GW Site

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

RECEIVED
NOV - 1 1999
OIL CON. DIV.
DIST. 3

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 #22

Location: Unit G Sec 14 T 28 N R 10 W County San Juan

Pit Type: Separator ☑ Dehydrator ☐ Other ☐

Land Type: BLM ☑ State ☐ Fee ☐ Other ☐

Pit Location: (Attach diagram) Pit dimensions: length 20 ' width 20 ' depth 4 '

Reference: wellhead ☑ other ☐

Footage from reference: 76'

Direction from reference: 60 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

McClanahan #22

Date Remediation Started: 09/12/1996 **Date Completed:** 09/17/1996

Remediation Method: (Check all appropriate sections)

Excavation X Approx. Cubic Yard 591

Landfarmed X Amount Landfarmed (cubic yds) 591

Other

Remediation Location: (i.e., landfarmed onsite, name and location of offsite facility)

Onsite X Offsite

Backfill Material Location:

General Description of Remedial Action:

Excavated contaminated soil to a pit size of 28' X 30' X 19' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by disking/plowing until soil met regulatory levels.

Ground Water Encountered: No -- Yes ☑ Depth 12'

Final Pit Closure Sampling: (if multiple samples, attach sample result and diagram of sample locations and depths.)

Sample Location 5 pt. composite - four side walls and center of pit bottom.

Sample depth 19'

Sample date 09/12/1996 Sample time 1:45:00 PM

Sample Results

Benzene (ppm) 0.0018

Total BTEX (ppm) 0.093

Field headspace (ppm)

TPH (ppm) < 5.00 Method 8015A

Vertical Extent (ft) Risk Analysis form attached Yes -- No --

Ground Water Sample: Yes ☑ No -- (If yes, see attached Groundwater Site Summary Report)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF

DATE **October 28, 1999**

SIGNATURE Maureen Gannon

PRINTED NAME AND TITLE **Maureen Gannon, Project Manager**

PNMGS Well Site: **McClanahan 22**

Groundwater Site Summary Report

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

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

Operator: Burlington Resources
Sec: 14 **Twn:** 28N **Rng:** 10W **Unit:** G
Canyon: Armenta

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

Topo Map: Figure 1
Site Map with Analytical Results: Figure 2
Groundwater Contour Map: Figure 3 (December 1998), Figure 4 (February 1999), Figure 5 (May 1999) & Figure 6 (August 1999)
Hydrograph: Figure 7
Analytical Results: attached 2nd/99 & 3rd/99 only
Well Completion Log/Diagram: TMW-1 and TMW-2 only

Site Hydrology:

The McClanahan 22 site lies in a side drainage off Armenta Canyon, a tributary to the San Juan River located about 7 miles east-southeast of Bloomfield, New Mexico. The site lies at an elevation of about 5636 feet amsl, on the south side of the drainage and perhaps 20 feet above the valley floor. The drainage runs northeast and empties into the north-draining Armenta Canyon about 500 feet from the site.

Subsurface materials beneath the site are composed primarily of sands, with minor amounts of silt or clay materials, as determined from the four monitoring wells installed (see Figure 1). Total depths of the wells are less than 20 feet, and no resistant bedrock units were encountered in the monitor well borings.

Depth to water has ranged from 7 to 15 feet beneath the site. Groundwater flow direction appears to be towards the north/northwest in Figure(s) 3 through 6, directly towards the unnamed drainage lying closest to the site. However, in general the surface topography drops to the north and northeast, along with the direction of streamflow in the unnamed nearby drainage as well as Armenta Canyon.

The site hydrograph (Figure 7) shows that in general water levels are higher in winter and spring, and lower in summertime. About one foot of water level fluctuations are observed seasonally. Similar trends are seen in other sites investigated in Armenta Canyon (Zachry 18E, McClanahan A2E).

Activities for Previous Year:

PNM performed groundwater monitoring at the McClanahan 22 well site on December 2, 1998, February 9, 1999, May 12, 1999, and again on August 10, 1999. Water level measurements were taken in each of the four monitoring wells. PNM submitted groundwater samples from well, MW-3, for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). The other wells (MW-1, MW-2 and MW-4) were not sampled because they have not shown appreciable amounts of BTEX compounds in previous sampling events.

On July 26, 1999, PNM installed 2-temporary monitor wells. One west (TMW-1) and another northwest (TMW-2) of our former dehydrator pit. These wells were installed as requested to alleviate any concerns regarding potential impacts to the northwest of PNM's former pit. Figure 2 shows the exact location of these wells.

During the most recent sampling activities conducted on August 10, 1999, all wells were sampled for BTEX, including the 2-new temporary monitor wells. Additional analyses was performed on monitor well, MW-3, for PAHs by method 8310. All sampling was performed in strict compliance with EPA protocol. PNM delivered the samples to OnSite Technologies, Farmington, New Mexico, for analyses of BTEX using EPA Method 8021B.

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**

Results:

Figure 2 provides a site map with BTEX results collected to date. All wells contain BTEX concentrations below detection limits. MW-3 had exhibited elevated levels of xylenes, in excess of NMWQCC standards; however, in the last four quarterly sampling rounds, BTEX constituents are below standards, and benzene has been below detection limits. Results of PAH analyses in monitor well, MW-3, were also below laboratory limits.

Further Action:

