GW - 170

REPORTS

YEAR(S):

1998

CLAYTON

Remediation System Operations

Third Annual Report

Amoco Pipeline Station
Artesia, New Mexico

GW-170

Prepared for:
AMOCO CORPORATION
2810 Torch Parkway, Suite 800
Warrenville, Illinois 60555-3938

Prepared by:
CLAYTON ENVIRONMENTAL CONSULTANTS
Division of Clayton Group Services, Inc.
1240 Iroquois Avenue, Suite 206
Naperville, Illinois 60563
630-369-0201

Clayton Project 64661.00 (2775)

June 30, 1998

Clayton
ENVIRONMENTAL
CONSULTANTS

Remediation System Operations

Third Annual Report

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(Continued)

TABLES

APPENDIX

1.0 INTRODUCTION

Amoco Pipeline installed an interception trench, and groundwater separation and remediation system at the Artesia, New Mexico facility in November 1994. Quarterly reports were provided to the State of New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division (OCD) until April 30, 1997. Permission was requested in the April 30, 1997 report to discontinue operation of the remediation system (oil-water separator and air stripper) since it was apparent that there had been essentially no movement of free product for at least the last five quarters. Permission was granted in a letter dated July 14, 1997 from Mr. Roger Anderson, bureau chief of the OCD, to Mr. Doug Earney of Amoco Oil Company. The permission was subject to certain conditions described in an attachment to Mr. Anderson's letter. The attachment was dated July 14, 1995 and titled "Discharge Plan Modification Approval Conditions. Ground Water Remediation Discharge Plan GO-170. Amoco Oil Company. Artesia Crude Pumping Station." One of the requirements (#3) was to submit an annual report to the OCD by July 1 of each year. This submittal, which contains all the requested information, is provided to satisfy the annual reporting requirements.

2.0 SUMMARY OF ANALYTICAL RESULTS

The "Discharge Plan Modification" required the following:

- Quarterly sampling of monitor wells MW-11 and MW-14 for BETX.
- Annual sampling of all wells not containing free product for BETX.

Samples from monitoring wells MW-11 and MW-14 were obtained on 7/10/97, 9/14/97, 1/28/98, and 4/18/98. Samples from the other monitoring wells which did not contain free product (MW-4, MW-6, MW-7, MW-8, MW-10, MW-12 and MW-13) were obtained on 4/18/98. The analytical results are provided in Appendix A. Table 1

provides a summary of the analytical results for all samples from wells containing no free product, including MW-11 and MW-14. It is particularly significant to note that BETX has not been observed in any sample taken from the downgradient wells (MW-11 and MW-14) during the last year. It may also be noted that high levels of BETX were observed in MW-8 during the 4/18/98 sampling. However, 4/18/98 was the first time that BETX was measured in this well since there had been free product before 7/10/97.

3.0 QUARTERLY WATER TABLE ELEVATIONS

The Plan Modification approval conditions specified that quarterly water table elevation maps be provided showing the elevation of the groundwater in all wells. This water table elevation data is provided in Table 2. Figures WT-1 through WT-4 provide the requested maps for the last four quarters.

4.0 WATER TABLE ELEVATIONS VERSUS TIME

The Plan Modification requested plots of water table elevation versus time for each ground water monitoring point. The plots for each well are presented in figures EMW-1 through EMW-14. The water table elevations are shown in Table 2.

5.0 QUARTERLY PRODUCT THICKNESS MAPS

The Plan Modification requested product thickness maps for free phase product in each well. These maps are presented as Figures 10 through 13. These figures cover the time from July 30, 1997 through April 18, 1998. For the sake of completeness, Figures 1 through 9, covering the time from February 9, 1995 through April 2, 1997, are also included. These maps show that there is essentially no product movement, and that there is very little product in any well except MW-2. The amount of product in MW-2 essentially stabilizes at approximately 4 feet. This well is very close to the storage tank,

and there is no indication that oil is migrating from this well to downgradient wells such as MW-6 (no product) or MW-5 (.01 feet of product).

6.0 FREE PRODUCT RECOVERED

The initial remediation system was shut down in April, 1997 since free product had not reached the interception trench for at least five quarters. Therefore, no free product was recovered during the year covered by this report. The amount of free product previously recovered was approximately 131 gallons.

7.0 ACTIVITIES, CONCLUSIONS AND RECOMMENDATIONS

Finally, the Plan Modification requested a description of the remediation and monitoring activities which occurred during the year including conclusions and recommendations. The activities involved only those described above, namely quarterly monitoring of water tables and product depths, quarterly analyses of samples from MW-11 and MW-13, and annual sampling of wells containing no free product.

In conclusion, it appears that migration of free product has stopped. In addition, no BETX has been observed in the two downgradient wells (MW-11 and MW-14) in the last year.

Amoco recommends that the monitoring program and reporting program conducted during the last year be continued for the next year. If, at the end of this year, there is still no indication of free product migration, and BETX is not observed in significant quantities (over the MCL) in MW-11 or MW-14, Amoco would like to discuss a reduced monitoring effort or possibly closure of the monitoring effort. In addition, Amoco requests permission to dismantle the oil-water separator and air stripper in order to use the equipment at other sites.

FIGURES

FIGURE EMW-1: Water Elevation Table for MW-1

Amoco Pipeline Company / Artesia, New Mexico

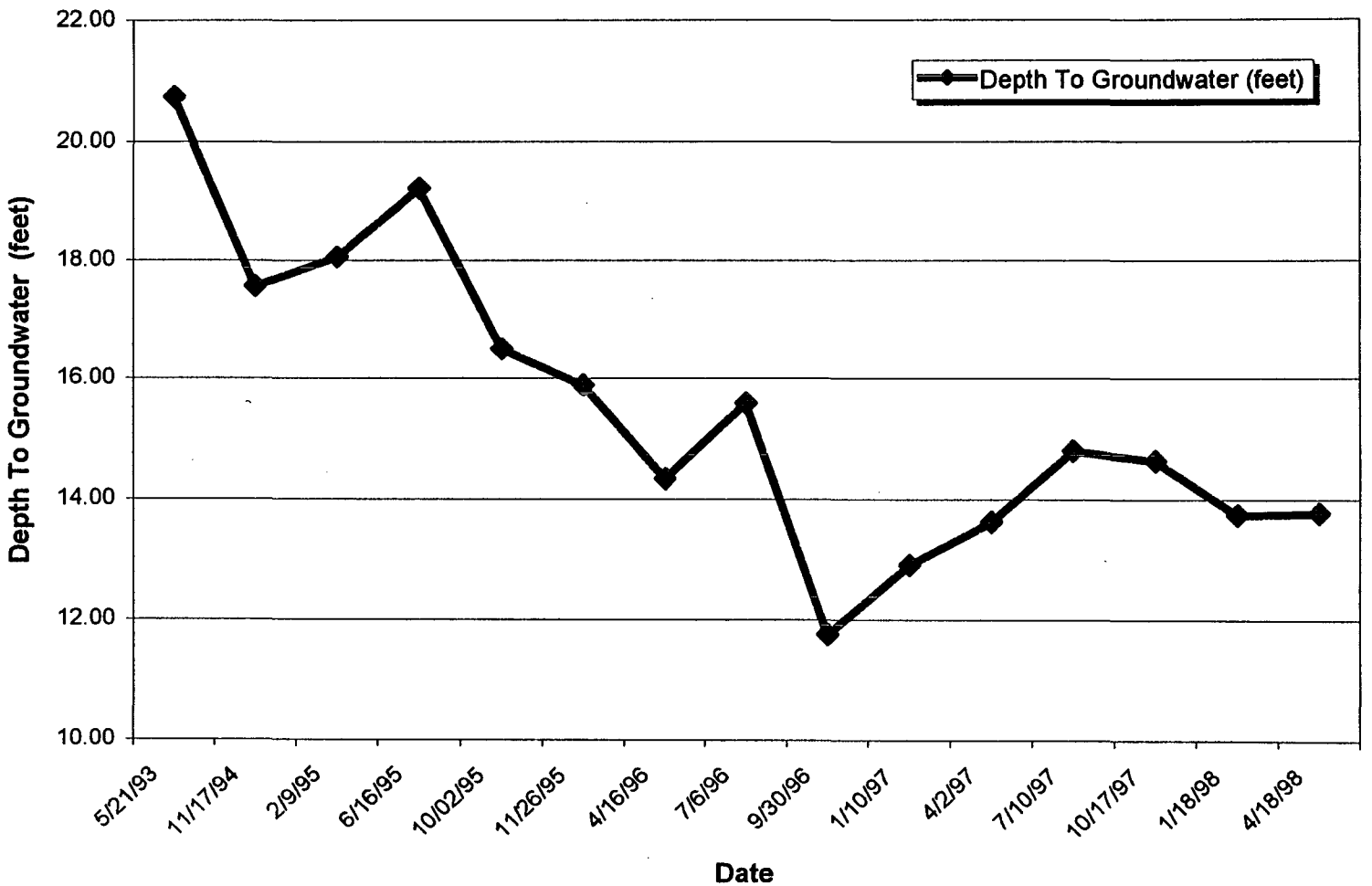

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FIGURE EMW-1: Water Elevation Table for MW-2

Amoco Pipeline Company / Artesia, New Mexico

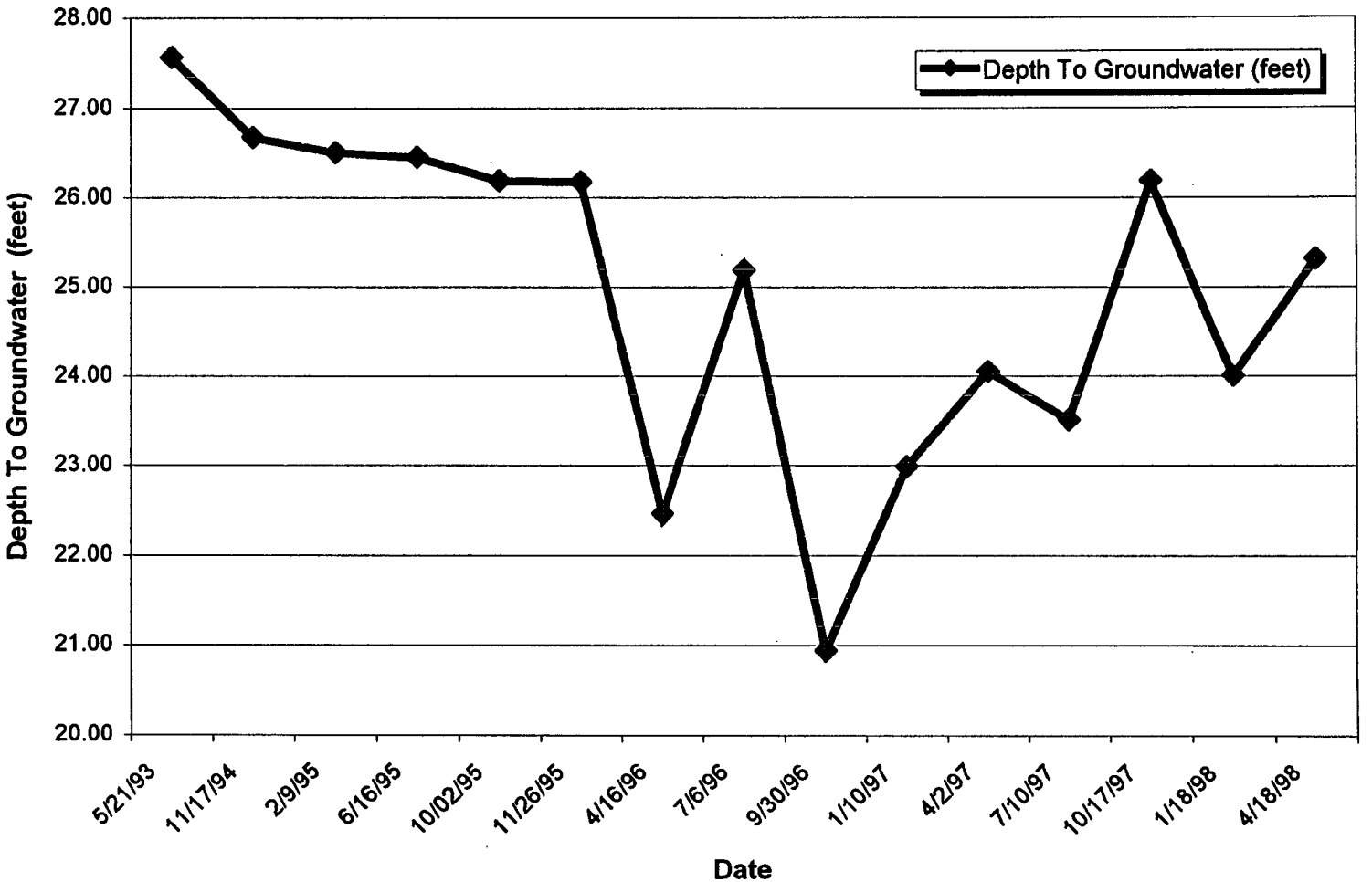

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FIGURE EMW-1: Water Elevation Table for MW-3

Amoco Pipeline Company / Artesia, New Mexico

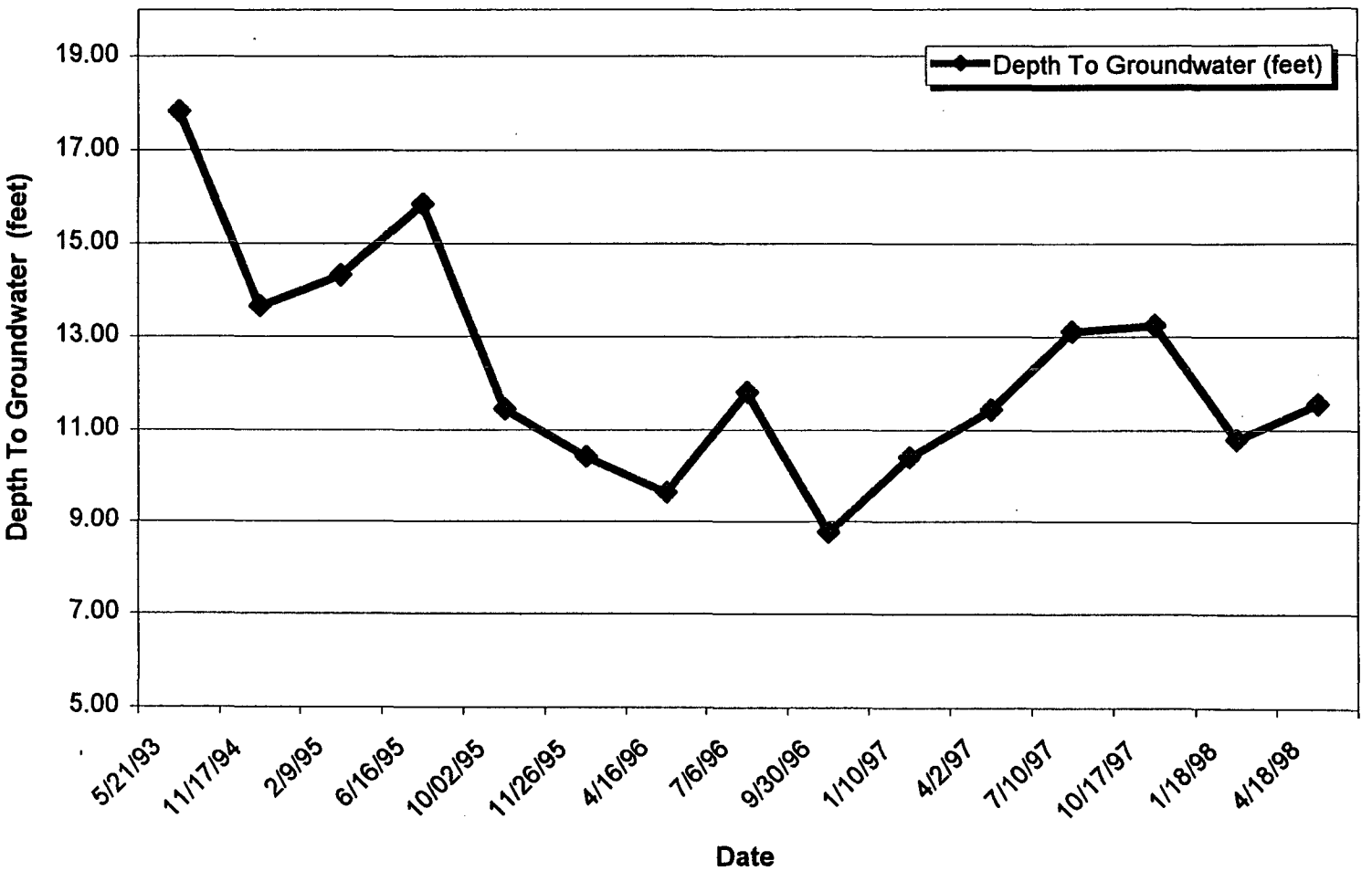

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FIGURE EMW-1: Water Elevation Table for MW-4

Amoco Pipeline Company / Artesia, New Mexico

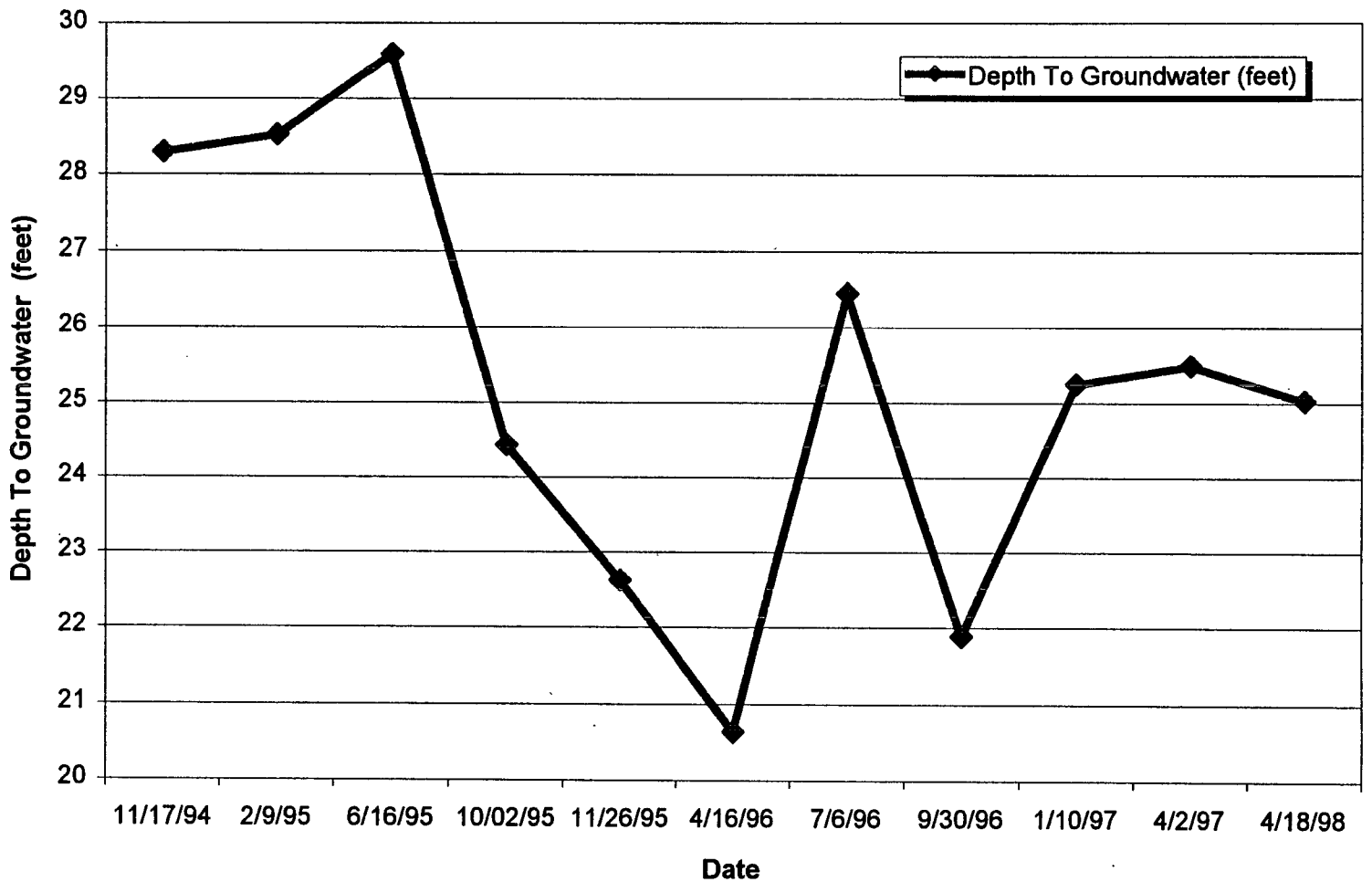

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FIGURE EMW-1: Water Elevation Table for MW-5

