	<b>1,1 - Dichloroethene</b>	<b>858</b>	200
75-09-2	Methylene chloride (Dichloromethane)	ND	200
156-60-5	trans - 1, 2 - Dichloroethene	ND	200
75-34-3	1,1 - Dichloroethane	ND	200
78-93-3	2 - Butanone (MEK)	ND	2,000
156-59-2	cis - 1,2 - Dichloroethene	ND	200
74-97-5	Bromochloromethane	ND	200
67-66-3	Chloroform (Trichloromethane)	ND	200
594-20-7	2,2 - Dichloropropane	ND	200
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>596</b>	200
107-06-2	1,2 - Dichloroethane	ND	200
563-58-6	1,1 - Dichloropropene	ND	200
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	200
71-43-2	Benzene	ND	200
74-95-3	Dibromomethane	ND	200
78-87-5	1,2 - Dichloropropane	ND	200
79-01-6	Trichloroethene	ND	200
75-27-4	Bromodichloromethane	ND	200
10061-01-5	cis - 1,3 - Dichloropropene	ND	200
10061-02-6	trans - 1,3 - Dichloropropene	ND	200
79-00-5	1,1,2 - Trichloroethane	ND	200
108-88-3	Toluene	ND	200
106-93-4	1,2 - Dibromoethane	ND	200
142-28-9	1,3 - Dichloropropane	ND	200
124-48-1	Dibromochloromethane	ND	200
127-18-4	<b>Tetrachloroethene</b>	<b>4,570</b>	200
630-20-6	1,1,1,2 - Tetrachloroethane	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethylbenzene	ND	200
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	400
75-25-2	Bromoform (Tribromomethane)	ND	200
100-42-5	Styrene (Ethenylbenzene)	ND	200
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	200
79-34-5	1,1,2,2 - Tetrachloroethane	ND	200
96-18-4	1,2,3 - Trichloropropane	ND	200

*ND - Analyte not detected at stated limit of detection*



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-8.10/97  
 Laboratory ID: C97-63859

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*MW-E*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	200
108-86-1	Bromobenzene	ND	200
103-65-1	n - Propylbenzene	ND	200
95-49-8	2 - Chlorotoluene	ND	200
106-43-4	4 - Chlorotoluene	ND	200
108-67-8	1,3,5 - Trimethylbenzene	ND	200
98-06-6	tert - Butylbenzene	ND	200
95-63-6	1,2,4 - Trimethylbenzene	ND	200
135-98-8	sec - Butylbenzene	ND	200
541-73-1	1,3 - Dichlorobenzene	ND	200
106-46-7	1,4 - Dichlorobenzene	ND	200
99-87-6	4-Isopropyltoluene	ND	200
95-50-1	1,2 - Dichlorobenzene	ND	200
104-51-8	n - Butylbenzene	ND	200
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	1,000
120-82-1	1,2,4 - Trichlorobenzene	ND	200
91-20-3	Naphthalene	ND	200
87-68-3	Hexachlorobutadiene	ND	200
87-61-6	1,2,3 - Trichlorobenzene	ND	200

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	ICAL / CCAL <u>AREA</u>	PERCENT <u>AREA</u>	ACCEPTANCE <u>RANGE</u>
Pentafluorobenzene	1014983	827952	50 - 200 %
Fluorobenzene	1592338	1469329	50 - 200 %
1,4 - Difluorobenzene	1643809	1439497	50 - 200 %
Chlorobenzene - d5	1205231	1170721	50 - 200 %
1,4 - Dichlorobenzene - d4	583757	553925	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE <u>RANGE</u>
Dibromofluoromethane	9.06	90.6%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.68	96.8%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.82	98.2%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: **Western Water Consultants**  
Sample ID: 93007-9.10/97  
Laboratory ID: C97-63860  
Matrix: Water  
Dilution Factor: 20

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

MW -9

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	20.0
74-87-3	Chloromethane	ND	20.0
75-01-4	Vinyl chloride (Chloroethene)	ND	20.0
74-83-9	Bromomethane	ND	20.0
75-00-3	Chloroethane	ND	20.0
75-69-4	Trichlorofluoromethane	ND	20.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>278</b>	20.0
75-09-2	Methylene chloride (Dichloromethane)	ND	20.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	20.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>18.6</b>	J 20.0
78-93-3	2 - Butanone (MEK)	ND	200
156-59-2	cis - 1,2 - Dichloroethene	ND	20.0
74-97-5	Bromochloromethane	ND	20.0
67-66-3	Chloroform (Trichloromethane)	ND	20.0
594-20-7	2,2 - Dichloropropane	ND	20.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>104</b>	20.0
107-06-2	1,2 - Dichloroethane	ND	20.0
563-58-6	1,1 - Dichloropropene	ND	20.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	20.0
71-43-2	Benzene	ND	20.0
74-95-3	Dibromomethane	ND	20.0
78-87-5	1,2 - Dichloropropane	ND	20.0
79-01-6	Trichloroethene	ND	20.0
75-27-4	Bromodichloromethane	ND	20.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	20.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	20.0
79-00-5	1,1,2 - Trichloroethane	ND	20.0
108-88-3	Toluene	ND	20.0
106-93-4	1,2 - Dibromoethane	ND	20.0
142-28-9	1,3 - Dichloropropane	ND	20.0
124-48-1	Dibromochloromethane	ND	20.0
127-18-4	<b>Tetrachloroethene</b>	<b>1,160</b>	20.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	20.0
108-90-7	Chlorobenzene	ND	20.0
100-41-4	Ethylbenzene	ND	20.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	40.0
75-25-2	Bromoform (Tribromomethane)	ND	20.0
100-42-5	Styrene (Ethenylbenzene)	ND	20.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	20.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	20.0
96-18-4	1,2,3 - Trichloropropane	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-9.10/97  
Laboratory ID: C97-63860

Date Sampled: 10/16/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

MW-9

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	20.0
108-86-1	Bromobenzene	ND	20.0
103-65-1	n - Propylbenzene	ND	20.0
95-49-8	2 - Chlorotoluene	ND	20.0
106-43-4	4 - Chlorotoluene	ND	20.0
108-67-8	1,3,5 - Trimethylbenzene	ND	20.0
98-06-6	tert - Butylbenzene	ND	20.0
95-63-6	1,2,4 - Trimethylbenzene	ND	20.0
135-98-8	sec - Butylbenzene	ND	20.0
541-73-1	1,3 - Dichlorobenzene	ND	20.0
106-46-7	1,4 - Dichlorobenzene	ND	20.0
99-87-6	4-Isopropyltoluene	ND	20.0
95-50-1	1,2 - Dichlorobenzene	ND	20.0
104-51-8	n - Butylbenzene	ND	20.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	100
120-82-1	1,2,4 - Trichlorobenzene	ND	20.0
91-20-3	Naphthalene	ND	20.0
87-68-3	Hexachlorobutadiene	ND	20.0
87-61-6	1,2,3 - Trichlorobenzene	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1097144	827952	133%	50 - 200 %
Fluorobenzene	1693039	1469329	115%	50 - 200 %
1,4 - Difluorobenzene	1745351	1439497	121%	50 - 200 %
Chlorobenzene - d5	1310510	1170721	112%	50 - 200 %
1,4 - Dichlorobenzene - d4	640756	553925	116%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	8.83	88.3%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.49	94.9%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.78	97.8%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: **Western Water Consultants**

Sample ID: 93007-10.10/97

Date Sampled: 10/16/97

Laboratory ID: C97-63861

Date Received: 10/21/97

Matrix: Water

Date Analyzed: 10/27/97

Dilution Factor: 2

Date Reported: November 6, 1997

MW-10

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	2.0
74-87-3	Chloromethane	ND	2.0
75-01-4	Vinyl chloride (Chloroethene)	ND	2.0
74-83-9	Bromomethane	ND	2.0
75-00-3	Chloroethane	ND	2.0
75-69-4	Trichlorofluoromethane	ND	2.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>1.98</b>	J 2.0
75-09-2	Methylene chloride (Dichloromethane)	ND	2.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.0
75-34-3	1,1 - Dichloroethane	ND	2.0
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.0
74-97-5	Bromochloromethane	ND	2.0
67-66-3	Chloroform (Trichloromethane)	ND	2.0
594-20-7	2,2 - Dichloropropane	ND	2.0
71-55-6	1,1,1 - Trichloroethane	ND	2.0
107-06-2	1,2 - Dichloroethane	ND	2.0
563-58-6	1,1 - Dichloropropene	ND	2.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.0
71-43-2	<b>Benzene</b>	<b>1.06</b>	J 2.0
74-95-3	Dibromomethane	ND	2.0
78-87-5	1,2 - Dichloropropane	ND	2.0
79-01-6	Trichloroethene	ND	2.0
75-27-4	Bromodichloromethane	ND	2.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.0
79-00-5	1,1,2 - Trichloroethane	ND	2.0
108-88-3	Toluene	ND	2.0
106-93-4	1,2 - Dibromoethane	ND	2.0
142-28-9	1,3 - Dichloropropane	ND	2.0
124-48-1	Dibromochloromethane	ND	2.0
127-18-4	<b>Tetrachloroethene</b>	<b>7.96</b>	2.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.0
108-90-7	Chlorobenzene	ND	2.0
100-41-4	Ethylbenzene	ND	2.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	4.0
75-25-2	Bromoform (Tribromomethane)	ND	2.0
100-42-5	Styrene (Ethenylbenzene)	ND	2.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.0
96-18-4	1,2,3 - Trichloropropane	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-10.10/97  
 Laboratory ID: C97-63861

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*MW - 10*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.0
108-86-1	Bromobenzene	ND	2.0
103-65-1	n - Propylbenzene	ND	2.0
95-49-8	2 - Chlorotoluene	ND	2.0
106-43-4	4 - Chlorotoluene	ND	2.0
108-67-8	1,3,5 - Trimethylbenzene	ND	2.0
98-06-6	tert - Butylbenzene	ND	2.0
95-63-6	1,2,4 - Trimethylbenzene	ND	2.0
135-98-8	sec - Butylbenzene	ND	2.0
541-73-1	1,3 - Dichlorobenzene	ND	2.0
106-46-7	1,4 - Dichlorobenzene	ND	2.0
99-87-6	4-Isopropyltoluene	ND	2.0
95-50-1	1,2 - Dichlorobenzene	ND	2.0
104-51-8	n - Butylbenzene	ND	2.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	10.0
120-82-1	1,2,4 - Trichlorobenzene	ND	2.0
91-20-3	Naphthalene	ND	2.0
87-68-3	Hexachlorobutadiene	ND	2.0
87-61-6	1,2,3 - Trichlorobenzene	ND	2.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1007977	827952	122%	50 - 200 %
Fluorobenzene	1587533	1469329	108%	50 - 200 %
1,4 - Difluorobenzene	1639939	1439497	114%	50 - 200 %
Chlorobenzene - d5	1220287	1170721	104%	50 - 200 %
1,4 - Dichlorobenzene - d4	618441	553925	112%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.04	90.4%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.99	99.9%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.84	98.4%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93007-11.10/97  
Laboratory ID: C97-63862  
Matrix: Water  
Dilution Factor: 1

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

MW-11

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	<b>Benzene</b>	<b>2.36</b>	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	<b>Ethylbenzene</b>	<b>0.49</b>	J 1.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>2.17</b>	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>0.85</b>	J 1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-11.10/97  
 Laboratory ID: C97-63862

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

MW-11

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )	
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	5.18	1.0	
108-86-1	Bromobenzene	ND	1.0	
103-65-1	n - Propylbenzene	ND	1.0	
95-49-8	2 - Chlorotoluene	ND	1.0	
106-43-4	4 - Chlorotoluene	ND	1.0	
108-67-8	1,3,5 - Trimethylbenzene	2.46	1.0	
98-06-6	tert - Butylbenzene	0.79	J	1.0
95-63-6	1,2,4 - Trimethylbenzene	5.87	1.0	
135-98-8	sec - Butylbenzene	0.63	J	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0	
106-46-7	1,4 - Dichlorobenzene	ND	1.0	
99-87-6	4-Isopropyltoluene	0.77	J	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0	
104-51-8	n - Butylbenzene	ND	1.0	
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0	
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0	
91-20-3	Naphthalene	ND	1.0	
87-68-3	Hexachlorobutadiene	ND	1.0	
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0	

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	882612	827952	107%	50 - 200 %
Fluorobenzene	1445737	1469329	98.4%	50 - 200 %
1,4 - Difluorobenzene	1507494	1439497	105%	50 - 200 %
Chlorobenzene - d5	1124263	1170721	96.0%	50 - 200 %
1,4 - Dichlorobenzene - d4	576242	553925	104%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.73	97.3%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.93	99.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: **Western Water Consultants**

Sample ID: 93007-12.10/97

Laboratory ID: C97-63863

Matrix: Water

Dilution Factor: 1

MW-12

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-12.10/97  
 Laboratory ID: C97-63863

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*MW-12*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	879818	827952	106%	50 - 200 %
Fluorobenzene	1438281	1469329	97.9%	50 - 200 %
1,4 - Difluorobenzene	1483307	1439497	103%	50 - 200 %
Chlorobenzene - d5	1120115	1170721	95.7%	50 - 200 %
1,4 - Dichlorobenzene - d4	555773	553925	100%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.69	96.9%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.75	97.5%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: **Western Water Consultants**

Sample ID: 93007-13.10/97

Laboratory ID: C97-63864

Matrix: Water

Dilution Factor: 1

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

MW-13

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>15.1</b>	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>1.37</b>	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	<b>Tetrachloroethene</b>	<b>13.3</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-13.10/97  
 Laboratory ID: C97-63864

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

MW-13

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	874930	827952	106%	50 - 200 %
Fluorobenzene	1424016	1469329	96.9%	50 - 200 %
1,4 - Difluorobenzene	1460798	1439497	101%	50 - 200 %
Chlorobenzene - d5	1101516	1170721	94.1%	50 - 200 %
1,4 - Dichlorobenzene - d4	553970	553925	100%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10.0	100%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.32	93.2%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.0	100%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-14.10/97  
Laboratory ID: C97-63865  
Matrix: Water  
Dilution Factor: 1

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

MW-1A

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethylene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-14.10/97  
 Laboratory ID: C97-63865

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*MW - 14*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	787193	827952	95.1%	50 - 200 %
Fluorobenzene	1328649	1469329	90.4%	50 - 200 %
1,4 - Difluorobenzene	1357765	1439497	94.3%	50 - 200 %
Chlorobenzene - d5	1015869	1170721	86.8%	50 - 200 %
1,4 - Dichlorobenzene - d4	504167	553925	91.0%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10.1	101%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.84	98.4%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.0	100%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: **Western Water Consultants**

Sample ID: 93007-15.10/97

Laboratory ID: C97-63866

Matrix: Water

Dilution Factor: 1

MW-15

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-15.10/97  
 Laboratory ID: C97-63866

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

*MW-15*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

<u>INTERNAL STANDARDS</u>	<u>ICAL / CCAL AREA</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Pentafluorobenzene	882398	827952	107%
Fluorobenzene	1516918	1469329	103%
1,4 - Difluorobenzene	1526135	1439497	106%
Chlorobenzene - d5	1145534	1170721	97.8%
1,4 - Dichlorobenzene - d4	577203	553925	104%

<u>SYSTEM MONITORING COMPOUNDS</u>	<u>CONCENTRATION</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Dibromofluoromethane	10.2	102%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	9.99	99.9%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.2	102%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC.CAS\97\_63853.xls

Analyst: YW  
 Reviewed: sec



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: Western Water Consultants  
Sample ID: 93007-S04.10/97  
Laboratory ID: C97-63867  
Matrix: Water  
Dilution Factor: 20

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	20.0
74-87-3	Chloromethane	ND	20.0
75-01-4	Vinyl chloride (Chloroethene)	ND	20.0
74-83-9	Bromomethane	ND	20.0
75-00-3	Chloroethane	ND	20.0
75-69-4	Trichlorofluoromethane	ND	20.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>21.8</b>	20.0
75-09-2	Methylene chloride (Dichloromethane)	ND	20.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	20.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>18.0</b>	J 20.0
78-93-3	2 - Butanone (MEK)	ND	200
156-59-2	cis - 1,2 - Dichloroethene	ND	20.0
74-97-5	Bromochloromethane	ND	20.0
67-66-3	Chloroform (Trichloromethane)	ND	20.0
594-20-7	2,2 - Dichloropropane	ND	20.0
71-55-6	1,1,1 - Trichloroethane	ND	20.0
107-06-2	1,2 - Dichloroethane	ND	20.0
563-58-6	1,1 - Dichloropropene	ND	20.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	20.0
71-43-2	Benzene	ND	20.0
74-95-3	Dibromomethane	ND	20.0
78-87-5	1,2 - Dichloropropane	ND	20.0
79-01-6	Trichloroethene	ND	20.0
75-27-4	Bromodichloromethane	ND	20.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	20.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	20.0
79-00-5	1,1,2 - Trichloroethane	ND	20.0
108-88-3	<b>Toluene</b>	<b>39.4</b>	20.0
106-93-4	1,2 - Dibromoethane	ND	20.0
142-28-9	1,3 - Dichloropropane	ND	20.0
124-48-1	Dibromochloromethane	ND	20.0
127-18-4	Tetrachloroethene	ND	20.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	20.0
108-90-7	Chlorobenzene	ND	20.0
100-41-4	<b>Ethylbenzene</b>	<b>322</b>	20.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>364</b>	40.0
75-25-2	Bromoform (Tribromomethane)	ND	20.0
100-42-5	Styrene (Ethenylbenzene)	ND	20.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>349</b>	20.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	20.0
96-18-4	1,2,3 - Trichloropropane	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



### EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93007-S04.10/97  
 Laboratory ID: C97-63867

*Shell Station Well*  
 Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	20.0
108-86-1	Bromobenzene	ND	20.0
103-65-1	n - Propylbenzene	35.0	20.0
95-49-8	2 - Chlorotoluene	ND	20.0
106-43-4	4 - Chlorotoluene	ND	20.0
108-67-8	1,3,5 - Trimethylbenzene	66.8	20.0
98-06-6	tert - Butylbenzene	49.8	20.0
95-63-6	1,2,4 - Trimethylbenzene	385	20.0
135-98-8	sec - Butylbenzene	ND	20.0
541-73-1	1,3 - Dichlorobenzene	ND	20.0
106-46-7	1,4 - Dichlorobenzene	ND	20.0
99-87-6	4-Isopropyltoluene	ND	20.0
95-50-1	1,2 - Dichlorobenzene	ND	20.0
104-51-8	n - Butylbenzene	ND	20.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	100
120-82-1	1,2,4 - Trichlorobenzene	ND	20.0
91-20-3	Naphthalene	102	20.0
87-68-3	Hexachlorobutadiene	ND	20.0
87-61-6	1,2,3 - Trichlorobenzene	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

#### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	934567	827952	113%	50 - 200 %
Fluorobenzene	1606380	1469329	109%	50 - 200 %
1,4 - Difluorobenzene	1604668	1439497	111%	50 - 200 %
Chlorobenzene - d5	1234428	1170721	105%	50 - 200 %
1,4 - Dichlorobenzene - d4	643953	553925	116%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10.1	101%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	10.3	103%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.96	99.6%	80 - 120 %

#### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC.CAS\97\_63853.xls

Analyst: \_\_\_\_\_  
 Reviewed: \_\_\_\_\_  
 sec



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93007-A.10/97  
Laboratory ID: C97-63868  
Matrix: Water  
Dilution Factor: 20

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

Duplicate  
MW-9

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	20.0
74-87-3	Chloromethane	ND	20.0
75-01-4	Vinyl chloride (Chloroethene)	ND	20.0
74-83-9	Bromomethane	ND	20.0
75-00-3	Chloroethane	ND	20.0
75-69-4	Trichlorofluoromethane	ND	20.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>321</b>	20.0
75-09-2	Methylene chloride (Dichloromethane)	ND	20.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	20.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>23.2</b>	20.0
78-93-3	2 - Butanone (MEK)	ND	200
156-59-2	cis - 1,2 - Dichloroethene	ND	20.0
74-97-5	Bromochloromethane	ND	20.0
67-66-3	<b>Chloroform (Trichloromethane)</b>	<b>10.0</b>	J 20.0
594-20-7	2,2 - Dichloropropane	ND	20.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>141</b>	20.0
107-06-2	1,2 - Dichloroethane	ND	20.0
563-58-6	1,1 - Dichloropropene	ND	20.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	20.0
71-43-2	Benzene	ND	20.0
74-95-3	Dibromomethane	ND	20.0
78-87-5	1,2 - Dichloropropane	ND	20.0
79-01-6	Trichloroethene	ND	20.0
75-27-4	Bromodichloromethane	ND	20.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	20.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	20.0
79-00-5	1,1,2 - Trichloroethane	ND	20.0
108-88-3	Toluene	ND	20.0
106-93-4	1,2 - Dibromoethane	ND	20.0
142-28-9	1,3 - Dichloropropane	ND	20.0
124-48-1	Dibromochloromethane	ND	20.0
127-18-4	<b>Tetrachloroethene</b>	<b>1,160</b>	20.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	20.0
108-90-7	Chlorobenzene	ND	20.0
100-41-4	Ethylbenzene	ND	20.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	40.0
75-25-2	Bromoform (Tribromomethane)	ND	20.0
100-42-5	Styrene (Ethenylbenzene)	ND	20.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	20.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	20.0
96-18-4	1,2,3 - Trichloropropane	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-A.10/97  
 Laboratory ID: C97-63868

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

Duplicate  
MW-9

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	20.0
108-86-1	Bromobenzene	ND	20.0
103-65-1	n - Propylbenzene	ND	20.0
95-49-8	2 - Chlorotoluene	ND	20.0
106-43-4	4 - Chlorotoluene	ND	20.0
108-67-8	1,3,5 - Trimethylbenzene	ND	20.0
98-06-6	tert - Butylbenzene	ND	20.0
95-63-6	1,2,4 - Trimethylbenzene	ND	20.0
135-98-8	sec - Butylbenzene	ND	20.0
541-73-1	1,3 - Dichlorobenzene	ND	20.0
106-46-7	1,4 - Dichlorobenzene	ND	20.0
99-87-6	4-Isopropyltoluene	ND	20.0
95-50-1	1,2 - Dichlorobenzene	ND	20.0
104-51-8	n - Butylbenzene	ND	20.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	100
120-82-1	1,2,4 - Trichlorobenzene	ND	20.0
91-20-3	Naphthalene	ND	20.0
87-68-3	Hexachlorobutadiene	ND	20.0
87-61-6	1,2,3 - Trichlorobenzene	ND	20.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	903397	827952	109%	50 - 200 %
Fluorobenzene	1590396	1469329	108%	50 - 200 %
1,4 - Difluorobenzene	1554609	1439497	108%	50 - 200 %
Chlorobenzene - d5	1197224	1170721	102%	50 - 200 %
1,4 - Dichlorobenzene - d4	596718	553925	108%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10.2	102%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC.CAS\97\_63853.xls

Analyst: yw  
 Reviewed: sec



Billings • Casper • Gillette • Rapid City

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93007-B.10/97  
Laboratory ID: C97-63869  
Matrix: Water  
Dilution Factor: 2

Date Sampled: 10/16/97  
Date Received: 10/21/97  
Date Analyzed: 10/27/97  
Date Reported: November 6, 1997

Duplicate  
MW-13

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	2.0
74-87-3	Chloromethane	ND	2.0
75-01-4	Vinyl chloride (Chloroethene)	ND	2.0
74-83-9	Bromomethane	ND	2.0
75-00-3	Chloroethane	ND	2.0
75-69-4	Trichlorofluoromethane	ND	2.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>11.4</b>	2.0
75-09-2	Methylene chloride (Dichloromethane)	ND	2.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.0
75-34-3	1,1 - Dichloroethane	ND	2.0
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.0
74-97-5	Bromochloromethane	ND	2.0
67-66-3	Chloroform (Trichloromethane)	ND	2.0
594-20-7	2,2 - Dichloropropane	ND	2.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>1.06</b>	J 2.0
107-06-2	1,2 - Dichloroethane	ND	2.0
563-58-6	1,1 - Dichloropropene	ND	2.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.0
71-43-2	Benzene	ND	2.0
74-95-3	Dibromomethane	ND	2.0
78-87-5	1,2 - Dichloropropane	ND	2.0
79-01-6	Trichloroethene	ND	2.0
75-27-4	Bromodichloromethane	ND	2.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.0
79-00-5	1,1,2 - Trichloroethane	ND	2.0
108-88-3	Toluene	ND	2.0
106-93-4	1,2 - Dibromoethane	ND	2.0
142-28-9	1,3 - Dichloropropane	ND	2.0
124-48-1	Dibromochloromethane	ND	2.0
127-18-4	<b>Tetrachloroethene</b>	<b>13.0</b>	2.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.0
108-90-7	Chlorobenzene	ND	2.0
100-41-4	Ethylbenzene	ND	2.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	4.0
75-25-2	Bromoform (Tribromomethane)	ND	2.0
100-42-5	Styrene (Ethenylbenzene)	ND	2.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.0
96-18-4	1,2,3 - Trichloropropane	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93007-B.10/97  
 Laboratory ID: C97-63869

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

Duplicate  
MW-13

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.0
108-86-1	Bromobenzene	ND	2.0
103-65-1	n - Propylbenzene	ND	2.0
95-49-8	2 - Chlorotoluene	ND	2.0
106-43-4	4 - Chlorotoluene	ND	2.0
108-67-8	1,3,5 - Trimethylbenzene	ND	2.0
98-06-6	tert - Butylbenzene	ND	2.0
95-63-6	1,2,4 - Trimethylbenzene	ND	2.0
135-98-8	sec - Butylbenzene	ND	2.0
541-73-1	1,3 - Dichlorobenzene	ND	2.0
106-46-7	1,4 - Dichlorobenzene	ND	2.0
99-87-6	4-Isopropyltoluene	ND	2.0
95-50-1	1,2 - Dichlorobenzene	ND	2.0
104-51-8	n - Butylbenzene	ND	2.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	10.0
120-82-1	1,2,4 - Trichlorobenzene	ND	2.0
91-20-3	Naphthalene	ND	2.0
87-68-3	Hexachlorobutadiene	ND	2.0
87-61-6	1,2,3 - Trichlorobenzene	ND	2.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1056667	827952	128%	50 - 200 %
Fluorobenzene	1635440	1469329	111%	50 - 200 %
1,4 - Difluorobenzene	1692064	1439497	118%	50 - 200 %
Chlorobenzene - d5	1255976	1170721	107%	50 - 200 %
1,4 - Dichlorobenzene - d4	615066	553925	111%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	8.88	88.8%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.52	95.2%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.83	98.3%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC.CAS\97\_63853.xls

Analyst: \_\_\_\_\_  
 Reviewed: \_\_\_\_\_ sec



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: Western Water Consultants

Sample ID: TRIP BLANK

Laboratory ID: C97-63869A

Matrix: Water

Dilution Factor: 1

Date Sampled: 10/16/97

Date Received: 10/21/97

Date Analyzed: 10/27/97

Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: TRIP BLANK  
 Laboratory ID: C97-63869A

Date Sampled: 10/16/97  
 Date Analyzed: 10/27/97  
 Date Reported: November 6, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ( $\mu\text{g/L}$ )	LIMIT OF DETECTION ( $\mu\text{g/L}$ )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

### RUNTIME QUALITY ASSURANCE REPORT

<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>ICAL / CCAL</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Pentafluorobenzene	986888	827952	119%	50 - 200 %
Fluorobenzene	1545717	1469329	105%	50 - 200 %
1,4 - Difluorobenzene	1609617	1439497	112%	50 - 200 %
Chlorobenzene - d5	1185434	1170721	101%	50 - 200 %
1,4 - Dichlorobenzene - d4	577656	553925	104%	50 - 200 %

<u>SYSTEM MONITORING COMPOUNDS</u>	<u>CONCENTRATION</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Dibromofluoromethane	9.30	93.0%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.71	97.1%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.86	98.6%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

Report File: R:\Reports\CLIENTS.97\Western\_Water\_Consultants\ORGANIC.CAS\97\_63853.xls

Analyst: yw  
 Reviewed: sec



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

File 93007D

### EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-AD.10/97  
Laboratory ID: C97-58595  
Matrix: Air  
Dilution Factor: 1

Date Sampled: 10/14/97  
Date Received: 10/15/97  
Date Analyzed: 10/15/97  
Date Reported: October 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	1.31	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	1.74	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-AD.10/97  
 Laboratory ID: C97-58595

Date Sampled: 10/14/97  
 Date Analyzed: 10/15/97  
 Date Reported: October 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )	
			J	1.0
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND		1.0
108-86-1	Bromobenzene	ND		1.0
103-65-1	n - Propylbenzene	ND		1.0
95-49-8	2 - Chlorotoluene	ND		1.0
106-43-4	4 - Chlorotoluene	ND		1.0
108-67-8	<b>1,3,5 - Trimethylbenzene</b>	<b>0.84</b>	<b>J</b>	<b>1.0</b>
98-06-6	tert - Butylbenzene	ND		1.0
95-63-6	1,2,4 - Trimethylbenzene	ND		1.0
135-98-8	sec - Butylbenzene	ND		1.0
541-73-1	1,3 - Dichlorobenzene	ND		1.0
106-46-7	1,4 - Dichlorobenzene	ND		1.0
99-87-6	4-Isopropyltoluene	ND		1.0
95-50-1	1,2 - Dichlorobenzene	ND		1.0
104-51-8	n - Butylbenzene	ND		1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		5.0
120-82-1	1,2,4 - Trichlorobenzene	ND		1.0
91-20-3	Naphthalene	ND		1.0
87-68-3	Hexachlorobutadiene	ND		1.0
87-61-6	1,2,3 - Trichlorobenzene	ND		1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1321130	1280898	103%	50 - 200 %
Fluorobenzene	2390227	2335628	102%	50 - 200 %
1,4 - Difluorobenzene	2185554	2159573	101%	50 - 200 %
Chlorobenzene - d5	1599418	1543939	104%	50 - 200 %
1,4 - Dichlorobenzene - d4	698628	683898	102%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.72	97.2%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	10.3	103%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.88	98.8%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



Billings • Casper • Gillette • Rapid City

## ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

### EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-WP.10/97  
Laboratory ID: C97-58596  
Matrix: Air  
Dilution Factor: 5

Date Sampled: 10/14/97  
Date Received: 10/15/97  
Date Analyzed: 10/15/97  
Date Reported: October 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorodifluoromethane	ND	5.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>5.40</b>	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>9.05</b>	5.0
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>125</b>	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	<b>Benzene</b>	<b>10.6</b>	5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	<b>Toluene</b>	<b>90.2</b>	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	<b>Tetrachloroethene</b>	<b>81.0</b>	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	<b>Ethylbenzene</b>	<b>26.4</b>	5.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>86.6</b>	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>63.8</b>	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-WP.10/97  
 Laboratory ID: C97-58596

Date Sampled: 10/14/97  
 Date Analyzed: 10/15/97  
 Date Reported: October 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
98-82-8	<b>Isopropylbenzene (1-Methylethylbenzene)</b>	<b>10.8</b>	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	<b>n - Propylbenzene</b>	<b>17.9</b>	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	<b>1,3,5 - Trimethylbenzene</b>	<b>109</b>	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	<b>1,2,4 - Trimethylbenzene</b>	<b>51.6</b>	5.0
135-98-8	sec - Butylbenzene	ND	5.0
541-73-1	<b>1,3 - Dichlorobenzene</b>	<b>ND</b>	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	Naphthalene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2,3 - Trichlorobenzene	ND	5.0

ND - Analyte not detected at stated limit of detection

### RUNTIME QUALITY ASSURANCE REPORT

<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>ICAL / CCAL AREA</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Pentafluorobenzene	1351504	1280898	106%	50 - 200 %
Fluorobenzene	2431170	2335628	104%	50 - 200 %
1,4 - Difluorobenzene	2225103	2159573	103%	50 - 200 %
Chlorobenzene - d5	1616655	1543939	105%	50 - 200 %
1,4 - Dichlorobenzene - d4	726254	683898	106%	50 - 200 %

<u>SYSTEM MONITORING COMPOUNDS</u>	<u>CONCENTRATION</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Dibromofluoromethane	9.39	93.9%	86 - 118 %
Toluene - d8	10.8	108%	88 - 110 %
4 - Bromofluorobenzene	10.4	104%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

File 93007.D

**EPA METHOD 8260**

Client: Western Water Consultants  
Sample ID: 93007-UST.7/97  
Laboratory ID: C97-41722  
Matrix: Air  
Dilution Factor: 10

Date Sampled: 07/29/97  
Date Received: 07/30/97  
Date Analyzed: 07/30/97  
Date Reported: August 12, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	10.0
74-87-3	Chloromethane	ND	10.0
75-01-4	Vinyl chloride (Chloroethene)	ND	10.0
74-83-9	Bromomethane	ND	10.0
75-00-3	Chloroethane	ND	10.0
75-69-4	Trichlorodifluoromethane	ND	10.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>10.4</b>	10.0
75-09-2	Methylene chloride (Dichloromethane)	ND	10.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	10.0
75-34-3	1,1 - Dichloroethane	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	10.0
74-97-5	Bromochloromethane	ND	10.0
67-66-3	Chloroform (Trichloromethane)	ND	10.0
594-20-7	2,2 - Dichloropropane	ND	10.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>30.0</b>	10.0
107-06-2	1,2 - Dichloroethane	ND	10.0
563-58-6	1,1 - Dichloropropene	ND	10.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	10.0
71-43-2	Benzene	ND	10.0
74-95-3	Dibromomethane	ND	10.0
78-87-5	1,2 - Dichloropropane	ND	10.0
79-01-6	Trichloroethene	ND	10.0
75-27-4	Bromodichloromethane	ND	10.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	10.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	10.0
79-00-5	1,1,2 - Trichloroethane	ND	10.0
108-88-3	Toluene	ND	10.0
106-93-4	1,2 - Dibromoethane	ND	10.0
142-28-9	1,3 - Dichloropropane	ND	10.0
124-48-1	Dibromochloromethane	ND	10.0
127-18-4	<b>Tetrachloroethene</b>	<b>148</b>	10.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	10.0
108-90-7	Chlorobenzene	ND	10.0
100-41-4	Ethylbenzene	ND	10.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	20.0
75-25-2	Bromoform (Tribromomethane)	ND	10.0
100-42-5	Styrene (Ethenylbenzene)	ND	10.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	10.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	10.0
96-18-4	1,2,3 - Trichloropropane	ND	10.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93007-UST.7/97  
 Laboratory ID: C97-41722

