3R - 19

MONITORING REPORTS 2/14/2008

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903

February 14, 2008

Mr. Glenn von Gonten, Senior Hydrologist
New Mexico Oil Conservation Division-NMOCD
Environmental Bureau
1220 St. Francis Drive
Santa Fe, New Mexico 87505

RE: REQUEST FOR PERMANENT CLOSURE
BP America Production Company (formerly Amoco Production Co. & BP Amoco)
Groundwater Monitoring Report
GCU Com I # 181, Unit F, Sec. 34, T29N, R12W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: 3RP-19-0

Dear Mr. von Gonten:

BP America Production Company (**BP**) has retained Blagg Engineering, Inc. (**BEI**) to conduct environmental monitoring of groundwater at the GCU Com I # 181.

The last BEI correspondence concerning the above reference well site was a similar report with letter dated, February 12, 2001. Since then, BP has followed its NMOCD approved groundwater management plan and request permanent closure for this site.

If you have any questions concerning the enclosed documentation, please contact either myself or Jeffrey C. Blagg at (505) 632-1199. Thank you for your cooperation and assistance.

Respectfully submitted:
Blagg Engineering, Inc.

Nelson J. Velez
Staff Geologist

Attachment: Groundwater Report (2 copies)

cc: Mr. Brandon Powell, Environmental Specialist, NMOCD District III Office, Aztec, NM
Mr. Larry Schlotterback, Environmental Coordinator, BP, Farmington, NM (without lab report)

NJV/njv

GCU COM I 181 02-14-08 CVL.DOC

BP AMERICA PRODUCTION CO.

SUPPLEMENTAL GROUNDWATER REMEDIATION REPORT

GCU COM I #181
(F) SECTION 34, T29N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
NEW MEXICO OIL CONSERVATION DIVISION
1220 ST. FRANCIS DRIVE
SANTA FE, NEW MEXICO 87504

FEBRUARY 2008

PREPARED BY:
BLAGG ENGINEERING, INC.

Consulting Petroleum / Reclamation Services
P.O. Box 87
Bloomfield, New Mexico 87413

BP AMERICA PRODUCTION COMPANY
GCU COM I #181
Se/4 Nw/4, Sec. 34, T29N, R12W

Historical Information:

Monitor Well Installation Dates:	March, 2001 (MW BG-1, MW #10R, MW #32R), January, 2002 (MW BG-2), June, 2006 (MW #7R)
Reclamation Procedures:	Air Sparge System (March/April, 2000)
Monitor Well Sampling Dates:	03/15/01, 03/27/01, 05/23/01, 09/20/01, 12/03/01, 02/28/02, 08/03/06, 08/15/06, 10/30/06

Referencing the February, 2001 site report, an air sparge system was installed and operated to remediate remaining groundwater contamination identified at the site. Prior reclamation activities included excavation and removal of impacted soils. Site monitoring indicated that operation of the air sparge system produced a significant reduction in the benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations within site monitor wells in the remaining impacted area. The following recommendations were proposed in order to achieve site closure:

1. Resample MW #10B, MW #32A, MW #41R, MW #45R, and MW #46R for chloride to validate the results reported from the June & September, 1996 sampling events.
2. Resample MW #7, MW #10B, MW #32A, MW #41R, MW #45R, and MW #46R for total dissolved solids (TDS) to validate the results reported from the June & September, 1996 sampling events.
3. Install an additional monitor well up gradient of all previously identified groundwater impact areas to determine the background TDS in the vicinity.
4. A continuation of quarterly sampling from MW #41R, MW #45R, MW #46R, and MW #47 for BTEX until four (4) consecutive sampling events of below NMWQCC regulatory standards have been attained.

BP agreed with the suggested recommendations, including continued operation of the air sparge system, to meet site closure.

Groundwater Investigation and Soil Lithology:

Three (3) groundwater monitor wells were installed in March, 2001. Monitor wells MW #BG1 (background), MW #10R, and MW #32R were installed by Blagg Engineering, Inc. utilizing a truck mounted drill rig with solid 3 ¼ inch augers. Two (2) inch PVC piping was hand driven into the annular after drilling to total depth and auger removal was finalized (see Bore/Test Hole Reports). The monitor wells were then completed by infilling the annular with Colorado silica sand. The latter two (2) monitor wells were installed to replace the existing drive points (MW #10B and MW #32A respectively) due to poor recovery rates observed during their development. This work was conducted to meet the first two (2) recommendations listed above. In January, 2002, a second background groundwater monitor well was installed, namely MW #BG-2, in order to compare TDS levels of those recorded from MW #7 (see Figure 1A for position placement). Lastly, in June, 2006, a replacement groundwater monitor well for MW #7 (MW #7R) was installed because of inadequate water volume in this well. This monitor well was installed utilizing a conventional drill rig with eight inch hollow stem augers. Boring logs for all five (5) monitor wells along with well completion information are contained within this report.

Soil lithology at the site consists of primarily coarse grained sand, non cohesive, and firm with some silty clay to clay at varying depths. Gravel was encountered within all boring at depths ranging from 10 to 14 feet below grade.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells following US EPA: SW-846 protocol. After well development, samples were collected with new disposable bailers, placed into laboratory supplied containers with appropriate preservative and stored in an ice chest for express delivery to a qualified laboratory for testing. Analytical testing included BTEX by US EPA Method 8021B, general water chemistry, TDS, and chloride.

Waste generated during monitor well sampling and development was disposed of utilizing the separator tank pit located on the well site.

Groundwater Quality & Flow Direction Information:

Quarterly groundwater monitor well sampling from MW #41R, MW #45R, MW #46R, and MW #47 continued in March, 2001. The sampling events for chloride in MW #10R, MW #32R, MW #41R, MW #45R, MW #46R and MW #BG1 took place between March and December, 2001. The sampling events for TDS in MW #7, MW #7R, MW #10R, MW #32R, MW #41R, MW #45R, MW #46R, and MW #BG2 took place between March, 2001 and October, 2006. Summary of laboratory BTEX, TDS, and chloride analytical results are included in the table on the following pages. The data indicates all BTEX constituents tested below NMWQCC standards for four (4) consecutive sampling events within the source and down gradient areas. Chloride and TDS levels appear to be below or statistically equivalent to background.

Groundwater contour maps of relative water table elevations for three (3) sample events are included (Figures 2, 3, and 4). The general groundwater flow direction has consistently been in a northwest direction toward MW #47 (west side of well pad) and MW #10R (north of well pad). There are no known receptors impacted by the previous discovery of impacted soil and/or groundwater.

Summary and Recommendations:

All identified hydrocarbon impacted soil and groundwater at the site has been remediated via excavation and operation of an air sparge system. All site wells meet NMWQCC, background, or are statistically equivalent to background standards for groundwater. Permanent site closure is recommended. Following approval by the NMOCD, site monitor wells will be abandoned pursuant to the approved BP Ground Water Management Plan.

BP AMERICA PROD. CO. GROUNDWATER MONITOR WELL LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

REVISED DATE: FEBRUARY 14, 2008
FILENAME: (18-2Q-01.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8020 OR 8021 (ppb) Benzene	Toluene	Ethyl Benzene	Total Xylene
27-Mar-01	MW #BG-1	7.68	10.00	4,600	3,700	7.4		-	-	-	-
09-Feb-94	MW #5	5.22	15.00		6,300	7.0		ND	0.5	ND	3.1
13-Jun-94		5.34			7,800	7.0		<1	<1	<1	<1
26-Sep-94		5.22			5,200	7.1		ND	ND	ND	ND
05-Jun-95		5.05			7,700	7.1		ND	ND	2.1	ND
29-Aug-95		5.75			5,500	6.9		ND	ND	ND	ND
20-Nov-95		5.44			4,200	7.0		ND	ND	ND	ND
22-Feb-96		5.33			3,600	7.0		ND	ND	ND	ND
09-Feb-94	MW #7	6.60	11.60		10,100	7.0		**12.9**	16.7	580	**1,300.3**
13-Jun-94		6.89			11,000	7.0		<1	10	<1	**1,480**
26-Sep-94		6.79			9,000	7.2		**12.8**	ND	606	**73.3**
05-Jun-95		6.53			10,200	7.2		**2.1**	33.1	375.8	**12.9**
29-Aug-95		7.32			9,000	7.0		**9.21**	21.7	200	**21.56**
20-Nov-95		6.92			7,600	7.2		**8.52**	25.1	47.0	**28.28**
22-Feb-96		6.78			5,600	7.2		**6.61**	40.7	26.9	**68.6**
03-Jun-96		6.92		9,460	8,000	7.2		**5.9**	ND	12.6	**11.6**
16-Sep-96		7.00		8,900	6,000	7.1		**4.46**	7.47	13.1	**15.45**
31-Dec-96		6.68			7,100	7.3		**3.55**	ND	9.48	**3.69**
15-Mar-01		6.81		6,250	4,600	7.2		-	-	-	-
05-Jun-95	WP #10B	6.45	9.00		15,600	7.2		1.7	ND	ND	4.6
29-Aug-95		7.22			9,000	6.1		1.24	1.04	0.77	2.43
20-Nov-95		6.88			7,900	6.4		ND	0.63	0.63	1.86
21-Feb-96		6.71			7,200	6.2		0.22	0.47	0.31	0.94
03-Jun-96		6.87		22,400	7,700	6.5		ND	ND	ND	ND
16-Sep-96		7.05		12,300	6,800	7.1		ND	ND	ND	ND
31-Dec-96		6.62			9,200	6.5		ND	0.85	ND	ND
27-Mar-01	WP #10R	6.82		3,472	3,600	7.5		-	-	-	-
03-Nov-94	MW #17	8.55	15.00		4,000	7.2		ND	ND	ND	ND
05-Jun-95		8.97			3,400	7.4		ND	ND	ND	0.8
29-Aug-95		9.60			3,800	7.0		ND	ND	ND	ND
20-Nov-95		9.48			3,200	6.9		ND	ND	ND	ND
		WELL DESTROYED WHILE REMOVING COMPOST PILES									
05-Jun-95	WP #21A	DRY	9.00					-	-	-	-
29-Aug-95		7.75	10.75		4,300	6.9		ND	0.96	0.52	0.41
20-Nov-95		7.57			3,200	6.8		ND	1.33	0.79	ND
03-Jan-96		7.53			3,200	6.8		ND	ND	ND	4.41
21-Feb-96		7.51			3,600	6.7		0.59	1.03	0.54	7.62
		NMWQCC GROUNDWATER STANDARDS						**10**	**750**	**750**	**620**

BP AMERICA PROD. CO. GROUNDWATER MONITOR WELL LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

REVISED DATE: FEBRUARY 14, 2008
FILENAME: (18-2Q-01.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8020 OR 8021 (ppb) Benzene	Toluene	Ethyl Benzene	Total Xylene
09-Feb-94	MW #25	8.92	13.20		5,500	7.0		ND	ND	0.3	1.8
13-Jun-94		8.70			5,700	7.0		<1	<1	<1	<1
26-Sep-94		8.89			5,100	7.3		ND	ND	ND	ND
05-Jun-95		8.68			5,800	7.3		ND	ND	ND	0.7
29-Aug-95		9.21			5,900	7.0		ND	ND	ND	ND
20-Nov-95		9.49			4,700	6.9		ND	ND	ND	ND
22-Feb-96		9.67			3,900	7.2		ND	ND	ND	ND
09-Feb-94	MW #28	6.79	14.30		3,800	7.0		0.4	1.8	ND	8.8
14-Jun-94		6.90			4,000	7.0		<1	<1	<1	<1
26-Sep-94		6.85			3,900	7.1		ND	ND	0.4	ND
05-Jun-95		6.56			3,500	7.4		ND	ND	ND	0.7
29-Aug-95		7.18			3,200	7.2		ND	ND	0.29	ND
20-Nov-95		7.07			3,700	7.0		ND	ND	ND	ND
		WELL DESTROYED WHILE REMOVING COMPOST PILES									
09-Feb-94	WP #31A	8.96	11.17		4,800	7.0		ND	ND	ND	0.4
13-Jun-94		9.04			4,500	7.0		<1	<1	<1	<1
26-Sep-94		8.97			4,800	6.8		ND	0.5	ND	ND
05-Jun-95		8.76			4,500	7.1		ND	ND	ND	0.5
29-Aug-95		9.35			4,100	6.4		ND	1.74	ND	ND
20-Nov-95		9.20			4,200	6.7		ND	ND	ND	ND
		WELL DESTROYED WHILE REMOVING COMPOST PILES									
05-Jun-95	WP #32A	8.00	9.00		14,000	7.1		3.2	ND	ND	2.8
29-Aug-95		7.18			8,200	6.1		3.16	0.71	1.27	2.03
20-Nov-95		7.05			6,500	6.2		0.78	0.57	0.75	ND
21-Feb-96		6.86			6,300	6.2		0.4	0.41	0.45	0.57
03-Jun-96		6.87		19,300	6,000	6.5		ND	ND	ND	ND
16-Sep-96		6.98		10,900	7,200	6.4		0.67	ND	ND	ND
31-Dec-96		6.71			8,000	6.6		0.59	0.79	ND	ND
27-Mar-01	WP #32R	6.47	10.00	3,560	3,800	7.4		-	-	-	-
09-Feb-94	MW #36	5.46	14.50		5,100	7.0		ND	ND	0.6	3.6
13-Jun-94		5.62			5,600	7.0		<1	<1	<1	<1
26-Sep-94		5.51			4,300	7.2		ND	ND	1.7	2
05-Jun-95		5.32			5,600	7.2		ND	ND	ND	ND
29-Aug-95		6.03			4,000	6.9		ND	ND	0.55	ND
20-Nov-95		5.71			3,800	7.0		ND	ND	ND	ND
22-Feb-96		5.62			3,200	7.0		ND	ND	ND	ND
		NMWQCC GROUNDWATER STANDARDS						**10**	**750**	**750**	**620**

