3R - 461

GWMR

02 / 01 / 2008

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413

RECEIVED 3R-461

FEB 04 2008
Oil Conservation Division
Environmental Bureau

January 30, 2008

Mr. Glenn Von Gonten, 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
Caneple GC B # 1, Unit P, Sec. 13, T31N, R11W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: NONE

Dear Mr. Von Gonten:

BP America Production Company (**BP**) has retained Blagg Engineering, Inc. (**BEI**) to conduct environmental monitoring of groundwater at the Caneple GC B # 1.

BP has followed its NMOCD approved groundwater management plan and is requesting 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

Caneple GC B 1 01-30-08 CVL.DOC

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FEB 07 2008
Oil Conservation Division
Environmental Bureau

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

2006-2007

CANEPLE GC B #1
(P) SECTION 13, T31N, R11W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

JANUARY 2008

PREPARED BY:
BLAGG ENGINEERING, INC.

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

BP AMERICA PRODUCTION COMPANY
Caneple GC B #1
Se/4 Se/4 Sec. 13, T31N, R11W

Historical Information:

Pit Closure Dates:	Feb / March 1996
Monitor Well Installation Dates:	Sept. / Oct. 2006
Reclamation Procedures:	Excavation (Feb. 1996)
Monitor Well Sampling Dates:	10/12/06; 12/21/06; 02/21/07; 05/16/07

Groundwater was encountered at a depth of approximately 8 feet below surface grade during excavation of impacted soils from a separator and an unknown type pit in February/March 1996 (documentation attached). The excavation perimeter was measured at approximately 50 X 100 X 10 feet depth. Approximately 1,850 cubic yards of soils were removed and transported to BP's (formerly called Amoco Production Company) Cahn GC #1S well site (Unit L, Sec. 33, T32N, R10W). Two (2) test holes adjacent to the excavation were sampled on February 19, 1996 and tested for benzene, toluene, ethylbenzene, and total xylenes (**BTEX**) per US EPA method 8020. The groundwater within the excavation perimeter was pumped via water hauling trucks and disposed at an approved facility. Afterwards, the exposed groundwater was sampled on February 23, 1996. A subsequent sampling of the groundwater was conducted on February 26, 1996. Upon receipt of the first laboratory results received, the New Mexico Oil Conservation Division (**NMOCD**) was notified with letter dated March 5, 1996 of the groundwater impact (attached). Resampling of the groundwater in three (3) additional events was conducted at later dates in February and March, 1996. The BTEX results of the groundwater sampling from the excavation and adjacent test holes are as follows;

Sample ID	Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
Pit Water	02/23/96	**23.3**	14.0	61.1	600
Pit Water	02/26/96	**15.7**	5.8	24.0	463.1
Pit Water	02/29/96	**13.8**	5.11	6.93	**659.8**
Pit Water	03/06/96	**11.0**	13.3	11.7	**700.5**
Pit Water	03/11/96	9.6	7.9	17.7	448.5
TH2 @ 8'	02/19/96	ND	ND	ND	3.18
TH3 @ 8'	02/19/96	1.14	0.99	ND	ND
NMWQCC regulatory standards		**10**	**750**	**750**	**620**

Note: NMWQCC = New Mexico Water Quality Control Commission, ppb = parts per billion, ND = not detectable at reported limits.

Groundwater Investigation and Soil Lithology:

Groundwater monitor wells were installed in September/October 2006 to test groundwater quality. Boring logs for all three (3) monitor wells along with well completion information are contained within this report. There does not appear to be any known receptors ever impacted by the previous discovery of impacted soil and/or groundwater. In addition, there does not appear to be any physical evidence to indicate that a nearby irrigation ditch immediately down gradient of the excavation (see Figure 1) has ever been impacted as well.

Soil lithology at the site consists of primarily sand and gravel of varying color and size.

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 and general water chemistry.

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 was initiated in October, 2006. Summary of laboratory BTEX analytical results are included in the table on the following pages. The data indicates all BTEX constituents tested below New Mexico Water Quality Control Commission (NMWQCC) standards for four (4) consecutive sampling events within the source area.

Groundwater contour maps of relative water table elevations for all sample events are included (Figures 2 and 5). The general groundwater flow direction has consistently been in a southwest direction.

Summary and Recommendations:

Hydrocarbon impacted soil and groundwater at the site has been remediated via excavation of impacted soils. All site wells meet NMWQCC 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 LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

CANEPLE GC B # 1

UNIT P, SEC. 13, T31N, R11W

REVISED DATE: August 3, 2007

FILENAME: (CAN-2Q07.WK4) NJV

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb) Benzene	Toluene	Ethyl Benzene	Total Xylene
12-Oct-06	MW #1	6.13	16.50	744	1,000	7.15		ND	ND	ND	ND
12-Oct-06	MW #2	5.70	16.20	2,700	2,800	6.98		6.0	ND	20	97
21-Dec-06		8.20			1,500	7.27		8.5	ND	17	89
21-Feb-07		8.84			1,100	7.40		5.4	2.0	13	71
16-May-07		6.33			900	7.29		3.5	ND	4.4	36
12-Oct-06	MW #3	4.19	15.00	1,140	1,600	7.03		ND	ND	ND	ND
21-Dec-06		7.00			1,200	7.27		ND	ND	ND	ND
					NMWQCC GROUNDWATER STANDARDS			10	750	750	620

GENERAL WATER QUALITY

BP AMERICA PRODUCTION COMPANY

CANEPLE GC B #1

Sample Date : October 12 , 2006

PARAMETERS	MW # 1	MW # 2	MW # 3	Units
LAB pH	7.39	7.39	7.57	s. u.
LAB CONDUCTIVITY @ 25 C	1,070	3,510	1,530	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	744	2,700	1,140	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	731	2,663	1,129	mg / L
SODIUM ABSORPTION RATIO	16.6	27.7	18.2	ratio
TOTAL ALKALINITY AS CaCO3	305	564	294	mg / L
TOTAL HARDNESS AS CaCO3	42.4	167	76.2	mg / L
BICARBONATE as HCO3	305	564	294	mg / L
CARBONATE AS CO3	< 0.1	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	< 0.1	27.9	2.5	mg / L
NITRITE NITROGEN	0.020	0.291	0.018	mg / L
CHLORIDE	114	214	144	mg / L
FLUORIDE	0.69	1.52	0.76	mg / L
PHOSPHATE	0.10	1.10	< 0.01	mg / L
SULFATE	165	1,160		mg / L
IRON	0.376	5.69	< 0.001	mg / L
CALCIUM	14.6	47.8	24.6	mg / L
MAGNESIUM	1.42	11.60	3.60	mg / L
POTASSIUM	1.00	34.7	0.80	mg / L
SODIUM	249	822	366	mg / L
CATION / ANION DIFFERENCE	0.12	0.05	0.05	%

CLIENT: AMOCO

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

LOCATION NO: B0335
C.O.C. NO: ANALYTICA 4710 - ENV.

FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: CANADA GAS COM B 1 PIT TYPE: SEP. + UNK.
DATE STARTED: 2-19-96
DATE FINISHED: 2-29-96
QUAD/UNIT: P SEC: 13 TWP: 31 N RNG: 11 W BM: NM CNTY: SJ ST: NM
ENVIRONMENTAL SPECIALIST: REO
QTR/FOOTAGE: SE / SE CONTRACTOR: MOSS

EXCAVATION APPROX. 50 FT. x 100 FT. x 10 FT. DEEP. CUBIC YARDS: 1850
DISPOSAL FACILITY: CAHN 66 1 S REMEDIATION METHOD: LANDFARM
LAND USE: RURAL RESIDENTIAL LEASE: — FORMATION:

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 75 FEET S 5° W FROM WELLHEAD.
DEPTH TO GROUNDWATER: 8' NEAREST WATER SOURCE: 50' NEAREST SURFACE WATER: 50'
NMOCD RANKING SCORE: 60 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: ABANDONED

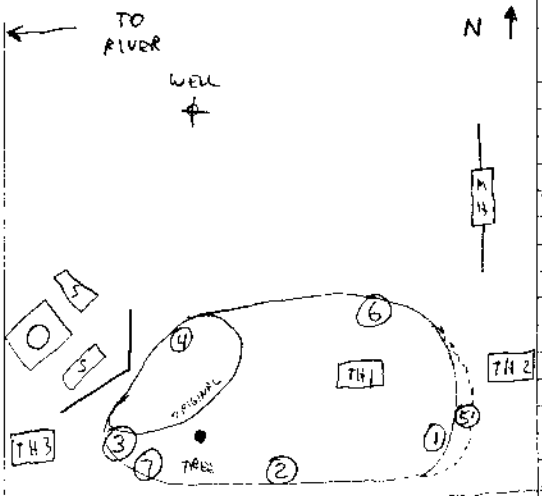
2/19 ONE OF TWO PITS EXCAVATED IN CLOSE PROXIMITY - ADDITIONAL EXCAVATION NECESSARY. - WATER IN PIT HAS BEEN PUMPED - TEST HOLES DUG UP + DOWN GRADIENT + SAMPLED.
2/22: NORTH SIDE PIT = 8' TO H_2O, SOUTH SIDE PIT = 6' TO H_2O. ADDITIONAL EXCAVATION COMPLETED.
2/23 FINAL SOIL SAMPLING + PIT WATER. CONTAMINATED SOILS HAVE BEEN EXCAVATED. WATER SAMPLE COLLECTED - CEASE PUMPING TODAY. SOME REMAINING DISCOLORATION PROBABLY SWAMP. - OVM READINGS O.K.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE
0 20 40 FT

