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REPORTS

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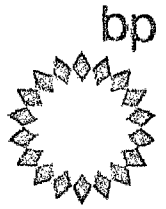
BP Pipelines (North America) Inc.

2001 Annual Report
Artesia, New Mexico



2001 Sixth Annual Report

BP PIPELINES
(North America) Inc.
ARTESIA, NEW MEXICO

August 27, 2001

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BP Pipelines (North America) Inc. Station
Artesia, New Mexico

1. INTRODUCTION

The objective of this Sixth Annual Report (Report) is to provide the State of New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division (OCD) information relative to activities and data collected at the subject site during the past 12 months (since June 2000). BASCOR Environmental, Inc. (BASCOR), on behalf of BP PipeLines (North America) Inc. (BP), has prepared this Report. Activities completed during the past year include the following:

(1) Gauging of fluid levels from site monitoring wells.
(2) Sampling of groundwater from selected monitoring wells in July 2001.

These activities are discussed in detail in subsequent sections of this Report.

1.1 Site History

A release of free phase hydrocarbon (FPH) was discovered at a BP site located approximately 12 miles southeast of Artesia, New Mexico (Site). BP installed an interception trench and a groundwater separation/air stripper remediation system in November 1994 to control and remediate the FPH and dissolved hydrocarbon associated with the release. The system operated from that time until early 1997, when a request was made to and granted by the OCD to discontinue operation of the active remediation system due to lack of FPH and dissolved hydrocarbon in the monitoring wells in the vicinity of the remediation system at the site. The system was dismantled in the Fall of 1998.

Quarterly reporting had been submitted to the OCD throughout operation of the remediation system. Annual reports have also been submitted, with the most recent annual report being titled "Remediation System Operations Fifth Annual Report", dated

July 7, 2000. That annual report describes activities that had occurred at the site from June 1999 through June 2000. Included in the report were descriptions of the following activities:

- Monitoring of water levels in wells.
- Sampling Monitoring Wells MW-1, MW-5, MW-7, MW-9, MW-10, MW-11, MW-12, and MW-14 for BTEX.
- Recovery of FPH from Monitoring Well MW-2 utilizing a wind-powered recovery system, beginning in August 1999. The recovery system was subsequently shut down in May 2000 due to only a minimal amount of FPH remaining in the well.

As part of that report, BASCOR recommended that several monitoring wells with a history of extremely low BTEX concentrations be abandoned. Also, BASCOR recommended replacing Monitoring Wells MW-1 and MW-2 with similarly constructed wells about 5 feet from the existing wells. These new wells will provide a groundwater sample representative of the existing subsurface conditions, since the sand pack and well screens have no history of FPH saturation. It can be difficult to obtain accurate dissolved BTEX groundwater samples from wells that have contained FPH at some time in the recent past. The historic groundwater sampling data are included in Appendix A of this report. Site figures showing historic FPH thicknesses are also included in Appendix A.

2.0 ACTIVITIES DURING THE PAST YEAR

2.1 Fluid Level Gauging

During the period from June 2000 through July 2001, fluid levels from site monitoring wells were gauged once (July 2001). Results of the gauging are presented in Table 1. Historic graphs of the depth to water data versus time are included on Figures 2 through 15. The data indicates the depth to water in the site wells generally decreased during the reporting period, in many cases to the highest (shallowest) levels since BP began collecting data in 1993. This condition reflects the influence that precipitation had on the water table over the past couple of years. Consistent with previous reports, Figures 16 through 23 contain maps showing water level depth data from semi-annual events, including the event during the past year (July 2001).

The fluid level data indicate that 0.47 ft of FPH was measured in MW-2 during July 2001. Additionally, MW-3 is showing 0.10 ft of FPH. Wells that historically had measurable FPH thicknesses (MW-1, MW-2, and MW-3) had accumulations that slightly thicker than the previous measurement, but still well within the lower range of historical thicknesses. Overall, FPH thicknesses have decreased substantially since fluid level monitoring began following the FPH release incident. Figures 24 through 31 are maps indicating measured FPH thicknesses for the monitoring wells measured during semi-annual events, including the event during the past year.

2.2 Groundwater Sampling

Consistent with previous site sampling strategy, groundwater samples were collected during July 2001 from Monitoring Wells MW-11 and MW-14 and submitted to a laboratory for BTEX analysis. Laboratory analytical results are included in Appendix B.

The results indicate that no BTEX constituents were detected in either well during the past year.

Semi-annual sampling of other monitoring wells that historically contained only minor FPH accumulations or no accumulations was also conducted during the reporting period. In addition to Monitoring Wells MW-11 and MW-14, Monitoring Wells MW-5, 7, 9, 10, and 12 were sampled and analyzed for BTEX. Some of these monitoring wells have historically contained minor FPH accumulations. Total dissolved BTEX data from those wells should accordingly be viewed as semi-quantitative, since groundwater samples collected from those wells may contain colloidal liquid FPH, thereby "contaminating" the groundwater sample. Laboratory analysis of water with colloidal suspensions of FPH will reflect the FPH in the water, even at extremely low colloidal levels, and not the true dissolved concentrations.

The total BTEX concentration for MW-5 was 0.630 mg/L. This data, while slightly elevated compared to the previous year's results, continues to indicate that the groundwater in the vicinity of MW-5 has only minimal impacts from the FPH release.

The total BTEX concentration for MW-7 was 0.002 mg/L (only total xylene was detected). This data also indicates that the groundwater in the vicinity of MW-7 has only minimal impacts from the FPH release.

The total BTEX concentration for MW-9 was 0.206 mg/L. Note that MW-9 is apparently upgradient from the BP tank battery, indicating that these data may be reflective of BTEX constituents migrating onto the BP lease site from upgradient locations. Also, MW-9 historically has had minor FPH accumulations, making any "dissolved" BTEX data suspect for reasons stated above.

The total BTEX concentration for MW-10 for the sampling period was 0.229 mg/L. These data indicate that the groundwater in the vicinity of MW-10 has only minimal impacts from the FPH release.

The groundwater sample from Monitoring Well MW-12 had <0.001 mg/L of dissolved BTEX (total xylene at 0.00028 mg/L). These data indicate that the groundwater in the vicinity of MW-12 has only minimal impacts from the FPH release.

3.0 RECOMMENDATIONS FOR SITE CLOSURE

BASCOR met with Jack Ford of the New Mexico OCD on July 19, 2001 to review site closure status and discuss future activity. The discussion included a summary of the current status of FPH in Monitoring Wells #2 and #3. The minimal amounts of FPH measured in the recent sampling event likely resulted from residual hydrocarbon in the well bore being freed by fluctuating water levels, and is not an indication of additional hydrocarbon in the formation.

BASCOR recommended in the meeting the installation of two new monitoring wells in the vicinity of Monitoring wells #2 and #3. The new wells (MW-2A and MW-3A) will be installed within 15 to 25 feet of the existing wells (MW-2 and MW-3), which will be abandoned after the new wells are installed. Fluid levels and dissolved hydrocarbon samples from the new wells will help to accurately determine the extent of remaining hydrocarbon in the formation.

Installation of these two new wells is scheduled for September 2001. After installation, the wells will be developed and monitored for FPH and dissolved BTEX. The results of the monitoring will be used to determine whether selected site wells can be abandoned. The recommendations will be forwarded to the OCD upon completion of the evaluation.

The site closure status will move to the risk assessment phase, which will include risk-based modeling of the vicinity of the release site. The intent of the modeling will be to demonstrate that the site can be closed, based on acceptable risk to potential receptors of groundwater impacted by the release.

There is little to no FPH accumulations remaining in most of the monitoring wells at the site. Also, available data indicates the dissolved hydrocarbon plume has not spread. BASCOR notes that groundwater levels have generally risen across the site over the past couple of years. It is possible that this rise in water levels may be masking FPH accumulations in selected wells. However, our experience is that rising water levels can

cause dissolved BTEX concentrations to either increase or decrease. Continued monitoring and sampling of selected wells, as well as the new installations as mentioned above, should address this issue. As mentioned above, BP will submit a report with recommendations related to continued monitoring and well abandonment upon completion of the additional monitoring from the new wells.

4.0 SUMMARY

BP has aggressively delineated and remediated the subsurface hydrocarbon that was released from the tank battery area in 1993. Fourteen (14) monitoring wells have been installed at and near the tank battery. A pump and treat recovery system with an interceptor trench were installed in 1996 and operated for several months. This system was effective in preventing the spread of hydrocarbons further downgradient, as evidenced by groundwater BTEX data collected from downgradient monitoring wells. In addition to the pump and treat system, FPH from a monitoring well near the source was removed, by regular hand bailing initially and by a wind-powered recovery system. Recent fluid level data indicates those recovery efforts were effective in substantially reducing the FPH accumulation in the subsurface.

Area-wide groundwater BTEX concentrations continue to be stable, with only minor fluctuations, indicating the source of those constituents has been greatly reduced. BP proposes to install two replacement wells in the area where the release occurred to demonstrate that there is sufficient data to initiate closure of the site. BP will utilize site information in a risk-based model to demonstrate there is minimal risk to human health and the environment.

TABLE

TABLE 1
Monitoring Well Fluid Level Data
BPAmoco Pipeline Company
Artesia, New Mexico

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-1	5/21/93	20.52	20.73	0.21
	11/17/94	17.54	17.56	0.02
	2/9/95	18.02	18.05	0.03
	6/16/95	19.15	19.21	0.06
	10/2/95	skim	16.48	skim
	11/26/95	15.85	15.87	0.02
	4/16/96	14.32	14.33	0.01
	7/6/96	15.55	15.57	0.02
	9/30/96	11.70	11.75	0.05
	1/10/97	12.79	12.90	0.11
	4/2/97	13.60	13.62	0.02
	7/10/97	14.78	14.79	0.01
	10/17/97	14.62	14.63	0.01
	1/18/98	none	13.74	0.00
	4/18/98	13.75	13.76	0.01
	5/29/98	none	14.56	0.00
	6/30/98	none	14.9	0.00
	7/23/98	none	15.71	0.00
	8/19/98	none	16.49	0.00
	12/5/98	none	17.94	0.00
	4/1/99	none	18.30	0.00
	6/3/99	none	17.65	0.00
	9/16/99	none	11.02	0.00
	1/8/00	none	10.18	0.00
	6/8/00	none	9.84	0.00
	7/24/01	9.88	9.90	0.02
MW-2	5/21/93	25.81	27.56	1.75
	11/17/94	23.28	26.67	3.39
	2/9/95	23.98	26.50	2.52
	6/16/95	25.63	26.45	0.82
	10/2/95	22.01	26.18	4.17
	11/26/95	21.23	26.17	4.94
	4/16/96	20.58	22.46	1.88
	7/6/96	21.86	25.18	3.32
	9/30/96	19.17	20.94	1.77
	1/10/97	20.20	22.98	2.78
	4/2/97	21.00	24.04	3.04
	7/10/97	22.41	23.50	1.09
	10/17/97	21.92	26.18	4.26
	1/18/98	20.03	24.00	3.97
	4/18/98	21.04	25.31	4.27
	5/29/98	21.68	25.86	4.18
	6/30/98	22.00	26.2	4.20
	7/23/98	23.08	26.25	3.17
	8/19/98	23.66	26.16	2.50
	12/5/98	24.90	26.70	1.80
	4/1/99	25.15	26.47	1.32

TABLE 1 (cont.)
Monitoring Well Fluid Level Data

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-2	6/1/99	23.10	26.20	3.10
	9/16/99	none	18.28	0.00
	1/8/00	18.65	19.23	0.58
	6/7/00	19.28	19.31	0.03
	7/24/01	17.03	17.50	0.47
MW-3	5/21/93	16.45	17.81	1.36
	11/17/94	13.07	13.65	0.58
	2/9/95	13.75	14.32	0.57
	6/16/95	15.20	15.84	0.64
	10/2/95	10.69	11.43	0.74
	11/26/95	9.69	10.41	0.72
	4/16/96	9.58	9.63	0.05
	7/6/96	11.70	11.80	0.10
	9/30/96	8.71	8.75	0.04
	1/10/97	10.33	10.40	0.07
	4/2/97	11.36	11.42	0.06
	7/10/97	13.02	13.10	0.08
	10/17/97	13.22	13.24	0.02
	1/18/98	10.68	10.78	0.10
	4/18/98	11.47	11.55	0.08
	5/29/98	12.34	12.45	0.11
	6/30/98	12.70	12.80	0.10
	7/23/98	13.95	14.02	0.07
	8/19/98	15.08	15.15	0.07
	12/5/98	16.4	16.5	0.10
	4/1/99	16.00	16.08	0.08
	6/3/99	14.35	14.38	0.03
	9/16/99	7.82	7.87	0.05
	1/8/00	8.50	8.60	0.10
	6/8/00	6.98	7.05	0.07
	7/24/01	6.63	6.73	0.10
MW-4	11/17/94	none	28.28	0.00
	2/9/95	none	28.51	0.00
	6/16/95	none	29.58	0.00
	10/2/95	none	24.42	0.00
	11/26/95	none	22.61	0.00
	4/16/96	none	20.63	0.00
	7/6/96	none	26.44	0.00
	9/30/96	none	21.88	0.00
	1/10/97	none	25.24	0.00
	4/2/97	none	25.49	0.00
	4/18/98	none	25.02	0.00
	12/5/98	29.52	29.70	0.18
	4/1/99	28.65	28.67	0.02
	6/3/99	none	26.48	0.00
	9/20/99	none	18.85	0.00
	1/8/00	none	19.30	0.00

TABLE 1 (cont.)
Monitoring Well Fluid Level Data

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-4	6/8/00	none	18.46	0.00
	7/24/01	none	16.93	0.00
MW-5	11/17/94	16.22	24.19	7.97
	2/9/95	16.84	24.85	8.01
	6/16/95	19.44	21.14	1.70
	10/2/95	16.19	17.85	1.66
	11/26/95	17.58	19.31	1.73
	4/16/96	17.04	17.25	0.21
	7/6/96	16.20	16.36	0.16
	9/30/96	11.17	11.38	0.21
	1/10/97	13.45	13.60	0.15
	4/2/97	14.19	14.35	0.16
	7/10/97	16.22	16.25	0.03
	10/17/97	13.37	13.39	0.02
	1/18/98	13.57	13.58	0.01
	4/18/98	14.04	14.05	0.01
	5/29/98	none	15.09	0.00
	6/30/98	none	15.42	0.00
	7/23/98	none	17.30	0.00
	8/19/98	18.09	18.10	0.01
	12/5/98	none	18.94	0.00
	4/1/99	none	19.48	0.00
	6/3/99	none	14.46	0.00
	9/20/99	none	9.91	0.00
	1/8/00	none	12.11	0.00
	6/8/00	none	12.13	0.00
	7/24/01	none	12.77	0.00
MW-6	11/17/94	trace	14.53	trace
	2/9/95	none	15.02	0.00
	6/16/95	16.24	16.27	0.03
	10/2/95	none	13.55	0.00
	11/26/95	none	14.84	0.00
	4/16/96	none	13.80	0.00
	7/6/96	none	14.55	0.00
	9/30/96	none	9.62	0.00
	1/10/97	none	12.26	0.00
	4/2/97	none	12.03	0.00
	4/18/98	none	12.14	0.00
	12/5/98	none	15.95	0.00
	4/1/99	none	16.04	0.00
	6/3/99	none	13.6	0.00
	9/20/99	none	8.69	0.00
	1/8/00	none	10.73	0.00
	6/8/00	none	11.45	0.00

TABLE 1 (cont.)
Monitoring Well Fluid Level Data

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-6	7/24/01	none	11.69	0.00
MW-7	11/17/94	none	34.33	0.00
	2/9/95	none	34.67	0.00
	6/16/95	none	35.61	0.00
	10/2/95	none	33.79	0.00
	11/26/95	none	33.20	0.00
	4/16/96	none	30.95	0.00
	7/6/96	none	33.36	0.00
	9/30/96	none	29.15	0.00
	1/10/97	none	30.72	0.00
	4/2/97	none	31.85	0.00
	4/18/98	none	31.94	0.00
	12/5/98	none	35.24	0.00
	4/1/99	none	35.24	0.00
	6/3/99	none	33.32	0.00
	9/20/99	none	27.25	0.00
	1/8/00	none	27.95	0.00
	6/8/00	none	26.91	0.00
	7/24/01	none	25.65	0.00
MW-8	11/17/94	13.69	14.95	1.26
	2/9/95	14.46	15.02	0.56
	6/16/95	15.50	16.41	0.91
	10/2/95	13.03	13.45	0.42
	11/26/95	14.16	14.71	0.55
	4/16/96	13.66	13.70	0.04
	7/6/96	13.05	13.07	0.02
	9/30/96	8.04	8.07	0.03
	1/10/97	9.89	9.90	0.01
	4/2/97	10.58	10.60	0.02
	7/10/97	none	12.59	0.00
	10/17/97	none	10.20	0.00
	1/18/98	none	10.08	0.00
	4/18/98	none	10.52	0.00
	5/29/99	none	11.55	0.00
	6/30/98	none	11.87	0.00
	7/23/98	none	13.65	0.00
	8/19/98	none	14.42	0.00
	12/5/98	none	15.30	0.00
	4/1/99	none	15.73	0.00
	6/3/99	none	11.88	0.00
	9/20/99	none	7.20	0.00
	1/8/00	none	8.58	0.00
	6/8/00	none	9.71	0.00
	7/24/01	none	9.53	0.00

TABLE 1 (cont.)
Monitoring Well Fluid Level Data

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-9	11/17/94	23.07	23.10	0.03
	2/9/95	trace	23.41	trace
	6/16/95	trace	24.65	trace
	10/2/95	skim	20.73	skim
	11/26/95	skim	19.52	skim
	4/16/96	17.53	17.54	0.01
	7/6/96	21.20	21.23	0.03
	9/30/96	16.00	16.02	0.02
	1/10/97	17.55	17.57	0.02
	4/2/97	18.91	18.92	0.01
	7/10/97	20.39	20.41	0.02
	10/17/97	20.13	20.15	0.02
	1/18/98	18.39	18.40	0.01
	4/18/98	18.80	18.81	0.01
	5/29/98	none	19.50	0.00
	6/30/98	none	19.82	0.00
	7/23/98	21.00	21.01	0.01
	8/19/98	none	21.75	0.00
	12/5/98	none	23.18	0.00
	4/1/99	none	22.85	0.00
	6/3/99	none	20.85	0.00
	9/20/99	none	12.56	0.00
	1/8/00	none	12.64	0.00
	6/8/00	none	11.65	0.00
	7/24/01	none	10.65	0.00
MW-10	11/17/94	19.02	21.24	2.22
	2/9/95	19.74	22.36	2.62
	6/16/95	20.97	23.30	2.33
	10/2/95	18.49	19.55	1.06
	11/26/95	20.13	22.03	1.90
	4/16/96	20.26	20.88	0.62
	7/6/96	19.86	20.03	0.17
	9/30/96	none	15.62	0.00
	1/10/97	19.00	19.05	0.05
	4/2/97	19.35	19.40	0.05
	7/10/97	20.37	20.42	0.05
	10/17/97	none	16.58	0.00
	1/18/98	none	17.82	0.00
	4/18/98	none	18.27	0.00
	5/29/99	none	18.72	0.00
	6/30/98	none	19.04	0.00
	7/23/98	none	19.26	0.00
	8/19/98	none	19.40	0.00
	12/5/98	none	19.69	0.00
	4/1/99	none	19.62	0.00
	6/3/99	none	17.10	0.00
	9/16/99	none	16.39	0.00
	1/8/00	none	17.75	0.00
	6/8/00	none	17.80	0.00

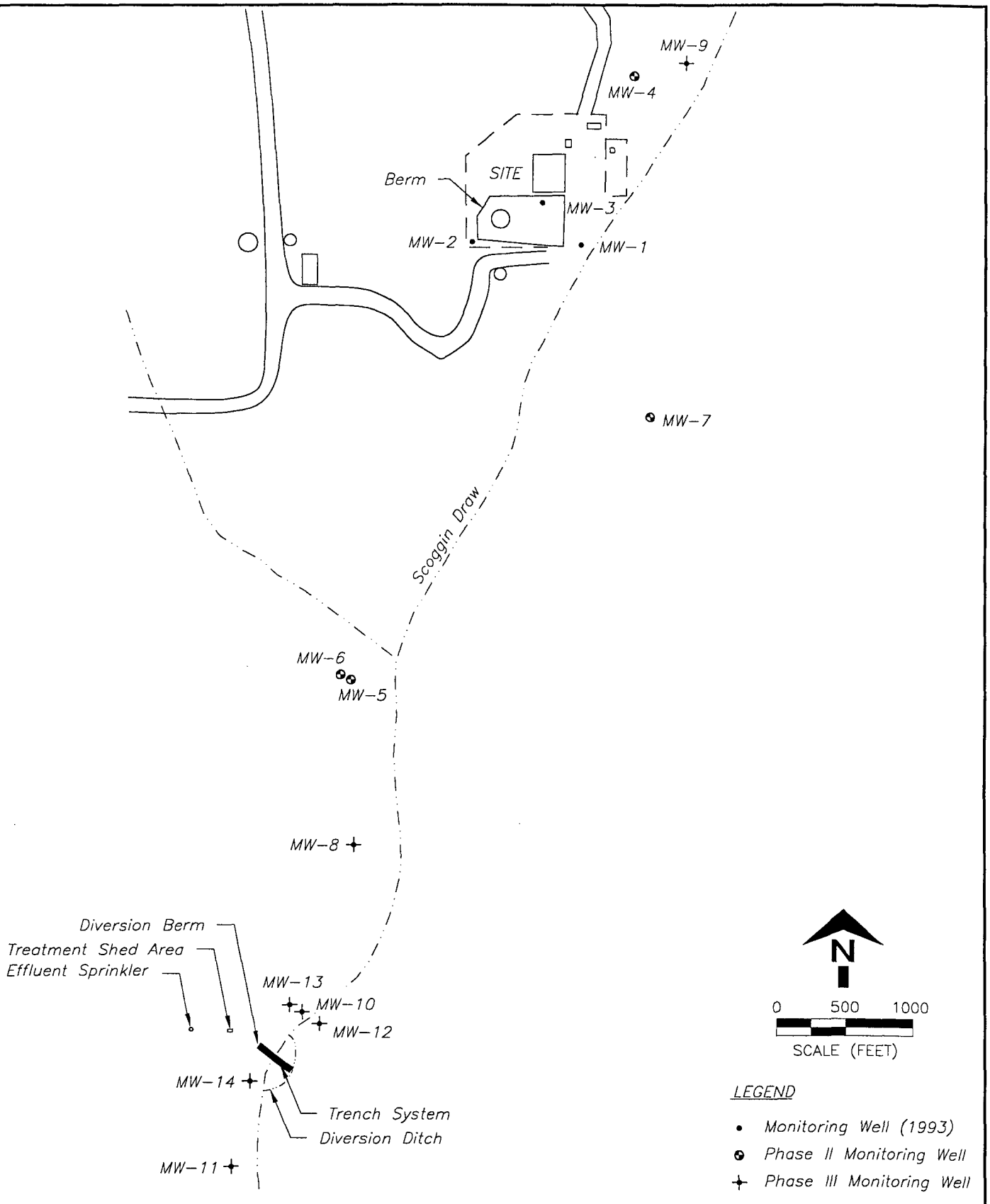
TABLE 1 (cont.)
Monitoring Well Fluid Level Data

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-10	7/24/01	none	17.44	0.00
MW-11	11/17/94	none	19.34	0.00
	2/9/95	none	19.61	0.00
	6/16/95	none	20.08	0.00
	10/2/95	none	19.74	0.00
	11/26/95	none	19.94	0.00
	4/16/96	none	19.68	0.00
	7/6/96	none	19.75	0.00
	9/30/96	none	18.65	0.00
	1/10/97	none	19.92	0.00
	4/2/97	none	14.50	0.00
	1/18/98	none	18.91	0.00
	4/18/98	none	19.07	0.00
	6/30/98	none	19.39	0.00
	8/19/98	none	19.54	0.00
	12/5/98	none	19.47	0.00
	4/1/99	none	19.44	0.00
	6/2/99	none	19.58	0.00
	9/16/99	none	18.20	0.00
	1/8/00	none	18.22	0.00
	6/7/00	none	18.55	0.00
	7/24/01	none	18.69	0.00
MW-12	11/17/94	none	16.47	0.00
	2/9/95	none	16.78	0.00
	6/16/95	none	17.28	0.00
	10/2/95	none	16.03	0.00
	11/26/95	none	16.63	0.00
	4/16/96	none	16.55	0.00
	7/6/96	none	16.45	0.00
	9/30/96	none	13.81	0.00
	1/10/97	none	18.92	0.00
	4/2/97	none	15.20	0.00
	4/18/98	none	14.91	0.00
	12/5/98	none	16.63	0.00
	4/1/99	none	16.87	0.00
	6/3/99	none	15.55	0.00
	9/16/99	none	13.59	0.00
	1/8/00	none	13.70	0.00
	6/7/00	none	14.35	0.00
	7/24/01	none	13.66	0.00

TABLE 1 (cont.)
Monitoring Well Fluid Level Data

Well No.	Date	Depth to FPH, ft	Depth to Water, ft	FPH Thickness, ft
MW-13	11/17/94	20.41	20.49	0.08
	2/9/95	20.84	20.87	0.03
	6/16/95	21.35	21.40	0.05
	10/2/95	19.35	19.44	0.09
	11/26/95	21.53	21.58	0.05
	4/16/96	21.82	21.90	0.08
	7/6/96	21.00	21.05	0.05
	9/30/96	16.40	16.42	0.02
	1/10/97	19.17	19.19	0.02
	4/2/97	18.50	18.52	0.02
	7/10/97	none	19.00	0.00
	10/17/97	none	18.03	0.00
	1/18/98	none	19.11	0.00
	4/18/98	none	19.60	0.00
	5/29/98	none	19.96	0.00
	6/30/98	none	20.28	0.00
	7/23/98	none	20.91	0.00
	8/19/98	none	21.25	0.00
	12/5/98	none	21.6	0.00
	4/1/99	none	21.81	0.00
	6/3/99	none	18.52	0.00
	9/16/99	none	13.59	0.00
	1/8/00	none	16.79	0.00
	6/7/00	none	17.81	0.00
	7/24/01	none	18.18	0.00
MW-14	11/17/94	none	18.11	0.00
	2/9/95	none	18.45	0.00
	6/16/95	none	18.93	0.00
	10/2/95	none	18.63	0.00
	11/26/95	none	18.83	0.00
	4/16/96	none	18.55	0.00
	7/6/96	none	18.58	0.00
	9/30/96	none	17.63	0.00
	1/10/97	none	17.42	0.00
	4/2/97	none	17.82	0.00
	1/18/98	none	17.61	0.00
	4/18/98	none	17.77	0.00
	6/30/98	none	18.10	0.00
	8/19/98	none	18.23	0.00
	12/5/98	none	18.15	0.00
	4/1/99	none	18.27	0.00
	6/2/99	none	18.25	0.00
	9/16/99	none	16.82	0.00
	1/8/00	none	16.75	0.00
	6/7/00	none	17.07	0.00
	7/24/01	none	16.16	0.00

FIGURES



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Artesia, New Mexico

SITE LAYOUT

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: D:\DWGS\AP98223\BASEMAP.DWG