Amoco Pipeline Company / Artesia, New Mexico

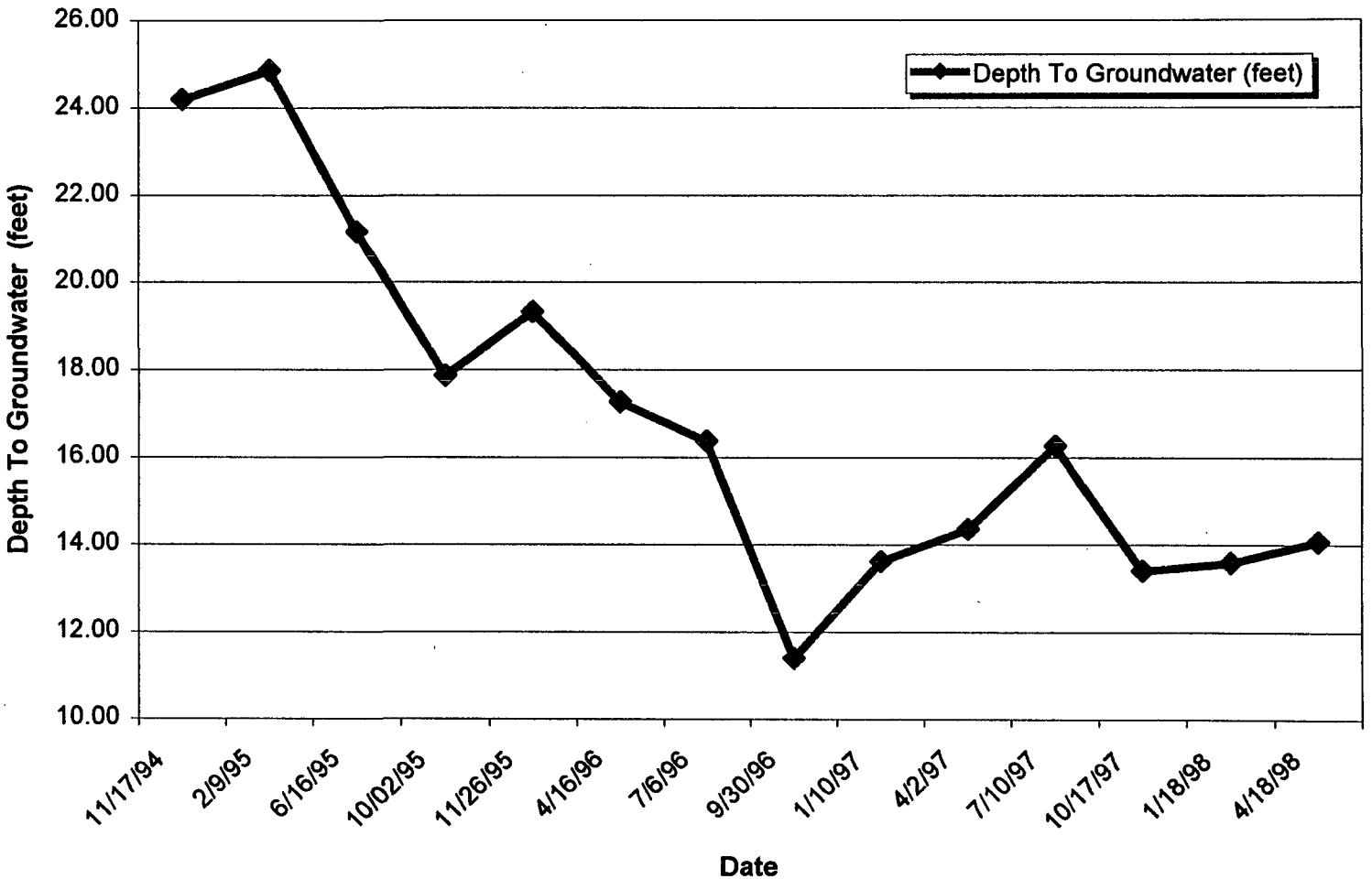

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FIGURE EMW-1: Water Elevation Table for MW-6

Amoco Pipeline Company / Artesia, New Mexico

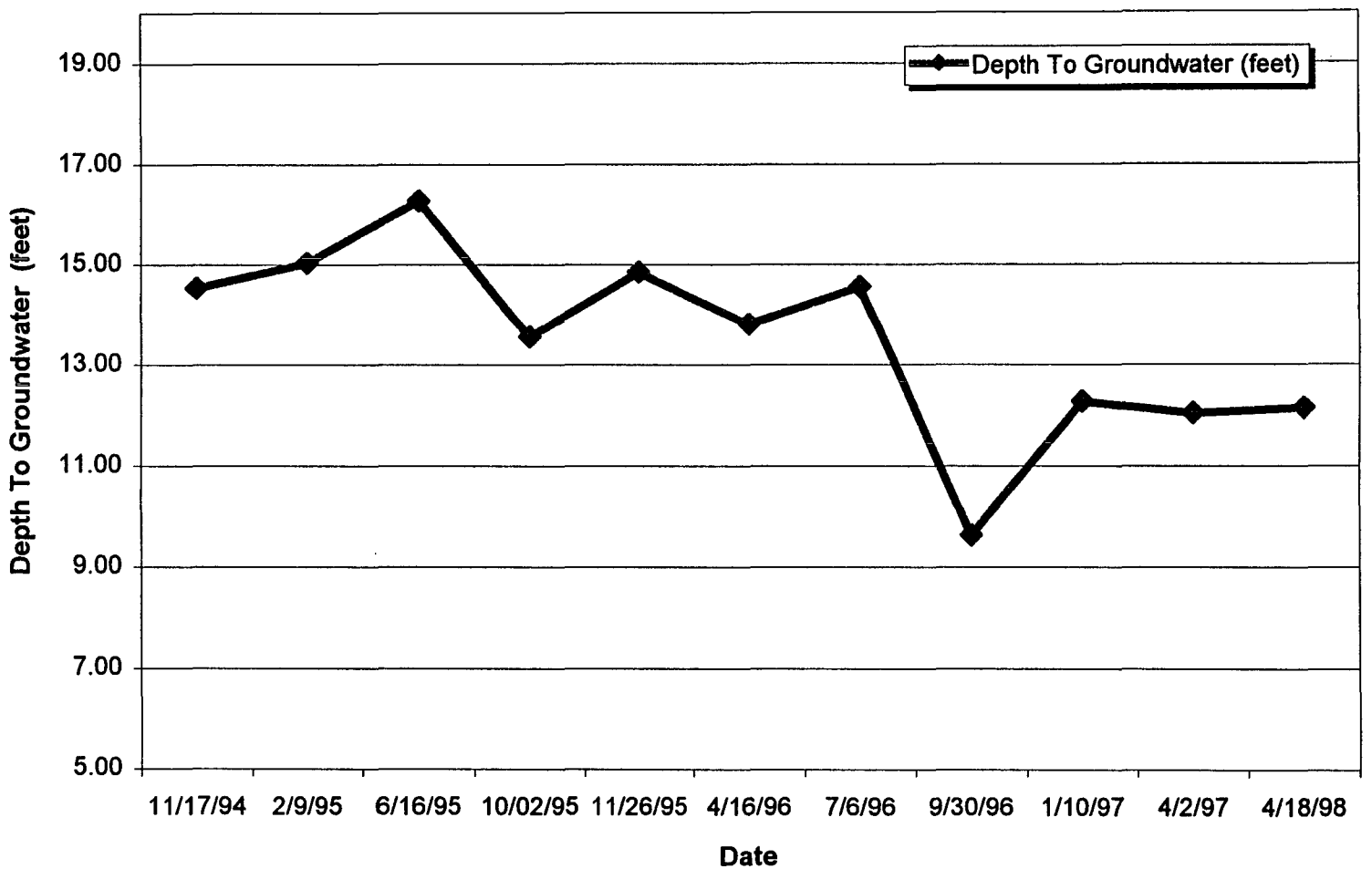

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FIGURE EMW-1: Water Elevation Table for MW-7

Amoco Pipeline Company / Artesia, New Mexico

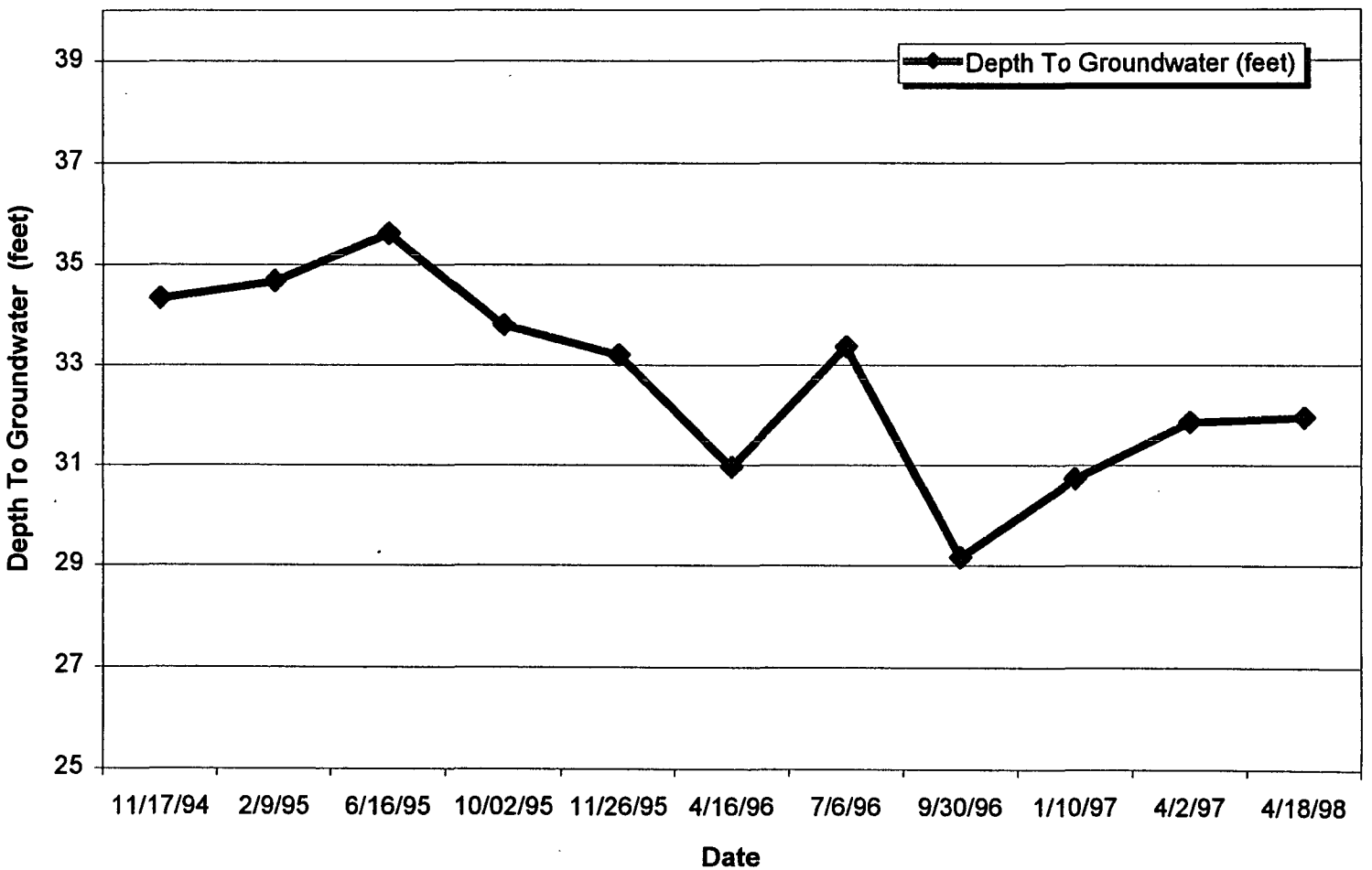

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FIGURE EMW-1: Water Elevation Table for MW-8

Amoco Pipeline Company / Artesia, New Mexico

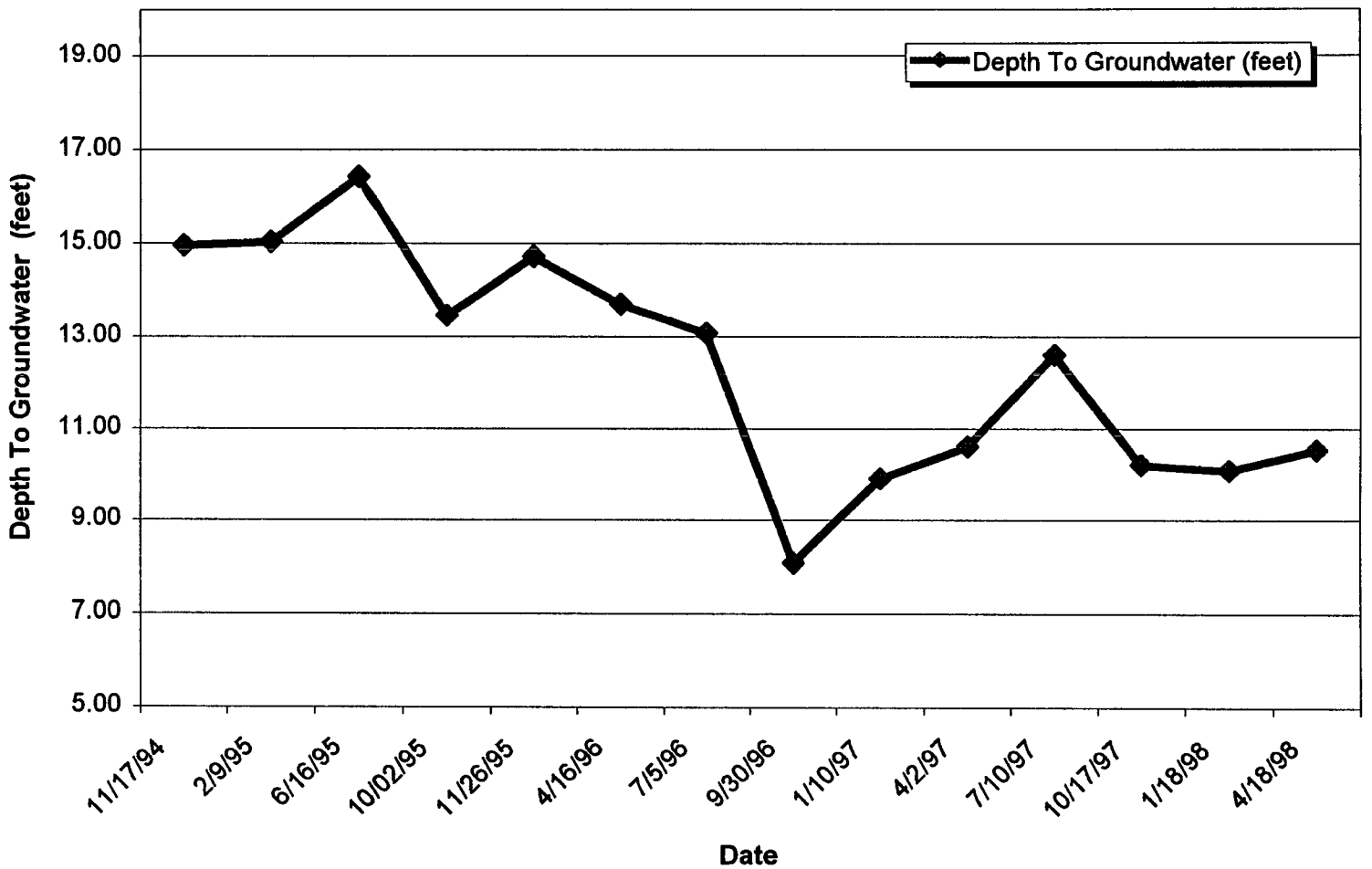

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FIGURE EMW-1: Water Elevation Table for MW-9

Amoco Pipeline Company / Artesia, New Mexico

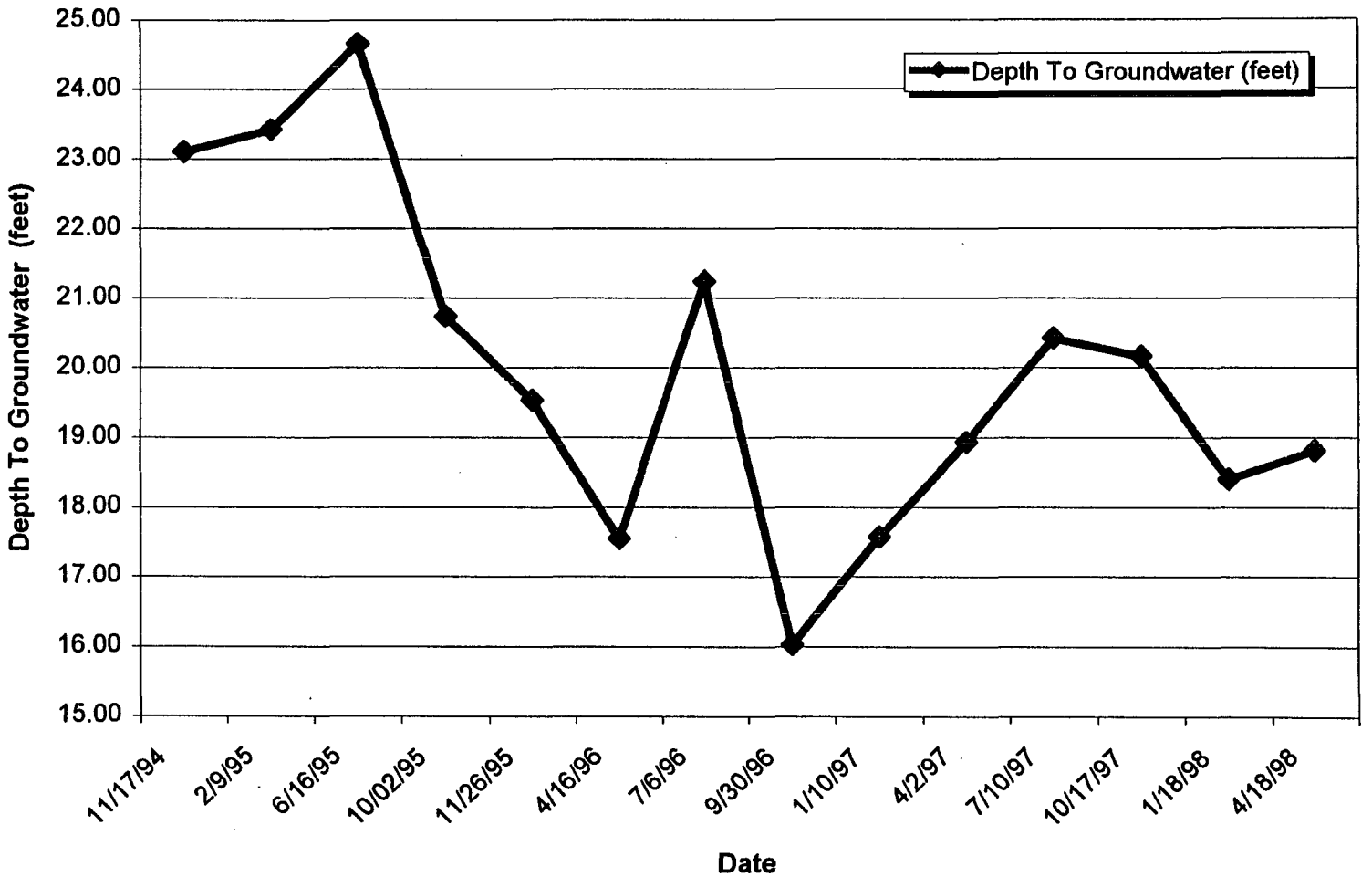

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FIGURE EMW-1: Water Elevation Table for MW-10

Amoco Pipeline Company / Artesia, New Mexico

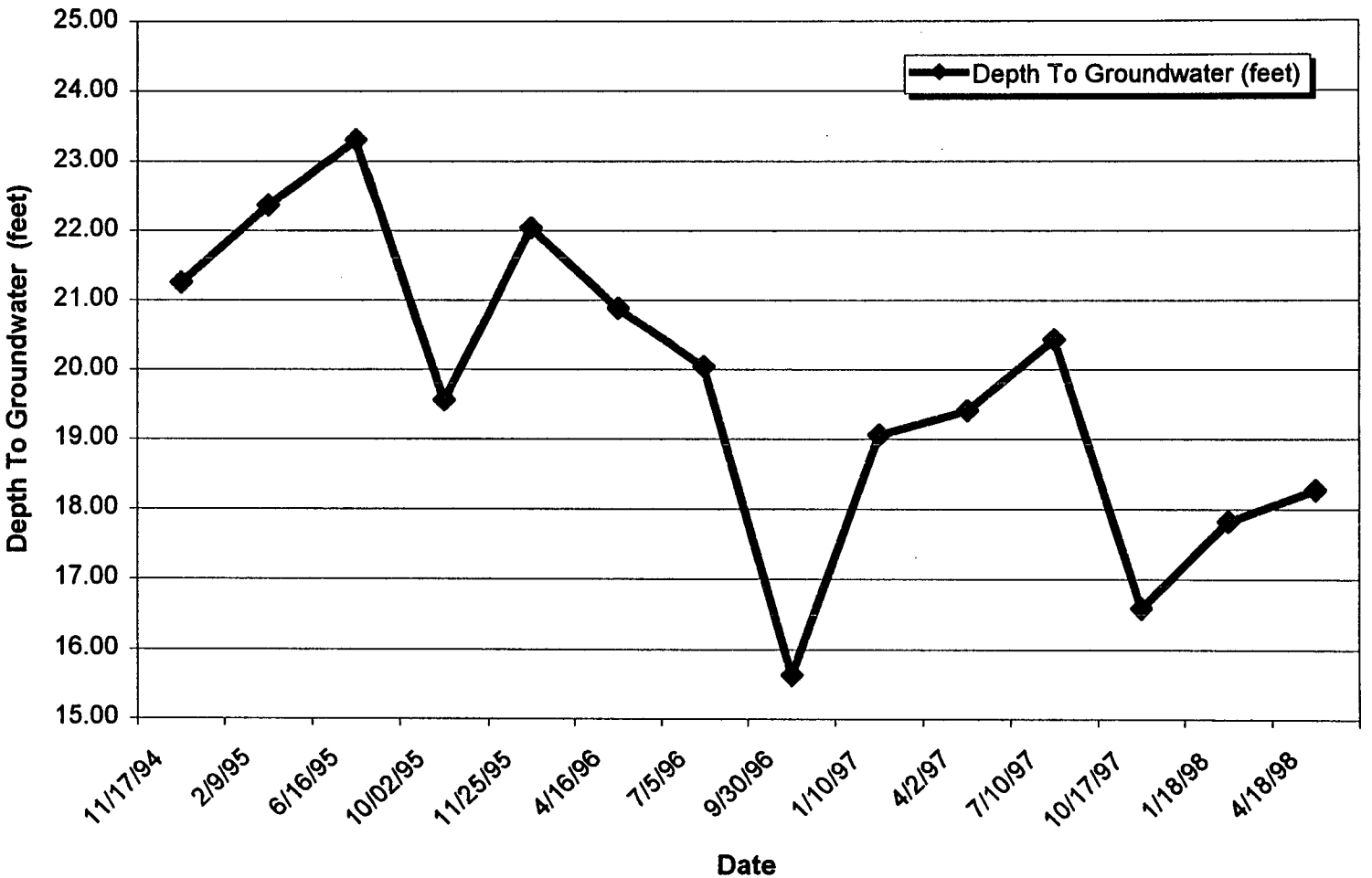

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FIGURE EMW-1: Water Elevation Table for MW-11