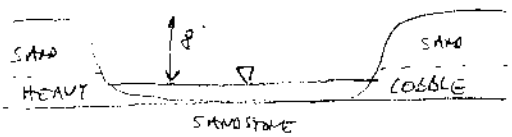
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 ESS@6'	197
2 SS@6'	0
3 WSS@8'	3
4 NWS@8'	32
5 ES@6'	0
6 NWS@8'	7
7 SWS@7'	20
LAB	SAMPLES
2/29 PIT WATER	BTEX
LAB	SAMPLES
TH2@8'	BTEX / CAT-ANION
TH3@8'	BTEX
PIT WATER	BTEX
	CATION / ANION

PIT PROFILE



TH2 → TH3 = 160'
TH3 → HOLE = 25'

2/23 3-11-96 BTEX

2/26 PIT WATER - BTEX | 2/29 PIT WATER - BTEX | 3/6 PIT WATER - BTEX

TRAVEL NOTES: CALLOUT: 2-19-96 ONSITE: 2-19-96 0815, 2-23, 2-26, 2-29
3-6-96 3-11-96

FORM REVISED 7/95

1000

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Caneple GC B1	Report Date:	02/26/96
Sample ID:	Pit Water	Date Sampled:	02/23/96
Lab ID:	2721	Date Received:	02/23/96
Sample Matrix:	Water	Date Analyzed:	02/23/96
Preservative:	Cool, HgCl2		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	23.3	10.0
Toluene	14.0	10.0
Ethylbenzene	61.1	10.0
m,p-Xylenes	565	20.0
o-Xylene	35.0	10.0

Total BTEX	**699**

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	100	88 - 110%
Bromofluorobenzene	94	86 - 115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

General Water Quality
Blagg Engineering, Inc.

Project ID:	Caneple GC B1	Date Reported:	03/01/96
Sample ID:	Pit Water	Date Sampled:	02/23/96
Laboratory ID:	2721	Time Sampled:	10:00
Sample Matrix:	Water	Date Received:	02/23/96

Parameter		Analytical Result	Units
General	Lab pH	7.5	s.u.
	Lab Conductivity @ 25° C	776	µmhos/cm
	Total Dissolved Solids @ 180°C	560	mg/L
	Total Dissolved Solids (Calc)	525	mg/L
Anions	Total Alkalinity as $CaCO_3$	327	mg/L
	Bicarbonate Alkalinity as $CaCO_3$	327	mg/L
	Carbonate Alkalinity as $CaCO_3$	NA	mg/L
	Hydroxide Alkalinity as $CaCO_3$	NA	mg/L
	Chloride	37.5	mg/L
	Sulfate	107	mg/L
	Nitrate + Nitrite - N	NA	
	Nitrate - N	NA	
	Nitrite - N	NA	
Cations	Total Hardness as $CaCO_3$	429	mg/L
	Calcium	116	mg/L
	Magnesium	33.7	mg/L
	Potassium	< 5.0	mg/L
	Sodium	30	mg/L

Data Validation			Acceptance Level
	Cation/Anion Difference	0.84	+/- 2 %
	TDS (180):TDS (calculated)	1.1	1.0 - 1.2

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 Wastewater, 18th ed., 1992.

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	Pit Water	Date Reported:	02-27-96
Chain of Custody:	4710	Date Sampled:	02-26-96
Laboratory Number:	A025	Date Received:	02-26-96
Sample Matrix:	Water	Date Analyzed:	02-26-96
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**15.7**	**1**	**0.3**
Toluene	**5.8**	**1**	**0.4**
Ethylbenzene	**24.0**	**1**	**0.3**
p,m-Xylene	**426**	**1**	**0.5**
o-Xylene	**37.1**	**1**	**0.3**
Total BTEX	**508**		

ND - Parameter not detected at the stated detection limit.

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

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

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

Comments: **Caneple GC B1.**

Analyst

Review

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

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Caneple GC B1	Report Date:	03/04/96
Sample ID:	Pit Water	Date Sampled:	02/29/96
Lab ID:	2773	Date Received:	02/29/96
Sample Matrix:	Water	Date Analyzed:	03/01/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	13.8	0.50
Toluene	5.11	0.50
Ethylbenzene	6.93	0.50
m,p-Xylenes	615	50.0
o-Xylene	44.8	25.0

Total BTEX	**685**

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	97	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	Pit Water	Date Reported:	03-06-96
Chain of Custody:	4736	Date Sampled:	03-06-96
Laboratory Number:	A029	Date Received:	03-06-96
Sample Matrix:	Water	Date Analyzed:	03-06-96
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**11.0**	**5**	**1.7**
Toluene	**13.3**	**5**	**1.8**
Ethylbenzene	**11.7**	**5**	**1.4**
p,m-Xylene	**644**	**5**	**2.7**
o-Xylene	**56.5**	**5**	**1.7**
Total BTEX	**736**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**101 %**
	Bromofluorobenzene	**103 %**

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

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

Comments: **Caneple GC B1.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	Pit Water	Date Reported:	03-11-96
Chain of Custody:	4741	Date Sampled:	03-11-96
Laboratory Number:	A037	Date Received:	03-11-96
Sample Matrix:	Water	Date Analyzed:	03-11-96
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**9.6**	**1**	**0.3**
Toluene	**7.9**	**1**	**0.4**
Ethylbenzene	**17.7**	**1**	**0.3**
p,m-Xylene	**421**	**1**	**0.5**
o-Xylene	**27.5**	**1**	**0.4**
Total BTEX	**484**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**103 %**
	Bromofluorobenzene	**101 %**

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

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

Comments: **Caneple GC B1.**

Analyst

Review

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ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Caneple GC B1	Report Date:	02/20/96
Sample ID:	TH 2 @ 8'	Date Sampled:	02/19/96
Lab ID:	2693	Date Received:	02/19/96
Sample Matrix:	Water	Date Analyzed:	02/19/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	2.62	1.00
o-Xylene	0.56	0.50

Total BTEX	**3.18**

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	96	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

General Water Quality
Blagg Engineering, Inc.

Project ID:	Caneple GC B1	Date Reported:	02/23/96
Sample ID:	TH - 2 @ 8'	Date Sampled:	02/19/96
Laboratory ID:	2693	Time Sampled:	9:30
Sample Matrix:	Water	Date Received:	02/19/96

Parameter		Analytical Result	Units
General	Lab pH	7.7	s.u.
	Lab Conductivity @ 25° C	642	µmhos/cm
	Total Dissolved Solids @ 180°C	470	mg/L
	Total Dissolved Solids (Calc)	461	mg/L
Anions	Total Alkalinity as $CaCO_3$	210	mg/L
	Bicarbonate Alkalinity as $CaCO_3$	210	mg/L
	Carbonate Alkalinity as $CaCO_3$	NA	mg/L
	Hydroxide Alkalinity as $CaCO_3$	NA	mg/L
	Chloride	20.0	mg/L
	Sulfate	160	mg/L
	Nitrate + Nitrite - N	NA	
	Nitrate - N	NA	
	Nitrite - N	NA	
Cations	Total Hardness as $CaCO_3$	323	mg/L
	Calcium	107.3	mg/L
	Magnesium	13.5	mg/L
	Potassium	< 5.0	mg/L
	Sodium	30	mg/L

Data Validation			Acceptance Level
	Cation/Anion Difference	1.43	+/- 2 %
	TDS (180):TDS (calculated)	1.0	1.0 - 1.2

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 Wastewater, 18th ed., 1992.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Caneple GC B1	Report Date:	02/20/96
Sample ID:	TH 3 @ 8'	Date Sampled:	02/19/96
Lab ID:	2694	Date Received:	02/19/96
Sample Matrix:	Water	Date Analyzed:	02/19/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	1.14	0.50
Toluene	0.99	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50

Total BTEX	**2.14**

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	96	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY
807 S. CARLTON • FARMINGTON, NM 87401 • (505) 326-2395

CHAIN OF CUSTODY

PROJECT MANAGER:
Analytica Lab I.D.:

Company: RLM66
Address:

Phone: 632-1194
Fax:

Bill To:
Company:
Address:

Sample ID	Date	Time	Matrix	Lab ID	Petroleum Hydrocarbons (418.1)	Gasoline / Diesel (mod. 8015)	Gasoline (GRO)	Aromatic HCs BTEX/MTBE (602 / 8020)	Chlorinated Hydrocarbons (8010)	SDWA Volatiles (502.1 / 503.1)	Chlorinated Pesticides / PCBs (608 / 8080)	Herbicides (615 / 8150)	Volatiles GC/MS (624 / 8240 / 8260)	Base / Neutral / Acid GC/MS (625 / 8270)	Polynuclear Aromatic Hydrocarbons (8100)	TCLP Extraction	Other (specify):	Cation / Anion	Specific Cations (specify):	Specific Anions (specify):	BOD / Fecal / Total Coliform	Solids: TDS / TSS / SS	Nutrients: NH4+ / NO2− / NO3− / TKN	Oil and Grease	Other (specify):	Priority Pollutants	RCRA Metals (Total)	RCRA Metals TCLP (1311)	Other (specify):	COMMENTS
																														PRES.
TH 2 @ 8'	2-19	0930	WATER					✓										✓												H.C.L. - COOL
TH 3 @ 8'	2-19	0940	WATER					✓																						

Project Information	Sample Receipt
Proj. #: AMOCO	No. Containers:
Proj. Name: CANDLE	Custody Seals: Y / N / NA
~~P.O. No:~~ GC B1	Received Intact:
Shipped Via: DELD	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature / Date: R. O'Neill 2-19-96	Signature / Date: R. O'Neill 2-19-96	Signature / Date:
Company: BEI / Time: —	Company: BEI / Time: 1040	Company: / Time:
Received By:	**Received By:**	**Received By:**
Signature / Date:	Signature / Date:	Signature / Date:
Company: / Time:	Company: / Time:	Company: / Time: Analytica 10:35