REFERENCE FILES: NONE

FIGURE 1

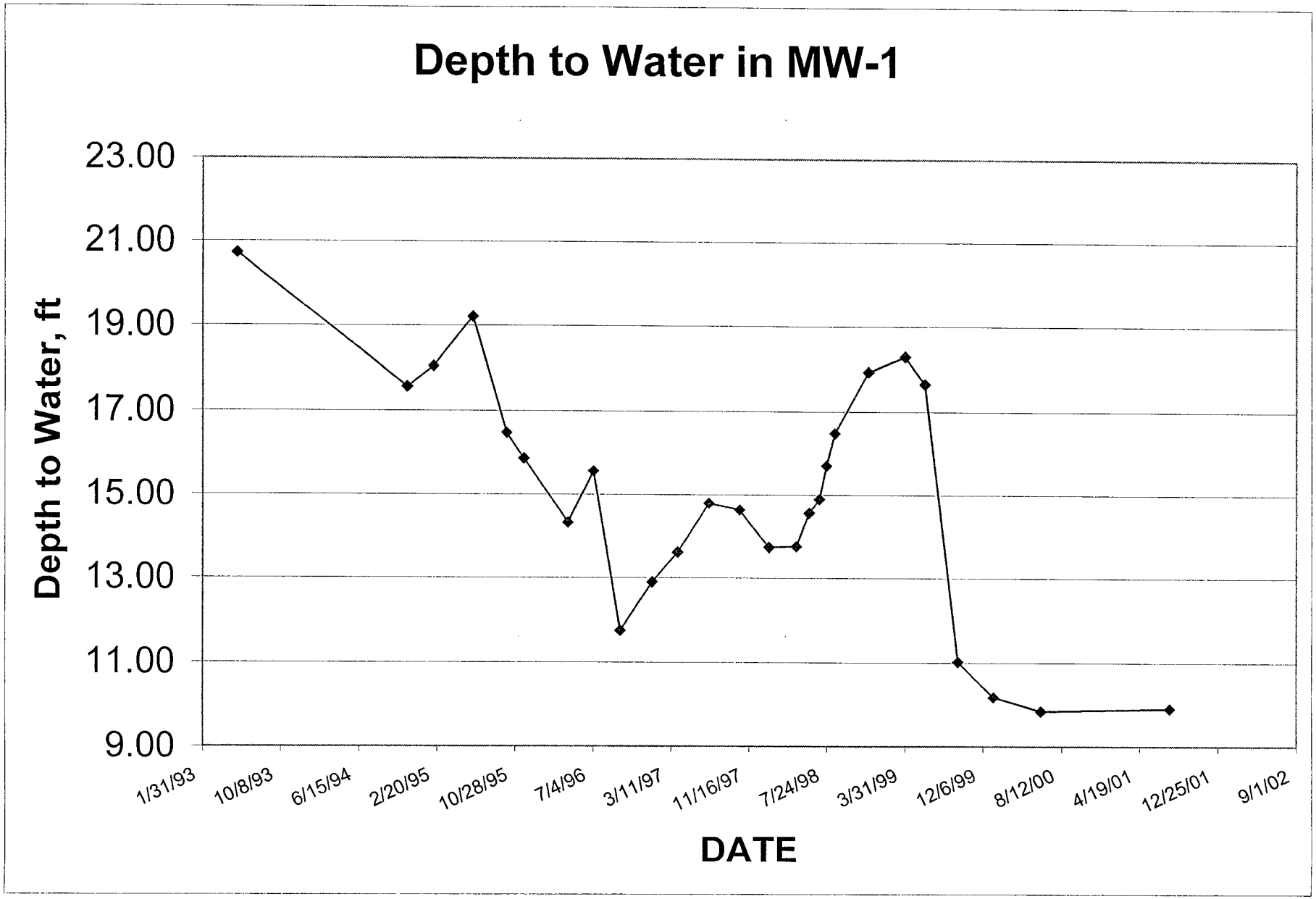

Depth to Water in MW-1
Depth to Water, ft
23.00
21.00
19.00
17.00
15.00
13.00
11.00
9.00
1/31/93
10/8/93
6/15/94
2/20/95
10/28/95
7/4/96
3/11/97
11/16/97
7/24/98
3/31/99
12/6/99
8/12/00
4/19/01
12/25/01
9/1/02
DATE

FIGURE 2

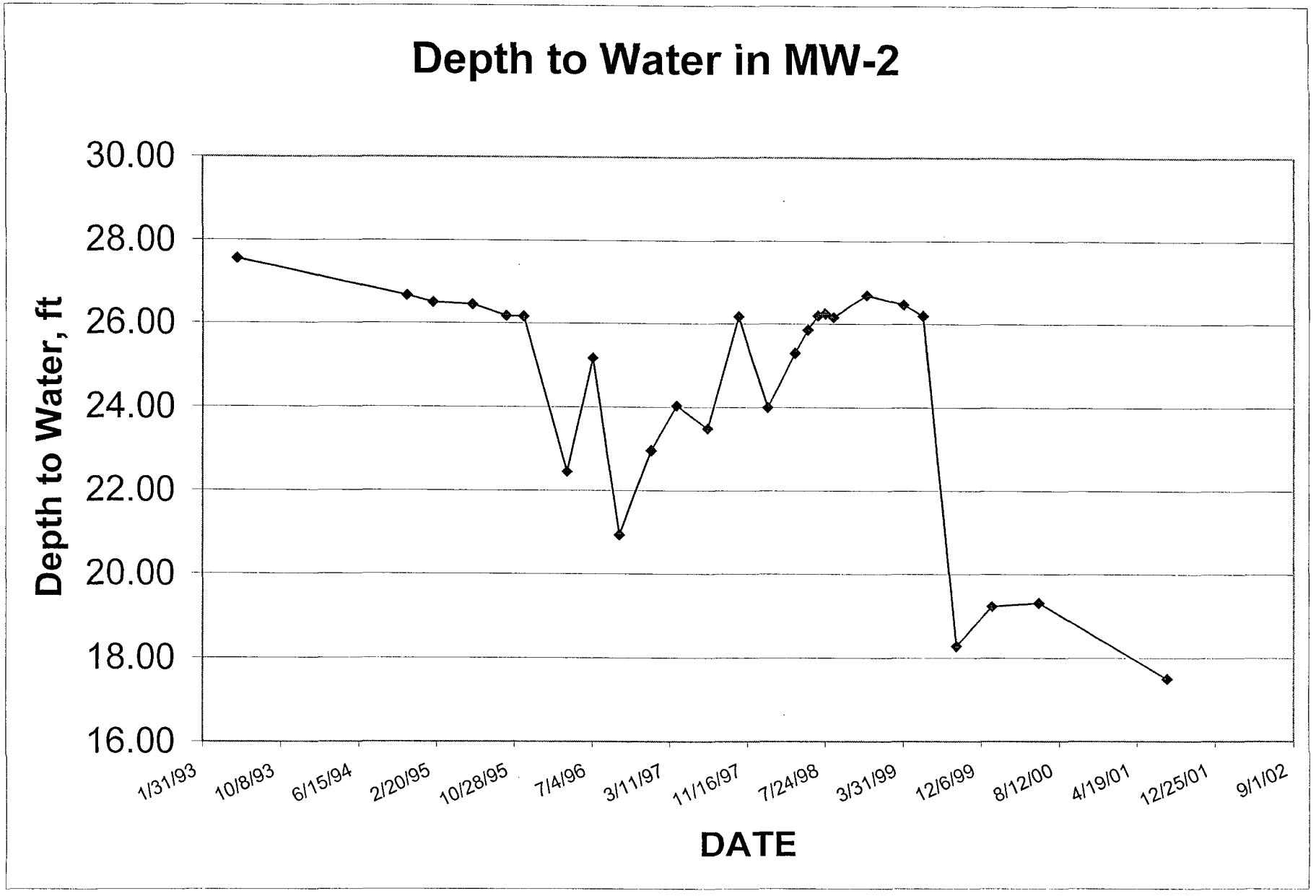

Depth to Water in MW-2
Depth to Water, ft
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
1/31/93
10/8/93
6/15/94
2/20/95
10/28/95
7/4/96
3/11/97
11/16/97
7/24/98
3/31/99
12/6/99
8/12/00
4/19/01
12/25/01
9/1/02
DATE

FIGURE 3

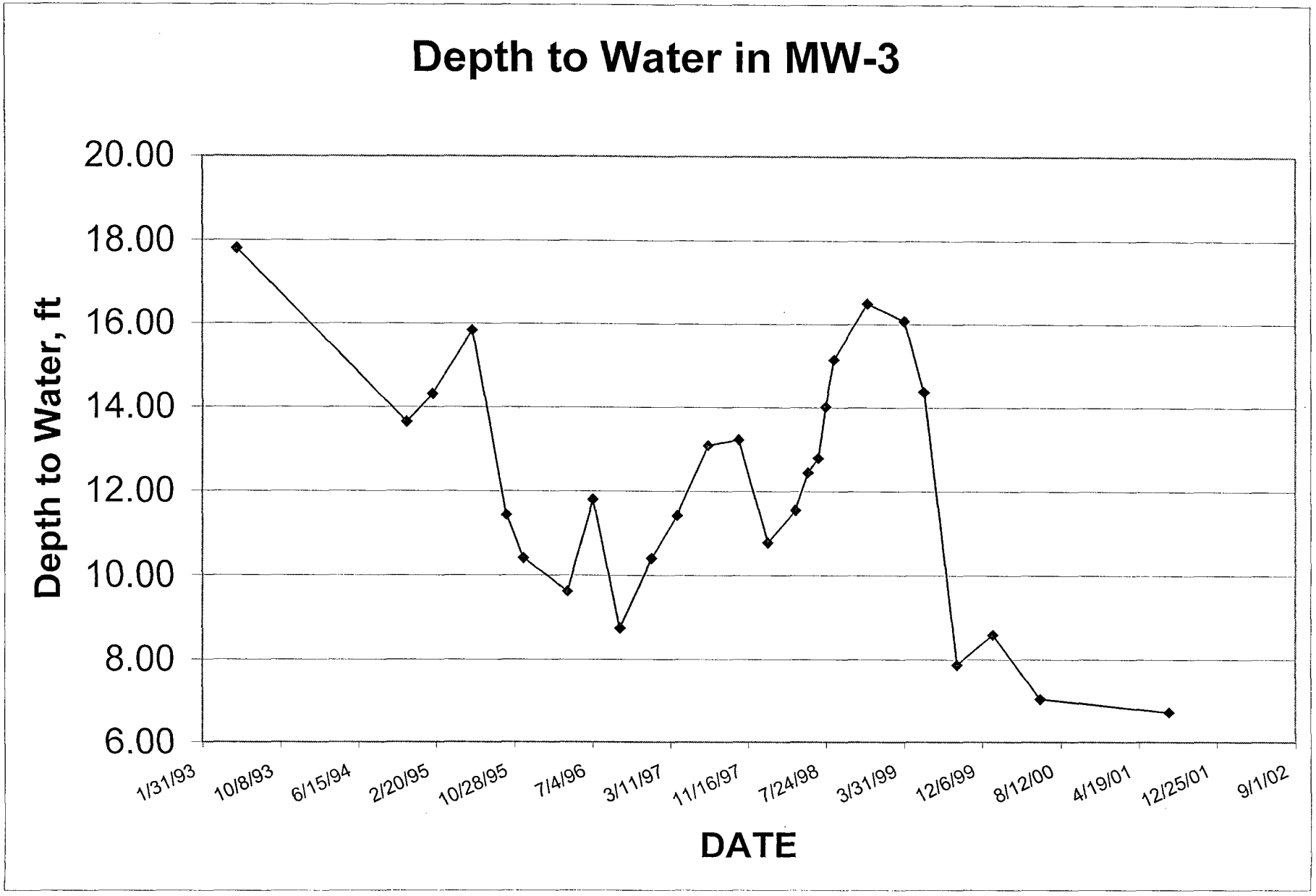

Depth to Water in MW-3
Depth to Water, ft
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
1/31/93
10/8/93
6/15/94
2/20/95
10/28/95
7/4/96
3/11/97
11/16/97
7/24/98
3/31/99
12/6/99
8/12/00
4/19/01
12/25/01
9/1/02
DATE

FIGURE 4

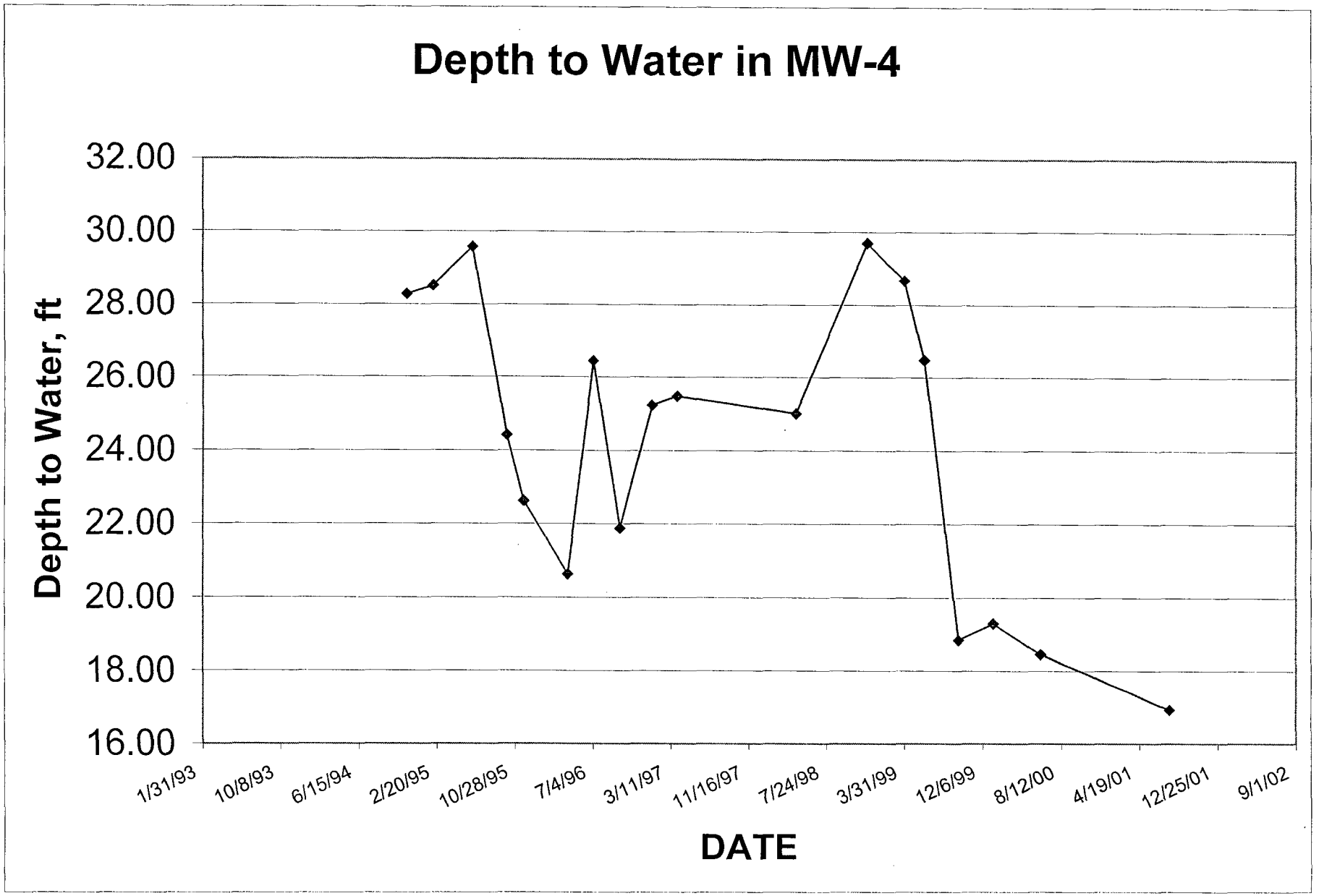

Depth to Water in MW-4
Depth to Water, ft
32.00
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
1/31/93
10/8/93
6/15/94
2/20/95
10/28/95
7/4/96
3/11/97
11/16/97
7/24/98
3/31/99
12/6/99
8/12/00
4/19/01
12/25/01
9/1/02
DATE

FIGURE 5

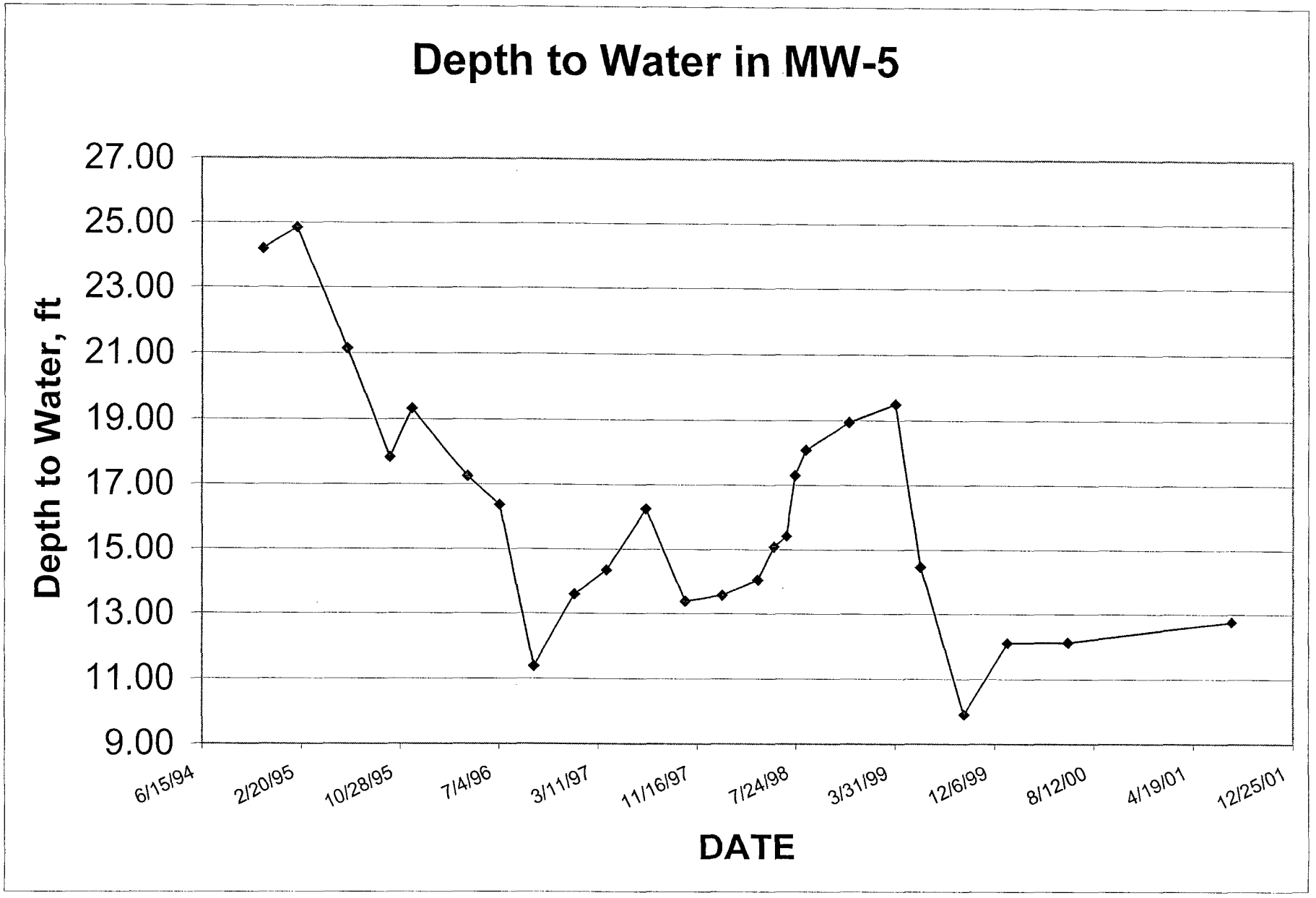

Depth to Water in MW-5
Depth to Water, ft
27.00
25.00
23.00
21.00
19.00
17.00
15.00
13.00
11.00
9.00
6/15/94
2/20/95
10/28/95
7/4/96
3/11/97
11/16/97
7/24/98
3/31/99
12/6/99
8/12/00
4/19/01
12/25/01
DATE

FIGURE 6

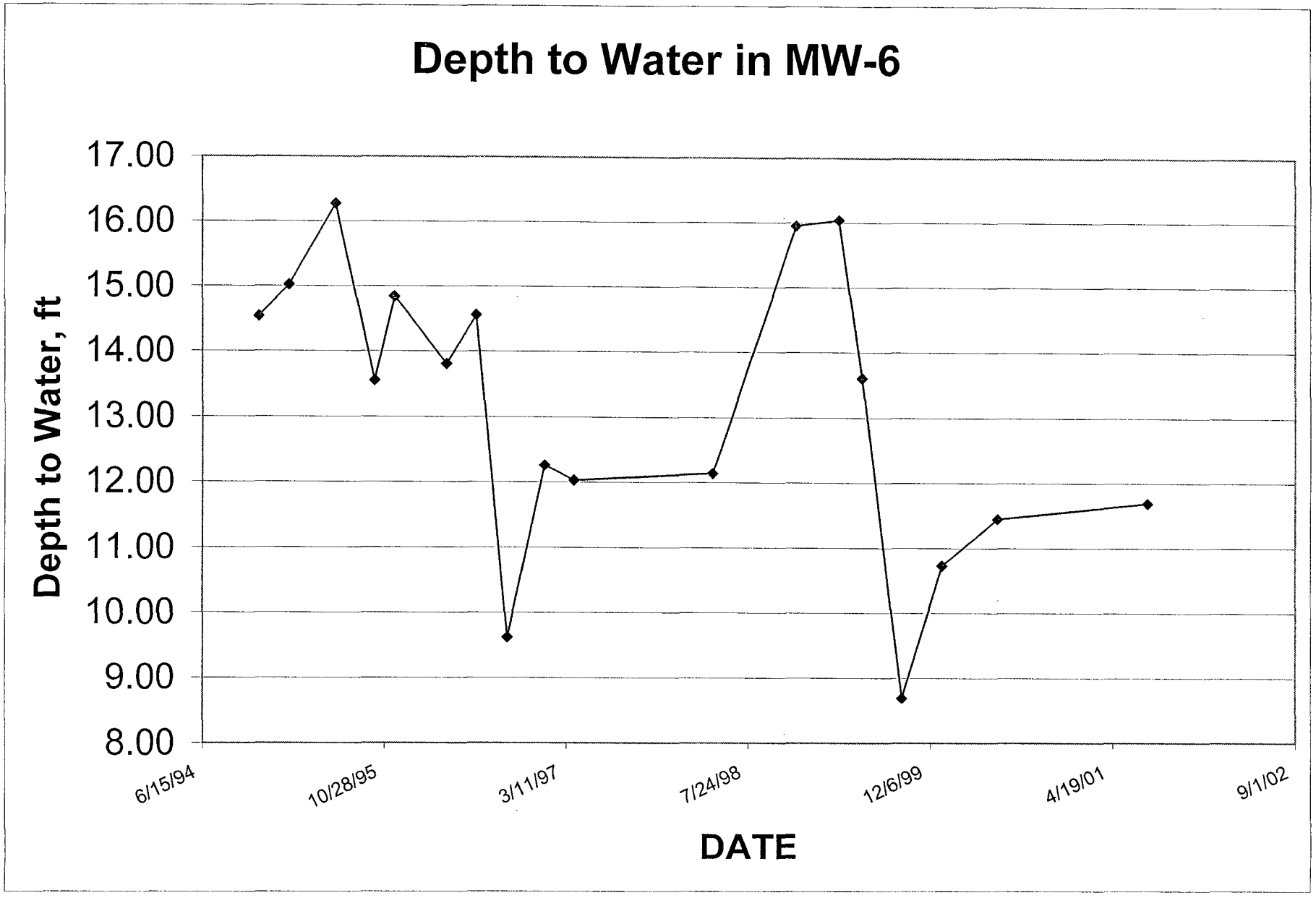

Depth to Water in MW-6
Depth to Water, ft
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 7

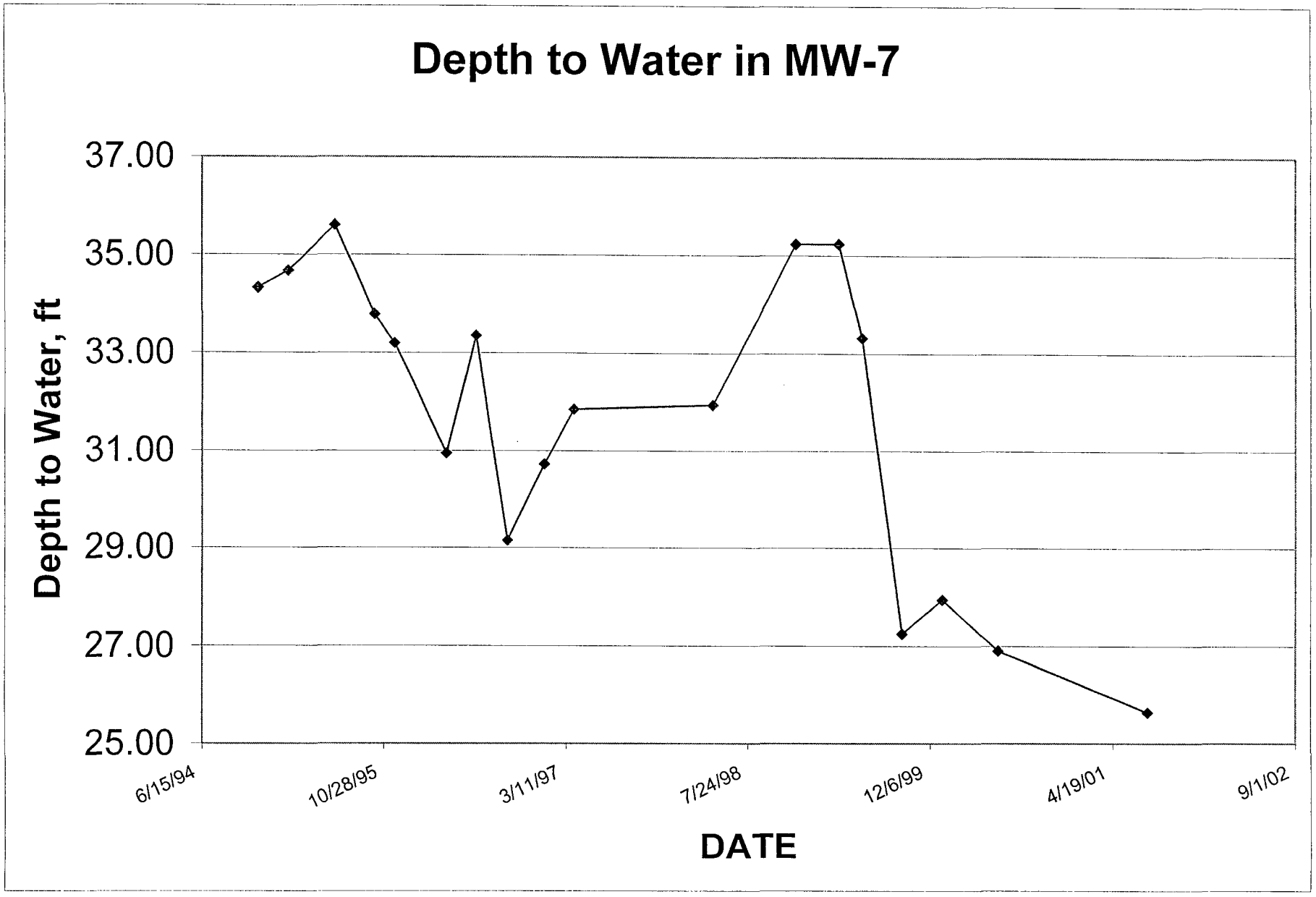

Depth to Water in MW-7
Depth to Water, ft
37.00
35.00
33.00
31.00
29.00
27.00
25.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 8