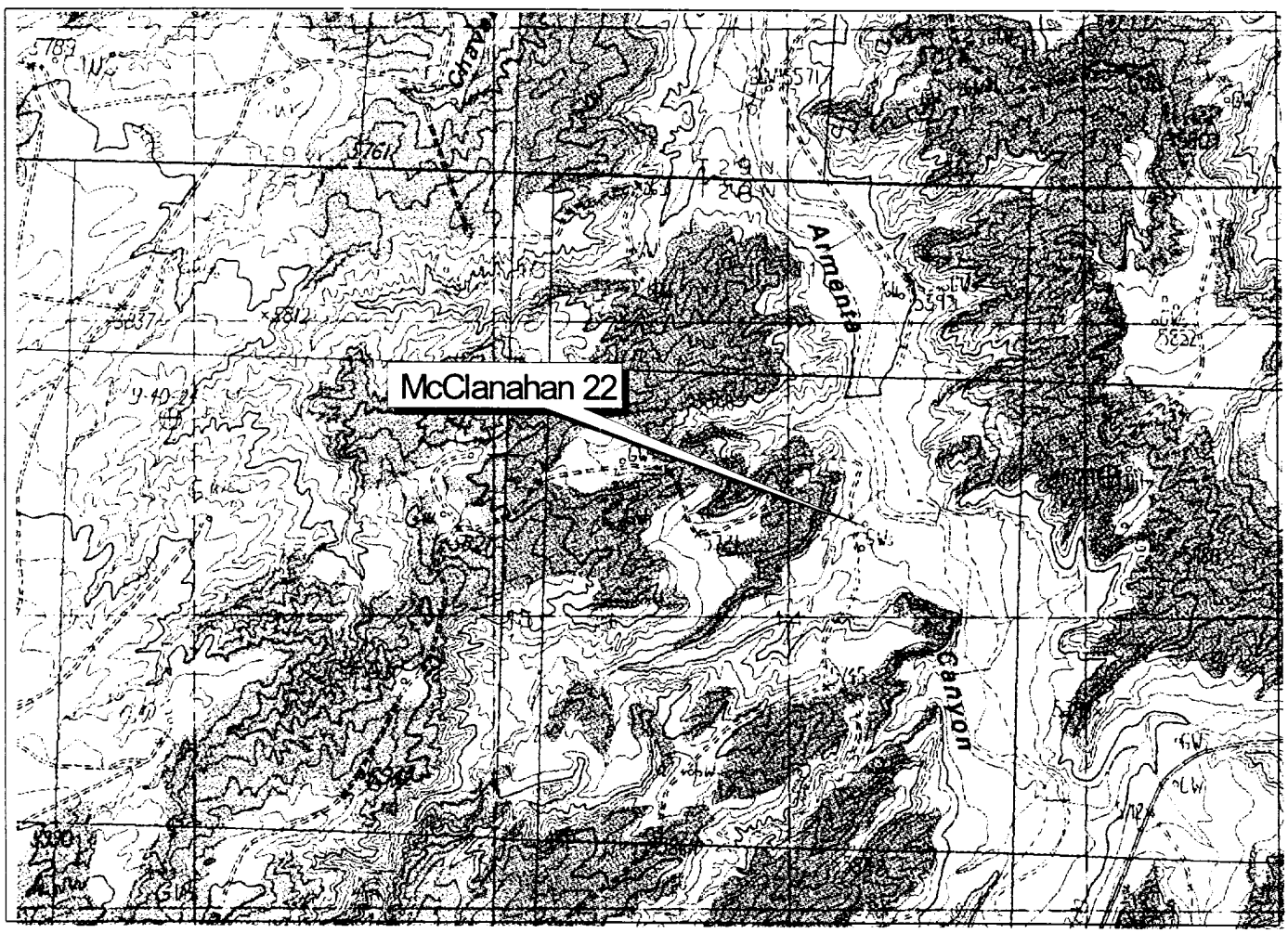
Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM requests closure of the McClanahan 22. This request is based upon the analytical data collected over the last two years at the site. The excavation of source materials was successful in achieving clean-up at the McClanahan 22. BTEX concentrations in all wells have been below standards for four consecutive quarters.

Upon approval of the groundwater closure report, PNM will plug and abandon the five 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 to the surface with cement containing 5% bentonite.