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Analytica
Pink: Client

ANALYTICA
ENVIRONMENTAL LABORATORY
807 S. CARLTON • FARMINGTON, NM 87401 • (505) 326-2395

CHAIN OF CUSTODY

PROJECT MANAGER:
Analytica Lab I.D.:

Company: BLAGG ENGR.
Address:

Phone: 632-1199
Fax:

Bill To: SAME
Company:
Address:

Analyses requested — ORGANIC ANALYSES: Petroleum Hydrocarbons (418.1); Gasoline / Diesel (mod. 8015); Gasoline (GRO); Aromatic HCs BTEX/MTBE (602 / 8020); Chlorinated Hydrocarbons (8010); SDWA Volatiles (502.1 / 503.1); Chlorinated Pesticides / PCBs (608 / 8080); Herbicides (615 / 8150); Volatiles GC/MS (624 / 8240 / 8260); Base / Neutral / Acid GC/MS (625 / 8270); Polynuclear Aromatic Hydrocarbons (8100); TCLP Extraction; Other (specify):
WATER ANALYSES: Cation / Anion; Specific Cations (specify):; Specific Anions (specify):; BOD / Fecal / Total Coliform; Solids: TDS / TSS / SS; Nutrients: NH4+ / NO2− / NO3− / TKN; Oil and Grease; Other (specify):
METALS: Priority Pollutants; RCRA Metals (Total); RCRA Metals TCLP (1311); Other (specify):

Sample ID	Date	Time	Matrix	Lab ID	Aromatic HCs BTEX/MTBE (602 / 8020)	Cation / Anion	COMMENTS
							PRES:
PIT WATER	2-23-96	1000	water		✓	✓	HgCl2 - cool

Project Information	Sample Receipt
Proj. #: Amoco	No. Containers:
Proj. Name: CANEPLE	Custody Seals: Y / N / NA
P. O. No: GC B1	Received Intact:
Shipped Via: DEL'D	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature: R. F. O'Neill Date: 2-23-96	Signature: R. F. O'Neill Date: 2-23-96	Signature: Date:
Company: BEI Time: 1000	Company: BEI Time: 1125	Company: Time:

Received By:	Received By:	Received By:
Signature: Date:	Signature: Date:	Signature: [signature] Date: 2/23
Company: Time:	Company: Time:	Company: Analytica Time: 11:30

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Analytica
Pink: Client

4710

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / Amoco	CAMPLE GC B1	

Sampler: (Signature) R. E. O'Neill

Chain of Custody Tape No.

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX						Remarks
												PRES.
PIT WATER	2-26-96	1320	A025	WATER	2	✓						$HgCl_2$ - COOL

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
R. E. O'Neill	2-26-96	1356	Glenn L. Green	2-26-96	1356
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

ANALYTICA
ENVIRONMENTAL LABORATORY
807 S. CARLTON • FARMINGTON, NM 87401 • (505) 326-2395

CHAIN OF CUSTODY

PROJECT MANAGER:
Analytica Lab I.D.:

Company: BLAGG
Address:

Phone: 632-1199
Fax:

Bill To: Same
Company:
Address:

Sample ID	Date	Time	Matrix	Lab ID	Petroleum Hydrocarbons (418.1)	Gasoline / Diesel (mod. 8015)	Gasoline (GRO)	Aromatic HCs (BTEX/MTBE (602 / 8020)	Chlorinated Hydrocarbons (8010)	SDWA Volatiles (502.1 / 503.1)	Chlorinated Pesticides / PCBs (608 / 8080)	Herbicides (615 / 8150)	Volatiles GC/MS (624 / 8240 / 8260)	Base / Neutral / Acid GC/MS (625 / 8270)	Polynuclear Aromatic Hydrocarbons (8100)	TCLP Extraction	Other (specify):	Cation / Anion	Specific Cations (specify):	Specific Anions (specify):	BOD / Fecal / Total Coliform	Solids: TDS / TSS / SS	Nutrients: NH4+ / NO2- / NO3- / TKN	Oil and Grease	Other (specify):	Priority Pollutants	RCRA Metals (Total)	RCRA Metals TCLP (1311)	Other (specify):	COMMENTS
PIT WATER	2-29	1440	WATER	7715				✓																						cool - H_2O_2

Project Information	Sample Receipt
Proj. #: A1606	No. Containers:
Proj. Name: CANDLE	Custody Seals: Y / N / NA
~~P.O. No:~~ GC B1	Received Intact:
Shipped Via: DEL'D	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature / Date: R G O'Neill 2-29-96	Signature / Date: R G O'Neill 2-29-96	Signature / Date:
Company / Time: BEI 1440	Company / Time: BEI 1520	Company / Time:
Received By:	**Received By:**	**Received By:**
Signature / Date:	Signature / Date:	Signature / Date: 2/29
Company / Time:	Company / Time:	Company / Time: Analytica 320

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Analytica
Pink: Client

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
AMOCO / BLAGG	CANEPLE 6C B1	
Sampler: (Signature) R. E. O'Neill	Chain of Custody Tape No.	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX						Remarks
PIT WATER	3-6-96	1000	A029	WATER	2	✓						$HgCl_2$ - COOL

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
R. E. O'Neill	3-6-96	1100	[signature]	3/6/96	1100
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

4741

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / AMOCO	CANEPLE 6C B1	
Sampler: (Signature) R. E. O'Neill	Chain of Custody Tape No.	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX						Remarks
PIT WATER	3-11-96	0920	A037	WATER	2	✓						HgCl2 - COOL

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
R. E. O'Neill	3-11-96	1150	[signature]	3/11/96	1150
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

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

March 5, 1996

Mr. Roger Anderson
Chief of Environmental Bureau
State of New Mexico Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: Groundwater Impact
Amoco Production Company: **Canople Gas Com B1 Well site**
Legal Description: Unit P, Sec. 13, T31N, R11W
San Juan County, New Mexico

Dear Mr. Anderson:

Initial groundwater sample analytical results at the above referenced well site during pit closure activity indicated contamination to be above the State of New Mexico Water Quality Control Commission's regulatory standards for Benzene. Sampling on the Separator + Unknown pit(s) was conducted February 26, 1996. Listed below are summary analytical results for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX):

Parameter	Separator + Unk. Pit(s) (parts per billion)
Benzene	15.7
Toluene	5.8
Ethylbenzene	24.0
Total Xylenes	463.1

If you have any questions concerning this information, please do not hesitate to contact us at (505) 632-1199. Thank you for your cooperation.

Respectfully submitted,
Blagg Engineering, Inc.

Jeffrey C. Blagg, P.E.
President

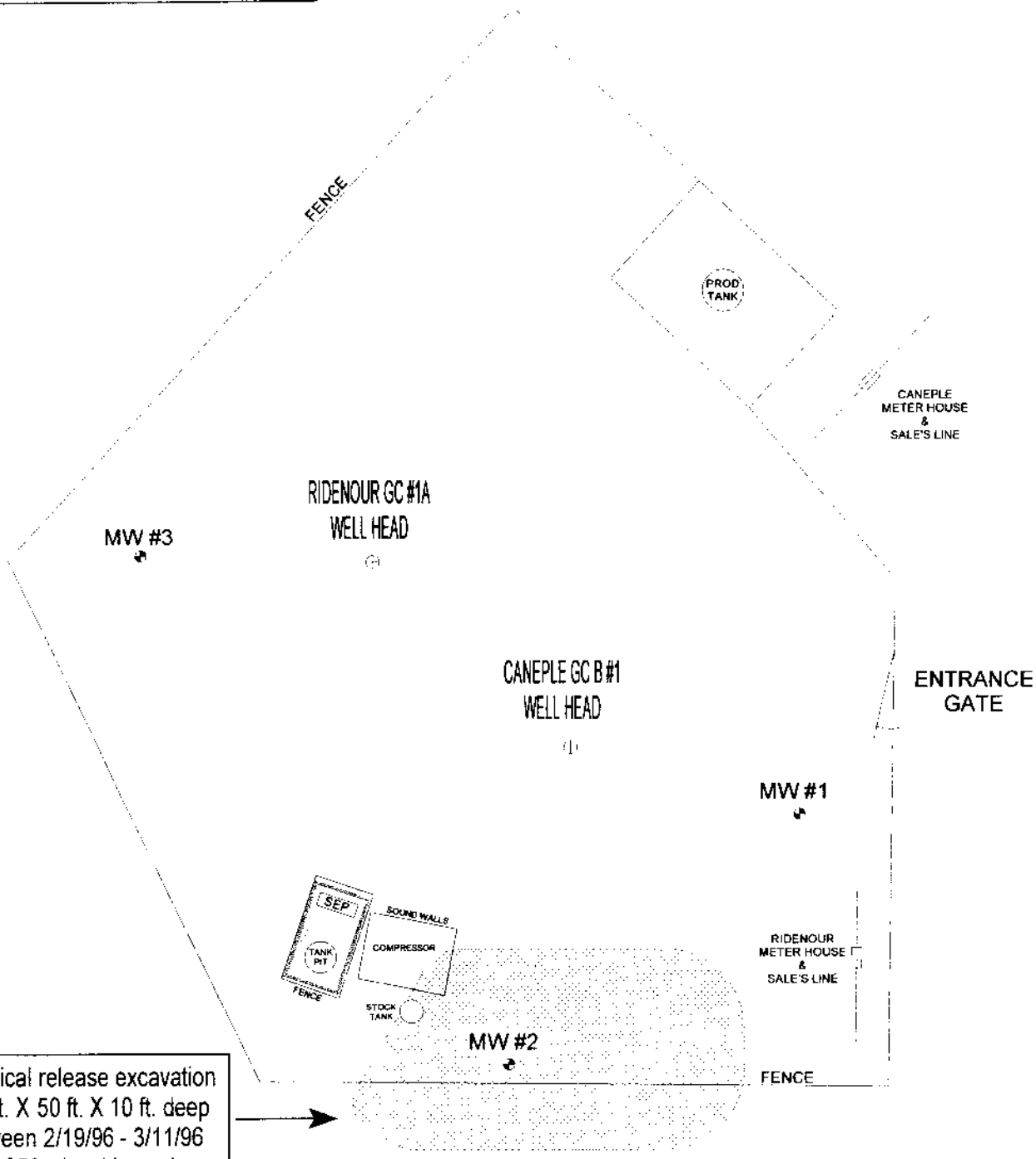
cc: Denny Foust, Deputy Oil & Gas Inspector, NMOCD, Aztec, NM
Buddy Shaw, Environmental Coordinator, Amoco Production Company, Farmington, NM