Date Sampled: 07/29/97  
 Date Analyzed: 07/30/97  
 Date Reported: August 12, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	10.0
108-86-1	Bromobenzene	ND	10.0
103-65-1	n - Propylbenzene	ND	10.0
95-49-8	2 - Chlorotoluene	ND	10.0
106-43-4	4 - Chlorotoluene	ND	10.0
108-67-8	1,3,5 - Trimethylbenzene	ND	10.0
98-06-6	tert - Butylbenzene	ND	10.0
95-63-6	1,2,4 - Trimethylbenzene	ND	10.0
135-98-8	sec - Butylbenzene	ND	10.0
541-73-1	1,3 - Dichlorobenzene	ND	10.0
106-46-7	1,4 - Dichlorobenzene	ND	10.0
99-87-6	4-Isopropyltoluene	ND	10.0
95-50-1	1,2 - Dichlorobenzene	ND	10.0
104-51-8	n - Butylbenzene	ND	10.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	50.0
120-82-1	1,2,4 - Trichlorobenzene	ND	10.0
91-20-3	Naphthalene	ND	10.0
87-68-3	Hexachlorobutadiene	ND	10.0
87-61-6	1,2,3 - Trichlorobenzene	ND	10.0

ND - Analyte not detected at stated limit of detection

### Runtime Quality Assurance Report

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	945544	940049	101%	50 - 200 %
Fluorobenzene	1838298	1717058	107%	50 - 200 %
1,4 - Difluorobenzene	1650419	1650598	100%	50 - 200 %
Chlorobenzene - d5	1257479	1211735	104%	50 - 200 %
1,4 - Dichlorobenzene - d4	535085	504616	106%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromoform	9.65	96.5%	86 - 118 %
Toluene - d8	10.6	106%	88 - 110 %
4 - Bromofluorobenzene	10.0	100%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.99	99.9%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: **93007-AD.7/97**  
Laboratory ID: **C97-41723**  
Matrix: **Air**  
Dilution Factor: **1**

Date Sampled: **07/29/97**  
Date Received: **07/30/97**  
Date Analyzed: **07/30/97**  
Date Reported: **August 12, 1997**

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>	
		<b>(mg/m<sup>3</sup>)</b>	<b>LIMIT OF DETECTION (mg/m<sup>3</sup>)</b>
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorodifluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Trichloromethane)	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>1.45</b>	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	<b>Toluene</b>	<b>3.46</b>	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	<b>Tetrachloroethene</b>	<b>2.88</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	<b>Ethylbenzene</b>	<b>0.71</b>	J 1.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>2.38</b>	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>2.12</b>	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93007-AD.7/97  
 Laboratory ID: C97-41723

Date Sampled: 07/29/97  
 Date Analyzed: 07/30/97  
 Date Reported: August 12, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	4.52	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	2.26	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### Runtime Quality Assurance Report

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT	ACCEPTANCE
		AREA	RECOVERY	RANGE
Pentafluorobenzene	867982	940049	92.3%	50 - 200 %
Fluorobenzene	1724537	1717058	100%	50 - 200 %
1,4 - Difluorobenzene	1577028	1650598	95.5%	50 - 200 %
Chlorobenzene - d5	1220180	1211735	101%	50 - 200 %
1,4 - Dichlorobenzene - d4	545779	504616	108%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	10.4	104%	86 - 118 %
Toluene - d8	10.6	106%	88 - 110 %
4 - Bromofluorobenzene	10.6	106%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.2	102%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: **93007-WP.7/97**  
Laboratory ID: **C97-41724**  
Matrix: **Air**  
Dilution Factor: **10**

Date Sampled: **07/29/97**  
Date Received: **07/30/97**  
Date Analyzed: **07/30/97**  
Date Reported: **August 12, 1997**

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>		<b>LIMIT OF DETECTION (mg/m<sup>3</sup>)</b>
		<b>(mg/m<sup>3</sup>)</b>		
75-71-8	Dichlorodifluoromethane	ND		10.0
74-87-3	Chloromethane	ND		10.0
75-01-4	Vinyl chloride (Chloroethene)	ND		10.0
74-83-9	Bromomethane	ND		10.0
75-00-3	Chloroethane	ND		10.0
75-69-4	Trichlorofluoromethane	ND		10.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>6.10</b>	<b>J</b>	10.0
75-09-2	Methylene chloride (Dichloromethane)	ND		10.0
156-60-5	trans - 1, 2 - Dichloroethene	ND		10.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>6.90</b>	<b>J</b>	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND		10.0
74-97-5	Bromochloromethane	ND		10.0
67-66-3	Chloroform (Trichloromethane)	ND		10.0
594-20-7	2,2 - Dichloropropane	ND		10.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>76.1</b>		10.0
107-06-2	1,2 - Dichloroethane	ND		10.0
563-58-6	1,1 - Dichloropropene	ND		10.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND		10.0
71-43-2	<b>Benzene</b>	<b>5.90</b>	<b>J</b>	10.0
74-95-3	Dibromomethane	ND		10.0
78-87-5	1,2 - Dichloropropane	ND		10.0
79-01-6	Trichloroethene	ND		10.0
75-27-4	Bromodichloromethane	ND		10.0
10061-01-5	cis - 1,3 - Dichloropropene	ND		10.0
10061-02-6	trans - 1,3 - Dichloropropene	ND		10.0
79-00-5	1,1,2 - Trichloroethane	ND		10.0
108-88-3	<b>Toluene</b>	<b>33.0</b>		10.0
106-93-4	1,2 - Dibromoethane	ND		10.0
142-28-9	1,3 - Dichloropropane	ND		10.0
124-48-1	Dibromochloromethane	ND		10.0
127-18-4	<b>Tetrachloroethene</b>	<b>25.5</b>		10.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND		10.0
108-90-7	Chlorobenzene	ND		10.0
100-41-4	<b>Ethylbenzene</b>	<b>5.50</b>	<b>J</b>	10.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>15.1</b>	<b>J</b>	20.0
75-25-2	Bromoform (Tribromomethane)	ND		10.0
100-42-5	Styrene (Ethenylbenzene)	ND		10.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>9.20</b>	<b>J</b>	10.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND		10.0
96-18-4	1,2,3 - Trichloropropane	ND		10.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93007-WP.7/97**  
 Laboratory ID: **C97-41724**

Date Sampled: **07/29/97**  
 Date Analyzed: **07/30/97**  
 Date Reported: **August 12, 1997**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF
			DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	10.0
108-86-1	Bromobenzene	ND	10.0
103-65-1	n - Propylbenzene	ND	10.0
95-49-8	2 - Chlorotoluene	ND	10.0
106-43-4	4 - Chlorotoluene	ND	10.0
108-67-8	<b>1,3,5 - Trimethylbenzene</b>	<b>10.3</b>	10.0
98-06-6	tert - Butylbenzene	ND	10.0
95-63-6	1,2,4 - Trimethylbenzene	ND	10.0
135-98-8	sec - Butylbenzene	ND	10.0
541-73-1	1,3 - Dichlorobenzene	ND	10.0
106-46-7	1,4 - Dichlorobenzene	ND	10.0
99-87-6	4-Isopropyltoluene	ND	10.0
95-50-1	1,2 - Dichlorobenzene	ND	10.0
104-51-8	n - Butylbenzene	ND	10.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	50.0
120-82-1	1,2,4 - Trichlorobenzene	ND	10.0
91-20-3	Naphthalene	ND	10.0
87-68-3	Hexachlorobutadiene	ND	10.0
87-61-6	1,2,3 - Trichlorobenzene	ND	10.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### Runtime Quality Assurance Report

<u>INTERNAL STANDARDS</u>	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	956286	940049	102%	50 - 200 %
Fluorobenzene	1846366	1717058	108%	50 - 200 %
1,4 - Difluorobenzene	1679699	1650598	102%	50 - 200 %
Chlorobenzene - d5	1289788	1211735	106%	50 - 200 %
1,4 - Dichlorobenzene - d4	549623	504616	109%	50 - 200 %

<u>SYSTEM MONITORING COMPOUNDS</u>	<u>CONCENTRATION</u>	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.75	97.5%	86 - 118 %
Toluene - d8	10.7	107%	88 - 110 %
4 - Bromofluorobenzene	10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.96	99.6%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

File 93007-D

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.AD-INP. 6/97  
Laboratory ID: C97-35213  
Matrix: Air  
Dilution Factor: 1

Date Sampled: 06/25/97  
Date Received: 06/26/97  
Date Analyzed: 06/26/97  
Date Reported: July 4, 1997

*Acid Deck  
Input*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	
		(mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorodifluoromethane	ND	1.0
<b>75-35-4</b>	<b>1,1 - Dichloroethene</b>	<b>1.25</b>	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
<b>75-34-3</b>	<b>1,1 - Dichloroethane</b>	<b>0.46</b>	J 1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
<b>71-55-6</b>	<b>1,1,1 - Trichloroethane</b>	<b>2.39</b>	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
<b>108-88-3</b>	<b>Toluene</b>	<b>4.20</b>	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
<b>127-18-4</b>	<b>Tetrachloroethene</b>	<b>6.15</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
<b>100-41-4</b>	<b>Ethylbenzene</b>	<b>1.66</b>	1.0
<b>108-38-3</b>	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>6.32</b>	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
<b>95-47-6</b>	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>5.56</b>	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93-007.AD-INP. 6/97  
 Laboratory ID: C97-35213

Date Sampled: 06/25/97  
 Date Analyzed: 06/26/97  
 Date Reported: July 4, 1997

*Acid Deck  
Input X*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION		LIMIT OF DETECTION (mg/m³)	
		(mg/m³)		J	1.0
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	0.99		J	1.0
108-86-1	Bromobenzene	ND			1.0
103-65-1	n - Propylbenzene	2.08			1.0
95-49-8	2 - Chlorotoluene	ND			1.0
106-43-4	4 - Chlorotoluene	ND			1.0
108-67-8	1,3,5 - Trimethylbenzene	12.0			1.0
98-06-6	tert - Butylbenzene	ND			1.0
95-63-6	1,2,4 - Trimethylbenzene	7.67			1.0
135-98-8	sec - Butylbenzene	ND			1.0
541-73-1	1,3 - Dichlorobenzene	ND			1.0
106-46-7	1,4 - Dichlorobenzene	ND			1.0
99-87-6	4-Isopropyltoluene	ND			1.0
95-50-1	1,2 - Dichlorobenzene	ND			1.0
104-51-8	n - Butylbenzene	ND			1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND			5.0
120-82-1	1,2,4 - Trichlorobenzene	ND			1.0
91-20-3	Naphthalene	ND			1.0
87-68-3	Hexachlorobutadiene	ND			1.0
87-61-6	1,2,3 - Trichlorobenzene	ND			1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>ICAL / CCAL AREA</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Pentafluorobenzene	1334849	1334266	100%	50 - 200 %
Fluorobenzene	2703700	2713933	99.6%	50 - 200 %
1,4 - Difluorobenzene	2196756	2179375	101%	50 - 200 %
Chlorobenzene - d5	1604355	1568157	102%	50 - 200 %
1,4 - Dichlorobenzene - d4	764736	718198	106%	50 - 200 %

<u>SYSTEM MONITORING COMPOUNDS</u>	<u>CONCENTRATION</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Dibromofluoromethane	10.4	104%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	10.6	106%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.82	98.2%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.WP-INP. 6/97  
Laboratory ID: C97-35214  
Matrix: Air  
Dilution Factor: 5

*Former Waste  
Water Collection  
Pond Area*

Date Sampled: 06/25/97  
Date Received: 06/26/97  
Date Analyzed: 06/26/97  
Date Reported: July 4, 1997

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>	<b>LIMIT OF</b>
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorodifluoromethane	ND	5.0
75-35-4	<b>1,1 - Dichloroethene</b>	17.0	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	<b>1,1 - Dichloroethane</b>	22.0	5.0
78-93-3	2 - Butanone (MEK)	ND	50.0
156-59-2	cis - 1, 2 - Dichloroethene	ND	5.0
74-97-5	Bromoform (Trichloromethane)	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	156	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	<b>Benzene</b>	18.7	5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	<b>Toluene</b>	104	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	<b>Tetrachloroethene</b>	97.3	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	<b>Ethylbenzene</b>	33.9	5.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	102	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	74.3	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93-007.WP-INP. 6/97  
 Laboratory ID: C97-35214

Date Sampled: 06/25/97  
 Date Analyzed: 06/26/97  
 Date Reported: July 4, 1997

*Former Waste Collectio  
Waste Pond Area*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )	
			ND	5.0
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	14.8		
108-86-1	Bromobenzene	ND		5.0
103-65-1	n - Propylbenzene	25.2		5.0
95-49-8	2 - Chlorotoluene	ND		5.0
106-43-4	4 - Chlorotoluene	ND		5.0
108-67-8	1,3,5 - Trimethylbenzene	117		5.0
98-06-6	tert - Butylbenzene	ND		5.0
95-63-6	1,2,4 - Trimethylbenzene	64.8		5.0
135-98-8	sec - Butylbenzene	ND		5.0
541-73-1	1,3 - Dichlorobenzene	ND		5.0
106-46-7	1,4 - Dichlorobenzene	ND		5.0
99-87-6	4-Isopropyltoluene	ND		5.0
95-50-1	1,2 - Dichlorobenzene	ND		5.0
104-51-8	n - Butylbenzene	ND		5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		25.0
120-82-1	1,2,4 - Trichlorobenzene	ND		5.0
91-20-3	Naphthalene	ND		5.0
87-68-3	Hexachlorobutadiene	ND		5.0
87-61-6	1,2,3 - Trichlorobenzene	ND		5.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1599312	1334266	120%	50 - 200 %
Fluorobenzene	3123487	2713933	115%	50 - 200 %
1,4 - Difluorobenzene	2556619	2179375	117%	50 - 200 %
Chlorobenzene - d5	1837138	1568157	117%	50 - 200 %
1,4 - Dichlorobenzene - d4	835726	718198	116%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.53	95.3%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.93	99.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.84	98.4%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.USTCOMP. 6/97  
Laboratory ID: C97-35215  
Matrix: Air  
Dilution Factor: 1

Date Sampled: 06/25/97  
Date Received: 06/26/97  
Date Analyzed: 06/26/97  
Date Reported: July 4, 1997

*Former UST  
Area*

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>	<b>LIMIT OF</b>
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethylene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>68.2</b>	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>10.5</b>	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Trichloromethane)	ND	1.0
67-66-3	<b>Chloroform (Trichloromethane)</b>	<b>2.03</b>	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>125</b>	1.0
107-06-2	<b>1,2 - Dichloroethane</b>	<b>1.54</b>	1.0
563-58-6	<b>1,1 - Dichloropropene</b>	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	<b>Trichloroethene</b>	<b>1.11</b>	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	<b>1,1,2 - Trichloroethane</b>	<b>1.44</b>	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	<b>Tetrachloroethene</b>	<b>335</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: Western Water Consultants  
 Sample ID: 93-007.USTCOMP. 6/97  
 Laboratory ID: C97-35215

Date Sampled: 06/25/97  
 Date Analyzed: 06/26/97  
 Date Reported: July 4, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )	
			ND	1.0
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND		
108-86-1	Bromobenzene	ND		
103-65-1	n - Propylbenzene	ND		
95-49-8	2 - Chlorotoluene	ND		
106-43-4	4 - Chlorotoluene	ND		
108-67-8	1,3,5 - Trimethylbenzene	ND		
98-06-6	tert - Butylbenzene	ND		
95-63-6	1,2,4 - Trimethylbenzene	ND		
135-98-8	sec - Butylbenzene	ND		
541-73-1	1,3 - Dichlorobenzene	ND		
106-46-7	1,4 - Dichlorobenzene	ND		
99-87-6	4-Isopropyltoluene	ND		
95-50-1	1,2 - Dichlorobenzene	ND		
104-51-8	n - Butylbenzene	ND		
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		5.0
120-82-1	1,2,4 - Trichlorobenzene	ND		
91-20-3	Naphthalene	ND		
87-68-3	Hexachlorobutadiene	ND		
87-61-6	1,2,3 - Trichlorobenzene	ND		

ND - Analyte not detected at stated limit of detection

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT	ACCEPTANCE
			RECOVERY	RANGE
Pentafluorobenzene	1460733	1334266	109%	50 - 200 %
Fluorobenzene	2930688	2713933	108%	50 - 200 %
1,4 - Difluorobenzene	2388702	2179375	110%	50 - 200 %
Chlorobenzene - d5	1707256	1568157	109%	50 - 200 %
1,4 - Dichlorobenzene - d4	816804	718198	114%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	9.89	98.9%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	9.93	99.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: Western Water Consultants  
Sample ID: 93-007.USSTDP1.6/97  
Laboratory ID: C97-35216  
Matrix: Air  
Dilution Factor: 1