Amoco Pipeline Company / Artesia, New Mexico

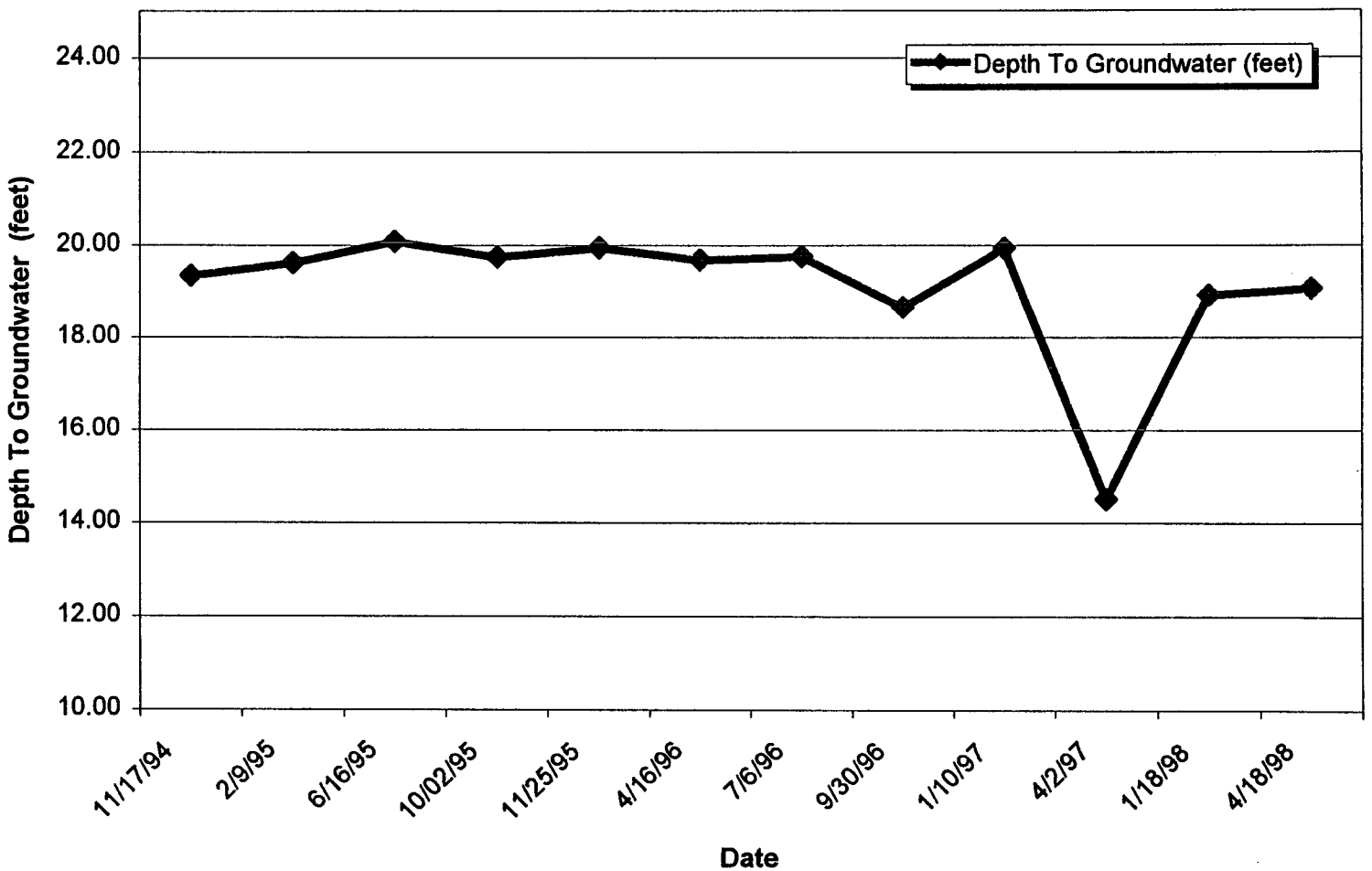

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FIGURE EMW-1: Water Elevation Table for MW-12

Amoco Pipeline Company / Artesia, New Mexico

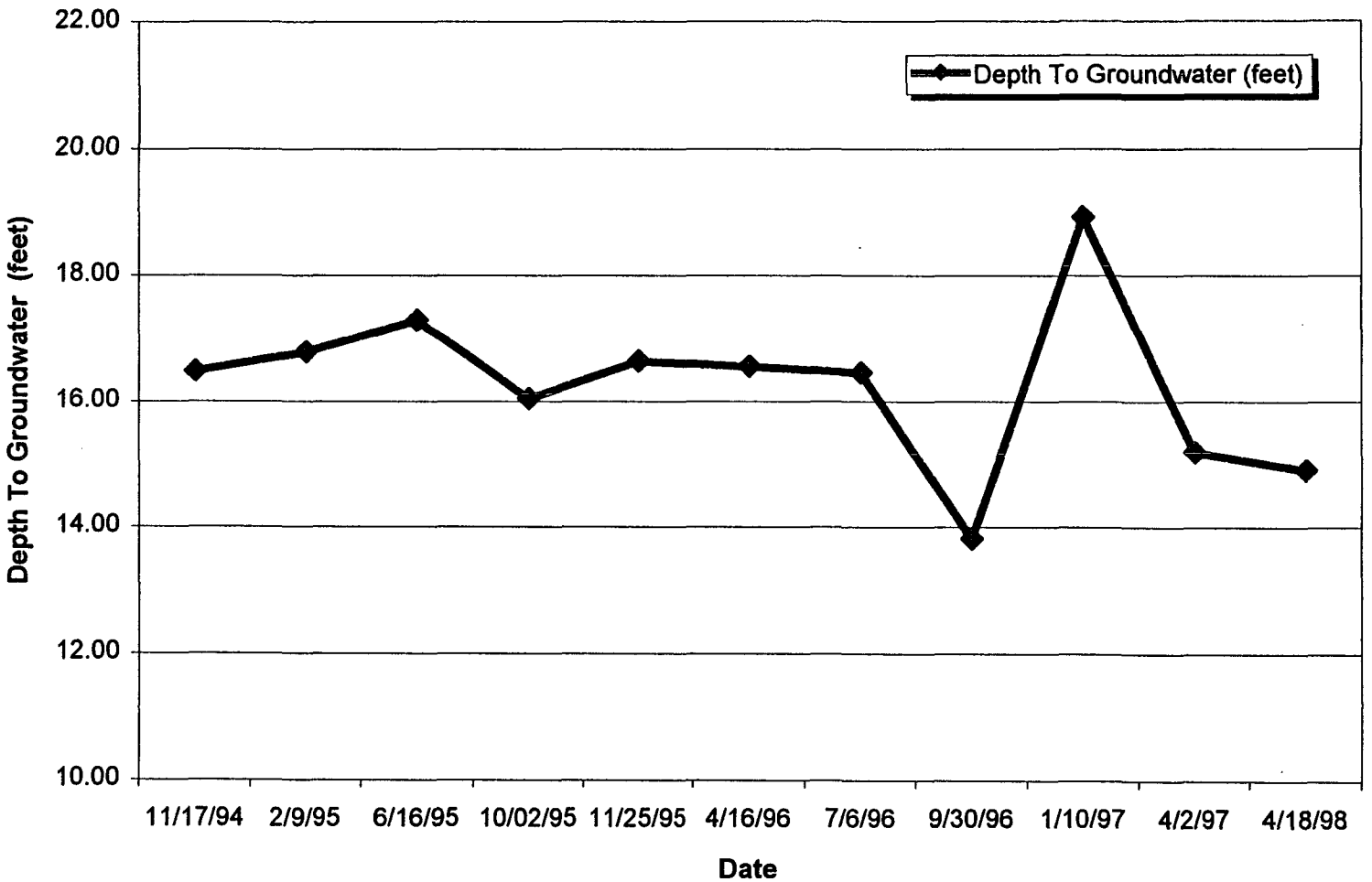

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FIGURE EMW-1: Water Elevation Table for MW-13

Amoco Pipeline Company / Artesia, New Mexico

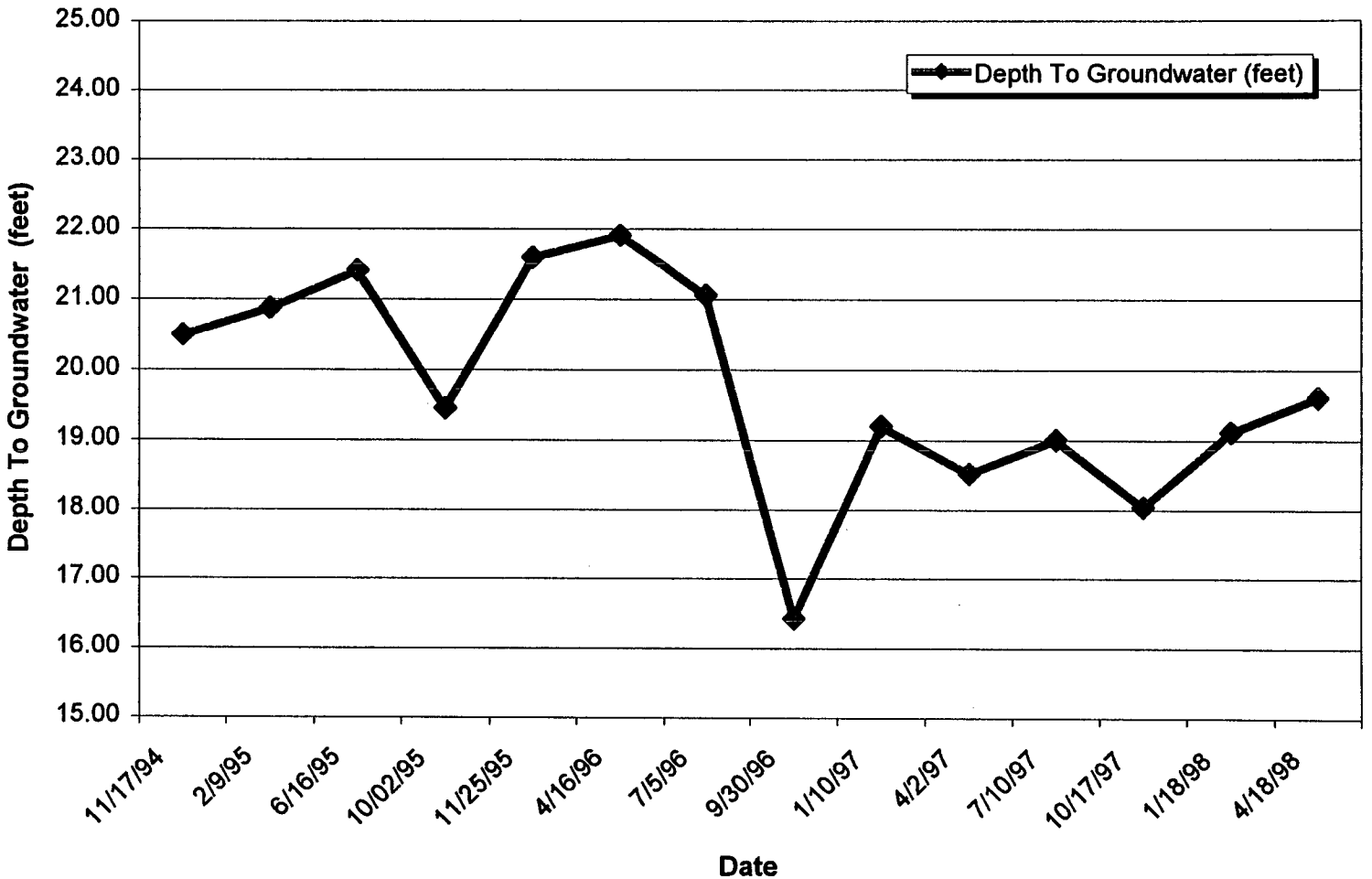

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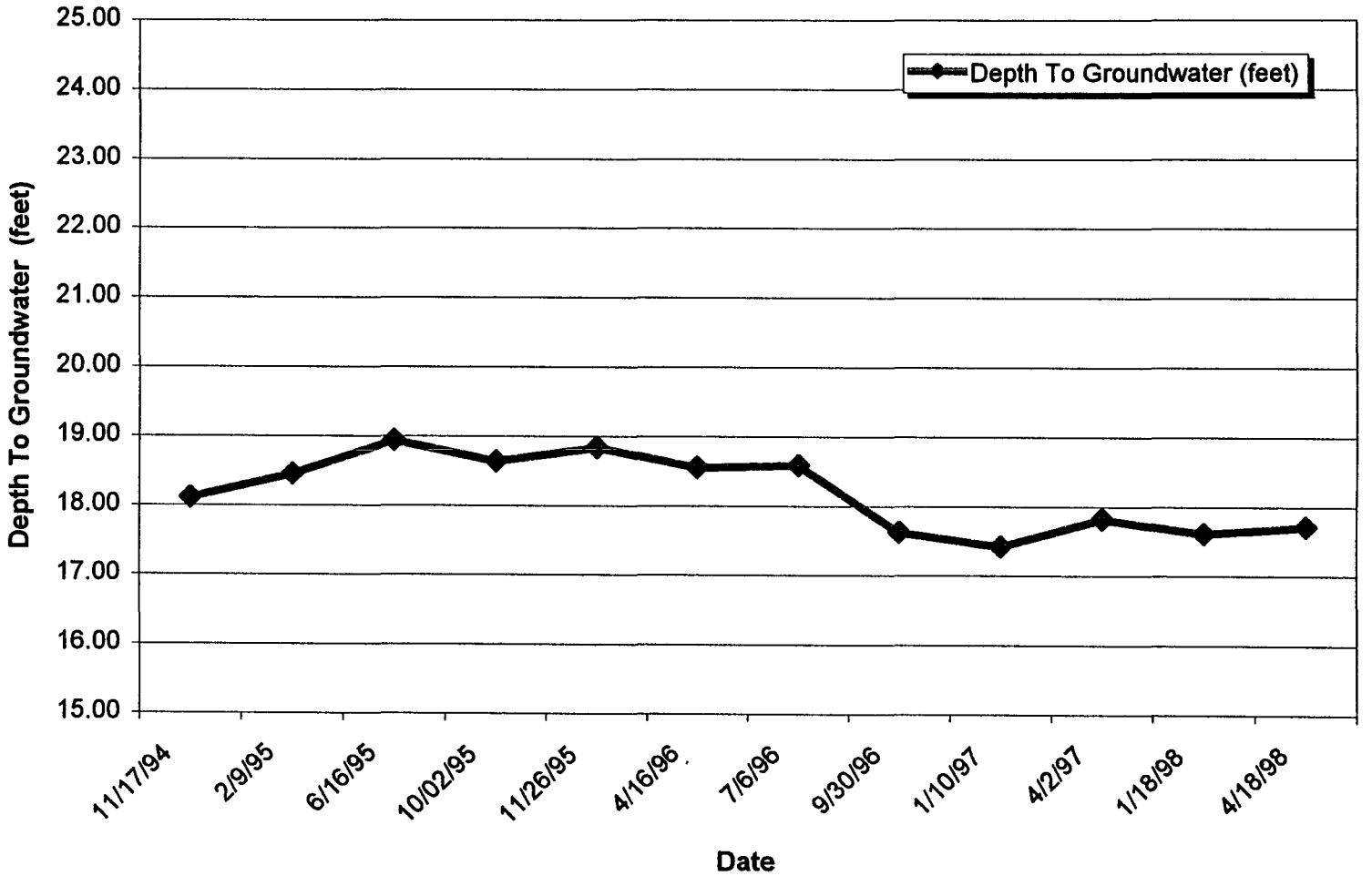
FIGURE EMW-1: Water Elevation Table for MW-14

Amoco Pipeline Company / Artesia, New Mexico



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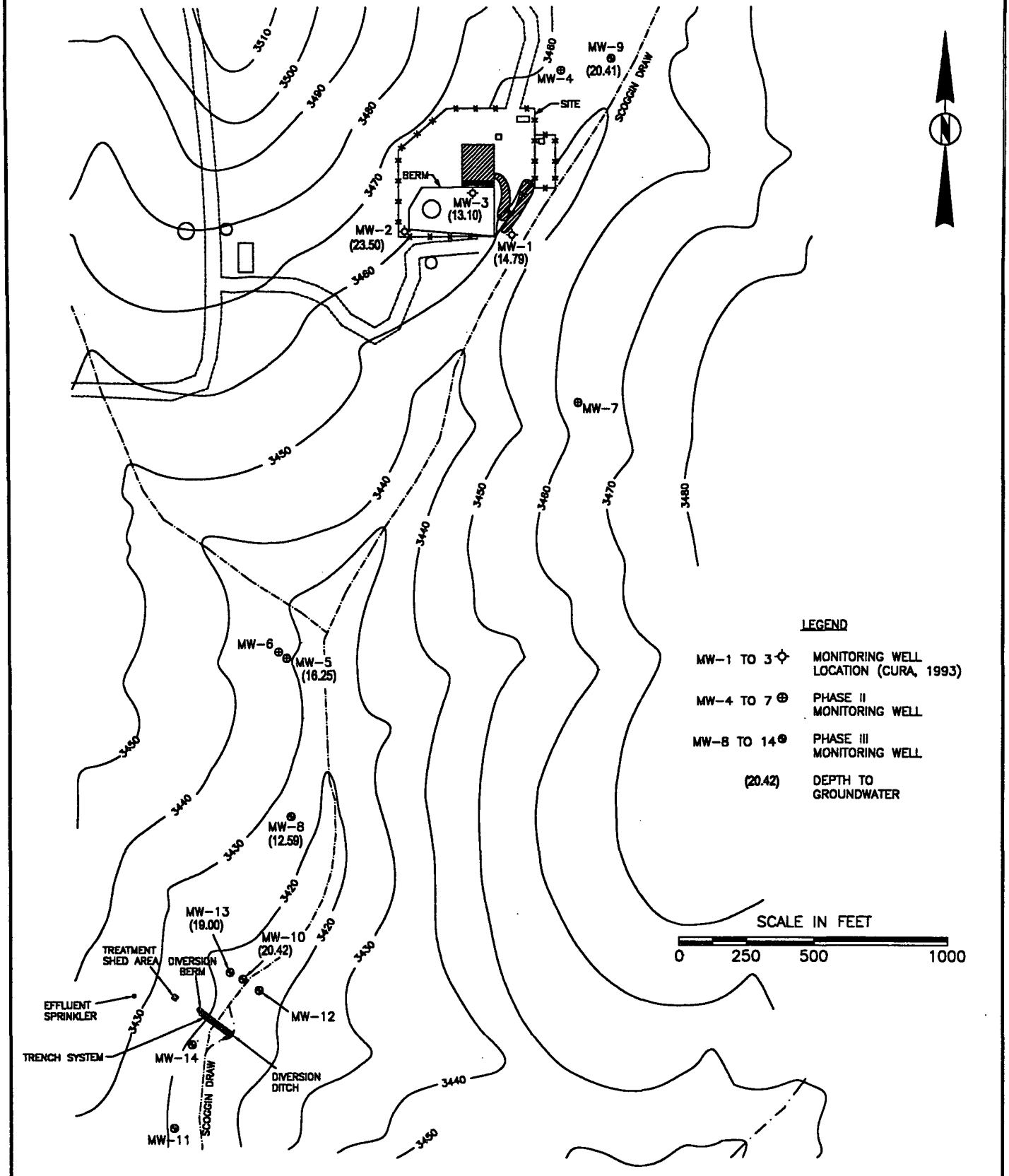

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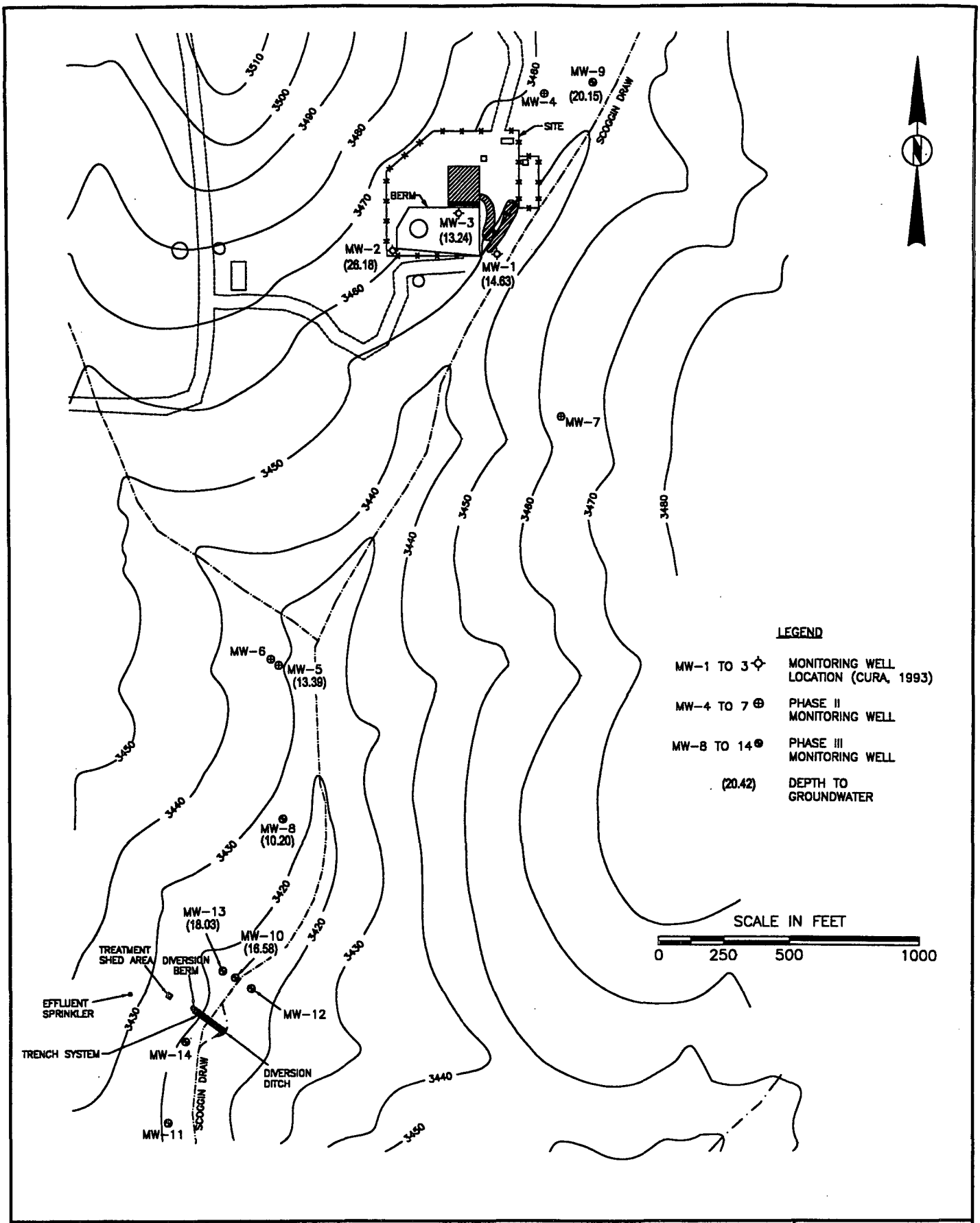
PRJ NO.	64661.01