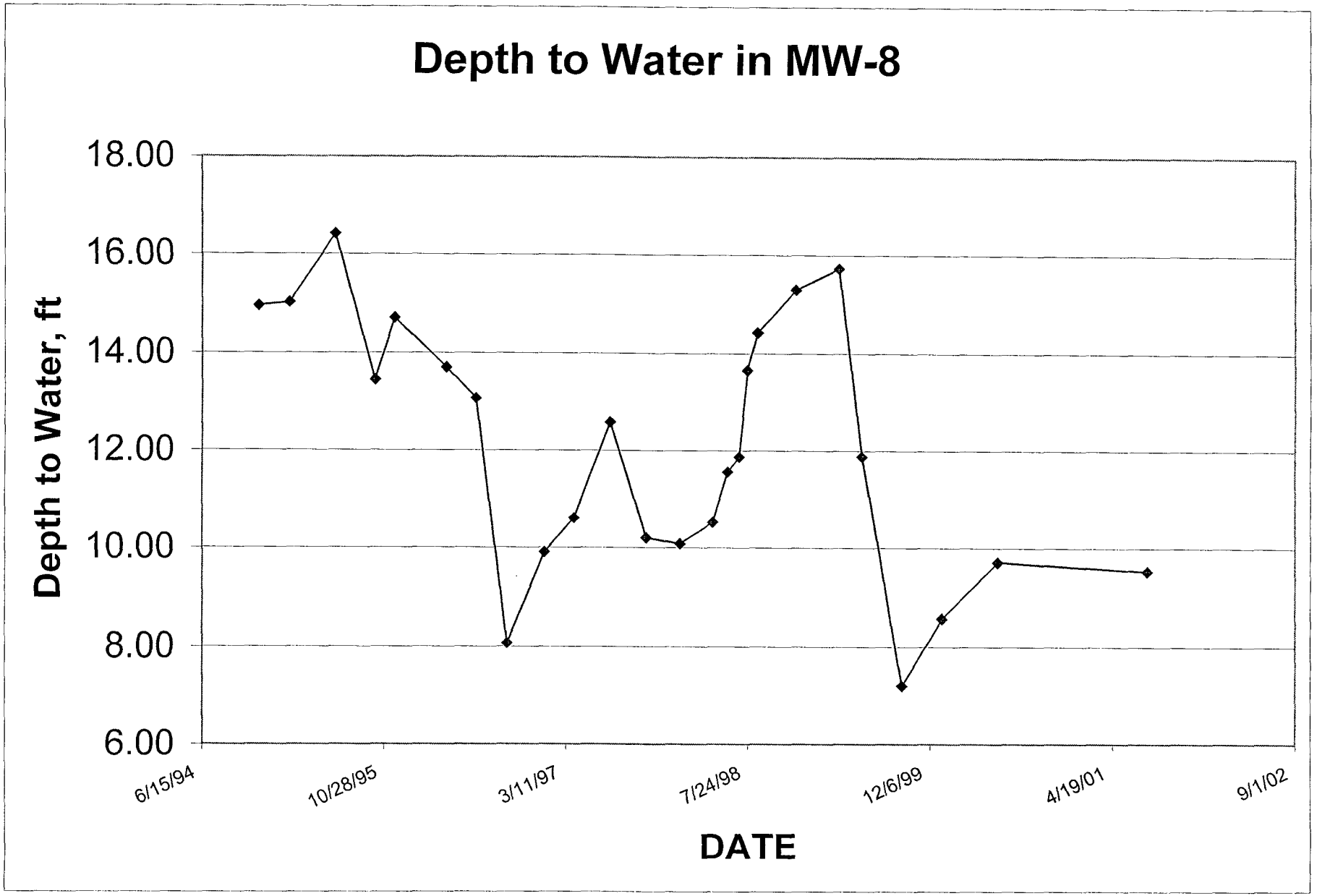

Depth to Water in MW-8
Depth to Water, ft
18.00
16.00
14.00
12.00
10.00
8.00
6.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 9

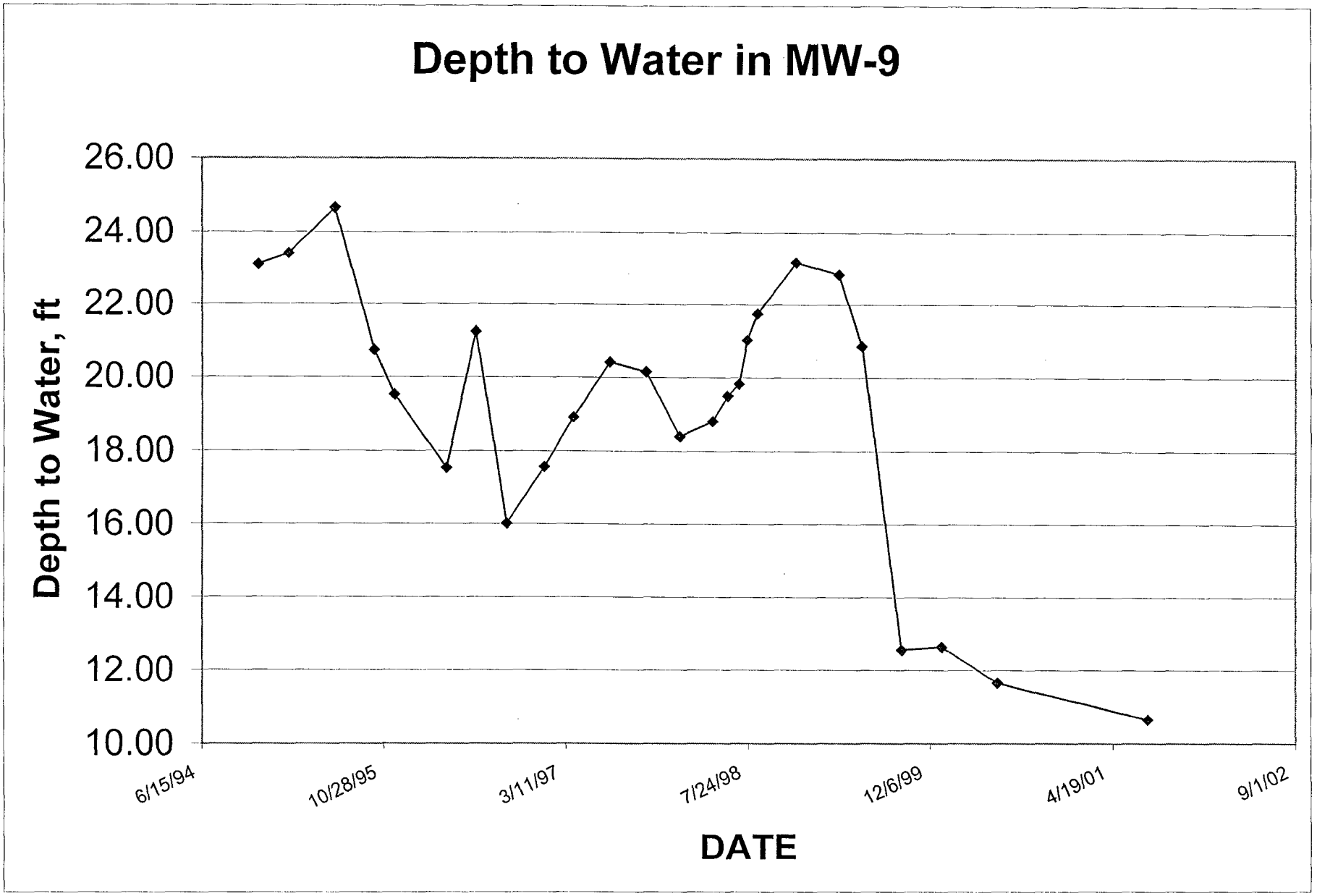

Depth to Water in MW-9
Depth to Water, ft
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 10

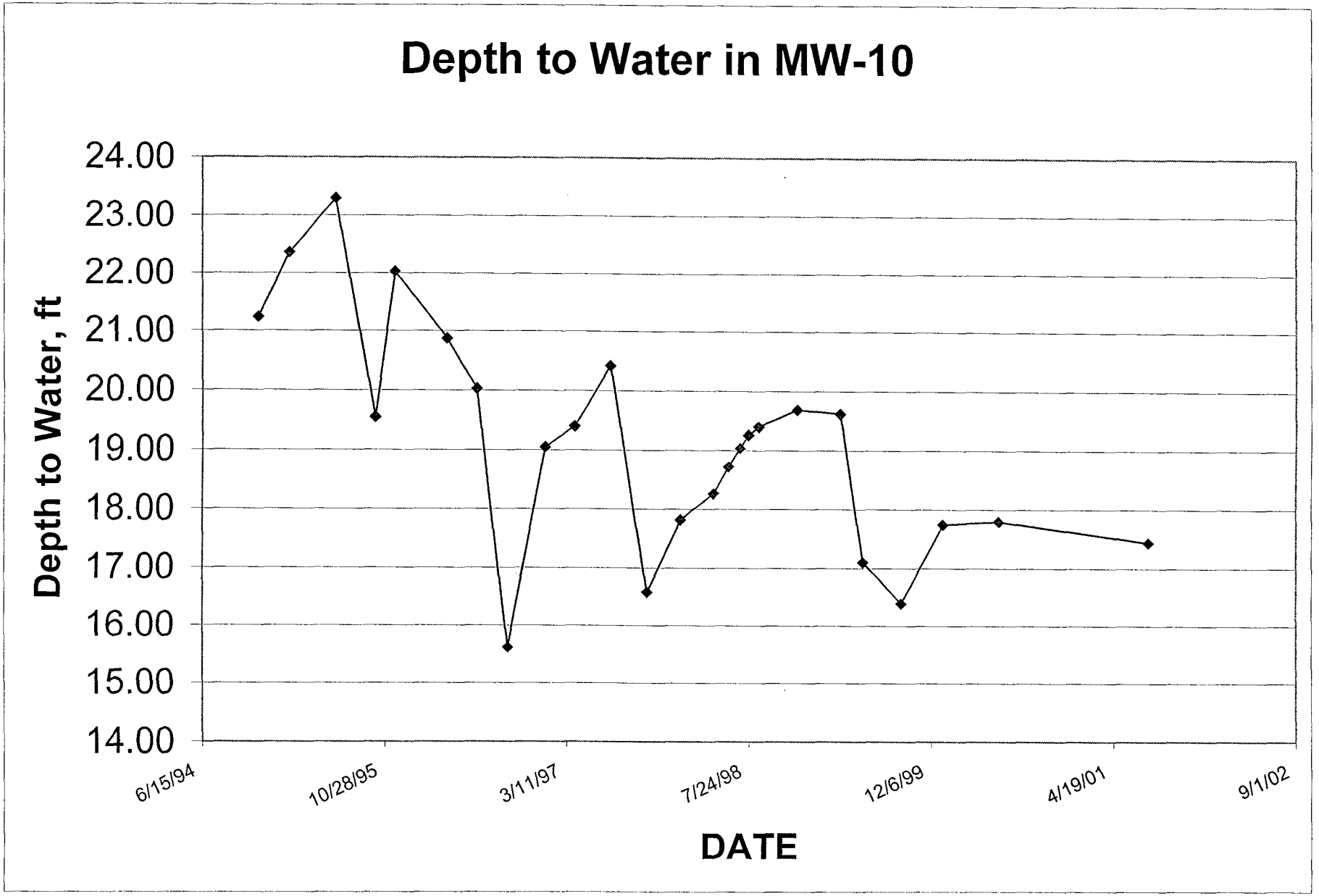

Depth to Water in MW-10
Depth to Water, ft
24.00
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 11

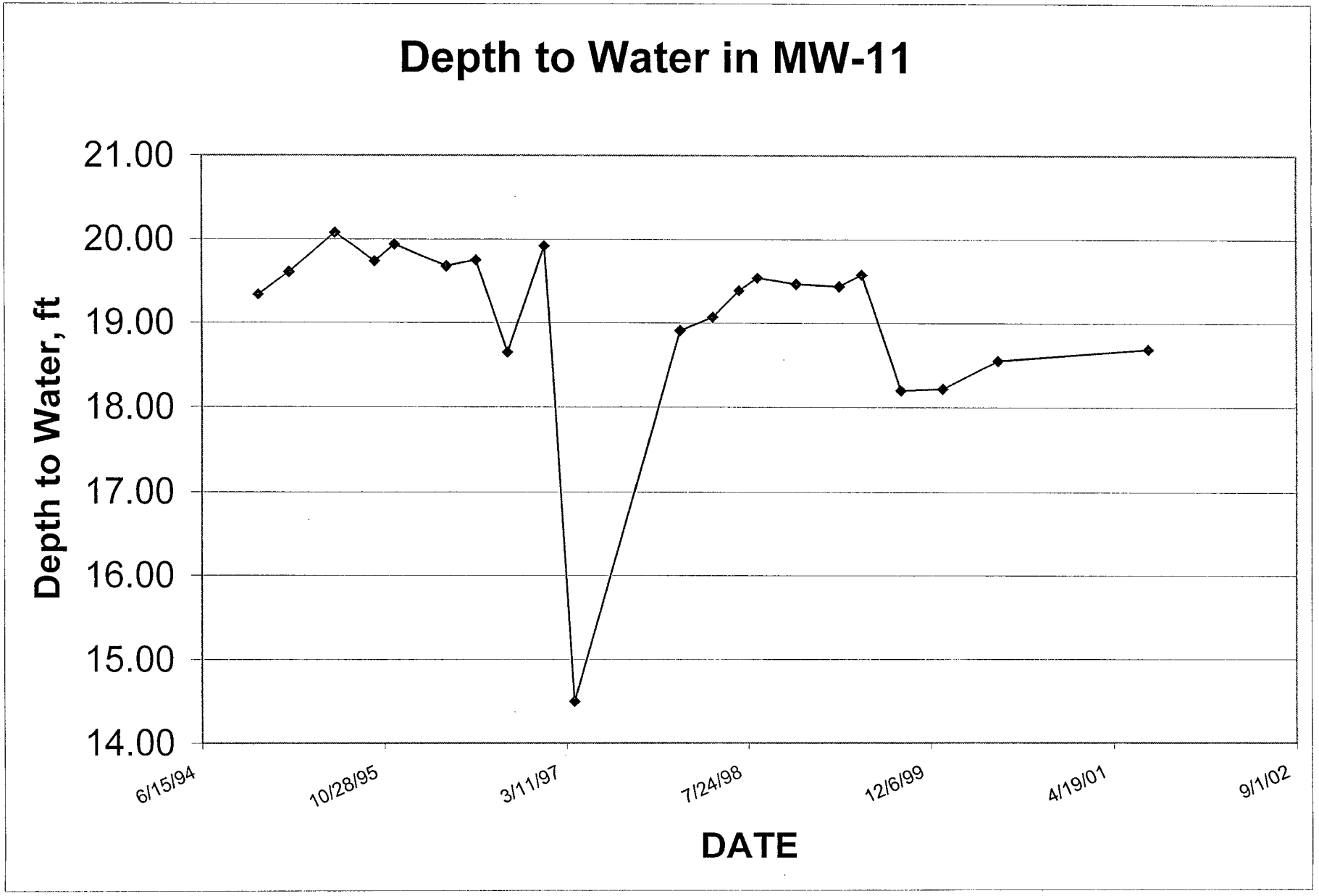

Depth to Water in MW-11
Depth to Water, ft
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 12

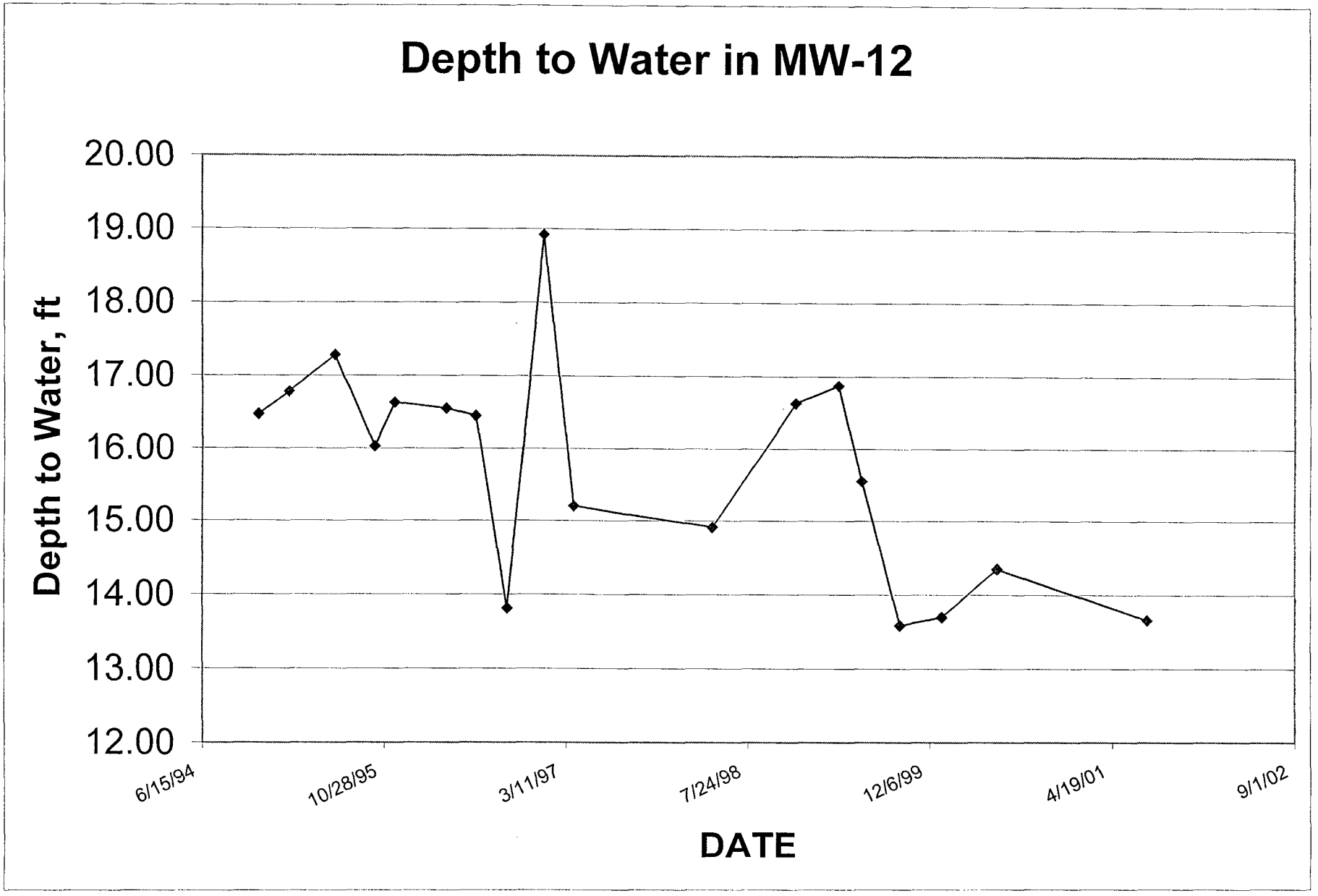

Depth to Water in MW-12
Depth to Water, ft
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 13

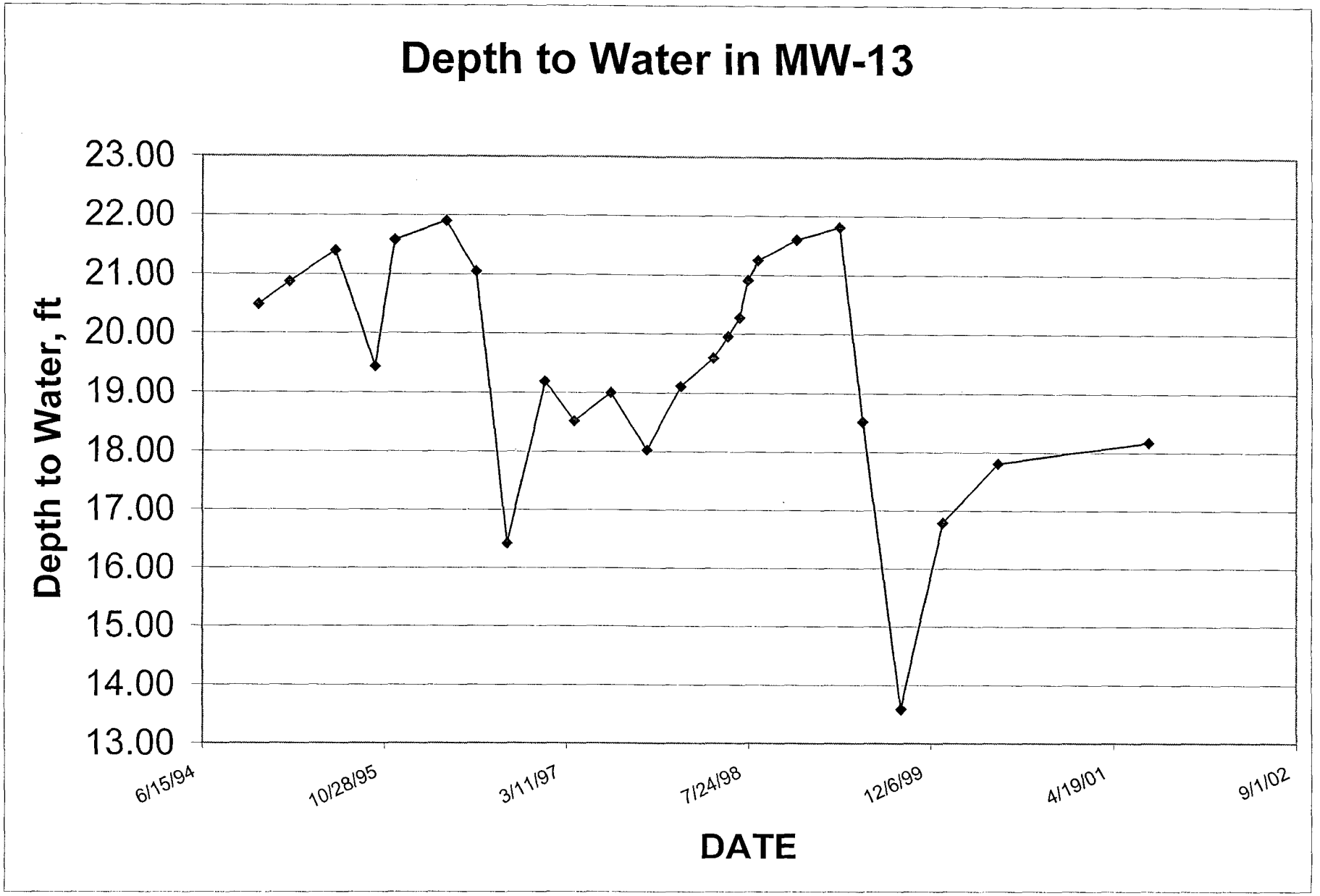

Depth to Water in MW-13
Depth to Water, ft
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 14

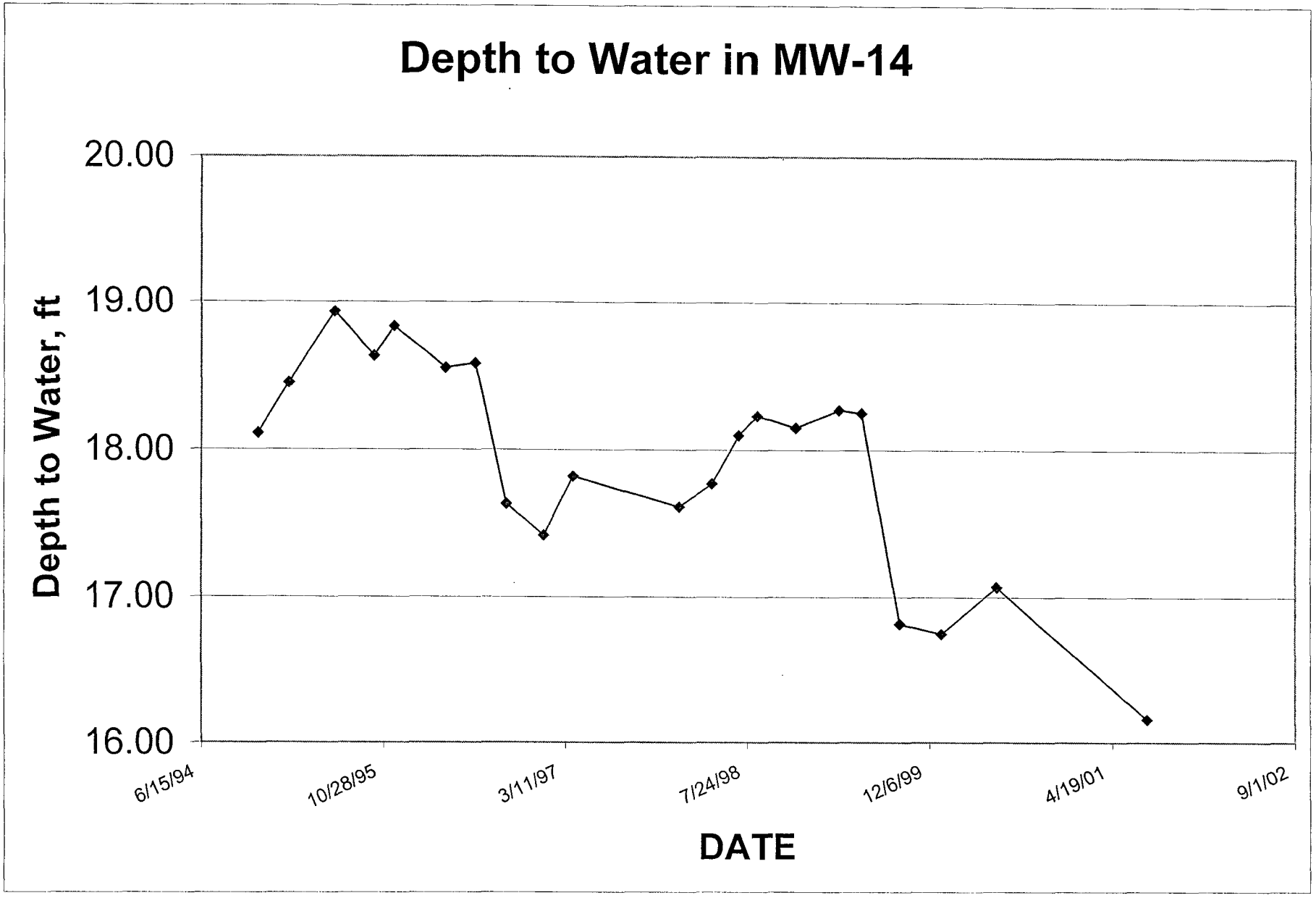
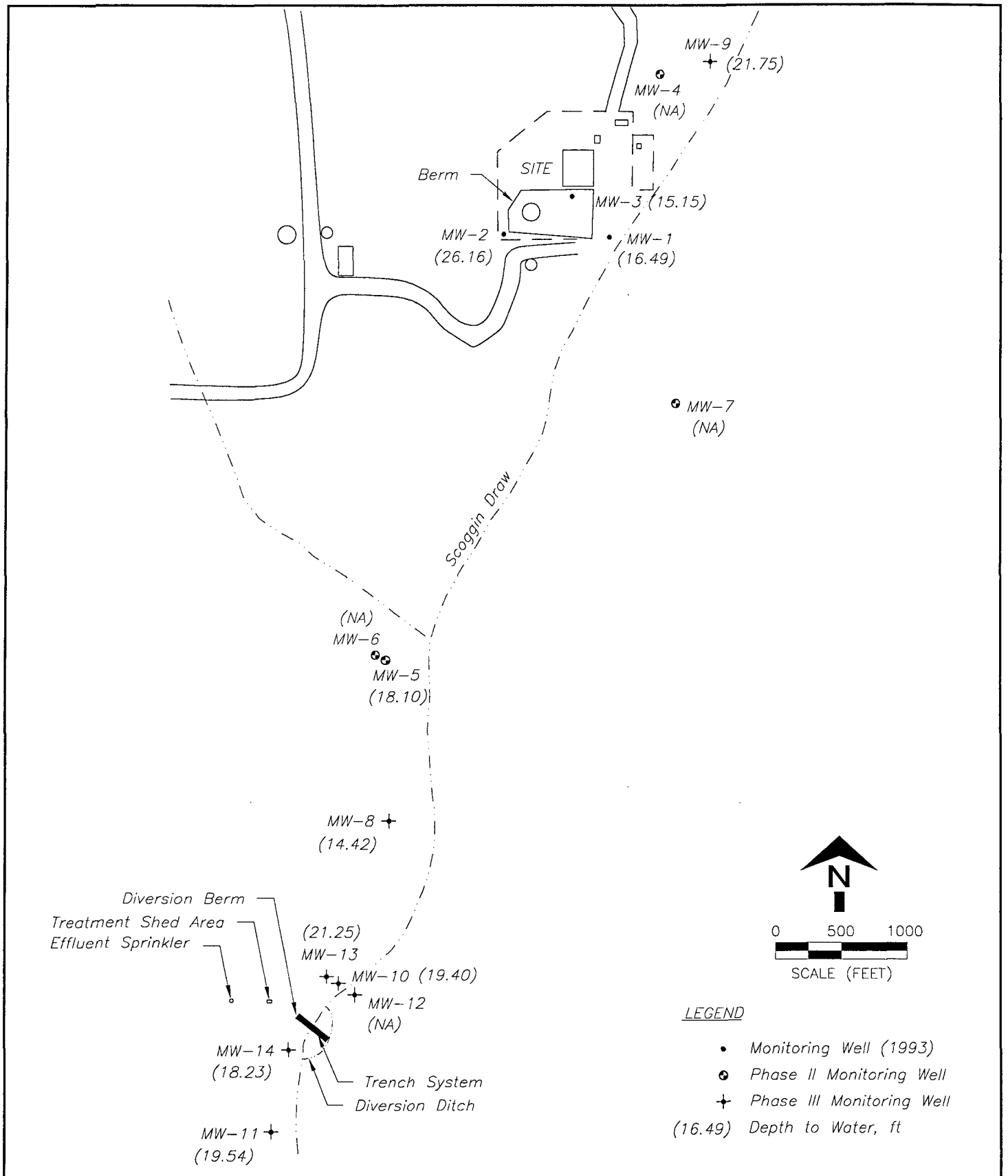