*Deep SVE 12' II  
3-7*

Date Sampled: 06/25/97  
Date Received: 06/26/97  
Date Analyzed: 06/26/97  
Date Reported: July 4, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorodifluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	82.8	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	7.31	1.0
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Trichloromethane)	ND	1.0
67-66-3	Chloroform (Trichloromethane)	1.07	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	60.2	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	226	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93-007.USTDP1. 6/97**  
 Laboratory ID: **C97-35216**

Date Sampled: **06/25/97**  
 Date Analyzed: **06/26/97**  
 Date Reported: **July 4, 1997**

Drip SVE 3-11

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>		<b>LIMIT OF DETECTION (mg/m<sup>3</sup>)</b>
		<b>(mg/m<sup>3</sup>)</b>		
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND		1.0
108-86-1	Bromobenzene	ND		1.0
103-65-1	n - Propylbenzene	ND		1.0
95-49-8	2 - Chlorotoluene	ND		1.0
106-43-4	4 - Chlorotoluene	ND		1.0
108-67-8	1,3,5 - Trimethylbenzene	ND		1.0
98-06-6	tert - Butylbenzene	ND		1.0
95-63-6	1,2,4 - Trimethylbenzene	ND		1.0
135-98-8	sec - Butylbenzene	ND		1.0
541-73-1	1,3 - Dichlorobenzene	ND		1.0
106-46-7	1,4 - Dichlorobenzene	ND		1.0
99-87-6	4-Isopropyltoluene	ND		1.0
95-50-1	1,2 - Dichlorobenzene	ND		1.0
104-51-8	n - Butylbenzene	ND		1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		5.0
120-82-1	1,2,4 - Trichlorobenzene	ND		1.0
91-20-3	Naphthalene	ND		1.0
87-68-3	Hexachlorobutadiene	ND		1.0
87-61-6	1,2,3 - Trichlorobenzene	ND		1.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

<b>INTERNAL STANDARDS</b>	<b>AREA</b>	<b>ICAL / CCAL AREA</b>	<b>PERCENT</b>	<b>ACCEPTANCE RANGE</b>
			<b>RECOVERY</b>	
Pentafluorobenzene	1524534	1334266	114%	50 - 200 %
Fluorobenzene	3083096	2713933	114%	50 - 200 %
1,4 - Difluorobenzene	2483535	2179375	114%	50 - 200 %
Chlorobenzene - d5	1782655	1568157	114%	50 - 200 %
1,4 - Dichlorobenzene - d4	856878	718198	119%	50 - 200 %

<b>SYSTEM MONITORING COMPOUNDS</b>	<b>CONCENTRATION</b>	<b>PERCENT</b>	<b>ACCEPTANCE RANGE</b>
		<b>RECOVERY</b>	
Dibromofluoromethane	10.1	101%	86 - 118 %
Toluene - d8	10.0	100%	88 - 110 %
4 - Bromofluorobenzene	10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### **REFERENCES**

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.USTDP2. 6/97  
Laboratory ID: C97-35217  
Matrix: Air  
Dilution Factor: 10

Date Sampled: 06/25/97  
Date Received: 06/26/97  
Date Analyzed: 06/26/97  
Date Reported: July 4, 1997

Deep SVE Well  
3-6

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	10.0
74-87-3	Chloromethane	ND	10.0
75-01-4	Vinyl chloride (Chloroethene)	ND	10.0
74-83-9	Bromomethane	ND	10.0
75-00-3	Chloroethane	ND	10.0
75-69-4	Trichlorodifluoromethane	ND	10.0
<b>75-35-4</b>	<b>1,1 - Dichloroethene</b>	<b>120</b>	10.0
75-09-2	Methylene chloride (Dichloromethane)	ND	10.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	10.0
<b>75-34-3</b>	<b>1,1 - Dichloroethane</b>	<b>13.2</b>	10.0
78-93-3	2 - Butanone (MEK)	ND	100.0
156-59-2	cis - 1,2 - Dichloroethene	ND	10.0
74-97-5	Bromochloromethane	ND	10.0
67-66-3	Chloroform (Trichloromethane)	ND	10.0
594-20-7	2,2 - Dichloropropane	ND	10.0
<b>71-55-6</b>	<b>1,1,1 - Trichloroethane</b>	<b>114</b>	10.0
107-06-2	1,2 - Dichloroethane	ND	10.0
563-58-6	1,1 - Dichloropropene	ND	10.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	10.0
71-43-2	Benzene	ND	10.0
74-95-3	Dibromomethane	ND	10.0
78-87-5	1,2 - Dichloropropane	ND	10.0
79-01-6	Trichloroethene	ND	10.0
75-27-4	Bromodichloromethane	ND	—
10061-01-5	cis - 1,3 - Dichloropropene	ND	10.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	10.0
79-00-5	1,1,2 - Trichloroethane	ND	10.0
108-88-3	Toluene	ND	10.0
106-93-4	1,2 - Dibromoethane	ND	10.0
142-28-9	1,3 - Dichloropropane	ND	10.0
124-48-1	Dibromochloromethane	ND	10.0
<b>127-18-4</b>	<b>Tetrachloroethene</b>	<b>368</b>	10.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	10.0
108-90-7	Chlorobenzene	ND	10.0
100-41-4	Ethylbenzene	ND	10.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	20.0
75-25-2	Bromoform (Tribromomethane)	ND	10.0
100-42-5	Styrene (Ethenylbenzene)	ND	10.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	10.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	10.0
96-18-4	1,2,3 - Trichloropropane	ND	10.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93-007.USTDP2.6/97**  
 Laboratory ID: **C97-35217**

Date Sampled: **06/25/97**  
 Date Analyzed: **06/26/97**  
 Date Reported: **July 4, 1997**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF
			DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	10.0
108-86-1	Bromobenzene	ND	10.0
103-65-1	n - Propylbenzene	ND	10.0
95-49-8	2 - Chlorotoluene	ND	10.0
106-43-4	4 - Chlorotoluene	ND	10.0
108-67-8	1,3,5 - Trimethylbenzene	ND	10.0
98-06-6	tert - Butylbenzene	ND	10.0
95-63-6	1,2,4 - Trimethylbenzene	ND	10.0
135-98-8	sec - Butylbenzene	ND	10.0
541-73-1	1,3 - Dichlorobenzene	ND	10.0
106-46-7	1,4 - Dichlorobenzene	ND	10.0
99-87-6	4-Isopropyltoluene	ND	10.0
95-50-1	1,2 - Dichlorobenzene	ND	10.0
104-51-8	n - Butylbenzene	ND	10.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	50.0
120-82-1	1,2,4 - Trichlorobenzene	ND	10.0
91-20-3	Naphthalene	ND	10.0
87-68-3	Hexachlorobutadiene	ND	10.0
87-61-6	1,2,3 - Trichlorobenzene	ND	10.0

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
		AREA		
Pentafluorobenzene	1408035	1334266	106%	50 - 200 %
Fluorobenzene	2854854	2713933	105%	50 - 200 %
1,4 - Difluorobenzene	2300607	2179375	106%	50 - 200 %
Chlorobenzene - d5	1647557	1568157	105%	50 - 200 %
1,4 - Dichlorobenzene - d4	783818	718198	109%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE RANGE
		RECOVERY	
Dibromofluoromethane	10.2	102%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.98	99.8%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: [energy@trib.com](mailto:energy@trib.com) • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.USTDP3. 6/97  
Laboratory ID: C97-35218  
Matrix: Air  
Dilution Factor: 10

*Deep SVE well  
3' S/W*

Date Sampled: 06/25/97  
Date Received: 06/26/97  
Date Analyzed: 06/26/97  
Date Reported: July 4, 1997

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>	<b>LIMIT OF</b>
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	10.0
74-87-3	Chloromethane	ND	10.0
75-01-4	Vinyl chloride (Chloroethene)	ND	10.0
74-83-9	Bromomethane	ND	10.0
75-00-3	Chloroethane	ND	10.0
75-69-4	Trichlorodifluoromethane	ND	10.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>79.8</b>	10.0
75-09-2	Methylene chloride (Dichloromethane)	ND	10.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	10.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>25.1</b>	10.0
78-93-3	2 - Butanone (MEK)	ND	100.0
156-59-2	cis - 1, 2 - Dichloroethene	ND	10.0
74-97-5	Bromochloromethane	ND	10.0
67-66-3	Chloroform (Trichloromethane)	ND	10.0
594-20-7	2,2 - Dichloropropane	ND	10.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>441</b>	10.0
107-06-2	1,2 - Dichloroethane	ND	10.0
563-58-6	1,1 - Dichloropropene	ND	10.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	10.0
71-43-2	Benzene	ND	10.0
74-95-3	Dibromomethane	ND	10.0
78-87-5	1,2 - Dichloropropane	ND	10.0
79-01-6	Trichloroethene	ND	10.0
75-27-4	Bromodichloromethane	ND	10.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	10.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	10.0
79-00-5	<b>1,1,2 - Trichloroethane</b>	<b>ND</b>	10.0
108-88-3	Toluene	ND	10.0
106-93-4	1,2 - Dibromoethane	ND	10.0
142-28-9	1,3 - Dichloropropane	ND	10.0
124-48-1	Dibromochloromethane	ND	10.0
127-18-4	<b>Tetrachloroethene</b>	<b>871</b>	10.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	10.0
108-90-7	Chlorobenzene	ND	10.0
100-41-4	Ethylbenzene	ND	10.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	20.0
75-25-2	Bromoform (Tribromomethane)	ND	10.0
100-42-5	Styrene (Ethenylbenzene)	ND	10.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	10.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	10.0
96-18-4	1,2,3 - Trichloropropane	ND	10.0

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93-007.USTDP3.6/97  
 Laboratory ID: C97-35218

Date Sampled: 06/25/97  
 Date Analyzed: 06/26/97  
 Date Reported: July 4, 1997

Deep SW 3-5-97

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>		<b>LIMIT OF DETECTION (mg/m<sup>3</sup>)</b>
		( <i>mg/m<sup>3</sup></i> )		
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND		10.0
108-86-1	Bromobenzene	ND		10.0
103-65-1	n - Propylbenzene	ND		10.0
95-49-8	2 - Chlorotoluene	ND		10.0
106-43-4	4 - Chlorotoluene	ND		10.0
108-67-8	1,3,5 - Trimethylbenzene	ND		10.0
98-06-6	tert - Butylbenzene	ND		10.0
95-63-6	1,2,4 - Trimethylbenzene	ND		10.0
135-98-8	sec - Butylbenzene	ND		10.0
541-73-1	1,3 - Dichlorobenzene	ND		10.0
106-46-7	1,4 - Dichlorobenzene	ND		10.0
99-87-6	4-Isopropyltoluene	ND		10.0
95-50-1	1,2 - Dichlorobenzene	ND		10.0
104-51-8	n - Butylbenzene	ND		10.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		50.0
120-82-1	1,2,4 - Trichlorobenzene	ND		10.0
91-20-3	Naphthalene	ND		10.0
87-68-3	Hexachlorobutadiene	ND		10.0
87-61-6	1,2,3 - Trichlorobenzene	ND		10.0

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>ICAL / CCAL AREA</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Pentafluorobenzene	1381918	1334266	104%	50 - 200 %
Fluorobenzene	2788756	2713933	103%	50 - 200 %
1,4 - Difluorobenzene	2259676	2179375	104%	50 - 200 %
Chlorobenzene - d5	1618016	1568157	103%	50 - 200 %
1,4 - Dichlorobenzene - d4	753752	718198	105%	50 - 200 %
<u>SYSTEM MONITORING COMPOUNDS</u>		<u>CONCENTRATION</u>	<u>PERCENT RECOVERY</u>	<u>ACCEPTANCE RANGE</u>
Dibromofluoromethane		9.98	99.8%	86 - 118 %
Toluene - d8		9.99	99.9%	88 - 110 %
4 - Bromofluorobenzene		10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4		10.2	102%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

File 93007-D

**EPA METHOD 8260**

Client: Western Water Consultants  
Sample ID: 93007-1-7.5/97  
Laboratory ID: C97-27703  
Matrix: Soil  
Dilution Factor: 200

SVE Well 1-7

Date Sampled: 05/12/97  
Date Received: 05/20/97  
Date Extracted: 05/21/97  
Date Analyzed: 05/21/97  
Date Reported: May 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/kg)	LIMIT OF DETECTION (mg/kg)
75-71-8	Dichlorodifluoromethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl chloride	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorofluoromethane	ND	0.20
75-35-4	1,1 - Dichloroethene	ND	0.20
75-09-2	Methylene chloride	ND	0.20
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.20
75-34-3	1,1 - Dichloroethane	ND	0.20
156-59-2	cis - 1,2 - Dichloroethene	ND	0.20
74-97-5	Bromochloromethane	ND	0.20
67-66-3	Chloroform	ND	0.20
594-20-7	2,2 - Dichloropropane	ND	0.20
71-55-6	1,1,1 - Trichloroethane	ND	0.20
107-06-2	1,2 - Dichloroethane	ND	0.20
563-58-6	1,1 - Dichloropropene	ND	0.20
56-23-5	Carbon tetrachloride	ND	0.20
71-43-2	<b>Benzene</b>	0.11	J 0.20
74-95-3	Dibromomethane	ND	0.20
78-87-5	1,2 - Dichloropropane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
75-27-4	Bromodichloromethane	ND	0.20
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.20
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.20
79-00-5	1,1,2 - Trichloroethane	ND	0.20
108-88-3	<b>Toluene</b>	1.55	0.20
106-93-4	1,2 - Dibromoethane (EDB)	ND	0.20
142-28-9	1,3 - Dichloropropane	ND	0.20
124-48-1	Dibromochloromethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	<b>Ethylbenzene</b>	2.17	0.20
108-38-3	<b>m,p - Xylenes</b>	2.57	0.40
75-25-2	Bromoform	ND	0.20
100-42-5	Styrene	ND	0.20
95-47-6	<b>o - Xylene</b>	1.21	0.20
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.20
96-18-4	1,2,3 - Trichloropropane	ND	0.20

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93007-1-7.5/97**  
 Laboratory ID: **C97-27703**

Date Sampled: **05/12/97**  
 Date Analyzed: **05/21/97**  
 Date Reported: **May 23, 1997**

SVE Well  
1-7

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION (mg/kg)</b>	<b>LIMIT OF DETECTION (mg/kg)</b>
98-82-8	Isopropylbenzene	0.50	0.20
108-86-1	Bromobenzene	ND	0.20
103-65-1	n - Propylbenzene	1.01	0.20
95-49-8	2 - Chlorotoluene	ND	0.20
106-43-4	4 - Chlorotoluene	ND	0.20
108-67-8	1,3,5 - Trimethylbenzene	3.37	0.20
98-06-6	tert - Butylbenzene	ND	0.20
95-63-6	1,2,4 - Trimethylbenzene	3.25	0.20
135-98-8	sec - Butylbenzene	0.58	0.20
541-73-1	1,3 - Dichlorobenzene	ND	0.20
106-46-7	1,4 - Dichlorobenzene	ND	0.20
99-87-6	4-Isopropyltoluene	0.65	0.20
95-50-1	1,2 - Dichlorobenzene	ND	0.20
104-51-8	n - Butylbenzene	1.41	0.20
96-12-8	1,2 - Dibromo - 3 - chloropropane (DBCP)	ND	1.00
120-82-1	1,2,4 - Trichlorobenzene	ND	0.20
91-20-3	Naphthalene	1.00	0.20
87-68-3	Hexachlorobutadiene	ND	0.20
87-61-6	1,2,3 - Trichlorobenzene	ND	0.20

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

<b>INTERNAL STANDARDS</b>	<b>AREA</b>	<b>ICAL / CCAL</b>	<b>PERCENT RECOVERY</b>	<b>ACCEPTANCE</b>
		<b>AREA</b>	<b>RECOVERY</b>	<b>RANGE</b>
Pentafluorobenzene	2349889	2125582	111%	50 - 200 %
Fluorobenzene	3530732	3225498	109%	50 - 200 %
1,4 - Difluorobenzene	3041531	2749094	111%	50 - 200 %
Chlorobenzene - d5	2176536	1972814	110%	50 - 200 %
1,4 - Dichlorobenzene - d4	1021590	941949	108%	50 - 200 %

<b>SYSTEM MONITORING COMPOUNDS</b>	<b>CONCENTRATION</b>	<b>PERCENT RECOVERY</b>	<b>ACCEPTANCE</b>
		<b>RECOVERY</b>	<b>RANGE</b>
Dibromofluoromethane	9.71	97.1%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.61	96.1%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.27	92.7%	80 - 120 %

### **REFERENCES**

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: Western Water Consultants  
Sample ID: 93007-1-8.5/97  
Laboratory ID: C97-27704  
Matrix: Soil  
Dilution Factor: 200