CANE-B1.LTR

NV/nv

FIGURE 1

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



BP AMERICA PRODUCTION COMPANY

CANEPLE GC B # 1

SE/4 SE/4 SEC. 13, T31N, R11W

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 INSTALLATIONS

DRAWN BY: NJV

FILENAME: CANEPLE GC B 1-SM.SKF

REVISED: 10/11/06 NJV

SITE MAP

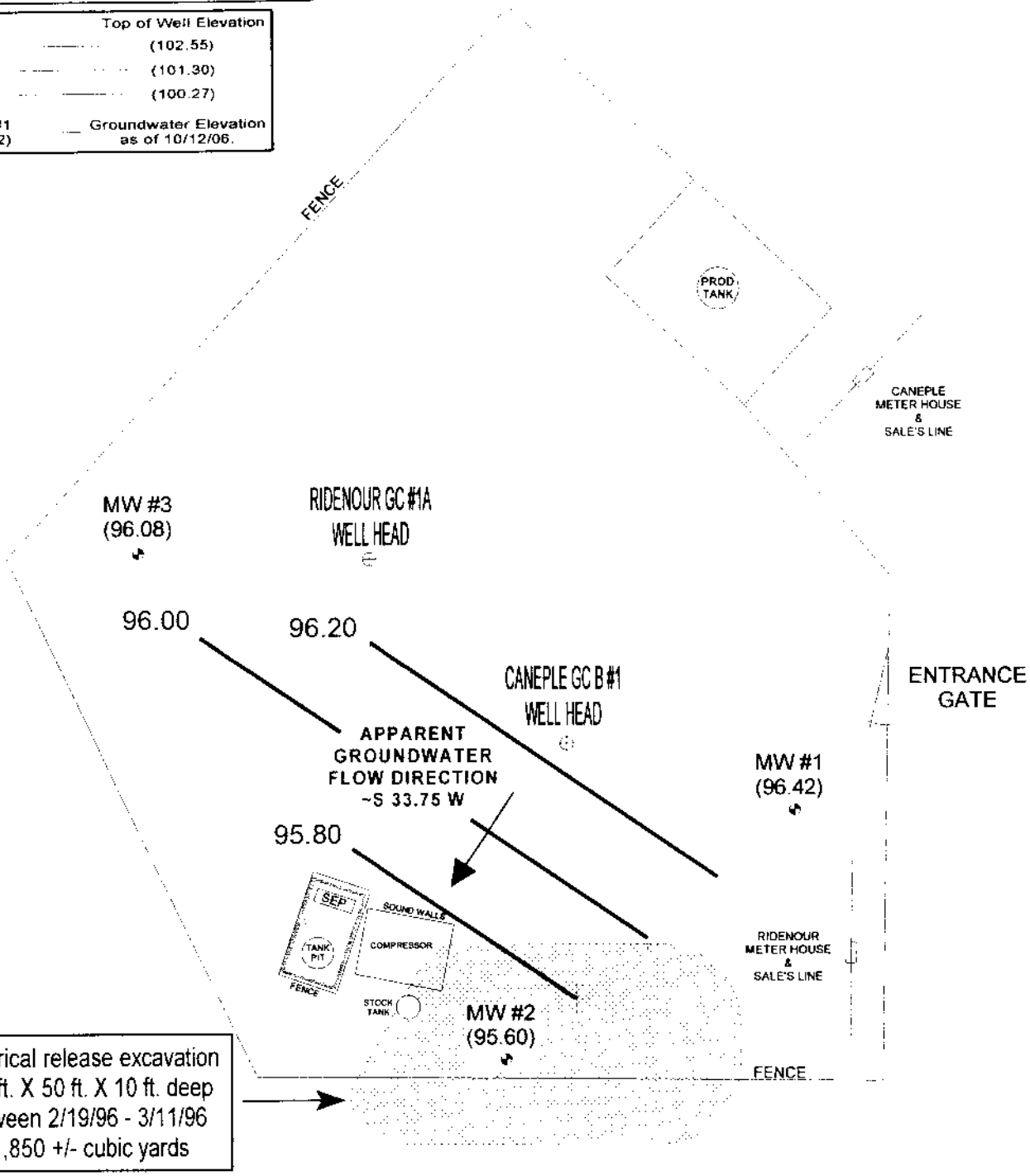
10/06

FIGURE 2
(4th 1/4, 2006)

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

	Top of Well Elevation
MW #1	(102.55)
MW #2	(101.30)
MW #3	(100.27)

MW #1 (96.42) — Groundwater Elevation as of 10/12/06.



BP AMERICA PRODUCTION COMPANY
CANEPLE GC B # 1
SE/4 SE/4 SEC. 13, T31N, R11W
SAN JUAN COUNTY, NEW MEXICO

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

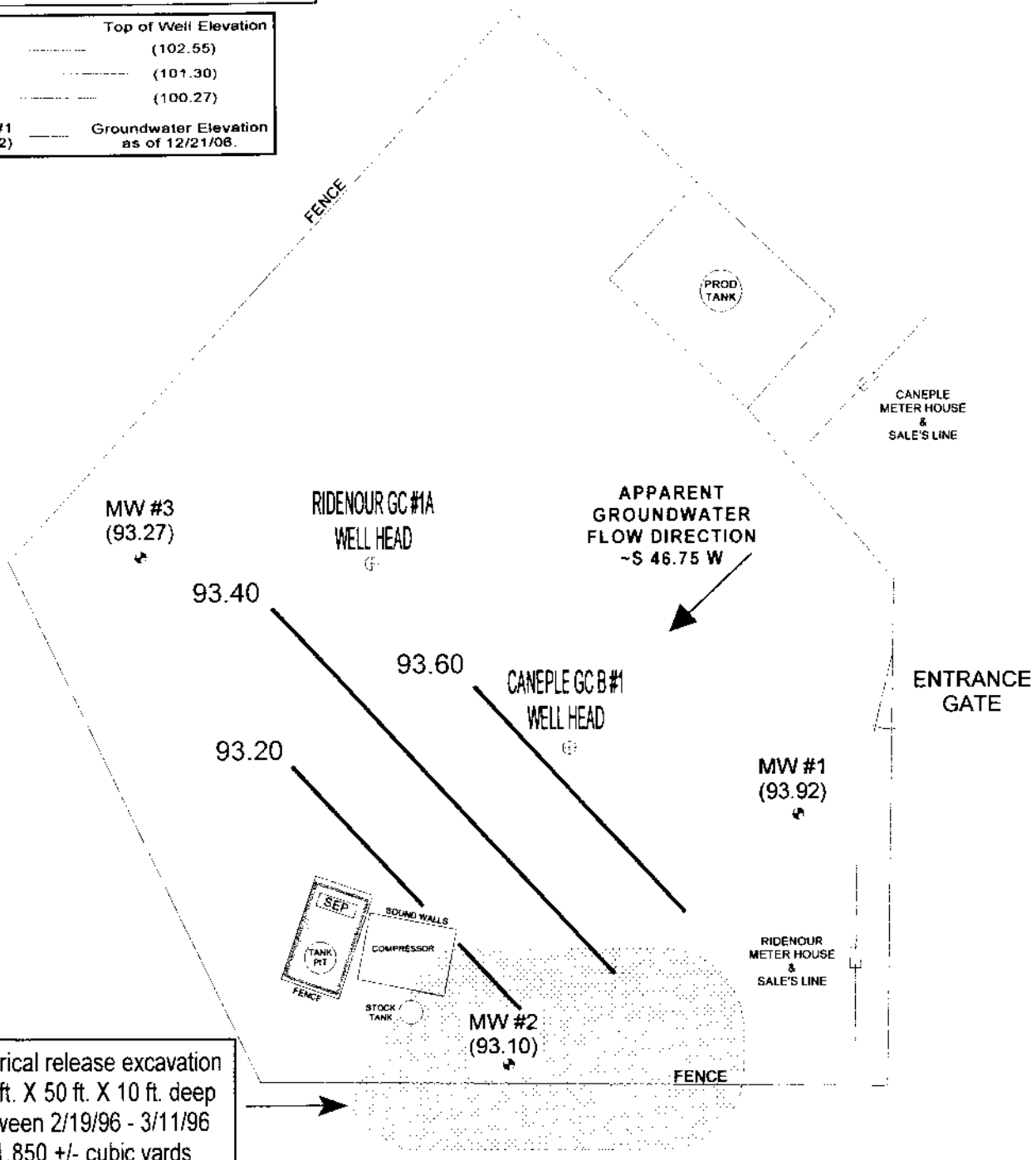
PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 10-12-06-GW.SKF
REVISED: 10/12/06 NJV

GROUNDWATER GRADIENT MAP
10/06

FIGURE 3
(4th 1/4, 2006)

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

	Top of Well Elevation
MW #1	(102.55)
MW #2	(101.30)
MW #3	(100.27)
MW #1 (93.92)	Groundwater Elevation as of 12/21/06.