Depth to Water in MW-14
Depth to Water, ft
20.00
19.00
18.00
17.00
16.00
6/15/94
10/28/95
3/11/97
7/24/98
12/6/99
4/19/01
9/1/02
DATE

FIGURE 15



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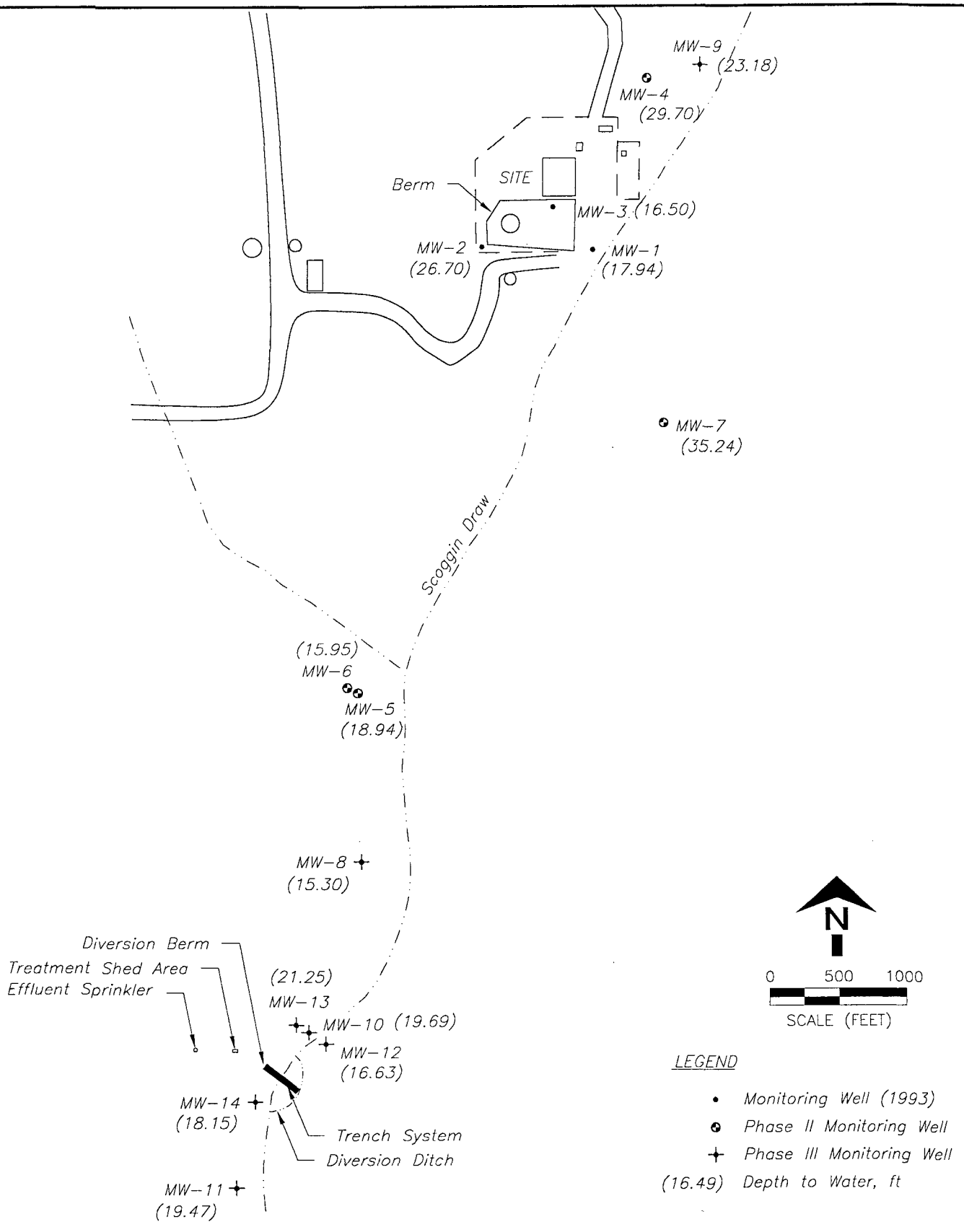
MEASURED DEPTH TO WATER DATA, 8/19/98

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME:	REFERENCE FILES:	
C:\...\AP98223\DEPTH TO WATER.DWG	NONE	FIGURE 16



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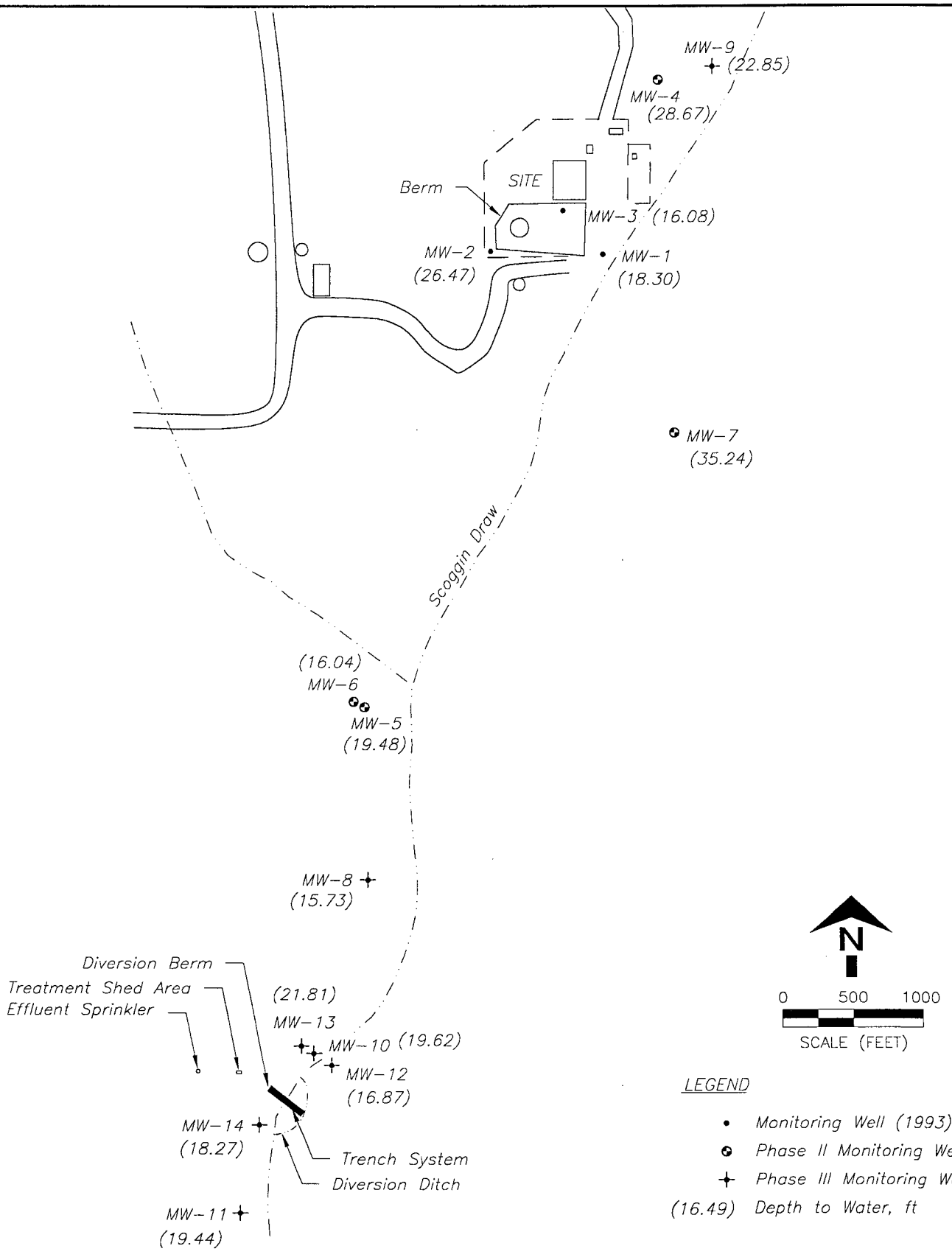
MEASURED DEPTH TO WATER DATA, 12/5/98

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME:	REFERENCE FILES:	
C:\...\AP98223\DEPTH TO WATER.DWG	NONE	FIGURE 17



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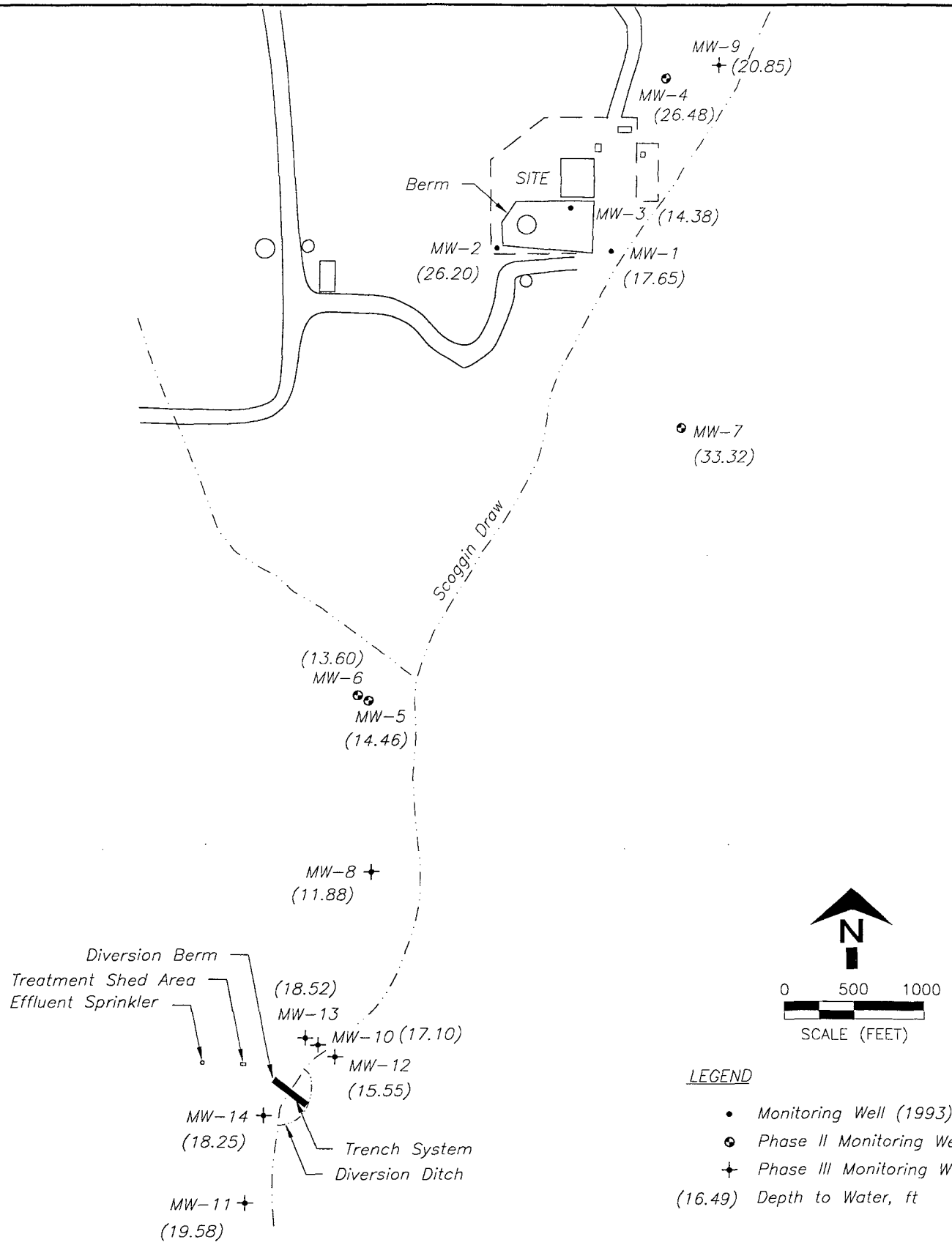
MEASURED DEPTH TO WATER DATA, 4/1/99

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 18



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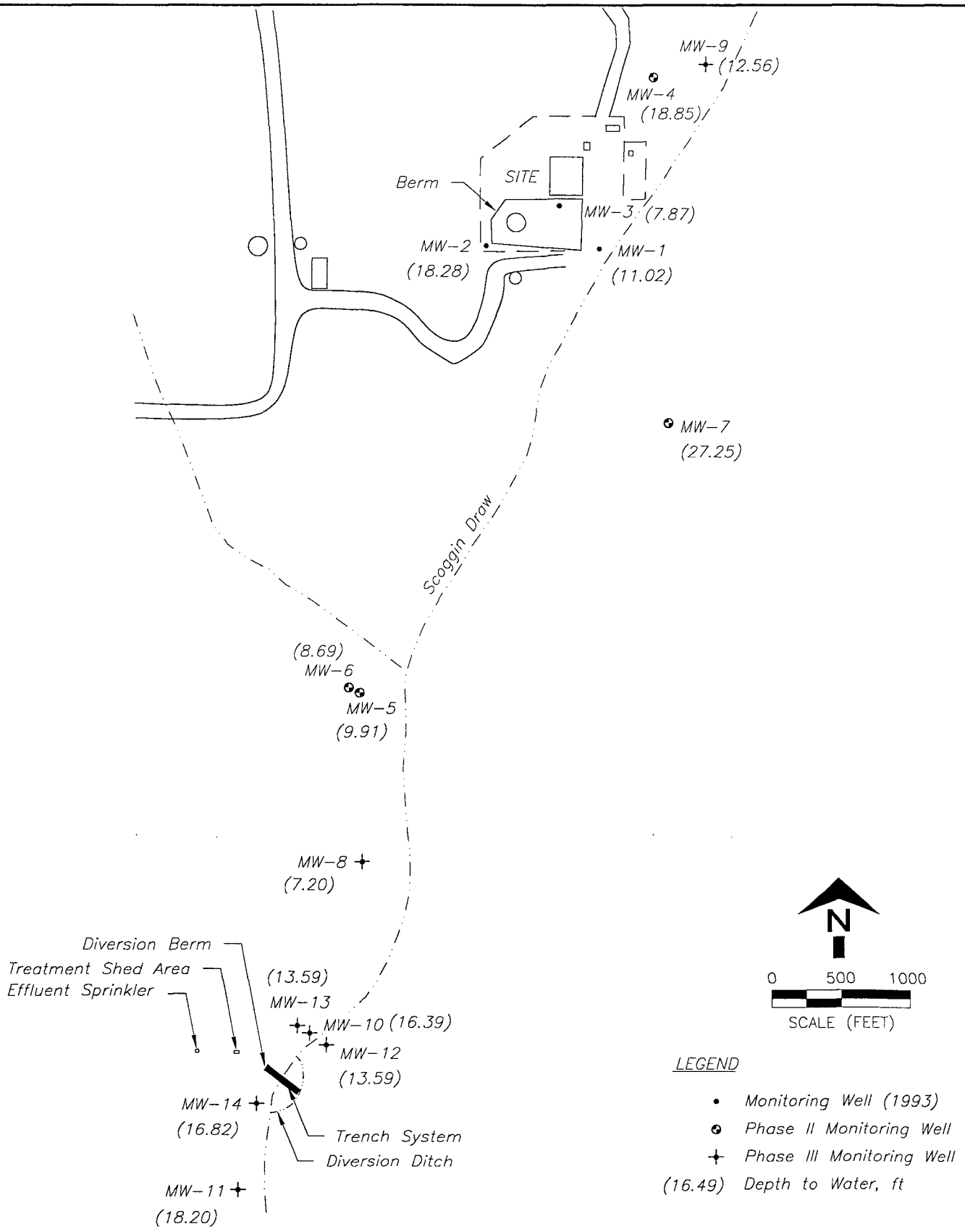
MEASURED DEPTH TO WATER DATA, 6/3/99

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 19



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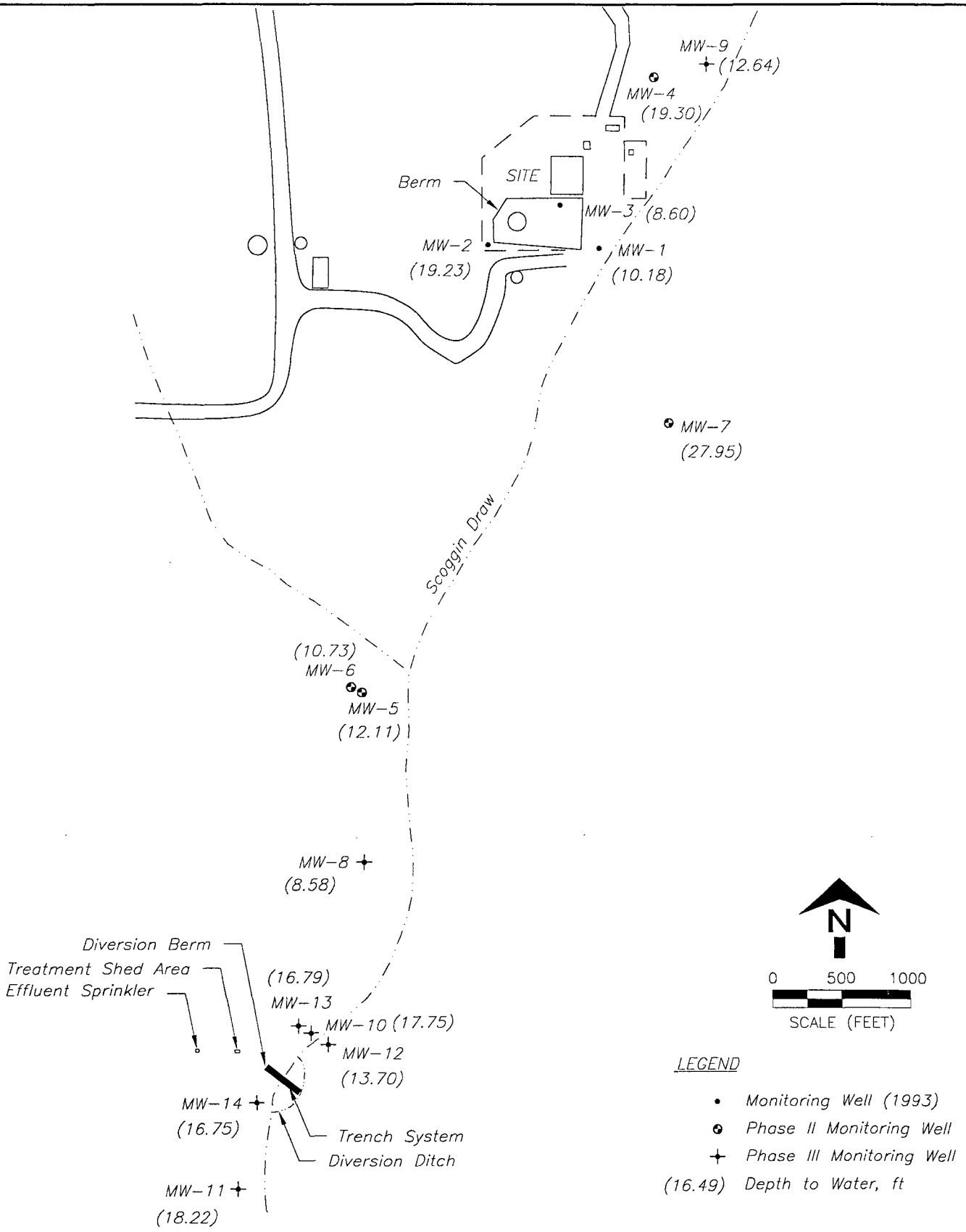
MEASURED DEPTH TO WATER DATA, 9/16/99

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 20



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Artesia, New Mexico

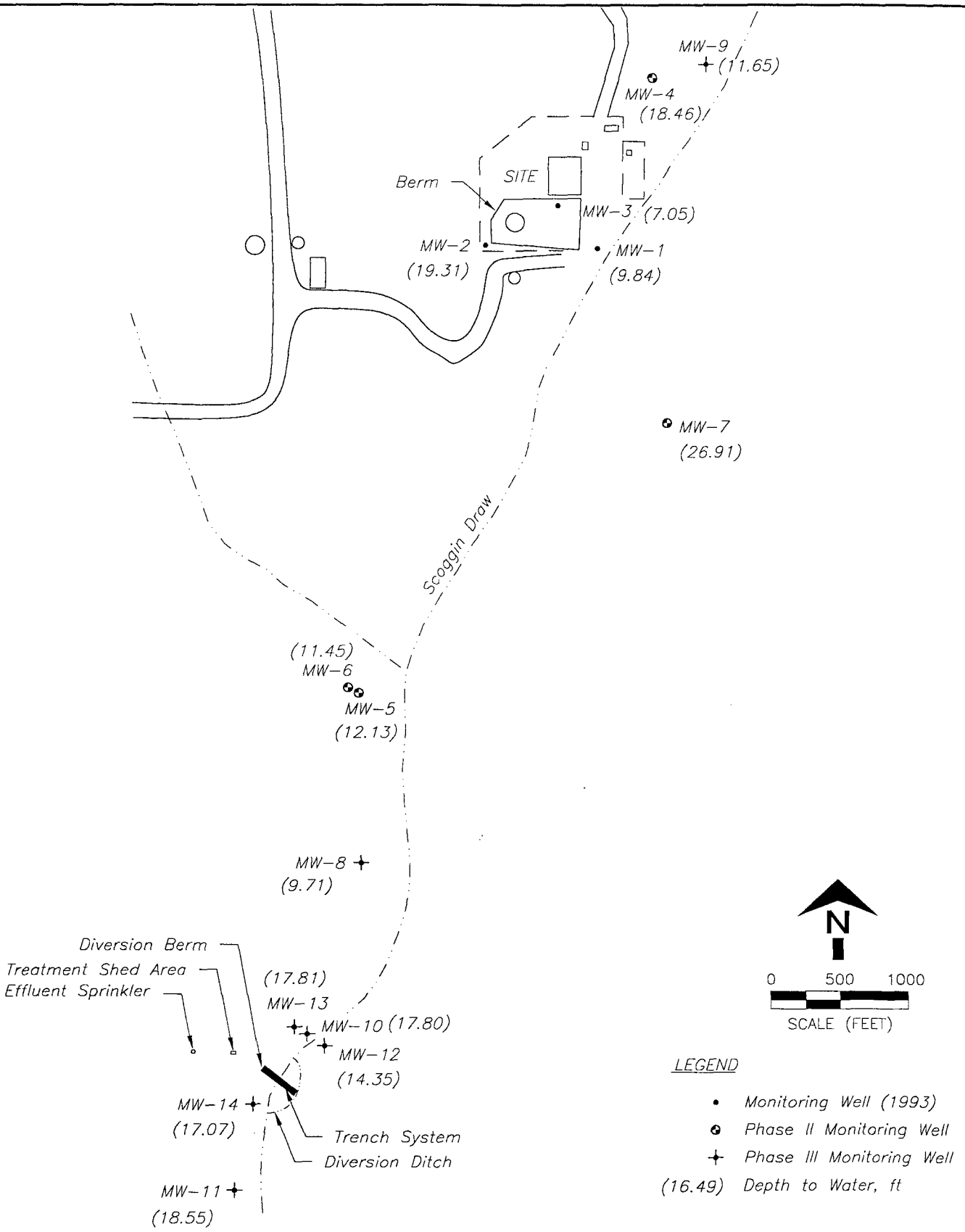
MEASURED DEPTH TO WATER DATA, 1/8/00

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 21



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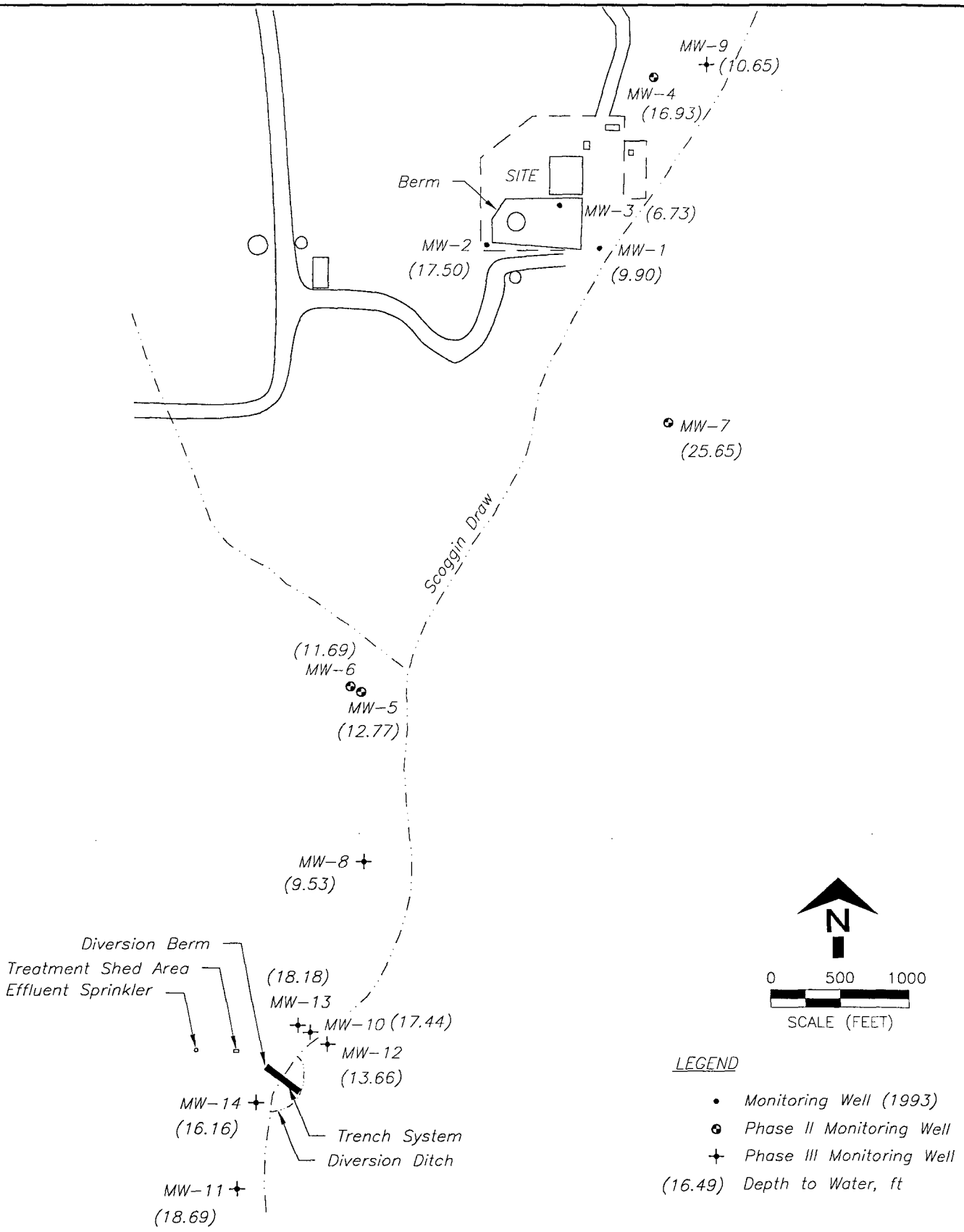
MEASURED DEPTH TO WATER DATA, 6/8/00

