3R - 035

ANNUAL MONITORING REPORT

04/04/2009

3R035

RECEIVED
2009 MAY 4 AM 9 45

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

JONES A LS #3
(G) SECTION 15, T28N, R8W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

APRIL 2009

PREPARED BY:
BLAGG ENGINEERING, INC.

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

BP AMERICA PRODUCTION COMPANY
JONES A LS # 3 - Dehydrator Pit
SW/4 NE/4, Sec. 15, T28N, R8W

Monitor Well Installation Dates: **5/28/04 (MW #2), 5/23/06 (MW #1 & MW #3)**

Monitor Well Sampling Dates: **4/01/08, 6/26/08, 8/25/08**

Site History:

A site dehydrator pit closure was initiated in March 2003. Potential groundwater impact was identified within the source area via installation of a monitor well in May 2004 (MW #2). Documentation for this work and subsequent groundwater monitoring data for the site have previously been submitted for New Mexico Oil Conservation Division (**NMOCD**) review. Further limited excavation of the source area was suggested within the report. The reporting herein is for site monitoring from June 2008 only.

Groundwater Monitor Well Sampling Procedures:

Each monitor well was developed by hand-bailing, using new disposable bailers after installation. Prior to sample collections, each monitor well was 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 for benzene, toluene, ethylbenzene, and total xylenes (**BTEX**) by US EPA Method 8021B or 8260 was conducted.

Fluids generated during monitor well development and purging was managed by discarding into the separator below-grade tank (BGT) located on the well site. The BGT contents are then disposed through approved NMOCD operational procedures for removal of produced fluids.

Groundwater Quality & Flow Direction Information:

MW #2 has tested with benzene fluctuations below and above the New Mexico Water Quality Control Commission (**NMWQCC**) standards since its installation. Down gradient delineation appears to have been achieved, based on test results of MW #3. A summary of BTEX laboratory analytical results is included within the table on the following page. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included.

Groundwater contour maps of relative water table elevations have consistently been measure to flow in the southwest direction (Figure 2 through Figure 4).

Summary and/or Recommendations:

Limited excavation of the impacted soil at the source area is still recommended. Thereafter, installation of a replacement monitor well and continue quarterly sampling until a minimum of four (4) consecutive sampling events below NMWQCC standards has been attained. Bi-annual sampling of MW #2 is currently suggested unless circumstances dictate otherwise.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

REVISED DATE: September 11 , 2008

FILENAME: (J3-3Q08.WK4) NJV

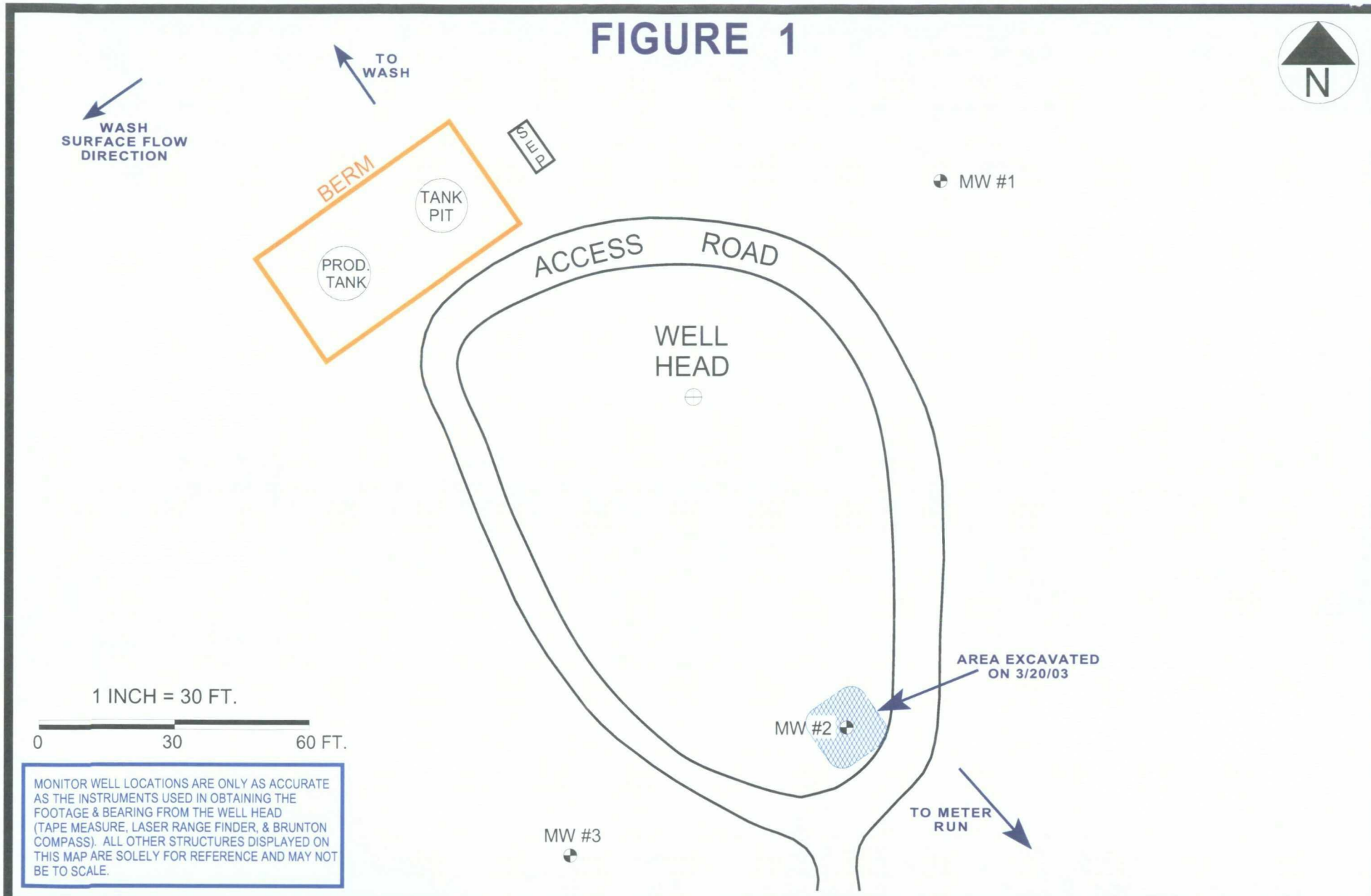
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb) Benzene	Toluene	Ethyl Benzene	Total Xylene
07-Jun-06	MW #1	11.04	20.00	828	1,100	7.08		ND	ND	ND	ND
23-Aug-06		11.34			900	7.15		ND	ND	ND	ND
14-Jun-04	MW #2	10.78	20.00		2,400	7.14		**290**	**780**	52	470
29-Dec-04		10.53			N/A	N/A		**7.8**	**11**	2.5	13
28-Mar-05		9.97			2,100	7.02		**720**	**4,800**	640	**6,800**
23-Jun-05		10.85			2,100	6.93		**140**	**220**	30	**570**
07-Jun-06		12.88	21.52	2,600	2,400	6.98		**32**	**11**	4.0	**17**
23-Aug-06		13.28			2,100	6.97		**9.9**	**ND**	1.2	**3.9**
16-Nov-06		12.25			2,400	6.96		**24**	**18**	4.9	**20**
25-Jan-07		11.01			900	7.34		**4.0**	**4.3**	1.4	**7.9**
25-Apr-07		12.05			2,300	7.06		**8.4**	**4.7**	2.2	**10**
19-Jul-07		13.15			2,200	6.91		**60**	**35**	7.3	**32**
09-Oct-07		11.98			2,200	6.95		**4.8**	**12**	3.7	**22**
01-Apr-08		11.45			2,300	7.01		**3.5**	**1.3**	1.7	**5.3**
26-Jun-08		12.19			1,400	7.21		**18**	**6.6**	5.3	**22**
25-Aug-08		13.01			2,100	7.04		**63**	**46**	14	**37**
07-Jun-06	MW #3	12.59	20.06	2,310	2,300	7.00		ND	ND	ND	ND
23-Aug-06		13.01			1,900	7.03		ND	ND	ND	ND
16-Nov-06		11.94			2,000	6.98		1.1	ND	2.1	7.5
25-Jan-07		12.64			1,100	7.52		ND	ND	1.7	4.0
25-Apr-07		11.76			2,200	7.06		ND	ND	6.7	17
19-Jul-07		12.84			2,100	7.00		ND	ND	ND	ND
					NMWQCC GROUNDWATER STANDARDS			**10**	**750**	**750**	**620**

NOTES : **1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .**

2) RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED .

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

FIGURE 1



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.

JONES A LS #3

SW/4 NE/4 SEC. 15, T28N, R8W

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

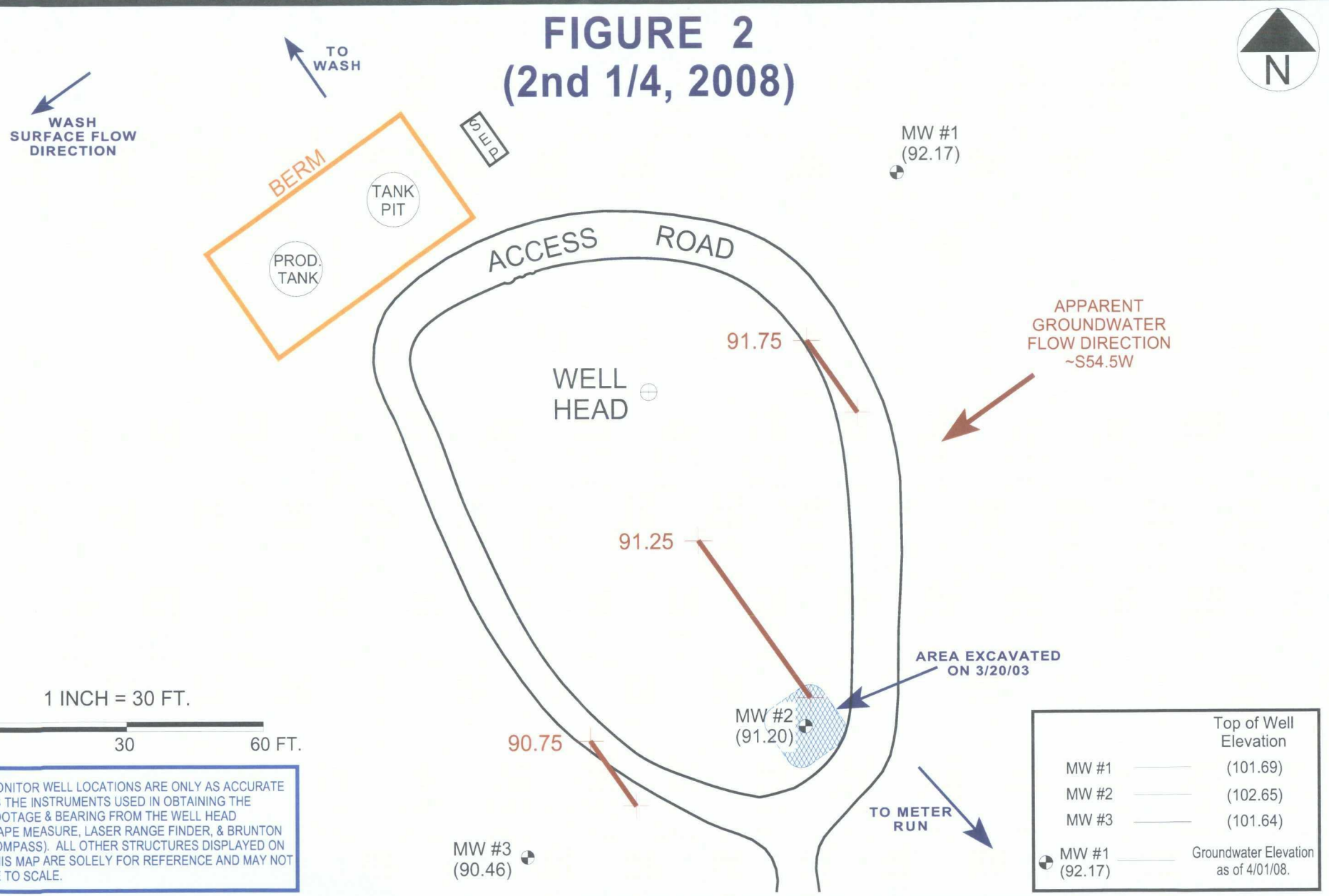
FILENAME: JONES A LS 3-SM.SKF

REVISED: 08-23-06 NJV

SITE MAP

06/06

FIGURE 2
(2nd 1/4, 2008)



BP AMERICA PRODUCTION CO.

JONES A LS # 3

SW/4 NE/4 SEC. 15, T28N, R8W

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

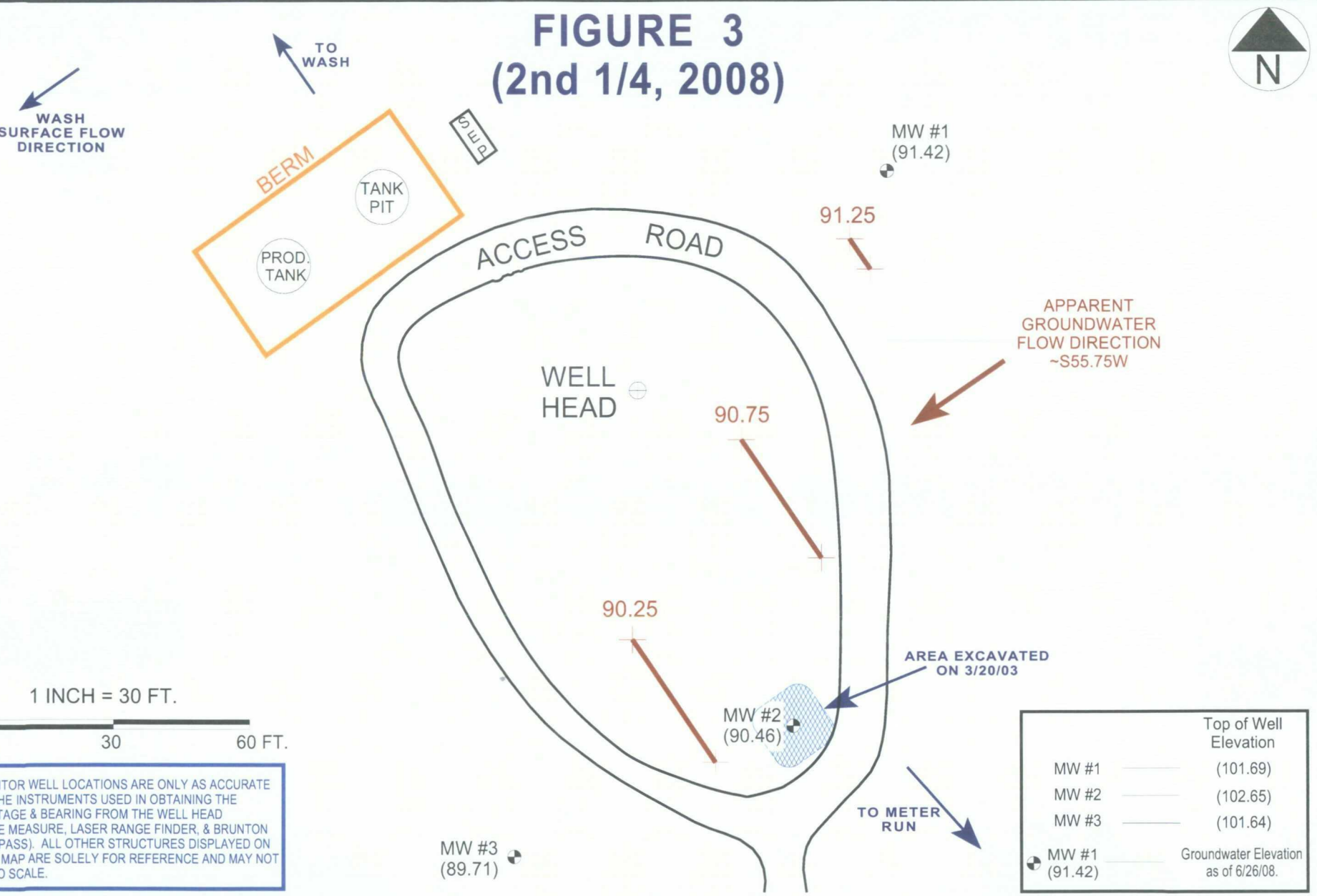
FILENAME: 04-01-08-GW.SKF

REVISED: 04-03-08 NJV

GROUNDWATER CONTOUR MAP

04/08

FIGURE 3
(2nd 1/4, 2008)



BP AMERICA PRODUCTION CO.

JONES A LS # 3

SW/4 NE/4 SEC. 15, T28N, R8W

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

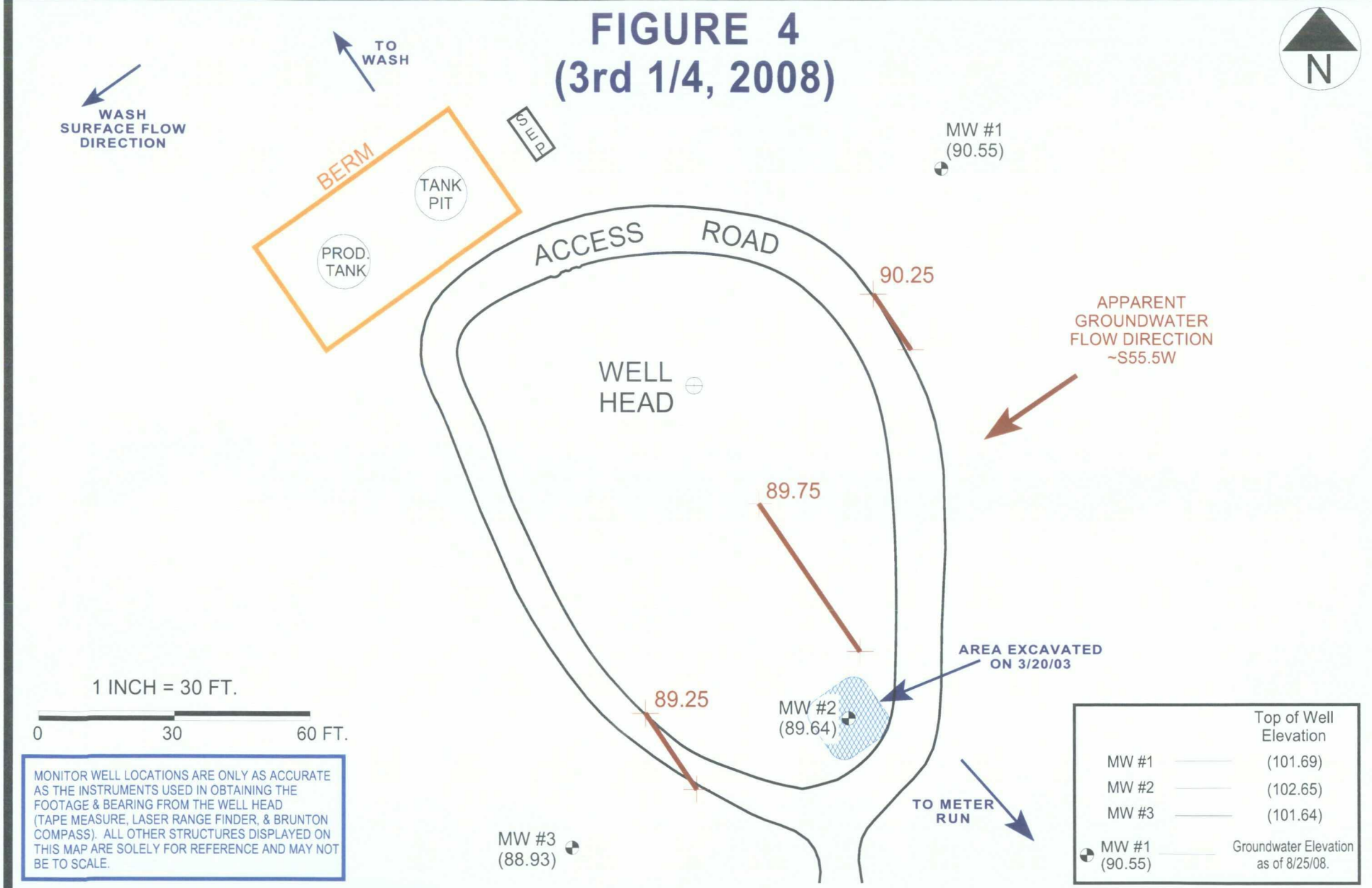
FILENAME: 06-26-08-GW.SKF

REVISED: 06-26-08 NJV

GROUNDWATER CONTOUR MAP

06/08

FIGURE 4
(3rd 1/4, 2008)



BP AMERICA PRODUCTION CO.