BP AMERICA PROD. CO. GROUNDWATER MONITOR WELL LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

REVISED DATE: FEBRUARY 14, 2008
FILENAME: (18-2Q-01.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8020 OR 8021 (ppb) Benzene	Toluene	Ethyl Benzene	Total Xylene
09-Feb-94	WP #39	8.42	10.17		3,400	7.0		ND	ND	ND	0.2
13-Jun-94		8.69			3,400	7.0		<1	<1	<1	<1
26-Sep-94		8.60			3,200	7.0		ND	0.2	ND	0.7
05-Jun-95		8.33			3,800	7.0		ND	ND	ND	0.5
29-Aug-95		9.17			3,000	6.8		ND	ND	ND	ND
20-Nov-95		8.74			3,100	6.8		ND	ND	ND	ND
21-Feb-96		8.61			2,600	6.8		ND	0.37	ND	ND
09-Feb-94	WP #40	8.08	10.71		3,700	7.0		ND	ND	ND	3.8
13-Jun-94		8.45			3,900	7.0		<1	<1	<1	<1
26-Sep-94		8.38			3,900	7.0		ND	0.4	ND	0.4
05-Jun-95		8.04			3,700	6.7		ND	ND	ND	ND
29-Aug-95		8.91			3,500	6.8		ND	ND	ND	ND
20-Nov-95		8.44			2,800	6.9		ND	ND	ND	ND
21-Feb-96		8.31			2,600	6.8		ND	ND	ND	ND
09-Feb-94	WP #41	9.05	11.00		6,900	7.0		**171**	**7,400**	**810**	**12,060**
14-Jun-94		8.72			12,200	7.0		**1,026**	**1,061**	**14,803**	**8,939**
26-Sep-94		9.15			9,500	7.0		**83.5**	**18.3**	**414**	**7,811**
05-Jun-95		4.91			13,000	6.7		**ND**	**86.5**	**95.4**	**2,152**
29-Aug-95		8.04			12,800	6.9		**ND**	**168**	**159**	**2,570**
20-Nov-95		9.52			11,000	7.0		**ND**	**371**	**355**	**5,454**
22-Feb-96		9.41			6,900	6.7		**62.4**	**324**	**333**	**6,164**
03-Jun-96		8.97		13,000	12,700	6.9		**36.2**	**243**	**278**	**5,115**
16-Sep-96		8.67		13,300	10,200	6.9		**36.7**	**253**	**271**	**4,747**
31-Dec-96		9.53			8,200	6.9		**69.0**	**211**	**342**	**5,369**
25-Jun-97	MW #41R	8.81	10.00		5,600	6.6		**61.9**	**17.2**	**388**	**3,193**
26-Jun-98		7.58			11,300	7.1		**1,070**	**940**	**100**	**11,910**
22-Jun-99		7.23			3,200	6.9		**14.4**	**82.2**	**58.2**	**401**
13-Dec-99		7.81			4,800	7.1		**313**	**1,830**	**936**	**6,080**
13-Jun-00		7.51			4,000	7.0		**ND**	**57**	**57**	**2,320**
30-Aug-00		5.10			5,000	6.9		**ND**	**ND**	**5.1**	**629**
29-Nov-00		7.59			6,100	7.7		**ND**	**ND**	**ND**	**ND**
15-Mar-01		7.27		5,260	5,100	7.7		**ND**	**ND**	**ND**	**1.8**
27-Mar-01		5.25		4,420	4,500	7.6		-	-	-	-
23-May-01		5.50			4,500	8.0		**ND**	**ND**	**ND**	**1.8**
05-Jun-95	WP #42	8.75	9.00		11,500	6.6		1.0	1.9	ND	7.5
29-Aug-95		6.75	8.95		4,500	6.9		ND	ND	1.22	1.27
20-Nov-95		6.42			3,200	6.8		ND	3.7	2.01	1.07
03-Jan-96		6.34			3,400	6.9		ND	ND	ND	6.77
21-Feb-96		6.31			3,400	6.7		ND	3.13	2.36	2.26
08-Jan-96	WP #43	2.65	6.00		2,400	7.0		ND	0.48	0.39	ND
21-Feb-96		2.62			2,900	6.7		ND	0.39	0.54	0.55
			NMWQCC GROUNDWATER STANDARDS					**10**	**750**	**750**	**620**

BP AMERICA PROD. CO. GROUNDWATER MONITOR WELL LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

REVISED DATE: FEBRUARY 14, 2008
FILENAME: (18-2Q-01.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8020 OR 8021 (ppb) Benzene	Toluene	Ethyl Benzene	Total Xylene
08-Jan-96	WP # 44	7.50	9.00		3,400	7.2		ND	0.75	1.23	2.49
21-Feb-96		7.52			3,600	6.7		ND	0.72	1.41	0.82
03-Jun-96	WP # 45	6.70	9.00	4,570	5,500	6.9		**997**	658	435	**3,633**
16-Sep-96		6.78		3,920	3,700	6.2		**352**	276	194	**1,126**
31-Dec-96		6.59			3,900	7.1		**518**	215	217	**907**
25-Jun-97	MW #45R	6.46	10.00		2,800	6.4		**1,796**	117	130	**787**
26-Jun-98		7.84			5,700	7.1		**959**	129	10.4	**1,701**
22-Jun-99		8.17			3,300	7.5		**2.1**	17.0	3.3	**30.5**
13-Dec-99		7.92			4,100	7.3		**349**	**1,480**	663	**3,271**
26-Jun-00		6.71			3,800	7.1		**9.2**	**9.6**	5.3	**11**
30-Aug-00		7.00			3,900	7.1		**ND**	**ND**	ND	**ND**
29-Nov-00		6.70			3,800	7.3		**ND**	**ND**	0.8	**234**
15-Mar-01		6.28		3,520	3,600	7.5		**ND**	**ND**	ND	**ND**
03-Jun-96	WP # 46	6.37	9.00	4,670	5,400	7.3		**61.7**	**871**	666	**8,650**
16-Sep-96		6.44		4,510	5,000	7.1		**44.7**	**270**	551	**4,080**
31-Dec-96		6.20			4,400	7.1		**60.3**	**921**	611	**8,300**
25-Jun-97	MW #46R	5.99	10.00		3,500	7.3		**292**	**342**	396	**4,850**
26-Jun-98		8.07			6,200	7.1		**717**	**2,080**	137	**11,510**
22-Jun-99		6.15			2,600	7.3		**2.4**	**4.6**	5.3	**151.2**
13-Dec-99		6.61			3,800	7.2		**239**	**437**	236	**1,375**
13-Jun-00		6.84			3,500	7.3		**6.6**	**34**	26	**96**
30-Aug-00		6.20			3,900	7.2		**2.7**	**4.2**	16	**41**
29-Nov-00		5.92			3,700	7.5		**ND**	**ND**	2.6	**8.2**
15-Mar-01		5.50		3,340	3,400	7.8		**ND**	**2.6**	1.9	**62**
17-Apr-00	MW #47	7.28	15.00	3,700	3,900	7.2		**13.0**	220	54	225
13-Jun-00		7.85			3,400	7.1		**ND**	ND	100	**1,040**
30-Aug-00		8.40			3,800	7.1		**ND**	ND	35	**154**
29-Nov-00		8.00			3,600	7.4		**ND**	2.6	15	**40.6**
15-Mar-01		7.58			3,300	7.4		**ND**	ND	5.9	**5.5**
23-May-01		7.25			3,400	7.4		**ND**	ND	3.5	**2.3**
					NMWQCC GROUNDWATER STANDARDS			**10**	**750**	**750**	**620**

NOTES : 1) **RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .**
2) **RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED .**

GENERAL WATER QUALITY

BP AMERICA PRODUCTION CO.

GCU COM I # 181

UNIT F , SEC. 34 , T29N , R12W

PARAMETERS	MW # BG-2 02/28/02	MW # BG-2 08/15/06	MW # BG-2 10/30/06	MW # 7 06/03/96	MW # 7 09/16/96	MW # 7 03/27/01	MW # 7 05/23/01	MW # 7 09/20/01	MW # 7 12/03/01	MW # 7 02/28/02	MW # 7R 08/03/06	MW # 7R 10/30/06	Units
LAB pH				7.8	7.8		7.22	7.25	7.30				s. u.
LAB CONDUCTIVITY @ 25 C				15,700	12,800		13,450	13,600	12,500				umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	2,910	**2,960**	**3,110**	**8,880**	**8,920**	**6,250**	**6,720**	**6,770**	**6,100**	**5,720**	**3,580**	**3,480**	mg / L
TOTAL DISSOLVED SOLIDS (Calc)				9,460	8,900		6,690	6,630	6,080				mg / L
SODIUM ABSORPTION RATIO				-	-		21.1	22.7	18.3				ratio
TOTAL ALKALINITY AS CaCO3				1,340	1,440		616	675	772				mg / L
TOTAL HARDNESS AS CaCO3				1,230	896		1,210	1,100	1,240				mg / L
BICARBONATE as CaCO3				1,340	1,440		616	675	772				mg / L
CARBONATE AS CaCO3				NA	NA		< 0.1	< 0.1	< 0.1				mg / L
HYDROXIDE AS CACO3				NA	NA		< 0.1	< 0.1	< 0.1				mg / L
NITRATE NITROGEN				NA	NA		0.3	0.3	0.4				mg / L
NITRITE NITROGEN				NA	NA		0.0	0.005	0.002				mg / L
CHLORIDE				**225**	**197**		**80**	**94.2**	**31.6**				mg / L
FLUORIDE				-	-		1.76	5.1	1.65				mg / L
PHOSPHATE				-	-		0.5	0.6	0.3				mg / L
SULFATE				5,100	4,990		4,090	4,000	3,630				mg / L
IRON				-	-		5.85	1.01	0.295				mg / L
CALCIUM				324	319		387	309	422				mg / L
MAGNESIUM				103	24.2		59.5	80.1	45.9				mg / L
POTASSIUM				< 5.0	6.00		2.40	3.1	2.7				mg / L
SODIUM				2,900	2,500		1,690	1,730	1,480				mg / L
CATION / ANION DIFFERENCE				3.99	4.31		0.17	0.05	0.07				%

GENERAL WATER QUALITY

BP AMERICA PRODUCTION CO.

GCU COM I # 181

UNIT F , SEC. 34 , T29N , R12W

PARAMETERS	MW # 10B 06/03/96	MW # 10B 09/16/96	MW # 10R 03/27/01	MW # 32A 06/03/96	MW # 32A 09/16/96	MW # 32R 03/27/01	MW # BG-1 03/27/01	MW # BG-1 05/23/01	MW # BG-1 09/20/01	MW # BG-1 12/03/01	MW # 41R 06/03/96	MW # 41R 09/16/96	Units
LAB pH	5.6	4.3		4.9	4.6			7.04	7.25	6.82	7.8	7.6	s. u.
LAB CONDUCTIVITY @ 25 C	34,900	18,200		32,000	18,600			10,300	9,000	9,100	25,600	19,800	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	**24,100**	**18,000**	**3,472**	**21,700**	**10,900**	**3,560**	**4,096**	**5,140**	**4,490**	**4,540**	**14,000**	**14,000**	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	22,400	12,300		19,300	10,900			5,100	4,500	4,500	13,000	13,300	mg / L
SODIUM ABSORPTION RATIO	-	-		-	-			11.1	10.6	10.6	-	-	ratio
TOTAL ALKALINITY AS CaCO3	71.6	57.5		95.5	71.9			276	230	216	3,820	4,890	mg / L
TOTAL HARDNESS AS CaCO3	3,000	1,490		2,590	1,240			1,540	1,360	1,340	2,630	2,540	mg / L
BICARBONATE as CaCO3	71.6	57.5		95.5	71.9			276	230	216	3,820	4,890	mg / L
CARBONATE AS CaCO3	NA	NA		NA	NA			< 0.1	< 0.1	< 0.1	NA	NA	mg / L
HYDROXIDE AS CACO3	NA	NA		NA	NA			< 0.1	< 0.1	< 0.1	NA	NA	mg / L
NITRATE NITROGEN	NA	NA		NA	NA			< 0.1	0.2	0.3	NA	NA	mg / L
NITRITE NITROGEN	NA	NA		NA	NA			0.0	< 0.001	0.001	NA	NA	mg / L
CHLORIDE	**300**	**247**	**56.0**	**325**	**350**	**89.2**	**130**	**76**	**79**	**72.0**	**1,550**	**1,700**	mg / L
FLUORIDE	-	-		-	-			1.7	6.0	1.94	-	-	mg / L
PHOSPHATE	-	-		-	-			0.4	0.3	0.3	-	-	mg / L
SULFATE	16,300	7,970		14,500	6,900			3,250	2,880	2,870	4,060	3,850	mg / L
IRON	-	-		-	-			0.0	0.002	0.063	-	-	mg / L
CALCIUM	965	100		886	100			570	403	534	972	957	mg / L
MAGNESIUM	145	302		91.0	242.0			28.3	85.0	< 0.01	49.1	36.3	mg / L
POTASSIUM	6.0	9.0		5.0	7.0			1.8	3.3	2.0	140	170.00	mg / L
SODIUM	4,600	3,600		3,500	3,300			1,000	900	890	3,900	3,700	mg / L
CATION / ANION DIFFERENCE	14.7	3.5		21.0	4.2			0.16	0.09	0.04	4.91	2.24	%

GENERAL WATER QUALITY

BP AMERICA PRODUCTION CO.

GCU COM I # 181

UNIT F , SEC. 34 , T29N , R12W

PARAMETERS	MW # 41R 03/15/01	MW # 41R 03/27/01	MW # 41R 05/23/01	MW # 41R 09/20/01	MW # 41R 12/03/01	MW # 45R 06/03/96	MW # 45R 09/16/96	MW # 45R 03/15/01	MW # 46R 06/03/96	MW # 46R 09/16/96	MW # 46R 03/15/01	MW # 47 04/17/00	Units
LAB pH			7.54	7.04	6.92	7.3	6.8		7.9	7.6		7.18	s. u.
LAB CONDUCTIVITY @ 25 C			10,700	8,800	7,900	8,770	5,850		8,960	6,670		-	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	**5,260**	**4,420**	**5,310**	**4,390**	**3,940**	**4,580**	**4,250**	**3,520**	**4,720**	**4,530**	**3,340**	**3,700**	mg / L
TOTAL DISSOLVED SOLIDS (Calc)			5,400	4,410	3,670	4,570	3,920		4,670	4,510		3,580	mg / L
SODIUM ABSORPTION RATIO			13.7	10.5	7.5	-	-		-	-		-	ratio
TOTAL ALKALINITY AS CaCO3			196	515	416	907	259		1290	1290		330	mg / L
TOTAL HARDNESS AS CaCO3			1,400	1,370	1,330	1,520	1,290		2,220	1,790		1,380	mg / L
BICARBONATE as CaCO3			196	515	416	907	259		1290	1290		330	mg / L
CARBONATE AS CaCO3			< 0.1	< 0.1	< 0.1	NA	NA		NA	NA		ND	mg / L
HYDROXIDE AS CACO3			< 0.1	< 0.1	< 0.1	NA	NA		NA	NA		-	mg / L
NITRATE NITROGEN			0.8	1.0	1.0	NA	NA		NA	NA		-	mg / L
NITRITE NITROGEN			0.100	0.082	< 0.001	NA	NA		NA	NA		-	mg / L
CHLORIDE	**300**	**190**	**240**	**134**	**79.6**	**200**	**275**	**90.0**	**200**	**350**	**60.0**	**44.0**	mg / L
FLUORIDE			1.75	5.8	1.89	-	-		-	-		-	mg / L
PHOSPHATE			6.9	2.0	0.7	-	-		-	-		-	mg / L
SULFATE			3,320	2,570	2,170	2,260	2,260		2,090	1,920		2,280	mg / L
IRON			0.910	31.9	28.9	-	-		-	-		0.21	mg / L
CALCIUM			475	406	488	457	319		749	638		490	mg / L
MAGNESIUM			50.7	86.0	27.3	92.1	121		86.0	48.4		39	mg / L
POTASSIUM			7.60	4.0	14.5	11.0	< 5.0		57.0	50.00		6.1	mg / L
SODIUM			1,180	890	630	1,000	790		710	730		530	mg / L
CATION / ANION DIFFERENCE			0.04	0.06	0.01	2.24	0.28		1.19	4.71		-	%

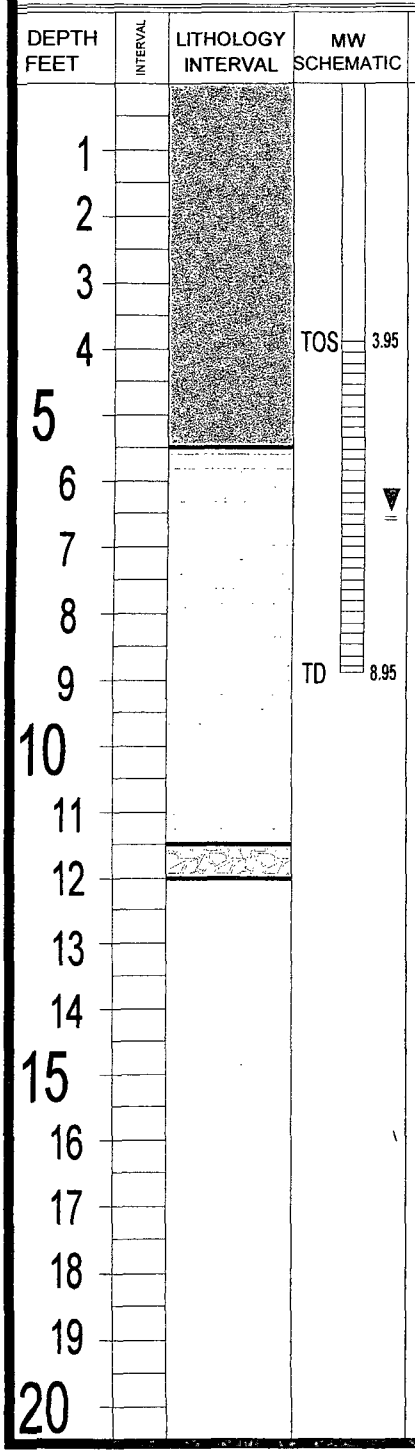
BLAGG ENGINEERING, INC.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

BORING #.....	BH - 1
MW #.....	BG-1
PAGE #.....	1
DATE STARTED	3/22/01
DATE FINISHED	3/22/01
OPERATOR.....	JCB
PREPARED BY	NJV

CLIENT: **BP AMERICA PRODUCTION COMPANY**
LOCATION NAME: GCU COM I # 181 UNIT F, SEC. 34, T29N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (EARTHPROBE 200)
BORING LOCATION: 381 FT., N88W FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.05 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (0.0 - 5.5 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 6.63 FT. FROM GROUND SURFACE MEASURED ON 3/23/01.