DEPTH TO GROUNDWATER
JULY 10, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

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

FIGURE WT-1



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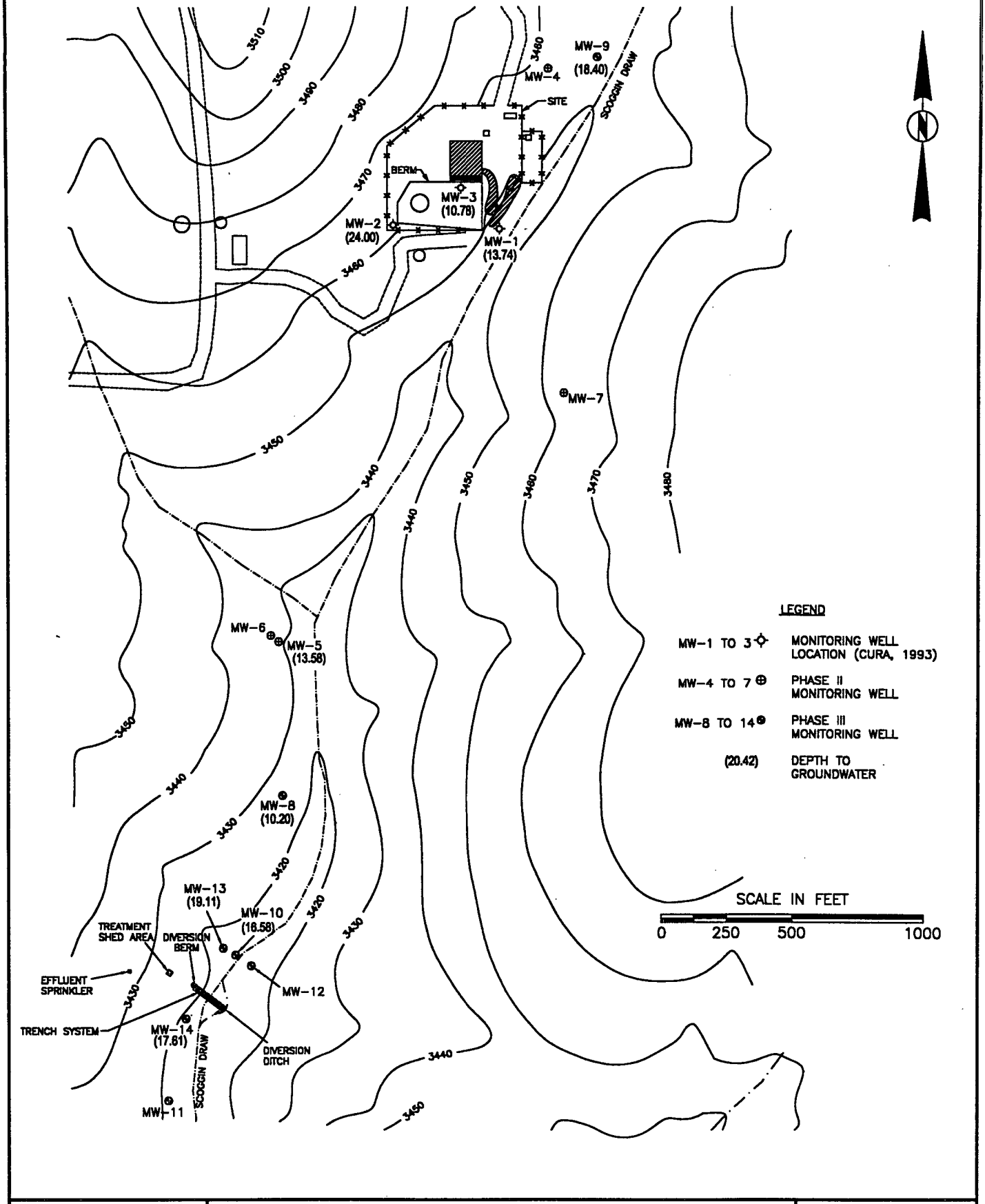
DEPTH TO GROUNDWATER
OCTOBER 17, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

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

FIGURE WT-2



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DATE	6-26-98
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PRJ NO.	64661.01

DEPTH TO GROUNDWATER
JANUARY 18, 1998

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
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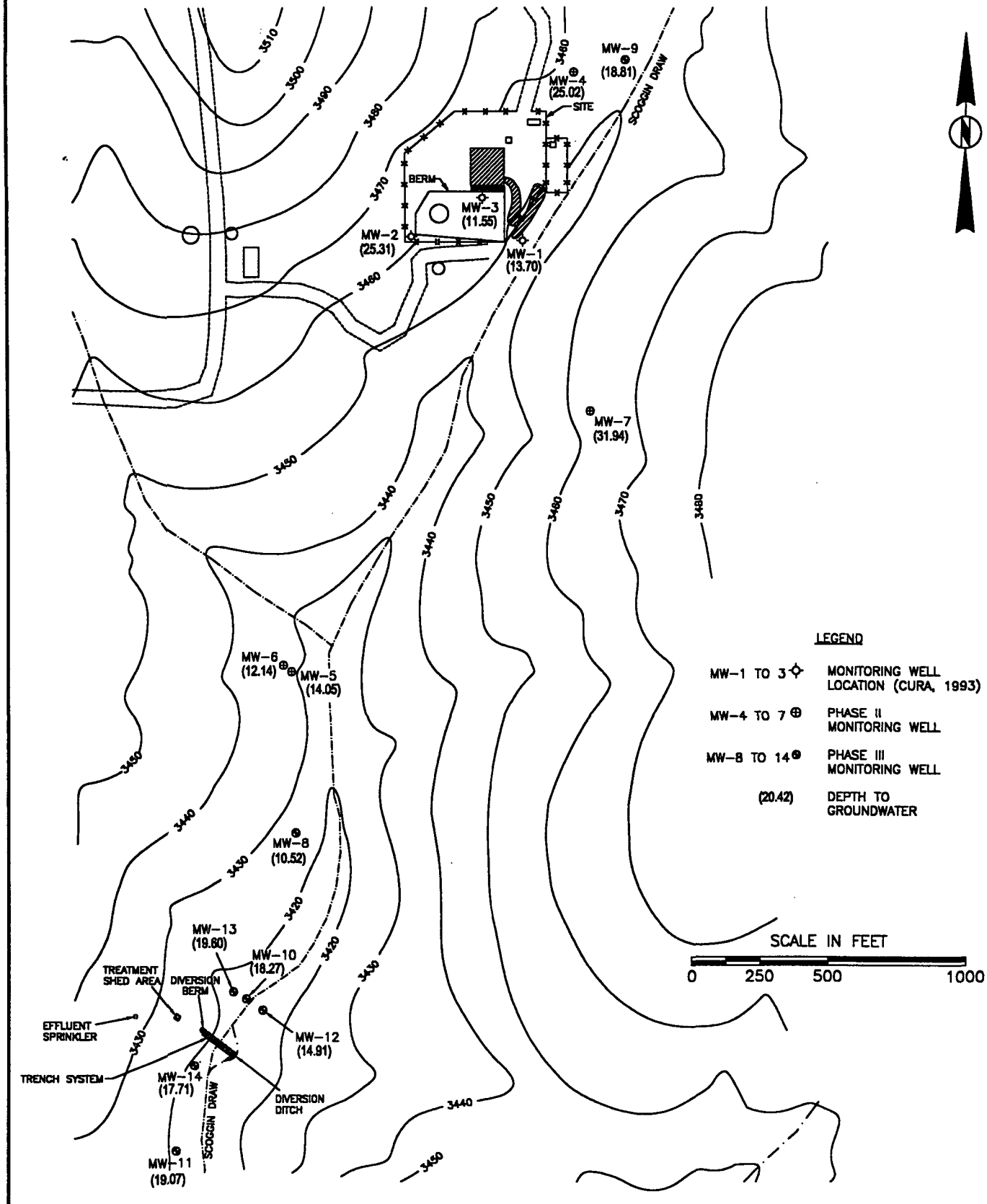
Div. of Clayton Group Services, Inc.

FIGURE WT-3



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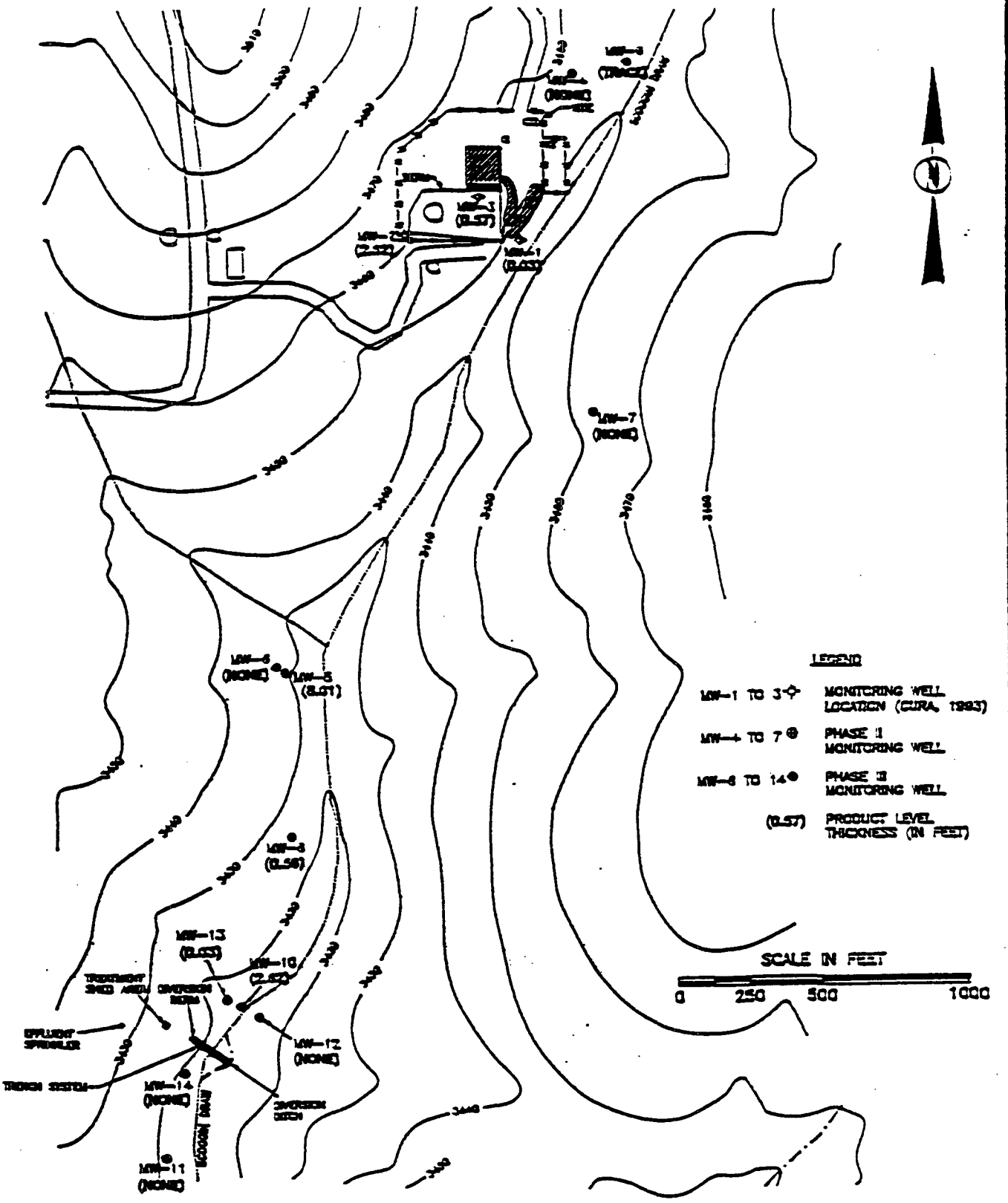
PRJ NO.	64661.01

DEPTH TO GROUNDWATER
APRIL 18, 1998

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

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

FIGURE WT-4



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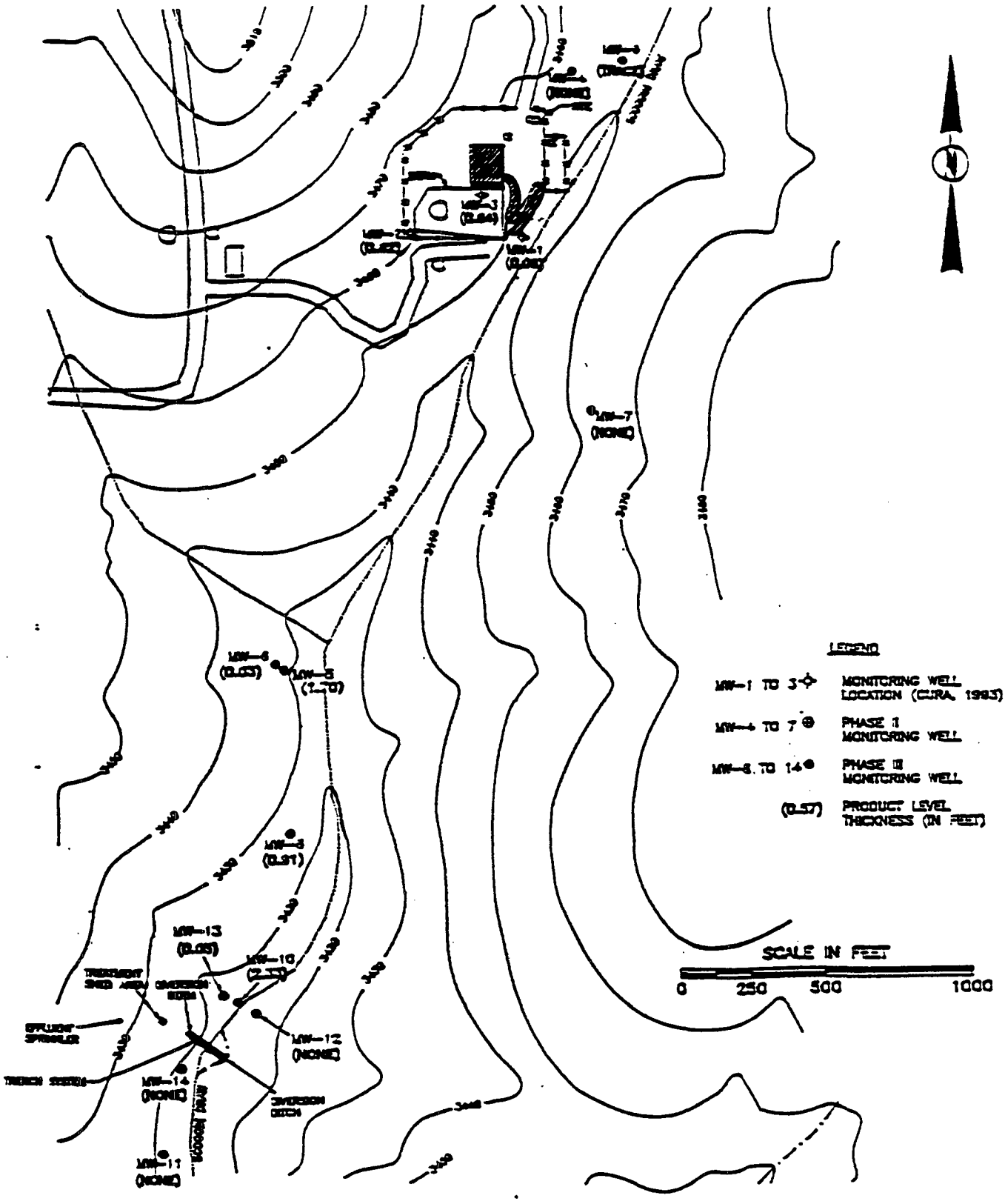
FREE PRODUCT
THICKNESS MAP
FEBRUARY 9, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 1



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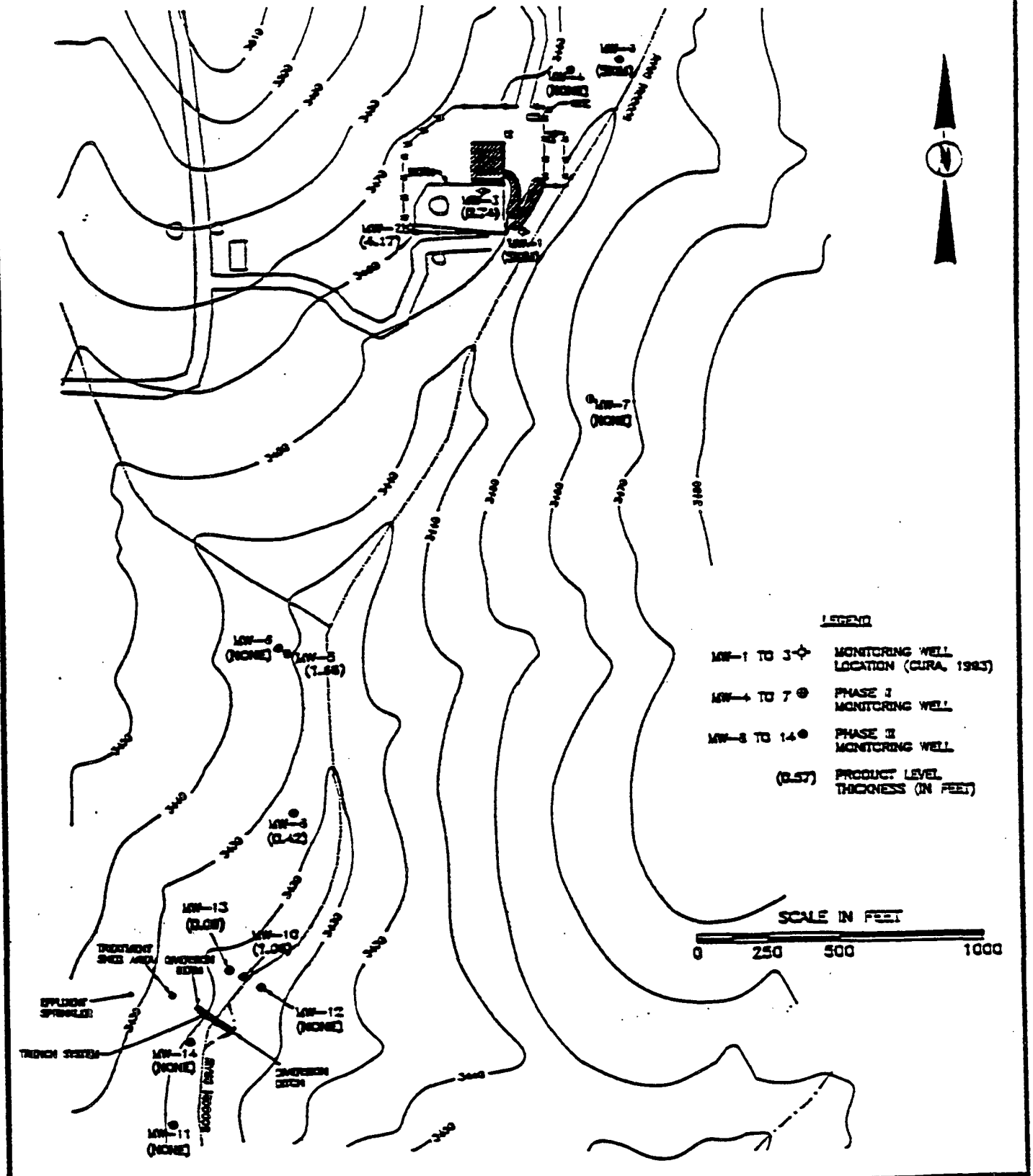
FREE PRODUCT THICKNESS MAP
JUNE 16, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 2



