District I
P O Box 1980 Hobbs NM

District II
P O Drawer DD Artesia NM 88211

District III
1000 Rio Brazos Rd Aztec NM 87410

Denny G. Faught
DEPUTY OIL & GAS INSPECTOR
JUL 18 1997

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

Approved

PIT REMEDIATION AND CLOSURE REPORT

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

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Howell #1

Location: Unit: K Sec. 20 T. 30 N R. 8 W County San Juan

Pit Type: Separator ___ Dehydrator ✔ Other ___

Land Type: BLM ✔ State ___ Fee ___ Other No

Pit Location: (Attach diagram)

Pit dimensions: length 20 ' width 20 ' depth 3 '

Reference: wellhead ✔ other ___

Footage from reference: 150'

Direction from reference: 45 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)	0
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)	0
RANKING SCORE (TOTAL POINTS) :			0

RECEIVED
APR 24 1997
OIL CON. DIV.
DIST. 3

Howell #1

Date Remediation Started: 7/24/96 **Date Completed:** 7/28/96

Remediation Method: (Check all appropriate sections)
Excavation X Approx. Cubic Yard 307
Landfarmed X Amount Landfarmed (cubic yds) 286
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 to pit size of 23'x20'x18' and landfarmed soil onsite within a bermed area at a depth of 6" to 12". Soil was aerated by plowing/disking until soil met regulatory levels.

***Vertical extent at 25' provided BTEX at 25 ppm and TPH at 43.7 ppm. See attached risk analysis form and lab analysis.

Ground Water Encountered: No ✔ Yes Depth

Final Pit Closure Sampling: (if multiple samples, attach sample result and diagram of sample locations and depths.)
Sample Location 5 pt composite-4 side walls and center of pit bottom
Sample depth 18'
Sample date 7/24/96 Sample time 11:45:00 AM

Sample Results
Benzene (ppm) 1.1886
Total BTEX (ppm) *** 420.4391
Field headspace (ppm)
TPH 2240.30 Method 8015A

Vertical Extent (ft) 25' Risk Assessment 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 April 28, 1997
SIGNATURE Denver Bearden
PRINTED NAME AND TITLE Denver Bearden, Administrator III

PNM Gas Services

Well Name:	Howell #1
Well Legals:	Unit K, Sec 20, T30N, R8W
Pit Type:	Dehydrator
Horizontal Distance to Surface Water:	Greater than 1,000 ft
Groundwater Depth:	Greater than 100 ft

RISK ANALYSIS

PNM requests closure of the Howell #1 using a limited risk analysis of the site conditions.

1. PNM estimated groundwater to be at a depth of 180 ft. based upon elevation of site to the San Juan River. (Reference: topographic map.)

