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REPORTS

DATE:

1999

Public Service Company
of New Mexico
Alvarado Square MS 0408
Albuquerque, NM 87158

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April 5, 1999

APR 07 1999

Mr. William Olson
Hydrogeologist
Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION



RE: 1999 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

PNM is pleased to submit the 1999 Annual Groundwater Report on Unlined Surface Impoundments in the San Juan Basin. Pursuant to PNM's Groundwater Management Program for Unlined Surface Impoundment Closures, the report details the ongoing investigation/remedial activities at unlined surface impoundments having groundwater contamination as identified by PNM. A list of groundwater sites reported in this document is provided below.

Blanco Wash Drip	Mangum 1E
Davis 1	McClanahan 22
Dogie East Pit	McClanahan A 2E
Dogie North Pit	McCoy Gas Com A1
Florance 124	Miles Federal 1E Drip
Florance 32A	O' Shea 1M
Florance 40	Patterson A Com A1
Florance 44	Pritchard 2
Florance M 47X	Randleman 1
Hampton 4M	Reid 16 Drip
Honolulu Drip	Turner 1A
Ice Canyon Drip	Wilmerding 1M
Jacques 2A	Zachry 18E
Jicarilla Contract 147-6	
Linda 1A	

Consistent with PNM's San Juan Basin Groundwater Management Plan, PNM will request closure of four of the above sites, the Florance 32A, Jacques 2A, Mangum 1E and 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 each of the sites. BTEX concentrations have been consistently below WQCC standards for four consecutive quarters.

Upon approval of the groundwater closure report, PNM will plug and abandon all of the groundwater monitoring wells at each of the locations. 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

Bill Olson
04/05/99
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with cement containing 5% bentonite. If you have any questions regarding the contents of the report, please contact me at (505) 241-2974.

Sincerely,

A handwritten signature in cursive script, appearing to read "Maureen Gannon", with a horizontal line extending to the right.

Maureen Gannon
Project Manager

Enclosure

cc: Colin Adams, Esq.
Ingrid Deklau, WFS
Denny Foust, OCD-Aztec Office
Ron Johnson
Mark Sikelianos
Bill VonDrehle, WFS



Environmental Services

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Annual

Groundwater Report

1999

Volume II

***Unlined Surface Impoundments
San Juan Basin***



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: 10 **Twn:** 31 N **R:** 13W **Unit:** C
Canyon: Armenta

Vulnerable Class: Original
OCD Ranking: 40
Lead Agency: NMOCD

Topo Map: previously submitted
Well Completion Diagram: NA
Site Map with Analytical Results: NA
Groundwater Contour Map: NA
Hydrograph: NA
Full-suite of Groundwater Sampling Results: NA
Analytical Results: NA

Site Hydrology:

The Wilmerding 1M site lies at an elevation of about 5810 ft.amsl, just southwest of the town of La Plata, New Mexico. The site is only about one mile south of the O'Shea 1M site, another PNM site discussed in this Groundwater Report. The site lies within the broad (more than one mile wide) alluvial plain of the south-flowing La Plata River. Irrigation ditches divert water from the La Plata and carry water to fields on the alluvial plain throughout the growing season. The site lies less than a mile from the streambed of the La Plata River; however, there are 3 nearby ditches that exert strong control on the site's hydrology. The McDermott and Cunningham ditches lie east of the site (downhill, between the site and the river) and the Highland Park ditch lies just west of the site (uphill and away from the river). Topography drops to the south at the Wilmerding 1M site.

In site excavations, about 6 to 7 feet of clay was encountered in the subsurface. Beyond this depth, cobbles and gravels were encountered. This is most likely the Jackson Lake Terrace deposits mapped by Pastuszak (1965) about three miles further south in his 1965 MS study from UNM. Pastuszak reports that the Jackson Lake lies about 100 feet over the level of the La Plata River, and is composed of boulders, cobbles and sand materials, deposited during the last deglaciation about 10,000 to 20,000 years ago. Thickness of the unit is reportedly 8 feet, and it is composed of gravels, cobbles and pebbles. Outcrop patterns of the unit typically form discontinuous bands parallel to the modern San Juan and La Plata river systems.

Groundwater was found at about 6 feet deep. Water levels rose rapidly, and stabilized at about 2 feet below land surface. Temporary monitor wells were installed, and subsequent visits to the site revealed that the water levels fluctuated in direct relation to the presence or absence of water in the nearby ditch systems. In September, 1998, October, 1998, and again in January, 1999, all four temporary monitor wells were found to be dry.

Groundwater flow direction cannot be determined from the data available at this time. However, it is believed that the Jackson Lake Terrace deposits form a perched groundwater system that is only seasonally saturated.

Activities for Previous Year:

A backhoe was used to install four 4-inch standpipes (which were slotted across the water table) in strategic locations for future groundwater monitoring wells. PNM then conducted quarterly measurements in the standpipes and did not detect the presence of groundwater during the 3rd and 4th quarters of 1998, and the 1st quarter of 1999.

Future Actions:

PNM will continue to monitor for the presence of groundwater in the 4-inch standpipes. We expect water levels to rise during the spring of 1999 and will conduct quarterly sampling at this time. A survey of the temporary monitor wells will also be conducted to better determine the local groundwater gradient.

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