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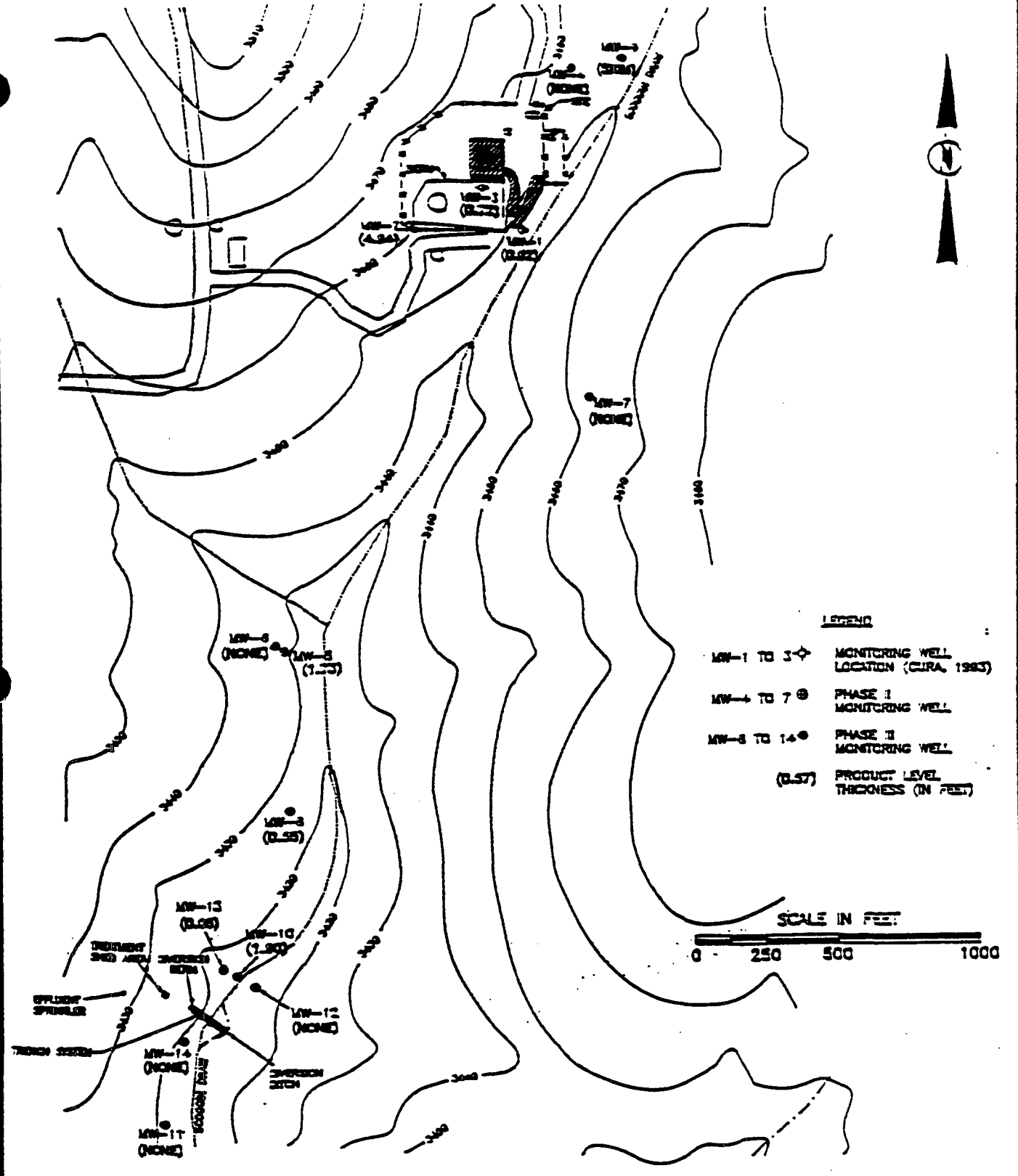
FREE PRODUCT
THICKNESS MAP
OCTOBER 2, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 3



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PRJ NO.	27751026

FREE PRODUCT
THICKNESS MAP
NOVEMBER 25-26, 1995

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

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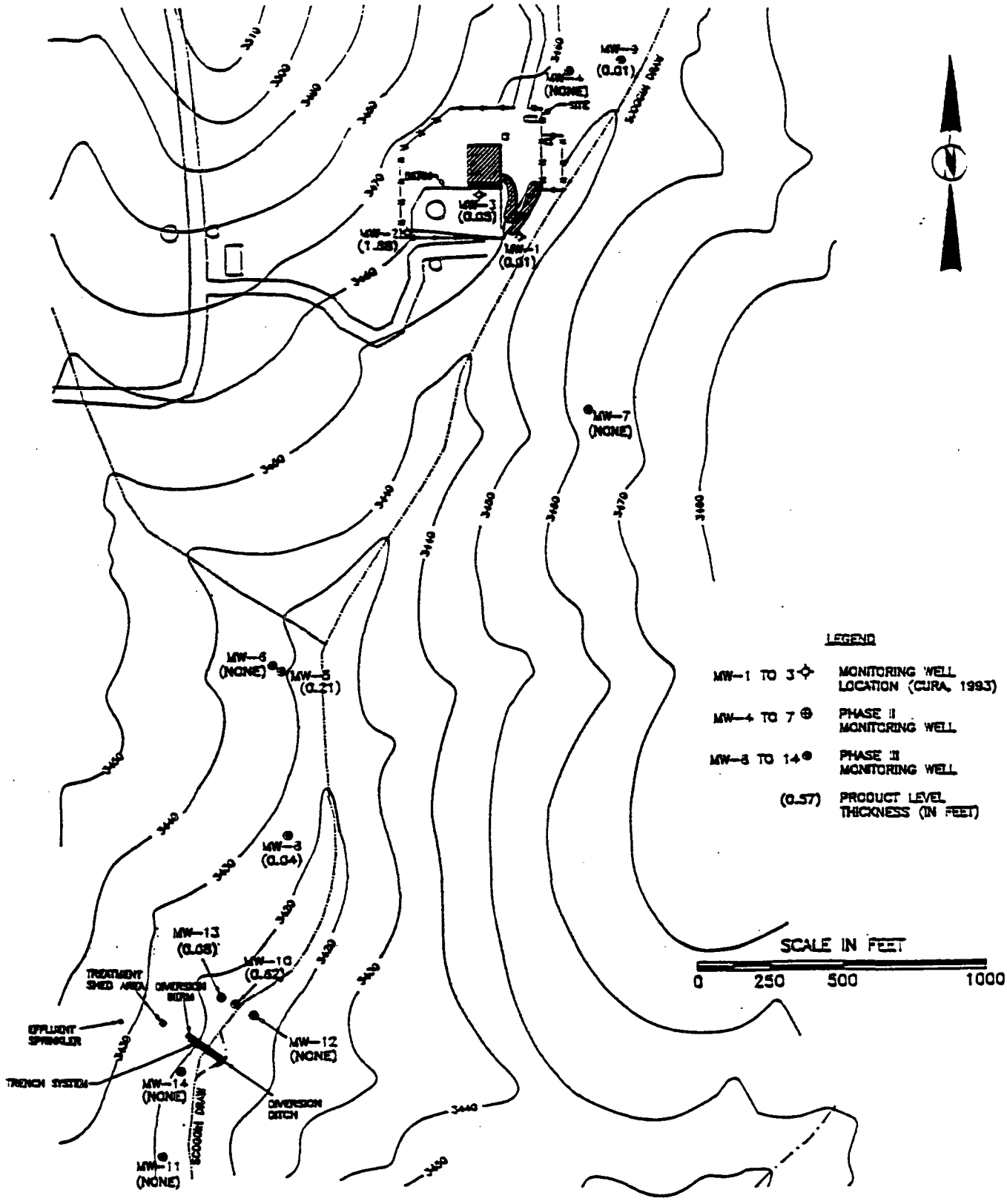
FIGURE 4



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PRJ NO.	27751024

FREE PRODUCT
THICKNESS MAP
APRIL 16-17, 1996

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
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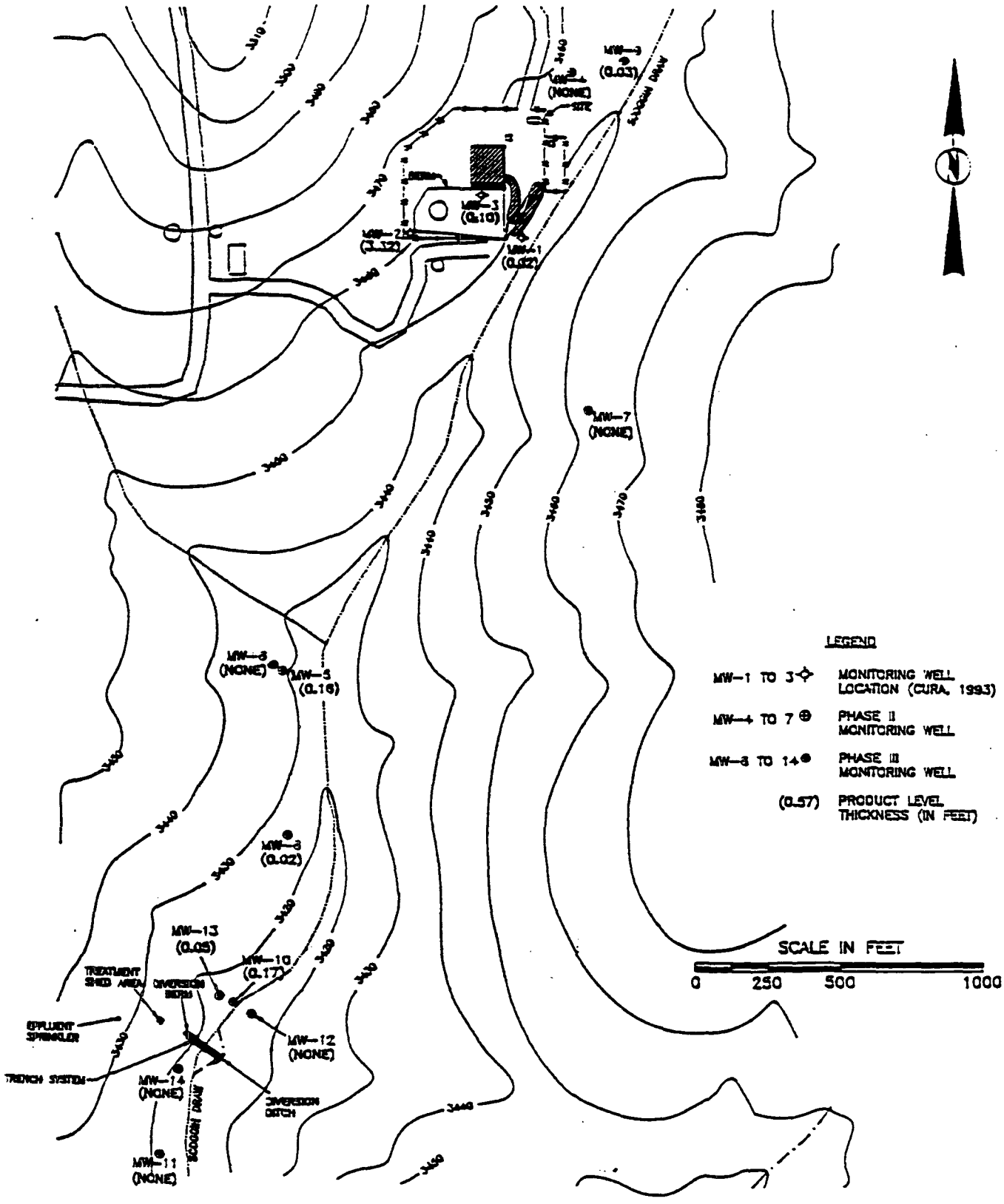
FIGURE 5



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PRJ NO.	27751021

FREE PRODUCT THICKNESS MAP
JULY 2, 1996

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
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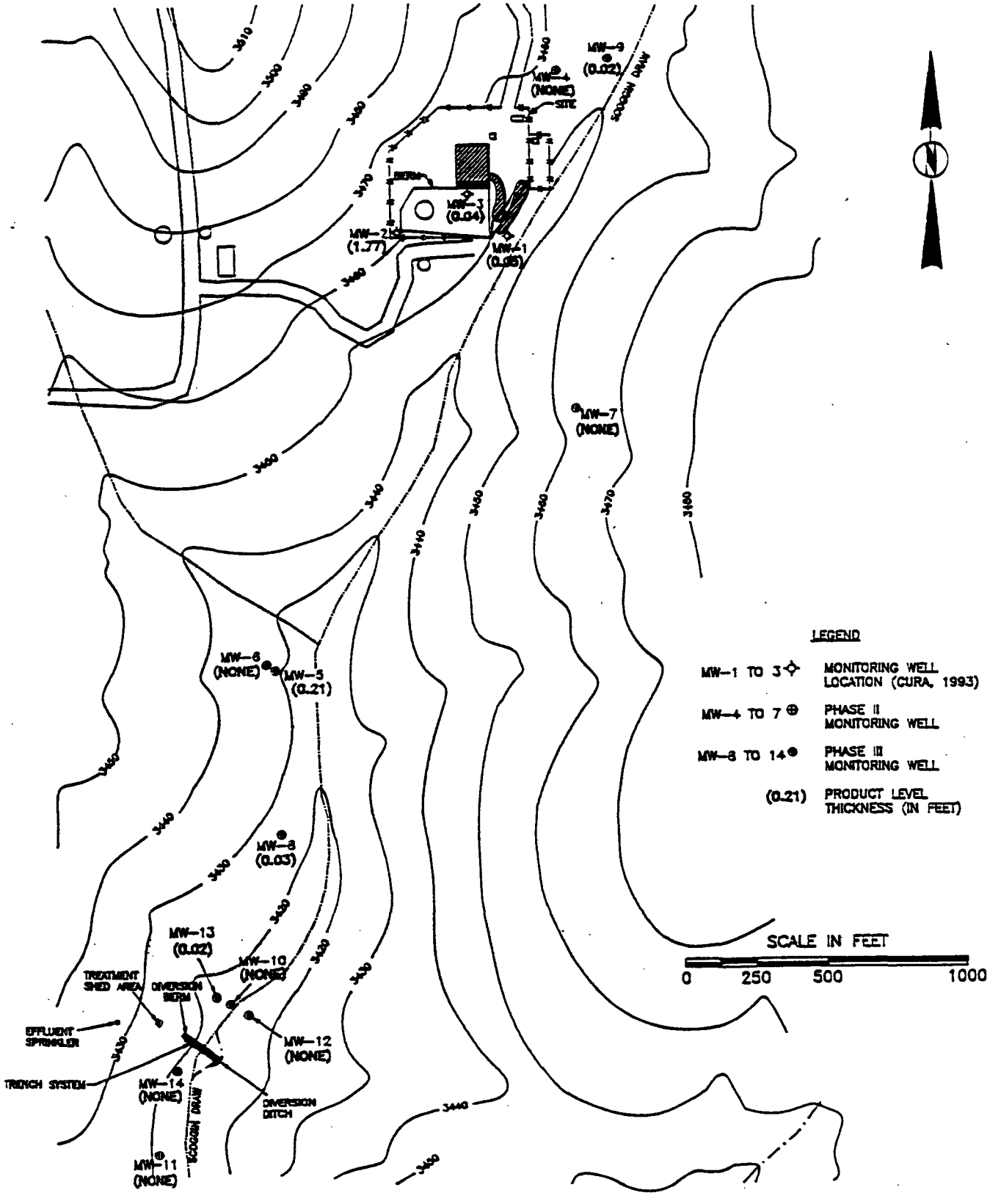
FIGURE 6



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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
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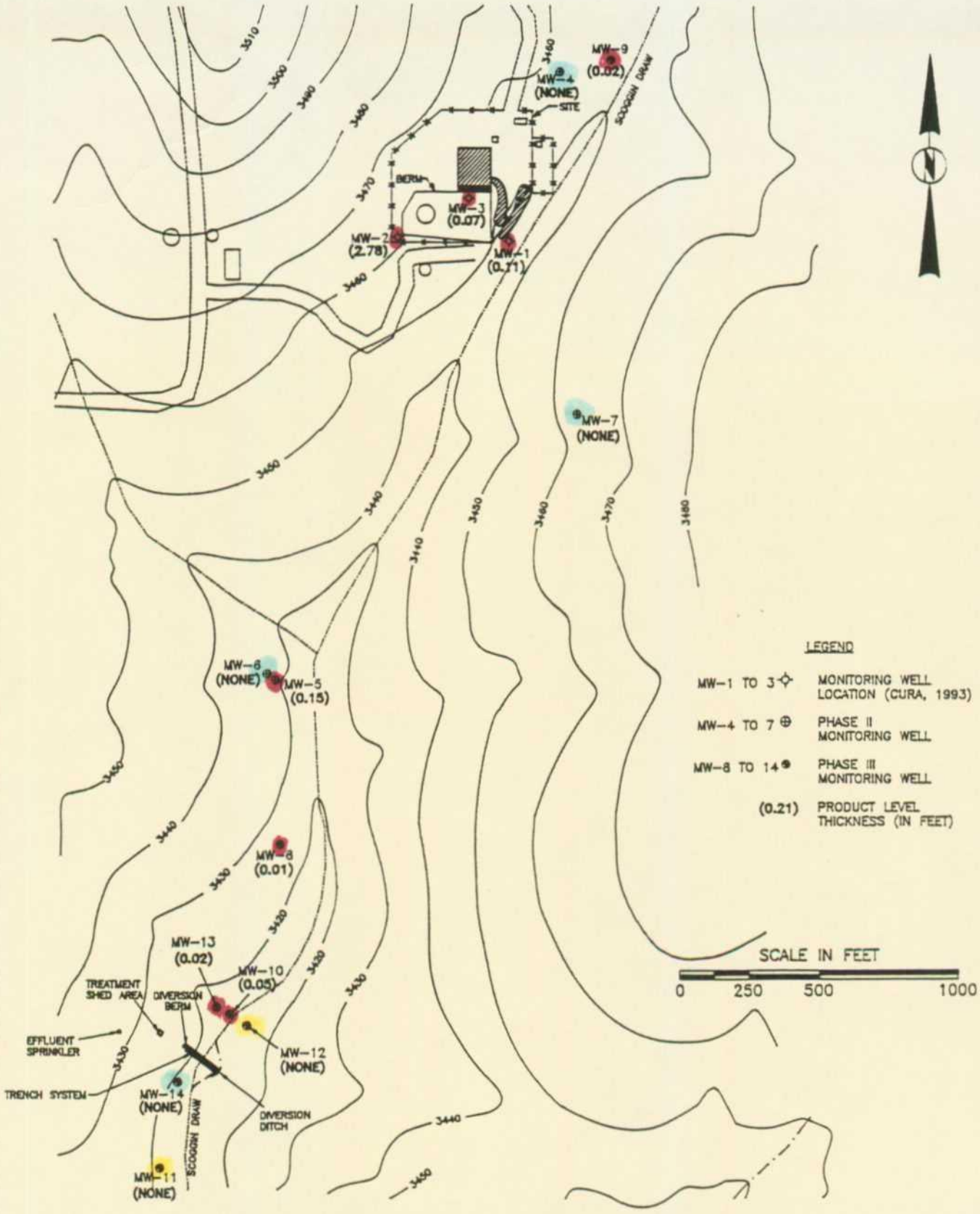
FIGURE 7



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FREE PRODUCT
THICKNESS MAP
JANUARY 10, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
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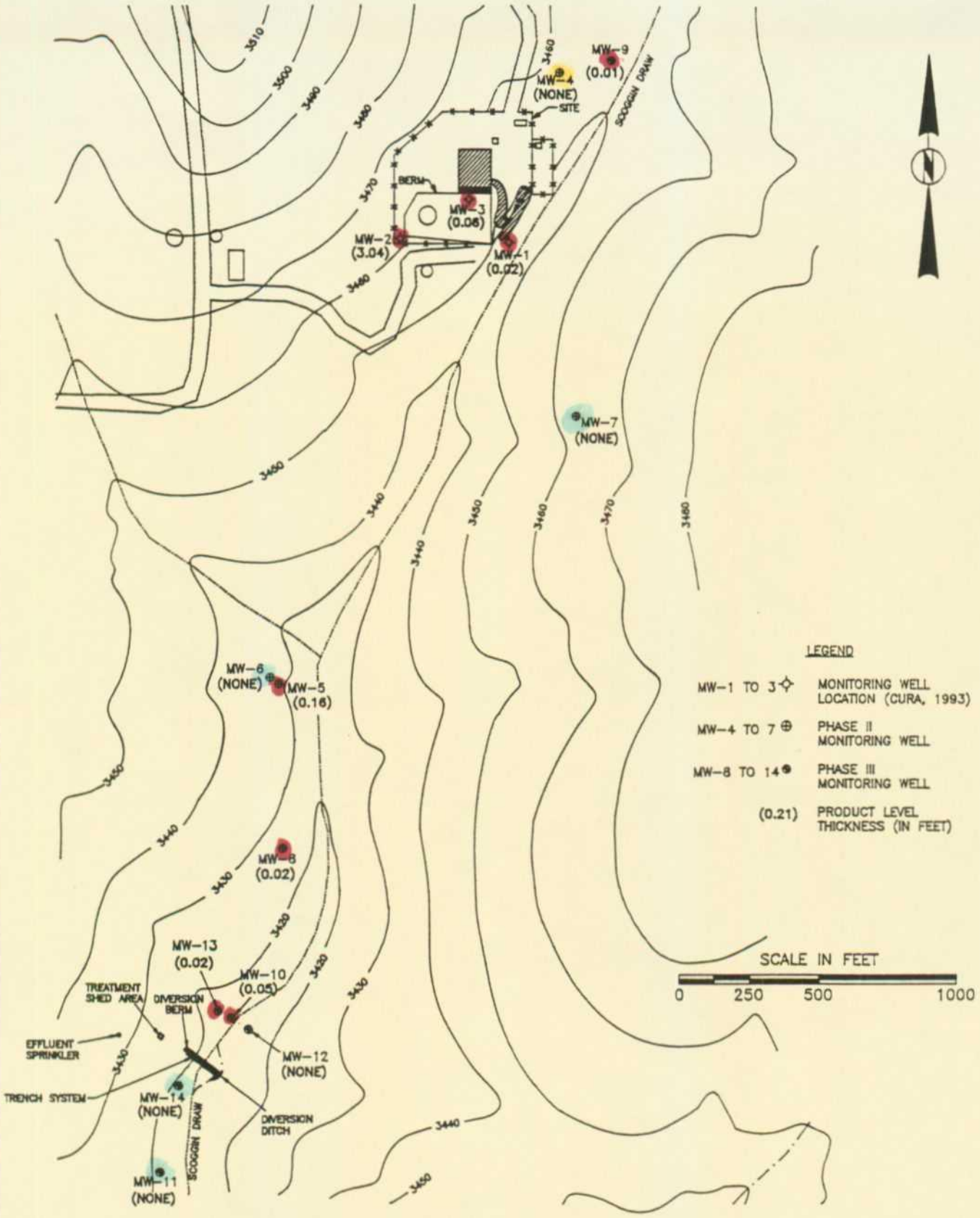
FIGURE 8