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**

Figure 1.
McClanahan 22
Twn. 28N Rng. 10W Sec. 14 Unit G

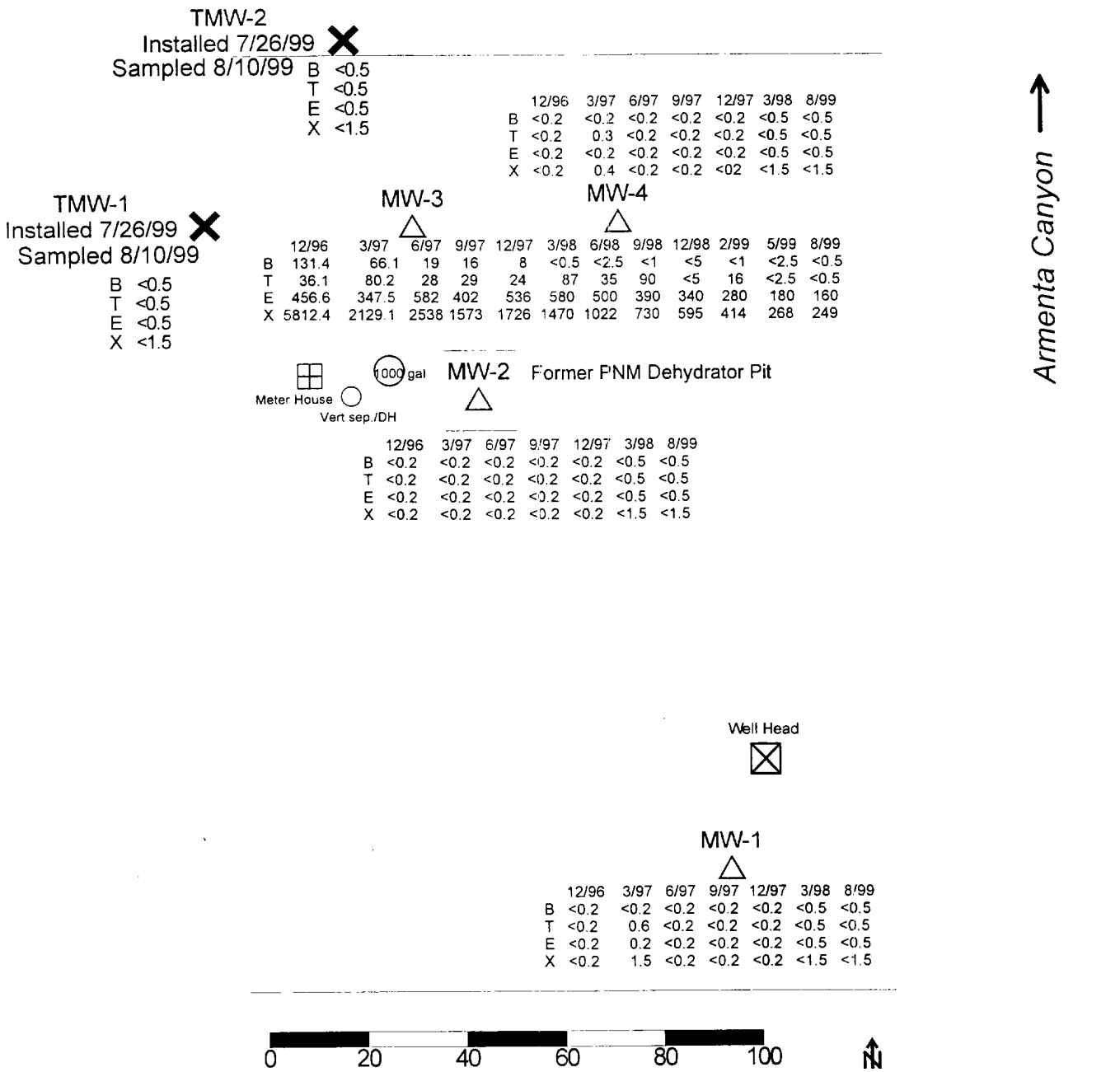


Blanco, New Mexico Quadrangle

0 1000 2000 3000 4000 5000 Feet

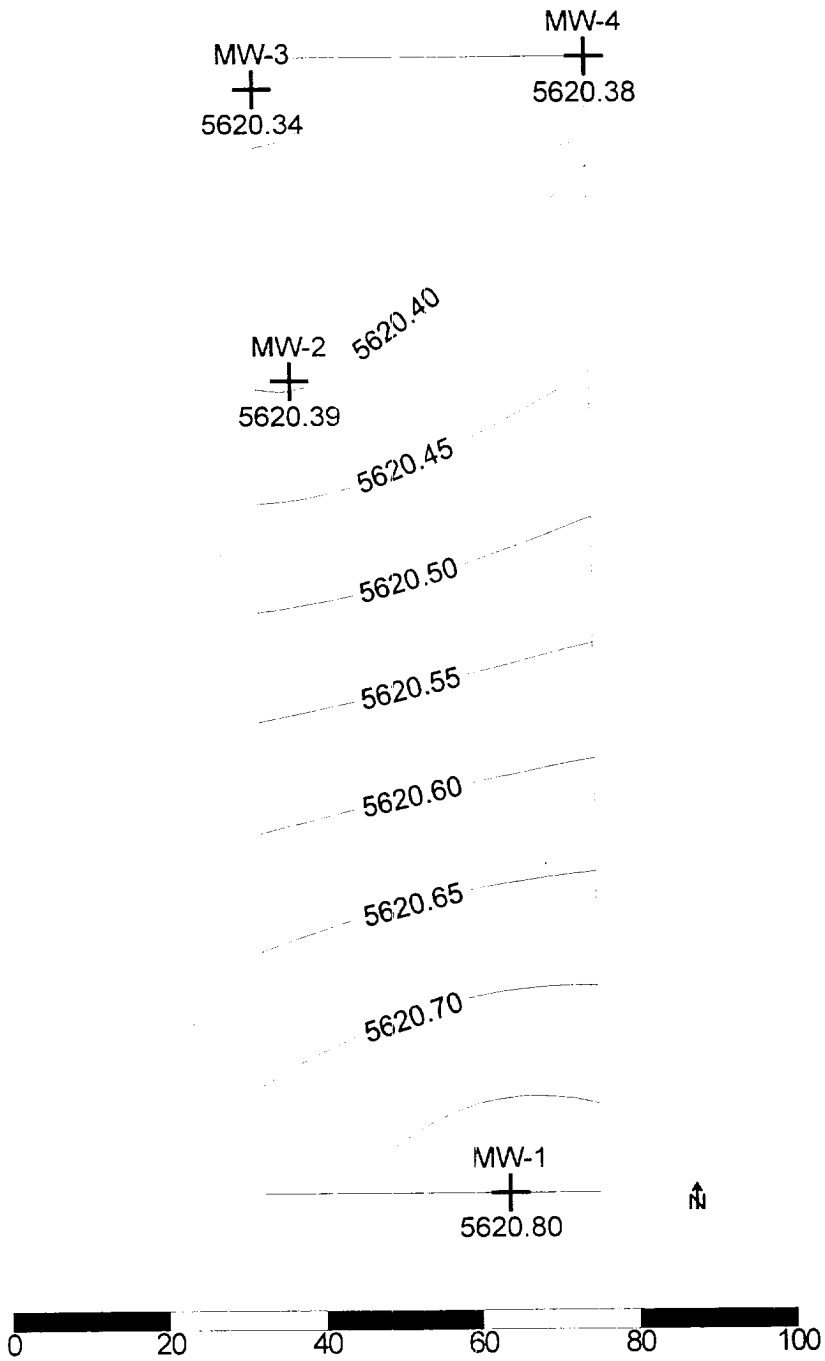
N

Figure 2.
McClanahan 22 Site Map With Analytical Results
(Concentrations in ppb)



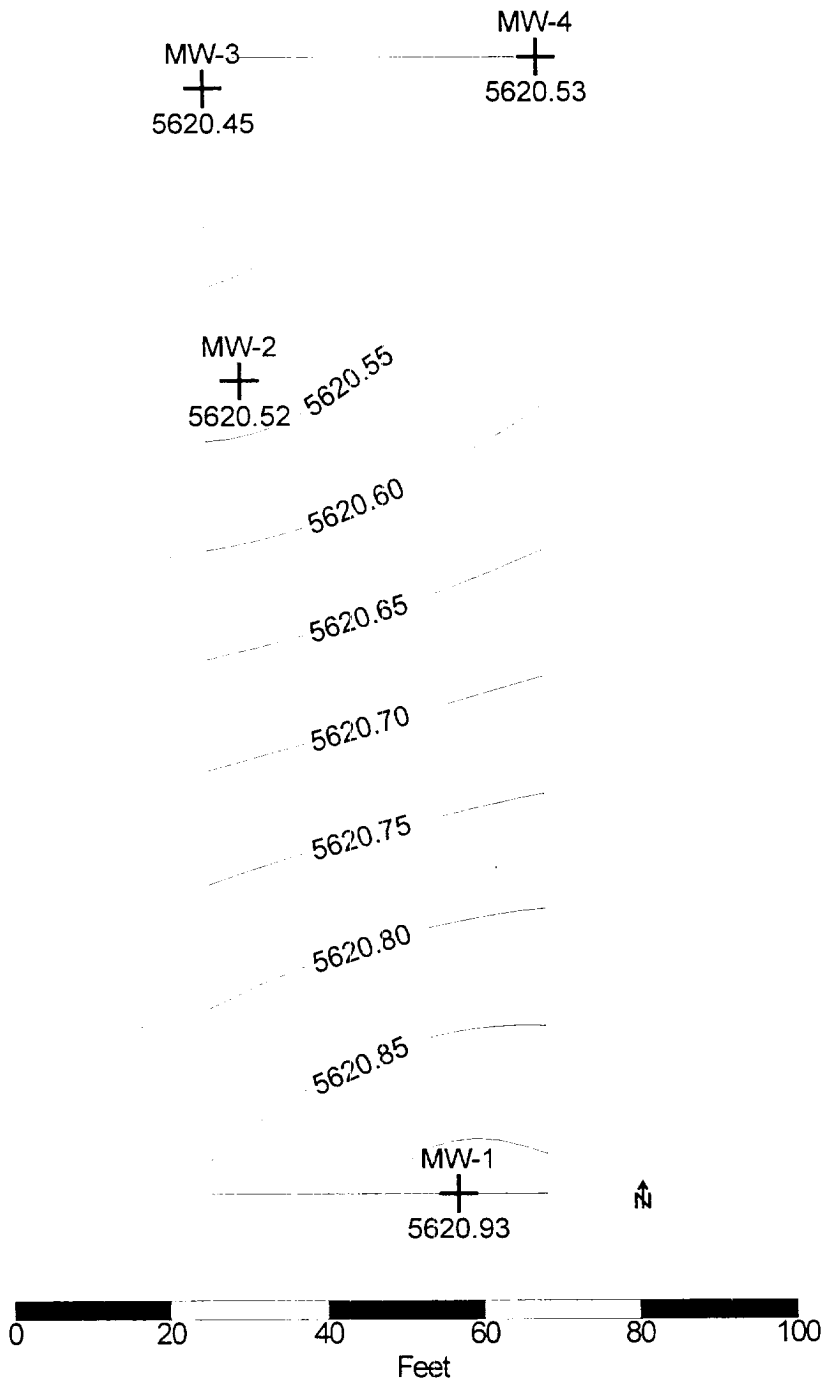
Mcclan22.srf

Figure 3.
McClanahan 22 Groundwater Contour Map
(December 2, 1998)