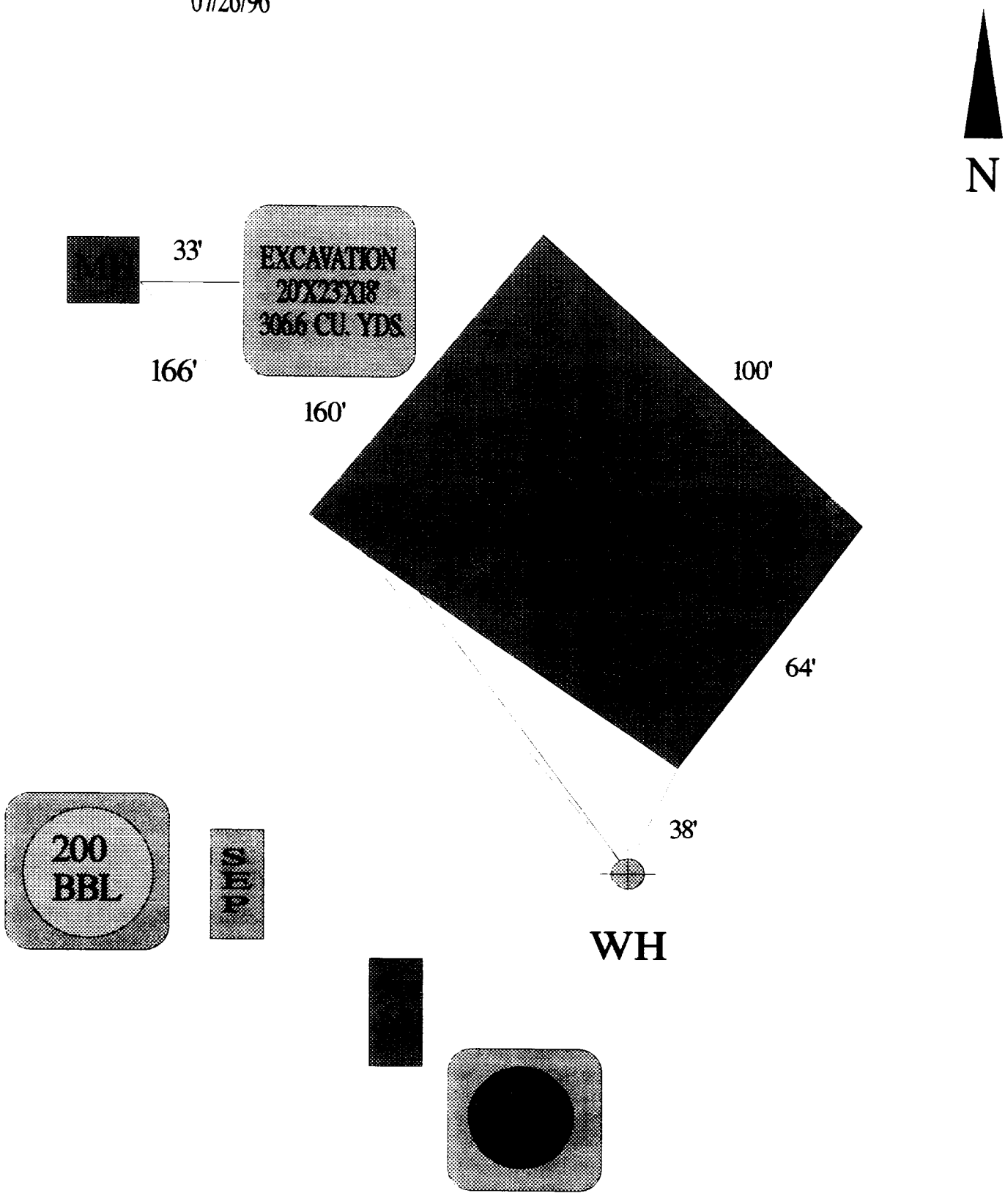
2. This site is not located within 200 ft. of a domestic water well and is not within 1,000 ft. of any other water source.

3. Distance from the site to surface water is greater than 1,000 ft.

4. PNM excavated 306 cu. yds. from the former pit. Vertical extent was determined using a hollow stem drilling rig. Bedrock was encountered at 25 ft. below ground surface.

Based upon the information provided above, PNM believes the Howell #1 poses minimal risk to the environment. Subsurface lateral migration is limited based upon PNM's past experience in excavating 400 pits. Source removal minimizes the possibility of surface water contamination. Bedrock provides an impermeable layer between remaining contamination and groundwater. Vertical migration through bedrock to groundwater is highly unlikely.

