

3R -

79

REPORTS

DATE:

5/17/2006

3R0079



THOMPSON

ENGINEERING &
PRODUCTION CORP

Petroleum Engineering Consulting
Lease Management
Contract Pumping

7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834

2006 MAY 17 PM 12 03

May 12, 2006

Mr. Glen Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Annual Groundwater Monitoring
Thomas #1 Well Location
Section 30, T29N, R11W

Dear Mr. Von Gonten,

Please find attached, from Animas Environmental Services, the annual groundwater testing report for the Thomas #1 well location.

As noted in the report, samples from both MW-2 and MW-3, collected in December 2005, are below the acceptable limits of the New Mexico Water Quality Control Commission for both BTEX and TPH. For this reason, Thompson Engineering, the current operator of the well, proposes that no further testing be required and that the project be closed.

Thank you for your consideration in this matter and please don't hesitate to call if you have further questions.

Sincerely,

Paul C. Thompson, P.E.
President
Thompson Engineering

3R 0079



THOMPSON

ENGINEERING &
PRODUCTION CORP

Petroleum Engineering Consulting
Lease Management
Contract Pumping

7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834

May 12, 2006

Mr. Denny Foust
New Mexico Oil Conservation Division
District 3 Office
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Annual Groundwater Monitoring
Thomas #1 Well Location
Section 30, T29N, R11W

Dear Mr. Foust,

I believe you have received the annual groundwater testing report for the Thomas #1 well location, directly from Animas Environmental Services.

As noted in the report, samples from both MW-2 and MW-3, collected in December 2005, are below the acceptable limits of the New Mexico Water Quality Control Commission for both BTEX and TPH. For this reason, Thompson Engineering, the current operator of the well, proposes that no further testing be required and that the project be closed.

Thank you for your consideration in this matter and please don't hesitate to call if you have further questions.

Sincerely,

Paul C. Thompson, P.E.
President
Thompson Engineering





320079

Animas Environmental Services, LLC

624 E. Comanche • Farmington, NM 87401
TEL 505-564-2281 • FAX 505-324-2022

2006 APR 19 PM 1 12

April 12, 2006

Mr. William Olson
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Mr. Denny Foust
New Mexico Oil Conservation Division
District 3 Office
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Annual Groundwater Monitoring and Sampling Report for the Burlington Resources Oil and Gas Company's Thomas No. 1 Well Location, Bloomfield, New Mexico

Dear Sirs:

Pursuant to New Mexico Oil Conservation Division (OCD) requirements, Animas Environmental Services, LLC (AES), on behalf of Clayton Investments, submits this Annual Groundwater Monitoring and Sampling Report for 2005 for the Burlington Resources Oil and Gas Company's Thomas No.1 well, which is located west of Bloomfield in the NW ¼, SW ¼, Section 30, T29N, R11W, San Juan County, New Mexico. A site location map is included as Figure 1.

1.0 Groundwater Monitoring and Sampling

On July 25, 2005, and December 30, 2005, BioTech Remediation, Inc. (BioTech) personnel completed groundwater elevation monitoring at all five monitoring wells located at the site and collected groundwater samples from monitoring wells MW-2 and MW-3 for laboratory analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) per EPA Method 8021 and C₆ through C₁₀ range total petroleum hydrocarbons (TPH) per EPA Method 8015. All samples were submitted to Pinnacle Laboratories in Albuquerque, New Mexico, for analysis. Laboratory analytical reports are found in Appendix A.

1.1 Depth to Groundwater Measurements and Hydraulic Gradient

Depth to groundwater measurements for all wells were made with a Heron Electronic Water Level and recorded prior to sampling activities. In July 2005, groundwater elevations indicated a general decrease by approximately 0.74 feet across the site since last measured in January 2005. MW-5 was reported to be dry in July 2005, and no groundwater measurements were taken. Depths to groundwater varied between 3.72 feet below top of casing (TOC) in MW-3 up to 4.82 feet below TOC in MW-2.

Groundwater elevations across the site ranged from 5371.82 ft above mean sea level (AMSL) in MW-4 to 5372.68 ft AMSL in MW-1. Based on groundwater elevation data, hydraulic gradient was calculated to be approximately 0.003 ft/ft in a southwest direction across the site.