SVE Well  
1-8

Date Sampled: 05/12/97  
Date Received: 05/20/97  
Date Extracted: 05/21/97  
Date Analyzed: 05/21/97  
Date Reported: May 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/kg)	LIMIT OF DETECTION (mg/kg)
75-71-8	Dichlorodifluoromethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl chloride (Chloroethene)	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorodifluoromethane	ND	0.20
75-35-4	1,1 - Dichloroethene	ND	0.20
75-09-2	Methylene chloride (Dichloromethane)	ND	0.20
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.20
75-34-3	1,1 - Dichloroethane	ND	0.20
156-59-2	cis - 1,2 - Dichloroethene	ND	0.20
74-97-5	Bromoform (Tetrachloromethane)	ND	0.20
67-66-3	Chloroform (Trichloromethane)	ND	0.20
594-20-7	2,2 - Dichloropropane	ND	0.20
71-55-6	1,1,1 - Trichloroethane	ND	0.20
107-06-2	1,2 - Dichloroethane	ND	0.20
563-58-6	1,1 - Dichloropropene	ND	0.20
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	0.20
71-43-2	Benzene	ND	0.20
74-95-3	Dibromomethane	ND	0.20
78-87-5	1,2 - Dichloropropane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
75-27-4	Bromodichloromethane	ND	0.20
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.20
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.20
79-00-5	1,1,2 - Trichloroethane	ND	0.20
108-88-3	Toluene	ND	0.20
106-93-4	1,2 - Dibromoethane	ND	0.20
142-28-9	1,3 - Dichloropropane	ND	0.20
124-48-1	Dibromochloromethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	Ethylbenzene	ND	0.20
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	0.40
75-25-2	Bromoform (Tribromomethane)	ND	0.20
100-42-5	Styrene (Ethenylbenzene)	ND	0.20
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	0.20
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.20
96-18-4	1,2,3 - Trichloropropane	ND	0.20

ND - Analyte not detected at stated limit of detection



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-1-8.5/97  
 Laboratory ID: C97-27704

Date Sampled: 05/12/97  
 Date Analyzed: 05/21/97  
 Date Reported: May 23, 1997

SVE Well  
1-8

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/kg)	LIMIT OF DETECTION (mg/kg)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	0.20
108-86-1	Bromobenzene	ND	0.20
103-65-1	n - Propylbenzene	ND	0.20
95-49-8	2 - Chlorotoluene	ND	0.20
106-43-4	4 - Chlorotoluene	ND	0.20
108-67-8	1,3,5 - Trimethylbenzene	ND	0.20
98-06-6	tert - Butylbenzene	ND	0.20
95-63-6	1,2,4 - Trimethylbenzene	ND	0.20
135-98-8	sec - Butylbenzene	ND	0.20
541-73-1	1,3 - Dichlorobenzene	ND	0.20
106-46-7	1,4 - Dichlorobenzene	ND	0.20
99-87-6	4-Isopropyltoluene (1-Methyl-4-(1-methyl)-benzene)	ND	0.20
95-50-1	1,2 - Dichlorobenzene	ND	0.20
104-51-8	n - Butylbenzene	ND	0.20
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	1.00
120-82-1	1,2,4 - Trichlorobenzene	ND	0.20
91-20-3	Naphthalene	ND	0.20
87-68-3	Hexachlorobutadiene	ND	0.20
87-61-6	1,2,3 - Trichlorobenzene	ND	0.20

ND - Analyte not detected at stated limit of detection

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	2236367	2125582	105%	50 - 200 %
Fluorobenzene	3346460	3225498	104%	50 - 200 %
1,4 - Difluorobenzene	2915255	2749094	106%	50 - 200 %
Chlorobenzene - d5	1988195	1972814	101%	50 - 200 %
1,4 - Dichlorobenzene - d4	948699	941949	101%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.58	95.8%	86 - 118 %
Toluene - d8	9.61	96.1%	88 - 110 %
4 - Bromofluorobenzene	9.93	99.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.87	98.7%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93007-3-5.5/97  
Laboratory ID: C97-27705  
Matrix: Soil  
Dilution Factor: 200

*SVE Well  
3-5*

Date Sampled: 05/12/97  
Date Received: 05/20/97  
Date Extracted: 05/21/97  
Date Analyzed: 05/21/97  
Date Reported: May 23, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/kg)	LIMIT OF DETECTION (mg/kg)
75-71-8	Dichlorodifluoromethane	ND	0.20
74-87-3	Chloromethane	ND	0.20
75-01-4	Vinyl chloride (Chloroethene)	ND	0.20
74-83-9	Bromomethane	ND	0.20
75-00-3	Chloroethane	ND	0.20
75-69-4	Trichlorofluoromethane	ND	0.20
75-35-4	1,1 - Dichloroethene	ND	0.20
75-09-2	Methylene chloride (Dichloromethane)	ND	0.20
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.20
75-34-3	1,1 - Dichloroethane	ND	0.20
156-59-2	cis - 1,2 - Dichloroethene	ND	0.20
74-97-5	Bromochloromethane	ND	0.20
67-66-3	Chloroform (Trichloromethane)	ND	0.20
594-20-7	2,2 - Dichloropropane	ND	0.20
71-55-6	1,1,1 - Trichloroethane	ND	0.20
107-06-2	1,2 - Dichloroethane	ND	0.20
563-58-6	1,1 - Dichloropropene	ND	0.20
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	0.20
71-43-2	Benzene	ND	0.20
74-95-3	Dibromomethane	ND	0.20
78-87-5	1,2 - Dichloropropane	ND	0.20
79-01-6	Trichloroethene	ND	0.20
75-27-4	Bromodichloromethane	ND	0.20
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.20
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.20
79-00-5	1,1,2 - Trichloroethane	ND	0.20
108-88-3	Toluene	ND	0.20
106-93-4	1,2 - Dibromoethane	ND	0.20
142-28-9	1,3 - Dichloropropane	ND	0.20
124-48-1	Dibromochloromethane	ND	0.20
127-18-4	Tetrachloroethene	ND	0.20
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.20
108-90-7	Chlorobenzene	ND	0.20
100-41-4	Ethylbenzene	ND	0.20
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	0.40
75-25-2	Bromoform (Tribromomethane)	ND	0.20
100-42-5	Styrene (Ethenylbenzene)	ND	0.20
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	0.20
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.20
96-18-4	1,2,3 - Trichloropropane	ND	0.20

*ND - Analyte not detected at stated limit of detection*



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-3-5.5/97  
 Laboratory ID: C97-27705

Date Sampled: 05/12/97  
 Date Analyzed: 05/21/97  
 Date Reported: May 23, 1997

*SVE well  
3-S*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/kg)	LIMIT OF DETECTION (mg/kg)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	0.20
108-86-1	Bromobenzene	ND	0.20
103-65-1	n - Propylbenzene	ND	0.20
95-49-8	2 - Chlorotoluene	ND	0.20
106-43-4	4 - Chlorotoluene	ND	0.20
108-67-8	1,3,5 - Trimethylbenzene	ND	0.20
98-06-6	tert - Butylbenzene	ND	0.20
95-63-6	1,2,4 - Trimethylbenzene	ND	0.20
135-98-8	sec - Butylbenzene	ND	0.20
541-73-1	1,3 - Dichlorobenzene	ND	0.20
106-46-7	1,4 - Dichlorobenzene	ND	0.20
99-87-6	4-Isopropyltoluene (1-Methyl-4-(1-methyl)-benzene)	ND	0.20
95-50-1	1,2 - Dichlorobenzene	ND	0.20
104-51-8	n - Butylbenzene	ND	0.20
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	1.00
120-82-1	1,2,4 - Trichlorobenzene	ND	0.20
91-20-3	Naphthalene	ND	0.20
87-68-3	Hexachlorobutadiene	ND	0.20
87-61-6	1,2,3 - Trichlorobenzene	ND	0.20

*ND - Analyte not detected at stated limit of detection*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE
Pentafluorobenzene	2272586	2125582	107%	50 - 200 %
Fluorobenzene	3513760	3225498	109%	50 - 200 %
1,4 - Difluorobenzene	2986901	2749094	109%	50 - 200 %
Chlorobenzene - d5	2108640	1972814	107%	50 - 200 %
1,4 - Dichlorobenzene - d4	998433	941949	106%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE
Dibromofluoromethane	9.89	98.9%	86 - 118 %
Toluene - d8	9.89	98.9%	88 - 110 %
4 - Bromofluorobenzene	10.0	100%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.0	100%	80 - 120 %

### REFERENCES

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601  
MAILING: P.O. BOX 3258 • CASPER, WY 82602  
E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

File 93LC7.D

Client: Western Water Consultants  
Sample ID: 93-007.UST-INP. 5/97  
Laboratory ID: C97-27399  
Matrix: Air  
Dilution Factor: 25

Date Sampled: 05/13/97  
Date Received: 05/14/97  
Date Analyzed: 05/14/97  
Date Reported: May 25, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	25.0
74-87-3	Chloromethane	ND	25.0
75-01-4	Vinyl chloride (Chloroethene)	ND	25.0
74-83-9	Bromomethane	ND	25.0
75-00-3	Chloroethane	ND	25.0
75-69-4	Trichlorodifluoromethane	ND	25.0
75-35-4	1,1 - Dichloroethene	21.3	J 25.0
75-09-2	Methylene chloride (Dichloromethane)	ND	25.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	25.0
75-34-3	1,1 - Dichloroethane	ND	25.0
156-59-2	cis - 1,2 - Dichloroethene	ND	25.0
74-97-5	Bromoform (Trichloromethane)	ND	25.0
67-66-3	Chloroform (Trichloromethane)	ND	25.0
594-20-7	2,2 - Dichloropropane	ND	25.0
71-55-6	1,1,1 - Trichloroethane	41.8	25.0
107-06-2	1,2 - Dichloroethane	ND	25.0
563-58-6	1,1 - Dichloropropene	ND	25.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	25.0
71-43-2	Benzene	ND	25.0
74-95-3	Dibromomethane	ND	25.0
78-87-5	1,2 - Dichloropropane	ND	25.0
79-01-6	Trichloroethene	ND	25.0
75-27-4	Bromodichloromethane	ND	25.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	25.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	25.0
79-00-5	1,1,2 - Trichloroethane	ND	25.0
108-88-3	Toluene	ND	25.0
106-93-4	1,2 - Dibromoethane	ND	25.0
142-28-9	1,3 - Dichloropropane	ND	25.0
124-48-1	Dibromochloromethane	ND	25.0
127-18-4	Tetrachloroethene	155	25.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	25.0
108-90-7	Chlorobenzene	ND	25.0
100-41-4	Ethylbenzene	ND	25.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	50.0
75-25-2	Bromoform (Tribromomethane)	ND	25.0
100-42-5	Styrene (Ethenylbenzene)	ND	25.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	25.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	25.0
96-18-4	1,2,3 - Trichloropropane	ND	25.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93-007.UST-INP. 5/97**  
 Laboratory ID: **C97-27399**

Date Sampled: **05/13/97**  
 Date Analyzed: **05/14/97**  
 Date Reported: **May 25, 1997**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION		LIMIT OF DETECTION (mg/m <sup>3</sup> )
		(mg/m <sup>3</sup> )		
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND		25.0
108-86-1	Bromobenzene	ND		25.0
103-65-1	n - Propylbenzene	ND		25.0
95-49-8	2 - Chlorotoluene	ND		25.0
106-43-4	4 - Chlorotoluene	ND		25.0
108-67-8	1,3,5 - Trimethylbenzene	ND		25.0
98-06-6	tert - Butylbenzene	ND		25.0
95-63-6	1,2,4 - Trimethylbenzene	ND		25.0
135-98-8	sec - Butylbenzene	ND		25.0
541-73-1	1,3 - Dichlorobenzene	ND		25.0
106-46-7	1,4 - Dichlorobenzene	ND		25.0
99-87-6	4-Isopropyltoluene	ND		25.0
95-50-1	1,2 - Dichlorobenzene	ND		25.0
104-51-8	n - Butylbenzene	ND		25.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		125.0
120-82-1	1,2,4 - Trichlorobenzene	ND		25.0
91-20-3	Naphthalene	ND		25.0
87-68-3	Hexachlorobutadiene	ND		25.0
87-61-6	1,2,3 - Trichlorobenzene	ND		25.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT	
			RECOVERY	RANGE
Pentafluorobenzene	1325549	1388793	95.4%	50 - 200 %
Fluorobenzene	3460826	3679984	94.0%	50 - 200 %
1,4 - Difluorobenzene	2489787	2589504	96.1%	50 - 200 %
Chlorobenzene - d5	1833183	1910498	96.0%	50 - 200 %
1,4 - Dichlorobenzene - d4	696012	669702	104%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	
		RECOVERY	RANGE
Dibromofluoromethane	11.5	115%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	10.3	103%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.86	98.6%	80 - 120 %

### REFERENCES

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
*Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990*

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601  
MAILING: P.O. BOX 3258 • CASPER, WY 82602  
E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.AD-INP. 5/97  
Laboratory ID: C97-27400  
Matrix: Air  
Dilution Factor: 1

Date Sampled: 05/13/97  
Date Received: 05/14/97  
Date Analyzed: 05/14/97  
Date Reported: May 25, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorodifluoromethane	ND	1.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>2.19</b>	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Tetrachloromethane)	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>2.09</b>	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropene	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	<b>Toluene</b>	<b>4.06</b>	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	<b>Tetrachloroethene</b>	<b>10.3</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>1.86</b>	J 2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>2.02</b>	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93-007.AD-INP. 5/97**  
 Laboratory ID: **C97-27400**

Date Sampled: **05/13/97**  
 Date Analyzed: **05/14/97**  
 Date Reported: **May 25, 1997**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
<b>108-67-8</b>	<b>1,3,5 - Trimethylbenzene</b>	<b>3.75</b>	1.0
98-06-6	tert - Butylbenzene	ND	1.0
<b>95-63-6</b>	<b>1,2,4 - Trimethylbenzene</b>	<b>2.42</b>	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
	AREA		
Pentafluorobenzene	1386815	1388793	99.9%
Fluorobenzene	3540147	3679984	96.2%
1,4 - Difluorobenzene	2515943	2589504	97.2%
Chlorobenzene - d5	1884394	1910498	98.6%
1,4 - Dichlorobenzene - d4	686263	669702	102%

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
	AREA		
Dibromofluoromethane	11.2	112%	86 - 118 %
Toluene - d8	10.3	103%	88 - 110 %
4 - Bromofluorobenzene	10.4	104%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.94	99.4%	80 - 120 %

### REFERENCES

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

**EPA METHOD 8260**

Client: **Western Water Consultants**  
Sample ID: 93-007.WP-INP. 5/97  
Laboratory ID: C97-27401  
Matrix: Air  
Dilution Factor: 5

Date Sampled: 05/13/97  
Date Received: 05/14/97  
Date Analyzed: 05/14/97  
Date Reported: May 25, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorodifluoromethane	ND	5.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>9.10</b>	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>10.2</b>	5.0
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>74.1</b>	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	<b>Benzene</b>	<b>5.70</b>	5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	<b>Toluene</b>	<b>95.5</b>	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	<b>Tetrachloroethene</b>	<b>66.3</b>	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	<b>Ethylbenzene</b>	<b>19.7</b>	5.0
108-38-3	<b>m,p - Xylenes (1,3- &amp; 1,4-Dimethylbenzene)</b>	<b>63.5</b>	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	<b>o - Xylene (1,2-Dimethylbenzene)</b>	<b>45.9</b>	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93-007.WP-INP. 5/97**  
 Laboratory ID: **C97-27401**

Date Sampled: **05/13/97**  
 Date Analyzed: **05/14/97**  
 Date Reported: **May 25, 1997**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	8.90	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	n - Propylbenzene	13.0	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	1,3,5 - Trimethylbenzene	54.8	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	1,2,4 - Trimethylbenzene	23.9	5.0
135-98-8	sec - Butylbenzene	ND	5.0
541-73-1	1,3 - Dichlorobenzene	ND	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	Naphthalene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2,3 - Trichlorobenzene	ND	5.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT	ACCEPTANCE
		AREA	RECOVERY	RANGE
Pentafluorobenzene	1319006	1388793	95.0%	50 - 200 %
Fluorobenzene	3316920	3679984	90.1%	50 - 200 %
1,4 - Difluorobenzene	2439384	2589504	94.2%	50 - 200 %
Chlorobenzene - d5	1815393	1910498	95.0%	50 - 200 %
1,4 - Dichlorobenzene - d4	663235	669702	99.0%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	11.3	113%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.2	102%	80 - 120 %

### REFERENCES

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
*Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990*

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

File #3007-D

EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-AD-INP-1/97  
Laboratory ID: C97-11256  
Matrix: Air  
Dilution Factor: 1

Date Sampled: 01/21/97  
Date Received: 01/22/97  
Date Analyzed: 01/22/97  
Date Reported: February 02, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Tetrachloromethane)	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	1.34	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	5.67	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	8.86	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	1.18	J 2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	1.20	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



Acid Dock Unit  
Input

## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-AD-INP-1/97  
 Laboratory ID: C97-11256

Date Sampled: 01/21/97  
 Date Analyzed: 01/22/97  
 Date Reported: February 2, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	<b>1,3,5 - Trimethylbenzene</b>	<b>1.39</b>	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### Runtime Quality Assurance Report