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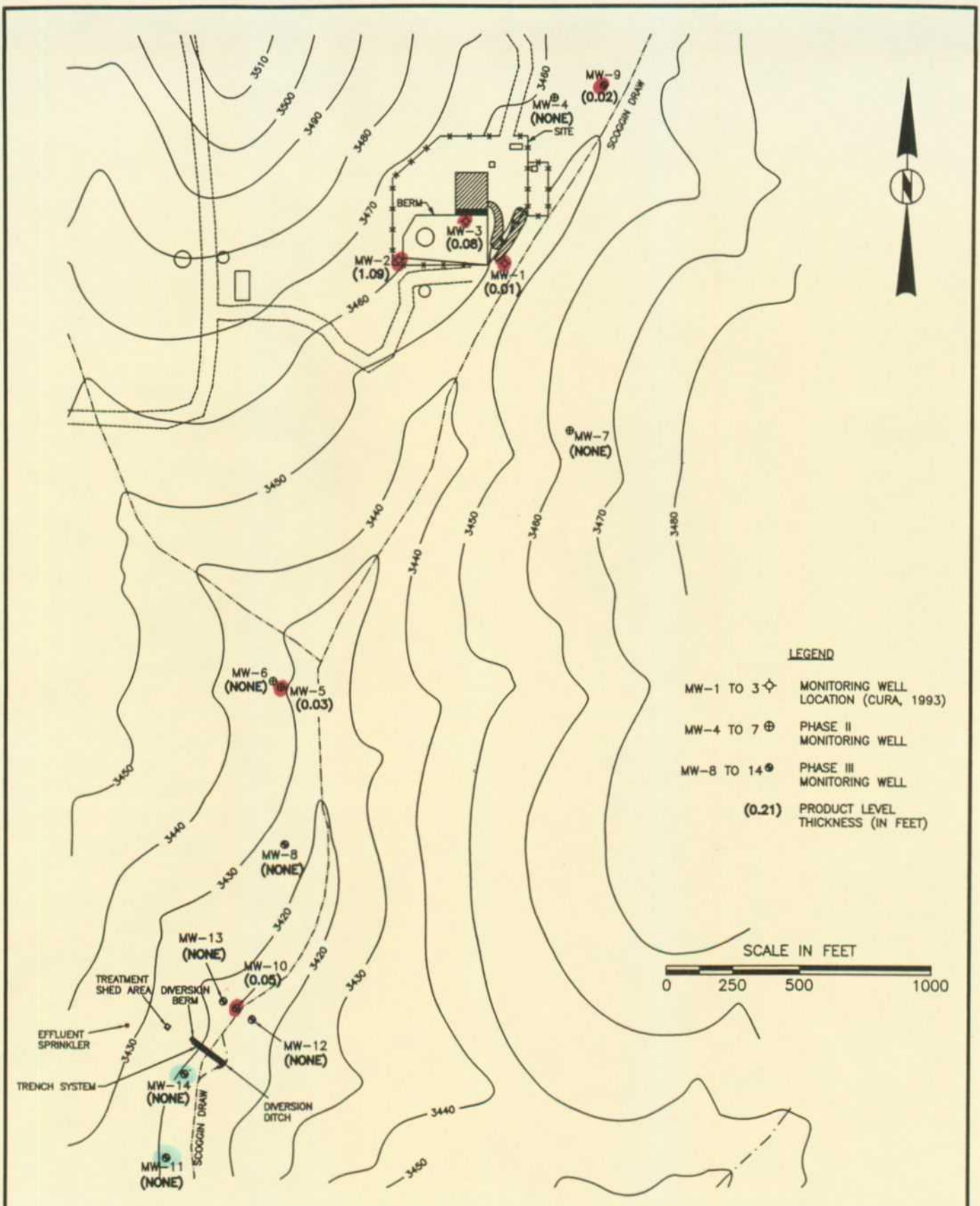
CAD NO.	2775.00-02
PRJ NO.	2775102L

FREE PRODUCT
THICKNESS MAP
APRIL 2, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 9



CHECK BY	HMM
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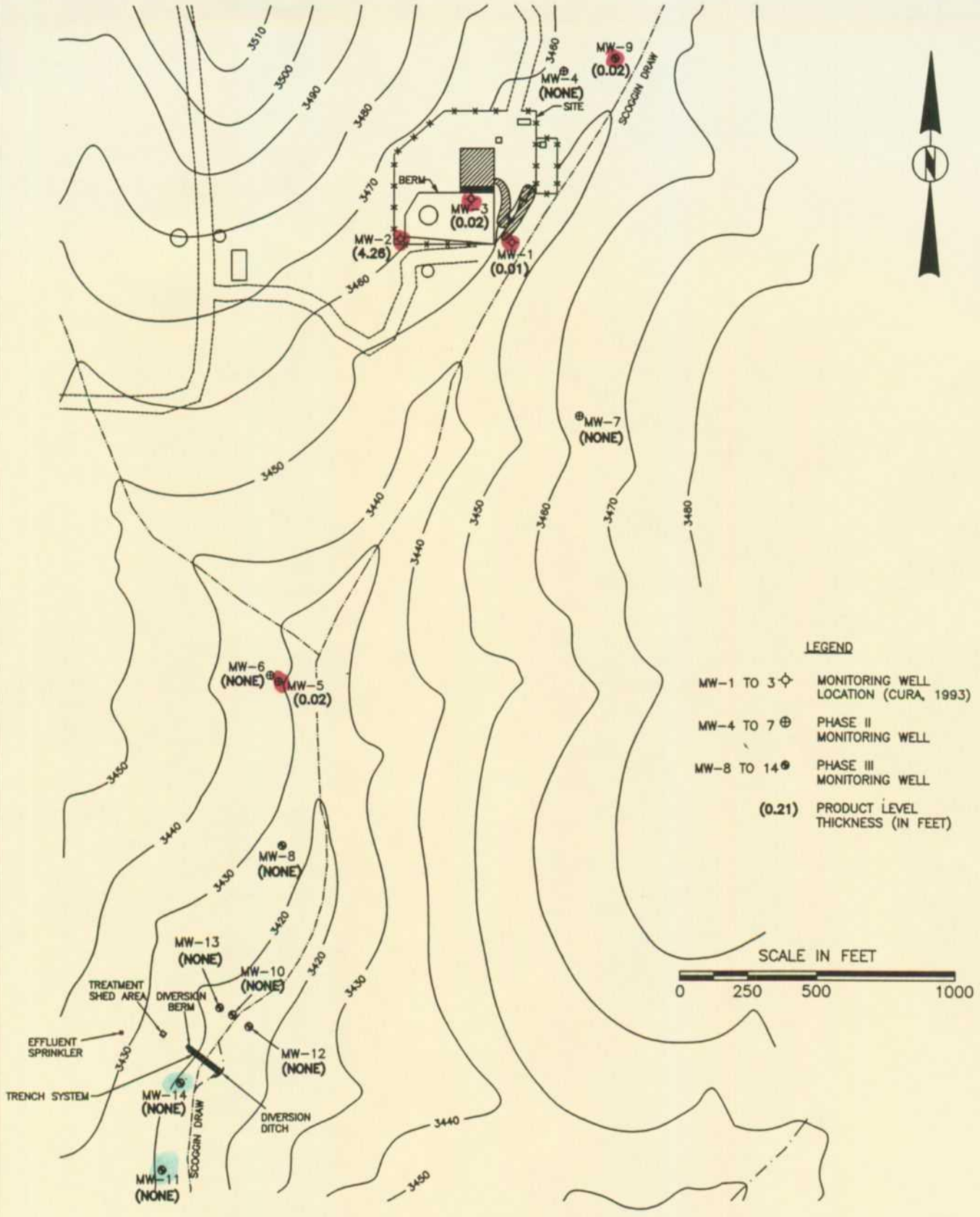
SCALE	AS SHOWN
CAD NO.	2775.00-02
PRJ NO.	2775102M

FREE PRODUCT
THICKNESS MAP
JULY 10, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
ENVIRONMENTAL CONSULTANTS

FIGURE 10



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PRJ NO.	2775102N

FREE PRODUCT
THICKNESS MAP
OCTOBER 17, 1997

AMOCO PIPELINE COMPANY
ARTESIA, NEW MEXICO

Clayton
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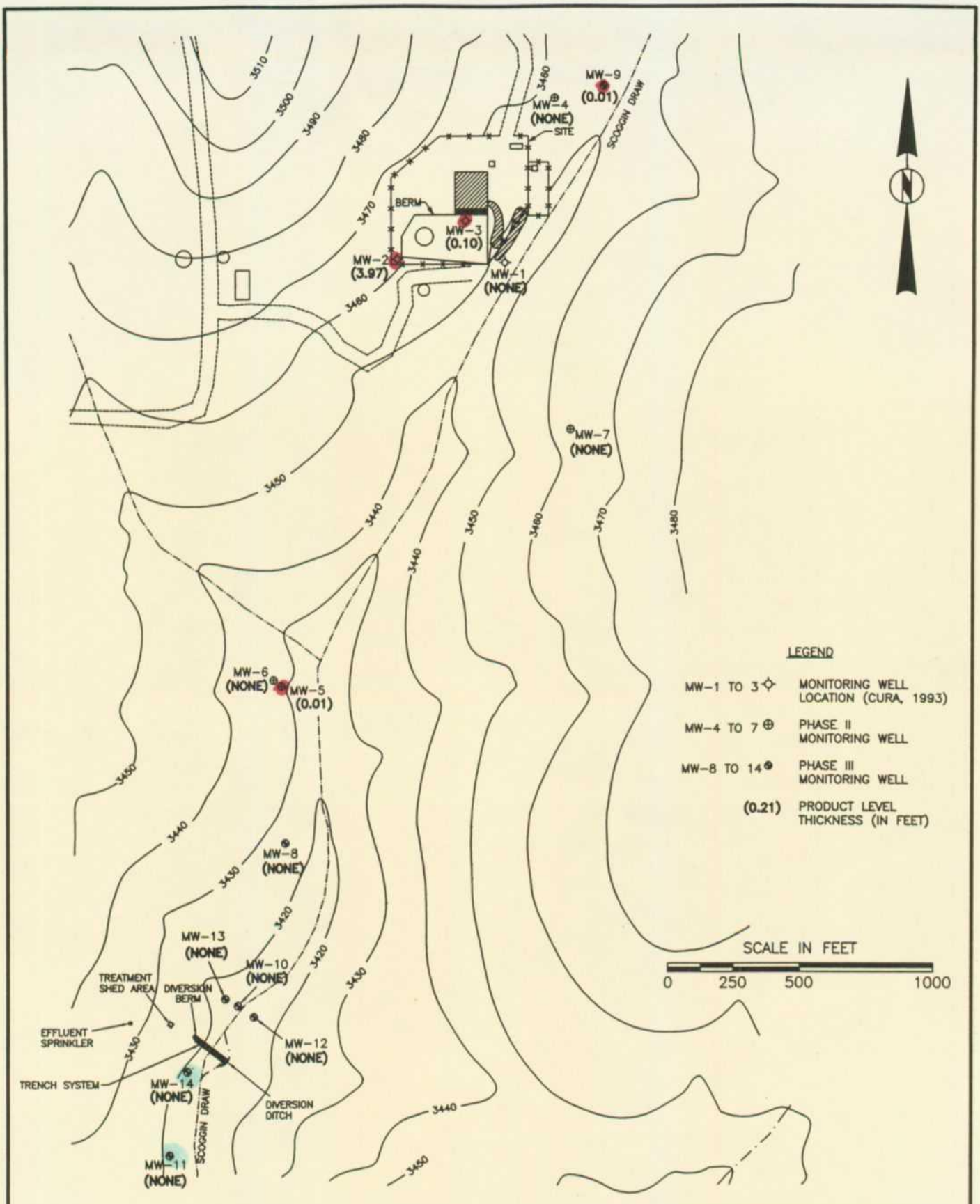
FIGURE 11



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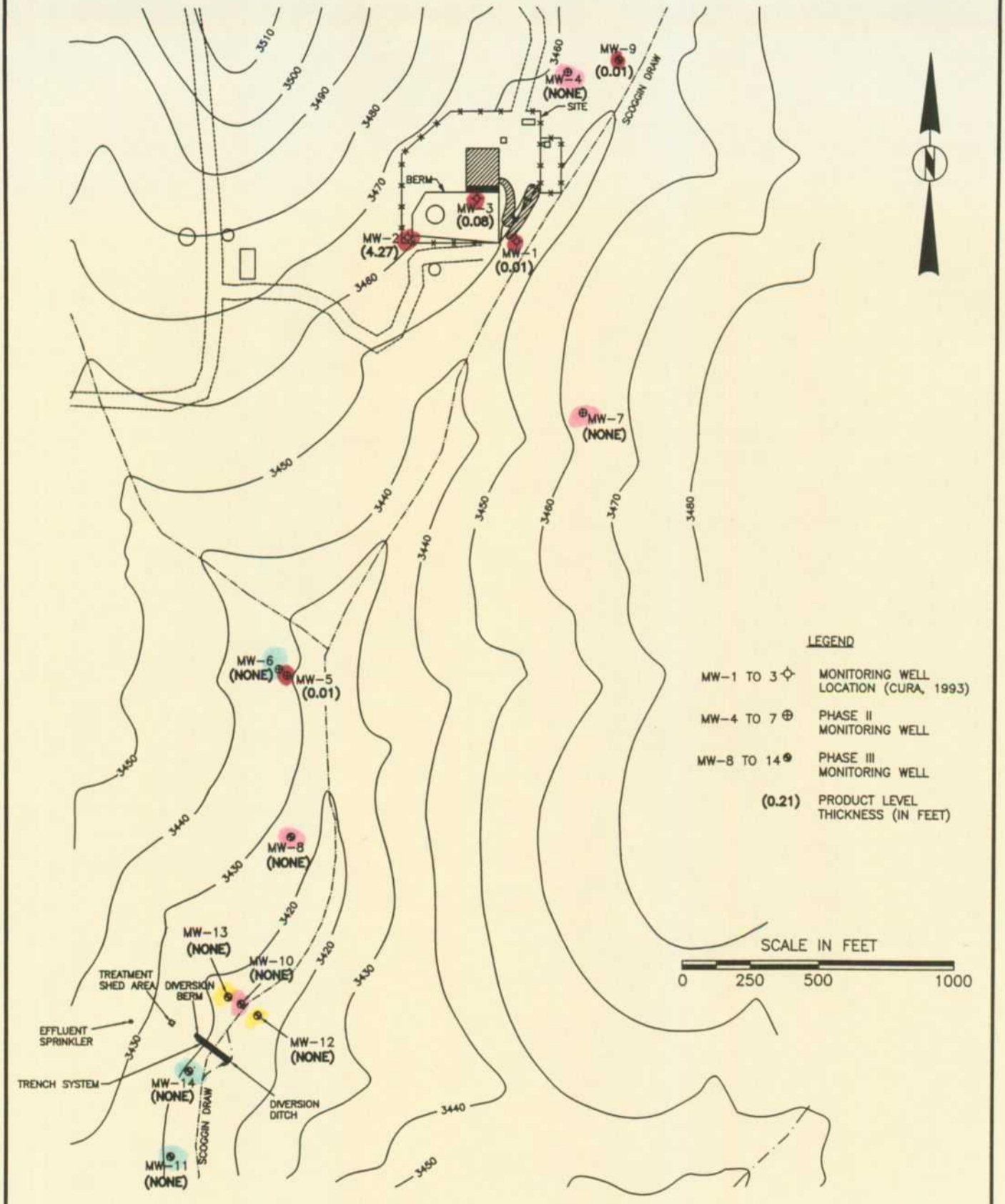
PRJ NO.	2775102o

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

TABLES

TABLE 1
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

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TABLE 2
Monitoring Well Water / Product Levels

Amoco Pipeline Company / Artesia, New Mexico

Well Identification	Date	Depth To Product (feet)	Depth To Water (feet)	Product Level Thickness (feet)	
MW-1	05/21/93		20.73	0.21	
	11/17/94	17.54	17.56	0.02	
	02/09/95	18.02	18.05	0.03	
	06/16/95	19.15	19.21	0.06	
	10/02/95	SKIM	16.48	SKIM	
	11/26/95	15.85	15.87	0.02	(1)
	04/16-17/96	14.32	14.33	0.01	
	07/06/96	15.55	15.57	0.02	
	09/30/96	11.70	11.75	0.05	
	01/10/97	12.79	12.90	0.11	
	04/02/97	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	NONE	
	4/18/98	13.75	13.76	0.01	
MW-2	05/21/93		27.56	1.75	
	11/17/94	23.28	26.67	3.39	
	02/09/95	23.98	26.50	2.52	
	06/16/95	25.63	26.45	0.82	
	10/02/95	22.01	26.18	4.17	
	11/26/95	21.23	26.17	4.94	(1)
	04/16-17/96	20.58	22.46	1.88	
	07/06/96	21.86	25.18	3.32	
	09/30/96	19.17	20.94	1.77	
	01/10/97	20.20	22.98	2.78	
	04/02/97	21.00	24.04	3.04	
	7/10/97	22.41	23.50	1.09	(1)
	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	
MW-3	05/21/93		17.81	1.36	
	11/17/94	13.07	13.65	0.58	
	02/09/95	13.75	14.32	0.57	
	06/16/95	15.20	15.84	0.64	
	10/02/95	10.69	11.43	0.74	
	11/26/95	9.69	10.41	0.72	(1)
	04/16-17/96	9.58	9.63	0.05	
	07/06/96	11.70	11.80	0.10	
	09/30/96	8.71	8.75	0.04	
	01/10/97	10.33	10.40	0.07	
	04/02/97	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	

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TABLE 2
Monitoring Well Water / Product Levels

Amoco Pipeline Company / Artesia, New Mexico

Well Identification	Date	Depth To Product (feet)	Depth To Water (feet)	Product Level Thickness (feet)
MW-4	11/17/94	NONE	28.28	NONE
	02/09/95	NONE	28.51	NONE
	06/16/95	NONE	29.58	NONE
	10/02/95	NONE	24.42	NONE
	11/26/95	NONE	22.61	NONE
	04/16-17/96	NONE	20.63	NONE
	07/06/96	NONE	26.44	NONE
	09/30/96	NONE	21.88	NONE
	01/10/97	NONE	25.24	NONE
	04/02/97	NONE	25.49	NONE
	4/18/98	NONE	25.02	NONE
MW-5	11/17/94	16.22	24.19	7.97
	02/09/95	16.84	24.85	8.01 (1)
	06/16/95	19.44	21.14	1.70
	10/02/95	16.19	17.85	1.66
	11/26/95	17.58	19.31	1.73 (1)
	04/16-17/96	17.04	17.25	0.21
	07/06/96	16.20	16.36	0.16
	09/30/96	11.17	11.38	0.21
	01/10/97	13.45	13.60	0.15
	04/02/97	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
MW-6	11/17/94	TRACE	14.53	TRACE
	02/09/95	NONE	15.02	NONE
	06/16/95	16.24	16.27	0.03
	10/02/95	NONE	13.55	NONE
	11/26/95	NONE	14.84	NONE
	04/16-17/96	NONE	13.80	NONE
	07/06/96	NONE	14.55	NONE
	09/30/96	NONE	9.62	NONE
	01/10/97	NONE	12.26	NONE
	04/02/97	NONE	12.03	NONE
	4/18/98	NONE	12.14	NONE

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TABLE 2
Monitoring Well Water / Product Levels

Amoco Pipeline Company / Artesia, New Mexico

Well Identification	Date	Depth To Product (feet)	Depth To Water (feet)	Product Level Thickness (feet)
MW-7	11/17/94	NONE	34.33	NONE
	02/09/95	NONE	34.67	NONE
	06/16/95	NONE	35.61	NONE
	10/02/95	NONE	33.79	NONE
	11/26/95	NONE	33.2	NONE
	04/16-17/96	NONE	30.95	NONE
	07/06/96	NONE	33.36	NONE
	09/30/96	NONE	29.15	NONE
	01/10/97	NONE	30.72	NONE
	04/02/97	NONE	31.85	NONE
	4/18/98	NONE	31.94	NONE
MW-8	11/17/94	13.69	14.95	1.26
	02/09/95	14.46	15.02	0.56
	06/16/95	15.50	16.41	0.91
	10/02/95	13.03	13.45	0.42
	11/26/95	14.16	14.71	0.55 (1)
	04/16-17/96	13.66	13.70	0.04
	07/05/96	13.05	13.07	0.02 (1)
	09/30/96	8.04	8.07	0.03
	01/10/97	9.89	9.90	0.01
	04/02/97	10.58	10.60	0.02
	7/10/97	NONE	12.59	NONE
	10/17/97	NONE	10.20	NONE
	1/18/98	NONE	10.08	NONE
	4/18/98	NONE	10.52	NONE
MW-9	11/17/94	23.07	23.10	0.03
	02/09/95	TRACE	23.41	TRACE
	06/16/95	TRACE	24.65	TRACE
	10/02/95	SKIM	20.73	SKIM
	11/26/95	SKIM	19.52	SKIM
	04/16-17/96	17.53	17.54	0.01
	07/06/96	21.20	21.23	0.03
	09/30/96	16.00	16.02	0.02
	01/10/97	17.55	17.57	0.02
	04/02/97	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

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TABLE 2
Monitoring Well Water / Product Levels

Amoco Pipeline Company / Artesia, New Mexico

Well Identification	Date	Depth To Product (feet)	Depth To Water (feet)	Product Level Thickness (feet)
MW-10	11/17/94	19.02	21.24	2.22
	02/09/95	19.74	22.36	2.62
	06/16/95	20.97	23.30	2.33
	10/02/95	18.49	19.55	1.06
	11/25/95	20.13	22.03	1.90 (1)
	04/16-17/96	20.26	20.88	0.62
	07/05/96	19.86	20.03	0.17 (1)
	09/30/96	NONE	15.62	NONE
	01/10/97	19.00	19.05	0.05
	04/02/97	19.35	19.40	0.05
	7/10/97	20.37	20.42	0.05
	10/17/97	NONE	16.58	NONE
	1/18/98	NONE	17.82	NONE
	4/18/98	NONE	18.27	NONE
MW-11	11/17/94	NONE	19.34	NONE
	02/09/95	NONE	19.61	NONE
	06/16/95	NONE	20.08	NONE
	10/02/95	NONE	19.74	NONE
	11/25/95	NONE	19.94	NONE
	04/16-17/96	NONE	19.68	NONE
	07/06/96	NONE	19.75	NONE
	09/30/96	NONE	18.65	NONE
	01/10/97	NONE	19.92	NONE
	04/02/97	NONE	14.50	NONE
	1/18/98	NONE	18.91	NONE
	4/18/98	NONE	19.07	NONE
MW-12	11/17/94	NONE	16.47	NONE
	02/09/95	NONE	16.78	NONE
	06/16/95	NONE	17.28	NONE
	10/02/95	NONE	16.03	NONE
	11/25/95	NONE	16.63	NONE
	04/16-17/96	NONE	16.55	NONE
	07/06/96	NONE	16.45	NONE
	09/30/96	NONE	13.81	NONE
	01/10/97	NONE	18.92	NONE
	04/02/97	NONE	15.20	NONE
	4/18/98	NONE	14.91	NONE

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TABLE 2
Monitoring Well Water / Product Levels

Amoco Pipeline Company / Artesia, New Mexico

Well Identification	Date	Depth To Product (feet)	Depth To Water (feet)	Product Level Thickness (feet)
MW-13	11/17/94	20.41	20.49	0.08
	02/09/95	20.84	20.87	0.03
	06/16/95	21.35	21.40	0.05
	10/02/95	19.35	19.44	0.09
	11/25/95	21.53	21.58	0.05 (1)
	04/16-17/96	21.82	21.90	0.08
	07/05/96	21.00	21.05	0.05 (1)
	09/30/96	16.40	16.42	0.02
	01/10/97	19.17	19.19	0.02
	04/02/97	18.50	18.52	0.02
	7/10/97	NONE	19.00	NONE
	10/17/97	NONE	18.03	NONE
	1/18/98	NONE	19.11	NONE
	4/18/98	NONE	19.60	NONE
MW-14	11/17/94	NONE	18.11	NONE
	02/09/95	NONE	18.45	NONE
	06/16/95	NONE	18.93	NONE
	10/02/95	NONE	18.63	NONE
	11/26/95	NONE	18.83	NONE
	04/16-17/96	NONE	18.55	NONE
	07/06/96	NONE	18.58	NONE
	09/30/96	NONE	17.63	NONE
	01/10/97	NONE	17.42	NONE
	04/02/97	NONE	17.82	NONE
	1/18/98	NONE	17.61	NONE
	4/18/98	NONE	17.71	NONE

NOTES:

(1) Well bailed after level measurements taken.