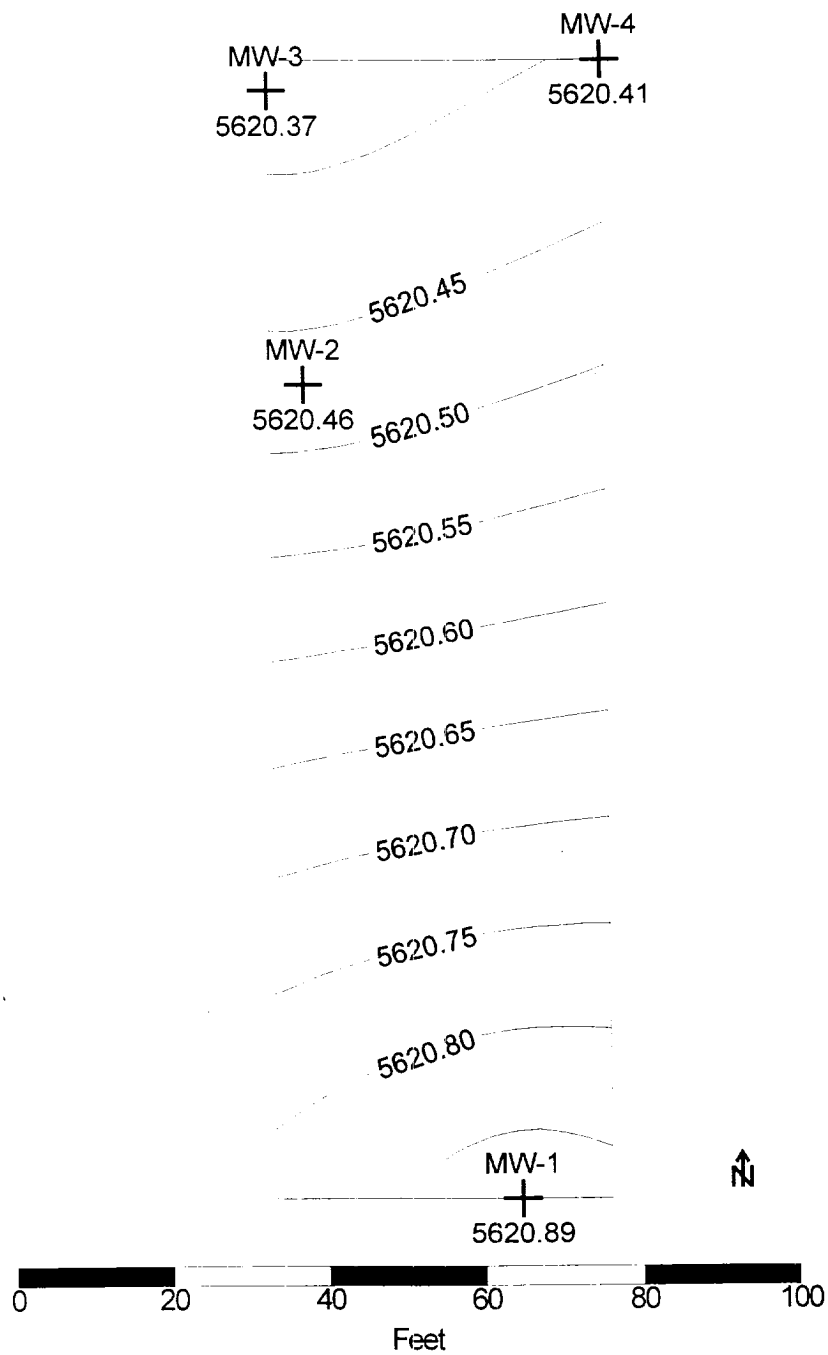
S/Surfer/McClanahan22/DEC98.SRF

Figure 4.
McClanahan 22 Groundwater Contour Map
(February 9, 1999)



S/Surfer/McClanahan22/FEB99.SRF

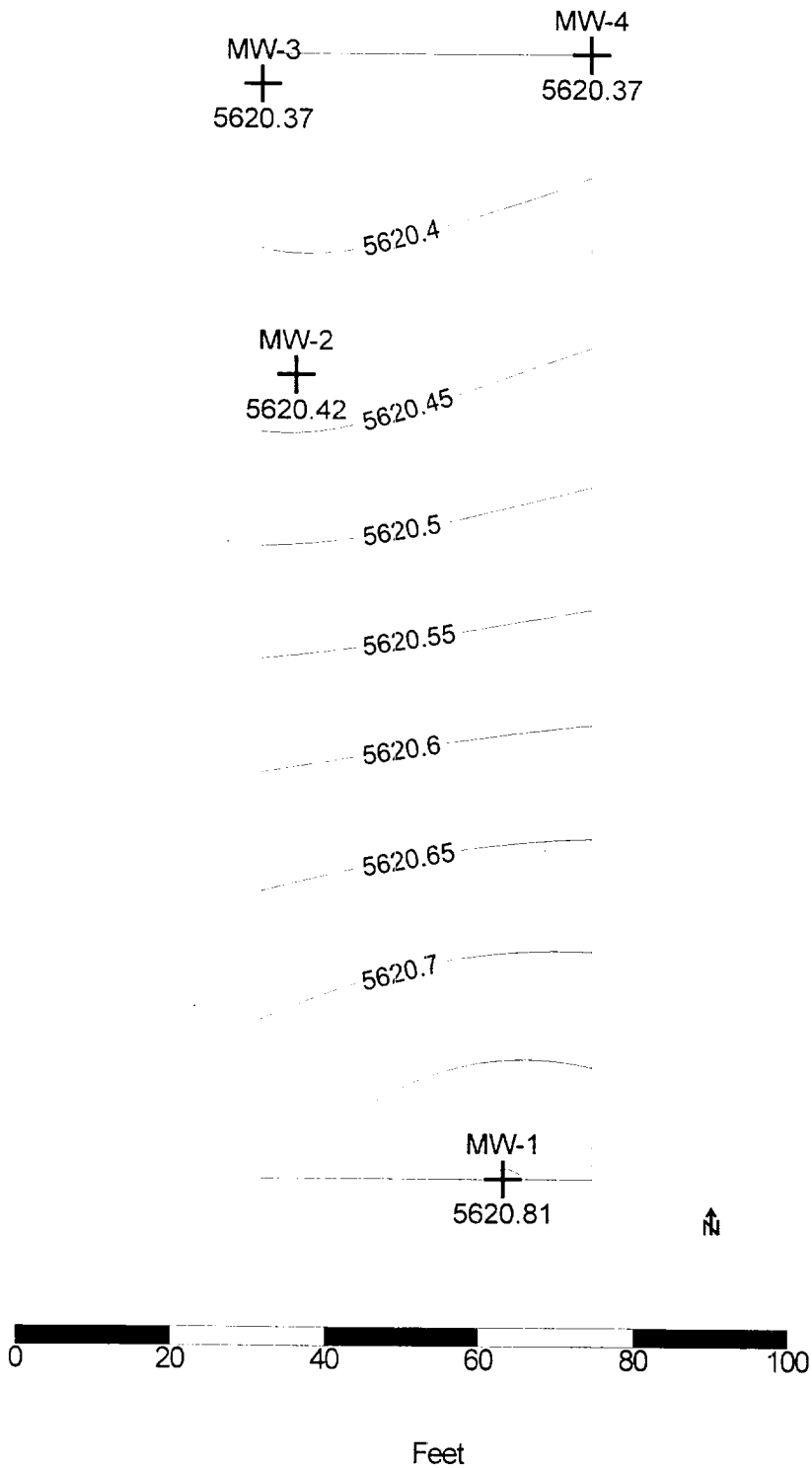
Figure 5.
McClanahan 22 Groundwater Contour Map
May 12, 1999