GRAYISH ORANGE SILTY CLAY, SLIGHTLY COHESIVE TO SLIGHTLY PLASTIC, SLIGHTLY MOIST TO WET, FIRM TO STIFF, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (5.5 - 11.5 FT. BELOW GRADE).

OLIVE GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (11.5 - 12.0 FT. BELOW GRADE).

NOTE:
- SAND.
- SILTY CLAY.
- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

Monitor well consist of 2 inch PVC piping - casing from 1.05 ft. above grade to 3.95 ft. below grade, 0.010 slotted screen between 3.95 to 8.95 feet below grade, sand packed annular to grade.

DRAWING: GCU 181 BH1-MWBG1.SKF | DATE: 3/23/01 | DWN BY: NJV

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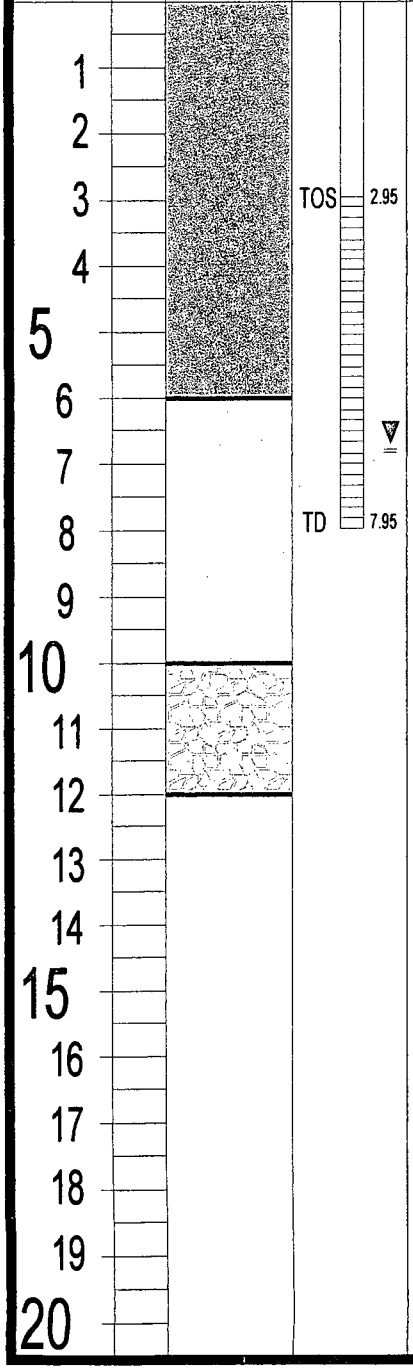
BORE / TEST HOLE REPORT

BORING #.....	BH - 2
MW #.....	10R
PAGE #.....	2
DATE STARTED	3/22/01
DATE FINISHED	3/22/01
OPERATOR.....	JCB
PREPARED BY	NJV

CLIENT: **BP AMERICA PRODUCTION COMPANY**
LOCATION NAME: GCU COM I # 181 UNIT F, SEC. 34, T29N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (EARTHPROBE 200)
BORING LOCATION: 330 FT., N8.5W FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.05 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 6.76 FT. FROM GROUND SURFACE MEASURED ON 3/23/01.

MEDIUM GRAY SILTY SAND, SLIGHTLY COHESIVE, WET TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (6.0 - 10.0 FT. BELOW GRADE).

OLIVE GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (10.0 - 12.0 FT. BELOW GRADE).

NOTE:
- SAND.
- SILTY SAND.
- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

Monitor well consist of 2 inch PVC piping - casing from 1.05 ft. above grade to 2.95 ft. below grade, 0.010 slotted screen between 2.95 to 7.95 feet below grade, sand packed annular to grade.

DRAWING: GCU 181 BH2-MW10R.SKF | DATE: 3/23/01 | DWN BY: NJV

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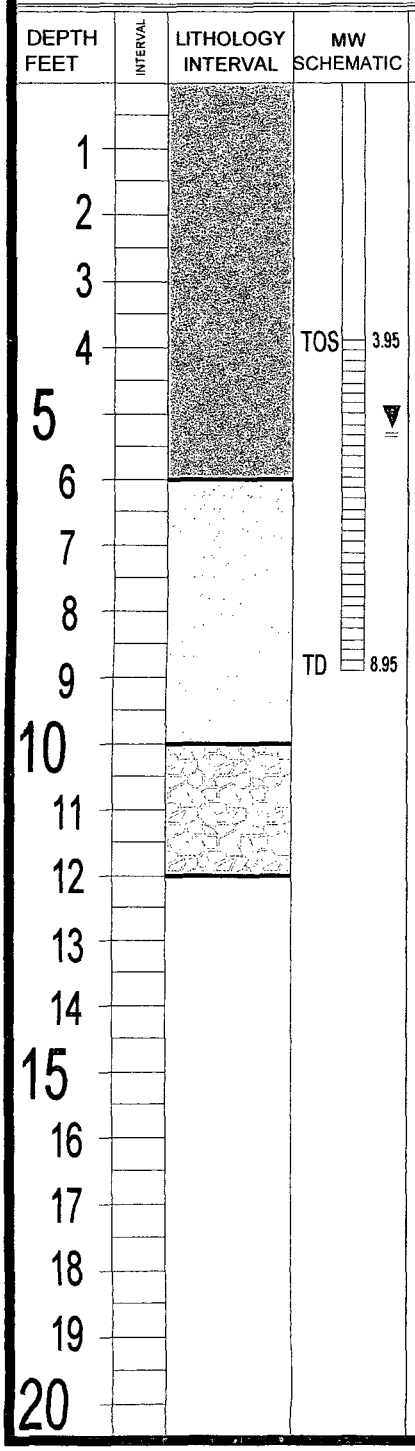
BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	GCU COM I # 181 UNIT F, SEC. 34, T29N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE 200)
BORING LOCATION:	424 FT., N36.5W FROM WELL HEAD.

BORING #.....	BH - 3
MW #.....	32R
PAGE #.....	3
DATE STARTED	3/22/01
DATE FINISHED	3/22/01
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.05 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 5.41 FT. FROM GROUND SURFACE MEASURED ON 3/23/01.

MEDIUM GRAY SILTY SAND, SLIGHTLY COHESIVE, WET TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (6.0 - 10.0 FT. BELOW GRADE).

OLIVE GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (10.0 - 12.0 FT. BELOW GRADE).

NOTE:
- SAND.
- SILTY SAND.
- SAND AND GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

Monitor well consist of 2 inch PVC piping - casing from 1.05 ft. above grade to 2.95 ft. below grade, 0.010 slotted screen between 3.95 to 8.95 feet below grade, sand packed annular to grade.

DRAWING: GCU 181 BH3-MW32R.SKF | DATE: 3/23/01 | DWN BY: NJV

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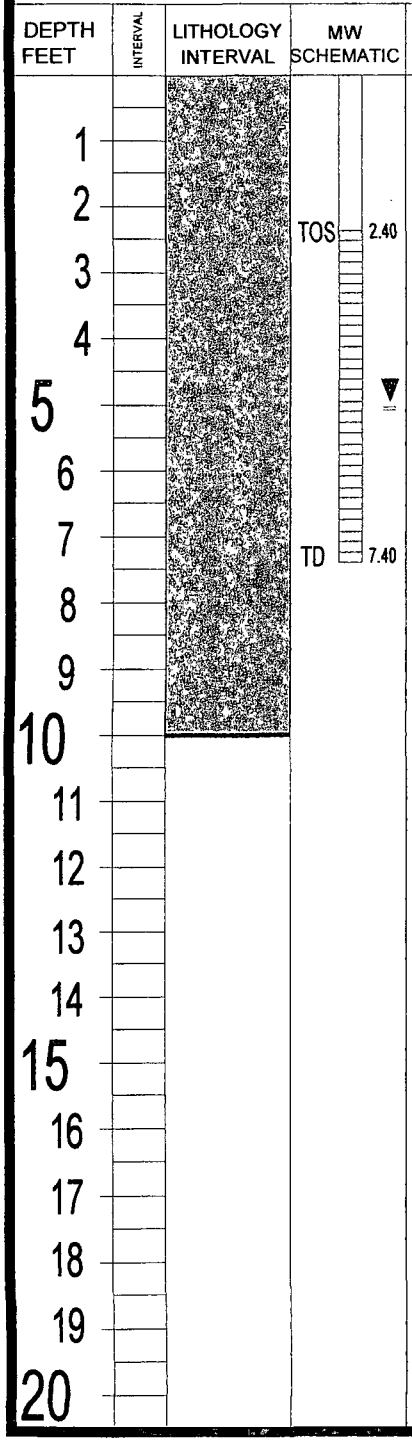
BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	GCU COM I # 181 UNIT F, SEC. 34, T29N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE 200)
BORING LOCATION:	141 FT., N58E FROM WELL HEAD.

BORING #.....	BH - 4
MW #.....	BG-2
PAGE #.....	4
DATE STARTED	1/25/02
DATE FINISHED	1/25/02
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.60 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (0.0 - 10.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 5.08 FT. FROM GROUND SURFACE MEASURED ON 1/28/02.

NOTE: - SAND.

TOS - TOP OF SCREEN FROM GROUND SURFACE.

TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

Monitor well consist of 2 inch PVC piping - casing from 1.60 ft. above grade to 2.40 ft. below grade, 0.010 slotted screen between 2.40 to 7.40 feet below grade, sand packed annular to grade.

DRAWING: GCU 181 BH2-MWBG2.SKF | DATE: 1/28/02 | DWN BY: NJV

BLAGG ENGINEERING, INC.

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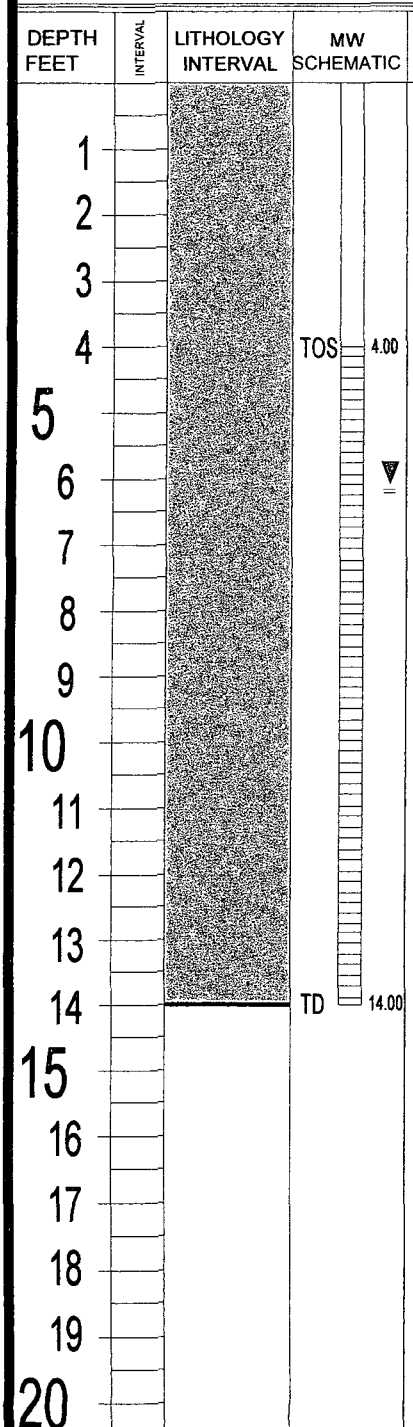
BORE / TEST HOLE REPORT

BORING #.....	BH - 5
MW #.....	7R
PAGE #.....	5
DATE STARTED	6/28/06
DATE FINISHED	6/28/06
OPERATOR.....	DP
PREPARED BY	NJV

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	GCU COM I # 181 UNIT F, SEC. 34, T29N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	201 FT., N12E FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.50 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH ORANGE SAND WITH MINOR AMOUNT OF GRAVEL @ BOTTOM OF BORING, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN AUGER CUTTINGS (0.0 - 14.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 6.16 FT. FROM GROUND SURFACE MEASURED ON 7/18/06.

NOTE: - SAND.