APPENDIX A

LABORATORY ANALYTICAL RESULTS

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622
(800) 807-2877

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

07/17/1997

NET Job Number: 97.08029

IEPA Cert. No.: 100221
WDNR Cert. No.: 999447130
A2LA Cert. No.: 0453-01

Enclosed is the Analytical and Quality Control reports for the following samples submitted to Bartlett Division of NET, Inc. for analysis.

Project Description: Amoco Pipeline Co. Artesia Station

Sample Number	Sample Description	Date Taken	Date Received
423121	Monitor Well #11, Grab	07/10/1997	07/11/1997
423122	Monitor Well #14, Grab	07/10/1997	07/11/1997
423123	Trip Blank		07/11/1997

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. These results apply only to the samples analyzed. Reproduction of this report only in whole is permitted. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Procedures used follow NET Standard Operating Procedures which reference the methods listed on your report. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Mary Pearson

Mary Pearson
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622
(800) 807-2877

ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

07/17/1997

Sample No. : 423121

NET Job No.: 97.08029

Sample Description: Monitor Well #11, Grab
Amoco Pipeline Co. Artesia Station

Date Taken: 07/10/1997
Time Taken: 13:10
IEPA Cert. No. 100221

Date Received: 07/11/1997
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Ethylbenzene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Toluene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Xylenes (total)	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Bromofluorobenzene (Surr)	103.5	%	07/16/1997	NA	njd	788	8020 (1)

NATIONAL ENVIRONMENTAL TESTING, INC.

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Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622
(800) 807-2877

ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

07/17/1997

Sample No. : 423122

NET Job No.: 97.08029

Sample Description: Monitor Well #14, Grab
Amoco Pipeline Co. Artesia Station

Date Taken: 07/10/1997
Time Taken: 14:40
IEPA Cert. No. 100221

Date Received: 07/11/1997
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Ethylbenzene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Toluene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Xylenes (total)	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Bromofluorobenzene (Surr)	104.0	%	07/16/1997	NA	njd	788	8020 (1)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

07/17/1997

Sample No. : 423123

NET Job No.: 97.08029

Sample Description: Trip Blank
Amoco Pipeline Co. Artesia Station

Date Taken:
Time Taken:
IEPA Cert. No. 100221

Date Received: 07/11/1997
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Ethylbenzene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Toluene	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Xylenes (total)	<1.0	ug/L	07/16/1997	1.0	njd	788	8020 (1)
Bromofluorobenzene (Surr)	115.5	%	07/16/1997	NA	njd	788	8020 (1)

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

07/17/1997

NET Job Number: 97.08029

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	788	20	19	95.0
Ethylbenzene	788	20	19	95.0
Toluene	788	20	19	95.0
Xylenes (total)	788	60	61	101.7
Bromofluorobenzene (Surr)	788	20	21.2	106.0

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

07/17/1997

NET Job Number: 97.08029

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	788	20	20	100.0
Ethylbenzene	788	20	19	95.0
Toluene	788	20	19	95.0
Xylenes (total)	788	60	61	101.7
Bromofluorobenzene (Surr)	788	20	22.2	111.0

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

07/17/1997

NET Job Number: 97.08029

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	788	20	19	95.0
Ethylbenzene	788	20	18	90.0
Toluene	788	20	19	95.0
Xylenes (total)	788	60	59	98.3
Bromofluorobenzene (Surr)	788	20	21.8	109.0

CCV - Continuing Calibration Verification

NATIONAL ENVIRONMENTAL TESTING, INC.

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QUALITY CONTROL REPORT

BLANK ANALYSIS

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

07/17/1997

NET Job Number: 97.08029

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis Results	Units	Reporting Limit	Analytical Method
UST VOLATILE COMPOUNDS-8020						8020 (1)
Benzene		788	<1.0	ug/L	1.0	8020 (1)
Ethylbenzene		788	<1.0	ug/L	1.0	8020 (1)
Toluene		788	<1.0	ug/L	1.0	8020 (1)
Xylenes (total)		788	<1.0	ug/L	1.0	8020 (1)
Bromofluorobenzene (Surr)		788	100.0	%	NA	8020 (1)

Advisory Control Limits for Blanks:

All compounds should be less than the Reporting Limit, except for phthalate esters, toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit.

NATIONAL ENVIRONMENTAL TESTING, INC.

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QUALITY CONTROL REPORT

LABORATORY CONTROL STANDARD

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

07/17/1997

NET Job Number: 97.08029

Analyte	Prep Batch Number	Run Batch Number	True Conc.	Conc. Found	LCS % Recovery
UST VOLATILE COMPOUNDS-8020					
Benzene		788	20	20	100.0
Ethylbenzene		788	20	19	95.0
Toluene		788	20	20	100.0
Xylenes (total)		788	60	62	103.3
Bromofluorobenzene (Surr)		788	20	22.9	114.5

NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	:	Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	:	Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	:	Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	:	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
TCLP	:	These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
Surr:	:	These initials are the abbreviation for surrogate. Surrogates are compounds that are chemically similar to the compounds of interest. They are part of the method quality control requirements.
%	:	Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
ICP	:	Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	:	Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	:	Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
PQL	:	Practical Quantitation Limit; the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

(1) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.

(2) ASTM "American Society for Testing Materials"

(3) Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.

(4) See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.

(5) Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.

(6) Methods 500 through 599: see "Methods for the Determination of Organic Compounds in Drinking Water," USEPA 600/4-88/039, Rev. 1988.

(7) See "Methods for the Determination of Metals in Environmental Samples", Supplement I EPA-600/R-94/111, May 1994.

(8) See "Standard Methods for the Examination of Water and Wastewater", 18th Ed., APHA, 1992.

(9) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986, Including Updates I and II.

(10) This method is from the 2nd Edition of "Test Methods for Evaluating Solid Waste", USEPA SW-846. It has been dropped from the 3rd Edition, 1986.

NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY Amoco Pipeline Co.
ADDRESS MC MB 63062 MB 7513 Chicago, IL 60680-7513
PHONE 312-856-7251 FAX 312-856-3731
PROJECT NAME/LOCATION Amoco Pipeline Co. Aurora Station
PROJECT NUMBER Facility 10195
PROJECT MANAGER MR. Douglas Earney

REPORT TO: H. Mittelhauser / D. Earney
INVOICE TO:
P.O. NO.
NET QUOTE NO.

MBF Services

SAMPLED BY Clayton McGrath II (PRINT NAME) — SIGNATURE
(PRINT NAME) — SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX 8020
7/10/97	13:10	Monitor Well #11	H2O	X		X					X
7/10/97	14:40	Monitor Well #14	H2O	X		X					X
		Trip Blank									

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes ✓ No
Is this work being conducted for regulatory enforcement action? Yes ___ No ___
Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other ___ None ___

COMMENTS

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) NO
FIELD FILTERED? YES (NO)
COC SEALS PRESENT AND INTACT? YES/NO N/A
VOLATILES FREE OF HEADSPACE? (YES) NO
TEMPERATURE UPON RECEIPT: 3.2°C Wet
Bottles supplied by NET? (YES) NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE 7/10/97

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
	7/10/97	16:35			7/10/97	1045	

METHOD OF SHIPMENT: FEDEX

REMARKS: Please Send Copy of Report ASAP Promptly To H. Mittelhauser #2775

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

NATIONAL ENVIRONMENTAL TESTING, INC.

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Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

09/22/1997

RECEIVED
SEP 25 1997

NET Job Number: 97.10983

IEPA Cert. No.: 100221
WDNR Cert. No.: 999447130
A2LA Cert. No.: 0453-01

Enclosed is the Analytical and Quality Control reports for the following samples submitted to Bartlett Division of NET, Inc. for analysis.

Project Description: Amoco Artesia Station

Sample Number	Sample Description	Date Taken	Date Received
433424	Monitor Well #11; Grab	09/14/1997	09/16/1997
433425	Monitor Well #14; Grab	09/14/1997	09/16/1997
433426	Trip Blank; Grab		09/16/1997

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. These results apply only to the samples analyzed. Reproduction of this report only in whole is permitted. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Procedures used follow NET Standard Operating Procedures which reference the methods listed on your report. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Mary Pearson

Mary Pearson
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

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Bartlett, IL 60103
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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

09/22/1997

Sample No. : 433424

NET Job No.: 97.10983

Sample Description: Monitor Well #11; Grab
Amoco Artesia Station

Date Taken: 09/14/1997
Time Taken: 14:15
IEPA Cert. No. 100221

Date Received: 09/16/1997
Time Received: 10:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Ethylbenzene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Toluene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Xylenes (total)	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Bromoflucrobenzene (Surr)	110.5	%	09/17/1997	NA	njd	805	8020 (1)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

09/22/1997

Sample No. : 433425

NET Job No.: 97.10983

Sample Description: Monitor Well #14; Grab
Amoco Artesia Station

Date Taken: 09/14/1997
Time Taken: 15:40
IEPA Cert. No. 100221

Date Received: 09/16/1997
Time Received: 10:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Ethylbenzene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Toluene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Xylenes (total)	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Bromofluorobenzene (Surr)	114.5	%	09/17/1997	NA	njd	805	8020 (1)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

09/22/1997

Sample No. : 433426

NET Job No.: 97.10983

Sample Description: Trip Blank; Grab
Amoco Artesia Station

Date Taken:
Time Taken:
IEPA Cert. No. 100221

Date Received: 09/16/1997
Time Received: 10:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Ethylbenzene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Toluene	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Xylenes (total)	<1.0	ug/L	09/17/1997	1.0	njd	805	8020 (1)
Bromofluorobenzene (Surr)	109.5	%	09/17/1997	NA	njd	805	8020 (1)

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

09/22/1997

NET Job Number: 97.10983

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	805	20	21	105.0
Ethylbenzene	805	20	21	105.0
Toluene	805	20	21	105.0
Xylenes (total)	805	60	64	106.7
Bromofluorobenzene (Surr)	805	20	21.7	108.5

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
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Mr. Hank Mittelhauser

09/22/1997

NET Job Number: 97.10983

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	805	20	21	105.0
Ethylbenzene	805	20	21	105.0
Toluene	805	20	21	105.0
Xylenes (total)	805	60	65	108.3
Bromofluorobenzene (Surr)	805	20	19.4	97.0

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT

BLANK ANALYSIS

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

09/22/1997

NET Job Number: 97.10983

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis Results	Units	Reporting Limit	Analytical Method
UST VOLATILE COMPOUNDS-8020						8020 (1)
Benzene		805	<1.0	ug/L	1.0	8020 (1)
Ethylbenzene		805	<1.0	ug/L	1.0	8020 (1)
Toluene		805	<1.0	ug/L	1.0	8020 (1)
Xylenes (total)		805	<1.0	ug/L	1.0	8020 (1)
Bromofluorobenzene (Surr)		805	108.5	%	NA	8020 (1)

Advisory Control Limits for Blanks:

All compounds should be less than the Reporting Limit, except for phthalate esters, toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit.

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QUALITY CONTROL REPORT

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

09/22/1997

NET Job Number: 97.10983

Analyte	Prep Batch Number	Run Batch Number	Matrix Spike Result	Sample Result	Spike Amount	Units	Percent Recovery	MSD Result	MSD Spike Amount	Units	Percent Recovery	MS/MSD RPD
UST VOLATILE COMPOUNDS-8020												
Benzene		805	20	<1.0	20	ug/L	100.0	19	20	ug/L	95.0	5.0
Ethylbenzene		805	20	<1.0	20	ug/L	100.0	19	20	ug/L	95.0	5.0
Toluene		805	20	<1.0	20	ug/L	100.0	19	20	ug/L	95.0	5.0
Xylenes (total)		805	63	<1.0	60	ug/L	105.0	59	60	ug/L	98.3	6.5

NOTE: Matrix Spike Samples may not be samples from this job.

Advisory Control Limits for MS/MSDs:

For Inorganic Parameters and GC Volatiles, the spike recovery should be 75 - 125% if the spike added value was greater than or equal to one fourth of the sample result value. If not, the control limits are not established. The RPD for the MS/MSD pair should be less than 20.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

RPD calculations are performed on the Percent Recovery calculated from the observed Matrix spike and Matrix Spike Duplicate results.

NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	:	Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	:	Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	:	Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	:	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
TCLP	:	These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
Surr:	:	These initials are the abbreviation for surrogate. Surrogates are compounds that are chemically similar to the compounds of interest. They are part of the method quality control requirements.
%	:	Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
ICP	:	Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	:	Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	:	Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
PQL	:	Practical Quantitation Limit; the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

(1) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.

(2) ASTM "American Society for Testing Materials"

(3) Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.

(4) See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.

(5) Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.

(6) Methods 500 through 599: see "Methods for the Determination of Organic Compounds in Drinking Water," USEPA 600/4-88/039, Rev. 1988.

(7) See "Methods for the Determination of Metals in Environmental Samples", Supplement I EPA-600/R-94/111, May 1994.

(8) See "Standard Methods for the Examination of Water and Wastewater", 18th Ed., APHA, 1992.

(9) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986, Including Updates I and II.

(10) This method is from the 2nd Edition of "Test Methods for Evaluating Solid Waste", USEPA SW-846. It has been dropped from the 3rd Edition, 1986.

NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

D. FARNEY
H. MITH 775

COMPANY Amoco Pipeline Co.
ADDRESS ML #B3062 P.O.B. 7513 Chicago, IL 60680-7513
PHONE 312-856-7251 FAX 312-856-3231
PROJECT NAME/LOCATION Amoco Aurora Station
PROJECT NUMBER
PROJECT MANAGER MR. Doug Farney

REPORT TO:
INVOICE TO:
P.O. NO.
NET QUOTE NO.

MGF Services

SAMPLED BY
(PRINT NAME) Clay Tom McFarland
SIGNATURE
(PRINT NAME)
SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX 8020
9/14/97	14:15	Monitor Well # 11 3 VOAs	H2O	X		X					X
9/14/97	15:40	Monitor Well # 14 3 VOAs	H2O	X		X					X
		Trip Blank 3 VOAs	H2O	X		X					X

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes V No
Is this work being conducted for regulatory enforcement action? Yes V No
Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other ___ None ___

COMMENTS

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO
FIELD FILTERED? YES / (NO)
COC SEALS PRESENT AND INTACT? ~~YES / NO~~ N/A
VOLATILES FREE OF HEADSPACE? (YES) ~~/ NO~~
TEMPERATURE UPON RECEIPT: 2.0° blue
Bottles supplied by NET? (YES) / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE 9/15/97

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
	9/15/97	5:22			9/16/97	10:00	J. Odell

METHOD OF SHIPMENT: FEDEX Delivery

REMARKS: Please Send Copy of Report Promptly to H. Mitchell @ 2775

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622
(800) 807-2877

RECEIVED
FEB - 2 1998

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

01/28/1998

NET Job Number: 98.00623

IEPA Cert. No.: 100221
WDNR Cert. No.: 999447130
A2LA Cert. No.: 0453-01

Enclosed is the Analytical and Quality Control reports for the following samples submitted to Bartlett Division of NET, Inc. for analysis.

Project Description: Artesia Pumping Facility

Sample Number	Sample Description	Date Taken	Date Received
453921	MW-11	01/18/1998	01/20/1998
453922	MW-14	01/18/1998	01/20/1998

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. These results apply only to the samples analyzed. Reproduction of this report only in whole is permitted. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Procedures used follow NET Standard Operating Procedures which reference the methods listed on your report. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Mary Pearson

Mary Pearson
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622
(800) 807-2877

ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

01/28/1998

Sample No. : 453921

NET Job No.: 98.00623

Sample Description: MW-11
Artesia Pumping Facility

Date Taken: 01/18/1998
Time Taken: 16:20
IEPA Cert. No. 100221

Date Received: 01/20/1998
Time Received: 10:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Ethylbenzene	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Toluene	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Xylenes (total)	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Bromofluorobenzene (Surr)	98.5	%	01/27/1998	NA	njd	843	8020 (1)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

01/28/1998

Sample No. : 453922

NET Job No.: 98.00623

Sample Description: MW-14
Artesia Pumping Facility

Date Taken: 01/18/1998
Time Taken: 17:30
IEPA Cert. No. 100221

Date Received: 01/20/1998
Time Received: 10:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILE COMPOUNDS-8020							
Benzene	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Ethylbenzene	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Toluene	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Xylenes (total)	<1.0	ug/L	01/27/1998	1.0	njd	843	8020 (1)
Bromofluorobenzene (Surr)	97.0	%	01/27/1998	NA	njd	843	8020 (1)

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Fax: (815) 874-5622
(800) 807-2877

QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

01/28/1998

NET Job Number: 98.00623

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	843	20	17	85.0
Ethylbenzene	843	20	19	95.0
Toluene	843	20	18	90.0
Xylenes (total)	843	60	61	101.7
Bromofluorobenzene (Surr)	843	20	19.2	96.0

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

01/28/1998

NET Job Number: 98.00623

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	843	20	17	85.0
Ethylbenzene	843	20	18	90.0
Toluene	843	20	18	90.0
Xylenes (total)	843	60	59	98.3
Bromofluorobenzene (Surr)	843	20	19.9	99.5

CCV - Continuing Calibration Verification

NATIONAL ENVIRONMENTAL TESTING, INC.

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

01/28/1998

NET Job Number: 98.00623

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILE COMPOUNDS-8020				
Benzene	843	20	17	85.0
Ethylbenzene	843	20	19	95.0
Toluene	843	20	18	90.0
Xylenes (total)	843	60	59	98.3
Bromofluorobenzene (Surr)	843	20	21.1	105.5

CCV - Continuing Calibration Verification

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
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Rockford, IL 61109
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Fax: (815) 874-5622
(800) 807-2877

QUALITY CONTROL REPORT

BLANK ANALYSIS

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

01/28/1998

NET Job Number: 98.00623

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis Results	Units	Reporting Limit	Analytical Method
UST VOLATILE COMPOUNDS-8020						8020 (1)
Benzene		843	<1.0	ug/L	1.0	8020 (1)
Ethylbenzene		843	<1.0	ug/L	1.0	8020 (1)
Toluene		843	<1.0	ug/L	1.0	8020 (1)
Xylenes (total)		843	<1.0	ug/L	1.0	8020 (1)
Bromofluorobenzene (Surr)		843	99.5	%	NA	8020 (1)

Advisory Control Limits for Blanks:

All compounds should be less than the Reporting Limit, except for phthalate esters, toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit.

NATIONAL ENVIRONMENTAL TESTING, INC.

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(800) 807-2877

QUALITY CONTROL REPORT

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

01/28/1998

NET Job Number: 98.00623

Analyte	Prep Batch Number	Run Batch Number	Matrix Spike Result	Sample Result	Spike Amount	Units	Percent Recovery	MSD Result	MSD Spike Amount	Units	Percent Recovery	MS/MSD RPD
UST VOLATILE COMPOUNDS-8020												
Benzene		843	170	150	20	ug/L	100.0	170	20	ug/L	100.0	0.0
Ethylbenzene		843	20	1.2	20	ug/L	94.0	20	20	ug/L	94.0	0.0
Toluene		843	18	<1.0	20	ug/L	90.0	20	20	ug/L	100.0	10.4
Xylenes (total)		843	59	1.5	60	ug/L	95.8	60	60	ug/L	97.5	1.8

NOTE: Matrix Spike Samples may not be samples from this job.