Latest survey data collected 5/12/99.
Confirms a northerly flow consistent with the flow of Armenta Canyon.

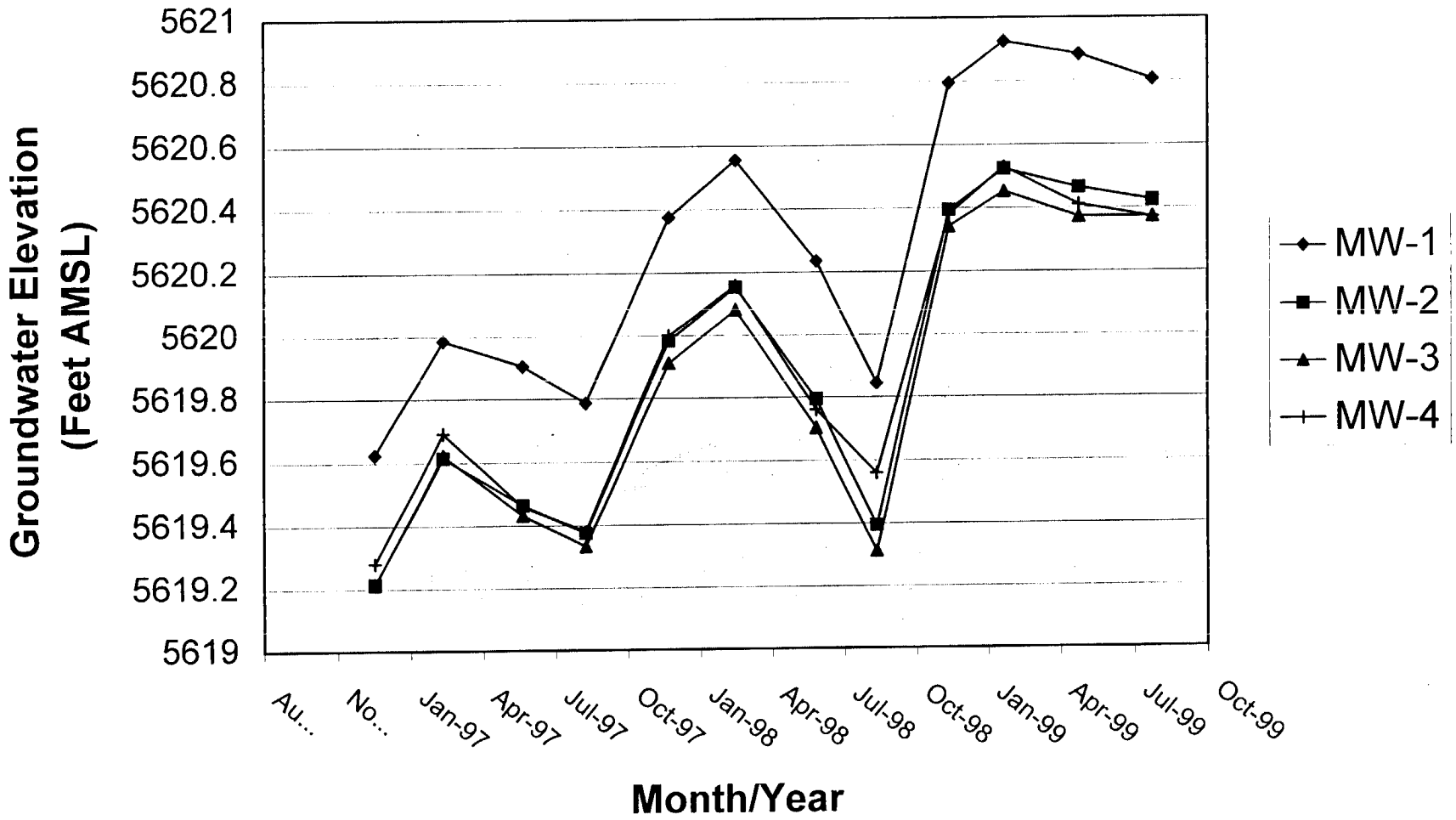
S/Surfer/McClanahan22/May99.SRF

Figure 6.
McClanahan 22 Groundwater Contour Map
(August 10, 1999)



S/Surfer/McClanahan22/Aug99.SRF

Figure 7. McClanahan 22 Hydrograph



RECORD OF SUBSURFACE EXPLO. .ION

Borehole # 2
Well # TEMP 2
Page 1 of 2

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name DNM WELL INSTALLATION
Project Number 21300 Phase 600'
Project Location MCCLANAHAN #22

Elevation
Borehole Location S14 T28N R10W G
GWL Depth
Logged By J. IRBY, C. CULLICOTT
Drilled By K. PADILLA & D. PADILLA
Date/Time Started 7/26/99 12:35pm
Date/Time Completed 7/26/99

Well Logged By C. IRBY, C. CULLICOTT
Personnel On-Site K. PADILLA, D. PADILLA
Contractors On-Site
Client Personnel On-Site GARY COOK

Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID

Depth (Feet)		Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0				SURFACE: SAND						
5										
10		10-12'		10-12' CLEAN SAND, TAN, DRY LOOSE UNCONSOLIDATED W/ ONE IRON STAINED & NC CONSOLIDATED SLIGHT MOIST			0		0	SS 2 2 = 4 BLOWS = 9
15	1	15-17'	2'	POORLY SORTED MED SAND → GRAVEL						
20				15-17': SATURATED GRAY SAND @15' HC STAIN-ODOR (WEATHERED ODOR) @ TOP OF WATER TABLE.			0		0	SS 2 2 = 4 BLOWS = 5
TD 25' 25										
30										
35										
40										

Comments: ~100' FROM ARMENTA WASH
SUNNY, HOT, LIGHT BREEZE

Geologist Signature Catherine Cullicott

RECORD OF SUBSURFACE E' ORATION

Borehole # ~~6~~ 1
Well # ~~5~~ TEMP 1
Page 1 of 2

Philip Services Corporation
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name PNM ~~Vertical Extent~~ well Installation
Project Number 21380- ~~20731~~ Phase ~~6003~~ 600
Project Location ~~Principal #2~~ MCLANAHAN #2