BP AMERICA PRODUCTION COMPANY
CANEPLE GC B # 1
SE/4 SE/4 SEC. 13, T31N, R11W
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: 12-21-06-GW.SKF
REVISED: 12/21/06 NJV

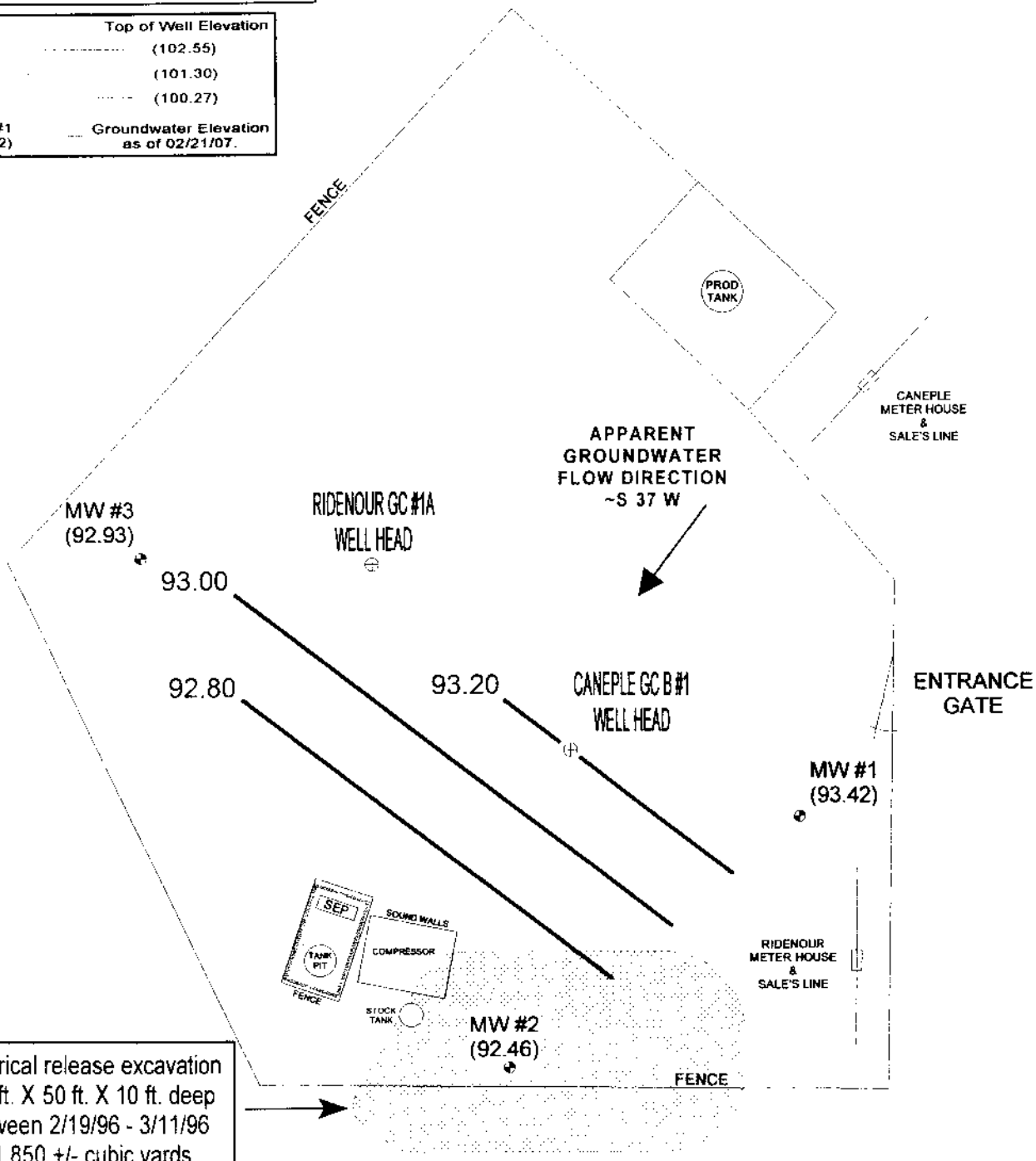
GROUNDWATER GRADIENT MAP
12/06

FIGURE 4
(1st 1/4, 2007)

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

	Top of Well Elevation
MW #1	(102.55)
MW #2	(101.30)
MW #3	(100.27)

MW #1 (93.42) — Groundwater Elevation as of 02/21/07.



BP AMERICA PRODUCTION COMPANY

CANEPLE GC B # 1

SE/4 SE/4 SEC. 13, T31N, R11W

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: 02-21-07-GW.SKF

REVISED: 02/21/07 NJV

GROUNDWATER GRADIENT MAP

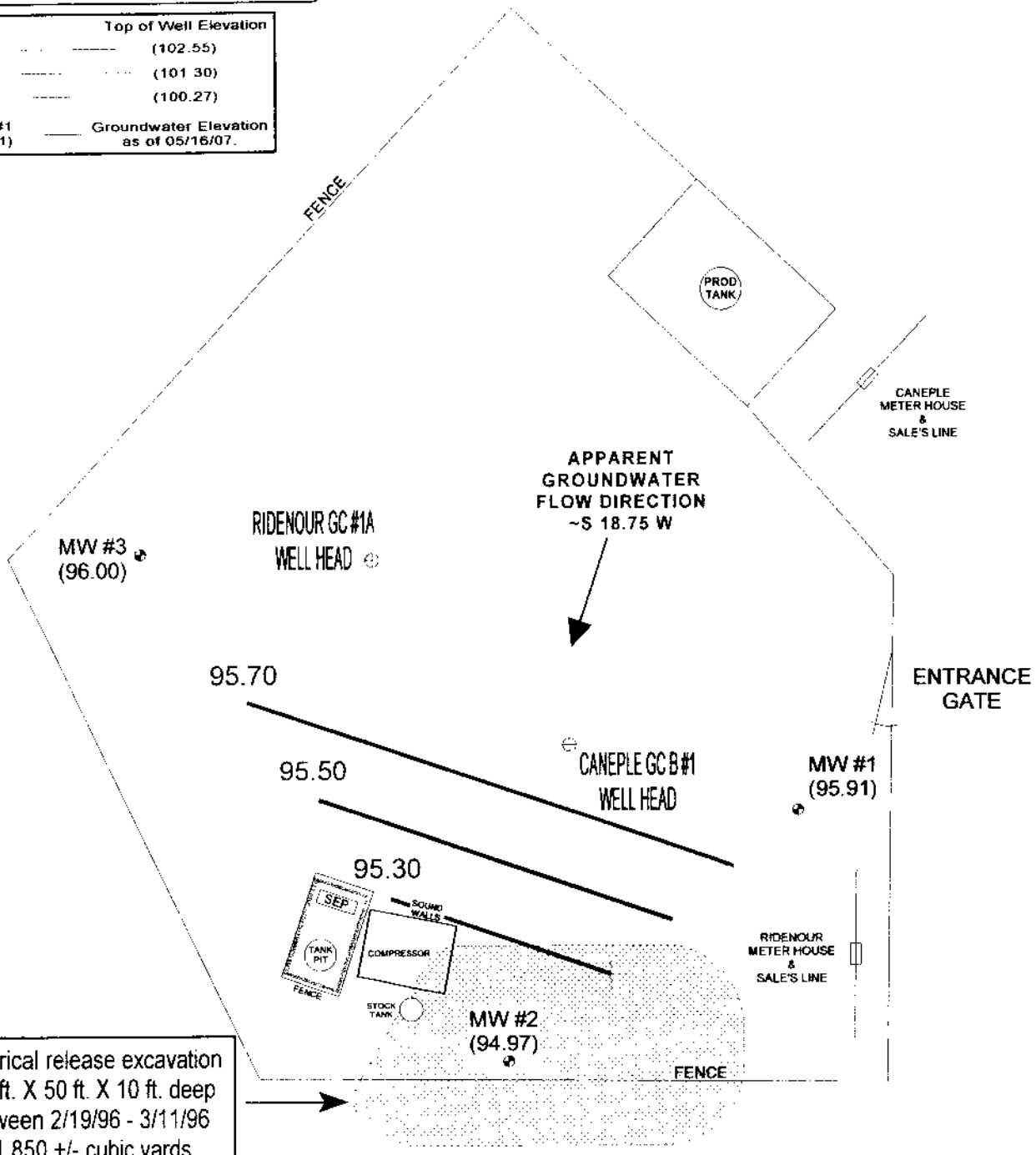
02/07

FIGURE 5
(2nd 1/4, 2007)

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

	Top of Well Elevation
MW #1	(102.55)
MW #2	(101.30)
MW #3	(100.27)

MW #1 (95.91) — Groundwater Elevation as of 05/16/07.