HOWELL #1 EXCAVATION
07/26/96



OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn:	*Denver Bearden*	Date:	29-Jul-96
Company:	*PNM Gas Services*	*COC No.:*	*4737*
Address:	*603 W. Elm*	*Sample No.*	*11602*
City, State:	*Farmington, NM 87401*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - Howell #1***				
Project Location:	***9607241145; Pit Excavation Composite Sample***				
Sampled by:	RH	Date:	24-Jul-96	Time:	11:45
Analyzed by:	DC	Date:	26-Jul-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Diesel Range Organics (C10 - C28)	2240.3	mg/kg	5.0	mg/kg

Quality Assurance Report

DRO QC No.: *0479-QC*

Calibration Check

Parameter	*Method Blank*	*Unit of Measure*	*True Value*	*Analyzed Value*	*% Diff*	*Limit*
Diesel Range (C10 - C28)	<5.0	ppm	2,000	1,977	1.1	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Diesel Range (C10-C28)	109	99	(70-130)	7	20%

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

Approved by: DaG
Date: 7/29/96

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn:	*Denver Bearden*	Date:	29-Jul-96
Company:	*PNM Gas Services*	*COC No.:*	*4737*
Address:	*603 W. Elm*	*Sample No.*	*11602*
City, State:	*Farmington, NM 87401*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - Howell #1***				
Project Location:	***9607241145; Pit Excavation Composite Sample***				
Sampled by:	RH	Date:	24-Jul-96	Time:	11:45
Analyzed by:	DC	Date:	26-Jul-96		
Sample Matrix:	*Soil*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	1188.6	ug/kg	0.2	ug/kg
Toluene	56452.6	ug/kg	0.2	ug/kg
Ethylbenzene	21147.3	ug/kg	0.2	ug/kg
m,p-Xylene	276459.5	ug/kg	0.2	ug/kg
o-Xylene	65191.1	ug/kg	0.2	ug/kg
TOTAL	420439.1	ug/kg		

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

Approved by: DC
Date: 7/29/96

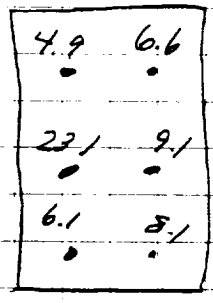
Howell #1
Amoco
Sec. 20, 30N, 8W

9-10-96

Landfarm: On-location

Composite sample # 9609101130 4pt comp.

Soil Vapor Head space PID reading: 33.3 ppm



2"-12" depth
Sand

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

Diesel Range Organics

Attn:	*Denver Bearden*	Date:	12-Sep-96
Company:	*PNM Gas Services*	*COC No.:*	*5010*
Address:	*603 W. Elm*	*Sample No.*	*12092*
City, State:	*Farmington, NM 87401*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - Howell #1 Landfarm***				
Project Location:	***9609101130; 6pt. Composite, 2"-12" depth***				
Sampled by:	GC	Date:	10-Sep-96	Time:	11:30
Analyzed by:	DC/HR	Date:	12-Sep-96		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Diesel Range Organics (C10 - C28)	209.5	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	104	3.6	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*%RSD*	*Limit*
Diesel Range (C10-C28)	96	95	(70-130)	1	20%

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

Approved by: JLG

Date: 9/12/96

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Public Service Co. of NM.	Project #:	93108-02
Sample ID:	TH - 1 @ 25'	Date Reported:	01-07-97
Laboratory Number:	A896	Date Sampled:	01-03-97
Chain of Custody No:	5052	Date Received:	01-03-97
Sample Matrix:	Soil	Date Extracted:	01-07-97
Preservative:	Cool	Date Analyzed:	01-07-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**43.7**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**43.7**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: **Howell #1.**

Analyst

Review

5796 U.S. Highway 64-3014 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Public Service Co. of NM.	Project #:	93108-02
Sample ID:	TH - 1 @ 25'	Date Reported:	01-08-97
Laboratory Number:	A896	Date Sampled:	01-03-97
Chain of Custody:	5052	Date Received:	01-03-97
Sample Matrix:	Soil	Date Analyzed:	01-07-97
Preservative:	Cool	Date Extracted:	01-07-97
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**11.8**	**8.8**
Toluene	**2,160**	**8.4**
Ethylbenzene	**1,510**	**7.6**
p,m-Xylene	**16,700**	**10.8**
o-Xylene	**4,590**	**5.2**
Total BTEX	**25,000**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**95 %**

References: Method 5030. Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: **Howell #1.**

Analyst

Review

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