Elevation
Borehole Locatio ~~[illegible] T 30N R 13W~~ S14 T28N R10W, G
GWL Depth 16.47
Logged By C. Irby C. CULLIGAN
Drilled By K. Padilla & D PADILLA
Date Started 7/26/99 10:45am
Date Completed 7/26 99 12:15pm

On-Site Geologist C. Irby C. CULLIGAN
Personnel On-Site K. Padilla, ~~A. Wente~~ D. PADILLA
Contractors On-Site
Client Personnel On-Site ~~R. Bumgarn~~ [illegible]

Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0				SURFACE: SAND						
5	1			CLAY AND SILTY [illegible]			0		Ø	
10				[illegible]			Ø		Ø	
15	2			[illegible]			Ø		Ø	
20				[illegible]						
25				TD 25'						
30										
35										
40										

Comments: [illegible] SUNNY, WARM, LIGHT BREEZE

Geologist Signature Catherine E Culligan

4.7'99 1-40ft x s

MONITORING WELL INSTALLATION RECORD

Phillip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # 2
Well # TEMP 2
Page 2 of 2

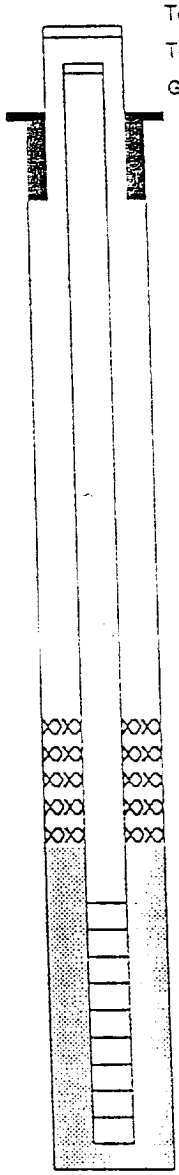
Project Name PNM WELL INSTALLATION
Project Number 2300 Phase 6001
Project Location MCCLANAHAN #2

Elevation
Well Location S14 T28N R10W, G
GWL Depth
Installed By K. PADILLA & D. PADILLA
Date/Time Started 7/26/99 12:35 pm
Date/Time Completed 7/26/99

On-Site Geologist C. TERRY, C. CULLIOTT
Personnel On-Site K. PADILLA, D. PADILLA
Contractors On-Site
Client Personnel On-Site GARY COOK

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		GS
Bottom of Grout		5'
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		15'
Bottom of Well Screen		25'
Top of Peltonite Seal		5'
Bottom of Peltonite Seal		7'
Top of Gravel Pack		7'
Bottom of Gravel Pack		25'
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		25'



Top of Protective Casing
Top of Riser +2½'
Ground Surface GS
Top of Seal 5'
Top of Gravel Pack 7'
Top of Screen 10'
Bottom of Screen 25'
Bottom of Borehole 25'

Comments:

Geologist Signature Catherine E Culliott

MONITORING WELL INSTALLATION RECORD

Phillip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # 1
Well # TEMP 1
Page 2 of 2

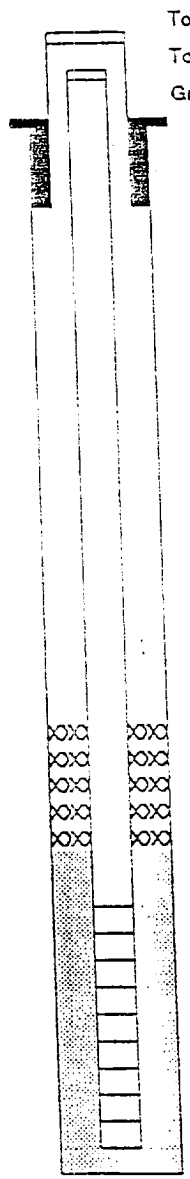
Project Name PNM WELL INSTALLATION
Project Number 2300 Phase 600
Project Location MCCLANAHAN #22

On-Site Geologist C. IRBY, C. CULLICOTT
Personnel On-Site K. PADILLA, D. PADILLA
Contractors On-Site
Client Personnel On-Site GARY COOK

Elevation
Well Location S14 T28N R10W, G
GWL Depth
Installed By K. PADILLA & D. PADILLA
Date/Time Started 7/26/99 10:45 am
Date/Time Completed 7/26/99 12:15 pm

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		GS
Bottom of Grout		5'
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		15'
Bottom of Well Screen		25'
Top of Peltonite Seal		5'
Bottom of Peltonite Seal		7'
Top of Gravel Pack		7'
Bottom of Gravel Pack		25'
Top of Natural Cave-in		
Bottom of Natural Cave-in		
Top of Groundwater		16.47
Total Depth of Borehole		25'



Top of Protective Casing
Top of Riser +2 1/2'
Ground Surface GS
Top of Seal 5'
Top of Gravel Pack 7'
Top of Screen 10'
Bottom of Screen 25'
Bottom of Borehole 25'

Comments:

Geologist Signature Catherine E Cullicott

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

May 18, 1999

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque, NM 87158
TEL: (505) 241-2974
FAX (505) 241-2340

RE: McClanahan 22 Order No.: 9905056

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 5/13/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *18-May-99*

CLIENT: PNM - Public Service Company of NM
Project: McClanahan 22
Lab Order: 9905056

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: *18-May-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9905056	**Client Sample ID:**	9905121530; MW-3
Lab ID:	9905056-01A **Matrix:** AQUEOUS	**Collection Date:**	5/12/99 3:30:00 PM
Project:	McClanahan 22	**COC Record:**	7711

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	2.5		µg/L	5	5/17/99
Toluene	ND	2.5		µg/L	5	5/17/99
Ethylbenzene	180	2.5		µg/L	5	5/17/99
m,p-Xylene	240	5		µg/L	5	5/17/99
o-Xylene	28	2.5		µg/L	5	5/17/99

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

7711

CHAIN OF CUSTODY RECORD

Date: 5/12/99

Page: 1 of 1

ON SITE TECHNOLOGIES, LTD.
612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.			
SEND INVOICE TO	Name	Denver Bearden	REPORT RESULTS TO	Name	Maureen Gannon / Title
	Company	PNM Gas Services / Dept. 324-3763		Company	PNM Gas Services
	Address	603 W. Elm Street		Mailing Address	Alverado Square, Mail Stop 0408
	City, State, Zip	Farmington, NM 87401		City, State, Zip	Albuquerque, NM 87158
				Telephone No.	505-848-2974 / Telefax No.

Sampling Location: Mcclanahan 22

Sampler: MS MG

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX 8021B	LAB ID
990512-1530 [illegible]			H_2O	HCl	2	X	

Relinquished by:	Date/Time 5/13/99 1500	Received by:	Date/Time 5/14/99 1510
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment: HAND Delivered

Authorized by: _____ Date 5/13/99

(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
			Results to be sent to both parties.