BP AMERICA PRODUCTION COMPANY

CANEPLE GC B # 1

SE/4 SE/4 SEC. 13, T31N, R11W

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: 05-16-07-GW.SKF

REVISED: 05/16/07 NJV

GROUNDWATER GRADIENT MAP

05/07

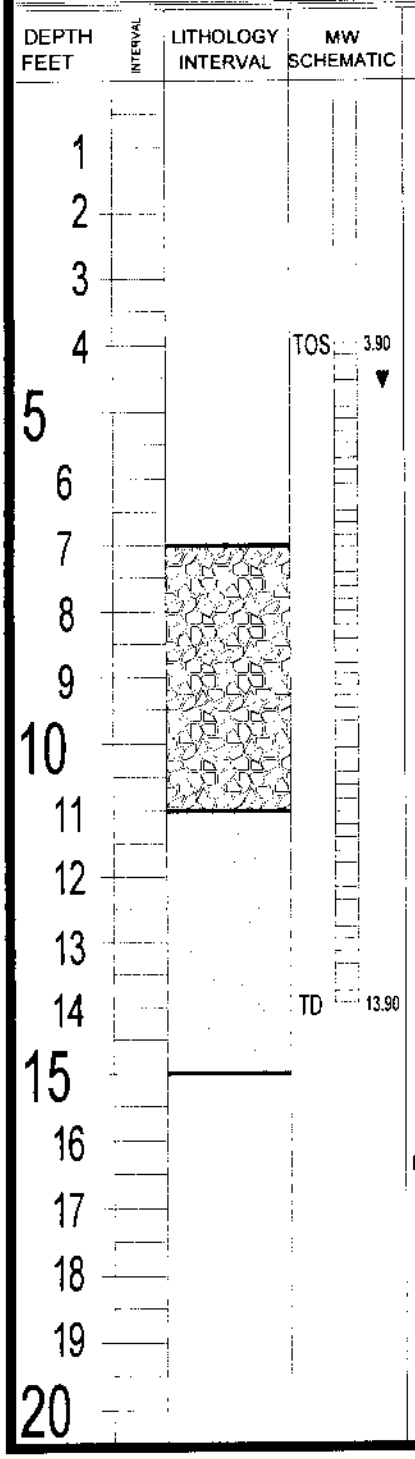
BLAGG ENGINEERING, INC.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #1

BORE / TEST HOLE REPORT

BORING #.....	BH-1
MW #.....	1
PAGE #.....	1
DATE STARTED	9/26/06
DATE FINISHED	9/26/06
OPERATOR.....	KP
PREPARED BY	NJV

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: CANEPLE GC B #1 UNIT P, SEC. 13, T31N, R11W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75) - TUBEX SYSTEM
BORING LOCATION: 59.5 FT., S74E FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.60 FT. ABOVE GROUND SURFACE.

DARK YELLOWISH ORANGE SAND AND GRAVEL, NON COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 7.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 4.73 FT. FROM GROUND SURFACE MEASURED ON 9/28/06.

SAME AS ABOVE EXCEPT BLACK (7.0 - 11.0 FT. BELOW GRADE).

SAME AS ABOVE EXCEPT BROWNISH GRAY (11.0 - 15.0 FT. BELOW GRADE).

NOTES: - SAND AND GRAVEL.

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.60 ft. above grade to 3.90 ft. below grade, 0.010 slotted screen between 3.90 to 13.90 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout between 0.0 to 2.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

DRAWING: CANEPLE GC B 1 BH1-MW1.SKF | DATE: 12/22/06 | DWN BY: NJV

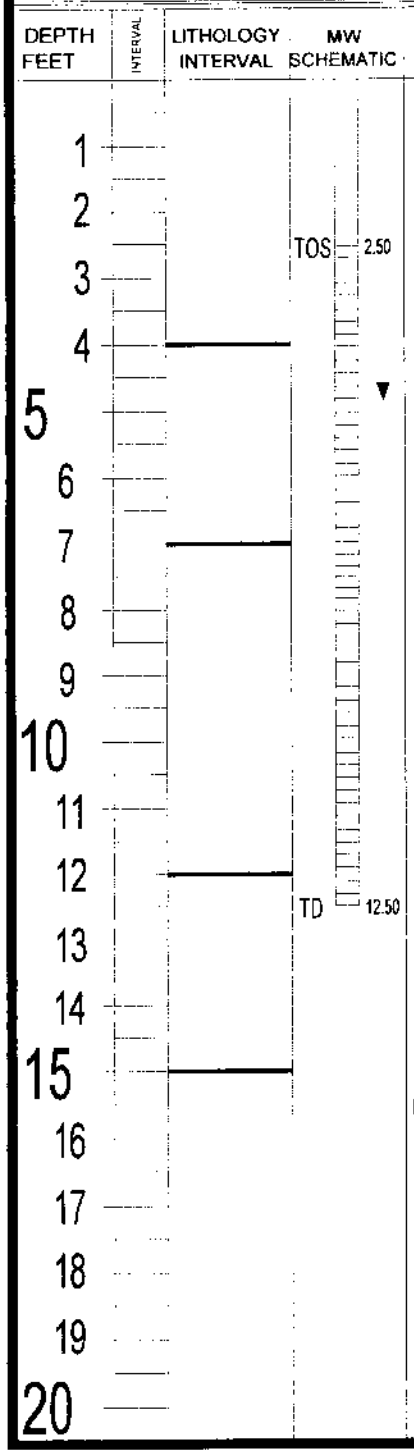
BLAGG ENGINEERING, INC.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2

BORE / TEST HOLE REPORT

BORING #.....	BH-2
MW #.....	2
PAGE #.....	2
DATE STARTED	9/26/06
DATE FINISHED	9/26/06
OPERATOR.....	KP
PREPARED BY	NJV

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: CANEPLE GC B #1 UNIT P, SEC. 13, T31N, R11W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75) - TUBEX SYSTEM
BORING LOCATION: 80 FT., S11W FROM WELL HEAD.



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

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

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 4.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 4.92 FT. FROM GROUND SURFACE MEASURED ON 9/28/06.

MEDIUM DARK TO GRAYISH BLACK SAND, NON COHESIVE, SLIGHTLY MOIST TO WET, LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (4.0 - 7.0 FT. BELOW GRADE).

BROWNISH GRAY SAND WITH MINOR AMOUNT OF GRAVEL, NON COHESIVE, WET, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (7.0 - 12.0 FT. BELOW GRADE).

MEDIUM LIGHT TO DARK GRAY SAND AND GRAVEL, NON COHESIVE, WET, LOOSE TO FIRM, APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (12.0 - 15.0 FT. BELOW GRADE).

NOTES:
- SAND.
- SAND AND GRAVEL.

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.50 ft. above grade to 2.50 ft. below grade, 0.010 slotted screen between 2.50 to 12.50 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout between 0.0 to 2.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

DRAWING: CANEPLE GC B 1 BH2-MW2.SKF DATE: 12/22/06 DWN BY: NJV

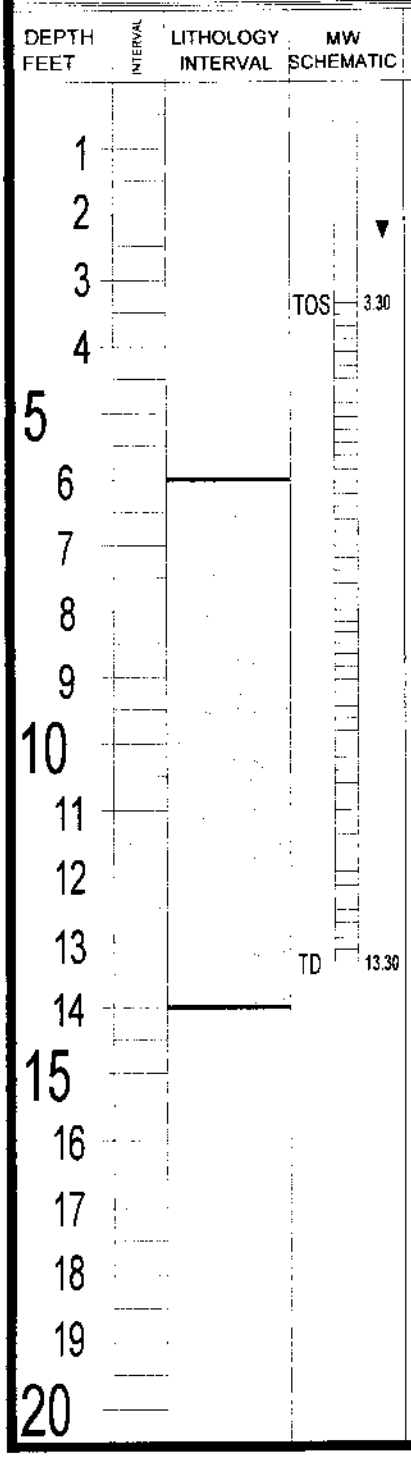
BLAGG ENGINEERING, INC.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #3

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	CANEPLE GC B #1 UNIT P, SEC. 13, T31N, R11W
CONTRACTOR:	BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75) - TUBEX SYSTEM
BORING LOCATION:	117 FT., N66W FROM WELL HEAD.

BORING #.....	BH-3
MW #.....	3
PAGE #.....	3
DATE STARTED	10/3/06
DATE FINISHED	10/3/06
OPERATOR.....	KP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.70 FT. ABOVE GROUND SURFACE.

DEPTH TO WATER APPROX. 2.49 FT. FROM GROUND SURFACE MEASURED ON 10/3/06.

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

SAME AS ABOVE EXCEPT LIGHT OLIVE GRAY AND PHASING INTO WET (6.0 - 14.0 FT. BELOW GRADE).

NOTES: ▭ - SAND AND GRAVEL.