JONES A LS # 3

SW/4 NE/4 SEC. 15, T28N, R8W

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: 08-25-08 NJV

GROUNDWATER CONTOUR MAP

08/08

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : 156385

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : PACE ANALYTICAL

Date : **April 1, 2008**

SAMPLER : N J V

Filename : **04-01-08.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.)
MW - 1	101.69	92.17	9.52	20.00	-	-	-	-	-
MW - 2	102.65	91.20	11.45	21.52	1208	7.01	2,300	15.9	5.00
MW - 3	101.64	90.46	11.18	20.06	-	-	-	-	-
					INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800		
					DATE & TIME =	04/01/08	1158		

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 . Collected sample for BTEX per US EPA Method 8260 from MW # 2 only .

Top of casing MW # 1 ~ 1.95 ft., MW # 2 ~ 3.00 ft., MW # 3 ~ 1.80 ft. above grade .

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: JONES A LS #3
Pace Project No.: 6038272

Sample: MW #2 **Lab ID: 6038272001** Collected: 04/01/08 12:08 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	**3.5**	ug/L	1.0	1		04/10/08 10:14	71-43-2	
Ethylbenzene	**1.7**	ug/L	1.0	1		04/10/08 10:14	100-41-4	
Toluene	**1.3**	ug/L	1.0	1		04/10/08 10:14	108-88-3	
Xylene (Total)	**5.3**	ug/L	3.0	1		04/10/08 10:14	1330-20-7	
Dibromofluoromethane (S)	96	%	85-114	1		04/10/08 10:14	1868-53-7	
Toluene-d8 (S)	103	%	82-114	1		04/10/08 10:14	2037-26-5	
4-Bromofluorobenzene (S)	89	%	85-119	1		04/10/08 10:14	460-00-4	
1,2-Dichloroethane-d4 (S)	87	%	81-118	1		04/10/08 10:14	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/10/08 10:14		

156385

Page 1 of 1

Chain of Custody Record

Project Name: JONES A LS #3
BP BU/AR Region/Enfos Segment: SAN JUAN OC SOUTH
State or Lead Regulatory Agency: NMOCD / BLM
Requested Due Date (mm/dd/yy): 4/15/08

On-site Time:	11:00 ~~12:25~~ 2:15	Temp:	53°F
Off-site Time:	12:25	Temp:	56°F
Sky Conditions:	SUNNY		
Meteorological Events:			
Wind Speed:	0-5 mph	Direction:	WEST

Lab Name: PACE ANALYTICAL	BP/AR Facility No.: WR192147	Consultant/Contractor: BLAGG/URS
Address: 9608 LOIRET BLVD	BP/AR Facility Address:	Address: 110 N. FOURTH ST.
LENEXA, KS 66219	Site Lat/Long:	BLOOMFIELD, NM 87413
Lab PM: MARY JANE WALLS	California Global ID No.:	Consultant/Contractor Project No.: 41008716
Tele/Fax: (913)-599-5665 FAX: (913)-599-1759	Enfos Project No.: 00195	Consultant/Contractor PM: NELSON VELEZ
BP/AR PM Contact: MIKE WHELAN, PG	Provision or RCOP (circle one)	Tele/Fax: (505)632-1199 FAX: 632-3903
Address: 501 WESTLAKE PARK BLVD	Phase/WBS:	Report Type & QC Level: STANDARD
Rm. 28.144B HOUSTON, TX 77079	Sub Phase/Task:	E-mail EDD To: blagg_nje@yahoo.com
Tele/Fax: (281) 366-7485 FAX: (281) 366-7094	Cost Element: 01	Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: BTEX 8021	Requested Analysis: BTEX/TPH	Requested Analysis: BTEX/Oxy/TPH	Requested Analysis: EPA 8260	Requested Analysis: EPA 8270	Requested Analysis:	Requested Analysis:	Requested Analysis:	Requested Analysis:	Requested Analysis:	Sample Point Lat/Long and Comments
																								603272
1	MW #2	1208	4/1/08		✓			3				✓					✓		300.0 H					01
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

Lab Bottle Order No:

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: NELSON VELEZ						
Sampler's Company: BLAGG ENGINEERING	Nelson Velez - BLAGG ENGR.	4/1/08	1530			
Shipment Date: APRIL 1, 2008						
Shipment Method: FED EX OVERNITE						
Shipment Tracking No:						

Special Instructions: REPORT BTEX CONSTITUENTS ONLY. SAN JUAN COUNTY, NM

Custody Seals In Place Yes X No ___ Temp Blank Yes X No ___ Cooler Temperature on Receipt 3.6 °F/C Trip Blank Yes X No ___

LABORATORY

BP COC Rev.4 10/1/04

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Lenexa, KS 66219
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SAMPLE SUMMARY

Project: JONES A LS #3
Pace Project No.: 6038272

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6038272001	**MW #2**	Water	04/01/08 12:08	04/08/08 08:45

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SAMPLE ANALYTE COUNT

Project: JONES A LS #3
Pace Project No.: 6038272

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6038272001	**MW #2**	EPA 8260	JKL	9

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PROJECT NARRATIVE

Project: JONES A LS #3
Pace Project No.: 6038272

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: BP-Blagg Engineering
Date: April 10, 2008

General Information:
1 sample was 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/13909

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.

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QUALITY CONTROL DATA

Project: JONES A LS #3
Pace Project No.: 6038272

QC Batch: MSV/13909
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 6038272001

METHOD BLANK: 310190
Associated Lab Samples: 6038272001

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)	%	88	81-118	
4-Bromofluorobenzene (S)	%	88	85-119	
Dibromofluoromethane (S)	%	99	85-114	
Toluene-d8 (S)	%	104	82-114	

LABORATORY CONTROL SAMPLE: 310191

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	10	9.3	93	87-117	
Ethylbenzene	ug/L	10	9.8	98	84-123	
Toluene	ug/L	10	9.7	97	81-124	
Xylene (Total)	ug/L	30	30.2	101	83-125	
1,2-Dichloroethane-d4 (S)	%			87	81-118	
4-Bromofluorobenzene (S)	%			89	85-119	
Dibromofluoromethane (S)	%			96	85-114	
Toluene-d8 (S)	%			104	82-114	

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QUALIFIERS

Project: JONES A LS #3
Pace Project No.: 6038272

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/13909

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JONES A LS #3
Pace Project No.: 6038272

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6038272001	**MW #2**	EPA 8260	MSV/13909		

Pace Analytical

Client Name: Bours Project # Cw38272

Optional
Proj. Due Date:
Proj. Name: 4/18/08

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____
Tracking #: 999 4348 715

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

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

Thermometer Used: T-168 (T-169) Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 3.6 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 RLO RLO

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

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MW 4/18/08 **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

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **June 26, 2008**

SAMPLER : N J V

Filename : **06-26-08.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.)
MW - 1	101.69	91.42	10.27	20.00	-	-	-	-	-
MW - 2	102.65	90.46	12.19	21.52	1435	7.21	1,400	20.8	4.50
MW - 3	101.64	89.71	11.93	20.06	-	-	-	-	-

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 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 . Collected sample for BTEX per US EPA Method 8260 from MW # 2 only .

Top of casing MW # 1 ~ 1.95 ft., MW # 2 ~ 3.00 ft., MW # 3 ~ 1.80 ft. above grade .

on-site	1:52	temp	91 F
off-site	2:52	temp	91 F
sky cond.	Sunny / partly cloudy		
wind speed	0-5	direct.	West