Advisory Control Limits for MS/MSDs:

For Inorganic Parameters and GC Volatiles, the spike recovery should be 75 - 125% if the spike added value was greater than or equal to one fourth of the sample result value. If not, the control limits are not established. The RPD for the MS/MSD pair should be less than 20.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

RPD calculations are performed on the Percent Recovery calculated from the observed Matrix spike and Matrix Spike Duplicate results.

NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	:	Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	:	Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	:	Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	:	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
TCLP	:	These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
Surr:	:	These initials are the abbreviation for surrogate. Surrogates are compounds that are chemically similar to the compounds of interest. They are part of the method quality control requirements.
%	:	Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
ICP	:	Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	:	Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	:	Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
PQL	:	Practical Quantitation Limit; the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

(1) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.

(2) ASTM "American Society for Testing Materials"

(3) Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.

(4) See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.

(5) Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.

(6) Methods 500 through 599: see "Methods for the Determination of Organic Compounds in Drinking Water," USEPA 600/4-88/039, Rev. 1988.

(7) See "Methods for the Determination of Metals in Environmental Samples", Supplement I EPA-600/R-94/111, May 1994.

(8) See "Standard Methods for the Examination of Water and Wastewater", 18th Ed., APHA, 1992.

(9) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986, Including Updates I and II.

(10) This method is from the 2nd Edition of "Test Methods for Evaluating Solid Waste", USEPA SW-846. It has been dropped from the 3rd Edition, 1986.

NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

H. Mitchelhouse
D. Feeney.

COMPANY Amoco Pipeline Company
ADDRESS MC P06302L2 POB 7513 Chicago IL.
PHONE 312 856 4725 FAX 312 856 5731
PROJECT NAME/LOCATION Amoco Pipeline Co. Artesia Station
PROJECT NUMBER Artesia Pumping Facility
PROJECT MANAGER MR. Douglas Feeney

REPORT TO:
INVOICE TO: Amoco Pipeline Co.
P.O. NO.
NET QUOTE NO.

MBF Services

SAMPLED BY
Clayton M Sharpe (PRINT NAME) Clayton M Sharpe (SIGNATURE)
(PRINT NAME) (SIGNATURE)

ANALYSES

BTEX 8020

RECEIVED JAN 26

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes V No
Is this work being conducted for regulatory enforcement action? Yes No
Which regulations apply: RCRA NPDES Wastewater UST Drinking Water Other None

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER
1/14/98	16:25	3 40mL) Voas MW-11	H2O	X		X				
1/14/98	17:35	3 40mL) Voas MW-14	H2O	X		X				

COMMENTS

Any Questions please call H. Mitchelhouse @ (630) 369-0201

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT:
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS DATE

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
Clayton M Sharpe	1/14/98	14:50					H. Mitchelhouse #2775

METHOD OF SHIPMENT: FEDEX

REMARKS: SEND COPY OF THE REPORT ASAP TO.

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: Amoco Pipeline Company
ADDRESS: MC P06 3022 POB 7513 Chicago IL
PHONE: 312 856 7251 FAX: 312 8565731
PROJECT NAME/LOCATION: Amoco Pipeline Co. Artesia station
PROJECT NUMBER: Artesia Pumping Facility
PROJECT MANAGER: Mr. Douglas Emery

REPORT TO: H. Mittelhauser D. Emery
INVOICE TO: Amoco Pipeline Co.
P.O. NO.
NET QUOTE NO.

MBF Services

SAMPLED BY
(PRINT NAME) Clayton M Barnhill SIGNATURE Clayton M Barnhill
(PRINT NAME) SIGNATURE

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes ✓ No
Is this work being conducted for regulatory enforcement action? Yes No
Which regulations apply: RCRA UST Other NPDES Wastewater Drinking Water None

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO_3	H_2SO_4	OTHER	BTEX 8020 (ANALYSES)	COMMENTS
1/18/98	16:20	3 (40ml) Voas MW-11	H_2O	X		X					X	
1/18/98	17:30	3 (40ml) Voas MW-14	H_2O	X		X					X	

COMMENTS: Any Questions please Call - H. Mittelhauser @ (630) 369-0201

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO
FIELD FILTERED? YES / (NO)
COC SEALS PRESENT AND INTACT? ~~YES / NO~~ N/A
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT: 2.4°C Wet Ice
Bottles supplied by NET? (YES) / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS DATE

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
Clayton M Barnhill	1/19/98	14:50			1/20/98	10:00	J. Dell

METHOD OF SHIPMENT: FEDEX

REMARKS: SEND COPY OF THE REPORT ASAP TO. H. Mittelhauser # 2775

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

1305

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103

Tel: (800) 378-5700
Fax: (630) 289-5445

Rockford Customer
Service Center
3548 35th Street
Rockford, IL 61109

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

04/30/1998

NET Job Number: 98.05248

IEPA Cert. No.: 100221
WDNR Cert. No.: 999447130
A2LA Cert. No.: 0453-01

Enclosed is the Analytical and Quality Control reports for the following samples submitted to Bartlett Division of NET, Inc. for analysis.

Project Description: Amoco Artesia Station - Facility #10195

Sample Number	Sample Description	Date Taken	Date Received
469498	Monitor Well #11	04/18/1998	04/21/1998
469499	Monitor Well #14	04/18/1998	04/21/1998
469500	Monitor Well #12	04/18/1998	04/21/1998
469501	Monitor Well #10	04/18/1998	04/21/1998
469502	Monitor Well #13	04/18/1998	04/21/1998
469503	Monitor Well #8	04/18/1998	04/21/1998
469504	Monitor Well #6	04/18/1998	04/21/1998
469505	Monitor Well #7	04/18/1998	04/21/1998
469506	Monitor Well #4	04/18/1998	04/21/1998
469507	Trip Blank		04/21/1998

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. These results apply only to the samples analyzed. Reproduction of this report only in whole is permitted. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Procedures used follow NET Standard Operating Procedures which reference the methods listed on your report. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Mary Pearson

Mary Pearson
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (800) 378-5700
Fax: (630) 289-5445

Rockford Customer
Service Center
3548 35th Street
Rockford, IL 61109

ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

04/30/1998

Sample No. : 469498

NET Job No.: 98.05248

Sample Description: Monitor Well #11
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 11:41
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Toluene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Xylenes, Total	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Surr: Toluene-d8	104.0	%	04/23/1998	88-110	llj	2282	8260A (9)
Surr: Bromofluorobenzene	92.4	%	04/23/1998	86-115	llj	2282	8260A (9)
Surr: Dibromofluoromethane	106.6	%	04/23/1998	86-118	llj	2282	8260A (9)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

04/30/1998

Sample No. : 469499

NET Job No.: 98.05248

Sample Description: Monitor Well #14
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 12:32
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Toluene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Xylenes, Total	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Surr: Toluene-d8	103.4	%	04/23/1998	88-110	llj	2282	8260A (9)
Surr: Bromofluorobenzene	92.0	%	04/23/1998	86-115	llj	2282	8260A (9)
Surr: Dibromofluoromethane	108.0	%	04/23/1998	86-118	llj	2282	8260A (9)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563

04/30/1998

Sample No. : 469500

NET Job No.: 98.05248

Sample Description: Monitor Well #12
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 13:21
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	3.9	ug/L	04/23/1998	1.0	11j	2282	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/23/1998	1.0	11j	2282	8260A (9)
Toluene	<1.0	ug/L	04/23/1998	1.0	11j	2282	8260A (9)
Xylenes, Total	<1.0	ug/L	04/23/1998	1.0	11j	2282	8260A (9)
Surr: Toluene-d8	105.2	%	04/23/1998	88-110	11j	2282	8260A (9)
Surr: Bromofluorobenzene	95.4	%	04/23/1998	86-115	11j	2282	8260A (9)
Surr: Dibromofluoromethane	108.0	%	04/23/1998	86-118	11j	2282	8260A (9)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
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Suite 206
Naperville, IL 60563

04/30/1998

Sample No. : 469501

NET Job No.: 98.05248

Sample Description: Monitor Well #10
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 14:12
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	91	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Toluene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Xylenes, Total	20	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Surr: Toluene-d8	107.6	%	04/23/1998	88-110	llj	2282	8260A (9)
Surr: Bromofluorobenzene	93.2	%	04/23/1998	86-115	llj	2282	8260A (9)
Surr: Dibromofluoromethane	106.2	%	04/23/1998	86-118	llj	2282	8260A (9)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
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04/30/1998

Sample No. : 469502

NET Job No.: 98.05248

Sample Description: Monitor Well #13
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 15:25
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Ethyl Benzene	6.1	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Toluene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Xylenes, Total	13	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Surr: Toluene-d8	108.0	%	04/29/1998	88-110	pll	2290	8260A (9)
Surr: Bromofluorobenzene	88.0	%	04/29/1998	86-115	pll	2290	8260A (9)
Surr: Dibromofluoromethane	96.0	%	04/29/1998	86-118	pll	2290	8260A (9)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
CLAYTON ENVIRONMENTAL
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04/30/1998

Sample No. : 469503

NET Job No.: 98.05248

Sample Description: Monitor Well #8
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 16:45
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	3,800	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Ethyl Benzene	480	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Toluene	820	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Xylenes, Total	1,100	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Surr: Toluene-d8	100.0	%	04/29/1998	88-110	pll	2290	8260A (9)
Surr: Bromofluorobenzene	88.0	%	04/29/1998	86-115	pll	2290	8260A (9)
Surr: Dibromofluoromethane	98.0	%	04/29/1998	86-118	pll	2290	8260A (9)

VOA ANALYZED AT 50X DILUTION

NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
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04/30/1998

Sample No. : 469504

NET Job No.: 98.05248

Sample Description: Monitor Well #6
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 17:40
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Toluene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Xylenes, Total	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Surr: Toluene-d8	104.0	%	04/29/1998	88-110	pll	2290	8260A (9)
Surr: Bromofluorobenzene	88.0	%	04/29/1998	86-115	pll	2290	8260A (9)
Surr: Dibromofluoromethane	98.0	%	04/29/1998	86-118	pll	2290	8260A (9)

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ANALYTICAL REPORT

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04/30/1998

Sample No. : 469505

NET Job No.: 98.05248

Sample Description: Monitor Well #7
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 18:45
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	120	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Toluene	<1.0	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Xylenes, Total	7.7	ug/L	04/23/1998	1.0	llj	2282	8260A (9)
Surr: Toluene-d8	107.0	%	04/23/1998	88-110	llj	2282	8260A (9)
Surr: Bromofluorobenzene	96.6	%	04/23/1998	86-115	llj	2282	8260A (9)
Surr: Dibromofluoromethane	108.4	%	04/23/1998	86-118	llj	2282	8260A (9)

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
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04/30/1998

Sample No. : 469506

NET Job No.: 98.05248

Sample Description: Monitor Well #4
Amoco Artesia Station - Facility #10195

Date Taken: 04/18/1998
Time Taken: 19:15
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	750	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Ethyl Benzene	100	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Toluene	130	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Xylenes, Total	150	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Surr: Toluene-d8	100.0	%	04/29/1998	88-110	pll	2290	8260A (9)
Surr: Bromofluorobenzene	90.0	%	04/29/1998	86-115	pll	2290	8260A (9)
Surr: Dibromofluoromethane	96.0	%	04/29/1998	86-118	pll	2290	8260A (9)

VOA ANALYZED AT 50X DILUTION

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ANALYTICAL REPORT

Mr. Hank Mittelhauser
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04/30/1998

Sample No. : 469507

NET Job No.: 98.05248

Sample Description: Trip Blank
Amoco Artesia Station - Facility #10195

Date Taken:
Time Taken:
IEPA Cert. No. 100221

Date Received: 04/21/1998
Time Received: 10:45
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
UST VOLATILES 8260 - AQUEOUS							
Benzene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Ethyl Benzene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Toluene	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Xylenes, Total	<1.0	ug/L	04/29/1998	1.0	pll	2290	8260A (9)
Surr: Toluene-d8	100.0	%	04/29/1998	88-110	pll	2290	8260A (9)
Surr: Bromofluorobenzene	90.0	%	04/29/1998	86-115	pll	2290	8260A (9)
Surr: Dibromofluoromethane	98.0	%	04/29/1998	86-118	pll	2290	8260A (9)

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QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

04/30/1998

NET Job Number: 98.05248

Analyte	Run Batch Number	CCV True Conc.	Conc. Found	Percent Recovery
UST VOLATILES 8260 - AQUEOUS				
Benzene	2282	50.0	49.7	99.4
Ethyl Benzene	2282	50.0	49.6	99.2
Toluene	2282	50.0	48.3	96.6
Xylenes, Total	2282	150	150	100.0
UST VOLATILES 8260 - AQUEOUS				
Benzene	2290	50.0	49.0	98.0
Ethyl Benzene	2290	50.0	48.0	96.0
Toluene	2290	50.0	48.0	96.0
Xylenes, Total	2290	150	144	96.0

CCV - Continuing Calibration Verification

NATIONAL ENVIRONMENTAL TESTING, INC.

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QUALITY CONTROL REPORT

BLANK ANALYSIS

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

04/30/1998

NET Job Number: 98.05248

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis Results	Units	Reporting Limit	Analytical Method
UST VOLATILES 8260 - AQUEOUS						8260A (9)
Benzene		2282	<1.0	ug/L	1.0	8260A (9)
Ethyl Benzene		2282	<1.0	ug/L	1.0	8260A (9)
Toluene		2282	<1.0	ug/L	1.0	8260A (9)
Xylenes, Total		2282	<1.0	ug/L	1.0	8260A (9)
Surr: Dibromofluoromethane		2282	101.8	%	86-118	8260A (9)
Surr: Toluene-d8		2282	101.6	%	88-110	8260A (9)
Surr: Bromofluorobenzene		2282	92.4	%	86-115	8260A (9)
UST VOLATILES 8260 - AQUEOUS						8260A (9)
Benzene		2282	<1.0	ug/L	1.0	8260A (9)
Ethyl Benzene		2282	<1.0	ug/L	1.0	8260A (9)
Toluene		2282	<1.0	ug/L	1.0	8260A (9)
Xylenes, Total		2282	<1.0	ug/L	1.0	8260A (9)
Surr: Dibromofluoromethane		2282	106.4	%	86-118	8260A (9)
Surr: Toluene-d8		2282	103.6	%	88-110	8260A (9)
Surr: Bromofluorobenzene		2282	101.4	%	86-115	8260A (9)
UST VOLATILES 8260 - AQUEOUS						8260A (9)
Benzene		2290	<1.0	ug/L	1.0	8260A (9)
Ethyl Benzene		2290	<1.0	ug/L	1.0	8260A (9)
Toluene		2290	<1.0	ug/L	1.0	8260A (9)
Xylenes, Total		2290	<1.0	ug/L	1.0	8260A (9)
Surr: Dibromofluoromethane		2290	96.0	%	86-118	8260A (9)
Surr: Toluene-d8		2290	98.0	%	88-110	8260A (9)
Surr: Bromofluorobenzene		2290	92.0	%	86-115	8260A (9)

Advisory Control Limits for Blanks:

All compounds should be less than the Reporting Limit, except for phthalate esters, toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit.

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QUALITY CONTROL REPORT

LABORATORY CONTROL STANDARD

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

04/30/1998

NET Job Number: 98.05248

Analyte	Prep Batch Number	Run Batch Number	True Conc.	Conc. Found	LCS % Recovery
UST VOLATILES 8260 - AQUEOUS					
Benzene		2282	20.0	19.3	96.5
Benzene		2282	20.0	16.8	84.0
Ethyl Benzene		2282	20.0	20.0	100.0
Ethyl Benzene		2282	20.0	17.6	88.0
Toluene		2282	20.0	20.2	101.0
Toluene		2282	20.0	16.8	84.0
Xylenes, Total		2282	60.0	55.8	93.0
Xylenes, Total		2282	60.0	52.8	88.0
Surr: Dibromofluoromethane		2282	50.0	52.1	104.2
Surr: Dibromofluoromethane		2282	50.0	51.4	102.8
Surr: Toluene-d8		2282	50.0	52.4	104.8
Surr: Toluene-d8		2282	50.0	51.6	103.2
Surr: Bromofluorobenzene		2282	50.0	48.6	97.2
Surr: Bromofluorobenzene		2282	50.0	50.8	101.6
UST VOLATILES 8260 - AQUEOUS					
Benzene		2290	20.0	19.0	95.0
Ethyl Benzene		2290	20.0	19.0	95.0
Toluene		2290	20.0	19.0	95.0
Xylenes, Total		2290	60.0	55.0	91.7
Surr: Dibromofluoromethane		2290	50.0	47.0	94.0
Surr: Toluene-d8		2290	50.0	49.0	98.0
Surr: Bromofluorobenzene		2290	50.0	47.0	94.0

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QUALITY CONTROL REPORT

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

CLAYTON ENVIRONMENTAL
1240 Iroquois Drive
Suite 206
Naperville, IL 60563
Mr. Hank Mittelhauser

04/30/1998

NET Job Number: 98.05248

Analyte	Prep Batch Number	Run Batch Number	Matrix Spike Result	Sample Result	Spike Amount	Units	Percent Recovery	MSD Result	MSD Spike Amount	Units	Percent Recovery	MS/MSD RPD
UST VOLATILES 8260 - AQUEOU												
Benzene		2282	18.6	<1.0	20.0	ug/L	93.0	18.9	20.0	ug/L	94.5	1.6
Ethyl Benzene		2282	18.7	<1.0	20.0	ug/L	93.5	18.2	20.0	ug/L	91.0	2.7
Toluene		2282	18.6	<1.0	20.0	ug/L	93.0	18.2	20.0	ug/L	91.0	2.2
Xylenes, Total		2282	51.4	<60.0	60.0	ug/L	85.7	50.4	60.0	ug/L	84.0	2.0
UST VOLATILES 8260 - AQUEOU												
Benzene		2290	21.0	<1.0	20.0	ug/L	105.0	19.0	20.0	ug/L	95.0	9.9
Ethyl Benzene		2290	19.0	<1.0	20.0	ug/L	95.0	18.0	20.0	ug/L	90.0	5.4
Toluene		2290	18.0	<1.0	20.0	ug/L	90.0	18.0	20.0	ug/L	90.0	0.0
Xylenes, Total		2290	58.0	<1.0	60.0	ug/L	96.7	56.0	60.0	ug/L	93.3	3.6

NOTE: Matrix Spike Samples may not be samples from this job.

Advisory Control Limits for MS/MSDs:

For Inorganic Parameters and GC Volatiles, the spike recovery should be 75 - 125% if the spike added value was greater than or equal to one fourth of the sample result value. If not, the control limits are not established. The RPD for the MS/MSD pair should be less than 20.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

RPD calculations are performed on the Percent Recovery calculated from the observed Matrix spike and Matrix Spike Duplicate results.

NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	:	Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	:	Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	:	Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	:	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
TCLP	:	These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
Surr:	:	These initials are the abbreviation for surrogate. Surrogates are compounds that are chemically similar to the compounds of interest. They are part of the method quality control requirements.
%	:	Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
ICP	:	Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	:	Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	:	Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
PQL	:	Practical Quantitation Limit; the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

(1) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.

(2) ASTM "American Society for Testing Materials"

(3) Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.

(4) See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.

(5) Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.

(6) Methods 500 through 599: see "Methods for the Determination of Organic Compounds in Drinking Water," USEPA 600/4-88/039, Rev. 1988.

(7) See "Methods for the Determination of Metals in Environmental Samples", Supplement I EPA-600/R-94/111, May 1994.

(8) See "Standard Methods for the Examination of Water and Wastewater", 18th Ed., APHA, 1992.

(9) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986, Including Updates I and II.

(10) This method is from the 2nd Edition of "Test Methods for Evaluating Solid Waste", USEPA SW-846. It has been dropped from the 3rd Edition, 1986.

3 vials each

H. Mitt Thausen

NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY Amoco Pipeline Company
ADDRESS MCPOB 63062 POB 7513 Chicago, ILL 60680-7513
PHONE 312-856-7251 FAX 312 856-3731
PROJECT NAME/LOCATION Amoco Artesia Station
PROJECT NUMBER Facility # 10195
PROJECT MANAGER MR. Douglas Farney

REPORT TO: D. Farney
INVOICE TO:
P.O. NO.
NET QUOTE NO.

MBF Services

SAMPLED BY
Clayton M Barnhill
(PRINT NAME) Clayton M Barnhill SIGNATURE

(PRINT NAME) SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION 3 40mL VOAs Each	MATRIX	GRAB	COMP	3 # and Type of Containers HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX 8020
4/18/98	11:41	Monitor Well # 11	H2O	X		X					X
4/18/98	12:32	Monitor Well # 14	H2O	X		X					X
4/18/98	13:24	Monitor Well # 12	H2O	X		X					X
4/18/98	14:12	Monitor Well # 10	H2O	X		X					X
4/18/98	15:25	Monitor Well # 13	H2O	X		X					X
4/18/98	16:45	Monitor Well # 8	H2O	X		X					X
4/18/98	17:40	Monitor Well # 6	H2O	X		X					X
4/18/98	18:45	Monitor Well # 7	H2O	X		X					X
4/18/98	19:15	Monitor Well # 4	H2O	X		X					X
		Trip Blank 3 (40mL VOAs)	X	X		X					X

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ✓ No ____

Is this work being conducted for regulatory enforcement action? Yes ____ No ____

Which regulations apply: RCRA ____ NPDES Wastewater ____ UST ____ Drinking Water ____ Other ____ None ____

COMMENTS

Any Questions? Please Call. H. Mitt Thausen. @ (630) 369-0201

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO FIELD FILTERED? YES / (NO)
COC SEALS PRESENT AND INTACT? ~~YES / NO~~ VOLATILES FREE OF HEADSPACE? (YES) NO
TEMPERATURE UPON RECEIPT: 1.2°C Wet Ice Bottles supplied by NET? (YES) NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ____
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ____ DATE ____

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
Clayton M Barnhill	4/20/98	11:50			4/21/98	10:45	J. O'Dell

METHOD OF SHIPMENT: FEDEX Priority

REMARKS: PLEASE SEND COPY OF REPORT ASAP TO . H. Mitt Thausen #2775

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK