

3R - 0026

**ANNUAL
MONITORING
REPORT**

09/26/2008

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

RECEIVED

2008 SEP 26 PM 2 39

3R0026

COPY

September 25, 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.)
Groundwater Monitoring Report
Jacques Com A #1, UNIT M, SEC. 25, T30N, R9W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: 3RP-26-0

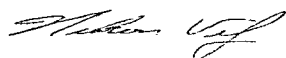
Dear Mr. von Gonten:

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

NJV/njv

Jacques Com A #1 09-25-08 CVL.DOC

3R0026

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

**JACQUES COM A #1
(M) SECTION 25, T30N, R9W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

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

SEPTEMBER 2008

**PREPARED BY:
BLAGG ENGINEERING, INC.**

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

BP AMERICA PRODUCTION COMPANY
Jacques Com A #1
SW/4 SW/4, Sec. 25, T30N, R9W

Well Site Plugged & Abandoned: March 1993

Pit Closure Date: March 2000 (abandoned pit II)

Monitor Well Installation Date: November 2007

Monitor Well Sampling Dates: 11/29/07, 04/04/08, 06/23/08, 08/25/08

Site History:

Groundwater was encountered at a depth of approximately 12 feet below surface grade during excavation of impacted soils from an abandoned pit in March 2000 (documentation attached). The excavation perimeter was measured at approximately 48 X 37 X 15 feet depth. Approximately 950 cubic yards of soils were removed and transported BP America Production Company (BP) Crouch Mesa facility. The groundwater within the excavation perimeter was pumped via water hauling trucks and disposed at an approved facility. Afterwards, the exposed groundwater was sampled and tested for benzene, toluene, ethylbenzene, and total xylenes (BTEX) per US EPA method 8020. The discovery of confirmed groundwater impact during the pit closure activity was transmitted via telecommunication to the New Mexico Oil Conservation Division's (NMOCD) Santa Fe office on May 11, 2000. NMOCD was notified with letter dated May 11, 2000 of the groundwater impact (attached). Resampling of the groundwater in a subsequent event was conducted in April 2000. The BTEX results of the groundwater sampling from the excavation and adjacent test hole in the suspected down gradient direction are as follows;

Sample ID	Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
Pit Water	03/06/00	130	31	69	789
Pit Water	04/19/00	16.0	ND	7.2	43
TW1 (gw)	03/06/00	ND	ND	ND	1.2
NMWQCC regulatory standards		10	750	750	620

Note: gw = groundwater, NMWQCC = New Mexico Water Quality Control Commission, ppb = parts per billion,
ND = Not detectable at reported limits (less than regulatory standards by at least a magnitude of 10).

Groundwater Investigation and Soil Lithology:

Groundwater monitor wells were installed in November 2007 to test groundwater quality (see Figure 1). Boring logs for all three (3) monitor wells along with well completion information are contained within this report. There are no known receptors impacted by the previous discovery of impacted soil and/or groundwater.

Soil lithology at the site consists of primarily coarse grained sand with varying size gravel at greater depths, non cohesive, and firm. Medium dark gray sand phasing into sand and gravel with an apparent hydrocarbon odor was observed from the drill cuttings at an estimated 12-20 feet below grade within the source area boring only (MW #2).

Groundwater Monitor Well Sampling Procedures:

Monitor wells were developed by hand-bailing, using new disposable bailers after installation. Prior to sample collections, the monitor wells were purged approximately three (3) well bore volumes with new disposable bailers. The groundwater samples were collected following US EPA: SW-846 protocol, were placed into laboratory supplied containers with appropriate preservative, and stored in an ice chest for express delivery to an analytical laboratory for testing under strict chain-of-custody procedures. Analytical testing included BTEX by US EPA Method 8021B or Method 8260B and general water quality parameters.

Fluids generated during monitor well development and purging were managed by discarding into a tank pit located at the adjacent Jacques #1 well site. The tank pit contents are then disposed through approved NMOCD operational procedures for removal of produced fluids.

Groundwater Quality & Flow Direction Information:

Quarterly groundwater monitor well sampling was initiated in November 2007. Summary of laboratory BTEX and general water chemistry analytical results are included in the table on the following pages. The data indicates all BTEX constituents tested at non-detectable or very low levels for four (4) consecutive sampling events within the source and down gradient areas. All field data and laboratory reports for each quarterly sampling event are contained within this report.

Groundwater elevations have consistently been measured with a gradient towards the south and southwest directions (Figure 2 through Figure 5).

Summary and Recommendations:

Hydrocarbon impacted soil and groundwater at the site appear to have been remediated via excavation of impacted soils. All site wells tested at non-detectable or low levels for BTEX; therefore, meeting 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.

JACQUES COM A # 1

UNIT M, SEC. 25, T30N, R9W

REVISED DATE: September 8, 2008

FILENAME: (JA1-3Q08.WK4) NJV

								BTEX EPA METHOD 8021B (ppb)			
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	Benzene	Toluene	Ethyl Benzene	Total Xylene
29-Nov-07	MW #1	15.22	22.50	4,800	3,800	7.27		ND	ND	ND	ND
29-Nov-07	MW #2	13.59	21.50	5,800	4,800	7.39		ND	ND	16	19
04-Apr-08		13.12			4,700	6.99		ND	ND	1.3	ND
23-Jun-08		12.35			2,400	7.42		ND	ND	ND	ND
25-Aug-08		13.02			3,100	7.23		ND	ND	ND	ND
29-Nov-07	MW #3	13.97	22.50	4,500	3,700	7.42		ND	ND	ND	ND
04-Apr-08		13.48			3,400	7.09		ND	ND	ND	ND
23-Jun-08		12.75			2,600	7.30		ND	ND	ND	ND
25-Aug-08		13.43			2,500	7.26		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

NOTES : 1) ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10).

GENERAL WATER QUALITY
BP AMERICA PRODUCTION COMPANY

JACQUES COM A # 1

Sample Date : November 29 , 2007

PARAMETERS	MW # 1	MW # 2	MW # 3	NMWQCC STANDARDS	Units
LAB pH	7.32	7.43	7.31	6 - 9	s. u.
TOTAL DISSOLVED SOLIDS	4,800	5,800	4,500	1,000	mg / L
NITROGEN, NITRITE	ND	ND	ND	10.0	mg / L
NITROGEN , NITRATE	1.1	ND	1.5	10.0	mg / L
CHLORIDE	89	230	71	250	mg / L
FLUORIDE	1.2	1.0	ND	1.6	mg / L
SULFATE	2,900	3,900	2,600	600	mg / L
IRON	ND	ND	ND	1.0	mg / L

Notes :

- 1) NMWQCC - New Mexico Water Quality Control Commission .
- 2) s. u. - stanadard unit .
- 3) mg / L - milligrams per liter or otherwise known as parts per million (ppm) .
- 4) New Mexico Oil Conservation Division (NMOCD) recognizes the NMWQCC or background levels (statistical equivalence) as the standards for each site specific scenario .

3004520381

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>85722</u> C.O.C. NO: <u>10365</u> <u>7462</u>
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FIELD REPORT: <u>JACQUES</u> ^{NV} CLOSURE VERIFICATION ^{NV}		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>JACQUES CORN A</u> WELL #: <u>1</u> PIT: <u>ABANDONED (II)</u>		DATE STARTED: <u>3/6/00</u>
QUAD/UNIT: <u>M</u> SEC: <u>25</u> TWP: <u>30N</u> RNG: <u>9W</u> PM: <u>NM</u> CNTY: <u>ST</u> ST: <u>NM</u>		DATE FINISHED: _____
QTR/FOOTAGE: <u>990' FSL / 990' FUL</u> ^{SWLW} CONTRACTOR: <u>P + S</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>

EXCAVATION APPROX. <u>48</u> FT. x <u>37</u> FT. x <u>15</u> FT. DEEP. CUBIC YARDAGE: <u>950</u>
DISPOSAL FACILITY: <u>NV BP CROUCH MESA LF</u> REMEDIATION METHOD: <u>STOCKPILED</u>
LAND USE: <u>RANGE</u> LEASE: <u>FEDERAL FEE</u> ^{NV} FORMATION: <u>PC</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>105</u> FT. <u>SG8W</u> FROM WELLHEAD.
DEPTH TO GROUNDWATER: <u><50'</u>	NEAREST WATER SOURCE: <u>>1000'</u> NEAREST SURFACE WATER: <u><1000'</u>
NMOCB RANKING SCORE: <u>30</u>	NMOCB TPH CLOSURE STD: <u>100</u> PPM
SOIL AND EXCAVATION DESCRIPTION:	

CHECK ONE :
☒ PIT ABANDONED
☐ STEEL TANK INSTALLED
☐ FIBERGLASS TANK INSTALLED

SIDEWALLS CONSISTED OF MOSTLY MOD. TO DK. YELL. BROWN SAND PHASING INTO SILTY CLAY @ GREATER DEPTH, 10-12' INTERVAL BELOW GRADE - MOD. TO DK. GRAY SILTY CLAY TO CLAY, SIDEWALL OVM SAMPLES APPEAR FREE OF ANY HC ODOOR & DISCOLORATION, NO NOTICEABLE TRENCH OBSERVED @ GW SURFACE WITH EXCAVATION, TEST HOLE SOIL SIMILAR TO PIT EXCAVATION EXCEPT MOD. GRAY DISCOLORATION OBSERVED WHEN GW WAS ENCOUNTERED (CONTAINED VARYING SIZE GRAVEL WITH GW). IRRIGATION DITCH APPROX. 435 FT. FROM SOUTH PERIMETER OF EXCAVATION.

P + A LOCATION - 3/6/93

FIELD 418.1 CALCULATIONS							
TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE

0 FT

PIT PERIMETER 4N

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 6'	0.0
2 @ 6'	0.0
3 @ 7'	0.0
4 @ 7'	0.0
5 @	

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
PW1EGW(1)	BTEX / A/C	0955
TH1EGW(2)	BTEX / A/C	1020
PW2EGW(14)	BTEX	1320

PIT PROFILE

TRAVEL NOTES:	CALLOUT: <u>3/3/00 AFTER.</u>	ONSITE: <u>3/6/00 MORN.</u>
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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 08-Mar-00

Client: Blagg Engineering
Work Order: 0003005
Lab ID: 0003005-01A Matrix: AQUEOUS
Project: BP Amoco - ~~Jaquez~~ Com A 1

Client Sample Info: ~~Jaquez~~ Com A#1 - Abandoned Pit (II)
Client Sample ID: PW1 @ GW (12ft)
Collection Date: 3/6/2000 9:55:00 AM
COC Record: 10365

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	130	0.5		µg/L	1	3/7/2000
Toluene	31	0.5		µg/L	1	3/7/2000
Ethylbenzene	69	0.5		µg/L	1	3/7/2000
m,p-Xylene	720	5		µg/L	5	3/7/2000
o-Xylene	69	0.5		µg/L	1	3/7/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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



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

ANALYTICAL REPORT

AV JACQUES

Date: 26-Apr-00

Client:	Blagg Engineering	Client Sample Info:	Laguerz Com A#1, Abandoned Pit <i>(I)</i>
Work Order:	0004047	Client Sample ID:	PW2 @ GW (14ft.)
Lab ID:	0004047-01A	Matrix:	AQUEOUS
Project:	BP Amoco - <i>AV JACQUES</i> Laguerz Com A#1	Collection Date:	4/19/2000 1:20:00 PM
		COC Record:	10579

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	16	0.5		µg/L	1	4/24/2000
Toluene	ND	0.5		µg/L	1	4/24/2000
Ethylbenzene	7.2	0.5		µg/L	1	4/24/2000
m,p-Xylene	42	1		µg/L	1	4/24/2000
o-Xylene	1	0.5		µg/L	1	4/24/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 08-Mar-00

Client: Blagg Engineering
Work Order: 0003005
Lab ID: 0003005-02A
Project: BP Amoco - ~~Jacquez~~ Com A 1

Client Sample Info: ~~Jacquez~~ Com A#1 - Abandoned Pit (II)
Client Sample ID: TW1 @ GW (12ft)
Collection Date: 3/6/2000 10:20:00 AM
COC Record: 10365

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	3/7/2000
Toluene	ND	0.5		µg/L	1	3/7/2000
Ethylbenzene	ND	0.5		µg/L	1	3/7/2000
m,p-Xylene	1.2	1		µg/L	1	3/7/2000
o-Xylene	ND	0.5		µg/L	1	3/7/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client: Blagg / AMOCO
Sample ID: PW 1 @ GW (12')
Laboratory Number: G895
Chain of Custody: 7462
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 403410
Date Reported: 03-07-00
Date Sampled: 03-06-00
Date Received: 03-06-00
Date Extracted: N/A
Date Analyzed: 03-07-00

Parameter	Analytical Result	Units	Units
pH	7.46	s.u.	
Conductivity @ 25° C	13,500	umhos/cm	
Total Dissolved Solids @ 180C	6,700	mg/L	
Total Dissolved Solids (Calc)	6,660	mg/L	
SAR	14.3	ratio	
Total Alkalinity as CaCO3	410	mg/L	
Total Hardness as CaCO3	1,960	mg/L	
Bicarbonate as HCO3	410	mg/L	6.71 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	<0.001	mg/L	0.00 meq/L
Chloride	390	mg/L	11.00 meq/L
Fluoride	1.76	mg/L	0.09 meq/L
Phosphate	1.1	mg/L	0.03 meq/L
Sulfate	3,890	mg/L	80.99 meq/L
Iron	0.007	mg/L	
Calcium	636	mg/L	31.74 meq/L
Magnesium	65.9	mg/L	5.42 meq/L
Potassium	4.5	mg/L	0.12 meq/L
Sodium	1,420	mg/L	61.77 meq/L
Cations			99.04 meq/L
Anions			98.83 meq/L
Cation/Anion Difference			0.21%

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:

JACQUES
Jaques Com A #1

Abandoned Pit. (II)

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client: Blagg / AMOCO
Sample ID: TH - 1 @ GW (12')
Laboratory Number: G896
Chain of Custody: 7462
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 403410
Date Reported: 03-07-00
Date Sampled: 03-06-00
Date Received: 03-06-00
Date Extracted: N/A
Date Analyzed: 03-07-00

Parameter	Analytical Result	Units	Units
pH	7.50	s.u.	
Conductivity @ 25° C	12,700	umhos/cm	
Total Dissolved Solids @ 180C	6,320	mg/L	
Total Dissolved Solids (Calc)	6,280	mg/L	
SAR	13.6	ratio	
Total Alkalinity as CaCO3	333	mg/L	
Total Hardness as CaCO3	1,760	mg/L	
Bicarbonate as HCO3	333	mg/L	5.46 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	<0.001	mg/L	0.00 meq/L
Chloride	90.0	mg/L	2.54 meq/L
Fluoride	1.57	mg/L	0.08 meq/L
Phosphate	1.0	mg/L	0.03 meq/L
Sulfate	4,040	mg/L	84.11 meq/L
Iron	0.020	mg/L	
Calcium	504	mg/L	25.15 meq/L
Magnesium	122	mg/L	10.05 meq/L
Potassium	4.5	mg/L	0.12 meq/L
Sodium	1,310	mg/L	56.99 meq/L
Cations			92.30 meq/L
Anions			92.23 meq/L
Cation/Anion Difference			0.08%

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:

JACQUES

Jaquez Com A #1 Abandoned Pit. (II) ^{7/5}

Analyst

Review

CHAIN OF CUSTODY RECORD

Date: 11/6/20

Page: 1 of 1

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

[illegible]

7462

ENVIROTECH INC.

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



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

Date: 1/19/00

Page: _____ of _____

0755

[illegible]

Distribution:	White - On Site	Yellow - LAB	Pink - Sampler	Goldenrod - Client
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BLAGG ENGINEERING, INC.

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

May 11, 2000

Mr. William C. Olson - Hydrologist
State of New Mexico Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: Formal Notification of Groundwater Impact
BP Amoco's ^{Jaques} Jaquez Com A # 1 - Abandoned pit (V)
Unit M, Sec. 25, T30N, R9W
San Juan County, New Mexico
(Gas well plugged & abandoned 3 / 6 / 93)

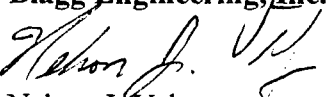
Dear Mr. Olson:

Initial groundwater sample analytical results at the above referenced well site during pit closure activity reveal hydrocarbon contamination to be above the State of New Mexico Water Quality Control Commission's regulatory standards for benzene and total xylenes. Sampling was conducted March 6, 2000. Depth to water is estimated at twelve (12) feet below grade. Listed below are summary analytical results for benzene, toluene, ethylbenzene, and total xylenes (BTEX):

Parameters	Abandoned Pit (parts per billion)
benzene	130
toluene	31
ethylbenzene	69
total xylenes	789

If you have any questions concerning this information, please do not hesitate to contact us at the aforementioned phone number. Thank you for your cooperation.

Respectfully submitted,
Blagg Engineering, Inc.


Nelson J. Velez
Staff Geologist

cc: Denny Foust, Environmental Geologist, NMOCD, Aztec, NM
Buddy Shaw, Environmental Coordinator, BP Amoco, Farmington, NM

NV/nv

JAQ-A1.LTR

BLAGG ENGINEERING, INC.

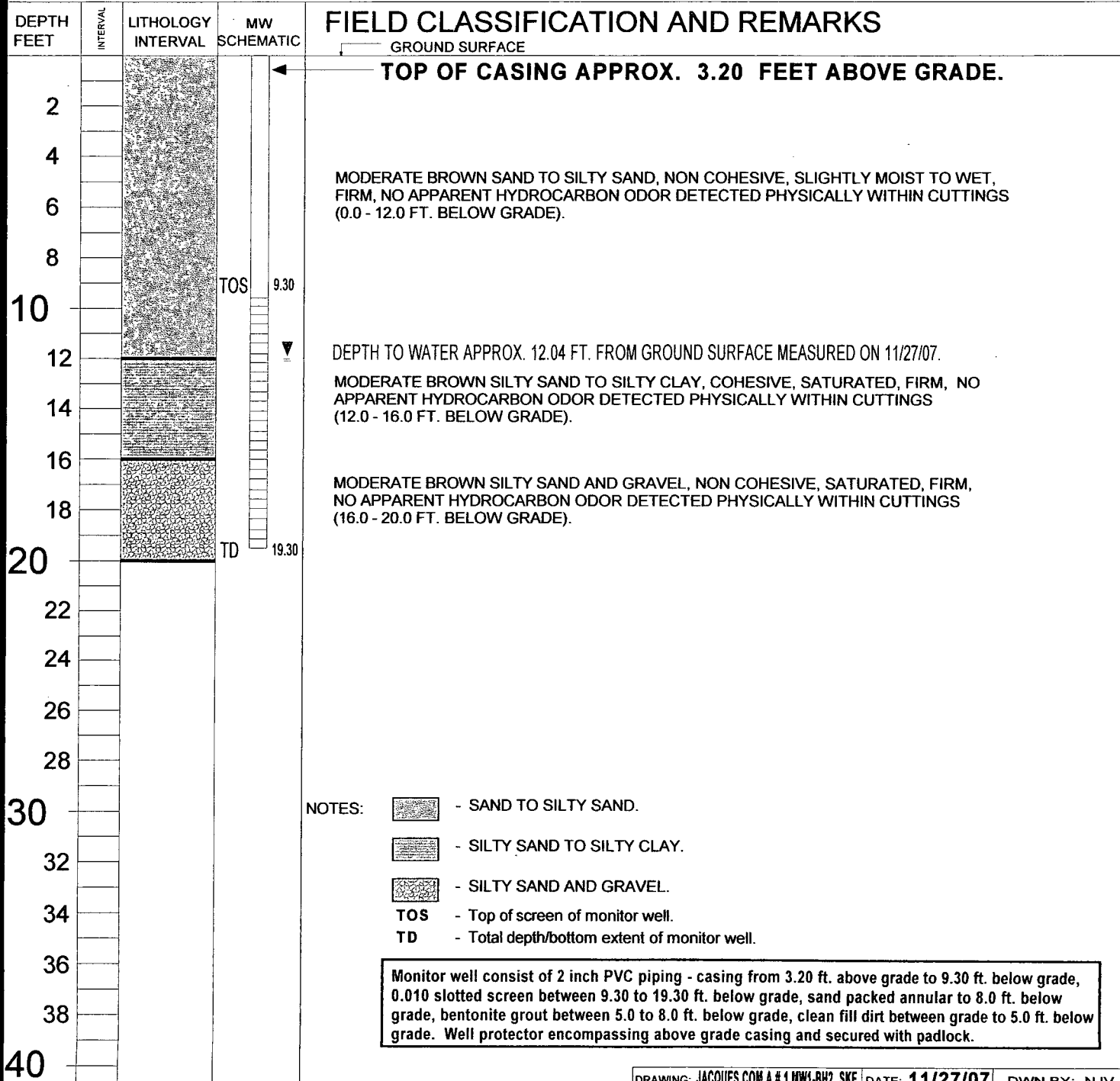
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #1

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: JACQUES COM A # 1 UNIT M, SEC. 25, T30N, R9W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 183 FT., S86W FROM WELL HEAD.

BORING #..... BH-2
MW #..... 1
PAGE #..... 1
DATE STARTED 11/27/07
DATE FINISHED 11/27/07
OPERATOR..... DP
PREPARED BY NJV



BLAGG ENGINEERING, INC.

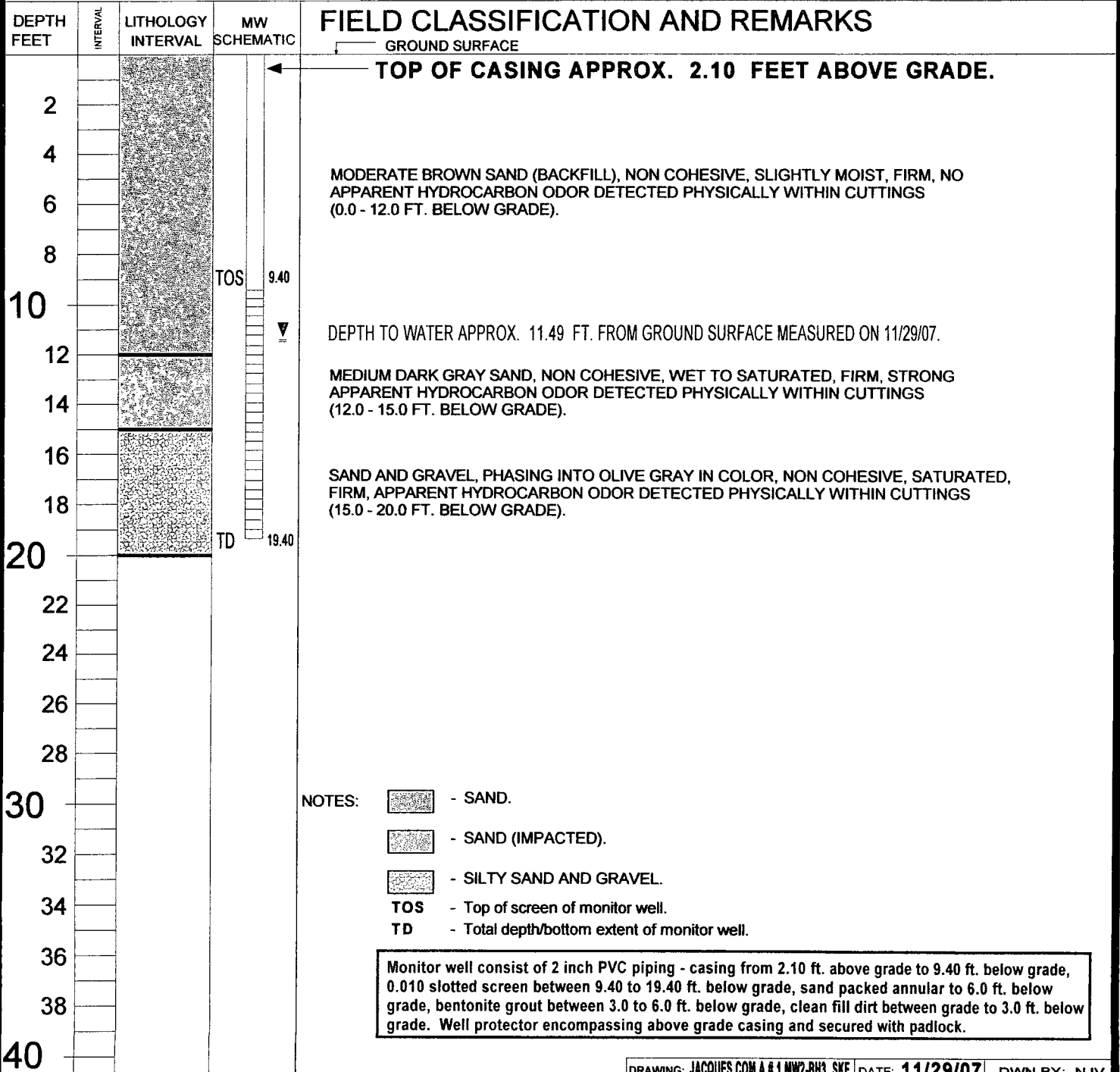
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: JACQUES COM A # 1 UNIT M, SEC. 25, T30N, R9W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 113 FT., S67W FROM WELL HEAD.

BORING #..... BH-3
MW #..... 2
PAGE #..... 2
DATE STARTED 11/27/07
DATE FINISHED 11/27/07
OPERATOR..... DP
PREPARED BY NJV



BLAGG ENGINEERING, INC.

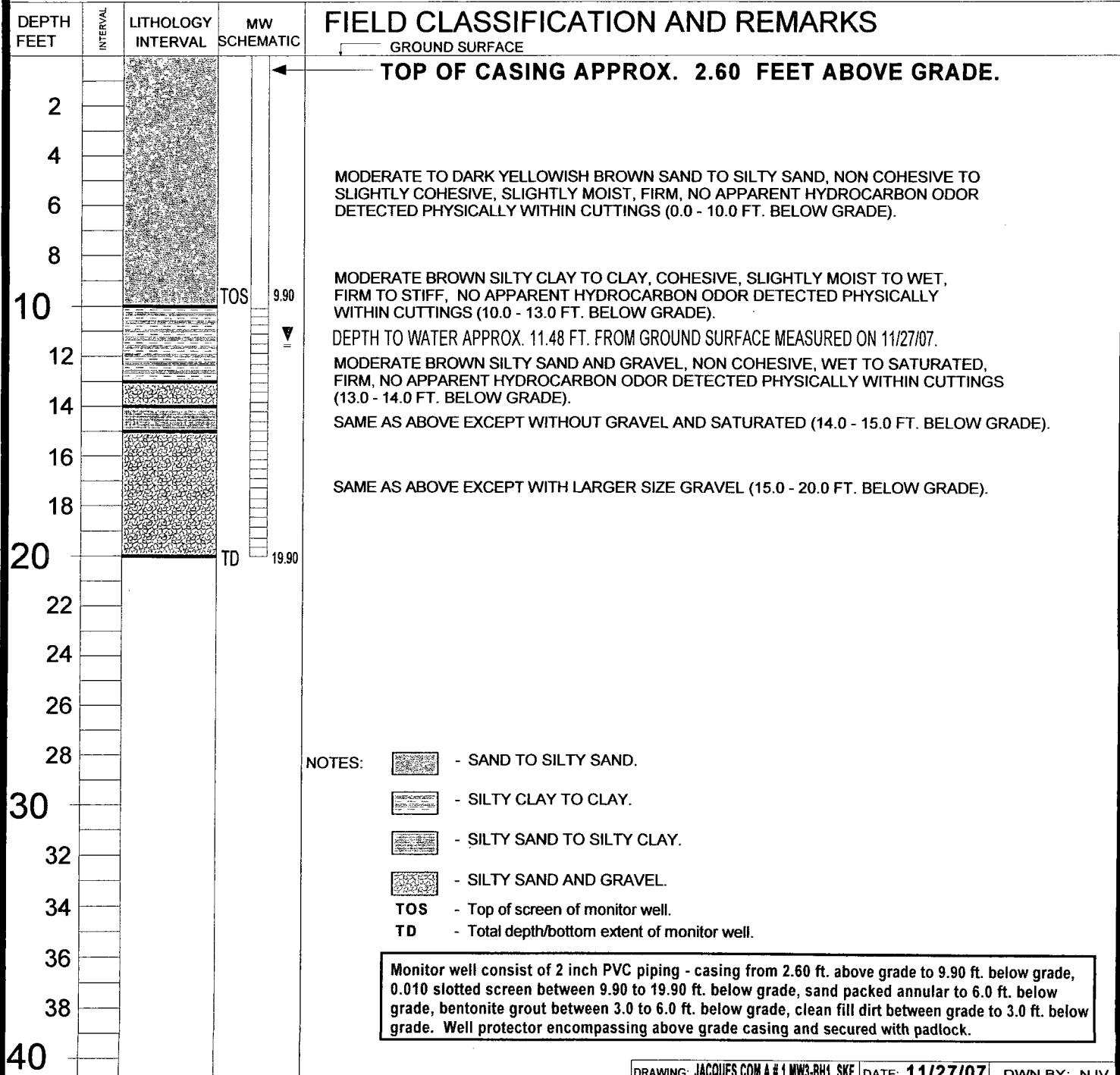
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

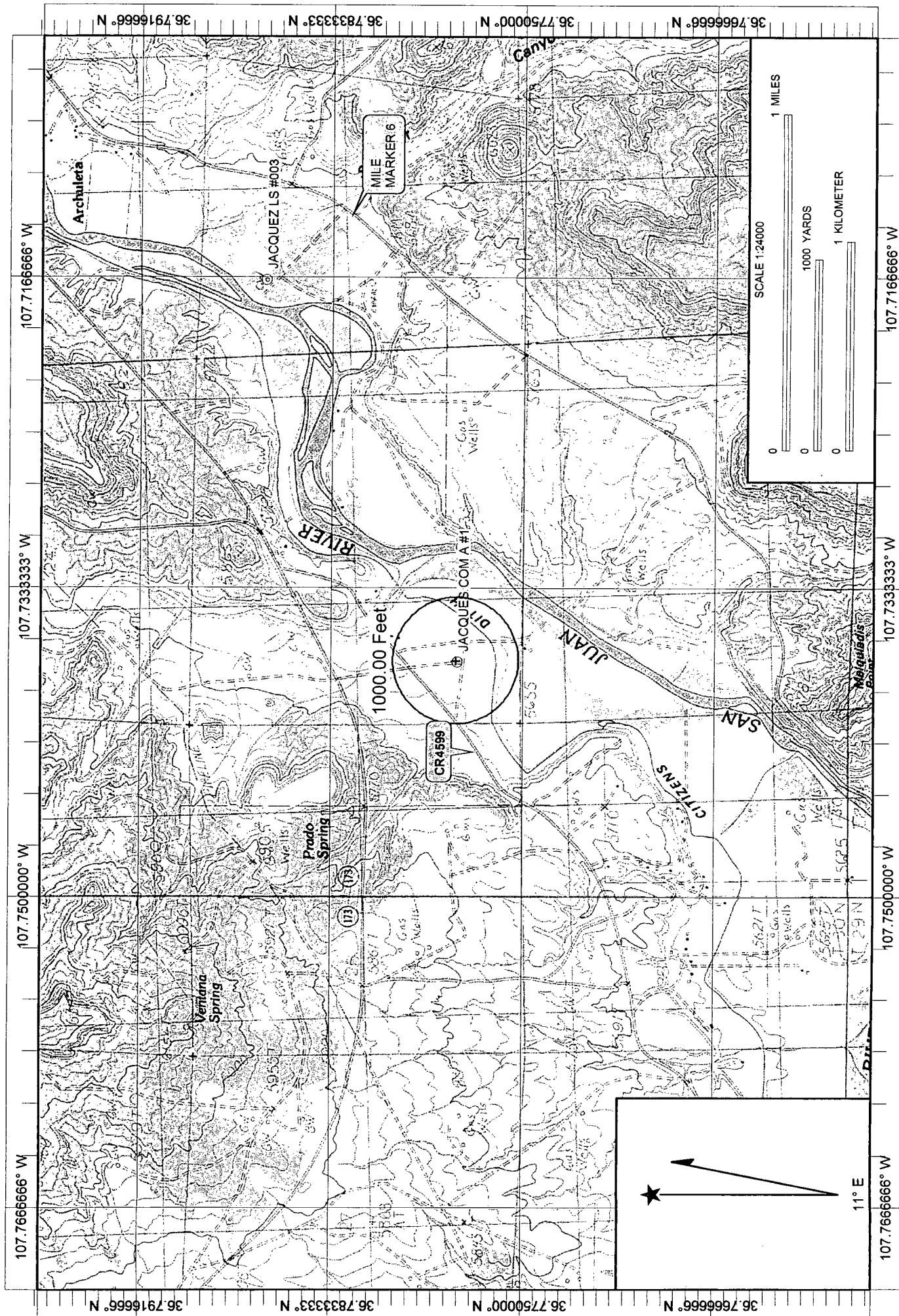
MW #3

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: JACQUES COM A # 1 UNIT M, SEC. 25, T30N, R9W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 134 FT., S43.5W FROM WELL HEAD.

BORING #..... BH-1
MW #..... 3
PAGE #..... 3
DATE STARTED 11/27/07
DATE FINISHED 11/27/07
OPERATOR..... DP
PREPARED BY NJV





Name: ARCHULETA

Date: 11/23/2007

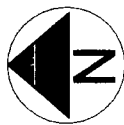
Scale: 1 inch equals 2000 feet

Location: 036.7778784° N 107.7373880° W

Caption: JACQUES COM A #1

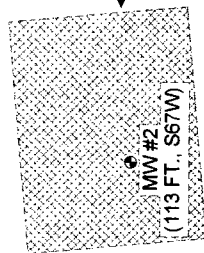
UNIT M, SEC. 25, T30N, R9W

FIGURE 1



PLUGGED &
ABANDONED
MARKER ⊕

MW #1
(183 FT., S86W)



ABANDONED PIT (II)
EXCAVATED MARCH, 2000

TEST HOLE ADVANCED
MARCH, 2000

MW #3
(134 FT., S43.5W)

1 INCH = 40 FT.
0 40 80 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.

JACQUES.COM A # 1

SW/4 SW/4 SEC. 25, T30N, R9W

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: JACQUES.COM A 1-SM.SKF

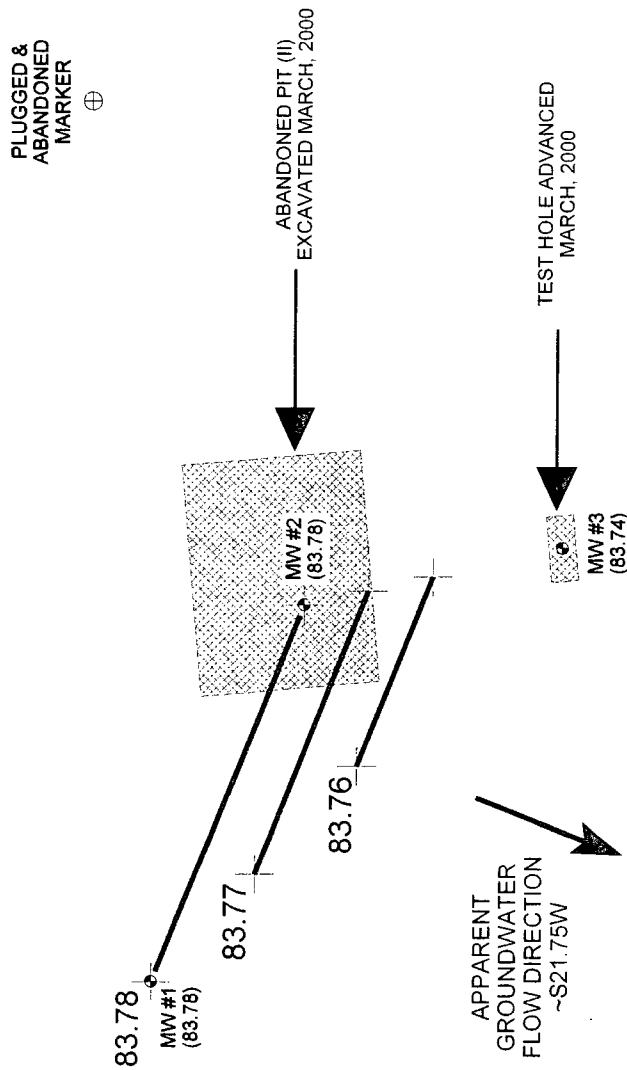
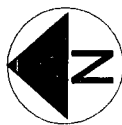
REVISED: 11-27-07 NJV

SITE MAP

11/07

FIGURE 2

(4th 1/4, 2007)



1 INCH = 40 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.

Top of Well Elevation	
MW #1	(99.00)
MW #2	(97.37)
MW #3	(97.71)
Groundwater Elevation as of 11/28/07	
MW #1	(83.78)

BP AMERICA PRODUCTION CO.
JACQUES COM A #1
SW/4 SW/4 SEC. 25. T30N. R9W
SANTO ANTON COUNTY, NEW MEXICO

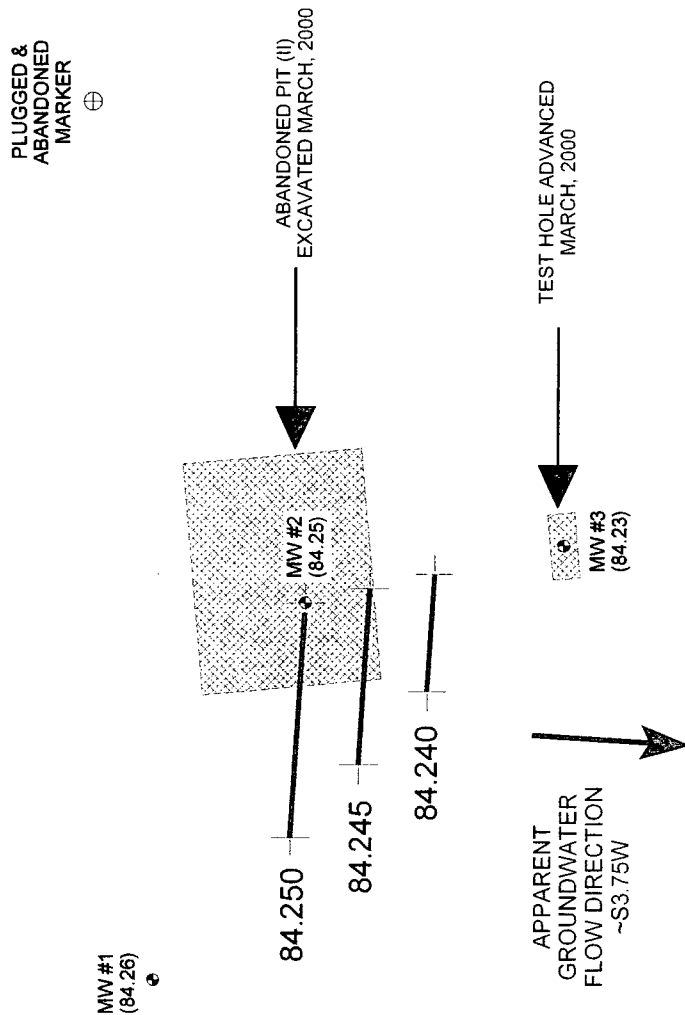
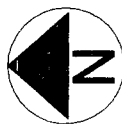
BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 11-29-07-GW.SKF
REVISED: 11-29-07 NJV

**GROUNDWATER
CONTOUR
MAP**
11/07

FIGURE 3

(2nd 1/4, 2008)



1 INCH = 40 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.

MW #	Top of Well Elevation
MW #1	(99.00)
MW #2	(97.37)
MW #3	(97.71)
MW #1	Groundwater Elevation as of 4/04/08.
⊕	(83.78)

BP AMERICA PRODUCTION CO.

JACQUES COM A #1

SW/4 SW/4 SEG. 25, T30N, R9W

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 04-04-08-GW.SKF

REVISED: 04-04-08 NJV

GROUNDWATER

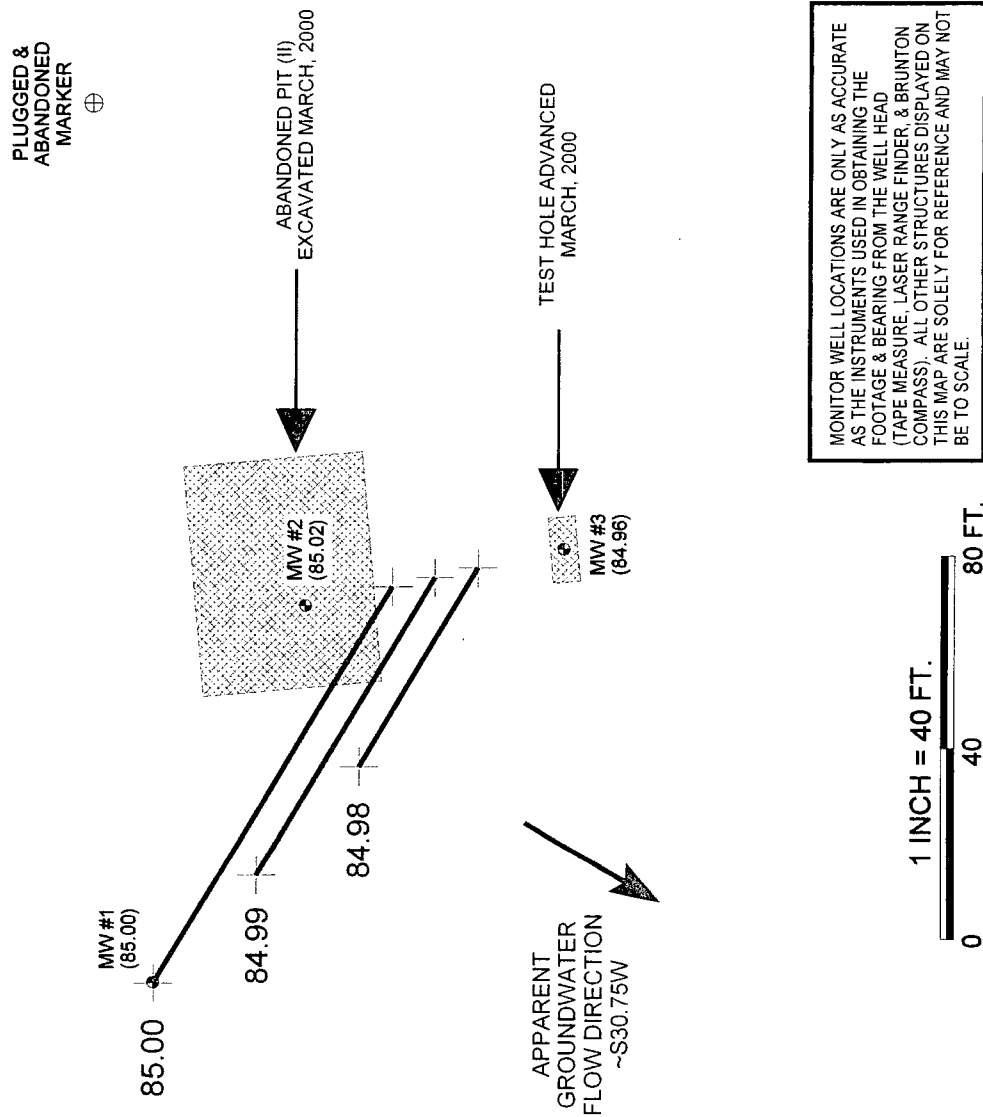
CONTOUR

MAP

04/08

FIGURE 4

(2nd 1/4, 2008)



BP AMERICA PRODUCTION CO.
JACQUES COM A #1
SW/4 SW/4 SEC. 25, T30N, R9W
SAN JUAN COUNTY, NEW MEXICO

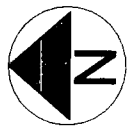
BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 06-23-08-GW.SKF
REVISED: 06-25-08 NJV

GROUNDWATER
CONTOUR
MAP
06/08

FIGURE 5

(3rd 1/4, 2008)



PLUGGED &
ABANDONED
MARKER



MW #1
(84.35)

84.34

ABANDONED PIT (II)
EXCAVATED MARCH, 2000

MW #2
(84.35)

84.32

84.30

APPARENT
GROUNDWATER
FLOW DIRECTION
~S21.75W

TEST HOLE ADVANCED
MARCH, 2000

MW #3
(84.28)

Top of Well Elevation	
MW #1	(99.00)
MW #2	(97.37)
MW #3	(97.71)
MW #1	Groundwater Elevation as of 8/25/08.
⊕ (84.35)	

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.

1 INCH = 40 FT.



BP AMERICA PRODUCTION CO.

JACQUES COM A # 1

SW/4 SW/4 SEC. 25, T30N, R9W

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: 08-25-08-GW.SKF

REVISED: 08-28-08 NJV

GROUNDWATER

CONTOUR

MAP

08/08

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

JACQUES COM A #1

UNIT M, SEC. 25, T30N, R9W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: November 29, 2007

SAMPLER: N J V

Filename: 11-29-07.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.)
1	99.00	83.78	15.22	22.50	1310	7.27	3,800	16.5	3.50
2	97.37	83.78	13.59	21.50	1345	7.39	4,800	15.7	2.00
3	97.71	83.74	13.97	22.50	1325	7.42	3,700	15.9	4.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

11/28/07 1410

NOTES: Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

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".

MW tops surveyed on 11/28/07.

Excellent recovery in MW #1, #3, poor recovery in MW #2. All showed murky brown appearance, slight hydrocarbon odor in MW #2. Collected BTEX, anions, pH, TDS, and iron samples from all MW's.

Top of casings: MW #1 ~ 3.20 ft., MW #2 ~ 2.10 ft., MW #3 ~ 2.60 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 11-Dec-07

CLIENT: Blagg Engineering

Client Sample ID: MW #1

Lab Order: 0711488

Collection Date: 11/29/2007 1:10:00 PM

Project: Jacques Com A #1 (Jacques #1)

Date Received: 11/30/2007

Lab ID: 0711488-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/5/2007 5:09:19 PM
Toluene	ND	1.0		µg/L	1	12/5/2007 5:09:19 PM
Ethylbenzene	ND	1.0		µg/L	1	12/5/2007 5:09:19 PM
Xylenes, Total	ND	2.0		µg/L	1	12/5/2007 5:09:19 PM
Surr: 4-Bromofluorobenzene	86.6	70.2-105		%REC	1	12/5/2007 5:09:19 PM
EPA METHOD 300.0: ANIONS						Analyst: SMP
Fluoride	1.2	1.0		mg/L	10	12/8/2007 12:35:11 PM
Chloride	89	1.0		mg/L	10	12/8/2007 12:35:11 PM
Nitrogen, Nitrite (As N)	ND	1.0	H	mg/L	10	12/8/2007 12:35:11 PM
Nitrogen, Nitrate (As N)	1.1	1.0	H	mg/L	10	12/8/2007 12:35:11 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2007 12:35:11 PM
Sulfate	2900	25		mg/L	50	12/8/2007 1:27:25 PM
FERROUS IRON						Analyst: SLB
Ferrous Iron	ND	0.10		mg/L	1	12/3/2007
SM4500-H+B: PH						Analyst: LMM
pH	7.32	0.1		pH units	1	11/30/2007
SM 2540C: TDS						Analyst: TAF
Total Dissolved Solids	4800	400		mg/L	1	12/4/2007

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 11-Dec-07

CLIENT: Blagg Engineering

Client Sample ID: MW #2

Lab Order: 0711488

Collection Date: 11/29/2007 1:45:00 PM

Project: Jacquez Corn A #1 (Jacques #1)

Date Received: 11/30/2007

Lab ID: 0711488-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/5/2007 6:09:34 PM
Toluene	ND	1.0		µg/L	1	12/5/2007 6:09:34 PM
Ethylbenzene	16	1.0		µg/L	1	12/5/2007 6:09:34 PM
Xylenes, Total	19	2.0		µg/L	1	12/5/2007 6:09:34 PM
Surr: 4-Bromofluorobenzene	107	70.2-105	S	%REC	1	12/5/2007 6:09:34 PM
EPA METHOD 300.0: ANIONS						Analyst: SMP
Fluoride	1.0	1.0		mg/L	10	12/8/2007 12:52:35 PM
Chloride	230	1.0		mg/L	10	12/8/2007 12:52:35 PM
Nitrogen, Nitrite (As N)	ND	1.0	H	mg/L	10	12/8/2007 12:52:35 PM
Nitrogen, Nitrate (As N)	ND	1.0	H	mg/L	10	12/8/2007 12:52:35 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2007 12:52:35 PM
Sulfate	3900	25		mg/L	50	12/8/2007 1:44:49 PM
FERROUS IRON						Analyst: SLB
Ferrous Iron	ND	0.10		mg/L	1	12/3/2007
SM4500-H+B: PH						Analyst: LMM
pH	7.43	0.1		pH units	1	11/30/2007
SM 2540C: TDS						Analyst: TAF
Total Dissolved Solids	5800	400		mg/L	1	12/4/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 11-Dec-07

CLIENT: Blagg Engineering**Client Sample ID:** MW #3**Lab Order:** 0711488**Collection Date:** 11/29/2007 1:25:00 PM**Project:** Jacques Com A #1 (Jacques #1)**Date Received:** 11/30/2007**Lab ID:** 0711488-03**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/5/2007 6:39:37 PM
Toluene	ND	1.0		µg/L	1	12/5/2007 6:39:37 PM
Ethylbenzene	ND	1.0		µg/L	1	12/5/2007 6:39:37 PM
Xylenes, Total	ND	2.0		µg/L	1	12/5/2007 6:39:37 PM
Surr: 4-Bromofluorobenzene	89.5	70.2-105		%REC	1	12/5/2007 6:39:37 PM
EPA METHOD 300.0: ANIONS						Analyst: SMP
Fluoride	ND	1.0		mg/L	10	12/8/2007 1:10:00 PM
Chloride	71	1.0		mg/L	10	12/8/2007 1:10:00 PM
Nitrogen, Nitrite (As N)	ND	1.0	H	mg/L	10	12/8/2007 1:10:00 PM
Nitrogen, Nitrate (As N)	1.5	1.0	H	mg/L	10	12/8/2007 1:10:00 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2007 1:10:00 PM
Sulfate	2600	25		mg/L	50	12/8/2007 2:02:14 PM
FERROUS IRON						Analyst: SLB
Ferrous Iron	ND	0.10		mg/L	1	12/3/2007
SM4500-H+B: PH						Analyst: LMM
pH	7.31	0.1		pH units	1	11/30/2007
SM 2540C: TDS						Analyst: TAF
Total Dissolved Solids	4500	200		mg/L	1	12/4/2007

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: Jacquez Com A #1 (Jacques #1)

Work Order: 0711488

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 300.0: Anions

Sample ID: MBLK		MBLK		Batch ID: R26423	Analysis Date: 12/8/2007 12:00:23 PM
Fluoride	ND	mg/L	0.10		
Chloride	ND	mg/L	0.10		
Nitrogen, Nitrite (As N)	ND	mg/L	0.10		
Nitrogen, Nitrate (As N)	ND	mg/L	0.10		
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50		
Sulfate	ND	mg/L	0.50		

Method: Ferrous Iron

Sample ID: 0711488-03C MSD		MSD			Batch ID: R26321		Analysis Date:		12/3/2007
Ferrous Iron	0.9240	mg/L	0.10	92.4	50	150	4.55	20	
Sample ID: 0711488-03C MS		MS			Batch ID: R26321		Analysis Date:		12/3/2007
Ferrous Iron	0.9670	mg/L	0.10	96.7	50	150			

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB		MBLK			Batch ID: R26381		Analysis Date: 12/5/2007 8:29:31 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: R26381		Analysis Date: 12/5/2007 11:44:35 PM	
Benzene	19.64	µg/L	1.0	98.2	85.9	113		
Toluene	19.43	µg/L	1.0	96.6	86.4	113		
Ethylbenzene	19.64	µg/L	1.0	98.2	83.5	118		
Xylenes, Total	59.27	µg/L	2.0	98.8	83.4	122		
Sample ID: 100NG BTEX LCSD		LCSD			Batch ID: R26381		Analysis Date: 12/6/2007 12:14:45 AM	
Benzene	20.41	µg/L	1.0	102	85.9	113	3.85	27
Toluene	20.15	µg/L	1.0	100	86.4	113	3.66	19
Ethylbenzene	20.53	µg/L	1.0	103	83.5	118	4.42	10
Xylenes, Total	61.86	µg/L	2.0	103	83.4	122	4.28	13

Method: SM 2540C: TDS

Sample ID: MB-14556		MBLK		Batch ID: 14556		Analysis Date: 12/4/2007	
Total Dissolved Solids	ND	mg/L	20				
Sample ID: LCS-14556		LCS		Batch ID: 14556		Analysis Date: 12/4/2007	
Total Dissolved Solids	1037	mg/L	20	103	80	120	

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 Received:

11/30/2007

Work Order Number **0711488**

Received by: **TLS**

Checklist completed by:

Signature

Emily Shomin

Date

11/30/07

Sample ID labels checked by

Initials

TS

Matrix

Carrier name **UPS**

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?

3°

<6° C 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 # : 156387

JACQUES COM A # 1

LABORATORY (S) USED : PACE ANALYTICAL

UNIT M, SEC. 25, T30N, R9W

Date : April 4, 2008

SAMPLER : N J V

Filename : 04-04-08.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.)
1	99.00	84.26	14.74	22.50	-	-	-	-	-
2	97.37	84.25	13.12	21.50	1230	6.99	4,700	17.8	2.00
3	97.71	84.23	13.48	22.50	1150	7.09	3,400	19.0	4.50

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800
DATE & TIME = 04/03/08 1030

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
(i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

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 # 3 , fair / poor recovery in MW # 2 . Both showed murky brown appearance ,
no apparent hydrocarbon odor in MW # 2 . Collected samples for BTEX per US EPA Method 8260
from MW # 2 & # 3 only .

Top of casings : MW # 1 ~ 3.20 ft. , MW # 2 ~ 2.10 ft. , MW # 3 ~ 2.60 ft. above grade .

ANALYTICAL RESULTS

Project: JACQUEZ COMA #1
Pace Project No.: 6038273

Sample: MW #2		Lab ID: 6038273001	Collected: 04/04/08 12:30	Received: 04/08/08 08:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		04/12/08 08:41	71-43-2	
Ethylbenzene	1.3	ug/L	1.0	1		04/12/08 08:41	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/08 08:41	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/08 08:41	1330-20-7	
Dibromofluoromethane (S)	99	%	85-114	1		04/12/08 08:41	1868-53-7	
Toluene-d8 (S)	102	%	82-114	1		04/12/08 08:41	2037-26-5	
4-Bromofluorobenzene (S)	100	%	85-119	1		04/12/08 08:41	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	81-118	1		04/12/08 08:41	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/08 08:41		

Date: 04/15/2008 05:50 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

Sample: MW #3		Lab ID: 6038273002	Collected: 04/04/08 11:50	Received: 04/08/08 08:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		04/12/08 08:57	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		04/12/08 08:57	100-41-4	
Toluene	ND ug/L		1.0	1		04/12/08 08:57	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		04/12/08 08:57	1330-20-7	
Dibromofluoromethane (S)	99 %		85-114	1		04/12/08 08:57	1868-53-7	
Toluene-d8 (S)	99 %		82-114	1		04/12/08 08:57	2037-26-5	
4-Bromofluorobenzene (S)	92 %		85-119	1		04/12/08 08:57	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		81-118	1		04/12/08 08:57	17060-07-0	
Preservation pH	1.0		1.0	1		04/12/08 08:57		

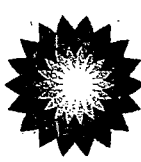
Date: 04/15/2008 05:50 PM

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Chain of Custody Record

Project Name:

BP BU/AR Region/Enfos Segment:

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy):

JACQUES COME A #1

SAN JUAN DE LOS RIOS

USD 4M

4/18/08

156387

Page 1 of 1

On-site Time: 11:00 Temp: 53°F

Off-site	Time: 12:45	Temp: 57° F
----------	-------------	-------------

Sky Conditions: SUNNY

Meteorological Events:

Wind Speed: 0-5 mph Direction: West

Lab Name: PAGE ANALYTICAL		BP/AR Facility No.: WR192506		Consultant/Contractor: BLAKE/URS	
Address: 9608 LOIRET BLVD		BP/AR Facility Address:		Address: 110 N. FOWATT ST.	
City/State: LENEXA, KS 66219		Site Lat/Long:		Bloomfield, NM 87413	
Lab PM: MARY JANE WALKER		California Global ID No.:		Consultant/Contractor Project No.: 41008810	
Tele/Fax: (913) 599-1759		Enfos Project No.:		Consultant/Contractor PM: NELSON VELEZ	
BP/AR PM Contact: MIRE WHELAN, PG		Provision or RCOP (circle one)		Tele/Fax: (505) 632-1199 Fax: (505) 632-3988	
Address: 501 WESTLAKE PARK BLVD.		Phase/WBS:		Report Type & QC Level: STANDARD	
Km. 28.1448 Houston, TX 77079		Sub Phase/Task:		E-mail EDD To: 61999-21VC@vhoo.com	
Tele/Fax: (281) 366-7485 Fax: (281) 366-7094		Cost Element:		Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	
Lab Bottle Order No:		Matrix		Requested Analysis	
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid
1	MW #2	4/4/08 1230	4/4/08	✓	✓
2	MW #3	4/4/08 1150	4/4/08	✓	✓
3					
4					
5					
6					
7					
8					
9					
10					
Relinquished By / Affiliation		Date		Time	
Nelson Velez - BLAKE ENTER.		4/7/08		1530	
Shipper's Name: NELSON VELEZ		Date		Time	
Shipper's Company: BLAKE ENGINEERING, INC.		4/7/08		1530	
Shipment Date: APRIL 7, 2008		Date		Time	
Shipment Method: FED EX OVERNITE		Date		Time	
Shipment Tracking No:		Date		Time	
Special Instructions: REPORT BTEX CONSTITUENTS ONLY.		Date		Time	
Custody Seals In Place Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Temp Blank Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Cooler Temperature on Receipt 39 °F	
Trip Blank Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Trip Blank Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		No	

SAMPLE SUMMARY

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6038273001	MW #2	Water	04/04/08 12:30	04/08/08 08:45
6038273002	MW #3	Water	04/04/08 11:50	04/08/08 08:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6038273001	MW #2	EPA 8260	JKL	9
6038273002	MW #3	EPA 8260	JKL	9

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

Method: EPA 8260
Description: 8260 MSV UST, Water
Client: BP-Blagg Engineering
Date: April 15, 2008

General Information:

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/13967

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

QC Batch: MSV/13967 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 6038273001, 6038273002

METHOD BLANK: 311355

Associated Lab Samples: 6038273001, 6038273002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	3.0	
1,2-Dichloroethane-d4 (S)	%	108	81-118	
4-Bromofluorobenzene (S)	%	93	85-119	
Dibromofluoromethane (S)	%	99	85-114	
Toluene-d8 (S)	%	101	82-114	

LABORATORY CONTROL SAMPLE: 311356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	10	9.2	92	87-117	
Ethylbenzene	ug/L	10	8.9	89	84-123	
Toluene	ug/L	10	8.7	87	81-124	
Xylene (Total)	ug/L	30	26.7	89	83-125	
1,2-Dichloroethane-d4 (S)	%			106	81-118	
4-Bromofluorobenzene (S)	%			91	85-119	
Dibromofluoromethane (S)	%			101	85-114	
Toluene-d8 (S)	%			101	82-114	

Date: 04/15/2008 05:50 PM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/13967

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JACQUEZ COM A #1
Pace Project No.: 6038273

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6038273001	MW #2	EPA 8260	MSV/13967		
6038273002	MW #3	EPA 8260	MSV/13967		

Date: 04/15/2008 05:50 PM

REPORT OF LABORATORY ANALYSIS

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Client Name: BRORSProject # 6038273Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____Tracking #: 459 4348 715Custody Seal on Cooler/Box Present: ☒ Yes ☐ No Seals intact: ☒ Yes ☐ NoPacking Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____Thermometer Used: T-168 T-169Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begunCooler Temperature: 36

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 4/18/08
WJ WJ

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>LT</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> , coliform, TOC, O&G, WL-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>WJ</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. <u>3 TB sent w/ multiple projects</u>
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>63708-3</u>	<u>WJ</u>

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MW 4/9/08

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

JACQUES COM A # 1

LABORATORY (S) USED : PACE ANALYTICAL

UNIT M, SEC. 25, T30N, R9W

Date : June 23, 2008

SAMPLER : N J V

Filename : 06-23-08.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.)
1	99.00	85.00	14.00	22.50	-	-	-	-	-
2	97.37	85.02	12.35	21.50	1050	7.42	2,400	20.9	2.00
3	97.71	84.96	12.75	22.50	1030	7.30	2,600	18.8	4.75

INSTRUMENT CALIBRATIONS =

4.01/7.00/10.00

2,800

DATE & TIME =

06/23/08

0634

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

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 # 3 , fair / poor recovery in MW # 2 . Both showed murky brown appearance , no apparent hydrocarbon odor in MW # 2 . Collected samples for BTEX per US EPA Method 8260 from MW # 2 & # 3 only .