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Jul-08*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW#2
Lab Order:	0806429	**Collection Date:**	6/26/2008 2:35:00 PM
Project:	Jones A LS #3	**Date Received:**	6/27/2008
Lab ID:	0806429-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	18	1.0		µg/L	1	7/5/2008 3:26:59 PM
Toluene	6.6	1.0		µg/L	1	7/5/2008 3:26:59 PM
Ethylbenzene	5.3	1.0		µg/L	1	7/5/2008 3:26:59 PM
Xylenes, Total	22	2.0		µg/L	1	7/5/2008 3:26:59 PM
Surr: 4-Bromofluorobenzene	103	68.9-122		%REC	1	7/5/2008 3:26:59 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

Client: BLAGG ENER./BP AMERICA

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

Phone #: 632-1199

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: JONES A LS #3

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 3°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
6/26/08	1435	MW #2	2-40ml	HgCl2 & COOL	0806429

Analysis Request

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

Date:	Time:	Relinquished by:	Received by:	
6/26/08	1540	Nelson Velez		
Date:	Time:	Relinquished by:	Received by:	
				10:00 6/27/08

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Jones A LS #3 **Work Order:** 0806429

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R29210**	Analysis Date:	7/5/2008 10:23:35 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 RB-II		*MBLK*			Batch ID:	**R29210**	Analysis Date:	7/6/2008 9:09:16 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:	**R29210**	Analysis Date:	7/6/2008 12:33:26 AM	
Benzene	21.12	µg/L	1.0	106	85.9	113			
Toluene	21.40	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.60	µg/L	1.0	108	83.5	118			
Xylenes, Total	64.42	µg/L	2.0	107	83.4	122			
Sample ID: 100NG BTEX LCS-II		*LCS*			Batch ID:	**R29210**	Analysis Date:	7/6/2008 2:43:40 PM	
Benzene	21.17	µg/L	1.0	106	85.9	113			
Toluene	21.45	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.95	µg/L	1.0	110	83.5	118			
Xylenes, Total	65.27	µg/L	2.0	109	83.4	122			

Qualifiers:

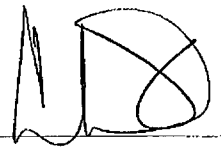
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date Received: 6/27/2008

Work Order Number 0806429 | Received by: ARS

Checklist completed by:  6/27/08 | Sample ID labels checked by: 

Signature | Date | 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?	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 # : N / A

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

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.)
MW - 1	101.69	90.55	11.14	20.00	-	-	-	-	-
MW - 2	102.65	89.64	13.01	21.52	0738	7.04	2,100	16.0	4.25
MW - 3	101.64	88.93	12.71	20.06	-	-	-	-	-

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 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 . Collected sample for BTEX per US EPA Method 8021B from MW # 2 only .

Top of casing MW # 1 ~ 1.95 ft. , MW # 2 ~ 3.00 ft. , MW # 3 ~ 1.80 ft. above grade .

on-site	6:52	temp	64 F
off-site	7:59	temp	66 F
sky cond.	Partly cloudy		
wind speed	0-5	direct.	East

Hall Environmental Analysis Laboratory, Inc.

Date: *05-Sep-08*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW#2
Lab Order:	0808407	**Collection Date:**	8/25/2008 7:38:00 AM
Project:	Jones A LS #3	**Date Received:**	8/26/2008
Lab ID:	0808407-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	63	1.0		µg/L	1	9/4/2008 5:58:20 PM
Toluene	46	1.0		µg/L	1	9/4/2008 5:58:20 PM
Ethylbenzene	14	1.0		µg/L	1	9/4/2008 5:58:20 PM
Xylenes, Total	37	2.0		µg/L	1	9/4/2008 5:58:20 PM
Surr: 4-Bromofluorobenzene	84.0	65.9-130		%REC	1	9/4/2008 5:58:20 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

Client: BLAGG ENER./BP AMERICA

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

Phone #: 632-1199

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: JONES A LS #3

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 17°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0808407	(BTEX + ~~MTBE~~ + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
8/25/08	0738	MW #2	2-40ml	HCl & cool	1	✓															

Date:	Time:	Relinquished by:	Received by:	Remarks:
8/25/08	1415	Nelson Velez		
Date:	Time:	Relinquished by:	Received by: 16:10 8/26/08	

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Jones A LS #3 **Work Order:** 0808407

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 0808407 | Received by: ARS

Checklist completed by: _____ 8/26/08 | Sample ID labels checked by: _____

Signature | Date | 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 _____