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 22



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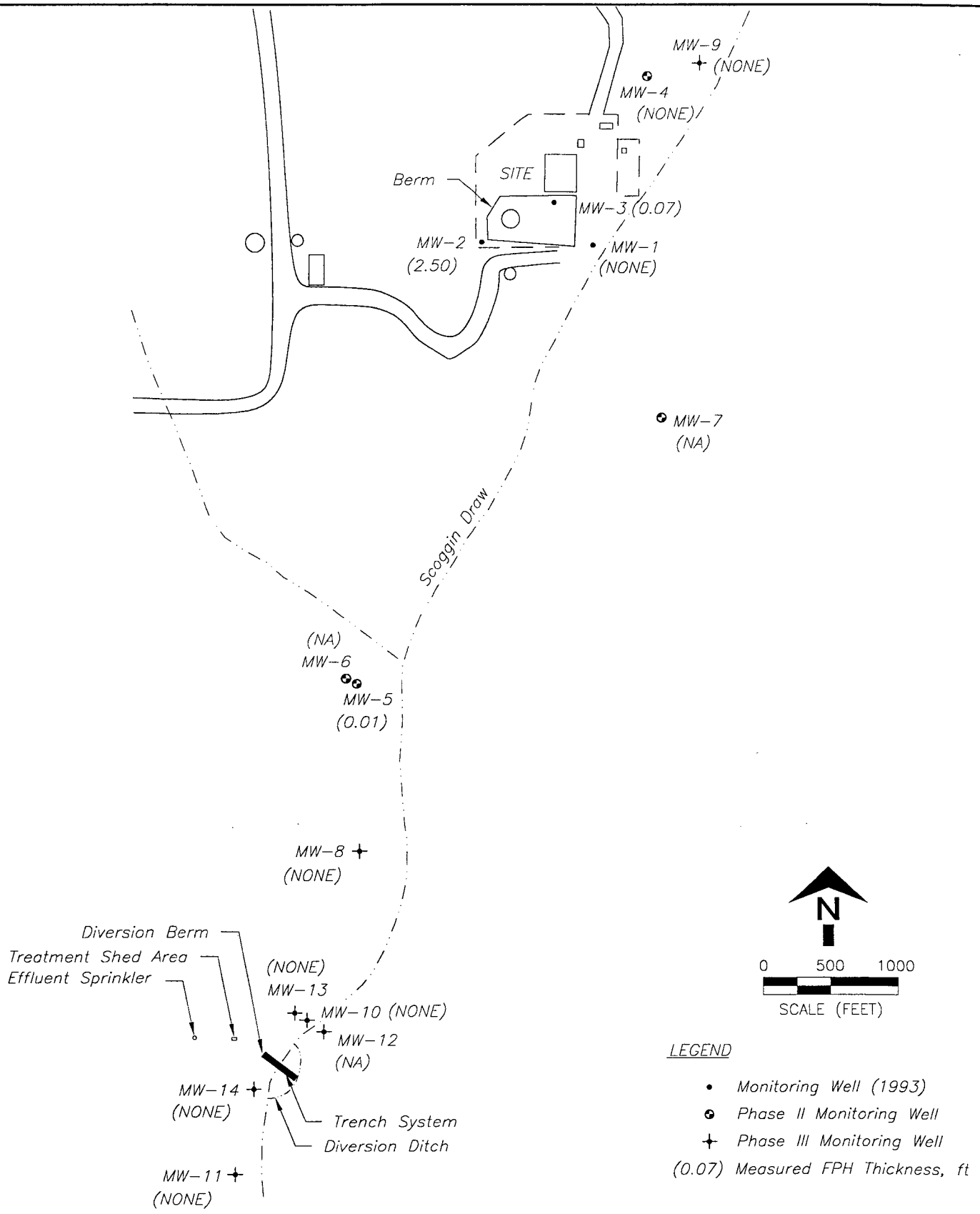
MEASURED DEPTH TO WATER DATA, 7/24/01

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME:	REFERENCE FILES:	
C:\...\AP98223\DEPTH TO WATER.DWG	NONE	FIGURE 23



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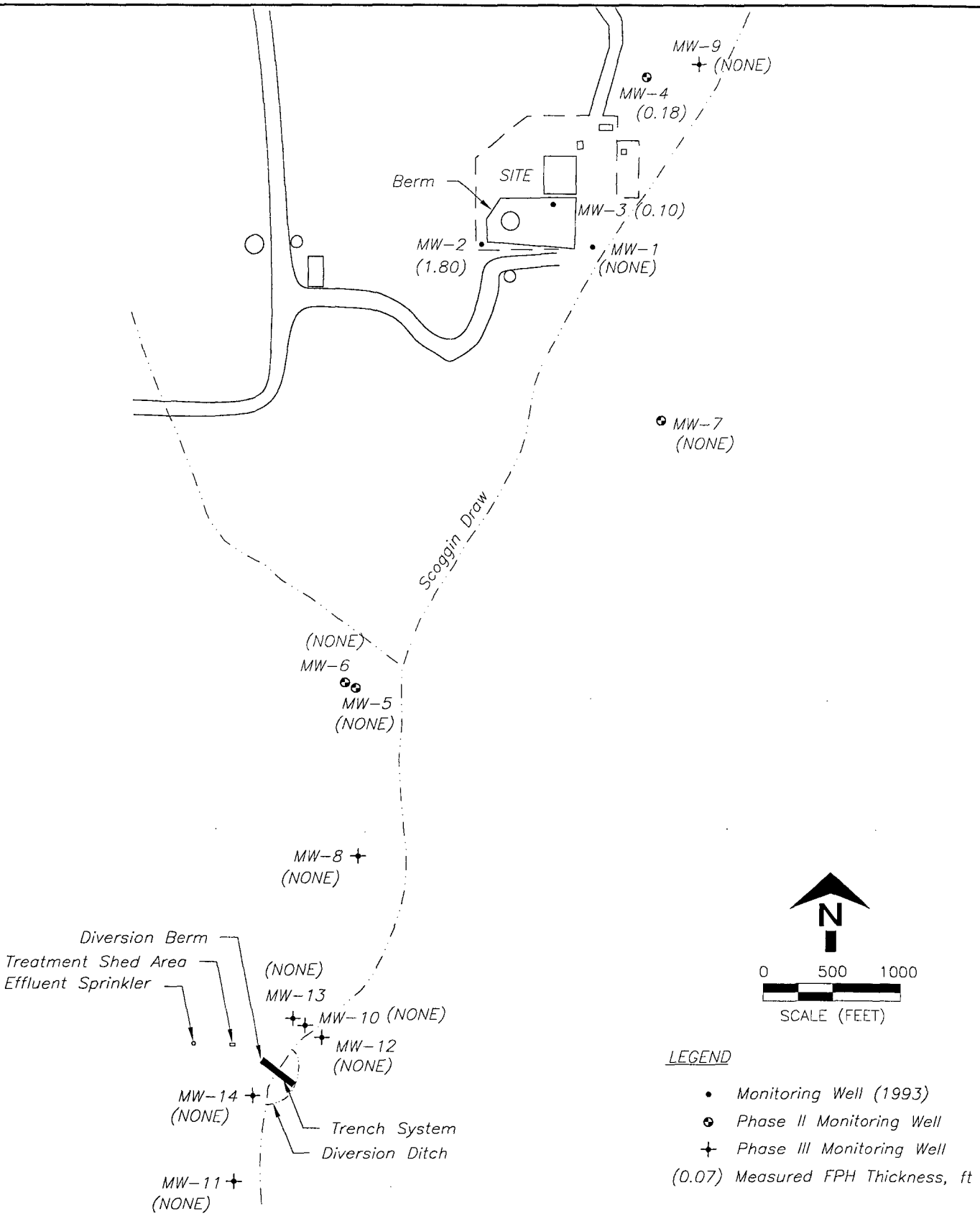
MEASURED FPH THICKNESS DATA, 8/19/98

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME:	REFERENCE FILES:	
C:\...\AP98223\DEPTH TO WATER.DWG	NONE	FIGURE 24



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Artesia, New Mexico

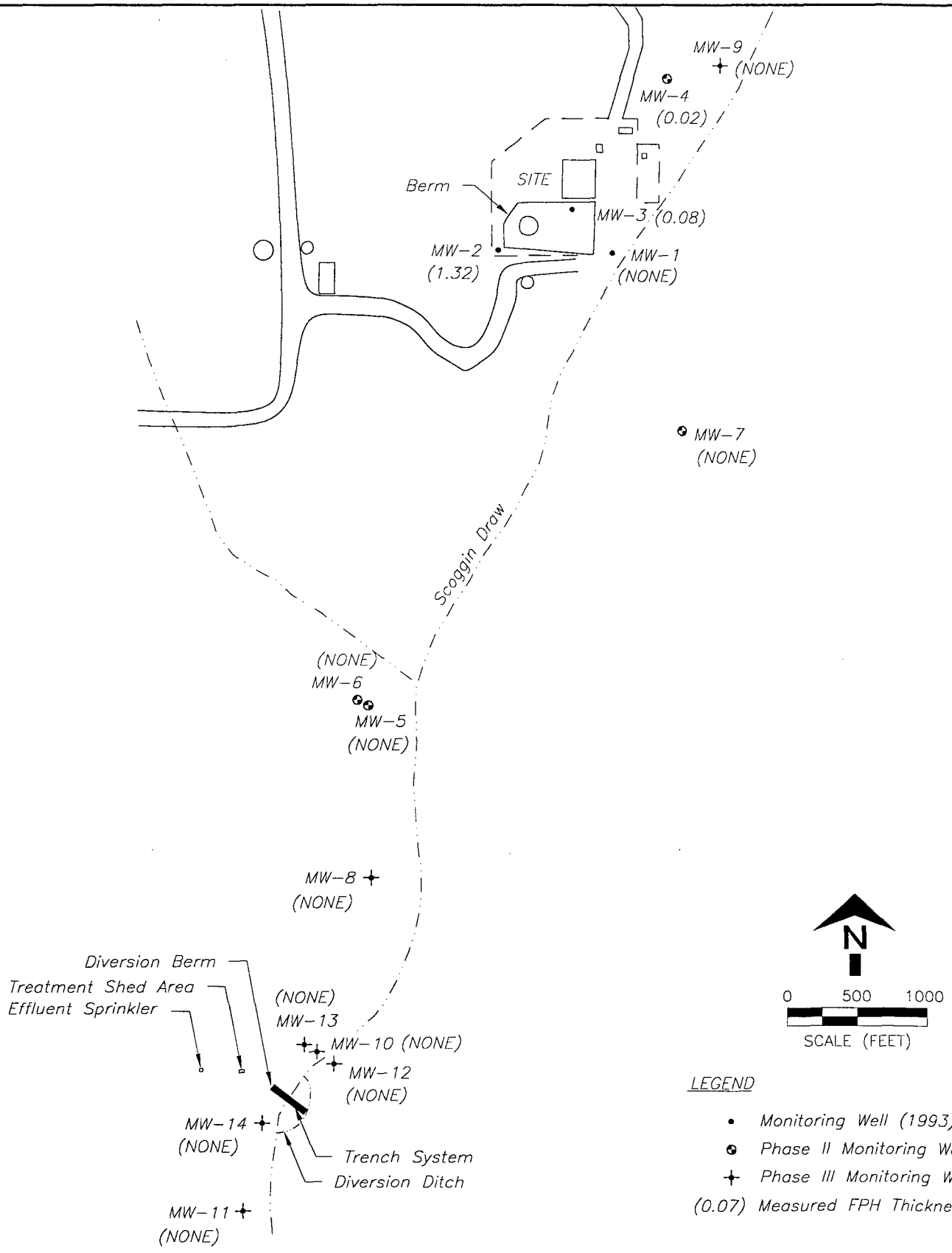
MEASURED FPH THICKNESS DATA, 12/5/98

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 25



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Artesia, New Mexico

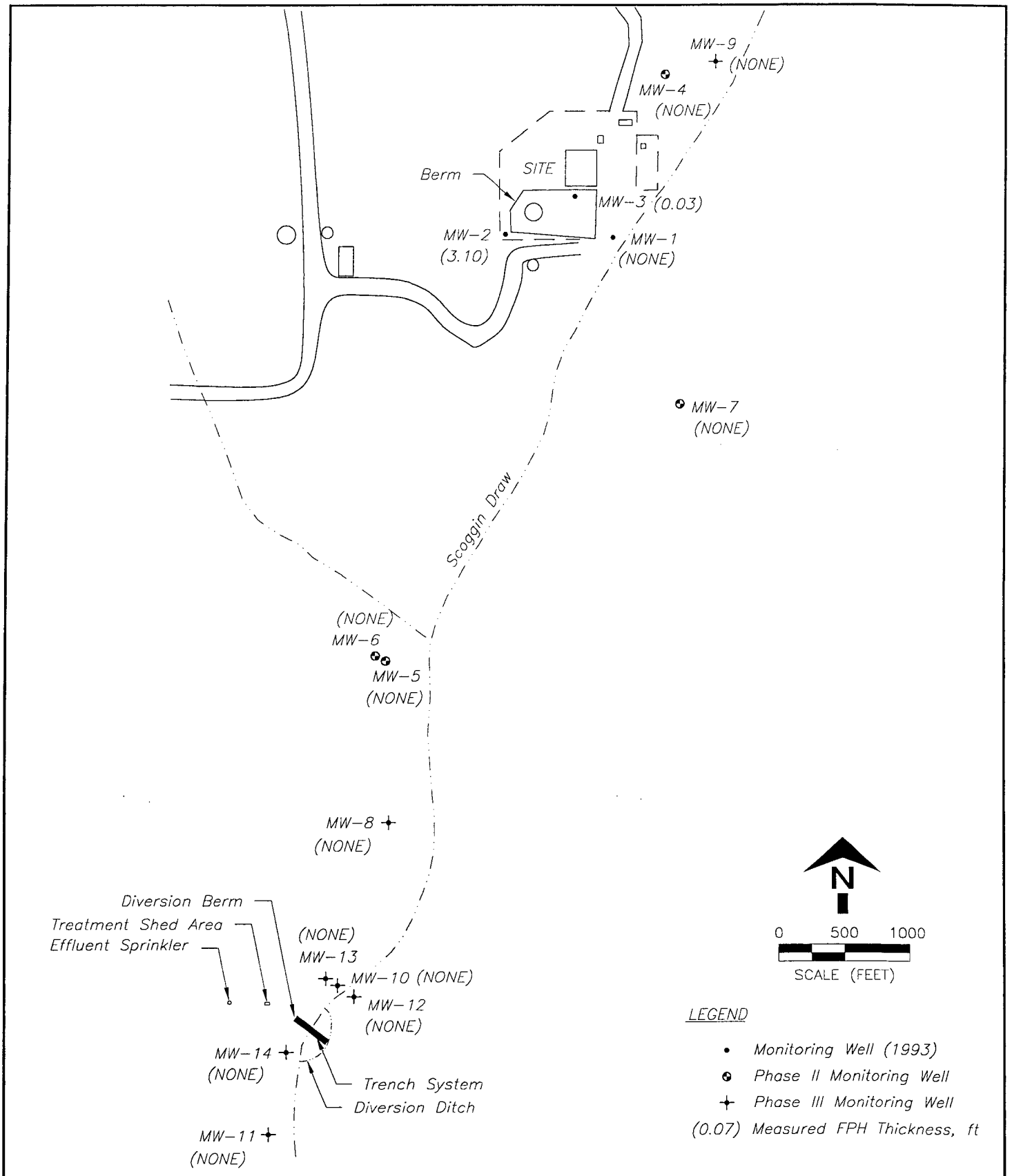
MEASURED FPH THICKNESS DATA, 4/1/99

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 26



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Artesia, New Mexico

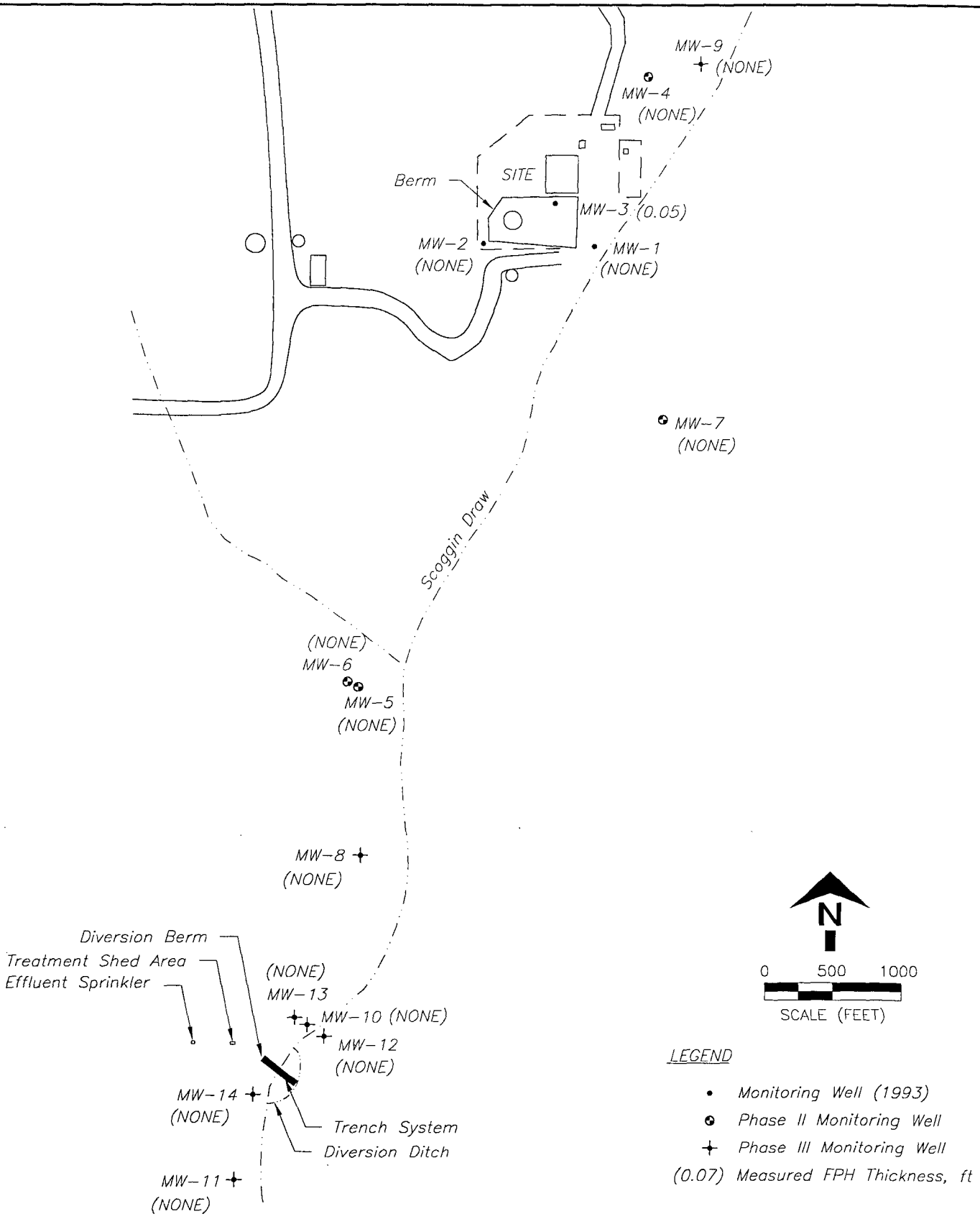
MEASURED FPH THICKNESS DATA, 6/3/99

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 27



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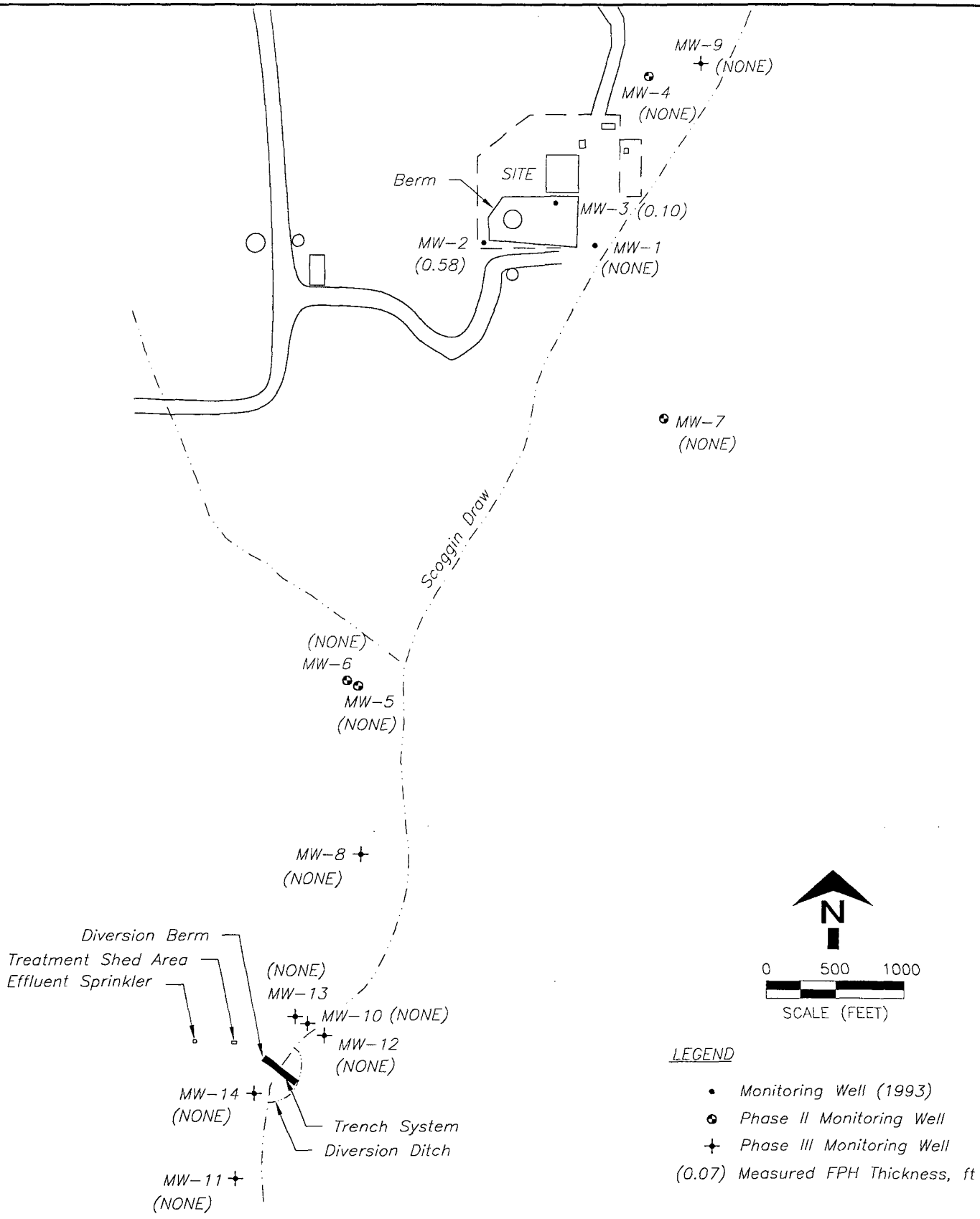
MEASURED FPH THICKNESS DATA, 9/16/99

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 28



BASCOR Environmental, Inc.
consulting engineers and scientists

BP Amoco

BP PIPELINES (NORTH AMERICA) INC.

Artesia, New Mexico

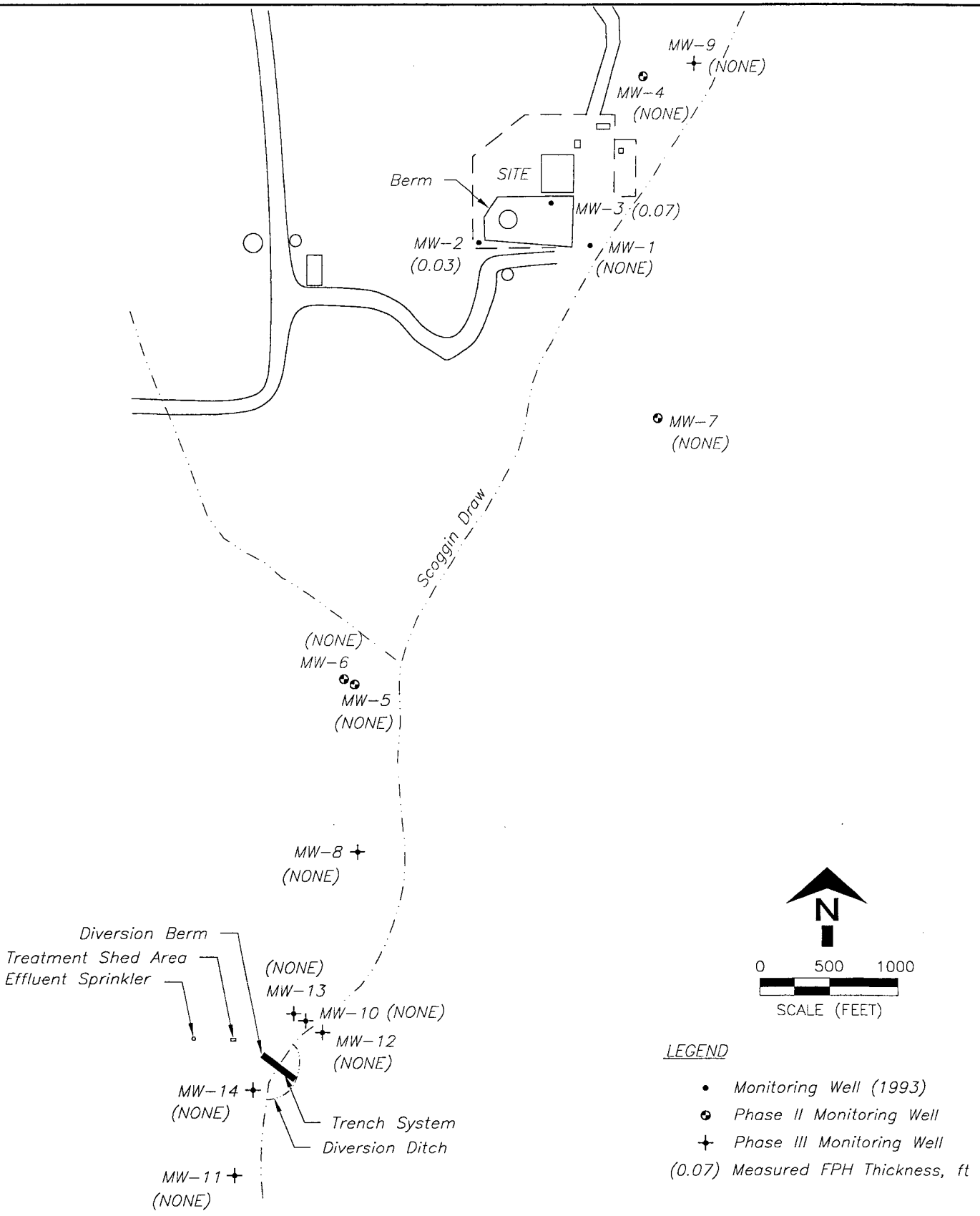
MEASURED FPH THICKNESS DATA, 1/8/00

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG

REFERENCE FILES: NONE

FIGURE 29



BASCOR Environmental, Inc.
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BP Amoco

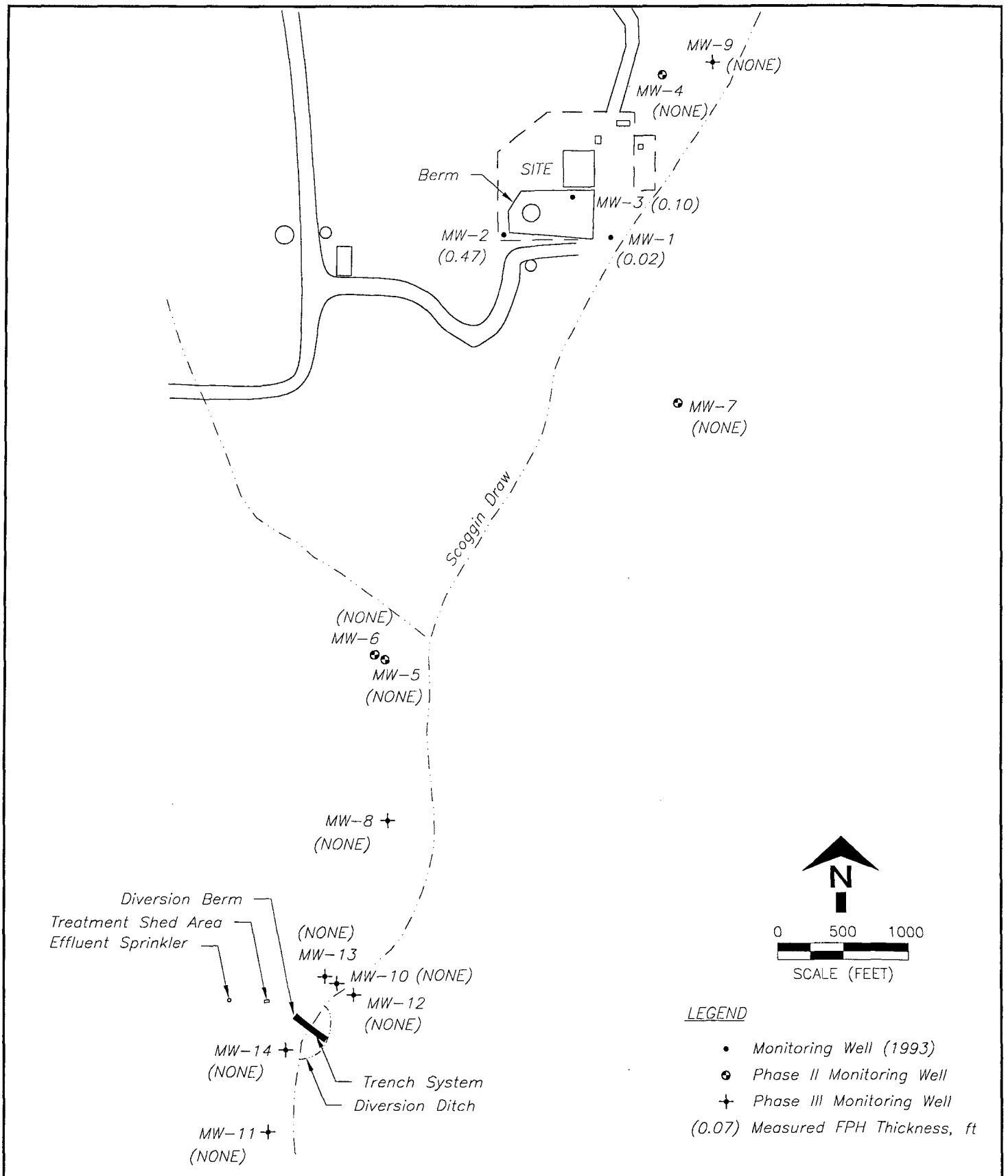
BP PIPELINES (NORTH AMERICA) INC.