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 1.70 ft. above grade to 3.30 ft. below grade, 0.010 slotted screen between 3.30 to 13.30 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout between 0.0 to 2.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

DRAWING: CANEPLE GC B 1 BH3-MW3.SKF | DATE: 12/22/06 | DWN BY: NJV

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A & 14677

CANEPLE GC B # 1 - SEP. & ABAN. PITS
UNIT P, SEC. 13, T31N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL
ENVIROTECH

Date : October 12, 2006

SAMPLER : N J V

Filename : 10-12-06.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.)
MW - 1	102.55	96.42	6.13	16.50	0840	7.15	1,000	12.8	5.00
MW - 2	101.30	95.60	5.70	16.20	0915	6.98	2,800	15.3	5.25
MW - 3	100.27	96.08	4.19	15.00	0950	7.03	1,600	16.6	5.50
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	10/12/06	0830		

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 all MW 's . All MW 's murky brown in appearance & no apparent hydrocarbon odor detected physically . Collected BTEX & major anions / cations samples from all MW 's .

Top of casing MW # 1 ~ 2.60 ft., MW # 2 ~ 2.50 ft., MW # 3 ~ 1.70 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: *18-Oct-06*

CLIENT: Blagg Engineering
Project: CANEPLE GC B #1
Lab Order: 0610140

Lab ID: 0610140-01 **Collection Date:** 10/12/2006 8:40:00 AM
Client Sample ID: MW #1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	10/14/2006 1:21:05 PM
Toluene	ND	1.0		µg/L	1	10/14/2006 1:21:05 PM
Ethylbenzene	ND	1.0		µg/L	1	10/14/2006 1:21:05 PM
Xylenes, Total	ND	3.0		µg/L	1	10/14/2006 1:21:05 PM
Surr: 4-Bromofluorobenzene	98.1	72.2-125		%REC	1	10/14/2006 1:21:05 PM

Lab ID: 0610140-02 **Collection Date:** 10/12/2006 9:15:00 AM
Client Sample ID: MW #2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	6.0	1.0		µg/L	1	10/16/2006 2:49:33 PM
Toluene	ND	1.0		µg/L	1	10/16/2006 2:49:33 PM
Ethylbenzene	20	1.0		µg/L	1	10/16/2006 2:49:33 PM
Xylenes, Total	97	3.0		µg/L	1	10/16/2006 2:49:33 PM
Surr: 4-Bromofluorobenzene	153	72.2-125	S	%REC	1	10/16/2006 2:49:33 PM

Lab ID: 0610140-03 **Collection Date:** 10/12/2006 9:50:00 AM
Client Sample ID: MW #3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	10/14/2006 2:21:34 PM
Toluene	ND	1.0		µg/L	1	10/14/2006 2:21:34 PM
Ethylbenzene	ND	1.0		µg/L	1	10/14/2006 2:21:34 PM
Xylenes, Total	ND	3.0		µg/L	1	10/14/2006 2:21:34 PM
Surr: 4-Bromofluorobenzene	86.6	72.2-125		%REC	1	10/14/2006 2:21:34 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #1	Date Reported:	10-13-06
Laboratory Number:	38795	Date Sampled:	10-12-06
Chain of Custody:	14677	Date Received:	10-12-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	10-13-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.39**	s.u.		
Conductivity @ 25° C	**1,070**	umhos/cm		
Total Dissolved Solids @ 180C	**744**	mg/L		
Total Dissolved Solids (Calc)	**731**	mg/L		
SAR	**16.6**	ratio		
Total Alkalinity as CaCO3	**305**	mg/L		
Total Hardness as CaCO3	**42.4**	mg/L		
Bicarbonate as HCO3	**305**	mg/L	5.00	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	**0.020**	mg/L	0.00	meq/L
Chloride	**114**	mg/L	3.22	meq/L
Fluoride	**0.69**	mg/L	0.04	meq/L
Phosphate	**0.10**	mg/L	0.00	meq/L
Sulfate	**165**	mg/L	3.44	meq/L
Iron	**0.376**	mg/L	0.01	meq/L
Calcium	**14.6**	mg/L	0.73	meq/L
Magnesium	**1.42**	mg/L	0.12	meq/L
Potassium	**1.00**	mg/L	0.03	meq/L
Sodium	**249**	mg/L	10.83	meq/L
Cations			11.70	meq/L
Anions			11.69	meq/L
Cation/Anion Difference			**0.12%**	

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: **Caneple GC B #1 Grab Sample**

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 #2	Date Reported:	10-13-06
Laboratory Number:	38796	Date Sampled:	10-12-06
Chain of Custody:	14677	Date Received:	10-12-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	10-13-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.39**	s.u.		
Conductivity @ 25° C	**3,510**	umhos/cm		
Total Dissolved Solids @ 180C	**2,700**	mg/L		
Total Dissolved Solids (Calc)	**2,663**	mg/L		
SAR	**27.7**	ratio		
Total Alkalinity as CaCO3	**564**	mg/L		
Total Hardness as CaCO3	**167**	mg/L		
Bicarbonate as HCO3	**564**	mg/L	9.24	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	**27.9**	mg/L	0.45	meq/L
Nitrite Nitrogen	**0.291**	mg/L	0.01	meq/L
Chloride	**214**	mg/L	6.04	meq/L
Fluoride	**1.52**	mg/L	0.08	meq/L
Phosphate	**1.10**	mg/L	0.03	meq/L
Sulfate	**1,160**	mg/L	24.15	meq/L
Iron	**5.69**	mg/L	0.20	meq/L
Calcium	**47.8**	mg/L	2.39	meq/L
Magnesium	**11.60**	mg/L	0.95	meq/L
Potassium	**34.7**	mg/L	0.89	meq/L
Sodium	**822**	mg/L	35.76	meq/L
Cations			39.98	meq/L
Anions			40.00	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.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Caneple GC B #1 Grab Sample**

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 #3	Date Reported:	10-13-06
Laboratory Number:	38797	Date Sampled:	10-12-06
Chain of Custody:	14677	Date Received:	10-12-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	10-13-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.57**	s.u.		
Conductivity @ 25° C	**1,530**	umhos/cm		
Total Dissolved Solids @ 180C	**1,140**	mg/L		
Total Dissolved Solids (Calc)	**1,129**	mg/L		
SAR	**18.2**	ratio		
Total Alkalinity as CaCO3	**294**	mg/L		
Total Hardness as CaCO3	**76.2**	mg/L		
Bicarbonate as HCO3	**294**	mg/L	4.82	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	**2.5**	mg/L	0.04	meq/L
Nitrite Nitrogen	**0.018**	mg/L	0.00	meq/L
Chloride	**144**	mg/L	4.06	meq/L
Fluoride	**0.76**	mg/L	0.04	meq/L
Phosphate	**<0.01**	mg/L	0.00	meq/L
Sulfate	**408**	mg/L	8.49	meq/L
Iron	**<0.001**	mg/L	0.00	meq/L
Calcium	**24.6**	mg/L	1.23	meq/L
Magnesium	**3.60**	mg/L	0.30	meq/L
Potassium	**0.80**	mg/L	0.02	meq/L
Sodium	**366**	mg/L	15.92	meq/L
Cations			17.47	meq/L
Anions			17.46	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.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Caneple GC B #1 Grab Sample**

Analyst

Review

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CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BLAGG ENER. / BP AMERICA
Address: P.O. BOX 87
BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: CANEPLE GC B #1
Project #:
NV
Project Manager: NV
Sampler: NV
Sample Temperature: 4

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No. 06/0140	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
10/12/06	0840	WATER	MW #1	2-40ml	✓		-1	✓												
10/12/06	0915	WATER	MW #2	2-40ml	✓		-2	✓												
10/12/06	0950	WATER	MW #3	2-40ml	✓		-3	✓												

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
10/12/06	1000		10/13/06
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 7:40

Remarks:

14677

CHAIN OF CUSTODY RECORD

Client / Project Name: BLAGG / BP

Project Location: CAREPLE GC B #1

Sampler: NV

Client No.: 94034-010

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	MATRIX ADJUSTMENTS / CATIONS	Remarks
MW #1	10/12/06	0840	38795	WATER	1	✓	PRESERVED COOL GRAB SAMPLES
MW #2	10/12/06	0915	38796	WATER	1	✓	
MW #3	10/12/06	0950	38797	WATER	1	✓	

Relinquished by: (Signature) — Date: 10/12/06 — Time: 1101 — Received by: (Signature)

Relinquished by: (Signature) — Received by: (Signature) — Date: 10/12/06 — Time: 1101

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	✓		

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: CANEPLE GC B #1 **Work Order:** 0610140

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	**R21050**	Analysis Date:	10/14/2006 3:58:20 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	**R21062**	Analysis Date:	10/16/2006 9:25:30 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS-II		*LCS*			Batch ID:	**R21050**	Analysis Date:	10/14/2006 3:00:20 AM	
Benzene	19.61	µg/L	1.0	98.0	85	115			
Toluene	19.76	µg/L	1.0	98.8	85	118			
Ethylbenzene	19.82	µg/L	1.0	99.1	85	116			
Xylenes, Total	60.45	µg/L	3.0	101	85	119			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R21062**	Analysis Date:	10/17/2006 5:46:40 AM	
Benzene	19.71	µg/L	1.0	98.6	85	115			
Toluene	19.77	µg/L	1.0	98.8	85	118			
Ethylbenzene	19.90	µg/L	1.0	99.5	85	116			
Xylenes, Total	60.36	µg/L	3.0	101	85	119			

Qualifiers:

- F Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 10/13/2006

Work Order Number 0610140 | Received by BLM

Checklist completed by Signature Date 10/13/06

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? **4°** *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

CANEPLE GC B # 1 - SEP. & ABAN. PITS
UNIT P, SEC. 13, T31N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **December 21, 2006**

SAMPLER : N J V

Filename : **12-21-06.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.)
MW - 1	102.55	93.92	8.63	16.50	-	-	-	-	-
MW - 2	101.30	93.10	8.20	16.20	1045	7.27	1,500	8.9	4.00
MW - 3	100.27	93.27	7.00	15.00	1010	7.27	1,200	7.7	4.00
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	12/20/06	0835		

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 # 2 & # 3 . Both MW 's murky brown in appearance & no apparent hydrocarbon odor detected physically . Collected samples from MW # 2 & # 3 for BTEX analysis .