In December 2005, groundwater measurements indicated a general increase in elevations by approximately 0.62 feet across the site. Depth to groundwater varied between 2.84 feet below TOC in MW-3 to 4.28 feet below TOC in MW-5. Groundwater elevations across the site ranged from 5372.07 ft AMSL in MW-5 up to 5373.29 ft AMSL in MW-1. Hydraulic gradient was estimated to be approximately 0.003 ft/ft in a southwest direction across the site.

Historical groundwater elevation data is summarized in Table 1, and groundwater elevation data for the July 25th and December 30th, 2005, monitoring events are included on Figures 2 and 3, respectively.

1.2 Groundwater Sample Collection

Following well measurements in July and December 2005, 2 of the 5 monitoring wells (MW-2 and MW-3) were each purged with a new disposable bailer, and a groundwater sample was collected from each well. The groundwater samples were then transferred into new clean sample containers with a slow release valve, labeled accordingly, and the Chain of Custody Record was completed. The samples were subsequently stored in an insulated cooler at approximately 4°C and transported to Pinnacle Laboratories, Albuquerque, New Mexico, for laboratory analyses.

1.3 Dissolved Phase Contaminant Concentrations

Analytical results of the groundwater samples collected from MW-2 on July 25th and December 30th, 2005, indicate that petroleum hydrocarbon contaminants continue to impact groundwater at the site. During the July and December 2005 sampling events, benzene concentrations in MW-2 exceeded the New Mexico Water Quality Control Commission (WQCC) standard of 10 µg/L with concentrations of 46 µg/L and 5.2 µg/L, respectively. Benzene was below analytical laboratory detection limits in MW-3 during both sampling events. Toluene, ethylbenzene, and xylene concentrations in MW-2 and MW-3 had concentrations that were below applicable New Mexico WQCC standards or below laboratory detection limits in July and December 2005. Trace amounts of TPH (C₆ through C₁₀) were reported for both sampling events in 2005 and ranged from 0.54 mg/L in December 2005 in MW-3, up to 3.0 mg/L in July 2005 in MW-2.

Historical groundwater contaminant concentration data are summarized in Table 2. Groundwater contaminant concentration data for the July 25, 2005, and December 30, 2005, sampling events are included on Figures 2 and 3, respectively.

2.0 Conclusions

Based on groundwater elevation data in July and December 2005, the hydraulic gradient at the site was calculated to be approximately 0.003 ft/ft in a southwest direction. Fluctuations in groundwater elevations during 2005 appear to be part of seasonal changes in the localized groundwater table. Analytical results from both sampling

Mr. William Olson
Mr. Denny Foust
April 12, 2006
Page 3 of 3

events indicate that benzene concentrations continue to slightly exceed the WQCC standard in MW-2.

The next groundwater monitoring and sampling event is scheduled to be conducted at the site in July 2006. If you have any questions regarding this report, please contact me or Elizabeth McNally at (505) 564-2281.

Sincerely,



Gwen Frost
Project Manager

Cc: Robert Moss
General Counsel
Clayton Investments
501 Airport Drive, Suite 100
Farmington, NM 87401