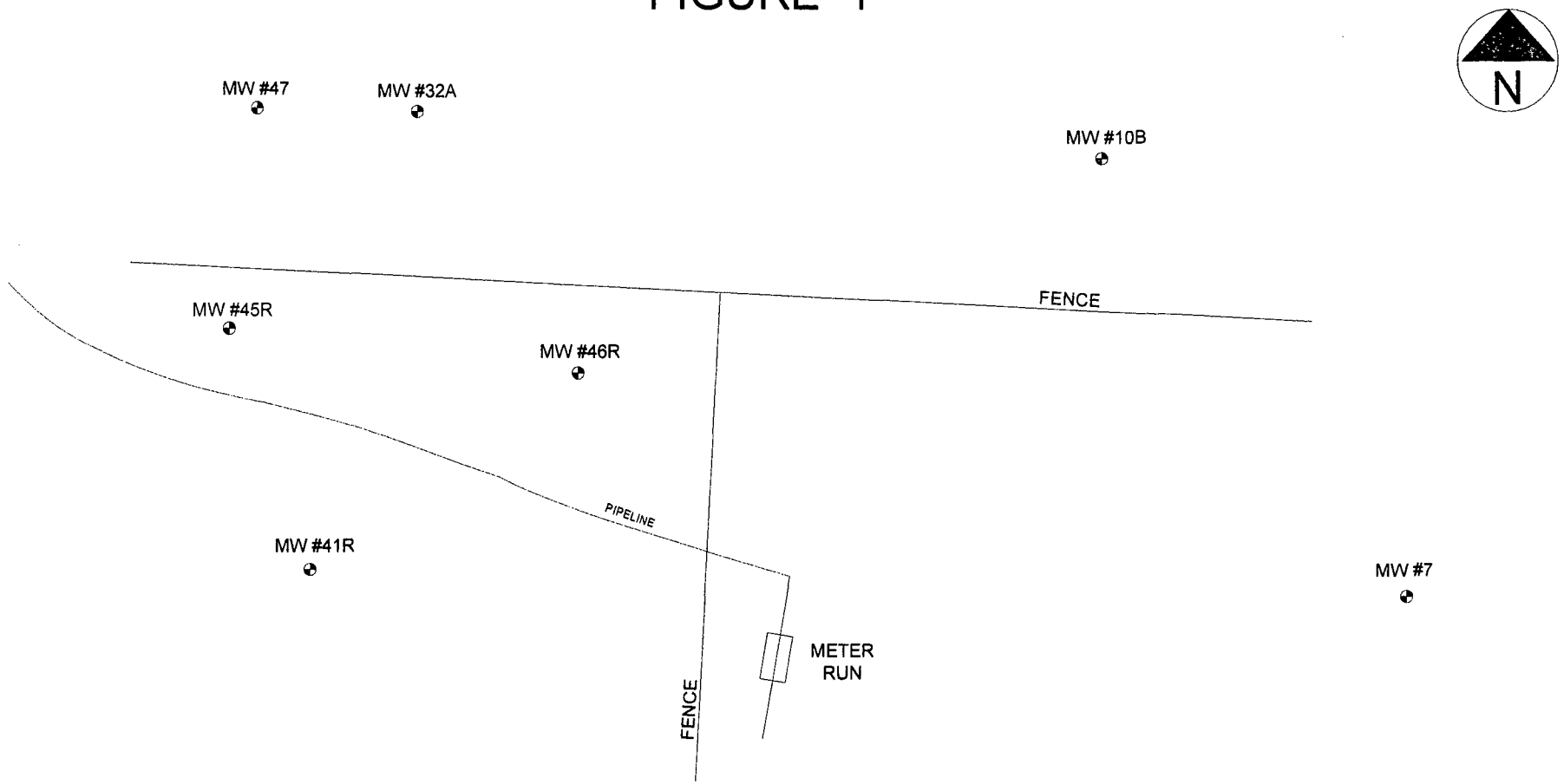
TOS - TOP OF SCREEN FROM GROUND SURFACE.

TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

Monitor well consist of 2 inch PVC piping - casing from 2.50 ft. above grade to 4.00 ft. below grade, 0.010 slotted screen between 4.00 to 14.00 feet below grade, sand packed annular to 2.00 ft. below grade, bentonite chips to grade, concreted well protector around above grade casing, and secured with padlock.

DRAWING: GCU 181 BH5-MW7R.SKF | DATE: 8/29/06 | DWN BY: NJV

FIGURE 1



AMOCO PRODUCTION COMPANY

GCU COM I #181

SE/4 NW/4 SEC. 34, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

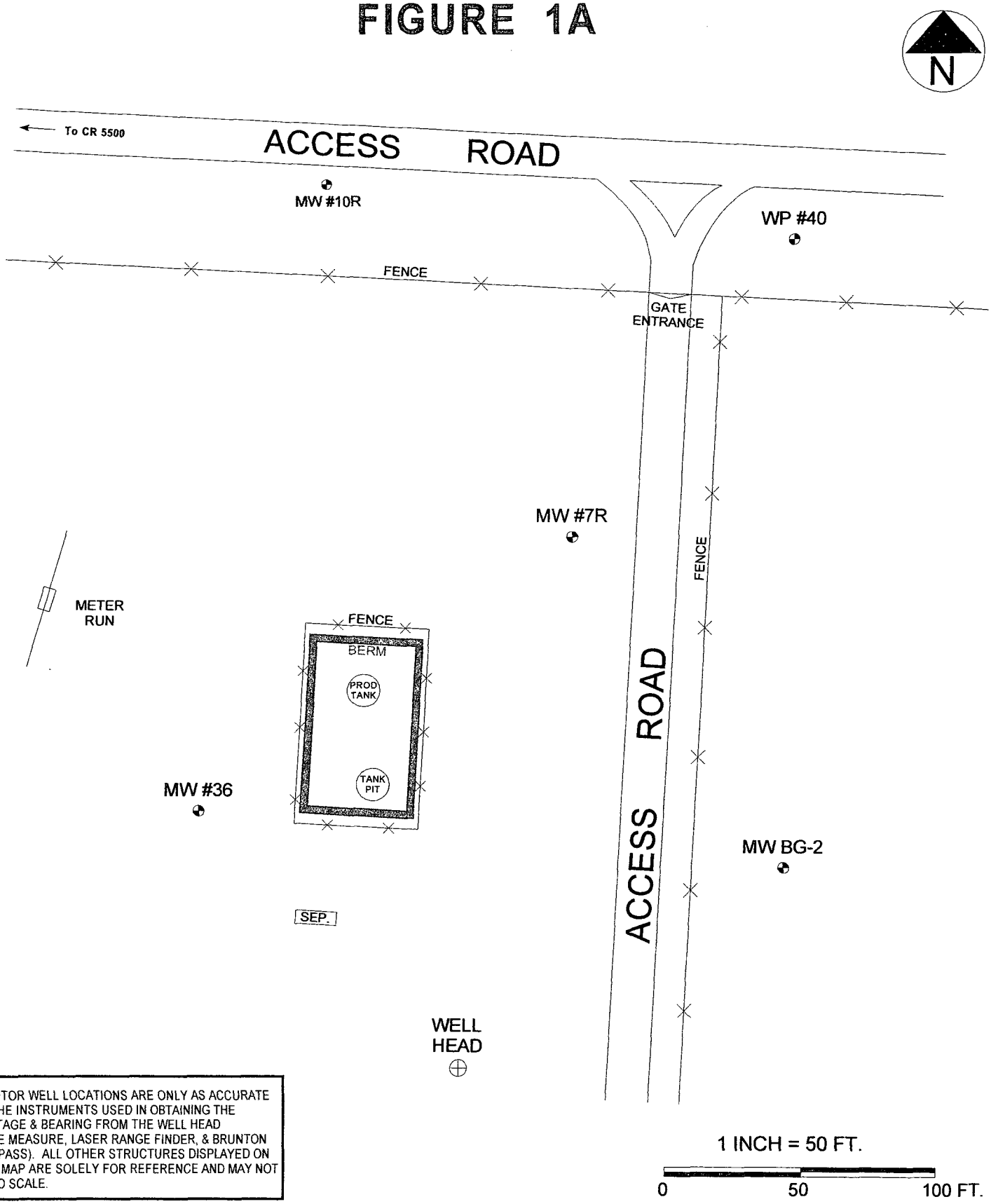
DRAWN BY: NJV

FILENAME: 181-SM.SKF

SITE MAP

03/01

FIGURE 1A



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MEASURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

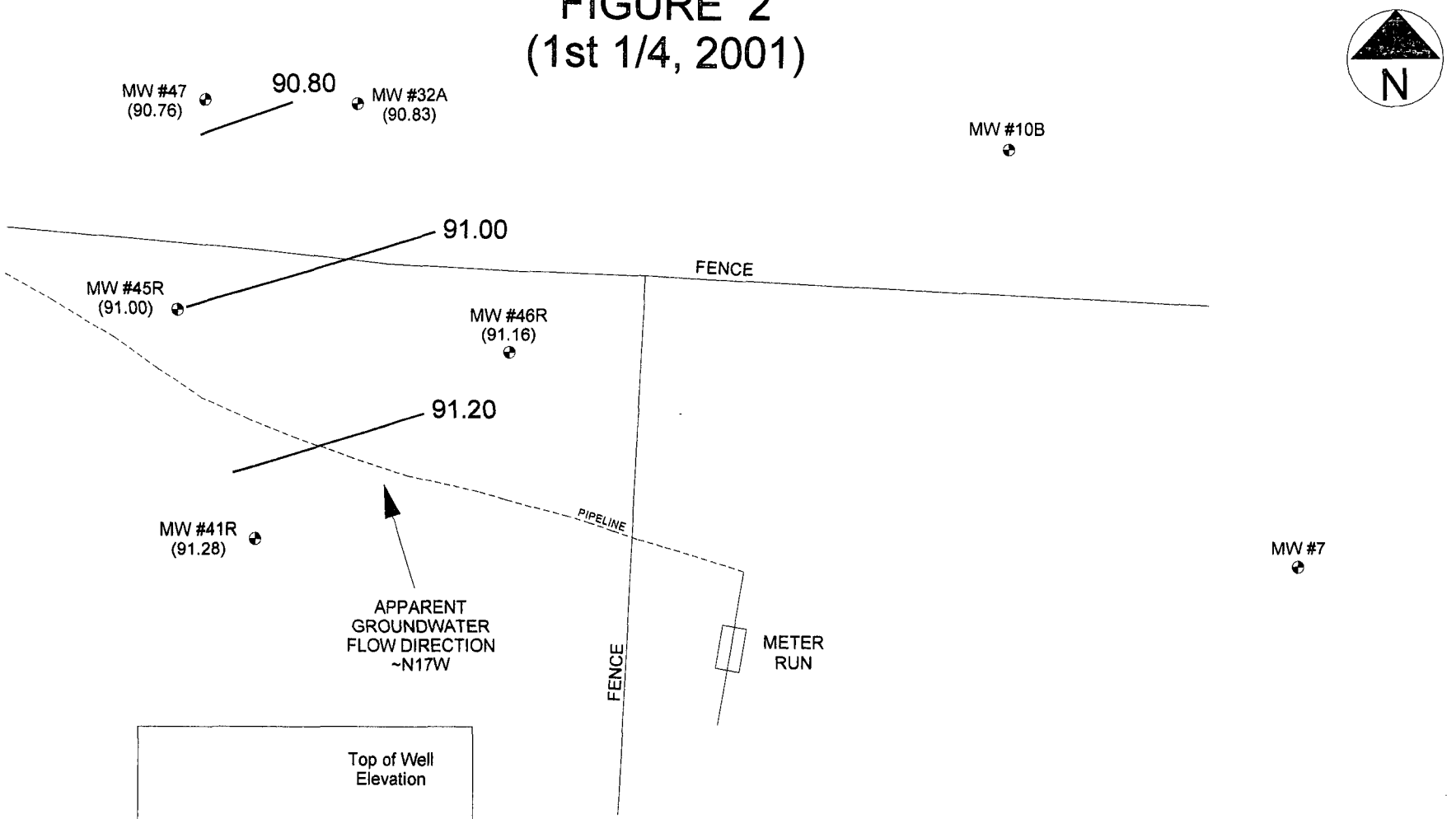
BP AMERICA PRODUCTION CO.
GCU COM I # 181
SE/4 NW/4 SEC. 34, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: MW INSTALLATION
DRAWN BY: NJV
FILENAME: GCU COM I 181-SM.SKF
REVISED: 08-24-06 NJV

SITE MAP
08/06

FIGURE 2
(1st 1/4, 2001)



BP AMOCO

GCU COM I #181

SE/4 NW/4 SEC. 34, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

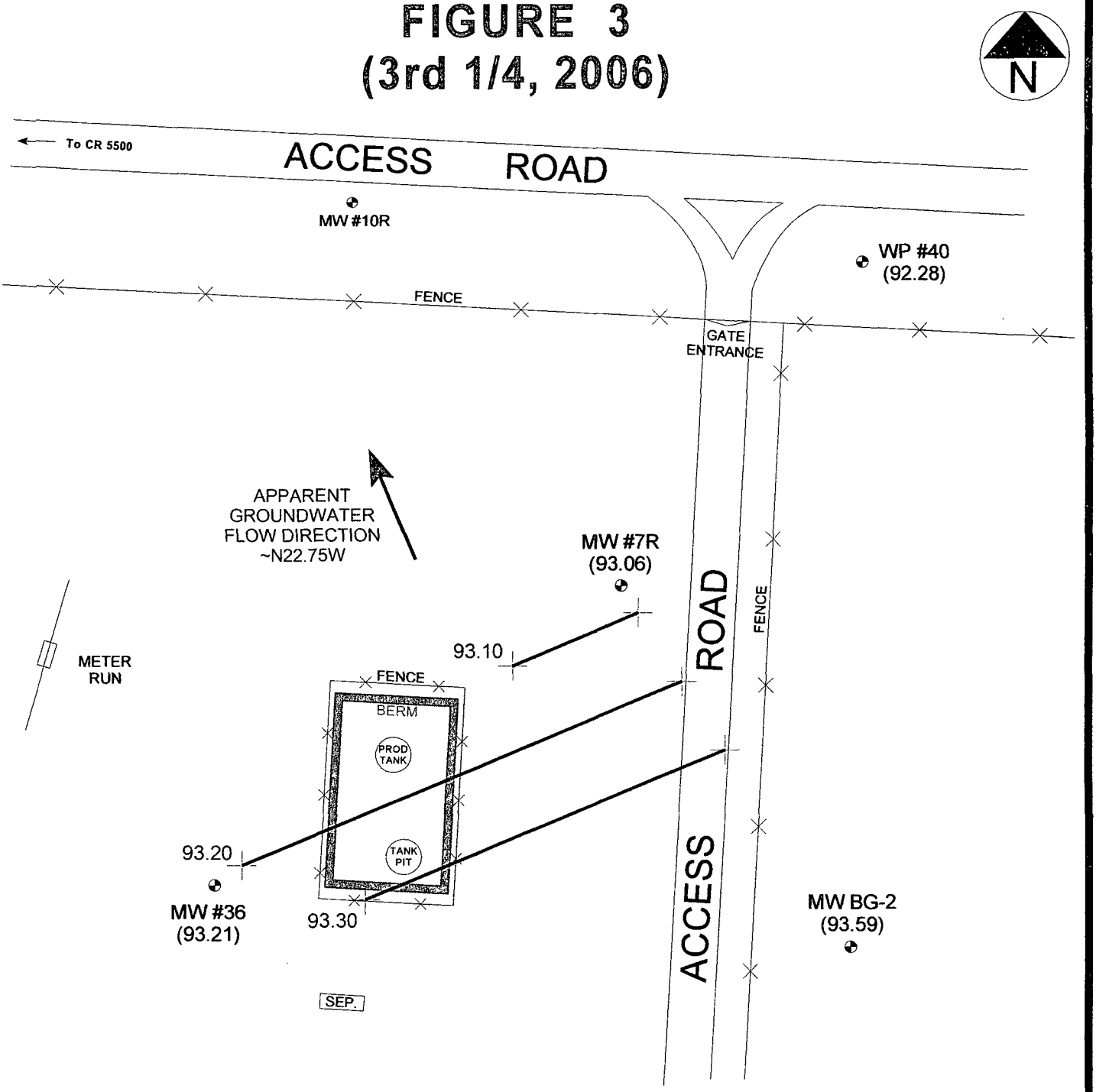
DRAWN BY: NJV

FILENAME: 03-15-01-GW.SKF

GROUNDWATER GRADIENT MAP

03/01

FIGURE 3
(3rd 1/4, 2006)



	Top of Well Elevation
MW BG-2	(100.96)
MW #7R	(101.97)
MW #36	(99.32)
WP #40	(101.13)
MW #7R (93.06)	Groundwater Elevation as of 8/24/06.