Top of casing MW # 1 ~ 2.60 ft., MW # 2 ~ 2.50 ft., MW # 3 ~ 1.70 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: *02-Jan-07*

CLIENT: Blagg Engineering
Project: Caneple GC B #1

Lab Order: 0612269

Lab ID: 0612269-01 **Collection Date:** 12/21/2006 10:45:00 AM
Client Sample ID: MW #2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **LMM**
Benzene	8.5	1.0		µg/L	1	12/28/2006 12:48:40 PM
Toluene	ND	1.0		µg/L	1	12/28/2006 12:48:40 PM
Ethylbenzene	17	1.0		µg/L	1	12/28/2006 12:48:40 PM
Xylenes, Total	89	3.0		µg/L	1	12/28/2006 12:48:40 PM
Surr: 4-Bromofluorobenzene	82.7	70.2-105		%REC	1	12/28/2006 12:48:40 PM

Lab ID: 0612269-02 **Collection Date:** 12/21/2006 10:10:00 AM
Client Sample ID: MW #3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **LMM**
Benzene	ND	1.0		µg/L	1	12/28/2006 1:18:48 PM
Toluene	ND	1.0		µg/L	1	12/28/2006 1:18:48 PM
Ethylbenzene	ND	1.0		µg/L	1	12/28/2006 1:18:48 PM
Xylenes, Total	ND	3.0		µg/L	1	12/28/2006 1:18:48 PM
Surr: 4-Bromofluorobenzene	77.6	70.2-105		%REC	1	12/28/2006 1:18:48 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BLAGG ENGR. / BP AMERICA
Address: P.O. BOX 87, BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: CANEPLE GC B #1
Project #: 96
Project Manager: NV
Sampler: NV
Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
12/21/06	1045	WATER	MW #2	2-40ml	✓		0612269 -1
12/21/06	1010	WATER	MW #3	2-40ml	✓		-2

(BTEX + MTBE + TMB's (8021B))	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
✓												
✓												

Date: 12/21/06 Time: 1100 Relinquished By: (Signature)
Received By: (Signature) 12/22/06 920
Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Caneple GC B #1

Work Order: 0612269

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R21975**		Analysis Date:	12/28/2006 9:42:29 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID: **R21975**		Analysis Date:	12/28/2006 11:30:42 AM	
Benzene	18.08	µg/L	1.0	90.4	85.9	113			
Toluene	18.48	µg/L	1.0	92.4	86.4	113			
Ethylbenzene	18.09	µg/L	1.0	90.4	83.5	118			
Xylenes, Total	55.05	µg/L	3.0	91.8	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID: **R21975**		Analysis Date:	12/28/2006 3:51:55 PM	
Benzene	17.77	µg/L	1.0	88.8	85.9	113	1.72	27	
Toluene	17.59	µg/L	1.0	87.9	86.4	113	4.94	19	
Ethylbenzene	17.33	µg/L	1.0	86.7	83.5	118	4.28	10	
Xylenes, Total	52.35	µg/L	3.0	87.3	83.4	122	5.02	13	

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 12/27/2006

Work Order Number 0612269 | Received by GLS

Checklist completed by [signature] Signature | 12/27/06 Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	4°	*4° C ± 2 Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

CANEPLE GC B # 1 - SEP. & ABAN. PITS
UNIT P, SEC. 13, T31N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : February 21, 2007

SAMPLER : N J V

Filename : 02-21-07.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.)
MW - 1	102.55	93.42	9.13	16.50	-	-	-	-	-
MW - 2	101.30	92.46	8.84	16.20	0900	7.40	1,100	8.7	3.75
MW - 3	100.27	92.93	7.34	15.00					
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	02/21/07	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 MW # 2 . Murky brown in appearance & no apparent hydrocarbon odor detected physically . Collected sample from MW # 2 for BTEX analysis .

Top of casing MW # 1 ~ 2.60 ft., MW # 2 ~ 2.50 ft., MW # 3 ~ 1.70 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: *27-Feb-07*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW#2
Lab Order:	0702270	**Collection Date:**	2/21/2007 9:00:00 AM
Project:	Caneple GC B #1	**Date Received:**	2/23/2007
Lab ID:	0702270-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	5.4	1.0		µg/L	1	2/26/2007 12:39:27 PM
Toluene	2.0	1.0		µg/L	1	2/26/2007 12:39:27 PM
Ethylbenzene	13	1.0		µg/L	1	2/26/2007 12:39:27 PM
Xylenes, Total	71	2.0		µg/L	1	2/26/2007 12:39:27 PM
Surr: 4-Bromofluorobenzene	93.1	70.2-105		%REC	1	2/26/2007 12:39:27 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: BLAGG ENGR. / BP AMERICA

Address: P.O. BOX 87
BLFD., NM 87413

Phone #: 632-1199

Fax #:

Project Name: CANEPLE GC B #1

Project #:

Project Manager: NV

Sampler: NV

Sample Temperature: 2°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
2/21/07	0900	WATER	MW #2	2-40 ml	✓			0702270 -1

ANALYSIS REQUEST

BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
2/22/07	0940			2/23/07 0900
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Caneple GC B #1 **Work Order:** 0702270

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	**R22594**	Analysis Date:	2/23/2007 8:08:20 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	**R22614**	Analysis Date:	2/26/2007 8:16:58 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R22594**	Analysis Date:	2/23/2007 8:14:12 PM	
Benzene	20.52	µg/L	1.0	103	85.9	113			
Toluene	20.30	µg/L	1.0	102	86.4	113			
Ethylbenzene	20.25	µg/L	1.0	101	83.5	118			
Xylenes, Total	61.56	µg/L	2.0	103	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R22614**	Analysis Date:	2/26/2007 6:48:45 PM	
Benzene	20.37	µg/L	1.0	102	85.9	113			
Toluene	20.43	µg/L	1.0	102	86.4	113			
Ethylbenzene	20.39	µg/L	1.0	102	83.5	118			
Xylenes, Total	62.07	µg/L	2.0	103	83.4	122			

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 2/23/2007

Work Order Number 0702270 | Received by TLS

Checklist completed by Signature [signature] Date 2-23-07

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	2°	*4° C ± 2 Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

CANEPLE GC B # 1 - SEP. & ABAN. PITS
UNIT P, SEC. 13, T31N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **May 16, 2007**

SAMPLER : N J V

Filename : **05-16-07.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.)
MW - 1	102.55	95.91	6.64	16.50	-	-	-	-	-
MW - 2	101.30	94.97	6.33	16.20	1000	7.29	900	17.9	5.00
MW - 3	100.27	96.00	4.27	15.00	-	-	-	-	-
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	05/08/07	0740		

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 MW # 2 . Murky brown in appearance & no apparent hydrocarbon odor detected physically . Collected sample from MW # 2 for BTEX analysis .

Top of casing MW # 1 ~ 2.60 ft., MW # 2 ~ 2.50 ft., MW # 3 ~ 1.70 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: *22-May-07*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2
Lab Order:	0705285	**Collection Date:**	5/16/2007 10:00:00 AM
Project:	Caneple GC B #1	**Date Received:**	5/19/2007
Lab ID:	0705285-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	3.5	1.0		µg/L	1	5/21/2007 3:11:03 PM
Toluene	ND	1.0		µg/L	1	5/21/2007 3:11:03 PM
Ethylbenzene	4.4	1.0		µg/L	1	5/21/2007 3:11:03 PM
Xylenes, Total	36	2.0		µg/L	1	5/21/2007 3:11:03 PM
Surr: 4-Bromofluorobenzene	88.4	70.2-105		%REC	1	5/21/2007 3:11:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BLAGG ENER. / BP AMERICA
Address: P. O. BOX 87, BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: CARPLE GC B #1
Project #: NV
Project Manager: NV
Sampler: NV
Sample Temperature: 4

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
5/16/07	1000	WATER	MW #2	2-40ml				0705285 1

BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
(BTEX)																
✓																

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
5/18/07	0930	Nelson Velez		5/19/07 10:00
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Caneple GC B #1

Work Order: 0705285

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: **SW8021**									
Sample ID: **5ML REAGENT BLA**		*MBLK*			Batch ID:	**R23688**	Analysis Date:		5/21/2007 8:06:10 AM
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: **100NG BTEX LCS**		*LCS*			Batch ID:	**R23688**	Analysis Date:		5/21/2007 3:41:06 PM
Benzene	19.05	µg/L	1.0	95.3	85.9	113			
Toluene	19.31	µg/L	1.0	96.6	86.4	113			
Ethylbenzene	19.48	µg/L	1.0	97.4	83.5	118			
Xylenes, Total	58.11	µg/L	2.0	96.9	83.4	122			
Sample ID: **100NG BTEX LCSD**		*LCSD*			Batch ID:	**R23688**	Analysis Date:		5/21/2007 4:11:08 PM
Benzene	19.30	µg/L	1.0	96.5	85.9	113	1.28	27	
Toluene	19.47	µg/L	1.0	97.3	86.4	113	0.794	19	
Ethylbenzene	19.76	µg/L	1.0	98.8	83.5	118	1.44	10	
Xylenes, Total	58.94	µg/L	2.0	98.2	83.4	122	1.40	13	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 5/19/2007

Work Order Number 0705285 | Received by AMF

Checklist completed by Signature | May 19, 07 Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	**4°**	*4° C ± 2 Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action