Attachments: Tables
Figures
Appendix A. Laboratory Analytical Results

Files:2006/Thomas Wells/2005 Annual Monitoring and Sampling Report

TABLE 1. WATER QUALITY AND WELL DATA

Burlington Resources Oil and Gas Company's Thomas No. 1 Location, Bloomfield, NM

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to Water (ft)	Water Level Elevation (ft amsl)
MW-1	09/07/01	5376.91	4.69	5372.22
	02/04/02	5376.91	3.66	5373.25
	07/30/02	5376.91	4.14	5372.77
	12/04/02	5376.91	3.47	5373.44
	07/03/03	5376.91	3.15	5373.76
	12/19/03	5376.91	3.53	5373.38
	07/12/04	5376.91	4.05	5372.86
	01/03/05	5376.91	3.50	5373.41
	07/25/05	5376.91	4.23	5372.68
	12/30/05	5376.91	3.62	5373.29
MW-2	09/07/01	5376.97	4.99	5371.98
	02/04/02	5376.97	4.21	5372.76
	07/30/02	5376.97	4.61	5372.36
	12/04/02	5376.97	4.05	5372.92
	07/03/03	5376.97	4.45	5372.52
	12/19/03	5376.97	4.06	5372.91
	07/12/04	5376.97	4.60	5372.37
	01/03/05	5376.97	4.22	5372.75
	07/25/05	5376.97	4.82	5372.15
	12/30/05	5376.97	4.26	5372.71
MW-3	09/07/01	5375.56	4.10	5371.46
	02/04/02	5375.56	2.46	5373.10
	07/30/02	5375.56	3.47	5372.09
	12/04/02	5375.56	2.69	5372.87
	07/03/03	5375.56	3.54	5372.02
	12/19/03	5375.56	2.78	5372.78
	07/12/04	5375.56	3.40	5372.16
	01/03/05	5375.56	2.82	5372.74
	07/25/05	5375.56	3.72	5371.84
	12/30/05	5375.56	2.84	5372.72
MW-4	09/07/01	5375.56	3.91	5371.65
	02/04/02	5375.56	2.82	5372.74
	07/30/02	5375.56	3.53	5372.03
	12/04/02	5375.56	2.81	5372.75
	07/03/03	5375.56	3.38	5372.18
	12/19/03	5375.56	2.87	5372.69

TABLE 1. WATER QUALITY AND WELL DATA

Burlington Resources Oil and Gas Company's Thomas No. 1 Location, Bloomfield, NM

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to Water (ft)	Water Level Elevation (ft amsl)
MW-4	07/12/04	5375.56	3.46	5372.10
	01/03/05	5375.56	3.00	5372.56
	07/25/05	5375.56	3.74	5371.82
	12/30/05	5375.56	3.03	5372.53
MW-5	09/07/01	5376.35	5.86	5370.49
	02/04/02	5376.35	4.19	5372.16
	07/30/02	5376.35	5.27	5371.08
	12/04/02	5376.35	4.49	5371.86
	07/03/03	5376.35	3.89	5372.46
	12/19/03	5376.35	4.23	5372.12
	07/12/04	5376.35	5.13	5371.22
	01/03/05	5376.35	4.60	5371.75
	07/25/05	5376.35	DRY	DRY
	12/30/05	5376.35	4.28	5372.07

TABLE 2. GROUNDWATER ANALYTICAL RESULTS

Burlington Resources Oil and Gas Company's Thomas No. 1 Location, Bloomfield, NM

Sample ID	Sample Date	Analytical Method	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TPH C6 - C10 (mg/L)
NM WQCC Standards			10	750	750	620	100	NE
MW-1	09/07/01	8021/8015	ns	ns	ns	ns	ns	ns
	02/04/02	8021/8015	ns	ns	ns	ns	ns	ns
	07/30/02	8021/8015	ns	ns	ns	ns	ns	ns
	12/04/02	8021/8015	ns	ns	ns	ns	ns	ns
	07/03/03	8021/8015	ns	ns	ns	ns	ns	ns
	12/19/03	8021/8015	ns	ns	ns	ns	ns	ns
	07/12/04	8021/8015	ns	ns	ns	ns	ns	ns
	01/03/05	8021/8015	ns	ns	ns	ns	ns	ns
MW-2	09/07/01	8021/8015	<2.5	<2.5	25	63.2	<5.0	ns
	02/04/02	8021/8015	120	9.0	76	373.6	2.8	ns
	07/30/02	8021/8015	50	<2.5	49	245.6	<5.0	ns
	12/04/02	8021/8015	87	<2.5	67	270	<13	ns
	07/03/03	8021/8015	150	<2.5	87	430	<13	ns
	12/19/03	8021/8015	56	<2.5	74	150	<13	ns
	07/12/04	8021/8015	89	3.4	110	1100	<13	5.1
	01/03/05	8021/8015	16	<2.5	35	420	<13	2.4
	07/25/05	8021/8015	46	<2.5	59	360	<13	3.0
	12/30/05	8021/8015	5.2	<0.5	15	33	<2.5	1.5
MW-3	09/07/01	8021/8015	130	<0.5	51	372.9	<1.0	<3.0
	02/04/02	8021/8015	ns	ns	ns	ns	ns	ns
	07/30/02	8021/8015	<0.5	2.3	9.5	8.6	<1.0	ns
	12/04/02	8021/8015	0.6	1.7	2.4	6.2	<2.5	ns
	07/03/03	8021/8015	<0.5	2.3	6.2	8.5	<2.5	ns
	12/19/03	8021/8015	<0.5	1.2	6.6	9.5	<2.5	ns
	07/12/04	8021/8015	0.6	1.7	12	12	<2.5	0.6
	01/03/05	8021/8015	<0.5	1.7	5.7	7.0	<2.5	0.4
	07/25/05	8021/8015	<0.5	1.2	12	10	<2.5	0.81
	12/30/05	8021/8015	<0.5	0.8	5.8	6.0	<2.5	0.54
MW-4	09/07/01	8021/8015	ns	ns	ns	ns	ns	ns
	02/04/02	8021/8015	<0.5	6.9	8.2	18.7	1.0	ns
	07/30/02	8021/8015	ns	ns	ns	ns	ns	ns
	12/04/02	8021/8015	ns	ns	ns	ns	ns	ns
	07/03/03	8021/8015	ns	ns	ns	ns	ns	ns
	12/19/03	8021/8015	ns	ns	ns	ns	ns	ns
	07/12/04	8021/8015	ns	ns	ns	ns	ns	ns
	01/03/05	8021/8015	ns	ns	ns	ns	ns	ns

