3R - 330

REPORTS

DATE:

April 29, 1999

Public Service Company
of New Mexico
603 W. Elm - P.O. Box 4750
Farmington, NM 87499
505 950-1997
Fax 505 325-7365

PNM Gas Services

April 29, 1999

Oil Conservation Division
Attention: Bill Olson
2040 South Pacheco
Santa Fe, NM 87505

Subject: OCD Closure Reports – 1st Reporting Quarter, 1999

Dear Mr. Olson:

PNM Environmental Services is submitting closure reports to the Oil Conservation Division for the groundwater sites listed below:

1. Florance #32A
2. Jacques #2A
3. McClanahan A #2E
4. Mangum #1E

I have provided copies of the closures to Denny Foust for his information.

I have also enclosed copies of closures submitted to Denny Foust for his approval for the sites listed below:

1. Delo #2
2. Leonard Johnston #1
3. Leonard Johnson #2
4. McCroden #1
5. McCroden #3
6. McCroden #3A
7. McCroden A #1 Drip
8. McCroden A #3 Line Drip
9. McCroden B #1
10. McCroden B #1 Drip
11. McCroden B #3
12. Navajo Indian B #6M
13. Patterson A Com #1
14. Patterson A Com #1E
15. Richardson #1
16. Richardson #1A
17. Richardson #9
18. Starr #1
19. Starr #1 Drip
20. Starr #4A
21. State Com AJ #34E

The following Jicarilla Apache Locations were submitted to Denny Foust, also (copies enclosed):

1. Axi Apache J #19
2. Axi Apache N #1
3. Axi Apache N #10
4. Axi Apache N #12A
5. Axi Apache N #13
6. Axi Apache N #14
7. Axi Apache O #10 Drip
8. Axi Apache O #5 Drip
9. Jicarilla 103 #6M Drip
10. Jicarilla A #10
11. Jicarilla B #12 Drip
12. Jicarilla B #13 Drip
13. Jicarilla Contract 147 #6 Drip
14. Jicarilla G #6 Drip
15. Jicarilla G #6M
16. Jicarilla J #14
17. Jicarilla J #22
18. Jicarilla K #12
19. Jicarilla K #17
20. Jicarilla K #5
21. Jicarilla K #6 Drip
22. K-Well Main Line Separator

If you have any questions, please call me at 324-3764.

Sincerely,

Kathy Juckes

Kathy Juckes
Staff Assistant

District I
P.O. Box 1980, Hobbs, NM

District II
P.O. Drawer DD, Artesia, NM 88221

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street
Santa Fe, New Mexico 87505

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services (Burlington) **Telephone:** 324-3764

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: McClanahan A #2E

Location: Unit O Sec 23 T 28 N R 10 W County San Juan

Pit Type: Separator ☑ Dehydrator ☐ Other

Land Type: BLM ☑ State ☐ Fee ☐ Other

Pit Location: Pit dimensions: length 15 ' width 15 ' depth 3 '

(Attach diagram) Reference: wellhead ☑ other

Footage from reference: 60'

Direction from reference: 10 Degrees ☑ East North ☐ of ☐ West South ☑

Depth to Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1,000 feet from all other water sources)	Yes No	(20 points) (0 points)	0
Distance to Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches	Less than 200 feet 200 feet to 1,000 feet Greater than 1,000 feet	(20 points) (10 points) (0 points)	10
	RANKING SCORE (TOTAL POINTS) :		30

PNMGS Well Site: **McClanahan A2E**

Groundwater Site Summary Report

Copies: WFS(1)
Operator (1)
NMOCD District Office (1)
NMOCD Santa Fe (1)

Quarter/Year: 2nd/98, 3rd/98, 4th/98 & 1st/99

Operator: Burlington Resources
Sec: 23 **Twn:** 28 **Rng:** 10 **Unit:** 0
Canyon: Armenta

Vulnerable Class: Original
OCD Ranking: 30
Lead Agency: NMOCD

Topo Map: Figure 1
Well Completion Diagram: previously submitted
Site Map with Analytical Results: Figure 2
Groundwater Contour Map: Figure 3a (June 1998), Figure 3b (August 1998), Figure 3c (December 1998) & Figure 3d (February 1999)
Hydrograph: Figure 4
Analytical Results: See 1999 Annual Groundwater Report

Site Hydrology:

The McClanahan A2E site lies within Armenta Canyon, a north-draining tributary to the San Juan River located about 8 miles southeast of Bloomfield, New Mexico. The canyon's confluence with the San Juan River lies about 3-½ miles north of the site. The site lies at an elevation of about 5745 feet amsl, which is about ten feet higher than the streambed in the broad canyon floor. The canyon floor spans about 2000 feet and the site is located on the west-central flank of the alluvium-filled valley.

Subsurface materials beneath the site are composed of silty sands, as determined from the four monitoring wells installed (see Figure 1). The thickness of alluvium is typically less than 50 feet in many of the area drainages (Stone et al., 1983). Total depths of the wells were 30 feet or less, and no apparent bedrock units were encountered in the monitor well borings. Materials encountered in the well borings were silty and clayey sands.

Depth to water has ranged from 14 to 20 feet beneath the site. No appreciable seasonal changes in flow direction are apparent, as evidenced by the groundwater flow maps spanning the year in Figures 3a through 3d. Well MW-2 was reinstalled in June, 1998, and subsequently the water levels in well MW-2 are slightly higher than in well MW-1, imparting an apparent slight southward gradient. However, groundwater flow direction is ~~predominantly towards the northeast, which follows the surface topography and the direction of streamflow in~~ Armenta Canyon.

The site hydrograph (Figure 4) shows that in general water levels are higher in winter and spring, and lower in summertime. About one foot or more of water level fluctuations are observed seasonally. The apparent rise in water levels in well MW-2 is more likely due to its reinstallation and resurveying, and probably represents an upward shift of about one foot.

Activities for Previous Year:

PNM performed groundwater monitoring at the site on June 25, August 26 and December 2, 1998 and again on February 12, 1999. Water level measurements were taken in each of the four monitoring wells. PNM conducted the quarterly groundwater sampling in wells MW-2 and MW-4 for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX); wells MW-1 and MW-3 were excluded because they have never detected appreciable concentrations of BTEX compounds. All wells were sampled for BTEX in February, 1999. Sampling was conducted in strict compliance with EPA protocol. PNM delivered the samples to OnSite Technologies, Farmington, New Mexico. The samples were analyzed for BTEX using EPA Method 8020.