Artesia, New Mexico

MEASURED FPH THICKNESS DATA, 6/7/00

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME:	REFERENCE FILES:	
C:\...\AP98223\DEPTH TO WATER.DWG	NONE	FIGURE 30



BASCOR Environmental, Inc.
consulting engineers and scientists

BP Amoco

BP PIPELINES (NORTH AMERICA) INC.

Artesia, New Mexico

MEASURED FPH THICKNESS DATA, 7/24/01

DRAWN	CHECKED	APPROVED	DATE
S.WHITNEY	S.SENN	R.SENN	8-27-01

FILENAME: C:\...\AP98223\DEPTH TO WATER.DWG
REFERENCE FILES: NONE

FIGURE 31

APPENDICES

APPENDIX A

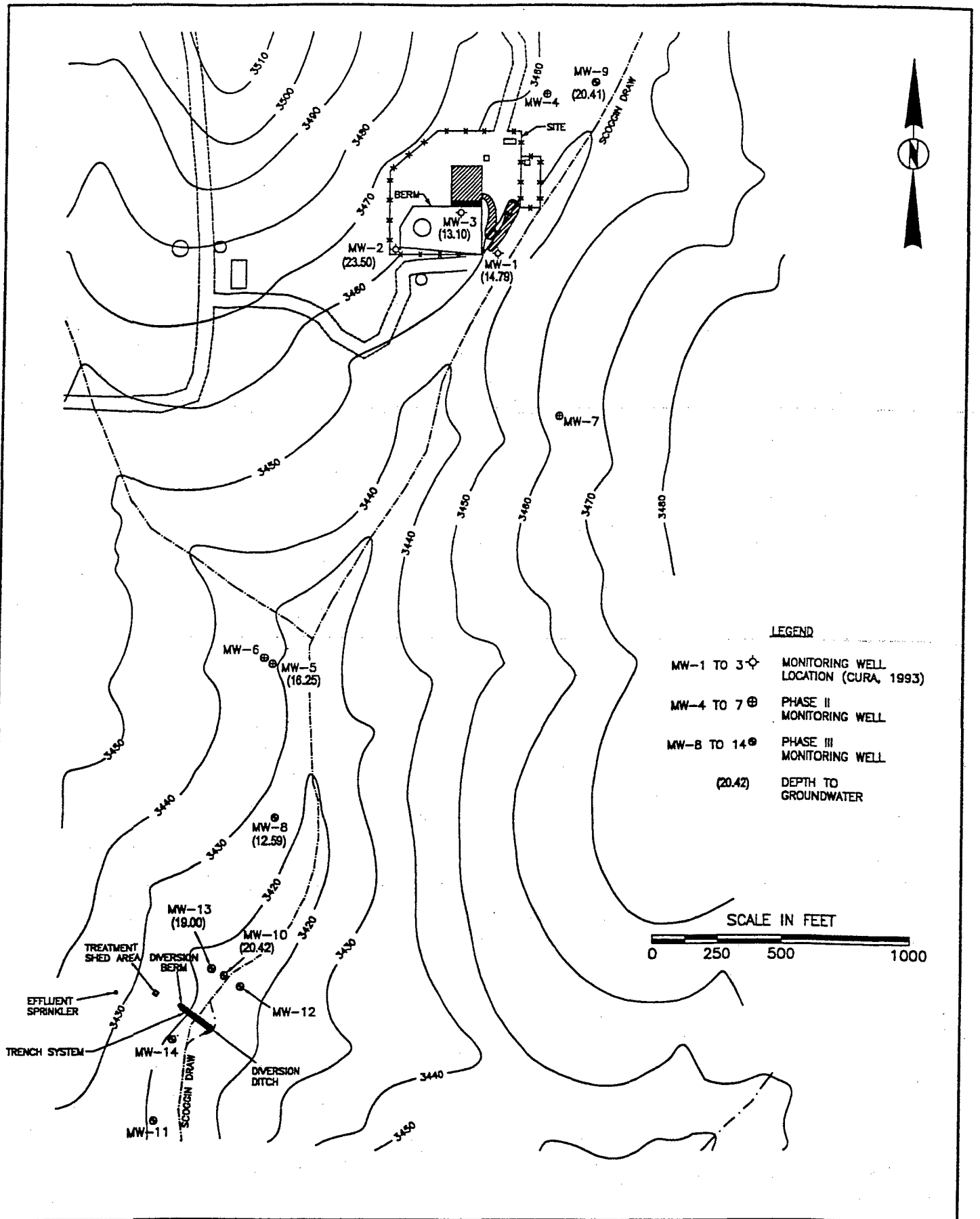
Historic Site Data

TABLE
BETX Results for Monitoring Wells with No Free Product

Amoco Pipeline Company / Artesia, New Mexico

WELL 4															
Sample Date:	11/25/94	12/22/94	02/16/95	06/16/95	10/02/95	11/26/95	04/17/96	07/05/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	<1	<1	<1	54.4	9.8	4.7	6.3	5.0	<1	<1	1.3	N/A	N/A	N/A	750
Ethylbenzene	<1	<1	<1	2.5	<1	1.3	<1.0	<1	<1	<1	<1	N/A	N/A	N/A	100
Toluene	<1	<1	<1	<1	<1	2.0	1.1	<1	<1	<1	<1	N/A	N/A	N/A	130
Xylene	<1	<1	<1	6.7	<1	3.8	3.6	2.0	<1	<1	<1	N/A	N/A	N/A	150
WELL 6															
Sample Date:	11/25/94	12/21/94	02/16/95	06/16/95	10/02/95	11/26/95	04/16/96	07/06/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	FREE	FREE	2.2	FREE	3.1	5.8	<1	<1	<1	<1	<1	N/A	N/A	N/A	<1
Ethylbenzene	PRODUCT	PRODUCT	<1	PRODUCT	<1	6.1	<1	<1	2.0	<1	<1	N/A	N/A	N/A	<1
Toluene	PRESENT	PRESENT	<1	PRESENT	<1	<1.0	<1	<1	<1	<1	<1	N/A	N/A	N/A	<1
Xylene			<1		2.5	19	3.7	<1	<1	<1	<1	N/A	N/A	N/A	<1
WELL 7															
Sample Date:	11/25/94	12/22/94	02/16/95	06/16/95	10/02/95	11/26/95	04/17/96	07/06/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	<1	1590	846	3100	880	3000	1900	1,800	170	160	<1	N/A	N/A	N/A	120
Ethylbenzene	<1	39	20.9	58.7	17	51	130	160	<2	<1	<1	N/A	N/A	N/A	<1
Toluene	<1	<10	<10	3.6	<10	4.6	<20	<10	<2	<1	<1	N/A	N/A	N/A	<1
Xylene	<1	86.5	52.7	140	35	200	100	120	11	3.2	<1	N/A	N/A	N/A	7.7
WELL 8															
Sample Date:	11/17/94	12/22/94	02/16/95	06/16/95	10/02/95	11/26/95	04/16/96	07/02/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,800
Ethylbenzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	480
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	820
Xylene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,100
WELL 10															
Sample Date:	11/17/94	12/22/94	02/16/95	06/14/95	10/02/95	11/25/95	04/16/96	07/02/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	62	N/A	N/A	N/A	N/A	N/A	91
Ethylbenzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.2	N/A	N/A	N/A	N/A	N/A	<1
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	<1
Xylene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.2	N/A	N/A	N/A	N/A	N/A	20
WELL 11															
Sample Date:	11/17/94	12/22/94	02/16/95	06/14/95	10/02/95	11/25/95	04/16/96	07/02/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	<1	<1	<1	<1	<1	1.3	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	2.1	1.1	<1	<1	1.5	<1	<1	<1	<1	<1
Toluene	<1	<1	<1	<1	<1	5.3	2.8	<1	<1	1.2	<1	<1	<1	<1	<1
Xylene	<1	<1	<1	<1	<1	6.1	3.7	<1	<1	6	<1	<1	<1	<1	<1
WELL 12															
Sample Date:	11/17/94	12/22/94	02/16/95	06/16/95	10/02/95	11/26/95	04/16/96	07/02/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	75	5.6	<1	<1	<1	1.1	1.5	4.1	30	2.3	<1	N/A	N/A	N/A	3.9
Ethylbenzene	1	<1	<1	<1	<1	<1.0	1.8	<1	<1	<1	<1	N/A	N/A	N/A	<1
Toluene	1.1	<1	<1	<1	<1	3.5	5.1	<1	<1	<1	<1	N/A	N/A	N/A	<1
Xylene	1	<1	<1	<1	<1	5.1	5.8	1.2	<1	<1	<1	N/A	N/A	N/A	<1
WELL 13															
Sample Date:	11/17/94	12/22/94	02/16/95	06/16/95	10/02/95	11/26/95	04/16/96	07/02/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
Ethylbenzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.1
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
Xylene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13
WELL 14															
Sample Date:	11/17/94	12/22/94	02/16/95	06/16/95	10/02/95	11/26/95	04/16/96	07/02/96	09/30/96	01/10/97	04/02/97	07/10/97	09/14/97	01/18/98	04/18/98
Benzene	<1	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	1.7	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	<1	<1	<1	<1	3.6	1.7	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<1	<1	<1	<1	<1	6.8	2.4	<1	<1	<1	<1	<1	<1	<1	<1

NOTES: All results are in ug/L. N/A = Not Applicable



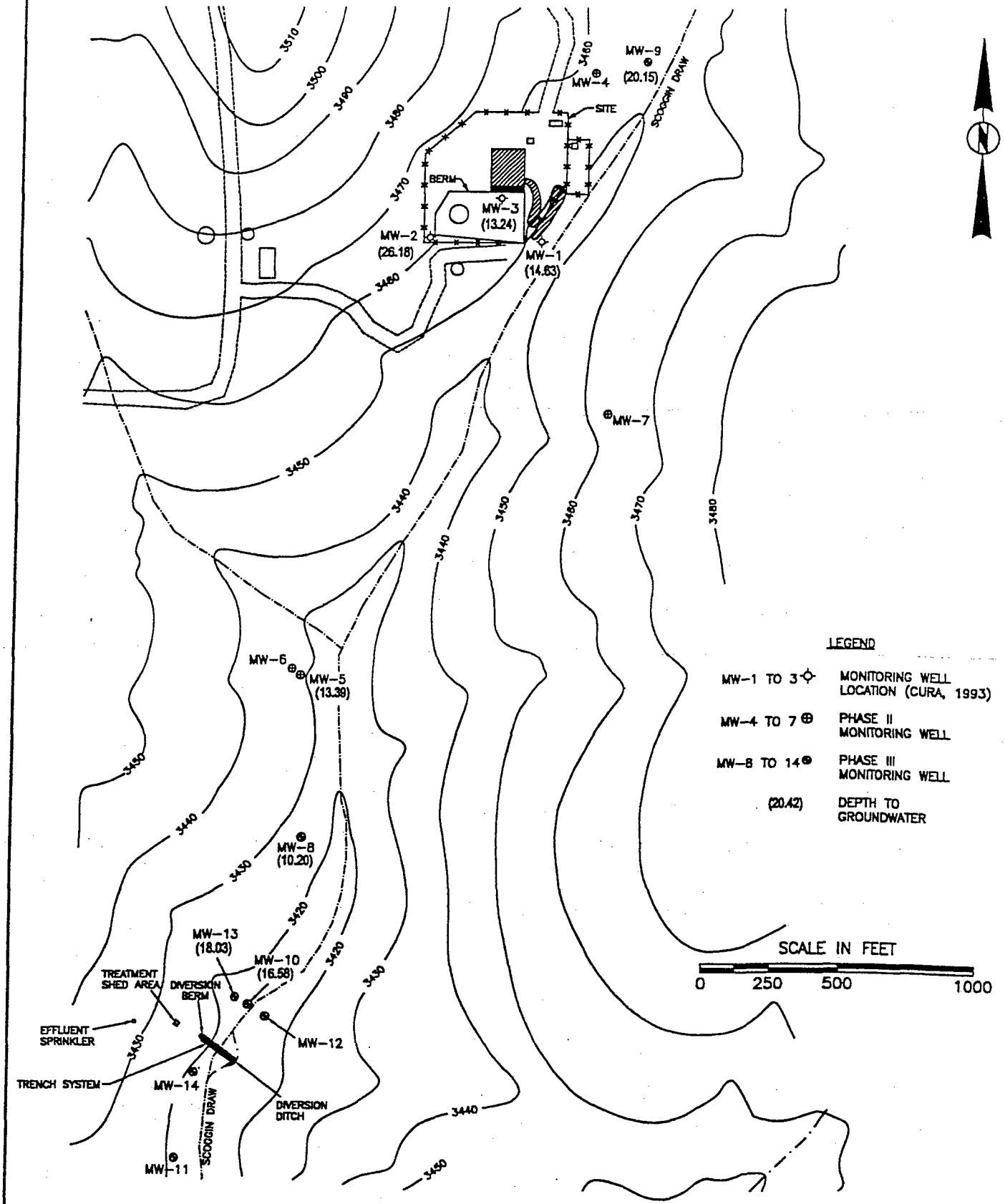
CHECK BY	HMM
DRAWN BY	BCP
DATE	6-26-98
SCALE	AS SHOWN
CAD NO.	6466101A
PRJ NO.	64661.01

DEPTH TO GROUNDWATER
JULY 10, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS
Div. of Clayton Group Services, Inc.

FIGURE WT-1



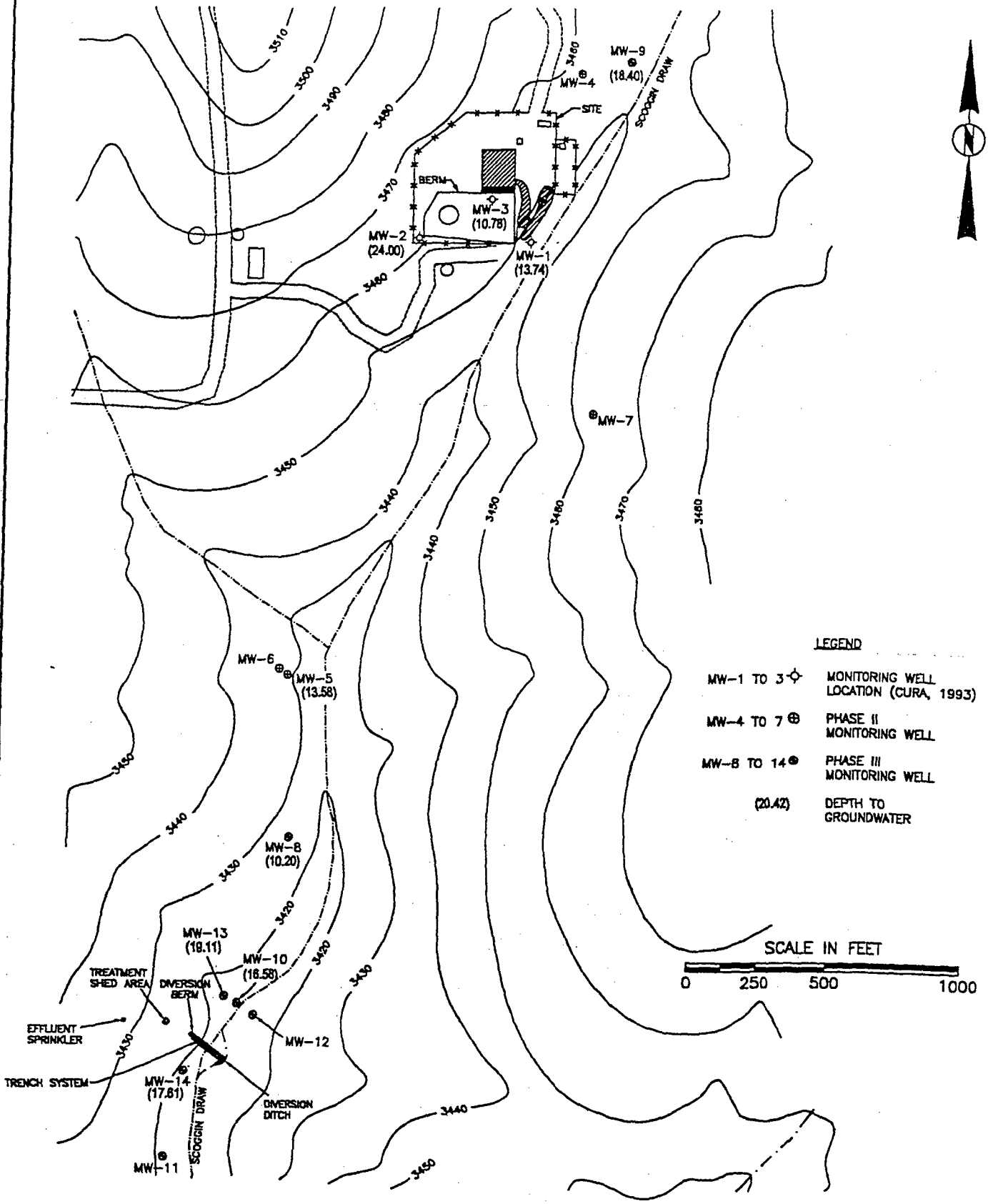
CHECK BY	HMM
DRAWN BY	BCP
DATE	6-26-98
SCALE	AS SHOWN
CAD NO.	6466101B
PRJ NO.	64661.01

DEPTH TO GROUNDWATER
OCTOBER 17, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS
Div. of Clayton Group Services, Inc.

FIGURE WT-2



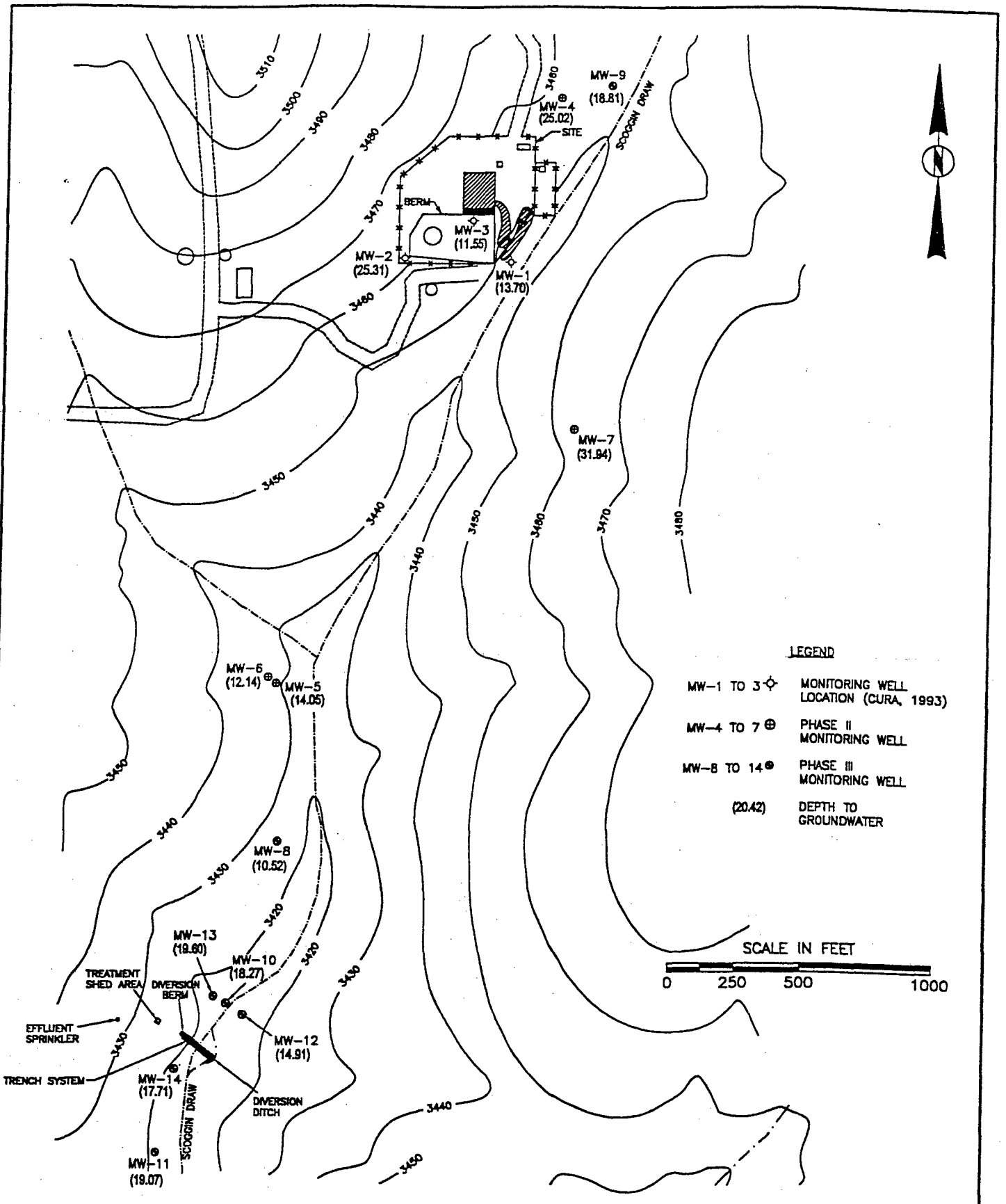
CHECK BY	HMM
DRAWN BY	BCP
DATE	6-26-98
SCALE	AS SHOWN
CAD NO.	6466101C
PRJ NO.	64661.01

DEPTH TO GROUNDWATER
JANUARY 18, 1998

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS
Div. of Clayton Group Services, Inc.

FIGURE WT-3



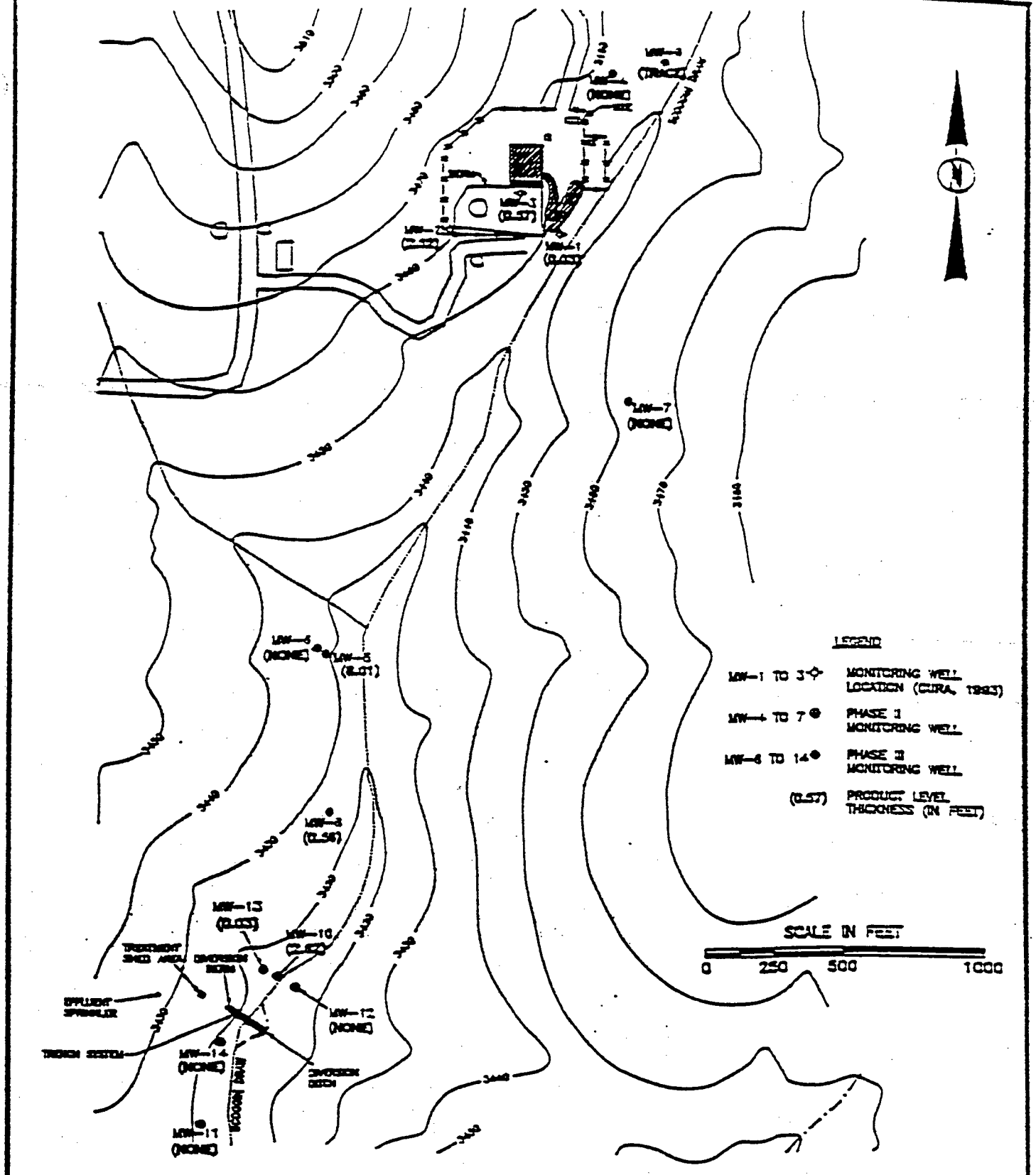
CHECK BY	HMM
DRAWN BY	BCP
DATE	6-26-98
SCALE	AS SHOWN
CAD NO.	6466101D
PRJ NO.	64661.01

DEPTH TO GROUNDWATER
APRIL 18, 1998

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS
Div. of Clayton Group Services, Inc.