Top of casings : MW # 1 ~ 3.20 ft. , MW # 2 ~ 2.10 ft. , MW # 3 ~ 2.60 ft. above grade .

on-site	9:49	temp	82
off-site	11:00	temp	86
sky cond.	sunny		
wind speed	0-5	direct.	north

ANALYTICAL RESULTS

Project: JACQUES COM A 1
Pace Project No.: 6042387

Sample: MW #2		Lab ID: 6042387001	Collected: 06/23/08 10:50	Received: 06/25/08 09:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		06/27/08 01:32	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/27/08 01:32	100-41-4	
Toluene	ND ug/L		1.0	1		06/27/08 01:32	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/27/08 01:32	1330-20-7	
Dibromofluoromethane (S)	95 %		85-114	1		06/27/08 01:32	1868-53-7	
Toluene-d8 (S)	102 %		82-114	1		06/27/08 01:32	2037-26-5	
4-Bromofluorobenzene (S)	100 %		85-119	1		06/27/08 01:32	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		81-118	1		06/27/08 01:32	17060-07-0	
Preservation pH	1.0		1.0	1		06/27/08 01:32		

Date: 06/27/2008 04:26 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JACQUES COM A 1

Pace Project No.: 6042387

Sample: MW #3		Lab ID: 6042387002	Collected: 06/23/08 10:30	Received: 06/25/08 09:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		06/27/08 01:47	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/27/08 01:47	100-41-4	
Toluene	ND ug/L		1.0	1		06/27/08 01:47	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/27/08 01:47	1330-20-7	
Dibromofluoromethane (S)	97 %		85-114	1		06/27/08 01:47	1868-53-7	
Toluene-d8 (S)	101 %		82-114	1		06/27/08 01:47	2037-26-5	
4-Bromofluorobenzene (S)	100 %		85-119	1		06/27/08 01:47	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		81-118	1		06/27/08 01:47	17060-07-0	
Preservation pH	1.0		1.0	1		06/27/08 01:47		

Date: 06/27/2008 04:26 PM

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Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name: JACQUES COM A I
 BP BU/AR Region/Enfos Segment: STOC SOUTH
 State or Lead Regulatory Agency: NMOC
 Requested Due Date (mm/dd/yyyy): 6/27/08

Page 1 of 1
 On-site Time: 9:49 Temp: 82°F
 Off-site Time: 11:00 Temp: 86°F
 Sky Conditions: sunny
 Meteorological Events:
 Wind Speed: 0-5 Direction: North

Lab Name: Pace Analytical Services, Inc. Address: 9609 Loiret Blvd Lenexa, KS 66219 Lab PM: MJ Walls Tele/Fax: 913-563-1401 BP/AR EMB: Mike Whelan Address: 501 Westlake Park Blvd. Rm28, 144B Houston, TX 77079 Tele: (281) 366-7485 Fax: (281) 366-7094 Lab Bottle Order No: 17709				BP/AR Facility No.: BP/AR Facility Address: Site Lat/Long: California Global ID No.: Enfos Project No.: 00194-0001 Provision or OOC (circle one) Phase/WBS: Sub Phase/Task: Cost Element:				Consultant/Contractor: Blagg/URS Address: 110 N. Fourth St. Bloomfield, NM 87413 Consultant/Contractor Project No.: Consultant/Contractor PM: Nelson Velez Tele: (505) 632-1199 Fax: (505) 632-3903 Report Type & QC Level: STD E-Mail EDD To: blagg-nv@yahoo.com Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)					
Item No.	Sample Description	Time	Date	Matrix	Laboratory No.	No. of Containers	Preservative	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
1	MW #2	1050	6/26/08	Soil/Solid	001	3	Unpreserved H ₂ SO ₄ HNO ₃ HCl Methanol BTEX (8260)	Nelson Velez	6/25/08	1645		6/25	900
2	MW #3	1030	6/26/08	Soil/Solid	002	3							
3													
4													
5													
6													
7													
8													
9													
10													
Sampler's Name: Nelson Velez													
Sampler's Company: Blagg Environmental, Inc.													
Shipment Date: 6/25/08 NV													
Shipment Method: FED. EX.													
Shipment Tracking No: 8643 6004 9400													
Special Instructions: REPORT BTEX CONSTITUENTS ONLY.													
Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: 35°F Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No													

SAMPLE SUMMARY

Project: JACQUES COM A 1
Pace Project No.: 6042387

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6042387001	MW #2	Water	06/23/08 10:50	06/25/08 09:00
6042387002	MW #3	Water	06/23/08 10:30	06/25/08 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: JACQUES COM A 1
Pace Project No.: 6042387

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6042387001	MW #2	EPA 8260	SSM	9
6042387002	MW #3	EPA 8260	SSM	9

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: JACQUES COM A 1
Pace Project No.: 6042387

Method: EPA 8260
Description: 8260 MSV UST, Water
Client: BP-Blagg Engineering
Date: June 27, 2008

General Information:

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/15384

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JACQUES COM A 1
Pace Project No.: 6042387

QC Batch: MSV/15384 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 6042387001, 6042387002

METHOD BLANK: 344275

Associated Lab Samples: 6042387001, 6042387002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	3.0	
1,2-Dichloroethane-d4 (S)	%	95	81-118	
4-Bromofluorobenzene (S)	%	101	85-119	
Dibromofluoromethane (S)	%	94	85-114	
Toluene-d8 (S)	%	103	82-114	

LABORATORY CONTROL SAMPLE: 344276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	10	9.1	91	87-117	
Ethylbenzene	ug/L	10	9.6	96	84-123	
Toluene	ug/L	10	9.4	94	81-124	
Xylene (Total)	ug/L	30	27.3	91	83-125	
1,2-Dichloroethane-d4 (S)	%			94	81-118	
4-Bromofluorobenzene (S)	%			103	85-119	
Dibromofluoromethane (S)	%			97	85-114	
Toluene-d8 (S)	%			101	82-114	

Date: 06/27/2008 04:26 PM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JACQUES COM A 1
Pace Project No.: 6042387

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/15384

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JACQUES COM A 1
Pace Project No.: 6042387

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6042387001	MW #2	EPA 8260	MSV/15384		
6042387002	MW #3	EPA 8260	MSV/15384		

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REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt



Client Name: BP BLAGE

Project # 6042587

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 0N L0C

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used T-169 / 179

Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.5

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: BW 6/25

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>2 DAY</u>
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>Wt</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

BLAGG ENGINEERING, INC.**MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA****CLIENT : BP AMERICA PROD. CO.****CHAIN-OF-CUSTODY # : N / A****JACQUES COM A # 1****LABORATORY (S) USED : HALL ENVIRONMENTAL****UNIT M, SEC. 25, T30N, R9W****Date : August 25, 2008****SAMPLER : N J V****Filename : 08-25-08.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.)
1	99.00	84.35	14.65	22.50	-	-	-	-	-
2	97.37	84.35	13.02	21.50	1210	7.23	3,100	22.5	2.00
3	97.71	84.28	13.43	22.50	1150	7.26	2,500	23.4	4.50

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	08/25/08	0730

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

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 # 3 , fair / poor recovery in MW # 2 . Both showed murky brown appearance , no apparent hydrocarbon odor in MW # 2 . Collected samples for BTEX per US EPA Method 8021B from MW # 2 & # 3 only .

Top of casings : MW # 1 ~ 3.20 ft. , MW # 2 ~ 2.10 ft. , MW # 3 ~ 2.60 ft. above grade .

on-site	11:14	temp	82
off-site	12:22	temp	86
sky cond.	Mostly sunny		
wind speed	0-5	direct.	southwest

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Sep-08

CLIENT: Blagg Engineering
Project: Jacques Com A #1**Lab Order:** 0808411**Lab ID:** 0808411-01**Collection Date:** 8/25/2008 12:10:00 PM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	1.0		µg/L	1	9/5/2008 1:04:00 AM
Toluene	ND	1.0		µg/L	1	9/5/2008 1:04:00 AM
Ethylbenzene	ND	1.0		µg/L	1	9/5/2008 1:04:00 AM
Xylenes, Total	ND	2.0		µg/L	1	9/5/2008 1:04:00 AM
Surr: 4-Bromofluorobenzene	109	65.9-130		%REC	1	9/5/2008 1:04:00 AM

Lab ID: 0808411-02**Collection Date:** 8/25/2008 11:50:00 AM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	1.0		µg/L	1	9/5/2008 1:34:16 AM
Toluene	ND	1.0		µg/L	1	9/5/2008 1:34:16 AM
Ethylbenzene	ND	1.0		µg/L	1	9/5/2008 1:34:16 AM
Xylenes, Total	ND	2.0		µg/L	1	9/5/2008 1:34:16 AM
Surr: 4-Bromofluorobenzene	88.6	65.9-130		%REC	1	9/5/2008 1:34:16 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Jacques Com A #1

Work Order: 0808411

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R30082 Analysis Date: 9/4/2008 8:51:58 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: R30082 Analysis Date: 9/5/2008 3:05:27 AM

Benzene	18.11	µg/L	1.0	90.6	85.9	113			
Toluene	17.59	µg/L	1.0	87.9	86.4	113			
Ethylbenzene	18.40	µg/L	1.0	92.0	83.5	118			
Xylenes, Total	55.02	µg/L	2.0	91.7	83.4	122			

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R30082 Analysis Date: 9/5/2008 3:35:48 AM

Benzene	17.66	µg/L	1.0	88.3	85.9	113	2.54	27	
Toluene	16.79	µg/L	1.0	84.0	86.4	113	4.62	19	S
Ethylbenzene	17.64	µg/L	1.0	88.2	83.5	118	4.23	10	
Xylenes, Total	52.31	µg/L	2.0	87.2	83.4	122	5.05	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 Received:

8/26/2008

Work Order Number **0808411**

Received by: **ARS**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name **UPS**

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°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action