Public Service Company of New Mexico - Gas Services
Environmental Services Division - Alvarado Square, MS-0408
Albuquerque, NM 87158

Contact: Maureen Gannon **Telephone: 505-241-2974**

PNMGS Well Site: McClanahan A2E (continued)

Results:

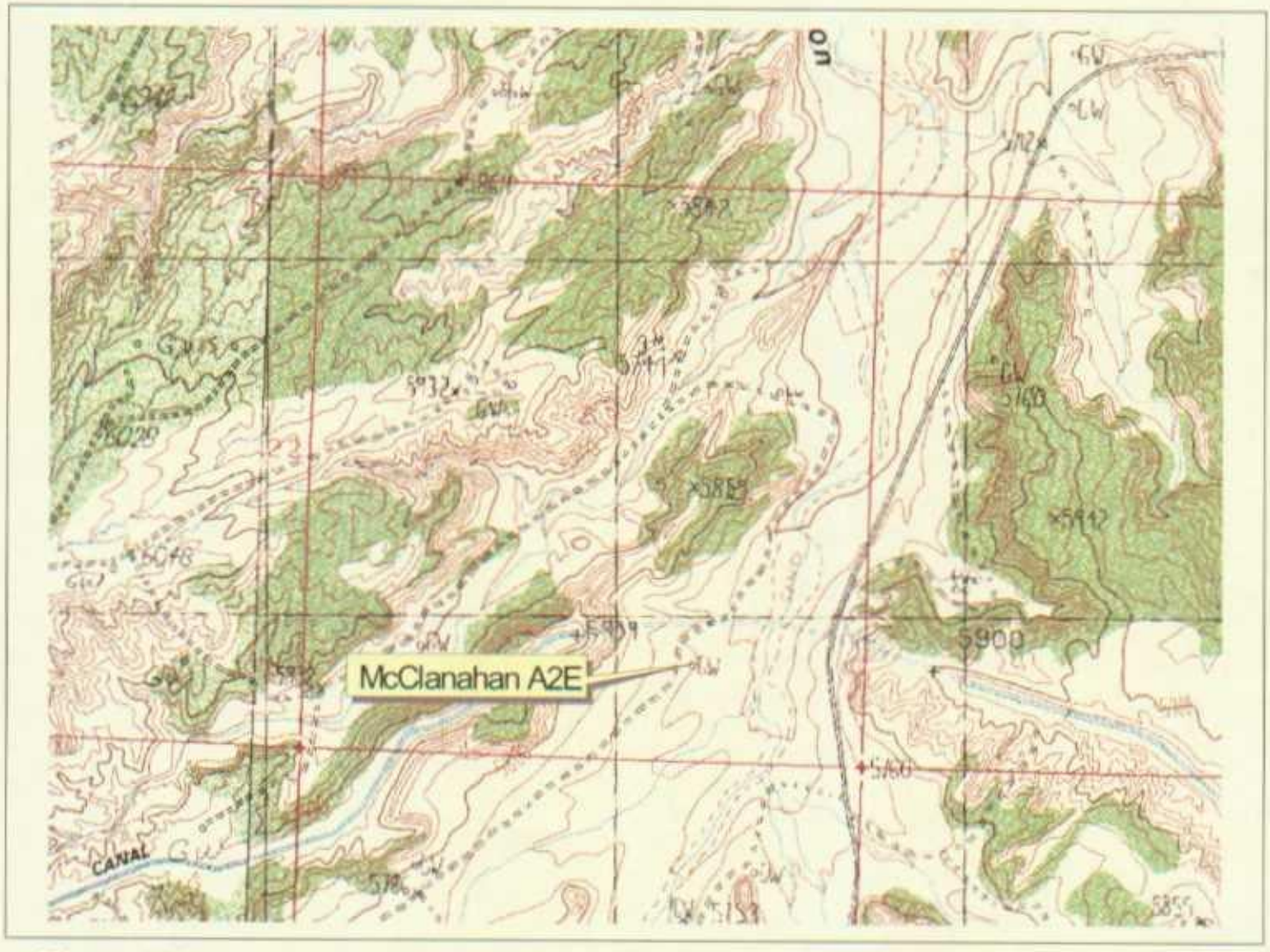
Figure 2 presents the site map with analytical results to date. MW-1 and MW-3 have shown BTEX concentrations to be non-detectable or below WQCC standards since monitoring began. MW-2 and MW-4 (the source and downgradient wells, respectively) have shown consistent attenuation of all BTEX constituents over time, which was dramatically accelerated after the secondary source material excavation was performed in April, 1998. MW-2, the source well, has now remained below standards for four consecutive quarters, indicating that no appreciable amount of hydrocarbon-contaminated soil remains in place.

Future Actions:

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM requests closure of the McClanahan A2E with the submittal of the 1st Quarter 1999 Pit Closures Report. This request is based upon the analytical data collected over the last two years at the site. The primary and secondary excavations of source materials appear to have been successful in achieving clean-up at the site over the two-year monitoring period, since the BTEX concentrations in downgradient well, MW-4, and source well, MW-2, have been below standards for four consecutive quarters. The consistently downward concentration trends were greatly enhanced by the secondary source excavation in April, 1998. Resampling of all monitor wells also shows that BTEX compounds are below standards in the other wells.

Upon approval of the groundwater closure report, PNM will plug and abandon the four groundwater monitoring wells at the site. The concrete pad and metal vault surrounding each well will be removed. The well casing will be cut to ground surface and each well will be plugged o the surface with cement containing 5% bentonite.

Figure 1.
McClanahan A2E Groundwater Site
Twn. 28N Rng. 10W Sec. 23 Unit O



Blanco, NM Quadrangle

0 1000 2000 3000 4000 5000 Feet

N
W E
S

Figure 2. McClanahan A2E Site Map with Analytical Results (Concentrations in ppb)

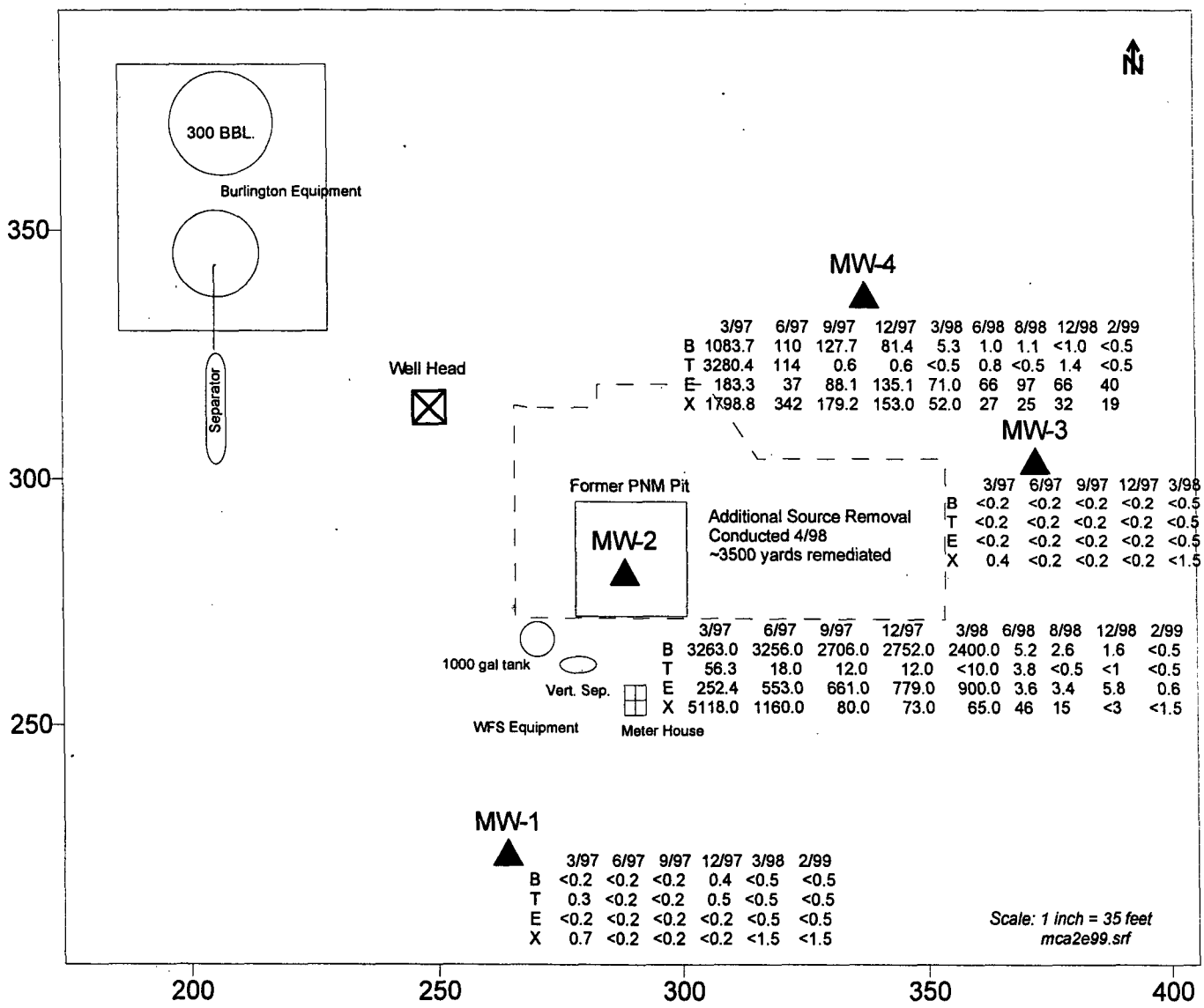
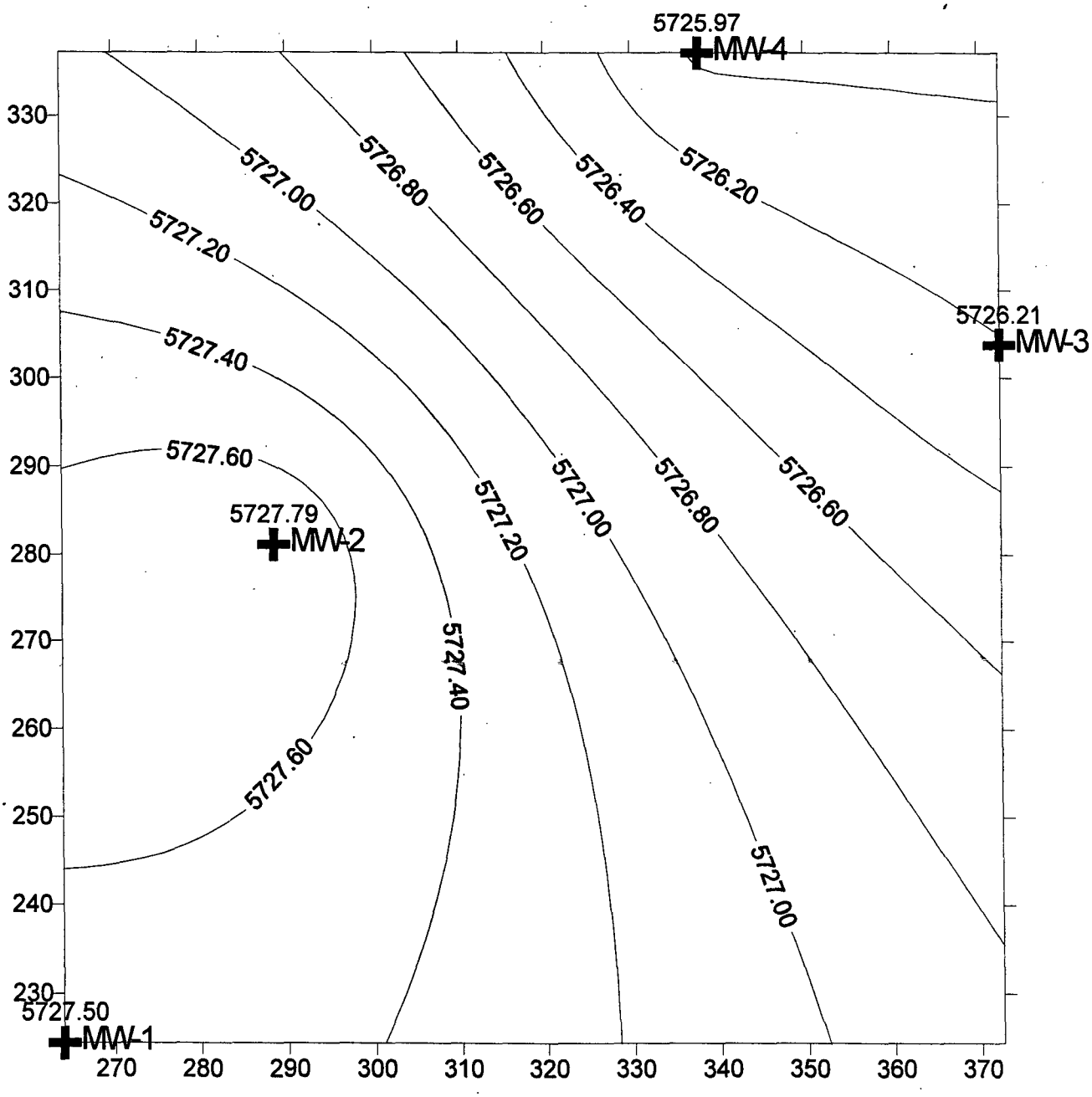


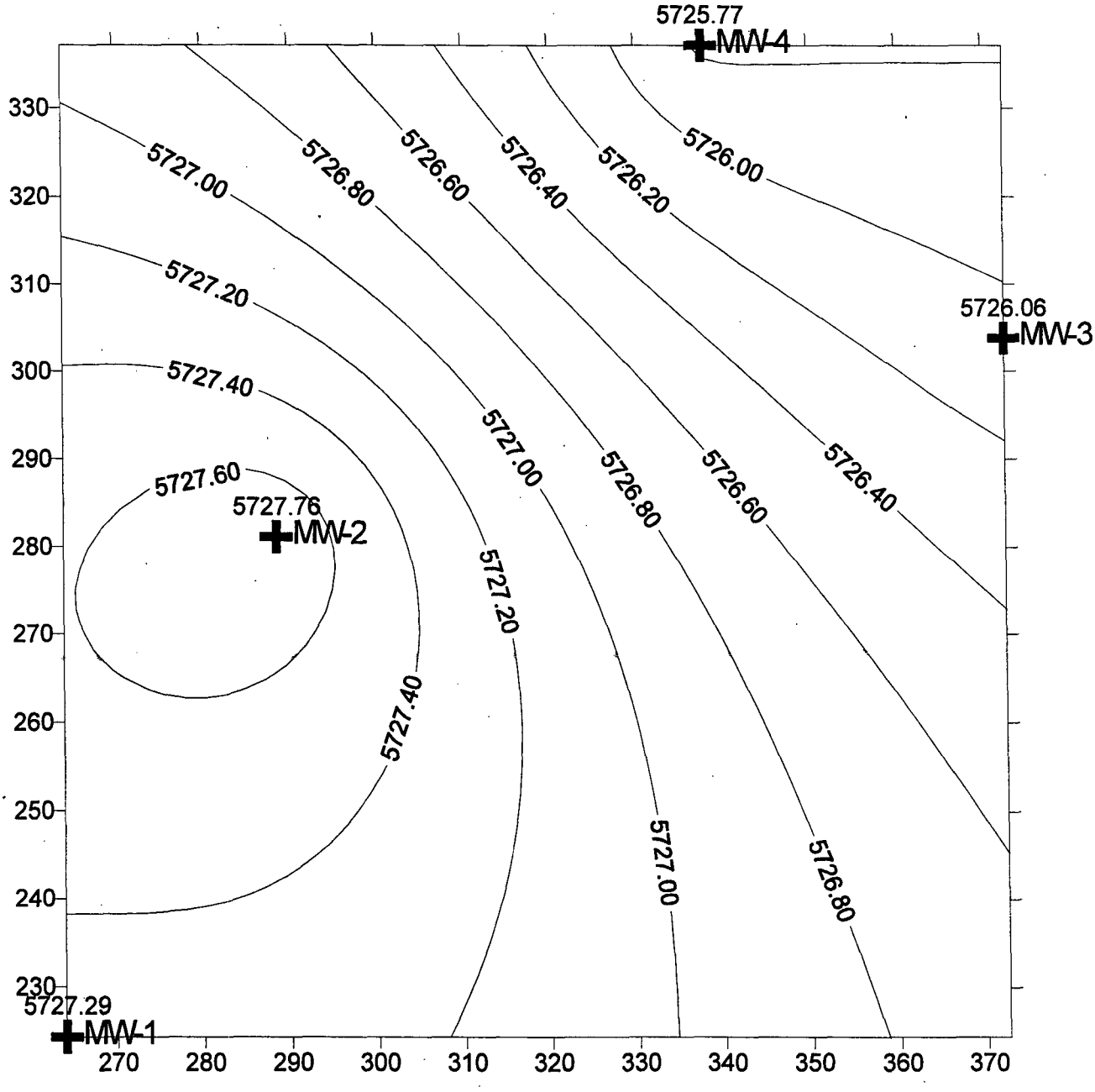
Figure 3a. McClanahan A2E Groundwater Contour Map
(June 25, 1998)



SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

Mc2a698.srf

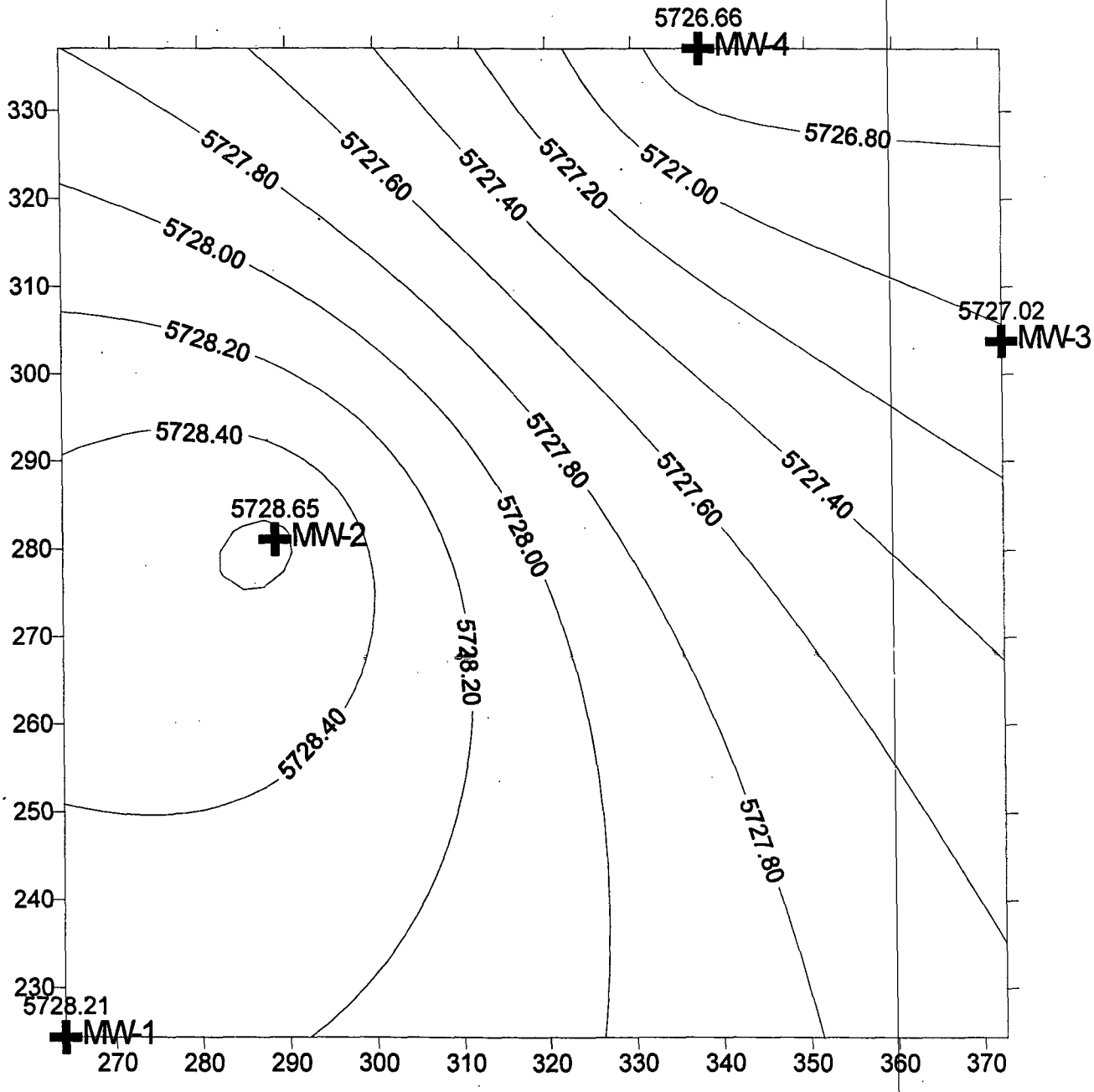
Figure 3b. McClanahan A2E Groundwater Contour Map
(August 26, 1998)



SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

Mc2ae82698.srf

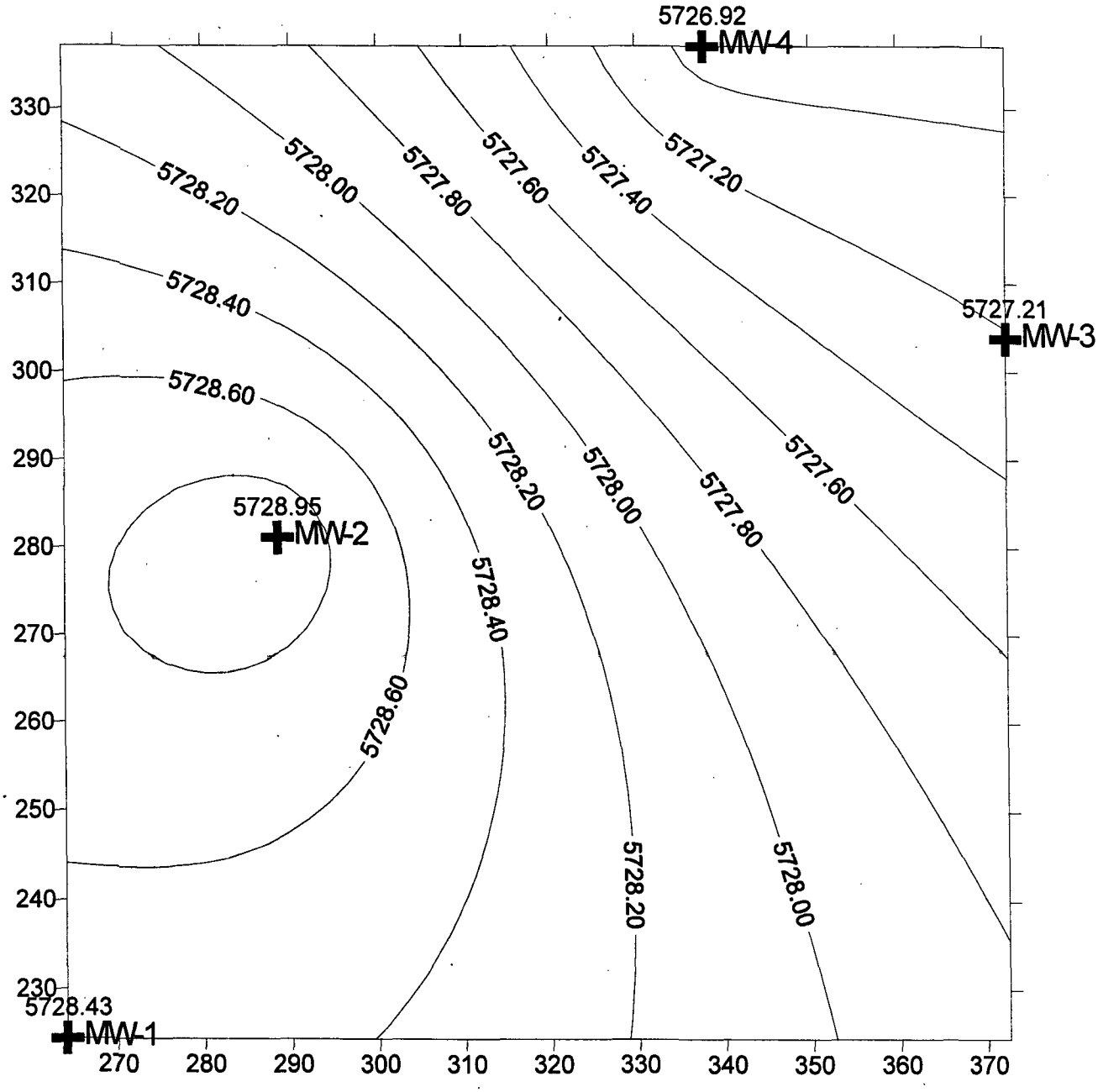
Figure 3c. McClanahan A2E Groundwater Contour Map
(December 2, 1998)



SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

Mc2ae12298.srf

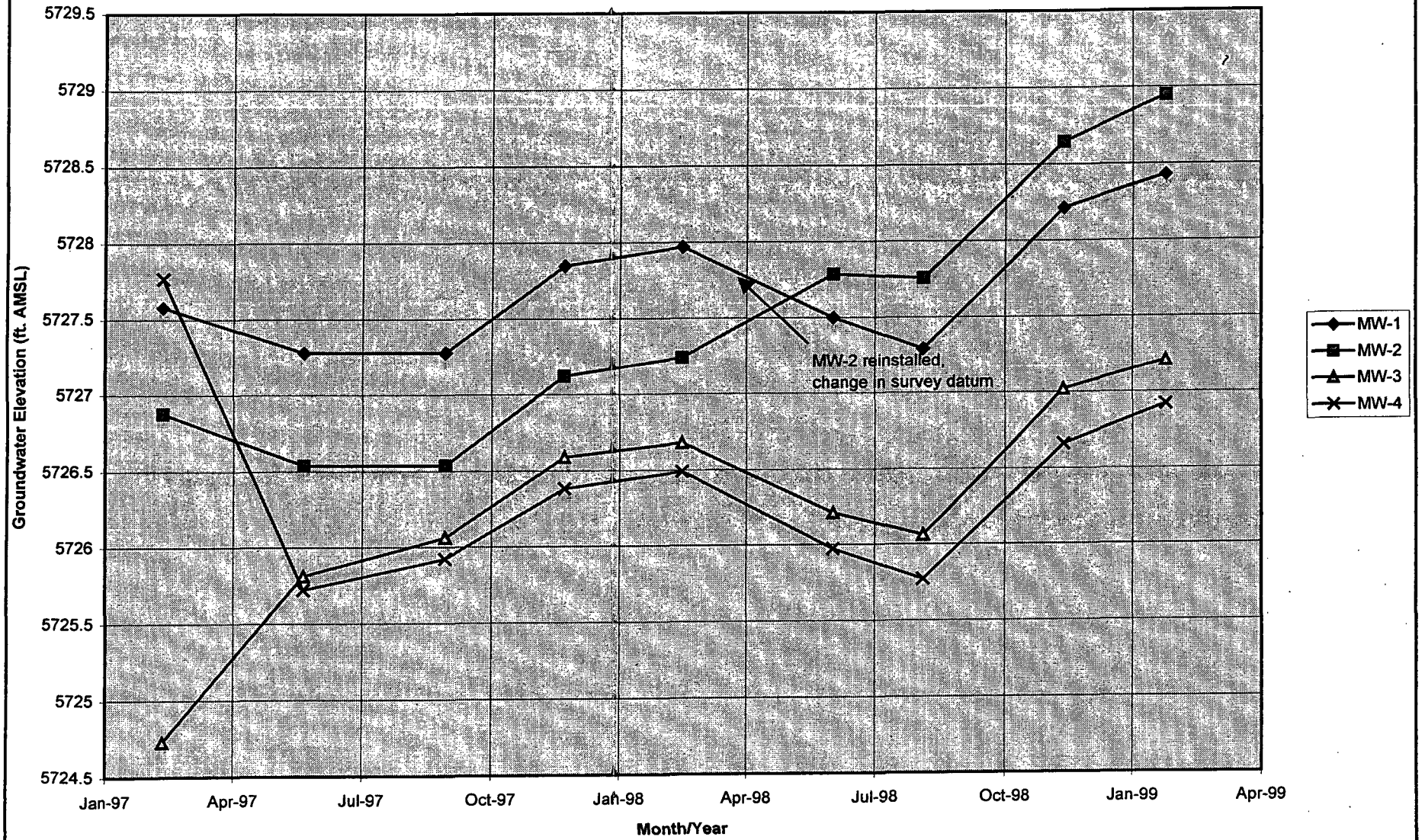
Figure 3d. McClanahan A2E Groundwater Contour Map
February 12, 1999)



SCALE IN FEET
(X-axis = Easting,
Y-axis = Northing)

Mc2ae21299.srf

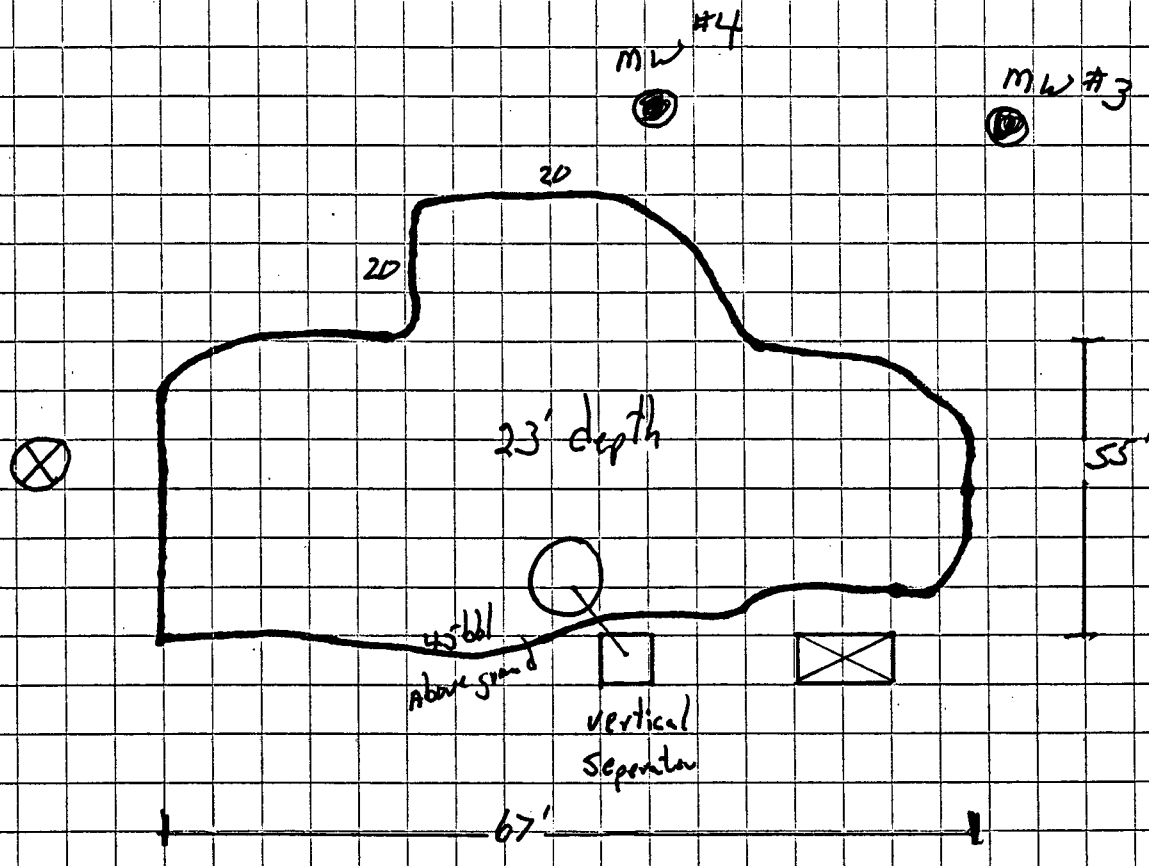
Figure 4. McClanahan A2E Hydrograph
(Water Level vs. Time)



McCa2e99.XLS

McClanahan A #2E
Burlington Resources
Sec. 23, 28N, 10W, O

4-16-98



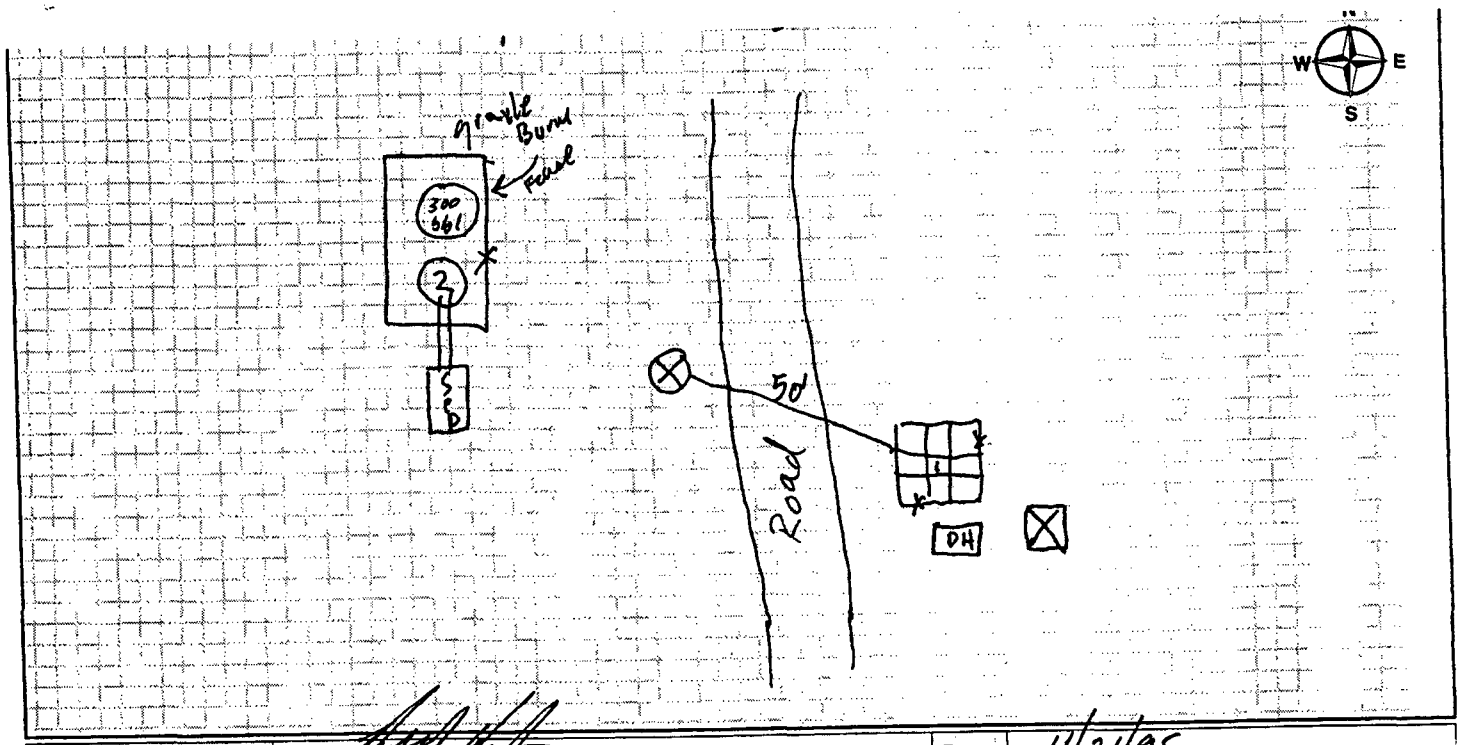
Water at 23' depth

67 X 55 X 23 = 3139 yds
20 X 20 X 23 = 341 yds
3480 yds

overburden = 2421 yds
spoil = 1059 yds

Landfarmed on location.

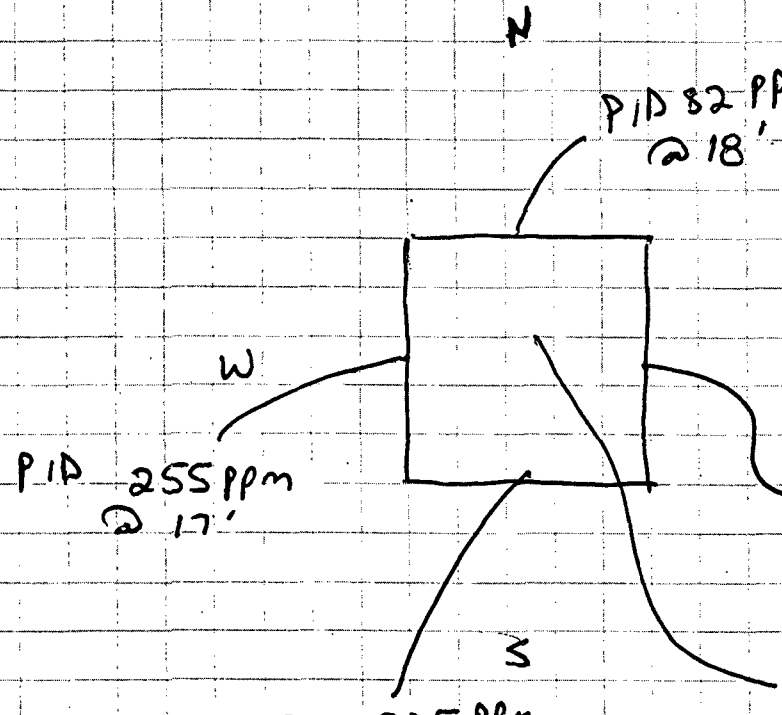
McClanahan A #2E



Assessor's Signature _____ Date: 11/21/95

PUBLIC SERVICE COMPANY OF NEW MEXICO

DEPARTMENT		
PROJECT: McClanahan A 2 E	FILE	SHEET OF
COMPONENT: Section 23, Township 28N, Range 10W, Unit O	BY	DATE
	CHECKED	DATE 10/17/96



Black Sandy Soil
Very Moist.
Sample Taken For BTEX / TPH
Sample # 9610171500
Delivered to onsite

Four point composite from side walls not submitted for lab analysis
Excavation is 28 x 15 x 18
Digging is slow with small bucket.
Will secure site and Wait for results of lab analysis before continuing. Also Wait until Monday, Operator will have larger bucket to clean up hole and Ray will be back to make decision.

7560 / 27 = 280

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Denver Bearden*	Date:	23-Oct-96
Company:	*PNM Gas Services*	*COC No.:*	*5126*
Address:	*603 W. Elm*	*Sample No.*	*12649*
City, State:	*Farmington, NM 87401*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - McClanahan A #2E***				
Project Location:	***9610201035; Pit Excavation Composite, Wall Sample***				
Sampled by:	RH	Date:	20-Oct-96	Time:	10:35
Analyzed by:	DC	Date:	22-Oct-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Benzene	1246.2	ug/kg	0.2	ug/kg
Toluene	27961.7	ug/kg	0.2	ug/kg
Ethylbenzene	5923.9	ug/kg	0.2	ug/kg
m,p-Xylene	60000.7	ug/kg	0.2	ug/kg
o-Xylene	12438.6	ug/kg	0.2	ug/kg
TOTAL	107571.0	ug/kg		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 10/23/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn:	*Denver Bearden*	Date:	22-Oct-96
Company:	*PNM Gas Services*	*COC No.:*	*5126*
Address:	*603 W. Elm*	*Sample No.*	*12649*
City, State:	*Farmington, NM 87401*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - McClanahan A #2E***				
Project Location:	***9610201035; Pit Excavation Composite Wall Sample***				
Sampled by:	RH	Date:	20-Oct-96	Time:	10:30
Analyzed by:	DC/HR	Date:	22-Oct-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Diesel Range Organics (C10 - C28)	68.1	mg/kg	5.0	mg/kg

Quality Assurance Report

DRO QC No.: *0489-QC*

Calibration Check

Parameter	*Method Blank*	*Unit of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Diesel Range (C10 - C28)	<5.0	ppm	100	102	2.1	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Diesel Range (C10-C28)	93	97	(70-130)	3	20%

Method *- SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:

Date: 10/22/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Denver Bearden*	*Date:*	23-Oct-96
Company:	*PNM Gas Services*	*COC No.:*	*5127*
Address:	*603 W. Elm*	*Sample No.:*	*12655*
City, State:	*Farmington, NM 87401*	*Job No.:*	*2-1000*

Project Name:	***PNM Gas Services - McClanahan A #2E***				
Project Location:	***9610210745; Pit Excavation Ground Water Sample***				
Sampled by:	RH	Date:	21-Oct-96	Time:	7:45
Analyzed by:	DC	Date:	22-Oct-96		
Sample Matrix:	*Water*				

Laboratory Analysis

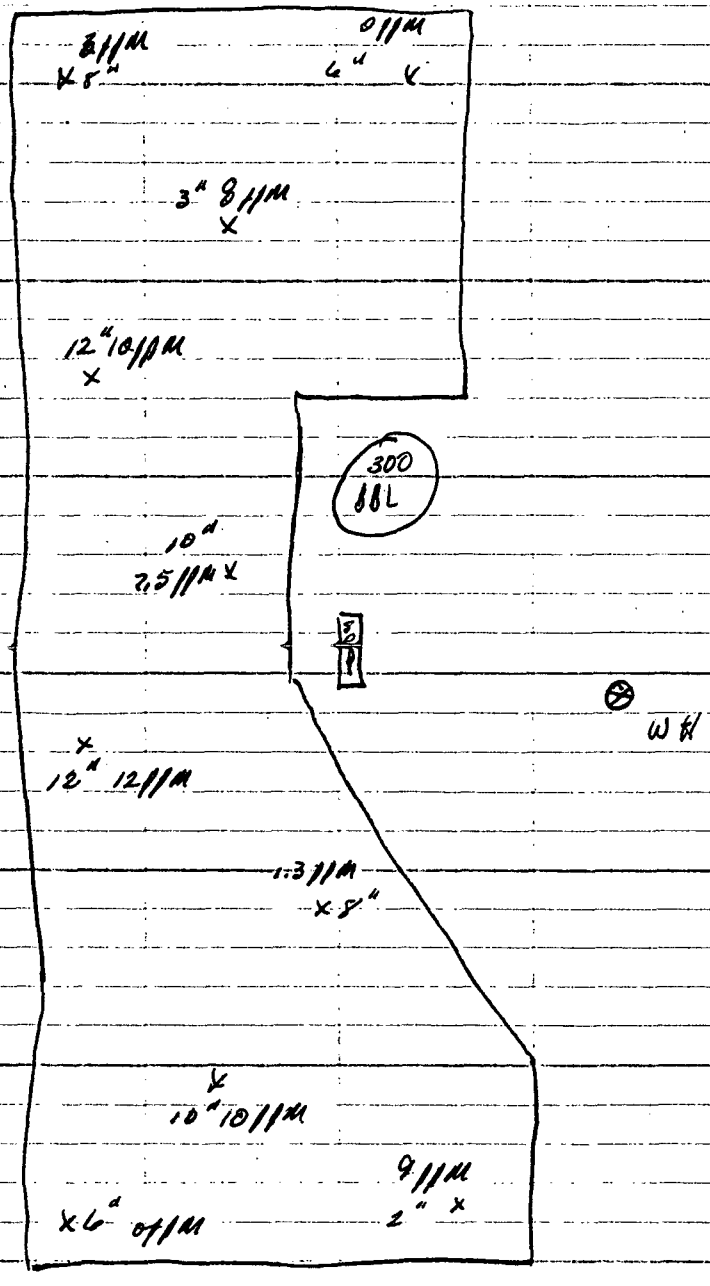
Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Benzene	3561.5	ug/L	0.2	ug/L
Toluene	7770.6	ug/L	0.2	ug/L
Ethylbenzene	314.2	ug/L	0.2	ug/L
m,p-Xylene	3795.3	ug/L	0.2	ug/L
o-Xylene	913.2	ug/L	0.2	ug/L
TOTAL	16354.8	ug/L		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:
Date: 10/23/96

McClanahan A #2
(O) 23-28N-10W
Burlington
San Juan County
Lab Sample # 9806040800
Field head Space 7 PPM

N



OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *08-Jun-98*

CLIENT: PNM - Public Service Company of NM
Project: Landfarm Composites
Lab Order: 9806013

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *08-Jun-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan A2E
Work Order:	9806013	**Client Sample ID:**	9806040800: Landfarm
Lab ID:	9806013-01A **Matrix:** SOIL	**Collection Date:**	6/4/98 8:00:00 AM
Project:	Landfarm Composites	**COC Record:**	5224

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	6/4/98

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- B - Analyte detected in the associated Method Blank
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499