FIGURE WT-4



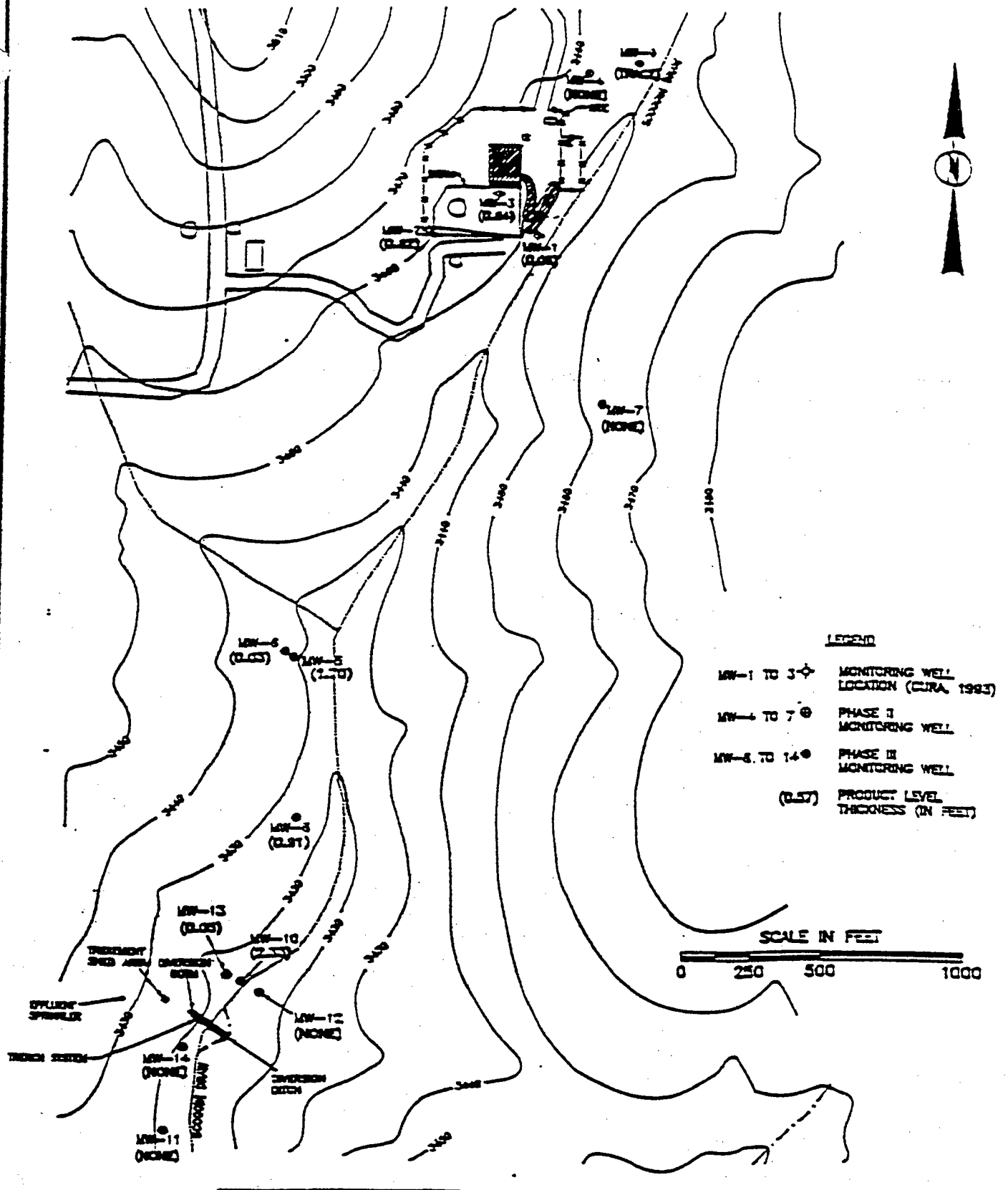
CHECK BY	HMM
DRAWN BY	SCP
DATE	5-3-95
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775:02C

FREE PRODUCT
THICKNESS MAP
FEBRUARY 9, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 1



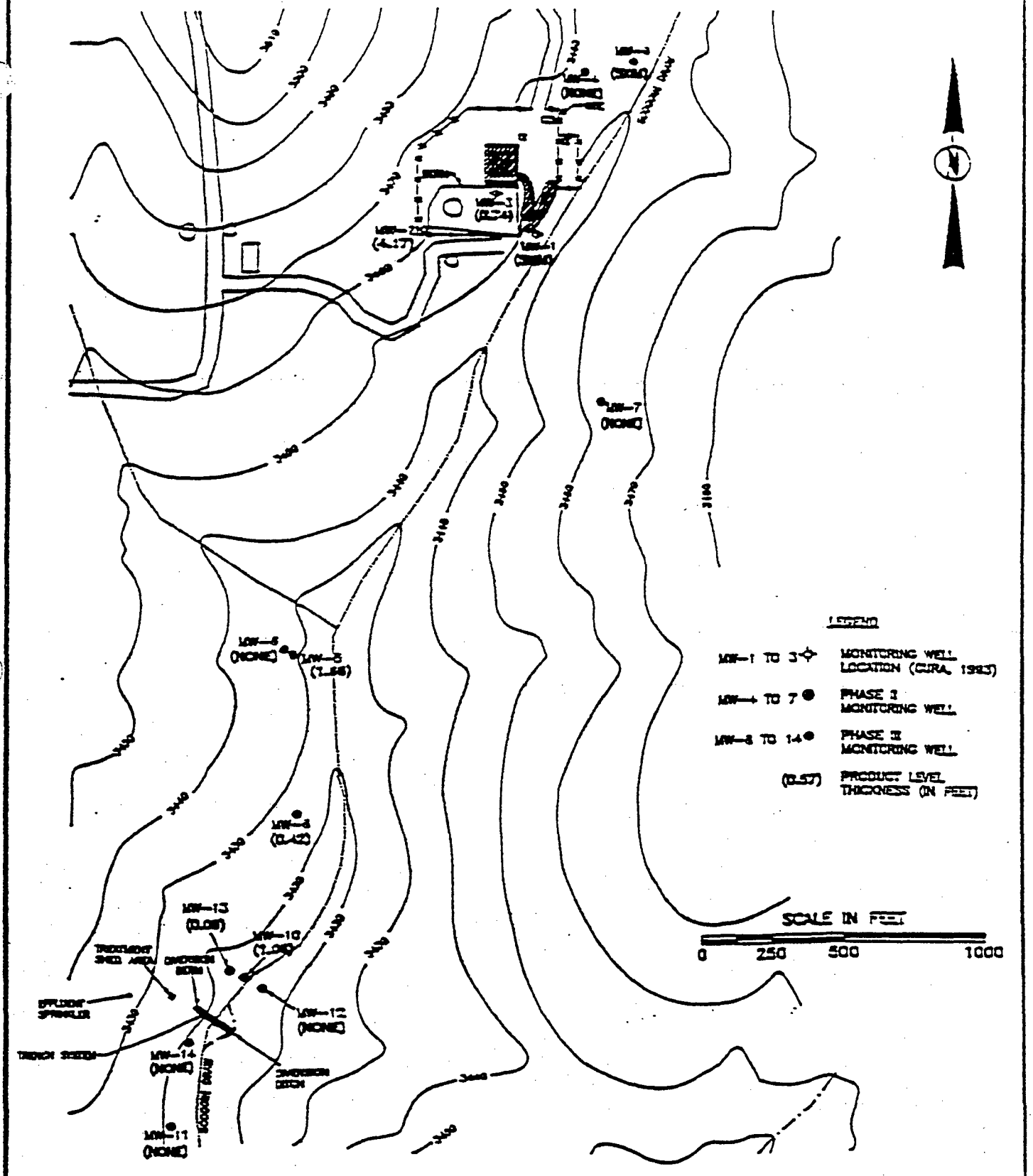
CHECK BY	HMM
DRAWN BY	BCP
DATE	7-25-95
SCALE	AS SHOWN
CAD NO.	Z775102E
PRJ NO.	Z775.00-02

FREE PRODUCT THICKNESS MAP
JUNE 16, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 2



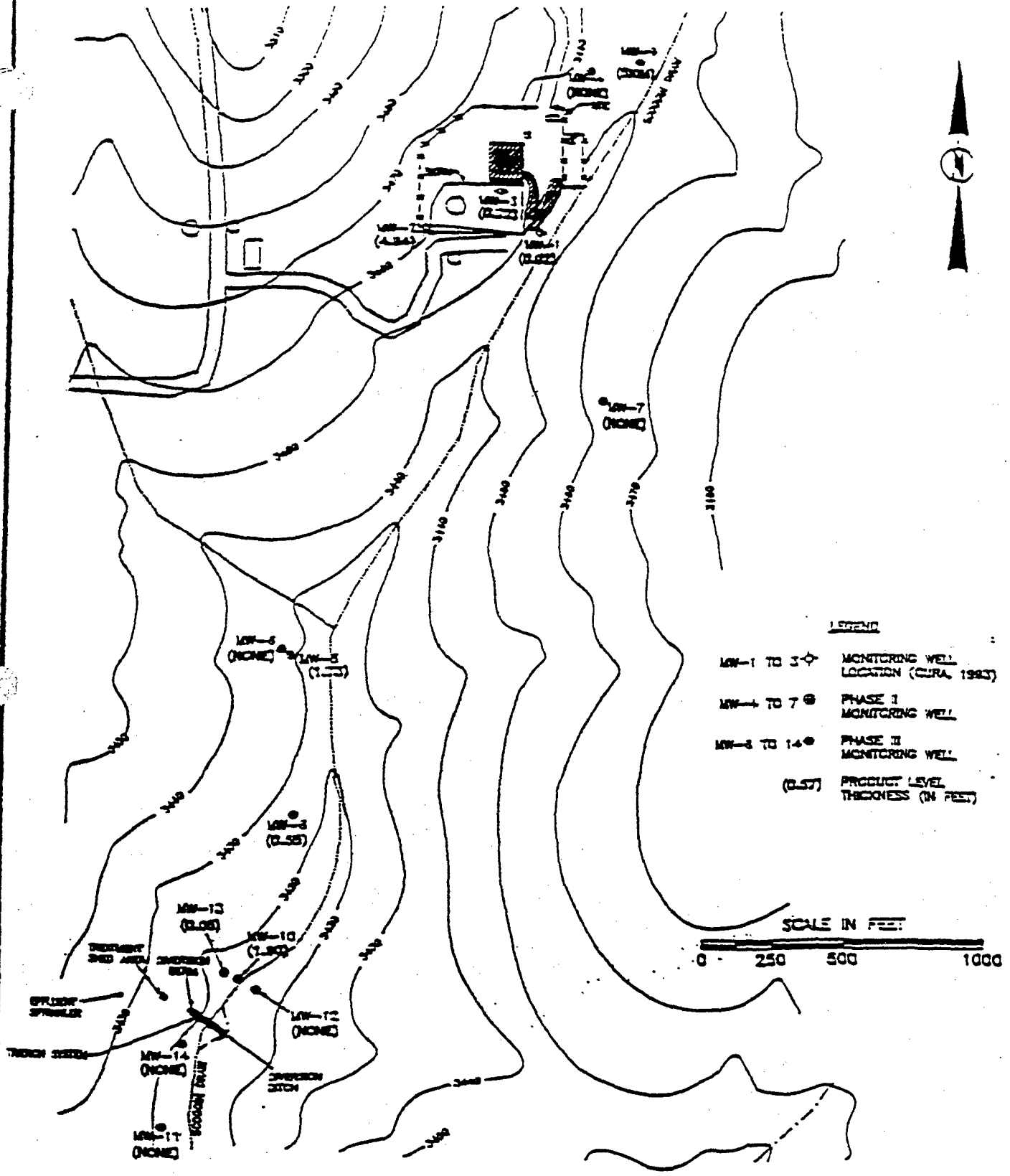
CHECK BY	HMM
DRAWN BY	BCP
DATE	10-16-95
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	27751025

FREE PRODUCT THICKNESS MAP
OCTOBER 2, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 3



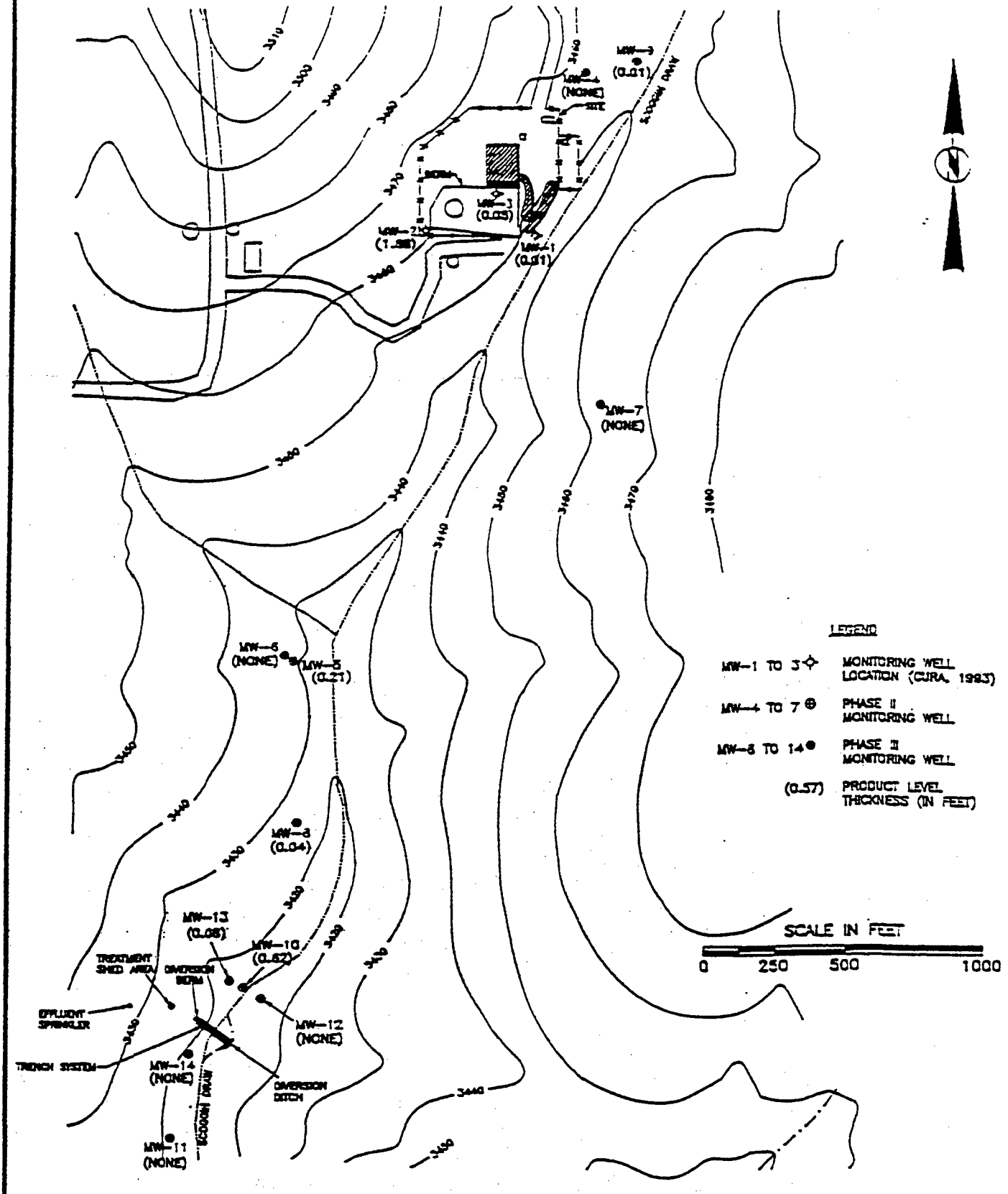
CHECK BY	HMM
DRAWN BY	BCP
DATE	1-12-96
SCALE	AS SHOWN
CAD NO.	27750G-02
PRJ NO.	27751020

FREE PRODUCT THICKNESS MAP
NOVEMBER 25-26, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 4



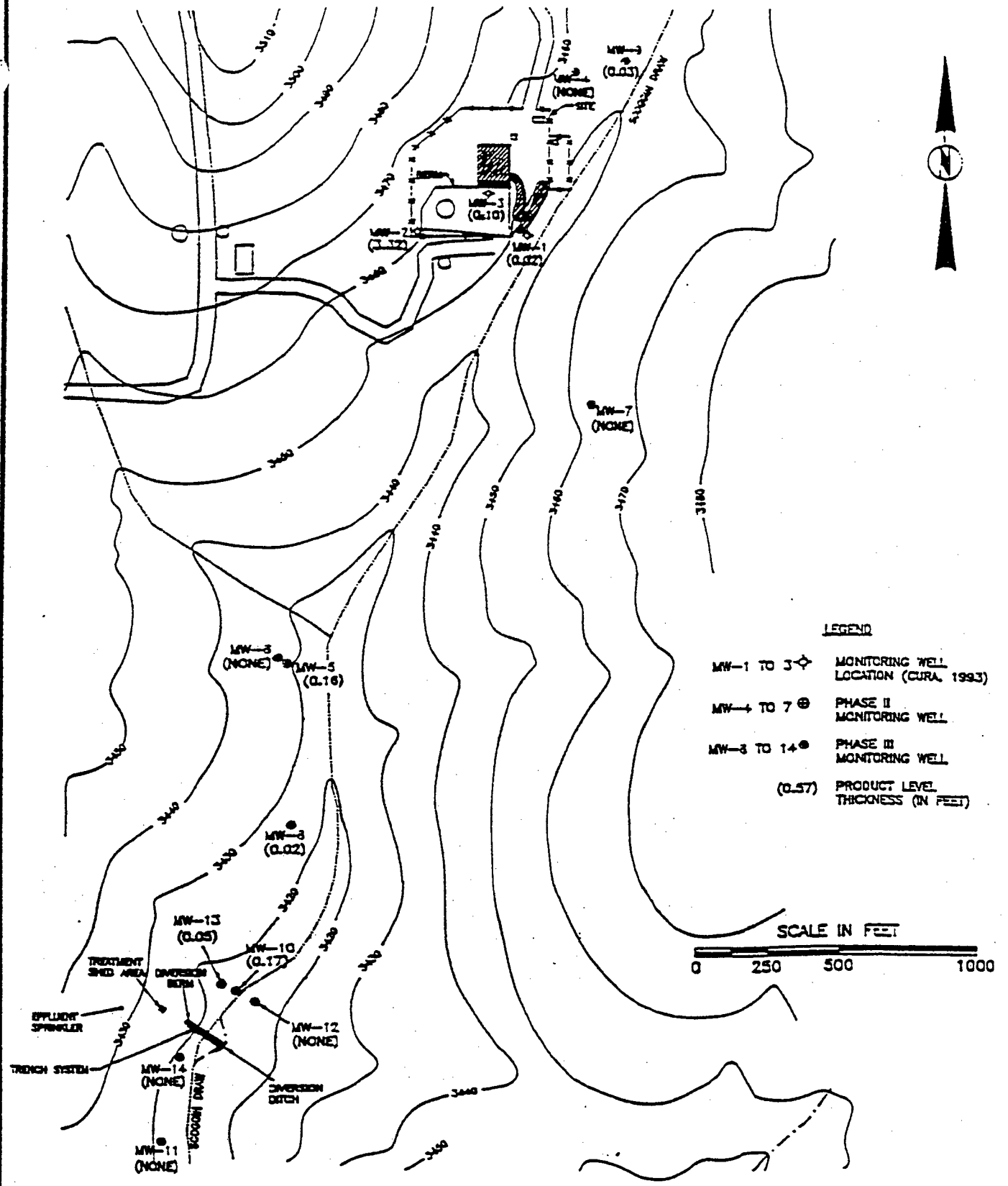
CHECK BY	HMM
DRAWN BY	BCP
DATE	4-24-96
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	27751024

FREE PRODUCT
THICKNESS MAP
APRIL 16-17, 1996

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 5



CHECK BY	HMM
DRAWN BY	BCP
DATE	7-16-96
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	27751021

FREE PRODUCT
THICKNESS MAP
JULY 2, 1996

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
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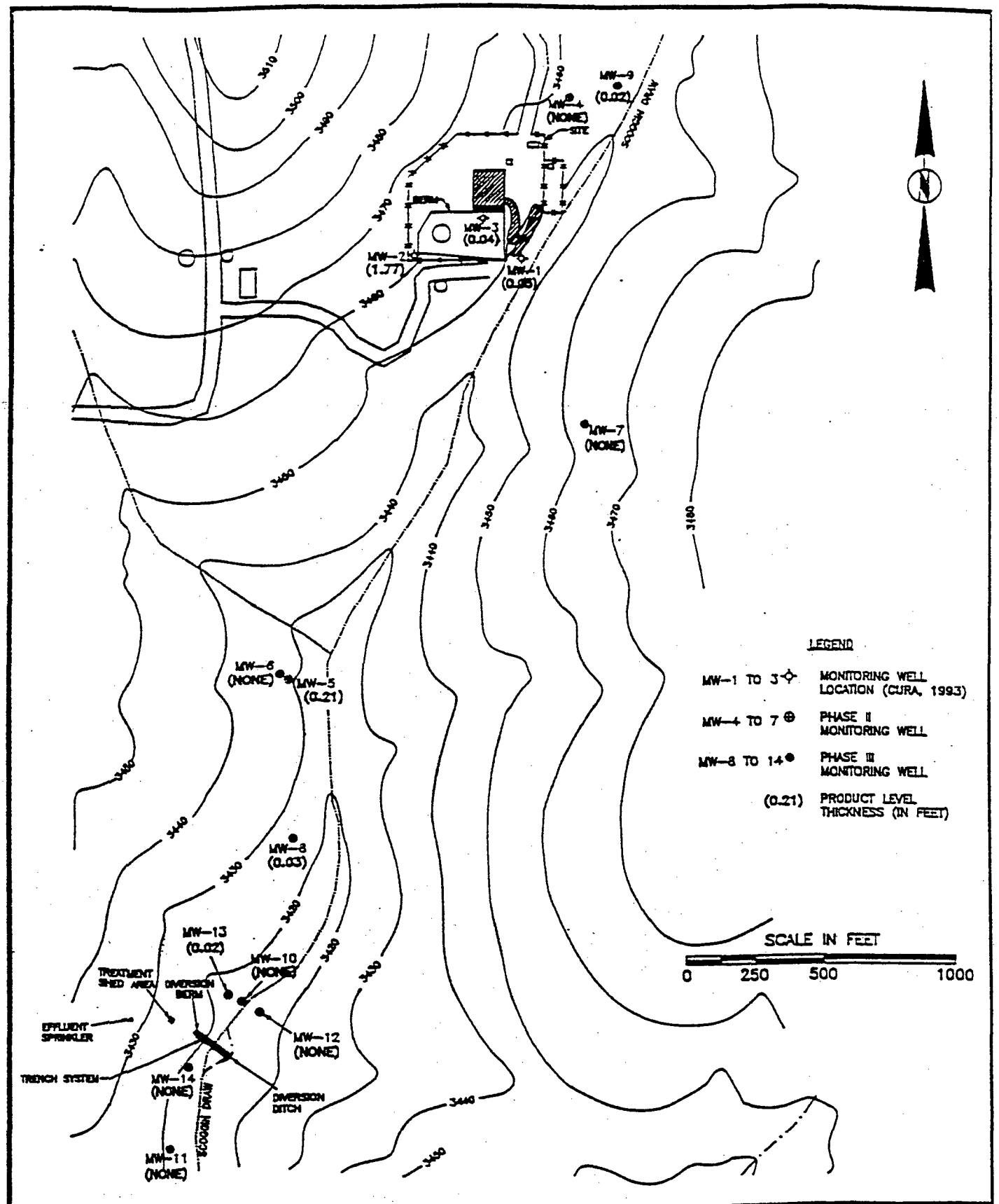
CONSULTANTS

FIGURE
6



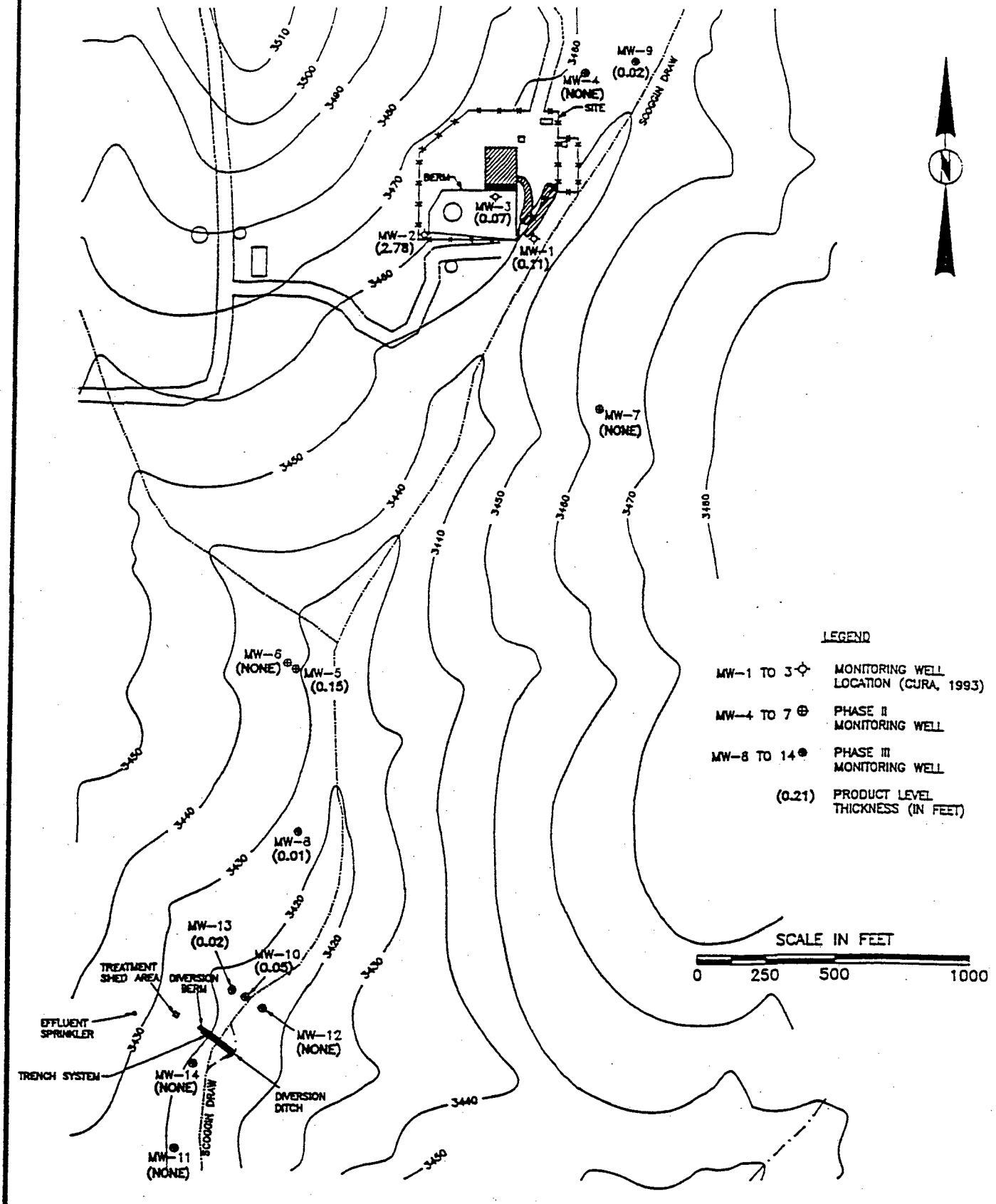
CHECK BY	HMM
DRAWN BY	BCP
DATE	10-9-96
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102J