1 INCH = 50 FT.

0 50 100 FT.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MEASURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

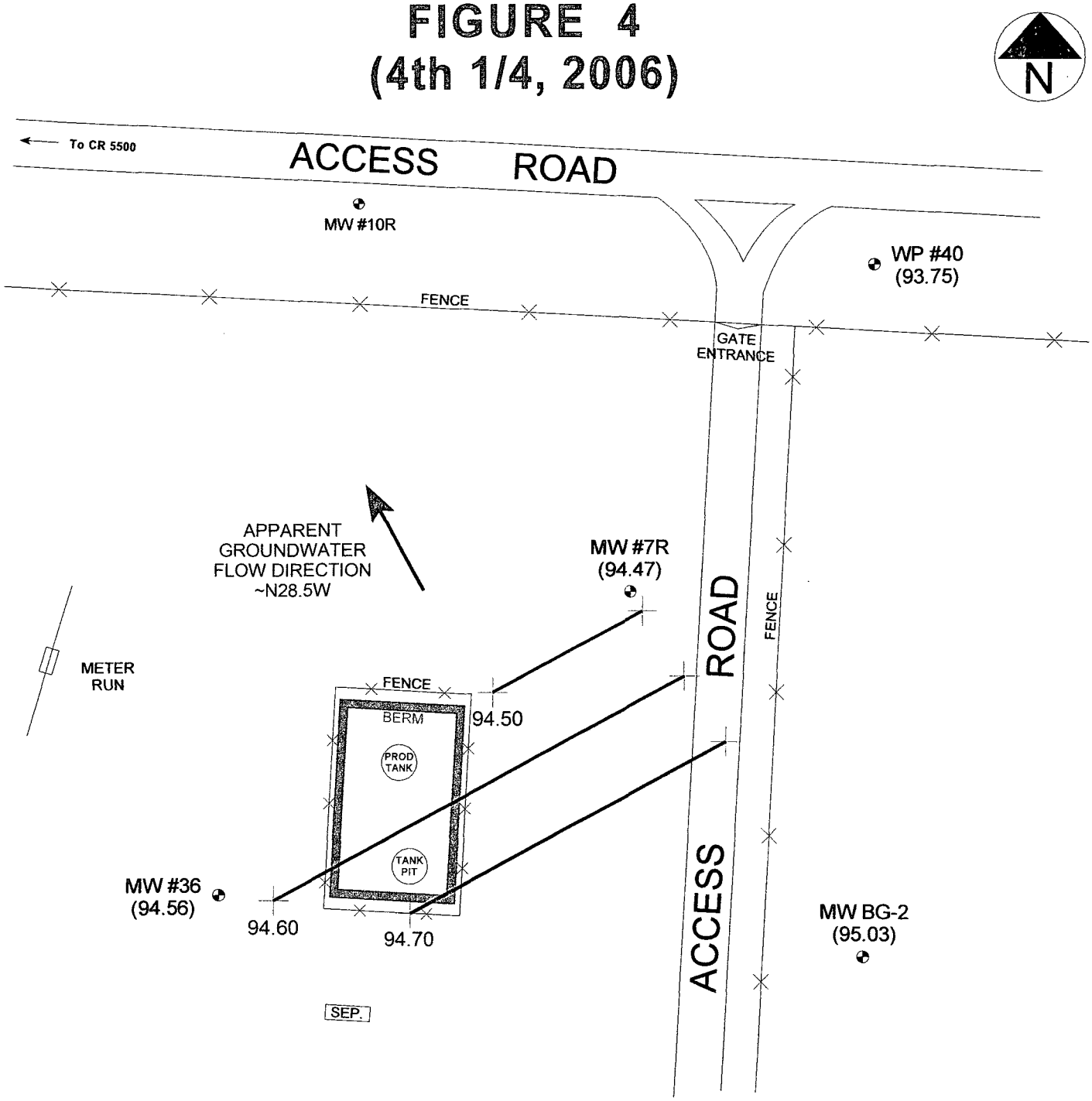
BP AMERICA PRODUCTION CO.
GCU COM I # 181
SE/4 NW/4 SEC. 34, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: MW INSTALLATION
DRAWN BY: NJV
FILENAME: 08-24-06-GW.SKF
REVISED: 08-24-06 NJV

GROUNDWATER CONTOUR MAP
08/06

FIGURE 4
(4th 1/4, 2006)



	Top of Well Elevation
MW BG-2	(100.96)
MW #7R	(101.97)
MW #36	(99.32)
WP #40	(101.13)
MW #7R (94.47)	Groundwater Elevation as of 10/30/06.

1 INCH = 50 FT.

0 50 100 FT.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MEASURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

BP AMERICA PRODUCTION CO.
GCU COM I #181
SE/4 NW/4 SEC. 34, T29N, R12W
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BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: MW INSTALLATION
DRAWN BY: NJV
FILENAME: 10-30-06-GW.SKF
REVISED: 10-31-06 NJV

GROUNDWATER CONTOUR MAP
10/06

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : BP AMOCO

CHAIN-OF-CUSTODY # : 10783
8277

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ON - SITE, TECH.
ENVIROTECH, INC.

Date : March 15, 2001

SAMPLER : N J V

Filename : 03-15-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
7	99.14	92.33	6.81	11.60	0940	7.19	4,600	1.75	-
10B	98.14	91.42	6.72	9.00	-	-	-	-	-
32A	97.85	90.83	7.02	9.00	-	-	-	-	-
41R	98.55	91.28	7.27	10.00	1210	7.67	5,100	1.00	-
45R	97.28	91.00	6.28	10.00	1130	7.46	3,600	2.00	-
46R	97.36	91.16	6.20	10.00	1155	7.81	3,400	2.50	-
47	98.34	90.76	7.58	15.00	1105	7.40	3,300	3.75	-

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).
2 bails per foot - small teflon bailer.
3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected BTEX from MW #'s 41R , 45R , 46R , & 47 . Collected TDS from MW #'s 7 , 41R , 45R , & 46R . Collected chloride samples from MW #'s 41R , 45R , & 46R . BEI reclamation system operational @ time of sampling . Excellent recovery in MW #'s 45R & 46R . Fair / poor recovery in MW #'s 7 & 41R . No recovery in MW #'s 10B & 32A (1.25 inch drive points) . Shut down compressor after sampling . Collected DTW levels from MW #'s 41R , 45R , 46R , & 47 on 3 / 16 / 01 .

OFF: (505) 325-5667
FAX: (505) 327-1496

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *23-Mar-01*

Client:	Blagg Engineering	**Client Sample Info:**	GCU Com I #181
Work Order:	0103014	**Client Sample ID:**	MW #41R
Lab ID:	0103014-01A **Matrix:** AQUEOUS	**Collection Date:**	3/15/2001 12:10:00 PM
Project:	BP Amoco; GCU Com I #181	**COC Record:**	10783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Benzene	ND	0.5		µg/L	1	3/15/2001
Toluene	ND	0.5		µg/L	1	3/15/2001
Ethylbenzene	ND	0.5		µg/L	1	3/15/2001
m,p-Xylene	1.2	1		µg/L	1	3/15/2001
o-Xylene	0.6	0.5		µg/L	1	3/15/2001

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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ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *23-Mar-01*

Client:	Blagg Engineering	**Client Sample Info:**	GCU Com I #181
Work Order:	0103014	**Client Sample ID:**	MW #45R
Lab ID:	0103014-02A **Matrix:** AQUEOUS	**Collection Date:**	3/15/2001 11:30:00 AM
Project:	BP Amoco; GCU Com I #181	**COC Record:**	10783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Benzene	ND	0.5		µg/L	1	3/15/2001
Toluene	ND	0.5		µg/L	1	3/15/2001
Ethylbenzene	ND	0.5		µg/L	1	3/15/2001
m,p-Xylene	ND	1		µg/L	1	3/15/2001
o-Xylene	ND	0.5		µg/L	1	3/15/2001

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
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *23-Mar-01*

Client:	Blagg Engineering	**Client Sample Info:**	GCU Com I #181
Work Order:	0103014	**Client Sample ID:**	MW #46R
Lab ID:	0103014-03A **Matrix:** AQUEOUS	**Collection Date:**	3/15/2001 11:55:00 AM
Project:	BP Amoco; GCU Com I #181	**COC Record:**	10783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Benzene	ND	0.5		µg/L	1	3/15/2001
Toluene	2.6	0.5		µg/L	1	3/15/2001
Ethylbenzene	1.9	0.5		µg/L	1	3/15/2001
m,p-Xylene	44	1		µg/L	1	3/15/2001
o-Xylene	18	0.5		µg/L	1	3/15/2001

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
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *23-Mar-01*

Client:	Blagg Engineering	**Client Sample Info:**	GCU Com I #181
Work Order:	0103014	**Client Sample ID:**	MW #47
Lab ID:	0103014-04A **Matrix:** AQUEOUS	**Collection Date:**	3/15/2001 11:05:00 AM
Project:	BP Amoco; GCU Com I #181	**COC Record:**	10783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Benzene	ND	0.5		µg/L	1	3/15/2001
Toluene	ND	0.5		µg/L	1	3/15/2001
Ethylbenzene	5.9	0.5		µg/L	1	3/15/2001
m,p-Xylene	1.5	1		µg/L	1	3/15/2001
o-Xylene	4	0.5		µg/L	1	3/15/2001

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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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #7	Date Reported:	03-16-01
Laboratory Number:	19394	Date Sampled:	03-15-01
Sample Matrix:	Water	Date Received:	03-15-01
Preservative:	Cool	Date Analyzed:	03-16-01
Condition:	Cool & Intact	Chain of Custody:	8277

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**6,250**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #41R	Date Reported:	03-16-01
Laboratory Number:	19395	Date Sampled:	03-15-01
Sample Matrix:	Water	Date Received:	03-15-01
Preservative:	Cool	Date Analyzed:	03-16-01
Condition:	Cool & Intact	Chain of Custody:	8277

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**5,260**	mg/L
Chloride	**300**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #45R	Date Reported:	03-16-01
Laboratory Number:	19396	Date Sampled:	03-15-01
Sample Matrix:	Water	Date Received:	03-15-01
Preservative:	Cool	Date Analyzed:	03-16-01
Condition:	Cool & Intact	Chain of Custody:	8277

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,520**	mg/L
Chloride	**90.0**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #46R	Date Reported:	03-16-01
Laboratory Number:	19397	Date Sampled:	03-15-01
Sample Matrix:	Water	Date Received:	03-15-01
Preservative:	Cool	Date Analyzed:	03-16-01
Condition:	Cool & Intact	Chain of Custody:	8277

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,340**	mg/L
Chloride	**60.0**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

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10785

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 3/15/01

Page: 1 of 1

Purchase Order No.:	Project No.		
SEND INVOICE TO: Name	Jeff Blagg	REPORT RESULTS TO: Name	Nelson Velez — Title
Company	Blagg Engineering, Inc. — Dept.	Company	Same
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	632-1199 — Telefax No. 632-3903

PROJECT LOCATION: BP - Gas Com E #181

SAMPLER'S SIGNATURE: Nelson Velez

SAMPLE IDENTIFICATION	SAMPLE DATE	TIME	MATRIX	PRES.	Number of Containers	BTEX (8021)	LAB ID
MW # 41R	3/15/01	1210	WATER	HCl & COOL	2	✓	0103044-01A
MW # 45R	3/15/01	1130	WATER	HCl & COOL	2	✓	-02A
MW # 46R	3/15/01	1155	WATER	HCl & COOL	2	✓	-03A
MW # 47	3/15/01	1105	WATER	HCl & COOL	2	✓	-04A

ANALYSIS REQUESTED

Relinquished by: Nelson Velez	Date/Time 3/15/01 1254	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Rush | 24-48 Hours | 10 Working Days | By Date

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Special Instructions / Remarks:

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

CHAIN OF CUSTODY RECORD

08277

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	Gcu com I # 181	
Sampler: NJV	Client No. 94034-010	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TDS	CHLORIDE					Remarks
MW #7	3/15/01	0940	19394	WATER	1	✓						ALL SAMPLES
~~WP #10B~~	~~3/15/01~~			~~WATER~~	~~1~~	~~✓~~	~~✓~~	NV				PRESER. - COOL
~~WP #32A~~	~~3/15/01~~			~~WATER~~	~~1~~	~~✓~~	~~✓~~	NV				
MW #41R	3/15/01	1210	19395	WATER	1	✓	✓					
MW #45R	3/15/01	1130	19396	WATER	1	✓	✓					
MW #46R	3/15/01	1155	19397	WATER	1	✓	✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	3/15/01	1315	[signature]	3/15/01	1315
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

On Site Technologies, LTD.

Date: *23-Mar-01*

CLIENT: Blagg Engineering
Work Order: 0103014
Project: BP Amoco; GCU Com I #181

QC SUMMARY REPORT
Method Blank

Sample ID: **MB1** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0501	0.5									J
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									
Toluene	.2356	0.5									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *23-Mar-01*

CLIENT: Blagg Engineering
Work Order: 0103014
Project: BP Amoco; GCU Com I #181

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0103008-01AMS** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35736**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4847	50	4000	760	102.2%	84	111				
Ethylbenzene	4577	50	4000	340	105.9%	84	111				
m,p-Xylene	9100	100	8000	600	106.3%	84	108				
Methyl tert-Butyl Ether	3712	100	4000	110	90.0%	80	117				
o-Xylene	4370	50	4000	120	106.3%	89	107				
Toluene	4308	50	4000	69	106.0%	90	107				

Sample ID: **0103008-01AMSD** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35737**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4646	50	4000	756	97.2%	84	111	4847	4.3%	8	
Ethylbenzene	4383	50	4000	337.9	101.1%	84	111	4577	4.3%	7	
m,p-Xylene	8719	100	8000	601.4	101.5%	84	108	9100	4.3%	7	
Methyl tert-Butyl Ether	3605	100	4000	111.2	87.3%	80	117	3712	2.9%	6	
o-Xylene	4217	50	4000	115.8	102.5%	89	107	4370	3.6%	6	
Toluene	4109	50	4000	68.94	101.0%	90	107	4308	4.7%	6	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *23-Mar-01*

CLIENT: Blagg Engineering
Work Order: 0103014
Project: BP Amoco; GCU Com I #181

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS WATER** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35734**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.16	0.5	40	0.0501	100.3%	92	109				
Ethylbenzene	41.7	0.5	40	0	104.3%	92	112				
m,p-Xylene	83.66	1	80	0	104.6%	91	108				
Methyl tert-Butyl Ether	39.77	1	40	0	99.4%	89	116				
o-Xylene	41.82	0.5	40	0	104.6%	93	109				
Toluene	41.23	0.5	40	0.2356	102.5%	93	108				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *23-Mar-01*

CLIENT: Blagg Engineering
Work Order: 0103014
Project: BP Amoco; GCU Com I #181

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV1 BTEX_0103** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.3	0.5	20	0	101.5%	85	115				
Ethylbenzene	20.95	0.5	20	0	104.7%	85	115				
m,p-Xylene	42.07	1	40	0	105.2%	85	115				
Methyl tert-Butyl Ether	20.11	1	20	0	100.6%	85	115				
o-Xylene	21.02	0.5	20	0	105.1%	85	115				
Toluene	20.92	0.5	20	0	104.6%	85	115				
1,4-Difluorobenzene	78.18	0	80	0	97.7%	85	103				
4-Bromochlorobenzene	74.84	0	80	0	93.6%	93	108				
Fluorobenzene	78.56	0	80	0	98.2%	88	103				