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT	ACCEPTANCE
		AREA	RECOVERY	RANGE
Pentafluorobenzene	716097	759181	94.3%	50 - 200 %
Fluorobenzene	1882885	1926580	97.7%	50 - 200 %
1,4 - Difluorobenzene	1578526	1659859	95.1%	50 - 200 %
Chlorobenzene - d5	1158137	1189173	97.4%	50 - 200 %
1,4 - Dichlorobenzene - d4	393498	408290	96.4%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	11.4	114%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	10.0	100%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.5	105%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



# ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

## EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-AD-EXH-1/97  
Laboratory ID: C97-11257  
Matrix: Air  
Dilution Factor: 1

Date Sampled: 01/21/97  
Date Received: 01/22/97  
Date Analyzed: 01/22/97  
Date Reported: February 02, 1997

### CONCENTRATION

### LIMIT OF

(mg/m<sup>3</sup>) DETECTION (mg/m<sup>3</sup>)

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Tetrachloromethane)	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



Acid Wt/F Unit  
Exhaust

## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93007-AD-EXH-1/97**  
 Laboratory ID: **C97-11257**

Date Sampled: **01/21/97**  
 Date Analyzed: **01/22/97**  
 Date Reported: **February 2, 1997**

<b>C.A.S. #</b>	<b>TARGET COMPOUNDS</b>	<b>CONCENTRATION</b>		<b>LIMIT OF DETECTION (mg/m<sup>3</sup>)</b>
		<b>(mg/m<sup>3</sup>)</b>	<b>DETECTION (mg/m<sup>3</sup>)</b>	
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND		1.0
108-86-1	Bromobenzene	ND		1.0
103-65-1	n - Propylbenzene	ND		1.0
95-49-8	2 - Chlorotoluene	ND		1.0
106-43-4	4 - Chlorotoluene	ND		1.0
108-67-8	1,3,5 - Trimethylbenzene	ND		1.0
98-06-6	tert - Butylbenzene	ND		1.0
95-63-6	1,2,4 - Trimethylbenzene	ND		1.0
135-98-8	sec - Butylbenzene	ND		1.0
541-73-1	1,3 - Dichlorobenzene	ND		1.0
106-46-7	1,4 - Dichlorobenzene	ND		1.0
99-87-6	4-Isopropyltoluene	ND		1.0
95-50-1	1,2 - Dichlorobenzene	ND		1.0
104-51-8	n - Butylbenzene	ND		1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND		5.0
120-82-1	1,2,4 - Trichlorobenzene	ND		1.0
91-20-3	Naphthalene	ND		1.0
87-68-3	Hexachlorobutadiene	ND		1.0
87-61-6	1,2,3 - Trichlorobenzene	ND		1.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### Runtime Quality Assurance Report

<b>INTERNAL STANDARDS</b>	<b>AREA</b>	<b>ICAL / CCAL</b>		<b>PERCENT RECOVERY</b>	<b>ACCEPTANCE RANGE</b>
		<b>AREA</b>	<b>RECOVERY</b>		
Pentafluorobenzene	738760	759181	97.3%	50 - 200 %	
Fluorobenzene	1883532	1926580	97.8%	50 - 200 %	
1,4 - Difluorobenzene	1622387	1659859	97.7%	50 - 200 %	
Chlorobenzene - d5	1166944	1189173	98.1%	50 - 200 %	
1,4 - Dichlorobenzene - d4	380641	408290	93.2%	50 - 200 %	

<b>SYSTEM MONITORING COMPOUNDS</b>	<b>CONCENTRATION</b>	<b>PERCENT RECOVERY</b>		<b>ACCEPTANCE RANGE</b>
		<b>RECOVERY</b>	<b>RANGE</b>	
Dibromofluoromethane	11.1	111%	86 - 118 %	
Toluene - d8	10.0	100%	88 - 110 %	
4 - Bromofluorobenzene	10.2	102%	86 - 115 %	
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %	

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



# ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

## EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-UST-INP-1/97  
Laboratory ID: C97-11258  
Matrix: Air  
Dilution Factor: 1

1/21/97  
1/22/97  
1/22/97  
February 02, 1997  
Date Sampled: 01/21/97  
Date Received: 01/22/97  
Date Analyzed: 01/22/97  
Date Reported: February 02, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorodifluoromethane	ND	1.0
75-35-4	<b>1,1 - Dichloroethene</b>	<b>30.0</b>	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	<b>1,1 - Dichloroethane</b>	<b>2.80</b>	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromoform (Trichloromethane)	ND	1.0
67-66-3	<b>Chloroform (Trichloromethane)</b>	<b>0.47</b>	J 1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	<b>1,1,1 - Trichloroethane</b>	<b>63.3</b>	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	<b>Trichloroethene</b>	<b>0.58</b>	J 1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	<b>Tetrachloroethene</b>	<b>205</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



UST Unit  
Input

## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: 93007-UST-INP-1/97  
 Laboratory ID: C97-11258

Date Sampled: 01/21/97  
 Date Analyzed: 01/22/97  
 Date Reported: February 2, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

*ND - Analyte not detected at stated limit of detection*

*J - Meets Mass Spectral identification criteria but result is below established detection limit*

### *Runtime Quality Assurance Report*

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT	ACCEPTANCE
		AREA	RECOVERY	RANGE
Pentafluorobenzene	721258	759181	95.0%	50 - 200 %
Fluorobenzene	1901604	1926580	98.7%	50 - 200 %
1,4 - Difluorobenzene	1612338	1659859	97.1%	50 - 200 %
Chlorobenzene - d5	1187554	1189173	99.9%	50 - 200 %
1,4 - Dichlorobenzene - d4	384275	408290	94.1%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	11.3	113%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	10.1	101%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

### REFERENCES

**Method 8260:** Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990



# ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234 - 1639 • PHONE: (307) 235 - 0515 • TOLL FREE: (888) 235 - 0515

## EPA METHOD 8260

Client: Western Water Consultants  
Sample ID: 93007-UST-EXH-1/97  
Laboratory ID: C97-11259  
Matrix: Air  
Dilution Factor: 1

UST Unit  
Exhaust

Date Sampled: 01/21/97  
Date Received: 01/22/97  
Date Analyzed: 01/22/97  
Date Reported: February 02, 1997

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m <sup>3</sup> )	LIMIT OF DETECTION (mg/m <sup>3</sup> )
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	<b>Chloromethane</b>	<b>2.50</b>	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	<b>Tetrachloroethene</b>	<b>6.19</b>	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit



UST Unit  
Exhaust

## EPA METHOD 8260

Client: **Western Water Consultants**  
 Sample ID: **93007-UST-EXH-1/97**  
 Laboratory ID: **C97-11259**

Date Sampled: **01/21/97**  
 Date Analyzed: **01/22/97**  
 Date Reported: **February 2, 1997**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m <sup>3</sup> )	DETECTION (mg/m <sup>3</sup> )
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2,3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

J - Meets Mass Spectral identification criteria but result is below established detection limit

### Runtime Quality Assurance Report

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT	ACCEPTANCE
		AREA	RECOVERY	RANGE
Pentafluorobenzene	775242	759181	102%	50 - 200 %
Fluorobenzene	1962104	1926580	102%	50 - 200 %
1,4 - Difluorobenzene	1689434	1659859	102%	50 - 200 %
Chlorobenzene - d5	1221432	1189173	103%	50 - 200 %
1,4 - Dichlorobenzene - d4	400959	408290	98.2%	50 - 200 %

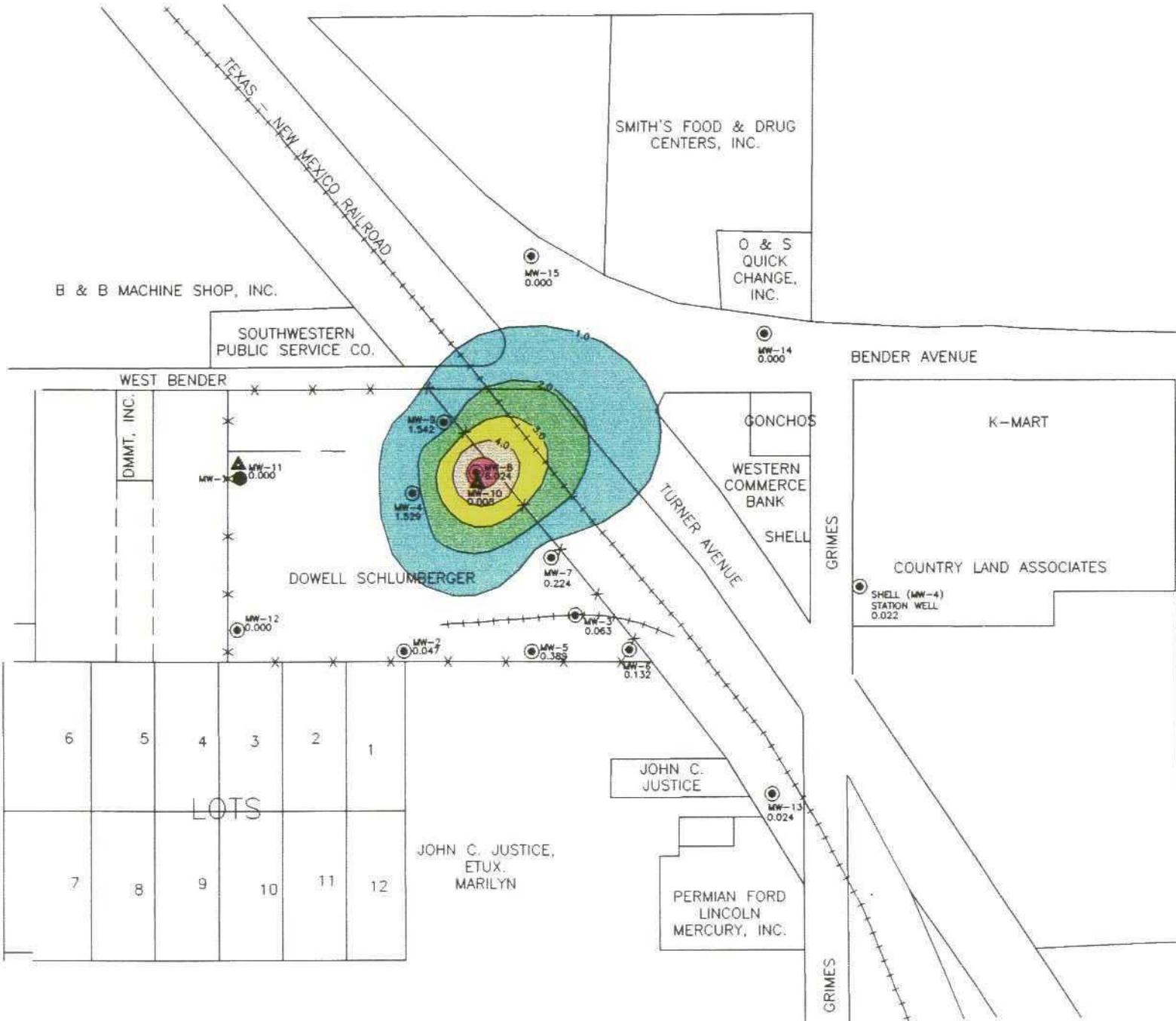
SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	11.3	113%	86 - 118 %
Toluene - d8	10.0	100%	88 - 110 %
4 - Bromofluorobenzene	10.3	103%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.0	100%	80 - 120 %

### REFERENCES

Method 8260: Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Technique  
 Test Methods for Evaluating Solid Waste, SW-846, Third Edition, USEPA, November 1990

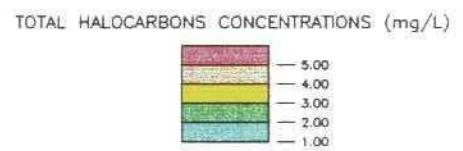
**APPENDIX C**

**ISOCONCENTRATION MAP  
AND PLOTS**



### EXPLANATION

- MW-8 6.483 (MW-11 0.000) SHALLOW MONITORING WELL LOCATION, IDENTIFICATION AND TOTAL HALOCARBONS CONCENTRATIONS
- MW-11 (MW-11 0.000) ABANDONED MONITORING WELL
- MW-11 ▲ DEEP MONITORING WELL LOCATION, IDENTIFICATION AND TOTAL HALOCARBONS CONCENTRATIONS
- 1.00 TOTAL HALOCARBONS CONTOURS



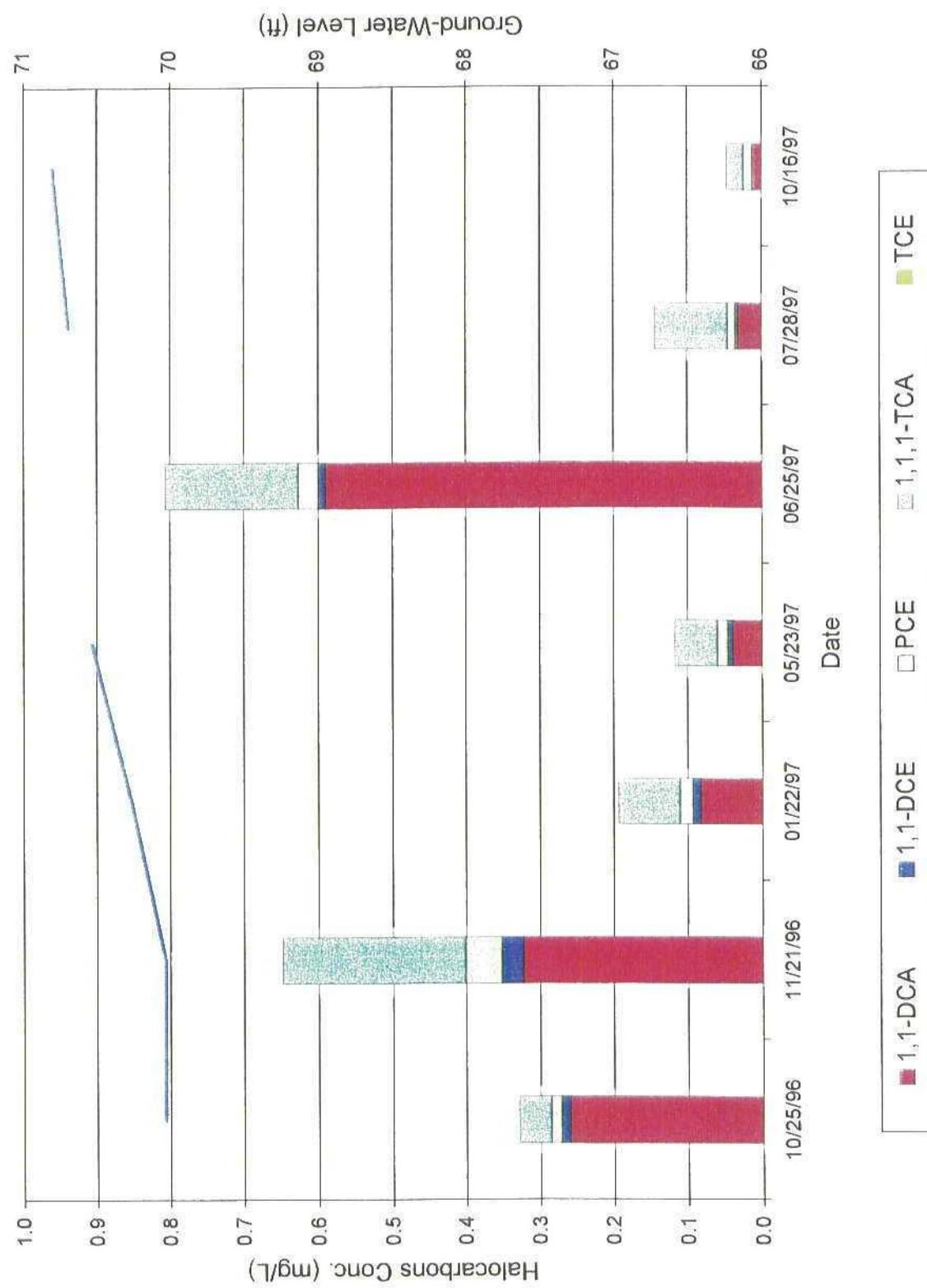
TOTAL HALOCARBONS CONCENTRATION MAP (10-16-97)

DOWELL, A DIVISION OF SCHLUMBERGER TECHNOLOGY CORPORATION HOBBS, NM

**Monitoring Well MW-1**  
**Halocarbons & Ground-Water Level**  
(Abandoned 5/22/97)

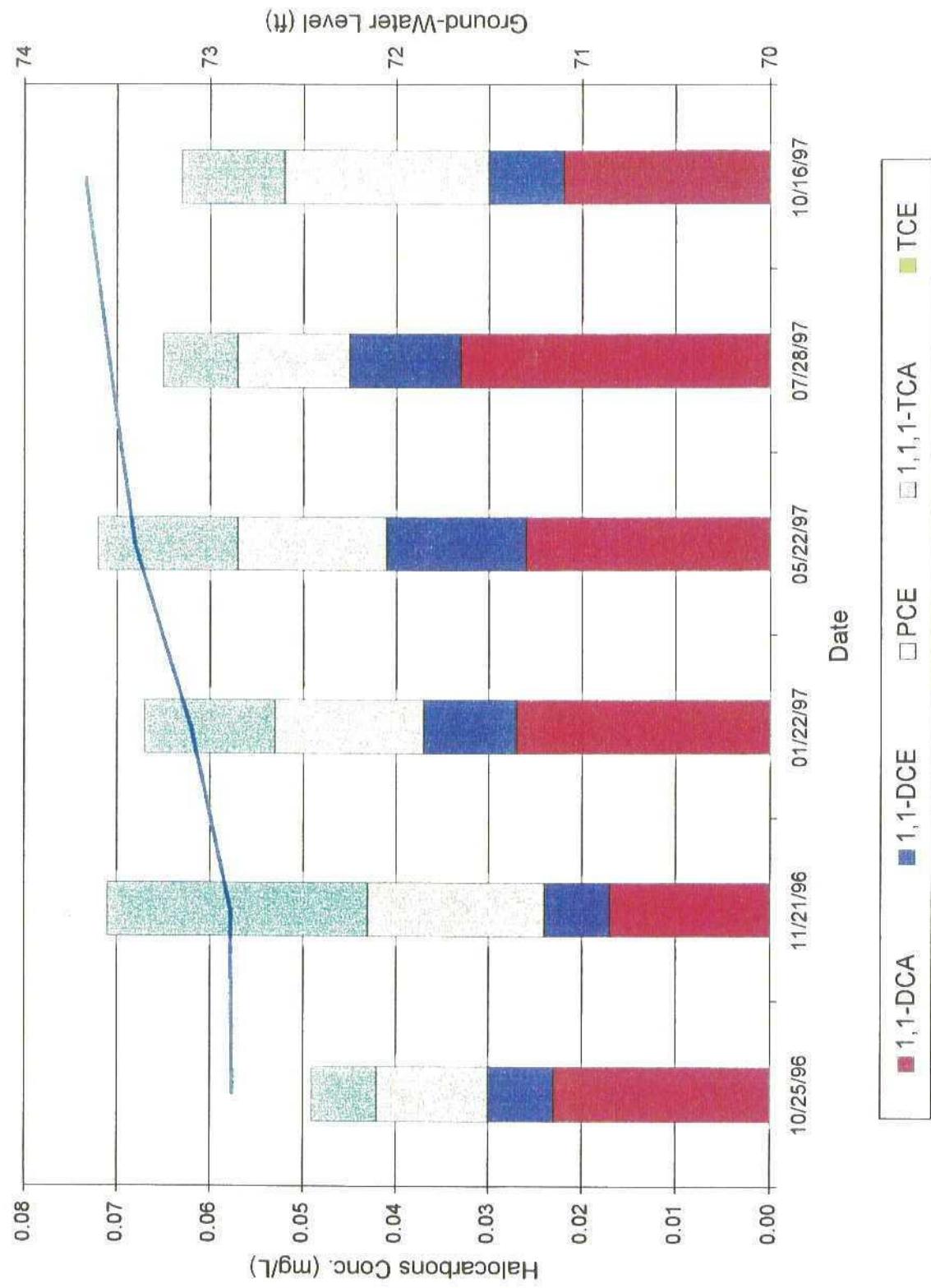


## Monitoring Well MW-2 Halocarbons & Ground-Water Level

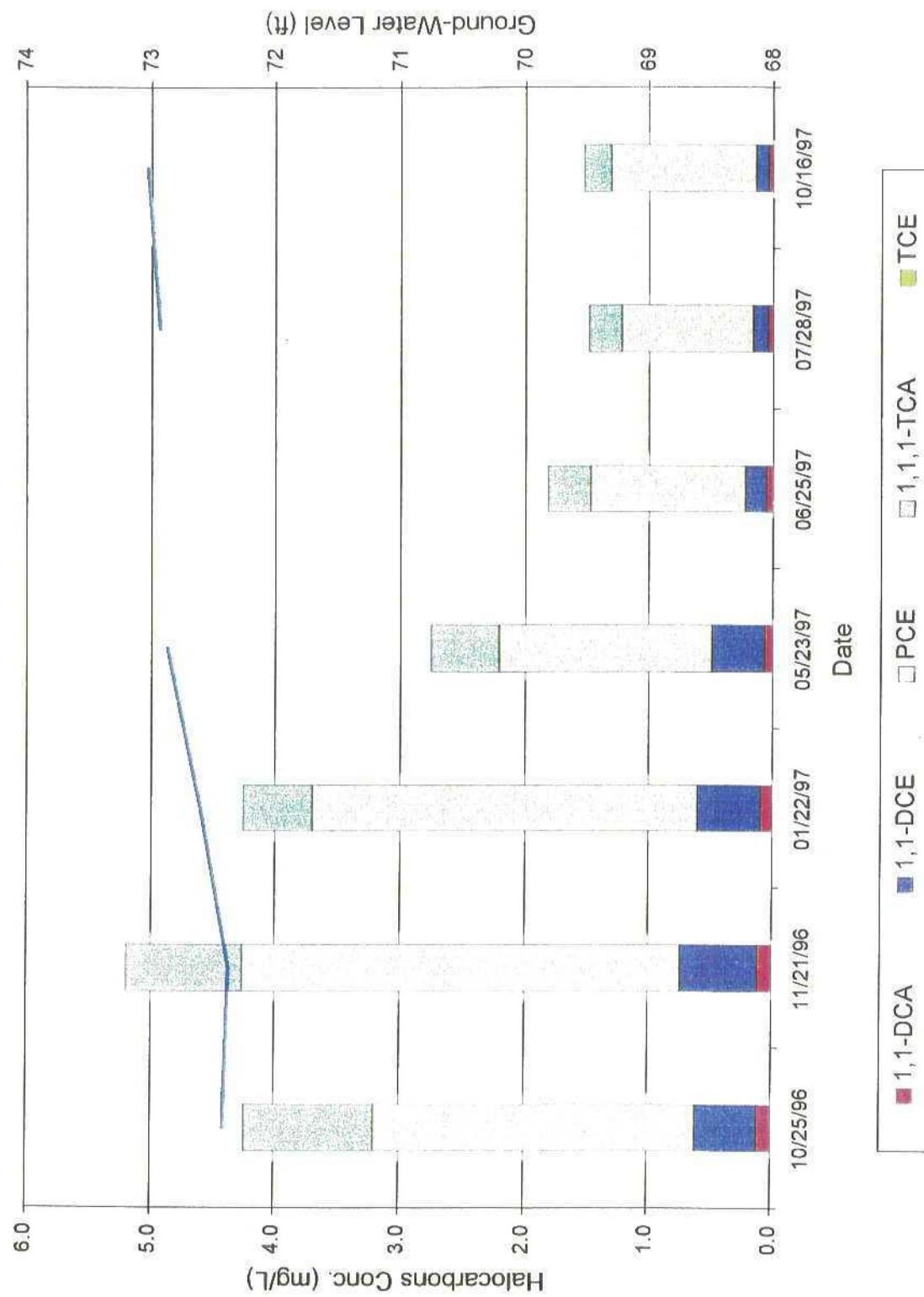


## Monitoring Well MW-3

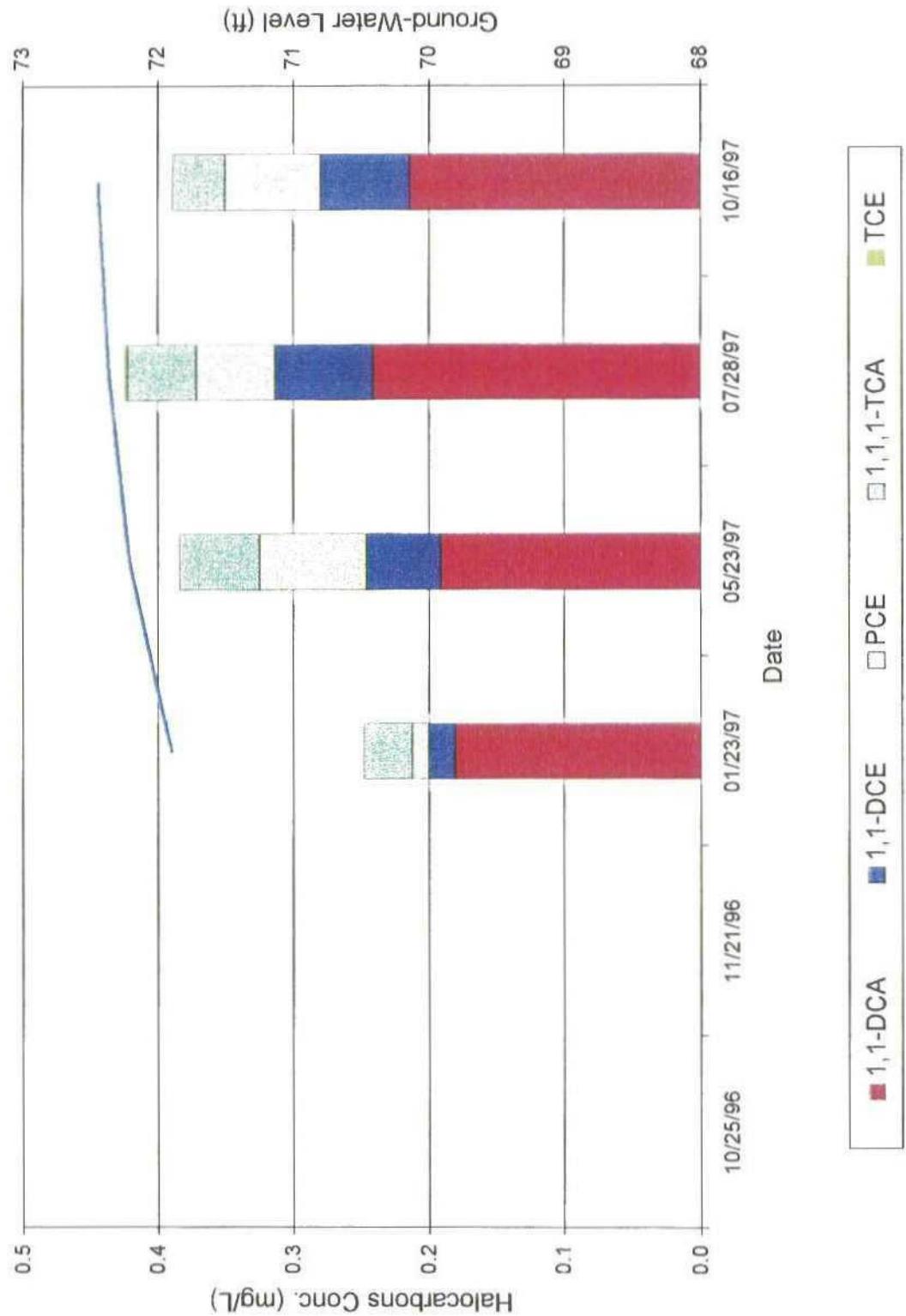
### Halocarbons & Ground-Water Level



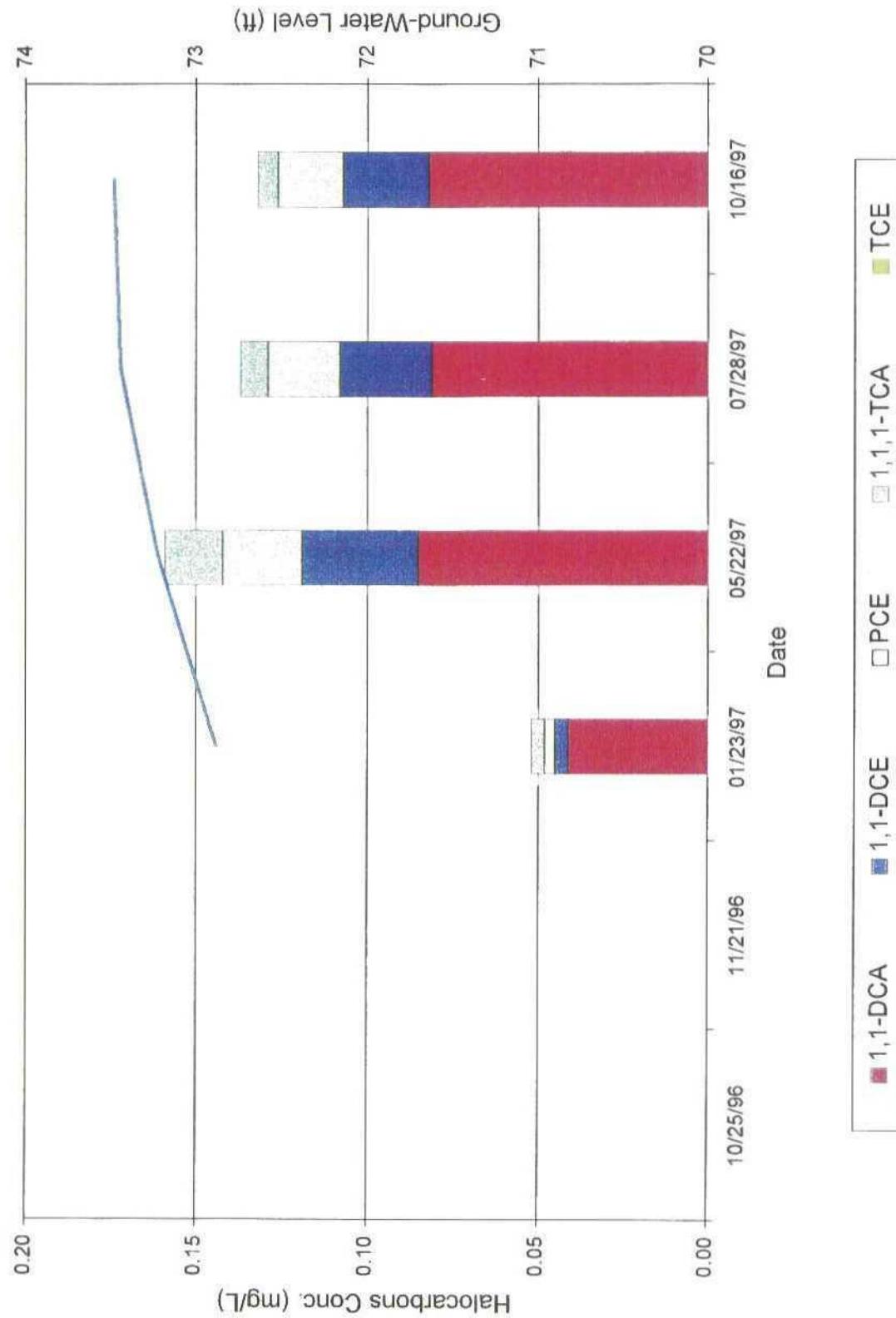
## Monitoring Well MW-4 Halocarbons & Ground-Water Level



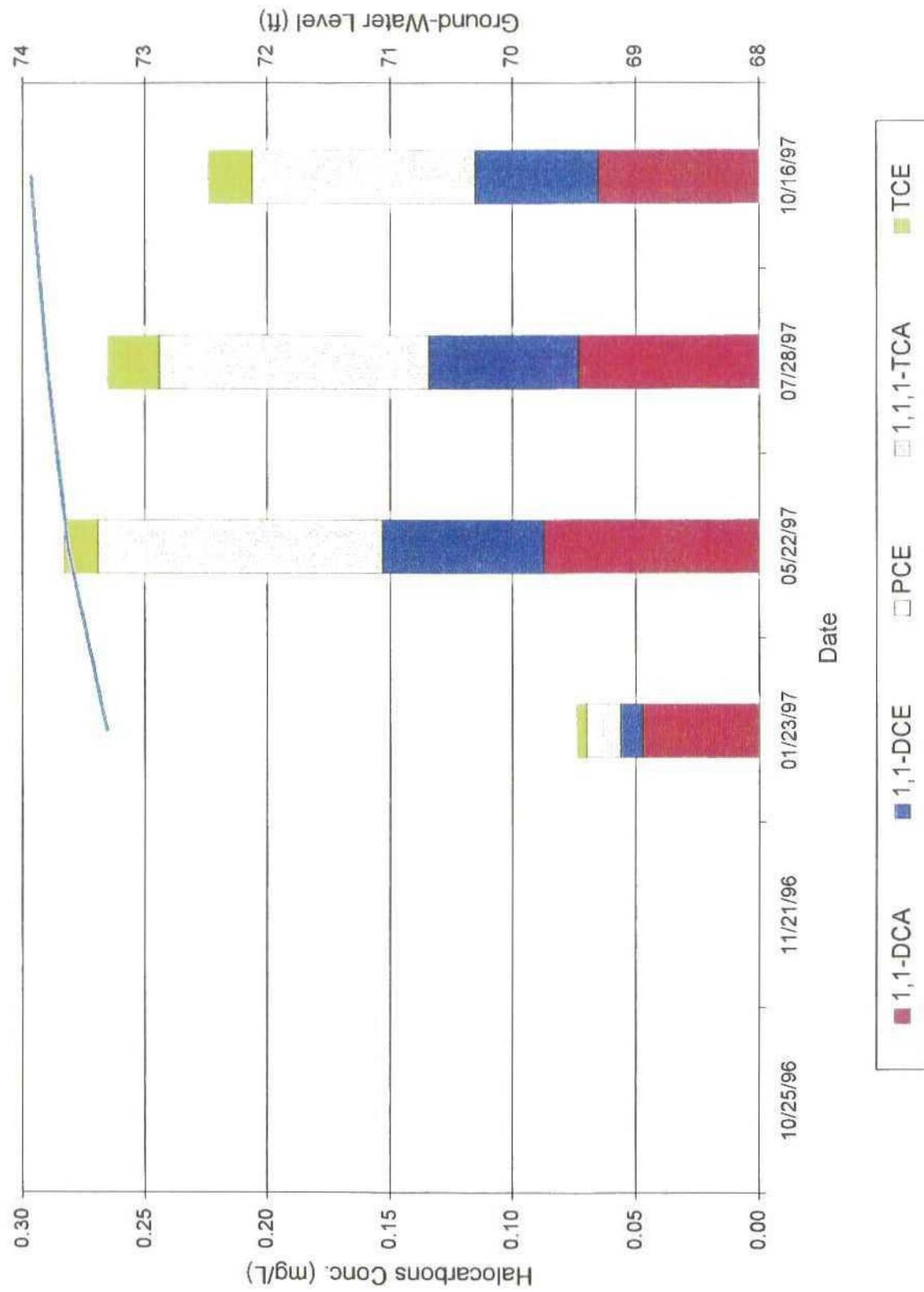
## Monitoring Well MW-5 Halocarbons & Ground-Water Level



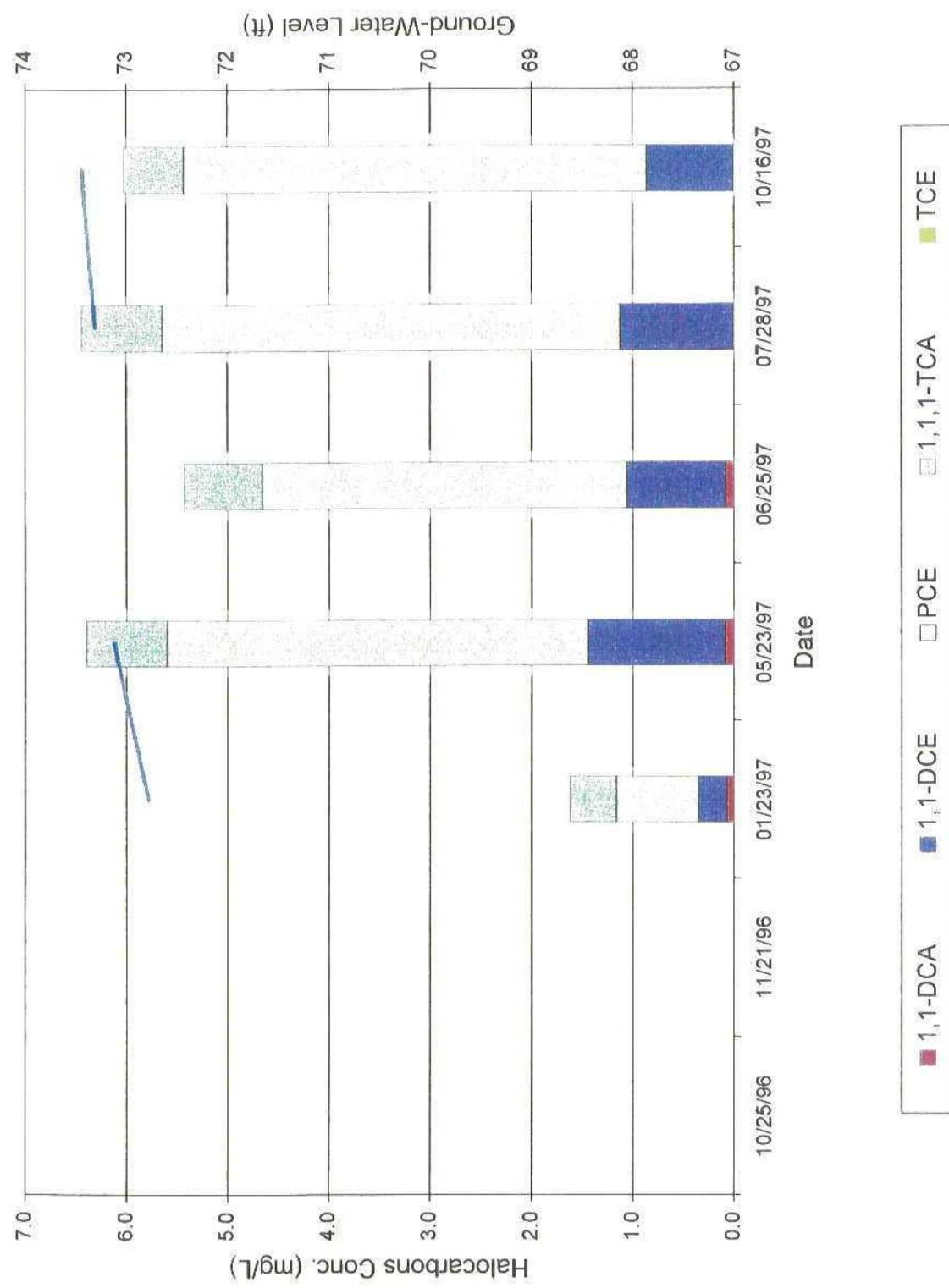
## Monitoring Well MW-6 Halocarbons & Ground-Water Level



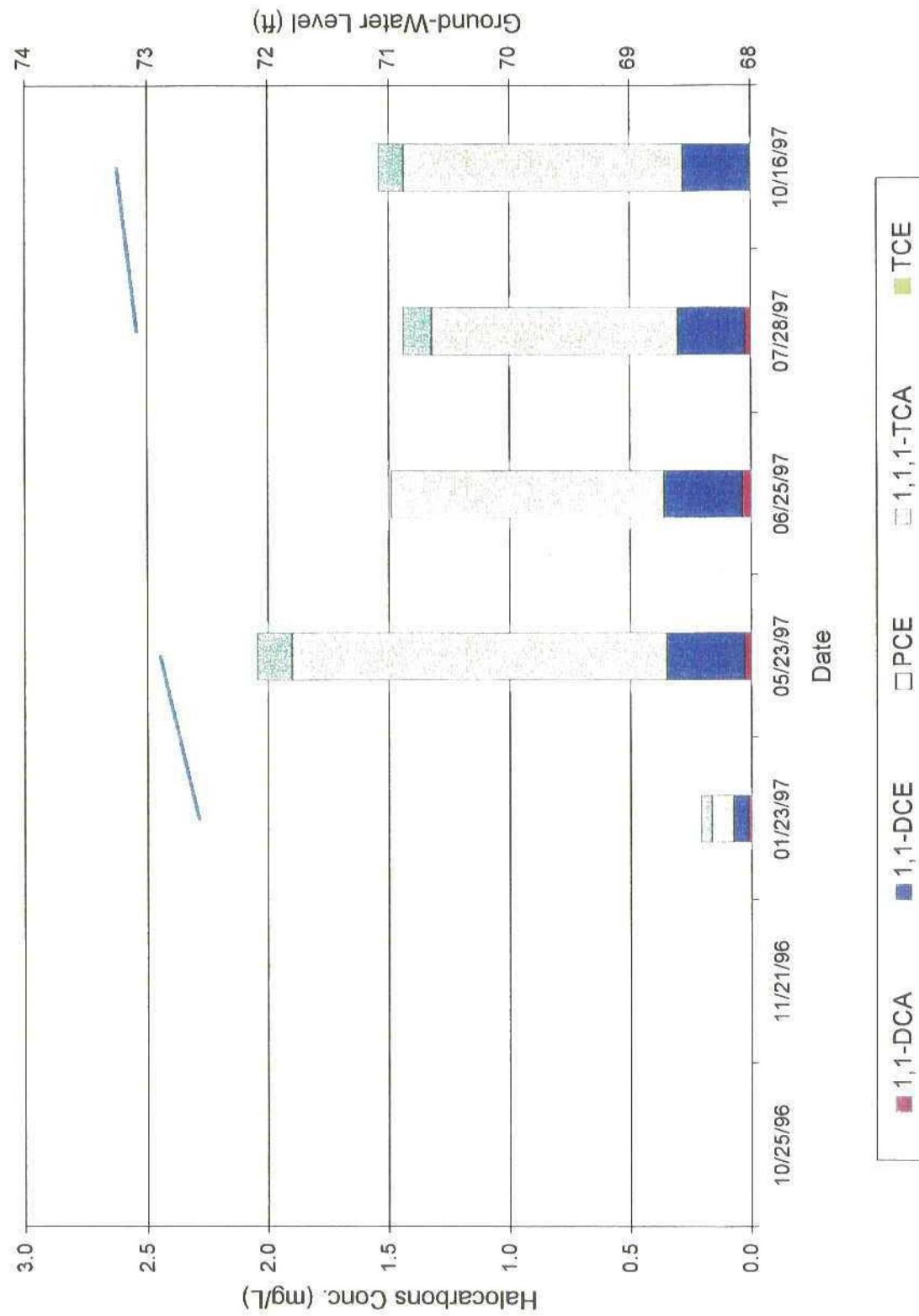
## Monitoring Well MW-7 Halocarbons & Ground-Water Level



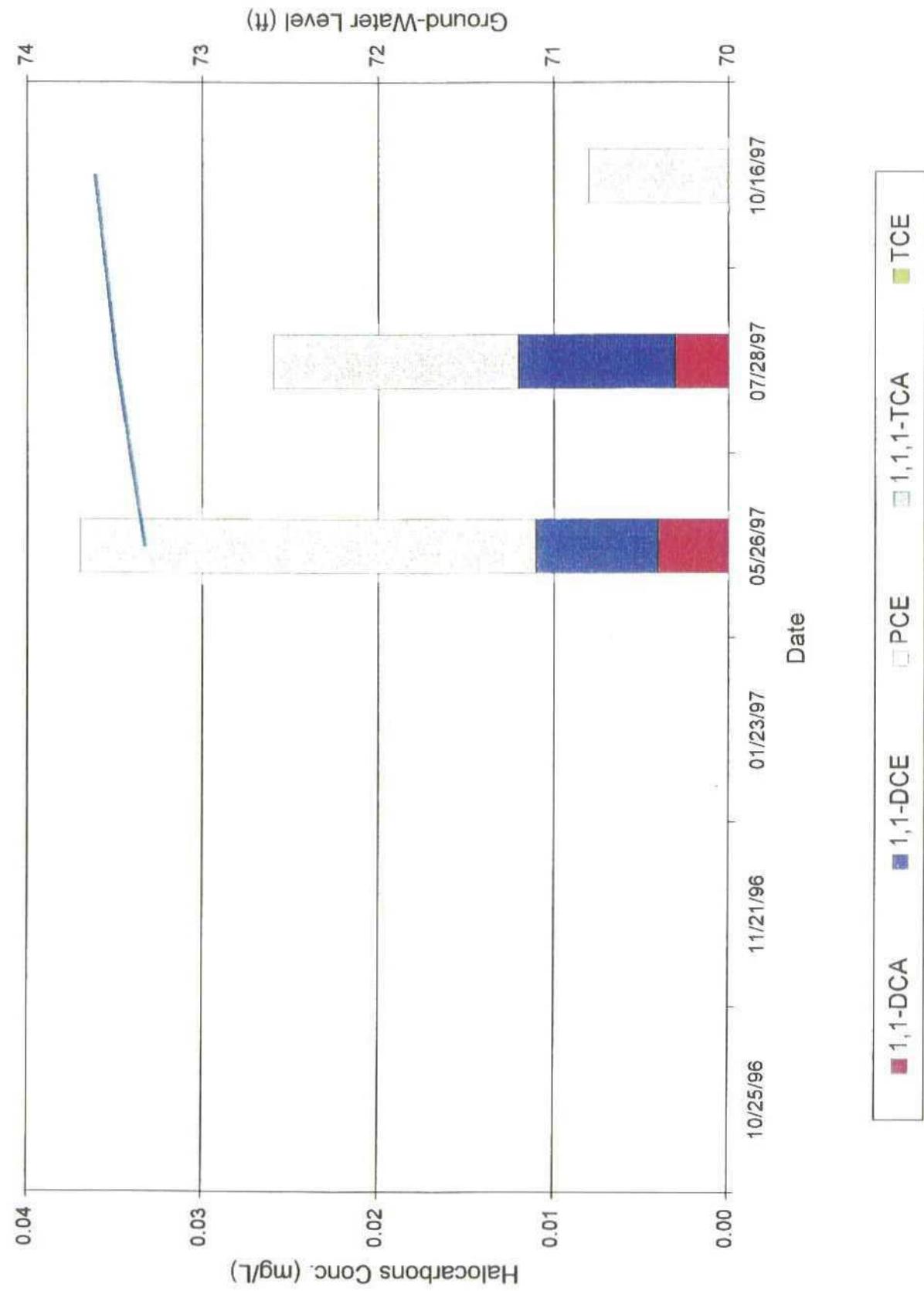
## Monitoring Well MW-8 Halocarbons & Ground-Water Level



## Monitoring Well MW-9 Halocarbons & Ground-Water Level



## Monitoring Well MW-10 Halocarbons & Ground-Water Level



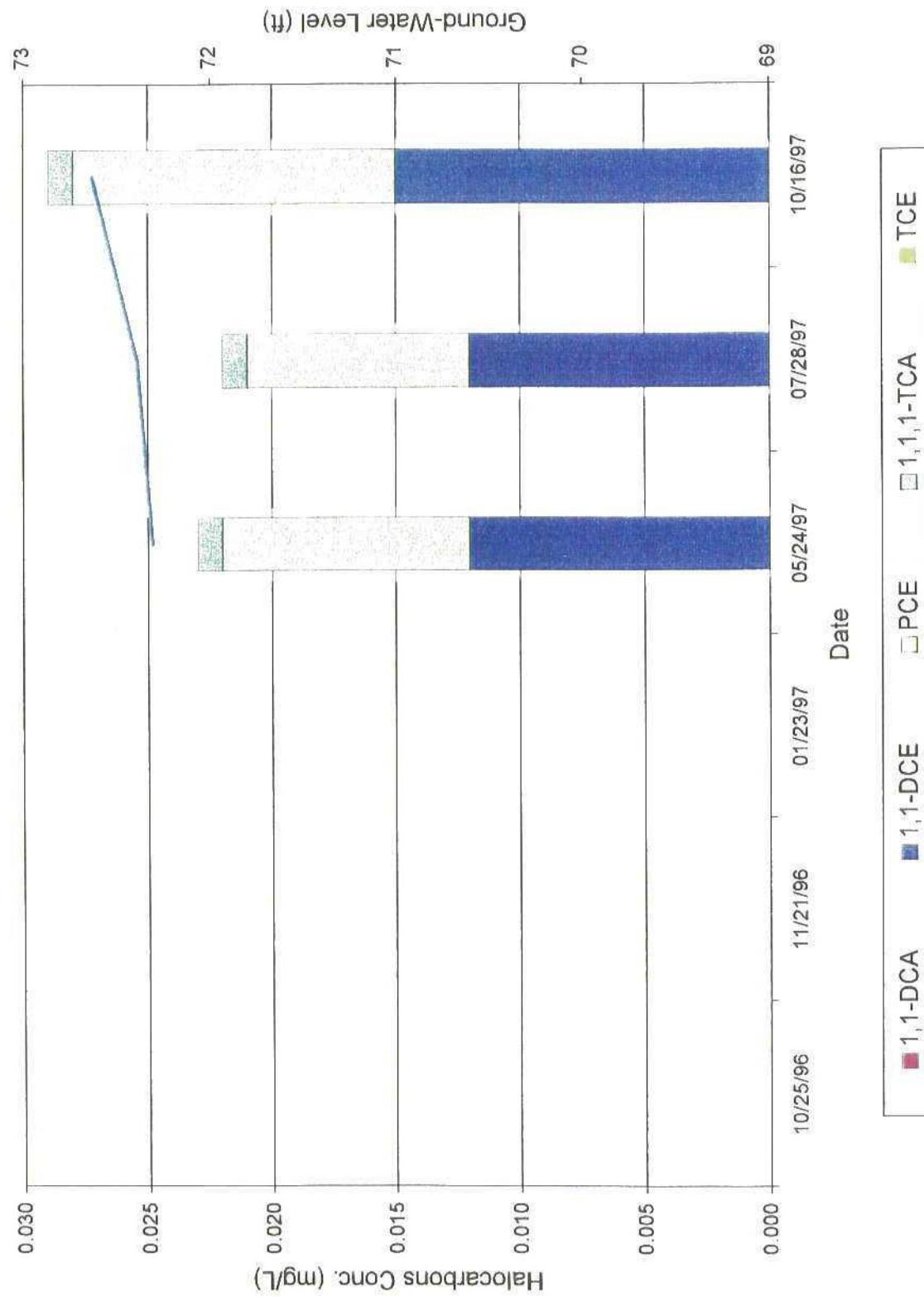
Monitoring Well MW-11  
Halocarbons & Ground-Water Level



Monitoring Well MW-12  
Halocarbons & Ground-Water Level



## Monitoring Well MW-13 Halocarbons & Ground-Water Level



Monitoring Well MW-14  
Halocarbons & Ground-Water Level



Monitoring Well MW-15  
Halocarbons & Ground-Water Level



Shell Station Monitoring Well MW-4  
Haloacarbons & Ground-Water Level