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

September 16, 1999

RECEIVED
SEP 2 1 1999

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque, NM 87158
TEL: (505) 241-2974
FAX (505) 241-2340

RE: McClanahan 22

Order No.: 9908027

Dear Maureen Gannon,

On Site Technologies, LTD. received 7 samples on 08/10/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)
Polynuclear Aromatic Hydrocarbons (SW8310)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *16-Sep-99*

CLIENT: PNM - Public Service Company of NM
Project: McClanahan 22
Lab Order: 9908027

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: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908100730; MW-1
Lab ID:	9908027-01A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 7:30:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	ND	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908100753; MW-2
Lab ID:	9908027-02A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 7:53:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	ND	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908100814; MW-3
Lab ID:	9908027-03A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 8:14:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	160	0.5		µg/L	1	08/16/1999
m,p-Xylene	220	1		µg/L	1	08/16/1999
o-Xylene	29	0.5		µg/L	1	08/16/1999

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

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908100830; MW-4
Lab ID:	9908027-04A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 8:30:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	ND	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

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

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OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908100855; TW-1
Lab ID:	9908027-05A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 8:55:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**			.	Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/16/1999
Toluene	ND	0.5		µg/L	1	08/16/1999
Ethylbenzene	ND	0.5		µg/L	1	08/16/1999
m,p-Xylene	ND	1		µg/L	1	08/16/1999
o-Xylene	ND	0.5		µg/L	1	08/16/1999

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

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908100935; TW-2
Lab ID:	9908027-06A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 9:35:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/17/1999
Toluene	ND	0.5		µg/L	1	08/17/1999
Ethylbenzene	ND	0.5		µg/L	1	08/17/1999
m,p-Xylene	ND	1		µg/L	1	08/17/1999
o-Xylene	ND	0.5		µg/L	1	08/17/1999

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

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ANALYTICAL REPORT

Date: *16-Sep-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	McClanahan 22
Work Order:	9908027	**Client Sample ID:**	9908101005; TW-3
Lab ID:	9908027-07A **Matrix:** AQUEOUS	**Collection Date:**	08/10/1999 10:05:00 AM
Project:	McClanahan 22	**COC Record:**	7783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	08/17/1999
Toluene	ND	0.5		µg/L	1	08/17/1999
Ethylbenzene	ND	0.5		µg/L	1	08/17/1999
m,p-Xylene	ND	1		µg/L	1	08/17/1999
o-Xylene	ND	0.5		µg/L	1	08/17/1999

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

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

RECEIVED SEP 7 1999

August 27, 1999

Mr. David Cox
ON SITE TECHNOLOGIES
612 East Murray
Farmington, NM 87401

The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on August 12, 1999. The sample(s) was assigned to Certificate of Analysis No. (s) 9908393 and analyzed for all parameters as listed on the chain of custody.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Scot Bramfitt
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 99-08-393

Approved for Release by:

Scot Bramfitt, Project Manager — 8/27/99 Date

Joel Grice
Laboratory Director

Ted Yen
Corporate Quality Assurance Director

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9908393-01

On Site Technologies
612 East Murray
Farmington, NM 87401
ATTN: David Cox

McClanahan 22 9908100814; MW-3

08/26/99

PROJECT: 8310 Analysis
SITE:
SAMPLED BY: On Site Technologies, LTD.
SAMPLE ID: 9908027-03B

PROJECT NO: 9908027
MATRIX: WATER
DATE SAMPLED: 08/10/99 08:14:00
DATE RECEIVED: 08/12/99

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	1.0	ug/L
Acenaphthylene	ND	1.0	ug/L
Acenaphthene	ND	1.0	ug/L
Fluorene	ND	1.0	ug/L
Phenanthrene	ND	1.0	ug/L
Anthracene	ND	1.0	ug/L
Fluoranthene	ND	1.0	ug/L
Pyrene	ND	1.0	ug/L
Chrysene	ND	1.0	ug/L
Benzo (a) anthracene	ND	1.0	ug/L
Benzo (b) fluoranthene	ND	1.0	ug/L
Benzo (k) fluoranthene	ND	1.0	ug/L
Benzo (a) pyrene	ND	1.0	ug/L
Dibenzo (a,h) anthracene	ND	1.0	ug/L
Benzo (g,h,i) perylene	ND	1.0	ug/L
Indeno (1,2,3-cd) pyrene	ND	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1-Fluoronaphthalene	0.50 ug/L	169MI	50	150
Phenanthrene d-10	0.50 ug/L	198MI	50	150

ANALYZED BY: LJ DATE/TIME: 08/25/99 19:23:06
EXTRACTED BY: KL DATE/TIME: 08/13/99 10:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
MI - Matrix Interference.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
Method 8310 ***

Matrix: Aqueous
Units: ug/L

Batch Id: 2990820014900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Naphthalene	ND	0.50	0.32	64.0	32 - 148
Acenaphthylene	ND	0.50	0.34	68.0	42 - 138
Acenaphthene	ND	0.50	0.34	68.0	22 - 133
Fluorene	ND	0.50	0.36	72.0	11 - 148
Phenanthrene	ND	0.50	0.37	74.0	40 - 121
Anthracene	ND	0.50	0.36	72.0	32 - 121
Fluoranthene	ND	0.50	0.37	74.0	45 - 133
Pyrene	ND	0.50	0.38	76.0	39 - 136
Chrysene	ND	0.50	0.40	80.0	44 - 122
Benzo (a) anthracene	ND	0.50	0.40	80.0	53 - 137
Benzo (b) fluoranthene	ND	0.50	0.40	80.0	62 - 121
Benzo (k) fluoranthene	ND	0.50	0.40	80.0	66 - 128
Benzo (a) pyrene	ND	0.50	0.42	84.0	42 - 120
Dibenzo (a,h) anthracene	ND	0.50	0.42	84.0	59 - 129
Benzo (g,h,i) perylene	ND	0.50	0.43	86.0	67 - 124
Indeno (1,2,3-cd) pyrene	ND	0.50	0.41	82.0	65 - 125