Sample ID: **CCV2 BTEX_0103** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.51	0.5	20	0	102.5%	85	115				
Ethylbenzene	21.29	0.5	20	0	106.5%	85	115				
m,p-Xylene	42.76	1	40	0	106.9%	85	115				
Methyl tert-Butyl Ether	19.68	1	20	0	98.4%	85	115				
o-Xylene	21.51	0.5	20	0	107.5%	85	115				
Toluene	21.07	0.5	20	0	105.3%	85	115				
1,4-Difluorobenzene	78.41	0	80	0	98.0%	85	103				
4-Bromochlorobenzene	76.03	0	80	0	95.0%	93	108				
Fluorobenzene	78.31	0	80	0	97.9%	88	103				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0103014
Project: BP Amoco; GCU Com I #181

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV3 BTEX_0103** Batch ID: **GC-1_010315** Test Code: **SW8021B** Units: **µg/L** Analysis Date **3/15/2001** Prep Date:

Client ID: **0103014** Run ID: **GC-1_010315A** SeqNo: **35733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.02	0.5	40	0	100.1%	85	115				
Ethylbenzene	41.36	0.5	40	0	103.4%	85	115				
m,p-Xylene	83.01	1	80	0	103.8%	85	115				
Methyl tert-Butyl Ether	38.04	1	40	0	95.1%	85	115				
o-Xylene	41.77	0.5	40	0	104.4%	85	115				
Toluene	41.15	0.5	40	0	102.9%	85	115				
1,4-Difluorobenzene	78.27	0	80	0	97.8%	85	103				
4-Bromochlorobenzene	77.23	0	80	0	96.5%	93	108				
Fluorobenzene	77.82	0	80	0	97.3%	88	103				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 23-Mar-01

CLIENT: Blagg Engineering
Work Order: 0103014
Project: BP Amoco; GCU Com I #181
Test No: SW8021B

QC SUMMARY REPORT
SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
0103005-01A	97.6	93.6	98.5					
0103005-02A	97.5	94.4	99					
0103005-03A	98	94.7	98.4					
0103005-04A	98	94.9	98.4					
0103005-05A	98.9	94.4	99.3					
0103006-01A	98.2	95.4	97.9					
0103008-01AMS	97.2	95.4	96.9					
0103008-01AMSD	97.1	96.2	97.1					
0103008-02A	98.6	93.9	98.3					
0103008-03A	99.3	92.9 *	99					
0103011-01A	95.6	94.7	96.2					
0103012-01A	96.6	95.7	97.9					
0103012-02A	98.6	95.8	99.6					
0103014-01A	98.8	96.2	100					
0103014-02A	98.2	95.8	98.2					
0103014-03A	98.2	93.8	98.3					
0103014-04A	97.3	91.6 *	97.5					
CCV1 BTEX_01030	97.7	93.6	98.2					
CCV2 BTEX_01030	98	95	97.9					
CCV3 BTEX_01030	97.8	96.5	97.3					
LCS WATER	97.5	95.9	96.9					
MB1	98.5	93.6	98.7					

Acronym		Surrogate	QC Limits
14FBZ	=	1,4-Difluorobenzene	85-103
4BCBZ	=	4-Bromochlorobenzene	93-108
FLBZ	=	Fluorobenzene	88-103

*** Surrogate recovery outside acceptance limits**

1

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : BP AMOCO

CHAIN-OF-CUSTODY # : 8292

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : March 27, 2001

SAMPLER : N J V

Filename : 03-27-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
BG-1	-	-	7.68	10.00	1310	7.38	3,700	1.25	-
10R	-	-	6.82	9.00	1340	7.54	3,600	0.50	-
32R	-	-	6.47	10.00	1355	7.39	3,800	1.75	-
41R ▼ BG-2	98.55	93.30	5.25	10.00	1325	7.63	4,500	0.75	-

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Installed MW # 's BG -1 (background), 10R (replaced drive point 10B), & 32R (replaced drive point 32B) on 3 / 22 / 01 . Each consist of 2 inch PVC - 5 ft. casing & 5 ft. screen (0.020 slotted). Developed all 3 MW 's on 3 / 23 / 01 by purging a minimum of 3 well bore volumes . Collected TDS & chloride from all MW 's listed above (MW # 41R written on COCR as BG - 2 - for verification of previous lab results , sampled on 3 / 15 /01). BEI reclamation system operational at time of sampling. Excellent recovery in MW # BG - 1, fair recovery in MW # 32R , poor / fair recovery in MW # 's 10R & 41R .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #BG-1	Date Reported:	03-29-01
Laboratory Number:	19459	Date Sampled:	03-27-01
Sample Matrix:	Water	Date Received:	03-27-01
Preservative:	Cool	Date Analyzed:	03-28-01
Condition:	Cool & Intact	Chain of Custody:	8292

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**4,096**	mg/L
Chloride	**130**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #BG-2	Date Reported:	03-29-01
Laboratory Number:	19460	Date Sampled:	03-27-01
Sample Matrix:	Water	Date Received:	03-27-01
Preservative:	Cool	Date Analyzed:	03-28-01
Condition:	Cool & Intact	Chain of Custody:	8292

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**4,420**	mg/L
Chloride	**190**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #10R	Date Reported:	03-29-01
Laboratory Number:	19461	Date Sampled:	03-27-01
Sample Matrix:	Water	Date Received:	03-27-01
Preservative:	Cool	Date Analyzed:	03-28-01
Condition:	Cool & Intact	Chain of Custody:	8292

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,472**	mg/L
Chloride	**56.0**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #32R	Date Reported:	03-29-01
Laboratory Number:	19462	Date Sampled:	03-27-01
Sample Matrix:	Water	Date Received:	03-27-01
Preservative:	Cool	Date Analyzed:	03-28-01
Condition:	Cool & Intact	Chain of Custody:	8292

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,560**	mg/L
Chloride	**89.2**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

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CHAIN OF CUSTODY RECORD

08292

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	GCU COM I #181	

Sampler:	Client No.
NJV	94034-010

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TDS	CHLORIDE					Remarks
NV BG MW #BG-1	3/27/01	1310	19459	WATER	1	✓	✓					ALL SAMPLES
												PRESERVED - COOL
MW #BG-2	3/27/01	1325	19460	WATER	1	✓	✓					
MW #10R	3/27/01	1340	19461	WATER	1	✓	✓					
MW #32R	3/27/01	1355	19462	WATER	1	✓	✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson VM	3/27/01	1410	Jennifer L. Ogletree	3/27/01	1410
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : BP AMOCO

CHAIN-OF-CUSTODY # : 11147

8405

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ON - SITE, TECH.

ENVIROTECH, INC.

Date : May 23, 2001

SAMPLER : N J V

Filename : 05-23-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
BG-1	-	-	7.71	10.00	1245	7.27	3,900	1.25	-
7	99.14	92.11	7.03	11.60	1345	7.65	5,000	2.25	-
41R	98.55	93.05	5.50	10.00	1430	7.99	4,500	0.75	-
45R	97.28	-	-	10.00	-	-	-	-	-
46R	97.36	-	-	10.00	-	-	-	-	-
47	98.34	91.09	7.25	15.00	1200	7.43	3,400	4.00	-

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected BTEX from MW #'s 41R , & 47 only . Collected anion / cation from MW #'s 7 , 41R , BG-1 . BEI reclamation system operational @ time of sampling . Poor recovery in MW # 41R , Fair recovery in MW #'s 7 & BG-1 . Permanently shut down compressor on 5 / 29 / 01 .

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ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *31-May-01*

Client:	Blagg Engineering	**Client Sample Info:**	BP - GCU Com I #181
Work Order:	0105052	**Client Sample ID:**	MW #41R
Lab ID:	0105052-01A **Matrix:** AQUEOUS	**Collection Date:**	5/23/2001 2:30:00 PM
Project:	BP - GCU Com I #181	**COC Record:**	11147

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **HR**
Benzene	ND	0.5		µg/L	1	5/28/2001
Toluene	ND	0.5		µg/L	1	5/28/2001
Ethylbenzene	ND	0.5		µg/L	1	5/28/2001
m,p-Xylene	1.2	1		µg/L	1	5/28/2001
o-Xylene	0.6	0.5		µg/L	1	5/28/2001

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
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *31-May-01*

Client:	Blagg Engineering	**Client Sample Info:**	BP - GCU Com I #181
Work Order:	0105052	**Client Sample ID:**	MW #47
Lab ID:	0105052-02A **Matrix:** AQUEOUS	**Collection Date:**	5/23/2001 12:00:00 PM
Project:	BP - GCU Com I #181	**COC Record:**	11147

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **HR**
Benzene	ND	0.5		µg/L	1	5/28/2001
Toluene	ND	0.5		µg/L	1	5/28/2001
Ethylbenzene	3.5	0.5		µg/L	1	5/28/2001
m,p-Xylene	1.4	1		µg/L	1	5/28/2001
o-Xylene	0.9	0.5		µg/L	1	5/28/2001

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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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW # BG - 1	Date Reported:	05-24-01
Laboratory Number:	19889	Date Sampled:	05-23-01
Chain of Custody:	8405	Date Received:	05-23-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	05-24-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.04**	s.u.		
Conductivity @ 25° C	**10,300**	umhos/cm		
Total Dissolved Solids @ 180C	**5,140**	mg/L		
Total Dissolved Solids (Calc)	**5,100**	mg/L		
SAR	**11.1**	ratio		
Total Alkalinity as CaCO3	**276**	mg/L		
Total Hardness as CaCO3	**1,540**	mg/L		
Bicarbonate as HCO3	**276**	mg/L	4.52	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**<0.1**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.005**	mg/L	0.00	meq/L
Chloride	**76.0**	mg/L	2.14	meq/L
Fluoride	**1.73**	mg/L	0.09	meq/L
Phosphate	**0.4**	mg/L	0.01	meq/L
Sulfate	**3,250**	mg/L	67.67	meq/L
Iron	**0.019**	mg/L		
Calcium	**570**	mg/L	28.44	meq/L
Magnesium	**28.3**	mg/L	2.33	meq/L
Potassium	**1.8**	mg/L	0.05	meq/L
Sodium	**1,000**	mg/L	43.50	meq/L
Cations			74.32	meq/L
Anions			74.44	meq/L
Cation/Anion Difference			**0.16%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW # 7	Date Reported:	05-24-01
Laboratory Number:	19890	Date Sampled:	05-23-01
Chain of Custody:	8405	Date Received:	05-23-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	05-24-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.22**	s.u.		
Conductivity @ 25° C	**13,450**	umhos/cm		
Total Dissolved Solids @ 180C	**6,720**	mg/L		
Total Dissolved Solids (Calc)	**6,690**	mg/L		
SAR	**21.1**	ratio		
Total Alkalinity as CaCO3	**616**	mg/L		
Total Hardness as CaCO3	**1,210**	mg/L		
Bicarbonate as HCO3	**616**	mg/L	10.10	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.3**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.007**	mg/L	0.00	meq/L
Chloride	**80.0**	mg/L	2.26	meq/L
Fluoride	**1.76**	mg/L	0.09	meq/L
Phosphate	**0.5**	mg/L	0.02	meq/L
Sulfate	**4,090**	mg/L	85.15	meq/L
Iron	**5.85**	mg/L		
Calcium	**387**	mg/L	19.31	meq/L
Magnesium	**59.5**	mg/L	4.90	meq/L
Potassium	**2.4**	mg/L	0.06	meq/L
Sodium	**1,690**	mg/L	73.52	meq/L
Cations			97.78	meq/L
Anions			97.62	meq/L
Cation/Anion Difference			**0.17%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW # 41R	Date Reported:	05-24-01
Laboratory Number:	19891	Date Sampled:	05-23-01
Chain of Custody:	8405	Date Received:	05-23-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	05-24-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.54**	s.u.		
Conductivity @ 25° C	**10,700**	umhos/cm		
Total Dissolved Solids @ 180C	**5,310**	mg/L		
Total Dissolved Solids (Calc)	**5,400**	mg/L		
SAR	**13.7**	ratio		
Total Alkalinity as CaCO3	**196**	mg/L		
Total Hardness as CaCO3	**1,400**	mg/L		
Bicarbonate as HCO3	**196**	mg/L	3.21	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.8**	mg/L	0.01	meq/L
Nitrite Nitrogen	**0.100**	mg/L	0.00	meq/L
Chloride	**240**	mg/L	6.77	meq/L
Fluoride	**1.75**	mg/L	0.09	meq/L
Phosphate	**6.9**	mg/L	0.22	meq/L
Sulfate	**3,320**	mg/L	69.12	meq/L
Iron	**0.910**	mg/L		
Calcium	**475**	mg/L	23.70	meq/L
Magnesium	**50.7**	mg/L	4.17	meq/L
Potassium	**7.6**	mg/L	0.19	meq/L
Sodium	**1,180**	mg/L	51.33	meq/L
Cations			79.40	meq/L
Anions			79.43	meq/L
Cation/Anion Difference			**0.04%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I # 181.**

Christine M Walters
Analyst

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CHAIN OF CUSTODY RECORD

08405

Client / Project Name: BLAGG / BP	Project Location: GCU COM I #181
Sampler: NJV	Client No.: 94034-010

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	ANION / CATION						Remarks
MW # BG-1	5/23/01	1245	19889	WATER	1	✓						ALL SAMPLES
												PRESERVED COOL
MW # 7	5/23/01	1345	19890	WATER	1	✓						
MW # 41R	5/23/01	1430	19891	WATER	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	5/23/01	1453	[signature]	5/23/01	1453
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

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Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

1147

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

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LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 5/23/01

Page: 1 of 1

Purchase Order No.:	Project No.		
SEND INVOICE TO: Name	Jeff Blagg	REPORT RESULTS TO: Name	Nelson Velez
Company	Blagg Engineering, Inc.	Company	Same
Dept.		Mailing Address	
Address		City, State, Zip	
City, State, Zip		Telephone No.	632-1199
		Title	
		Telefax No.	632-3903

PROJECT LOCATION: BP - Gcu com I #181

SAMPLER'S SIGNATURE: Nelson Velez

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE PRES.	Number of Containers	ANALYSIS REQUESTED: BTEX (8021)	LAB ID
MW # 41R	5/23/01	1430	WATER	HCl & COOL	2	✓	01052[illegible]-01R
MW # 47	5/23/01	1200	WATER	HCl & COOL	2	✓	-01R

Relinquished by: Nelson Velez	Date/Time 5/23/01 1508	Received by:	Date/Time 5/24/01 1508
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Rush | 24-48 Hours | 10 Working Days | By Date

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Special Instructions / Remarks:

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

On Site Technologies, LTD.

Date: *31-May-01*

CLIENT: Blagg Engineering
Work Order: 0105052
Project: BP - GCU Com I #181

QC SUMMARY REPORT
Method Blank

Sample ID: **MB1** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									
Toluene	.1045	0.5									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *31-May-01*

CLIENT: Blagg Engineering
Work Order: 0105052
Project: BP - GCU Com I #181

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0105046-05AMS** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2164	25	2000	260	95.2%	70	130				
Ethylbenzene	1972	25	2000	40	96.6%	70	130				
m,p-Xylene	3720	50	4000	20	92.5%	70	130				
Methyl tert-Butyl Ether	6369	50	2000	4600	88.5%	70	130				
o-Xylene	1913	25	2000	0	95.7%	70	130				
Toluene	1905	25	2000	8	94.8%	70	130				

Sample ID: **0105046-05AMSD** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2243	25	2000	260	99.1%	70	130	2164	3.6%	8	
Ethylbenzene	2059	25	2000	40	101.0%	70	130	1972	4.3%	7	
m,p-Xylene	3879	50	4000	20	96.5%	70	130	3720	4.2%	7	
Methyl tert-Butyl Ether	6499	50	2000	4600	95.0%	70	130	6369	2.0%	6	
o-Xylene	1985	25	2000	0	99.2%	70	130	1913	3.7%	6	
Toluene	1977	25	2000	8	98.4%	70	130	1905	3.7%	6	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *31-May-01*

CLIENT: Blagg Engineering
Work Order: 0105052
Project: BP - GCU Com I #181

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS WATER** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.85	0.5	40	0	99.6%	80	120				
Ethylbenzene	40.16	0.5	40	0	100.4%	80	120				
m,p-Xylene	76.97	1	80	0	96.2%	80	120				
Methyl tert-Butyl Ether	40.72	1	40	0	101.8%	80	120				
o-Xylene	39.65	0.5	40	0	99.1%	80	120				
Toluene	39.52	0.5	40	0.1045	98.5%	80	120				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *31-May-01*

CLIENT: Blagg Engineering
Work Order: 0105052
Project: BP - GCU Com I #181

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV1 BTEX_0105** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.2	0.5	20	0	96.0%	85	115				
Ethylbenzene	19.4	0.5	20	0	97.0%	85	115				
m,p-Xylene	37.34	1	40	0	93.3%	85	115				
Methyl tert-Butyl Ether	20.15	1	20	0	100.7%	85	115				
o-Xylene	19.13	0.5	20	0	95.6%	85	115				
Toluene	19.1	0.5	20	0	95.5%	85	115				
1,4-Difluorobenzene	74.82	0	80	0	93.5%	70	130				
4-Bromochlorobenzene	83.66	0	80	0	104.6%	70	130				
Fluorobenzene	75.7	0	80	0	94.6%	70	130				

Sample ID: **CCV2 BTEX_0105** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.14	0.5	40	0	97.8%	85	115				
Ethylbenzene	39.38	0.5	40	0	98.4%	85	115				
m,p-Xylene	75.5	1	80	0	94.4%	85	115				
Methyl tert-Butyl Ether	41.01	1	40	0	102.5%	85	115				
o-Xylene	38.85	0.5	40	0	97.1%	85	115				
Toluene	38.83	0.5	40	0	97.1%	85	115				
1,4-Difluorobenzene	74.6	0	80	0	93.2%	70	130				
4-Bromochlorobenzene	80.22	0	80	0	100.3%	70	130				
Fluorobenzene	74.83	0	80	0	93.5%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0105052
Project: BP - GCU Com I #181

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV3 BTEX_0105** Batch ID: **GC-1_010528** Test Code: **SW8021B** Units: **µg/L** Analysis Date **5/28/2001** Prep Date:

Client ID: **0105052** Run ID: **GC-1_010528A** SeqNo: **38466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.66	0.5	20	0	98.3%	85	115				
Ethylbenzene	19.63	0.5	20	0	98.2%	85	115				
m,p-Xylene	37.82	1	40	0	94.6%	85	115				
Methyl tert-Butyl Ether	20.48	1	20	0	102.4%	85	115				
o-Xylene	19.31	0.5	20	0	96.5%	85	115				
Toluene	19.4	0.5	20	0	97.0%	85	115				
1,4-Difluorobenzene	74.61	0	80	0	93.3%	70	130				
4-Bromochlorobenzene	83.44	0	80	0	104.3%	70	130				
Fluorobenzene	75.53	0	80	0	94.4%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 31-May-01

CLIENT: Blagg Engineering
Work Order: 0105052
Project: BP - GCU Com I #181
Test No: SW8021B

QC SUMMARY REPORT
SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0105045-05A	114	98.3	105
0105046-05A	93.6	101	95.5
0105046-05AMS	93.7	104	94
0105046-05AMSD	92.5	103	94
0105046-19A	93.6	98.3	95.7
0105047-01A	94.6	102	96.4
0105047-02A	92.9	98.4	94.3
0105047-03A	95	102	96.1
0105047-04A	94	101	95.8
0105049-01A	93.3	102	94
0105049-02A	95.3	101	96.8
0105049-03A	88.2	96.6	89.8
0105049-04A	91.9	102	92.7
0105049-05A	94.1	103	95.3
0105051-02A	94.8	99.3	96.2
0105051-03A	94.5	102	96.4
0105052-01A	94.9	102	96.4
0105052-02A	93.4	104	94.5
0105053-01A	93.2	107	94.4
CCV1 BTEX_01052	93.5	104	94.6
CCV2 BTEX_01052	93.2	100	93.5
CCV3 BTEX_01052	93.3	104	94.4
LCS WATER	93.5	105	93.9
MB1	93.5	104	95

Acronym		Surrogate	QC Limits
14FBZ	=	1,4-Difluorobenzene	70-130
4BCBZ	=	4-Bromochlorobenzene	70-130
FLBZ	=	Fluorobenzene	70-130

*** Surrogate recovery outside acceptance limits**

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : BP AMOCO

CHAIN-OF-CUSTODY # : 9427

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : Sept. 20, 2001

Filename : 09-20-01.WK4

SAMPLER : N J V

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
BG-1	-	-	8.18	10.00	1055	7.31	4,900	1.00	-
7	99.14	91.66	7.48	11.60	1040	7.19	3,500	2.00	-
41R	98.55	91.12	7.43	10.00	1110	6.94	3,600	0.75	-
45R	97.28	-	-	10.00	-	-	-	-	-
46R	97.36	-	-	10.00	-	-	-	-	-
47	98.34	90.40	7.94	15.00	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected anion / cation from MW #'s 7 , 41R , & BG -1 . Poor recovery in MW # 41R .

Fair recovery in MW #'s 7 & BG-1 . Permanently shut down compressor on 5 / 29 / 01 .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #7	Date Reported:	09-21-01
Laboratory Number:	21055	Date Sampled:	09-20-01
Chain of Custody:	9427	Date Received:	09-20-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	09-21-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.50**	s.u.		
Conductivity @ 25° C	**13,600**	umhos/cm		
Total Dissolved Solids @ 180C	**6,770**	mg/L		
Total Dissolved Solids (Calc)	**6,630**	mg/L		
SAR	**22.7**	ratio		
Total Alkalinity as CaCO3	**675**	mg/L		
Total Hardness as CaCO3	**1,100**	mg/L		
Bicarbonate as HCO3	**675.0**	mg/L	11.06	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.3**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.005**	mg/L	0.00	meq/L
Chloride	**94.2**	mg/L	2.66	meq/L
Fluoride	**5.1**	mg/L	0.27	meq/L
Phosphate	**0.6**	mg/L	0.02	meq/L
Sulfate	**4,000**	mg/L	83.28	meq/L
Iron	**1.01**	mg/L		
Calcium	**309**	mg/L	15.42	meq/L
Magnesium	**80.1**	mg/L	6.59	meq/L
Potassium	**3.1**	mg/L	0.08	meq/L
Sodium	**1,730**	mg/L	75.26	meq/L
Cations			97.34	meq/L
Anions			97.29	meq/L
Cation/Anion Difference			**0.05%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #41R	Date Reported:	09-21-01
Laboratory Number:	21056	Date Sampled:	09-20-01
Chain of Custody:	9427	Date Received:	09-20-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	09-21-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.04**	s.u.		
Conductivity @ 25° C	**8,800**	umhos/cm		
Total Dissolved Solids @ 180C	**4,390**	mg/L		
Total Dissolved Solids (Calc)	**4,410**	mg/L		
SAR	**10.5**	ratio		
Total Alkalinity as CaCO3	**515**	mg/L		
Total Hardness as CaCO3	**1,370**	mg/L		
Bicarbonate as HCO3	**515**	mg/L	8.44	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**1.0**	mg/L	0.02	meq/L
Nitrite Nitrogen	**0.082**	mg/L	0.00	meq/L
Chloride	**134**	mg/L	3.78	meq/L
Fluoride	**5.8**	mg/L	0.31	meq/L
Phosphate	**2.0**	mg/L	0.06	meq/L
Sulfate	**2,570**	mg/L	53.51	meq/L
Iron	**31.9**	mg/L		
Calcium	**406**	mg/L	20.26	meq/L
Magnesium	**86.0**	mg/L	7.08	meq/L
Potassium	**4.0**	mg/L	0.10	meq/L
Sodium	**890**	mg/L	38.72	meq/L
Cations			66.15	meq/L
Anions			66.11	meq/L
Cation/Anion Difference			**0.06%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #BG-1	Date Reported:	09-21-01
Laboratory Number:	21057	Date Sampled:	09-20-01
Chain of Custody:	9427	Date Received:	09-20-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	09-21-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.25**	s.u.		
Conductivity @ 25° C	**9,000**	umhos/cm		
Total Dissolved Solids @ 180C	**4,490**	mg/L		
Total Dissolved Solids (Calc)	**4,500**	mg/L		
SAR	**10.6**	ratio		
Total Alkalinity as CaCO3	**230**	mg/L		
Total Hardness as CaCO3	**1,360**	mg/L		
Bicarbonate as HCO3	**230**	mg/L	3.77	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.2**	mg/L	0.00	meq/L
Nitrite Nitrogen	**<0.001**	mg/L	0.00	meq/L
Chloride	**78.6**	mg/L	2.22	meq/L
Fluoride	**6.0**	mg/L	0.32	meq/L
Phosphate	**0.3**	mg/L	0.01	meq/L
Sulfate	**2,880**	mg/L	59.96	meq/L
Iron	**0.002**	mg/L		
Calcium	**403**	mg/L	20.11	meq/L
Magnesium	**85.0**	mg/L	6.99	meq/L
Potassium	**3.3**	mg/L	0.08	meq/L
Sodium	**900**	mg/L	39.15	meq/L
Cations			66.34	meq/L
Anions			66.28	meq/L
Cation/Anion Difference			**0.09%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walden
Analyst

Review

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

CHAIN OF CUSTODY RECORD

09427

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	GCU COM I # 181	
Sampler: NJV	Client No. 94034-010	Remarks: ALL SAMPLES PRESERVED COOL

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	ANION/ CATION					Remarks
MW # 7	9/20/01	1040	21055	WATER	1	✓					
MW # 41R	9/20/01	1110	21056	WATER	1	✓					
MW # BG-1	9/20/01	1055	21057	WATER	1	✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	9/20/01	1118	[signature]	9.20.01	1118
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : BP AMOCO

CHAIN-OF-CUSTODY # : 9443
73483

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH, INC.
IML

Date : Dec. 3, 2001

Filename : 12-03-01.WK4

SAMPLER : N J V

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
BG-1	-	-	7.72	10.00	1235	7.17	3,900	1.25	-
7	99.14	92.21	6.93	11.60	1315	7.36	5,200	2.25	-
41R	98.55	91.52	7.03	10.00	1330	6.89	3,900	1.50	-
45R	97.28	-	-	10.00	-	-	-	-	-
46R	97.36	-	-	10.00	-	-	-	-	-
47	98.34	90.87	7.47	15.00	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).
2 bails per foot - small teflon bailer.
3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected anion / cation from MW #'s 7 , 41R , & BG -1 . Poor recovery in MW # 41R .

Fair recovery in MW #'s 7 & BG-1 . Permanently shut down compressor on 5 / 29 / 01 .

Split samples collected .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #BG - 1	Date Reported:	12-04-01
Laboratory Number:	21632	Date Sampled:	12-03-01
Chain of Custody:	9443	Date Received:	12-03-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	12-04-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	6.82	s.u.		
Conductivity @ 25° C	9,100	umhos/cm		
Total Dissolved Solids @ 180C	4,540	mg/L		
Total Dissolved Solids (Calc)	4,500	mg/L		
SAR	10.6	ratio		
Total Alkalinity as CaCO3	216	mg/L		
Total Hardness as CaCO3	1,340	mg/L		
Bicarbonate as HCO3	216	mg/L	3.54	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.3	mg/L	0.00	meq/L
Nitrite Nitrogen	0.001	mg/L	0.00	meq/L
Chloride	72.0	mg/L	2.03	meq/L
Fluoride	1.94	mg/L	0.10	meq/L
Phosphate	0.3	mg/L	0.01	meq/L
Sulfate	2,870	mg/L	59.75	meq/L
Iron	0.063	mg/L		
Calcium	534	mg/L	26.65	meq/L
Magnesium	<0.01	mg/L	0.00	meq/L
Potassium	2.0	mg/L	0.05	meq/L
Sodium	890	mg/L	38.72	meq/L
Cations			65.41	meq/L
Anions			65.44	meq/L
Cation/Anion Difference			0.04%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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

Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, NM 87401

Client: Blagg Engineering, Inc.
Project: BP Amoco
Sample ID: MW#BG-1
Lab ID: 0301W05039
Matrix: Water
Condition: Cool/Intact

Date Received: 12/03/01
Date Reported: 12/18/01
Date Sampled: 12/03/01
Time Sampled: 1235

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Time	Init.
PH	7.0	s.u.			0.1	EPA 150.1	12/04/01	1515	ZW
Electrical Conductivity	4770	µmhos/cm			10	EPA 120.1	12/04/01	1515	ZW
Solids - Total Dissolved	4140	mg/L			10	SM 2540C	12/05/01	0830	ZW
Alkalinity (CaCO3)	238	mg/L			1	EPA 310.1	12/05/01	1550	ZW
Hardness (CaCO3)	1360	mg/L			1	EPA 200.7	12/18/01	1254	PR
Major Cations									
Calcium	475	mg/L	23.69	meq/L	0.2	EPA 200.7	12/18/01	1254	PR
Magnesium	43.4	mg/L	3.57	meq/L	0.2	EPA 200.7	12/18/01	1254	PR
Potassium	4.0	mg/L	0.10	meq/L	0.2	EPA 200.7	12/18/01	1254	PR
Sodium	684	mg/L	29.77	meq/L	0.2	EPA 200.7	12/18/01	1254	PR
Major Anions									
Bicarbonate (HCO3)	290	mg/L	4.76	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Carbonate (CO3)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Chloride	72	mg/L	2.02	meq/L	1	EPA 300.0	12/06/01	2339	ZW
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Sulfate	2470	mg/L	51.37	meq/L	5	EPA 300.0	12/06/01	2339	ZW
Anion/Cation Balance QC Information									
Anion Sum			58.12	meq/L	0.01	SM 1030			
Cation Sum			57.13	meq/L	0.01	SM 1030			
Cation/Anion Balance			0.86	%	0.01	SM 1030			
Iron	<0.02	mg/L			0.02	EPA 200.7	12/18/01	1254	PR

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,18th Edition, 1992.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.

Reviewed By:

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #7	Date Reported:	12-04-01
Laboratory Number:	21633	Date Sampled:	12-03-01
Chain of Custody:	9443	Date Received:	12-03-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	12-04-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	**7.30**	s.u.		
Conductivity @ 25° C	**12,500**	umhos/cm		
Total Dissolved Solids @ 180C	**6,100**	mg/L		
Total Dissolved Solids (Calc)	**6,080**	mg/L		
SAR	**18.3**	ratio		
Total Alkalinity as CaCO3	**772**	mg/L		
Total Hardness as CaCO3	**1,240**	mg/L		
Bicarbonate as HCO3	**772**	mg/L	12.65	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.4**	mg/L	0.01	meq/L
Nitrite Nitrogen	**0.002**	mg/L	0.00	meq/L
Chloride	**31.6**	mg/L	0.89	meq/L
Fluoride	**1.65**	mg/L	0.09	meq/L
Phosphate	**0.3**	mg/L	0.01	meq/L
Sulfate	**3,630**	mg/L	75.58	meq/L
Iron	**0.295**	mg/L		
Calcium	**422**	mg/L	21.06	meq/L
Magnesium	**45.9**	mg/L	3.78	meq/L
Potassium	**2.7**	mg/L	0.07	meq/L
Sodium	**1,480**	mg/L	64.38	meq/L
Cations			89.28	meq/L
Anions			89.22	meq/L
Cation/Anion Difference			**0.07%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, NM 87401

Client: Blagg Engineering, Inc.
Project: BP Amoco
Sample ID: MW#7
Lab ID: 0301W05040
Matrix: Water
Condition: Cool/Intact

Date Received: 12/03/01
Date Reported: 12/18/01
Date Sampled: 12/03/01
Time Sampled: 1315

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Time	Init.
PH	7.3	s.u.			0.1	EPA 150.1	12/04/01	1515	ZW
Electrical Conductivity	7050	µmhos/cm			10	EPA 120.1	12/04/01	1515	ZW
Solids - Total Dissolved	5890	mg/L			10	SM 2540C	12/05/01	0830	ZW
Alkalinity (CaCO3)	641	mg/L			1	EPA 310.1	12/05/01	1550	ZW
Hardness (CaCO3)	1320	mg/L			1	EPA 200.7	12/18/01	1301	PR
Major Cations									
Calcium	421	mg/L	21.00	meq/L	0.2	EPA 200.7	12/18/01	1301	PR
Magnesium	64.8	mg/L	5.33	meq/L	0.2	EPA 200.7	12/18/01	1301	PR
Potassium	4.4	mg/L	0.11	meq/L	0.2	EPA 200.7	12/18/01	1301	PR
Sodium	1280	mg/L	55.83	meq/L	0.2	EPA 200.7	12/18/01	1301	PR
Major Anions									
Bicarbonate (HCO3)	781	mg/L	12.81	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Carbonate (CO3)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Chloride	83	mg/L	2.33	meq/L	1	EPA 300.0	12/07/01	0016	ZW
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Sulfate	3470	mg/L	72.23	meq/L	5	EPA 300.0	12/07/01	0016	ZW
Anion/Cation Balance QC Information									
Anion Sum			87.34	meq/L	0.01	SM 1030			
Cation Sum			82.27	meq/L	0.01	SM 1030			
Cation/Anion Balance			2.99	%	0.01	SM 1030			
Iron	<0.02	mg/L			0.02	EPA 200.7	12/18/01	1301	PR

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,18th Edition, 1992.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.

Reviewed By:

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #41R	Date Reported:	12-04-01
Laboratory Number:	21634	Date Sampled:	12-03-01
Chain of Custody:	9443	Date Received:	12-03-01
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	12-04-01
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	6.92	s.u.		
Conductivity @ 25° C	7,900	umhos/cm		
Total Dissolved Solids @ 180C	3,940	mg/L		
Total Dissolved Solids (Calc)	3,670	mg/L		
SAR	7.5	ratio		
Total Alkalinity as CaCO3	416	mg/L		
Total Hardness as CaCO3	1,330	mg/L		
Bicarbonate as HCO3	416	mg/L	6.82	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.0	mg/L	0.02	meq/L
Nitrite Nitrogen	<0.001	mg/L	0.00	meq/L
Chloride	79.6	mg/L	2.25	meq/L
Fluoride	1.89	mg/L	0.10	meq/L
Phosphate	0.7	mg/L	0.02	meq/L
Sulfate	2,170	mg/L	45.18	meq/L
Iron	28.9	mg/L		
Calcium	488	mg/L	24.35	meq/L
Magnesium	27.3	mg/L	2.25	meq/L
Potassium	14.5	mg/L	0.37	meq/L
Sodium	630	mg/L	27.41	meq/L
Cations			54.37	meq/L
Anions			54.38	meq/L
Cation/Anion Difference			0.01%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, NM 87401

Client: Blagg Engineering, Inc.
Project: BP Amoco
Sample ID: MW#41R
Lab ID: 0301W05041
Matrix: Water
Condition: Cool/Intact

Date Received: 12/03/01
Date Reported: 12/18/01
Date Sampled: 12/03/01
Time Sampled: 1330

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Time	Init.
PH	6.8	s.u.			0.1	EPA 150.1	12/04/01	1515	ZW
Electrical Conductivity	4770	µmhos/cm			10	EPA 120.1	12/04/01	1515	ZW
Solids - Total Dissolved	4120	mg/L			10	SM 2540C	12/05/01	0830	ZW
Alkalinity (CaCO3)	439	mg/L			1	EPA 310.1	12/05/01	1550	ZW
Hardness (CaCO3)	1480	mg/L			1	EPA 200.7	12/18/01	1304	PR
Major Cations									
Calcium	496	mg/L	24.73	meq/L	0.2	EPA 200.7	12/18/01	1304	PR
Magnesium	59.2	mg/L	4.87	meq/L	0.2	EPA 200.7	12/18/01	1304	PR
Potassium	22.9	mg/L	0.59	meq/L	0.2	EPA 200.7	12/18/01	1304	PR
Sodium	614	mg/L	26.70	meq/L	0.2	EPA 200.7	12/18/01	1304	PR
Major Anions									
Bicarbonate (HCO3)	536	mg/L	8.78	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Carbonate (CO3)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Chloride	93	mg/L	2.62	meq/L	1	EPA 300.0	12/07/01	0029	ZW
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	12/05/01	1550	ZW
Sulfate	2290	mg/L	47.64	meq/L	5	EPA 300.0	12/07/01	0029	ZW
Anion/Cation Balance QC Information									
Anion Sum			59.02	meq/L	0.01	SM 1030			
Cation Sum			56.89	meq/L	0.01	SM 1030			
Cation/Anion Balance			1.84	%	0.01	SM 1030			
Iron	0.13	mg/L			0.02	EPA 200.7	12/18/01	1304	PR

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,18th Edition, 1992.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.

Reviewed By: _____

CHAIN OF CUSTODY RECORD

09443

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	GCU COM I #181	

Sampler:	Client No.
NJV	94034-010

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	ANION/ CATION						Remarks
												PRESERVED COOL
MW #BG-1	12/3/01	1235	21632	WATER	1	✓						
MW #7	12/3/01	1315	21633	WATER	1	✓						
MW #41R	12/3/01	1330	21634	WATER	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	12/3/01	1405	[signature]	12-3-01	1405
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

CHAIN OF CUSTODY RECORD

Inter-Mountain Laboratories, Inc.

Client/Project Name	Project Location	ANALYSES / PARAMETERS
BLAGG/BP	GCU com I #181	
Sampler: (Signature)	**Chain of Custody Tape No.**	

Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	API ANION/ CATION				Remarks
MW # BG-1	12/3/01	1235	5039	WATER	1	✓				PRESERVED COOL SEE ATTACHED LIST
MW # 7	12/3/01	1315	5040	WATER	1	✓				
MW # 41R	12/3/01	1330	5041	WATER	1	✓				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	12/3/01	1429			
Relinquished by: (Signature)	**Date**	**Time**	**Received by: (Signature)**	**Date**	**Time**
Relinquished by: (Signature)	**Date**	**Time**	**Received by laboratory: (Signature)**	**Date**	**Time**
				12/3/01	14:29

Inter-Mountain Laboratories, Inc.

☐ 555 Absaraka, Sheridan, Wyoming 82801, Telephone (307) 674-7506

☐ 1633 Terra Avenue, Sheridan, Wyoming 82801, Telephone (307) 672-8945

☐ 1701 Phillips Circle, Gillette, Wyoming 82718, Telephone (307) 682-8945

☒ 2506 West Main Street, Farmington, NM 87401, Telephone (505) 326-4737

☐ 11183 State Hwy. 30, College Station, TX 77845, Telephone (979) 776-8945

73483

Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, NM 87401

Quality Control Report
Duplicate Analysis

Client: Blagg Engineering, Inc.
Project: BP Amoco
Sample ID: MW#BG-1
Lab ID: 0301W05039
Matrix: Water
Condition: Cool/Intact

Report Date: 12/18/01
Receipt Date: 12/03/01
Sample Date: 12/03/01
Time Sampled: 1235

Parameter	Original Conc.	Duplicate Conc.	Relative % Diff.	PQL	Units
PH	7.0	7.0	0	0.1	s.u.
Electrical Conductivity	4770	4760	0	10	µmhos/cm
Solids - Total Dissolved	4140	4130	0	10	mg/L
Alkalinity (CaCO3)	238	280	16	1	mg/L
Hardness (CaCO3)	1360	1380	1	1	mg/L
Major Cations					
Calcium	475	481	1	0.2	mg/L
Magnesium	43.4	44.0	1	0.2	mg/L
Potassium	4.0	4.0	0	0.2	mg/L
Sodium	684	699	2	0.2	mg/L
Major Anions					
Bicarbonate (HCO3)	290	342	16	1	mg/L
Carbonate (CO3)	<1	<1	NC*	1	mg/L
Chloride	72	73	1	1	mg/L
Hydroxide (OH)	<1	<1	NC*	1	mg/L
Sulfate	2470	2470	0	5	mg/L
Anion/Cation Balance QC Information					
Anion Sum	58.12	59.02	2	0.01	meq/L
Cation Sum	57.13	58.14	2	0.01	meq/L
Cation/Anion Balance	0.86	0.75		0.01	%
Iron	<0.02	<0.02	NC*	0.02	mg/L

*NC - Non-Calculable RPD due to value(s) less than DL

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,18th Edition, 1992.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

BLAGG ENGINEERING, INC.

MONITOR WELL SAMPLING DATA

CLIENT : BP AMOCO

CHAIN-OF-CUSTODY # : 9722

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH, INC.

Date : February 28, 2002

SAMPLER : N J V

Filename : 02-28-02.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
BG-2	-	-	6.60	9.00	1215	7.08	2,500	1.75	-
7	99.14	92.47	6.67	11.60	1245	7.85	4,500	2.50	-

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Installed MW # BG - 2 on 1 / 25 / 02 . 5 ft. screen (0.010 slot) , 5 ft. casing , cut off 1 ft. from top of casing . Top of casing approx. 1.60 ft. above ground surface , TD approx. 7.40 ft. below ground surface . Developed on 1 / 28 / 02 - DTW = 6.68 ft. , purged approx. 4.00 gallons , pH = 7.35 , conductivity = 2,600 . Excellent recovery . TDS samples from both MW 's . Fair recovery in MW # 7 . Permanently shut down reclamation system on 5 / 29 / 01 .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #BG - 2	Date Reported:	03-04-02
Laboratory Number:	22170	Date Sampled:	02-28-02
Sample Matrix:	Water	Date Received:	02-28-02
Preservative:	Cool	Date Analyzed:	03-01-02
Condition:	Cool & Intact	Chain of Custody:	9722

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**2,910**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Christine M Walters
Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #7	Date Reported:	03-04-02
Laboratory Number:	22169	Date Sampled:	02-28-02
Sample Matrix:	Water	Date Received:	02-28-02
Preservative:	Cool	Date Analyzed:	03-01-02
Condition:	Cool & Intact	Chain of Custody:	9722

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**5,720**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

09722

Client / Project Name: BLAGG / BP

Project Location: Gcu com I #181

Sampler: NJV

Client No.: 94034-010

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TDS						Remarks
												PRESERVED COOL
MW # 7	2/23/02	1245	22169	WATER	1	✓						
MW # BG-2	2/23/02	1215	22170	WATER	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	2/28/02	1348	[signature]	2/28/02	1348
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : 14642

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH , INC.

Date : August 3, 2006

SAMPLER : N J V

Filename : 08-03-06.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
BG-2	100.96		-	9.00	-	-	-	-	-
7R	101.97		8.77	17.00	1420	6.88	3,400	25.8	4.00
36	99.32		-	12.87	-	-	-	-	-
WP-40	101.13		-	10.80	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	08/03/06	0755

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Exellent recovery in MW # 7R . Collected major anions / cations sample from MW # 7R only .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #7R	Date Reported:	08-04-06
Laboratory Number:	38045	Date Sampled:	08-03-06
Sample Matrix:	Water	Date Received:	08-03-06
Preservative:	Cool	Date Analyzed:	08-04-06
Condition:	Cool & Intact	Chain of Custody:	14642

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,580**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181 Grab Sample**

Analyst

Review

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CHAIN OF CUSTODY RECORD

14642

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	Gallegos Canyon #181	

Sampler:	Client No.
NV	94034-010

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TDS						Remarks
												PRESERVED COOL
												GRAB SAMPLE
MW #7R	8/3/06	1420	38045	WATER	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	8/3/06	1440	Paula Vaull	8/3/06	1440
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : 14674

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH , INC.

Date : August 15, 2006

SAMPLER : N J V

Filename : 08-15-06.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
BG-2	100.96		7.34	9.00	1335	7.04	2,500	24.3	3.00
7R	101.97		-	17.00	-	-	-	-	-
36	99.32		-	12.87	-	-	-	-	-
WP-40	101.13		-	10.80	-	-	-	-	-
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	08/09/06	0945		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:
2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Exellent recovery in MW BG-2 . Collected major anions / cations sample from MW BG-2 only .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	BG - 2	Date Reported:	08-16-06
Laboratory Number:	38172	Date Sampled:	08-15-06
Sample Matrix:	Water	Date Received:	08-15-06
Preservative:	Cool	Date Analyzed:	08-15-06
Condition:	Cool & Intact	Chain of Custody:	14674

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**2,960**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181 Grab Sample.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

14674

Client / Project Name			Project Location		ANALYSIS / PARAMETERS							
BLAGG / BP.			GCU Com I #181									
Sampler: NV			Client No. 94034-010		No. of Containers		TDS					Remarks
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix								PRESERVED COOL
												GRAB SAMPLE
BG - 2	8/15/06	1335	38172	WATER	1		✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	8/15/06	1403	[signature]	8/15/06	1403
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : 14705

GCU COM I # 181
UNIT F, SEC. 34, T29N, R12W

LABORATORY (S) USED : ENVIROTECH

Date : October 30, 2006

SAMPLER : N J V

Filename : 10-30-06.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
BG-2	100.96	95.03	5.93	9.00	1055	6.98	2,800	17.0	1.50
7R	101.97	94.47	7.50	17.00	1125	6.97	3,000	20.0	4.75
36	99.32	94.56	4.76	12.87	-	-	-	-	-
WP-40	101.13	93.75	7.38	10.80	-	-	-	-	-
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	10/27/06	0845		

NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Excellent recovery in both MW's # BG-2 & # 7R. Collected TDS from both MW's # BG-2 & # 7R.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #BG-2	Date Reported:	10-31-06
Laboratory Number:	38970	Date Sampled:	10-30-06
Sample Matrix:	Water	Date Received:	10-30-06
Preservative:	Cool	Date Analyzed:	10-30-06
Condition:	Cool & Intact	Chain of Custody:	14705

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,110**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181 Grab Sample.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Water Analysis

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #7R	Date Reported:	10-31-06
Laboratory Number:	38971	Date Sampled:	10-30-06
Sample Matrix:	Water	Date Received:	10-30-06
Preservative:	Cool	Date Analyzed:	10-30-06
Condition:	Cool & Intact	Chain of Custody:	14705

Parameter	Analytical Result	Units
Total Dissolved Solids @ 180C	**3,480**	mg/L

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **GCU Com I #181 Grab Sample.**

Analyst

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CHAIN OF CUSTODY RECORD

14705

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	Gcu com I #181	

Sampler:	Client No.
NV	94034-010

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TDS						Remarks
												PRESERVED COOL GRAB SAMPLES
MW #BG-2	10/30/06	1055	38970	WATER	1	✓						
MW #7R	10/30/06	1125	38971	WATER	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	10/30/06	1145	[signature]	10/30/06	1145
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

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Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		