TABLE 2. GROUNDWATER ANALYTICAL RESULTS

Burlington Resources Oil and Gas Company's Thomas No. 1 Location, Bloomfield, NM

Sample ID	Sample Date	Analytical Method	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TPH C6 - C10 (mg/L)
NM WQCC Standards			10	750	750	620	100	NE
MW-5	09/07/01	8021/8015	ns	ns	ns	ns	ns	ns
	02/04/02	8021/8015	ns	ns	ns	ns	ns	ns
	07/30/02	8021/8015	ns	ns	ns	ns	ns	ns
	12/04/02	8021/8015	ns	ns	ns	ns	ns	ns
	07/03/03	8021/8015	ns	ns	ns	ns	ns	ns
MW-5	12/19/03	8021/8015	ns	ns	ns	ns	ns	ns
	07/12/04	8021/8015	ns	ns	ns	ns	ns	ns
	01/03/05	8021/8015	ns	ns	ns	ns	ns	ns

Notes:

< Analyte not detected above listed method limit
 (µg/L) Micrograms per Liter (ppb)
 (mg/L) Milligrams per Liter (ppm)
 ns Not Sampled



AES



Animas Environmental Services, LLC

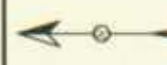
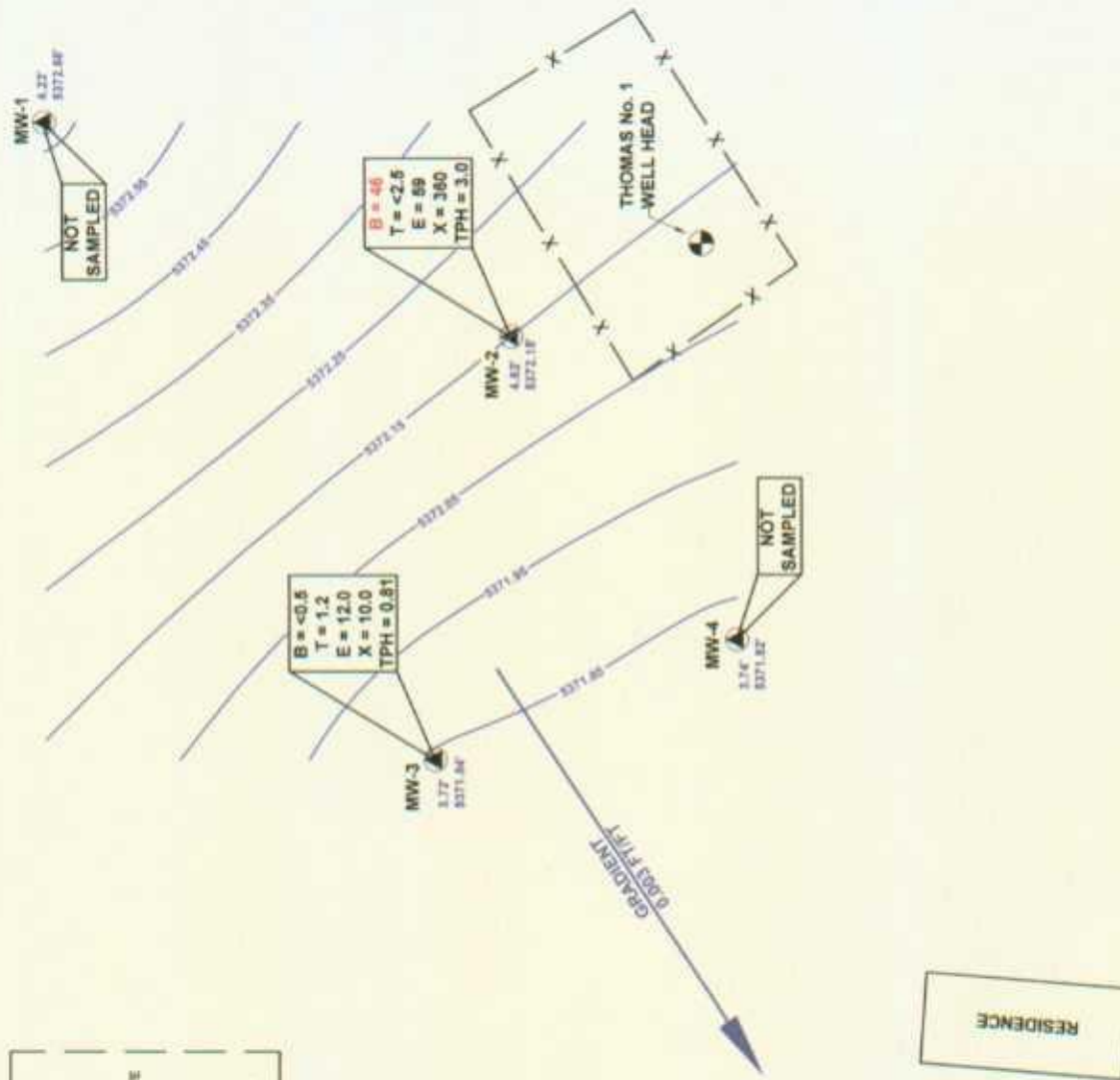


BURLINGTON RESOURCES
 OIL AND GAS COMPANY'S
 THOMAS No. 1
 NW1/4, SW1/4, SECTION 30,
 T. 29N, R. 11W,
 SAN JUAN COUNTY, NM

FIGURE 1

SITE LOCATION
 MAP

HORN CANYON
 QUAD: 1985, REV. 1979



Animas Environmental Services, LLC

BURLINGTON RESOURCES
OIL AND GAS COMPANY'S
THOMAS No. 1 WELL
BLOOMFIELD, NM

Dir. By:	NCW	Date:	04/07/05
Rev. By:		Date:	
File: THOMAS101112.spl.dwg			

FIGURE 2

**SITE MAP WITH
MONITORING AND SAMPLING
RESULTS
JULY 2005**



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **507234**
August 09, 2005

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name THOMAS WELLS
Project Number (NONE)

Attention: MIKE BEAUPARLANT

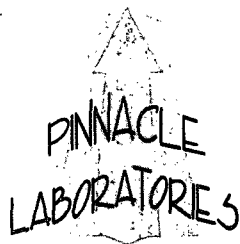
On 07/29/2005 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 507234
PROJECT #	: (NONE)	DATE RECEIVED	: 07/29/2005
PROJECT NAME	: THOMAS WELLS	REPORT DATE	: 08/09/2005
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
507234 - 01	MW 2	AQUEOUS	07/25/2005
507234 - 02	MW 3	AQUEOUS	07/25/2005



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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

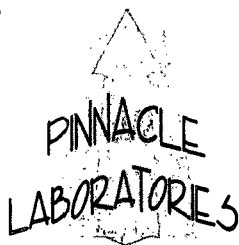
GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B / 8015B GRO
CLIENT : BIOTECH REMEDIATION
PROJECT # : (NONE)
PROJECT NAME : THOMAS WELLS

PINNACLE I.D. : 507234
ANALYST : DSR

SAMPLE		DATE		DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	MW 2	AQUEOUS	07/25/2005	NA	08/04/2005	5
02	MW 3	AQUEOUS	07/25/2005	NA	08/04/2005	1
PARAMETER		DET. LIMIT	UNITS	MW 2	MW 3	
FUEL HYDROCARBONS		0.10	MG/L	3.0	0.81	
HYDROCARBON RANGE				C6-C10	C6-C10	
HYDROCARBONS QUANTITATED USING				GASOLINE	GASOLINE	
BENZENE		0.5	UG/L	46	< 0.5	
TOLUENE		0.5	UG/L	< 2.5	1.2	
ETHYLBENZENE		0.5	UG/L	59	12	
TOTAL XYLENES		1.0	UG/L	360	10	
METHYL-t-BUTYL ETHER		2.5	UG/L	< 13	< 2.5	
SURROGATE:						
BROMOFLUOROBENZENE (%)				110	105	
SURROGATE LIMITS		(80 - 120)				

CHEMIST NOTES:
N/A



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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

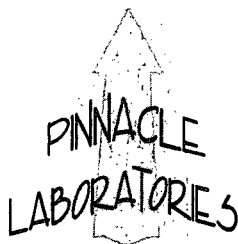
GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B / 8015B GRO	PINNACLE I.D.	: 507234
BLANK I.D.	: 080405	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/04/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	ANALYST	: DSR

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/L	<0.10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 107
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

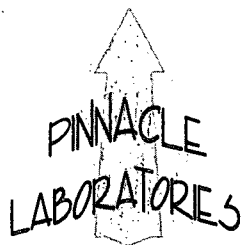
TEST	: EPA 8015B GRO	PINNACLE I.D.	: 507234
BATCH #	: 080405	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/04/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.10	1.0	1.05	105	1.01	101	4	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING GASOLINE									

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

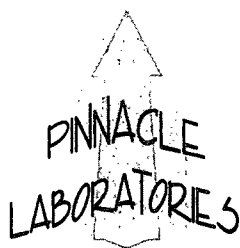
TEST	: EPA 8015B GRO	PINNACLE I.D.	: 507234
MSMSD #	: 507235-01	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/04/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.10	1.0	0.917	92.	0.996	100	8	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

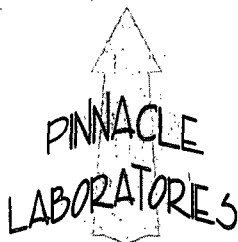
TEST	: EPA 8021B	PINNACLE I.D.	: 507234
BATCH #	: 080405	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/04/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.1	96	18.8	94	2	(80 - 120)	20
TOLUENE	<0.5	20.0	20.9	105	21.3	107	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.9	100	19.7	99	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	61.8	103	61.7	103	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	20.0	100	20.1	101	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B	PINNACLE I.D.	: 507234
MSMSD #	: 507235-01	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/04/2005
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.2	91	18.7	94	3	(80 - 120)	20
TOLUENE	<0.5	20.0	20.4	102	20.7	104	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.4	97	19.7	99	2	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	59.9	100	61.4	102	2	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	17.9	90	18.5	93	3	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

CHAIN OF CUSTODY

DATE: 7-25-05 PAGE: 1 OF 1

PLI Accession #:

507234

ANALYSIS REQUEST			
PROJECT MANAGER: MIKE BEAUPRELAUD COMPANY: BIOTECH REMEDIATION INC. ADDRESS: 501 ALBERT DR. PHONE: 505-307-4965 FAX: BILL TO: COMPANY: ADDRESS:	SAMPLE ID MW#2 MW#3	DATE 7-25-05 "	TIME 1430 1413
MATRIX PETROLEUM HYDROCARBONS (418.1) TRPH (MOD.8015) Diesel/Direct Inject (M8015) Gas/Purge & Trap 8021 (BTEX)/8015 (Gasoline) MTBE 8021 (BTEX) CMTBE DTMB DPCE 8021 (TCL) 8021 (EDX) 8021 (HALO) 8021 (CUST) 504.1 EDB DBCP D			
LABID 01 02			
CONTAINERS Metals: RCRA Metals by TCLP (Method 1311) RCRA Metals (8) Target Analyte List Metals (23) Priority Pollutant Metals (13) General Chemistry: Polynuclear Aromatics (610/8310/8270-SIMS) Base/Neutral/Acid Compounds GC/MS (625/8270) Herbicides (615/8151) Pesticides/PCB (608/8081/8082) 8260 (Landfill) Volatile Organics 8260 (CUST) Volatile Organics 8260 (Full) Volatile Organics 8260 (TCL) Volatile Organics 8260 (Full) Volatile Organics 8260 (CUST) Volatile Organics 8260 (Landfill) Volatile Organics Pesticides/PCB (608/8081/8082) Herbicides (615/8151) Base/Neutral/Acid Compounds GC/MS (625/8270) Polynuclear Aromatics (610/8310/8270-SIMS) General Chemistry: Priority Pollutant Metals (13) Target Analyte List Metals (23) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals:			

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.			
PROJECT INFORMATION PROJ. NO.: PROJ. NAME: THOMAS WELLS P.O. NO.: SHIPPED VIA: BUS	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS (RUSH) ☐ 24hr ☐ 48hr ☐ 72hr CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER METHANOL PRESERVATION ☐ METALS ☐ TOTAL ☐ DISSOLVED	RELINQUISHED BY: Signature: [Signature] Printed Name: MIKE BEAUPRELAUD Date: 7-27-05 Company: BIOTECH See Reverse side (Force Majeure)	RELINQUISHED BY: Signature: [Signature] Printed Name: [Blank] Date: [Blank] Company: [Blank]
SAMPLE RECEIPT NO CONTAINERS: 4 CUSTODY SEALS: Y/N (N) RECEIVED INTACT: YES BLUE/ICE/CE: 3.12			
RECEIVED BY: Signature: [Signature] Printed Name: [Blank] Date: [Blank] Company: [Blank]			

July, 2003 PLI Inc.: Pinnacle Laboratories, Inc. • 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87107 • Fax (505) 344-4413 • E-mail: PIN_LAB@ATT.NET

DISTRIBUTION: White - PLI, Canary - Originator

PINNACLE LABS

Environmental Testing

Pinnacle Lab ID number **601019**
January 11, 2006

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name THOMAS WELLS
Project Number (NONE)

Attention: MIKE BEAUPARLANT

On 01/03/06 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.



H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B / 8015B GRO
 CLIENT : BIOTECH REMEDIATION
 PROJECT # : (NONE)
 PROJECT NAME : THOMAS WELLS

PINNACLE I.D. : 601019
 ANALYST : BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	MW #2	AQUEOUS	12/30/05	NA	01/09/06	1
02	MW #3	AQUEOUS	12/30/05	NA	01/09/06	1

PARAMETER	DET. LIMIT	UNITS	MW #2	MW #3
FUEL HYDROCARBONS	0.10	MG/L	1.5 - D5	0.54 - D1
HYDROCARBON RANGE			C6-C10	C6-C10
HYDROCARBONS QUANTITATED USING			GASOLINE	GASOLINE

BENZENE	0.5	UG/L	5.2	< 0.5
TOLUENE	0.5	UG/L	< 0.5	0.8
ETHYLBENZENE	0.5	UG/L	15	5.8
TOTAL XYLENES	1.0	UG/L	33	6.0
METHYL-t-BUTYL ETHER	2.5	UG/L	< 2.5	< 2.5

SURROGATE:
 BROMOFLUOROBENZENE (%) 101 104
 SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

D1 = GRO was reported from a 1X dilution run on 01-05-06.
 D5 = GRO was reported from a 5X dilution run on 01-05-06.

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 601019
BLANK I.D.	: 010506	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/05/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	ANALYST	: BP

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/L	<0.10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE

CHEMIST NOTES:
N/A

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B	PINNACLE I.D.	: 601019
BLANK I.D.	: 010506	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/05/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 94
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B	PINNACLE I.D.	: 601019
BLANK I.D.	: 010906	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/09/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 101
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

GAS CHROMATOGRAPHY QUALITY CONTROL LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 601019
BATCH #	: 010506	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/05/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.10	1.00	1.07	107	1.02	102	5	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING GASOLINE									

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GAS CHROMATOGRAPHY QUALITY CONTROL MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 601019
MSMSD #	: 601019-02	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/05/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	0.54	1.00	1.53	99	1.44	90	6	(70 - 130)	20
HYDROCARBON RANGE	C6-C10								
HYDROCARBONS QUANTITATED USING GASOLINE									

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GAS CHROMATOGRAPHY QUALITY CONTROL LCS/LCSD

TEST	: EPA 8021B	PINNACLE I.D.	: 601019
BATCH #	: 010506	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/05/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.0	105	20.7	104	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.4	102	20.2	101	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.3	102	20.2	101	0	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	61.1	102	60.8	101	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	20.6	103	20.8	104	1	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GAS CHROMATOGRAPHY QUALITY CONTROL LCS/LCSD

TEST	: EPA 8021B	PINNACLE I.D.	: 601019
BATCH #	: 010906	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/09/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.4	102	20.7	104	1	(80 - 120)	20
TOLUENE	<0.5	20.0	19.8	99	20.1	101	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.7	99	20.1	101	2	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	59.1	99	60.6	101	3	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	18.1	91	17.6	88	3	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GAS CHROMATOGRAPHY QUALITY CONTROL MS/MSD

TEST	: EPA 8021B	PINNACLE I.D.	: 601019
MSMSD #	: 601019-02	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/05/06
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THOMAS WELLS	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.8	109	21.8	109	0	(80 - 120)	20
TOLUENE	0.8	20.0	20.7	100	20.6	99	0	(80 - 120)	20
ETHYLBENZENE	5.8	20.0	27.1	107	27.1	107	0	(80 - 120)	20
TOTAL XYLENES	6.0	60.0	68.4	104	68.2	104	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	18.1	91	18.1	91	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY
DATE: 12-30-05 PAGE: 1 OF 1

PLI Accession # 601017

PROJECT MANAGER: MIKE BEAPAZIAN

COMPANY: BIOTECH REMEDIATION, INC.
ADDRESS: 501 Airport Dr. Suite 104
Tomball, TX 77401
PHONE: 281-337-4965
FAX:

BILL TO:
COMPANY:
ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
MW#2	12-30-05	1620	H2O	-01
MW#3	12-30-05	1637	H2O	-02

ANALYSIS REQUEST										NUMBER OF CONTAINERS										
Petroleum Hydrocarbons (418.1) TPH																				
(MOD.8015) Diesel/Direct Inject																				
(M8015) Gas/Purge & Trap																				
8021 (BTEX)/8015 (Gasoline) MTBE																				
8021 (BTEX) DMTBE DTMB DPCE																				
8021 (TCL)																				
8021 (EDX)																				
8021 (HALO)																				
8021 (CUST)																				
504.1 EDB □/DBCP □																				
8260 (TCL) Volatile Organics																				
8260 (Full) Volatile Organics □PBMS																				
8260 (CUST) Volatile Organics																				
8260 (Landfill) Volatile Organics																				
Pesticides/PCB (608/8081/8082)																				
Herbicides (615/8151)																				
Base/Neutral/Acid Compounds GC/MS (625/8270)																				
Polynuclear Aromatics (610/8310/8270-SIMS)																				
General Chemistry:																				
Priority Pollutant Metals (13)																				
Target Analyte List Metals (23)																				
RCRA Metals (8)																				
RCRA Metals by TCLP (Method1311)																				
Metals:																				

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		RELINQUISHED BY: 1.		RELINQUISHED BY: 2.	
PROJ. NO.:		(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr	☐ 1 WEEK	Signature:		Signature:	
PROJ. NAME: THOMAS WELLS		NOT AVAILABLE ON ALL ANALYSES		Printed Name:	M. Beapazian	Printed Name:	
P.O. NO.:		CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER		Date:	12/30/05	Date:	
SHIPPED VIA:		METHANOL PRESERVATION ☐	METALS ☐ TOTAL ☐ DISSOLVED	Company:	BIOTECH	Company:	
SAMPLE RECEIPT		COMMENTS:		RECEIVED BY: (LAB)		RECEIVED BY: (LAB)	
NO. CONTAINERS	4			Signature:		Signature:	
CUSTODY SEALS	Y/N/NA			Printed Name:		Printed Name:	
RECEIVED INTACT	YES			Date:		Date:	
REF. ICE	YES						

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.