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
NAPHTHALENE	ND	0.50	0.29	58.0	0.27	54.0	7.14	30	1 - 122
ACENAPHTHYLENE	ND	0.50	0.47	94.0	0.43	86.0	8.89	30	1 - 124
ACENAPHTHENE	ND	0.50	0.31	62.0	0.28	56.0	10.2	30	1 - 124
FLUORENE	ND	0.50	0.39	78.0	0.34	68.0	13.7	30	1 - 142
PHENANTHRENE	ND	0.50	0.39	78.0	0.45	90.0	14.3	30	1 - 155
ANTHRACENE	ND	0.50	0.41	82.0	0.38	76.0	7.59	30	1 - 126
FLUORANTHENE	ND	0.50	0.67	134 *	0.61	122	9.37	30	14 - 123
PYRENE	ND	0.50	0.70	140	0.64	128	8.96	30	1 - 140
CHRYSENE	ND	0.50	0.50	100	0.46	92.0	8.33	30	1 - 199
BENZO (A) ANTHRACENE	ND	0.50	0.48	96.0	0.44	88.0	8.70	30	12 - 135
BENZO (B) FLUORANTHENE	ND	0.50	0.51	102	0.50	100	1.98	30	6 - 150
BENZO (K) FLUORANTHENE	ND	0.50	0.41	82.0	0.36	72.0	13.0	30	1 - 159
BENZO (A) PYRENE	ND	0.50	0.49	98.0	0.44	88.0	10.8	30	1 - 128
DIBENZO (A,H) ANTHRACENE	ND	0.50	0.32	64.0	0.31	62.0	3.17	30	1 - 110
BENZO (G,H,I) PERYLENE	ND	0.50	0.45	90.0	0.42	84.0	6.90	30	1 - 116
INDENO (1,2,3-CD) PYRENE	ND	0.50	0.44	88.0	0.40	80.0	9.52	30	1 - 116

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
Method 8310 ***

Matrix: Aqueous **Batch Id:** 2990820014900
Units: ug/L

Analyst: LJ
Sequence Date: 08/20/99
SPL ID of sample spiked: 9908386-02E
Sample File ID: 990819A\018-2001
Method Blank File ID:
Blank Spike File ID: 990820A\017-0701
Matrix Spike File ID: 990819A\019-2101
Matrix Spike Duplicate File ID: 990819A\020-2201

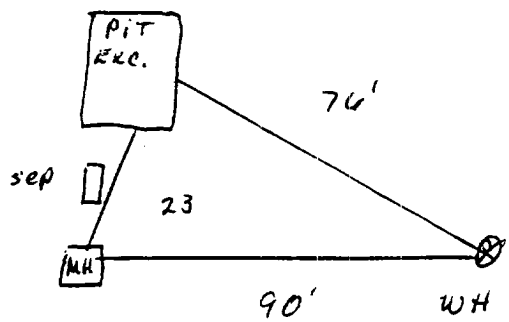
* = Values outside QC Range due to Matrix Interference (except RPD)
« = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (1st Q '97)
(***) = Source: Temporary Limits

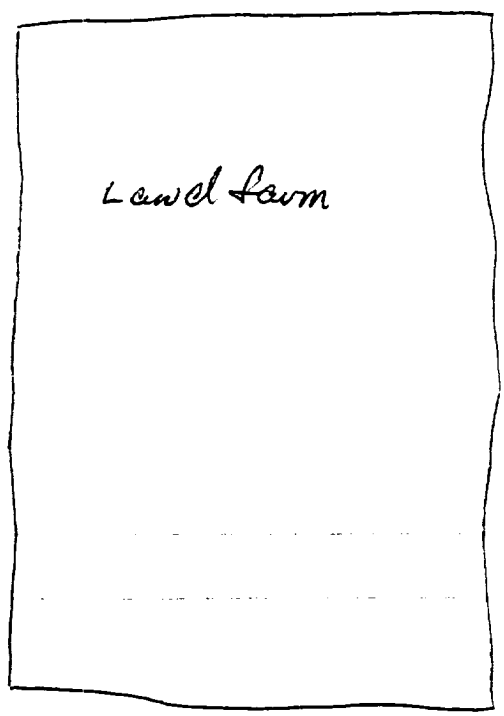
SAMPLES IN BATCH(SPL ID):

9908386-06E	9908387-07E	9908387-08E	9908387-09E
9908392-01C	9908392-02C	9908392-03C	9908392-04C
9908393-01A	9908400-11D	9908400-12C	9908400-13C
9908400-14D	9908400-16D	9908386-02E	9908386-01E
9908386-03E	9908386-04E	9908386-05E	

McClanahan #22

N





OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn:	*Denver Bearden*	Date:	17-Sep-96
Company:	*PNM Gas Services*	*COC No.:*	*4876*
Address:	*603 W. Elm*	*Sample No.*	*12151*
City, State:	*Farmington, NM 87401*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - McClanahan #22***				
Project Location:	***9609121345; Pit Excavation Composite Sample***				
Sampled by:	RH	Date:	12-Sep-96	Time:	13:45
Analyzed by:	HR/DC	Date:	17-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Diesel Range Organics (C10 - C28)	<5.0	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	103	3.0	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Diesel Range (C10-C28)	91	81	(70-130)	8	20%

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

Approved by:

Date: 9/17/96

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Denver Bearden*	*Date:*	17-Sep-96
Company:	*PNM Gas Services*	*COC No.:*	*4876*
Address:	*603 W. Elm*	*Sample No.:*	*12151*
City, State:	*Farmington, NM 87401*	*Job No.:*	*2-1000*

Project Name:	***PNM Gas Services - McClanahan #22***				
Project Location:	***9609121345; Pit Excavation Composite Sample***				
Sampled by:	RH	Date:	12-Sep-96	Time:	13:45
Analyzed by:	HR	Date:	13-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Benzene	1.8	ug/kg	0.2	ug/kg
Toluene	9.0	ug/kg	0.2	ug/kg
Ethylbenzene	8.0	ug/kg	0.2	ug/kg
m,p-Xylene	72.8	ug/kg	0.2	ug/kg
o-Xylene	1.4	ug/kg	0.2	ug/kg
TOTAL	93.0	ug/kg		

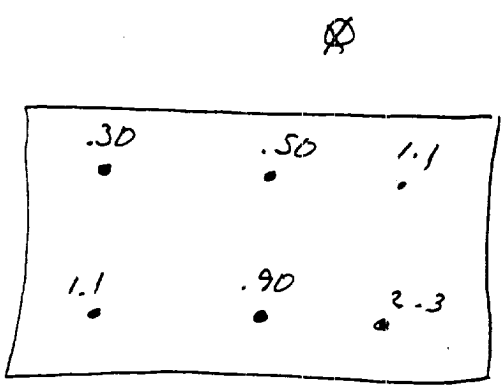
Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: DAC
Date: 9/17/96

McClanahan #22
Meridian Oil
Sec 14, 28N, 10W

10-30-96

Landfarm: On location
Composite sample # 9610301330
soil vapor head space PID reading = 13.6 ppm



2"-12" depth

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn: Denver Bearden
Company: PNM Gas Services
Address: 603 W. Elm
City, State: Farmington, NM 87401

Date: 31-Oct-96
COC No.: 5102
Sample No. 12717
Job No. 2-1000

Project Name: **PNM Gas Services - McClanahan #22 Landfarm**
Project Location: **9610301330; 6pt. Composite, 2"-12" depth**
Sampled by: GC Date: 30-Oct-96 Time: 13:30
Analyzed by: DC/HR Date: 31-Oct-96
Sample Matrix: Soil

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Diesel Range Organics (C10 - C28)	<5.0	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	96	3.7	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Diesel Range (C10-C28)	110	97	(70-130)	9	20%

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

Approved by:
Date: 10/31/96