FREE PRODUCT
THICKNESS MAP
SEPTEMBER 30, 1996

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 7



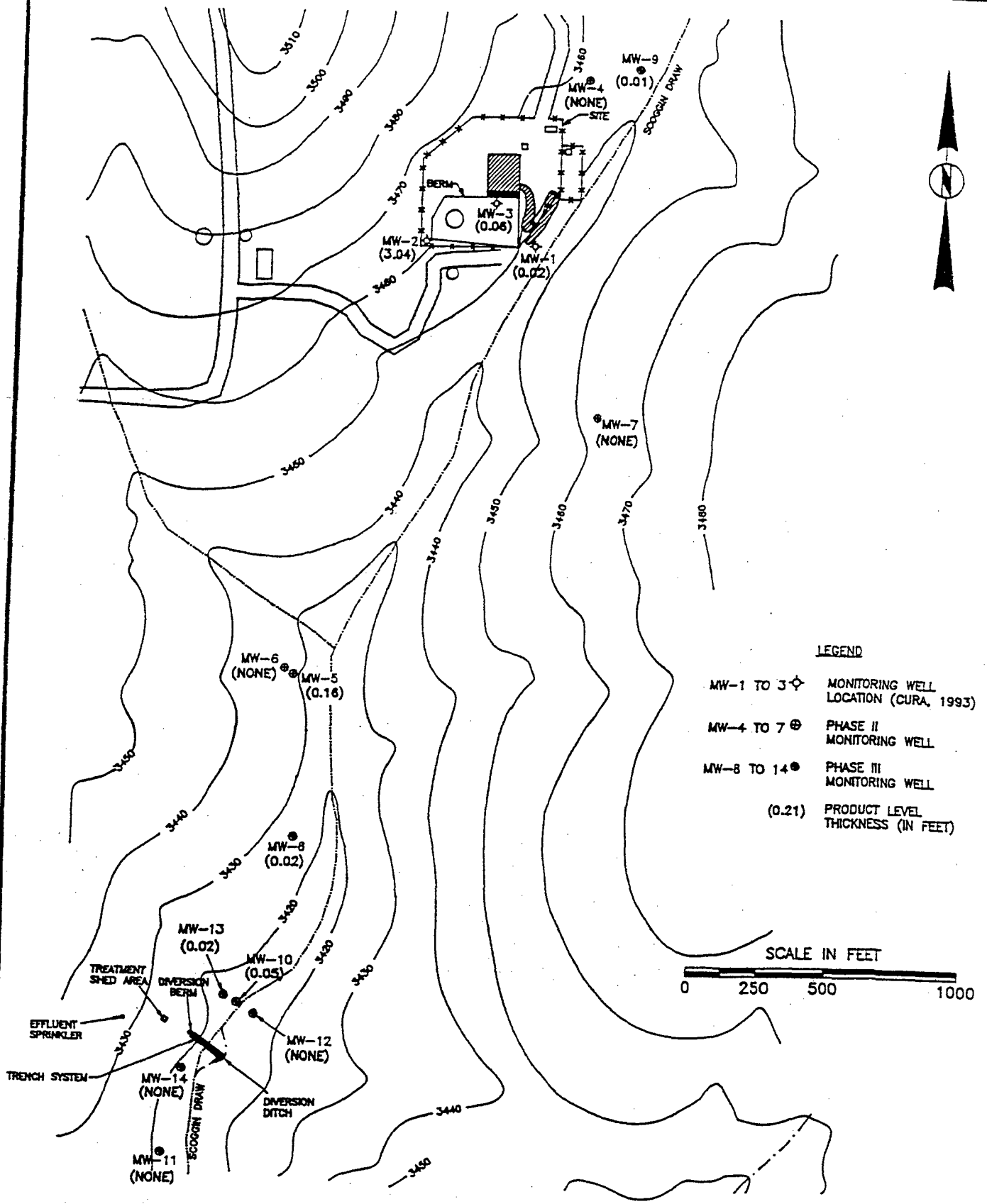
CHECK BY	HMM
DRAWN BY	BCP
DATE	1-23-97
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102K

FREE PRODUCT
THICKNESS MAP
JANUARY 10, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE
8



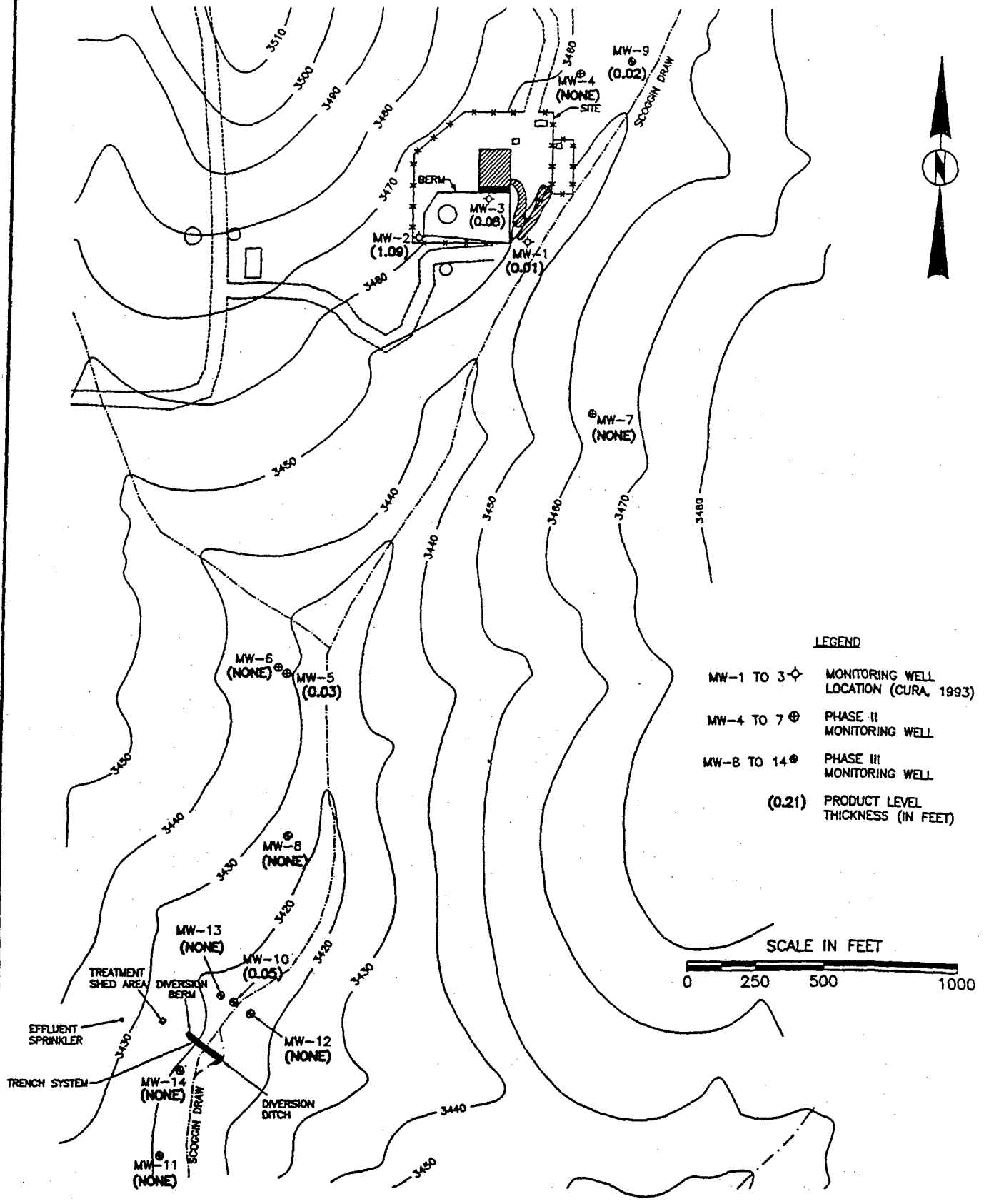
CHECK BY	HMM
DRAWN BY	BCP
DATE	4-16-97
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102L

FREE PRODUCT
THICKNESS MAP
APRIL 2, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE
9



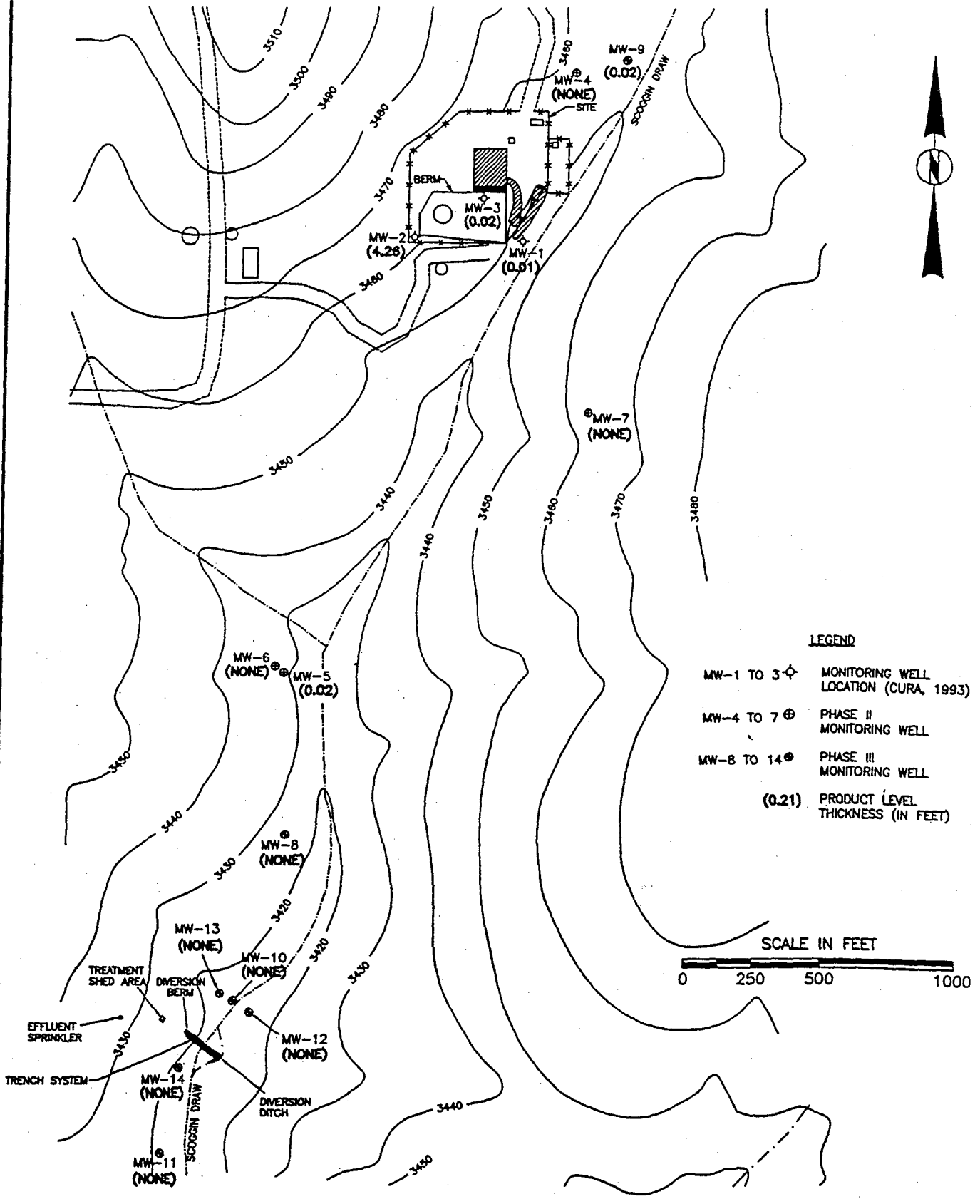
CHECK BY	HMM
DRAWN BY	BCP
DATE	5-11-98
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102M

FREE PRODUCT
THICKNESS MAP
JULY 10, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL
CONSULTANTS

FIGURE
10



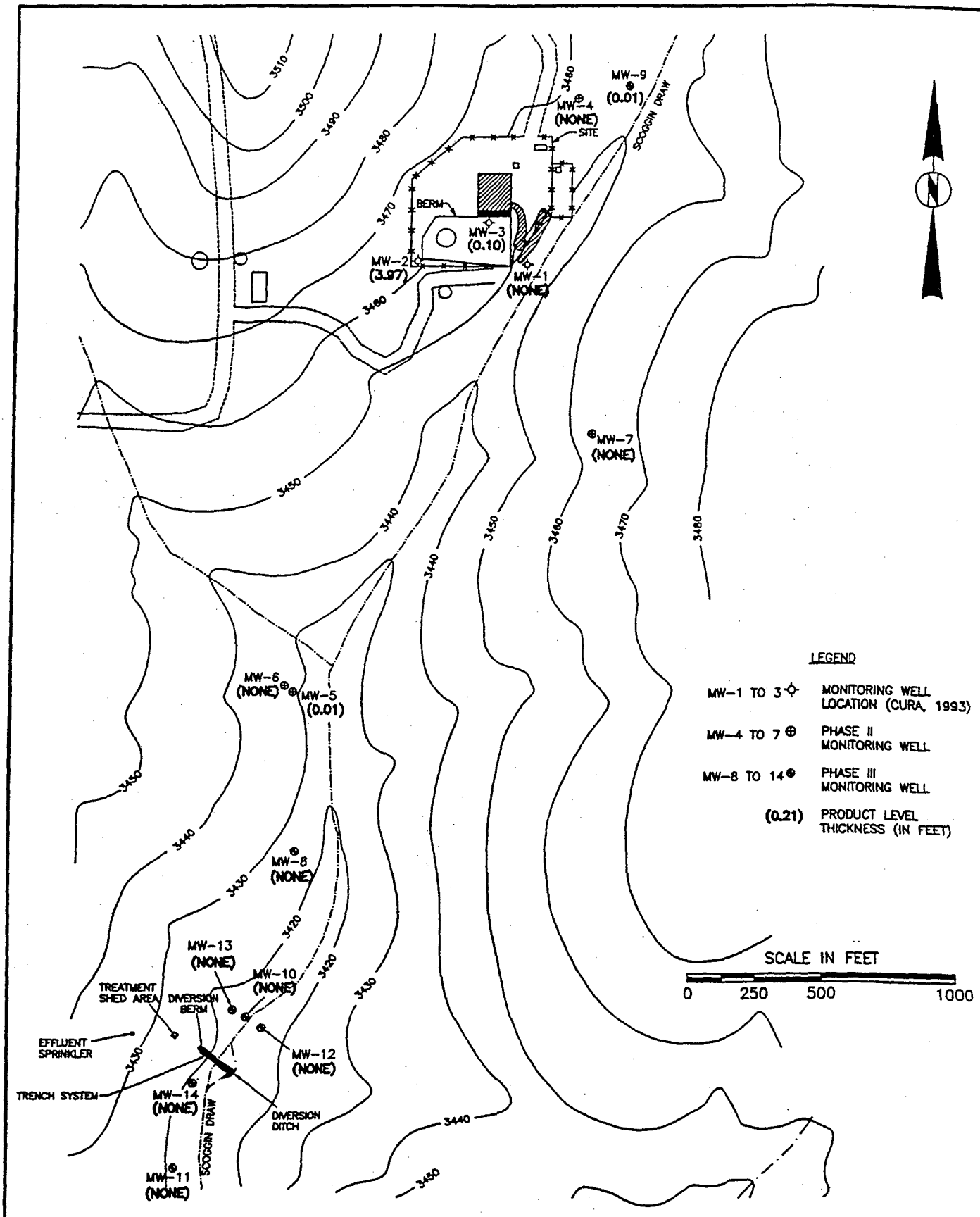
CHECK BY	HMM
DRAWN BY	BCP
DATE	5-11-98
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102N

FREE PRODUCT
THICKNESS MAP
OCTOBER 17, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 11



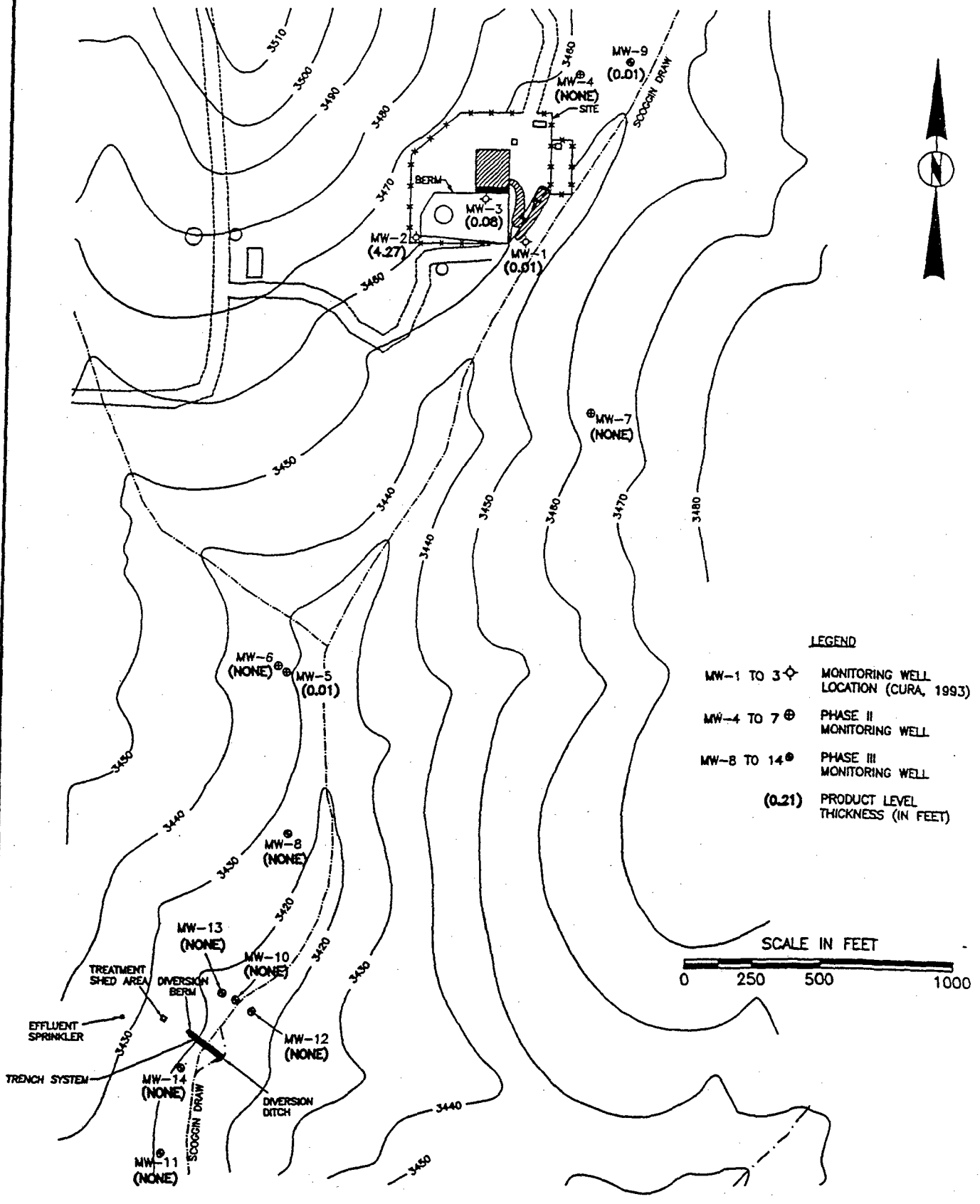
CHECK BY	HMM
DRAWN BY	BCP
DATE	5-11-98
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102o

FREE PRODUCT
THICKNESS MAP
JANUARY 18, 1998

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE
12



CHECK BY	HMM
DRAWN BY	BCP
DATE	5-11-98
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102P

FREE PRODUCT
THICKNESS MAP
APRIL 18, 1998

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE
13

APPENDIX B

Laboratory Analytical Results

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001

Job No: 01.05624

The following samples were received by TestAmerica for analysis:

Sample Number	Sample Description	Date Taken	Date Received
445774	MW-5 BP Artesian Station	07/24/2001	07/26/2001
445775	MW-7 BP Artesian Station	07/24/2001	07/26/2001
445776	MW-9 BP Artesian Station	07/24/2001	07/26/2001
445777	MW-10 BP Artesian Station	07/24/2001	07/26/2001
445778	MW-11 BP Artesian Station	07/24/2001	07/26/2001
445779	MW-12 BP Artesian Station	07/24/2001	07/26/2001
445780	MW-14 BP Artesian Station	07/24/2001	07/26/2001
445781	Trip Blank BP Artesian Station	07/24/2001	07/26/2001

Brian D. DeJong
Organic Operations Manager

602 COMMERCE DRIVE / WATERTOWN, WI 53094 / 920-261-1660 / FAX: 920-261-8120
WDNR No. 128053530

KEY TO DATA FLAGS

The attached sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
E = TCLP extraction outside of method required temperature range
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent and contaminant
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits
* = See Case Narrative

KEY TO ANALYST INITIALS

The attached sample(s) may have been analyzed by another certified laboratory. If a number appears in the Analyst Initials field, the following are the appropriate certifications (if the lab code does not appear below, that means that WDNR certification is not required for the work performed):

Lab Code	Certification Number
008	WDNR - 99976690B
009	WDNR - 241293690
060	ILNELAC - 100221; WDNR - 999447130
070	IA - 007; MDH - 019-999-319; WDNR - 999917270
130	WDNR - 632021390
147	WDNR - 721026460
300	FLNELAC - 87358; IA - 131; MDH - 047-999-345; WDNR - 998020430
400	WDNR - 113133790
510	WDNR - 241249360
700	WDNR - 113289110

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445774
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-5 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 13:20 Date Received: 07/26/2001

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS								
Benzene	400	ug/L	0.13	0.44	SW 8020	07/31/2001	jsm	7539
Ethylbenzene	60	ug/L	0.22	0.70	SW 8020	07/31/2001	jsm	7539
Toluene	9.7	ug/L	0.20	0.64	SW 8020	07/31/2001	jsm	7539
Xylenes, Total	160	ug/L	0.23	0.82	SW 8020	07/31/2001	jsm	7539
Surr: Bromofluorobenzene	89.5	%		80-	SW 8020	07/31/2001	jsm	7539

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445775
Account No: 3000
Page 4 of 11

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-7 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 15:06 Date Received: 07/26/2001

Parameter		Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS	H								
Benzene	M	<0.21	ug/L	0.13	0.44	SW 8020	08/01/2001	jsm	7547
Ethylbenzene		<0.22	ug/L	0.22	0.70	SW 8020	08/01/2001	jsm	7547
Toluene		<0.20	ug/L	0.20	0.64	SW 8020	08/01/2001	jsm	7547
Xylenes, Total		1.8	ug/L	0.23	0.82	SW 8020	08/01/2001	jsm	7547
Surr: Bromofluorobenzene		92.0	%		80-	SW 8020	08/01/2001	jsm	7547

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445776
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-9 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 08:36 Date Received: 07/26/2001

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS								
Benzene	36	ug/L	0.13	0.44	SW 8020	07/31/2001	jsm	7539
Ethylbenzene	20	ug/L	0.22	0.70	SW 8020	07/31/2001	jsm	7539
Toluene	<4.0	ug/L	0.20	0.64	SW 8020	07/31/2001	jsm	7539
Xylenes, Total	150	ug/L	0.23	0.82	SW 8020	07/31/2001	jsm	7539
Surr: Bromofluorobenzene	85.5	%		80-	SW 8020	07/31/2001	jsm	7539

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445777
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-10 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 12:31 Date Received: 07/26/2001

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS								
Benzene	180	ug/L	0.13	0.44	SW 8020	07/31/2001	jsm	7539
Ethylbenzene	8.6	ug/L	0.22	0.70	SW 8020	07/31/2001	jsm	7539
Toluene	<4.0	ug/L	0.20	0.64	SW 8020	07/31/2001	jsm	7539
Xylenes, Total	40	ug/L	0.23	0.82	SW 8020	07/31/2001	jsm	7539
Surr: Bromofluorobenzene	93.0	%		80-	SW 8020	07/31/2001	jsm	7539

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445778
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-11 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 09:55 Date Received: 07/26/2001

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS								
Benzene	<0.13	ug/L	0.13	0.44	SW 8020	07/31/2001	jsm	7539
Ethylbenzene	<0.22	ug/L	0.22	0.70	SW 8020	07/31/2001	jsm	7539
Toluene	<0.20	ug/L	0.20	0.64	SW 8020	07/31/2001	jsm	7539
Xylenes, Total	<0.23	ug/L	0.23	0.82	SW 8020	07/31/2001	jsm	7539
Surr: Bromofluorobenzene	98.5	%		80-	SW 8020	07/31/2001	jsm	7539

ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445779
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-12 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 11:51 Date Received: 07/26/2001

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS								
Benzene	<0.13	ug/L	0.13	0.44	SW 8020	08/01/2001	jsm	7547
Ethylbenzene	<0.22	ug/L	0.22	0.70	SW 8020	08/01/2001	jsm	7547
Toluene	<0.20	ug/L	0.20	0.64	SW 8020	08/01/2001	jsm	7547
Xylenes, Total	0.28	ug/L	0.23	0.82	SW 8020	08/01/2001	jsm	7547
Surr: Bromofluorobenzene	91.5	%		80-	SW 8020	08/01/2001	jsm	7547

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445780
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-14 BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 11:03 Date Received: 07/26/2001

Parameter	Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS								
Benzene	<0.13	ug/L	0.13	0.44	SW 8020	07/31/2001	jsm	7539
Ethylbenzene	<0.22	ug/L	0.22	0.70	SW 8020	07/31/2001	jsm	7539
Toluene	<0.20	ug/L	0.20	0.64	SW 8020	07/31/2001	jsm	7539
Xylenes, Total	<0.23	ug/L	0.23	0.82	SW 8020	07/31/2001	jsm	7539
Surr: Bromofluorobenzene	99.0	%		80-	SW 8020	07/31/2001	jsm	7539

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ANALYTICAL REPORT

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

08/02/2001
Job No: 01.05624
Sample No: 445781
Account No: 3000

JOB DESCRIPTION: BP Artesian Station-New Mexico
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: Trip Blank BP Artesian Station
Rec'd at 2.7 degrees C

Date/Time Taken: 07/24/2001 UNKNOWN Date Received: 07/26/2001

Parameter		Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
PVOC - AQUEOUS									
Benzene		<0.13	ug/L	0.13	0.44	SW 8020	07/31/2001	jsm	7539
Ethylbenzene		<0.22	ug/L	0.22	0.70	SW 8020	07/31/2001	jsm	7539
Toluene	Q	0.26	ug/L	0.20	0.64	SW 8020	07/31/2001	jsm	7539
Xylenes, Total		<0.23	ug/L	0.23	0.82	SW 8020	07/31/2001	jsm	7539
Surr: Bromofluorobenzene		98.5	%		80-	SW 8020	07/31/2001	jsm	7539

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QUALITY CONTROL REPORT

BLANKS

08/02/2001

Mr. Sam Senn
BASCOR ENVIRONMENTAL, INC.
800 W. Central Road
Suite 104N
Mt. Prospect, IL 60056

Job No: 01.05624
Account No: 3000

Job Description: BP Artesian Station-New Mexico

Parameter	Prep Batch	Run Batch	Blank Result	MDL	LOQ	Units
PVOC - AQUEOUS						
Benzene		7539	<0.13	0.13	0.44	ug/L
Ethylbenzene		7539	<0.22	0.22	0.70	ug/L
Toluene		7539	<0.20	0.20	0.64	ug/L
Xylenes, Total		7539	<0.23	0.23	0.82	ug/L
Surr: Bromofluorobenzene		7539	94.0		80-	%
PVOC - AQUEOUS						
Benzene		7547	<0.13	0.13	0.44	ug/L
Ethylbenzene		7547	<0.22	0.22	0.70	ug/L
Toluene		7547	<0.20	0.20	0.64	ug/L
Xylenes, Total		7547	<0.23	0.23	0.82	ug/L
Surr: Bromofluorobenzene		7547	93.0		80-	%

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

07.0302

TestAmerica INCORPORATED

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone: 920-261-1660
Fax: 920-261-8120
FedEx 1430-0597-6

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: Bascor Environmental, Inc. Client #: ON File @ TA
Address: 800 West Central Road Suite 104N
City/State/Zip Code: Mt. Prospect, IL 60056
Project Manager: Mr. Sam Senn
Telephone Number: 847-577-1980 Fax: 847-577-1982
Sampler Name: (Print Name) Clayton M Barnhill, PG
Sampler Signature: Clayton M Barnhill, PG

Project Name: Bascor BP Artesia Station
Project #:
Site/Location ID: Bascor BP Artesia State: New Mexico
Report To: Mr. Sam Senn, Bascor Environmental Station
Invoice To: Bascor
Quote #: PO#:

TAT
☑ Standard
☐ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y N

QC Deliverables
☐ None
☑ Level 2 (Batch QC)
☐ Level 3
☐ Level 4
Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl 3/40 mL/VOAs	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: BTEX 8021	REMARKS
MW-5	7/24/01	13:20	G	N	GW		X						X	
MW-7	7/24/01	15:06	G	N	GW		X						X	
MW-9	7/25/01	8:36	G	N	GW		X						X	
MW-10	7/24/01	12:32	G	N	GW		X						X	
MW-11	7/24/01	9:53	G	N	GW		X						X	
MW-12	7/24/01	11:51	G	N	GW		X						X	
MW-14	7/24/01	11:03	G	N	GW		X						X	
TRIP Blank							X							
Temp °C Blank											X			

Special Instructions: If you have any Questions please call Sam or Randy Senn @ Bascor (847) 577-1980

Relinquished By: Clayton M Barnhill	Date: 7/25/01	Time: 14:00	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 7/26/01	Time: 7:25

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 2.7
Custody Seals: Y N N/A
Bottles Supplied by TestAmerica: Y N
Method of Shipment: FEDEX

27/27/01