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

3R420

February 1, 2011

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

Re: BP America Production Company
Groundwater Monitoring Report
GCU # 204E, Unit I, Sec. 34, T28N, R12W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: 3RP-420-0

Dear Mr. von Gonten:

BP America Production Company (**BP**) has retained Blagg Engineering, Inc. (**BEI**) to conduct environmental monitoring of groundwater at the GCU # 204E.

The last formal correspondence to NMOCD was conducted with letter dated, May 1, 2009. Since then, BP has followed its NMOCD approved groundwater management plan and continues to monitor the site. No permanent closure is requested at this time.

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. Jeff Peace, Environmental Advisor, BP, Farmington, NM

NJV/njv

GCU 204E 02-01-11 CVL.DOC

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

GCU # 204E
(I) SECTION 34, T28N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

DECEMBER 2010

PREPARED BY:
BLAGG ENGINEERING, INC.

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

BP AMERICA PRODUCTION COMPANY
GCU # 204E - Blow Pit
NE¼ SE¼, Sec. 34, T28N, R12W

Remediation via Excavation Date: July 2009

Monitor Well Installation Dates: 11/1/06 (MW #2), 1/18/07 (MW #1, MW #3), 10/1/09 (MW #2R, MW #4, MW #5)

Monitor Well Sampling Dates: 5/19/09, 11/16/09, 2/19/10, 5/19/10, 10/30/10

Pit Closure & Background:

A site earthen blow pit closure was initiated in June 2003. Groundwater impacts were identified from sampling and testing of MW #2 in November 2006. After receipt of the laboratory results, the New Mexico Oil Conservation Division (**NMOCD**) was notified with a letter dated March 2, 2007 of the groundwater impacts. Documentation of this work and subsequent groundwater monitoring data for the site was previously submitted to NMOCD for review. Further site delineation and limited excavation of the source area was proposed. In addition, continued bi-annual sampling pursuant to BP's NMOCD approved Groundwater Management Plan (**GMP**) was also suggested within the report. Reporting herein is for further site soil remediation, groundwater monitor well installations, and site monitoring conducted in 2009 and 2010.

Soil Remediation and Groundwater Abatement:

In July 2009, excavation of the source area was conducted using a trackhoe (Figure 1B). Groundwater was not detected during the removal of the apparent impacted soils. Depths of the excavation averaged fifteen (15) feet below ground surface with sandstone bedrock being observed at the base. The excavation perimeter was calculated approximately 2,600 square feet. An estimated 500 cubic yards of soil were removed and transported to BP's Crouch Mesa Facility.

Groundwater monitor wells MW #2R, MW #4, and MW #5 were installed on October 1, 2009 and sampling initiated in November 2009 (Figure 1C). Boring log of the three (3) newly installed wells along with completion information are contained within this report.

Groundwater Monitor Well Sampling Procedures:

Each groundwater monitor well was purged approximately three (3) well bore volumes or at a minimum, its well bore using new disposable bailers, then given a sufficient amount of time to allow recovery prior to sample collections. 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 was conducted.

Fluids generated during monitor well development and purging were managed by discarding into the separator/compressor below-grade tank (BGT) located south-southwest of the test wells. The BGT contents are eventually disposed through approved NMOCD operational procedures for removal of produced fluids.

Water Quality and Gradient Information:

The analytical results for MW #2R have shown a significant decrease in all BTEX constituents since the remediation effort in July 2009. MW #3 results appear to be in a steady state condition, especially the benzene and total xylenes constituents. Both MW #4 and MW #5 have elevated benzene and total xylenes concentrations well above the NMWQCC standards. A historical summary of laboratory analytical BTEX results are included within the tables on the following pages. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included.

Groundwater contour maps (Figure 2 through Figure 6) reveal the relative elevations from the site wells have shown an apparent north-northwest flow direction.

Summary and/or Recommendations:

The well site is located in a very remote area of San Juan County near Navajo Agricultural Product Industry (NAPI) area. The presence of BTEX well above NMWQCC standards down gradient of the source area (MW #2R) and lateral gradient (MW #3) indicates possible long term monitoring. Down gradient delineation to the north of the source area is necessary with at least one (1) or more groundwater test wells. Alternative remedial actions such as introducing an oxygenated compound may be suitable for groundwater abatement of high dissolved BTEX concentrations. Quarterly sampling of MW #2R is recommended. At a minimum, bi-annual sampling of MW #3, MW #4, and MW #5 should be considered unless changes in their analytical data suggest otherwise. This site will continue to have sampling and testing pursuant to BP's GMP.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 204E
UNIT I, SEC. 34, T28N, R12W

REVISED DATE: November 11, 2010

FILENAME: (204E4Q10.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
30-Jan-07	MW #1	18.57	27.00	584	1,100	7.33		ND	3.0	2.3	13
14-Nov-06	MW #2	16.69	27.50	924	1,400	6.80		**1,000**	**3,900**	**1,100**	**9,700**
30-Jan-07		16.97			1,200	6.89		**900**	**1,600**	**1,400**	**12,000**
25-Apr-07		16.37			1,000	6.78		**790**	**1,200**	**1,100**	**13,000**
23-Jul-07		15.16			1,000	6.82		**940**	**630**	**1,800**	**12,000**
26-Jun-08		14.36			700	7.34		**200**	**410**	**1,700**	**12,000**
26-Aug-08		13.36			800	7.27		**160**	**210**	**1,400**	**11,000**
19-May-09		14.60			800	7.32		**140**	**83**	**1,200**	**6,700**
"	dup.)	"			"	"		**150**	**68**	**1,300**	**7,200**
16-Nov-09	MW #2R	15.61			900	7.71		**13**	**ND**	**240**	**1,900**
19-Feb-10		16.05			1,000	7.86		**ND**	**ND**	**150**	**1,300**
19-May-10		15.88			1,100	7.75		**11**	**1.8**	**220**	**1,800**
30-Oct-10		15.55			1,000	7.82		**6.3**	**ND**	**86**	**410**
30-Jan-07	MW #3	13.92	25.00	620	1,000	7.00		8.2	ND	71	120
25-Apr-07		11.81			900	6.91		8.3	ND	25	140
23-Jul-07		11.89			1,000	6.74		**26**	ND	90	270
25-Oct-07		10.37			1,100	7.00		**2.4**	ND	4.7	11
14-Apr-08		11.43			700	6.99		**1,360**	14	116	381
26-Aug-08		9.96			1,200	6.99		**520**	ND	64	140
19-May-09		12.00			800	7.01		**350**	170	380	700
16-Nov-09		13.21			800	7.18		**240**	**1,700**	600	**1,500**
19-Feb-10		13.44			800	7.36		**96**	**940**	480	**1,100**
19-May-10		13.45			1,000	7.19		**210**	**2,200**	680	**2,500**
30-Oct-10		12.69			1,000	6.95		**350**	**210**	340	**1,100**
					NMWQCC GROUNDWATER STANDARDS			**10**	**750**	**750**	**620**

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 204E

UNIT I, SEC. 34, T28N, R12W

REVISED DATE: November 11, 2010

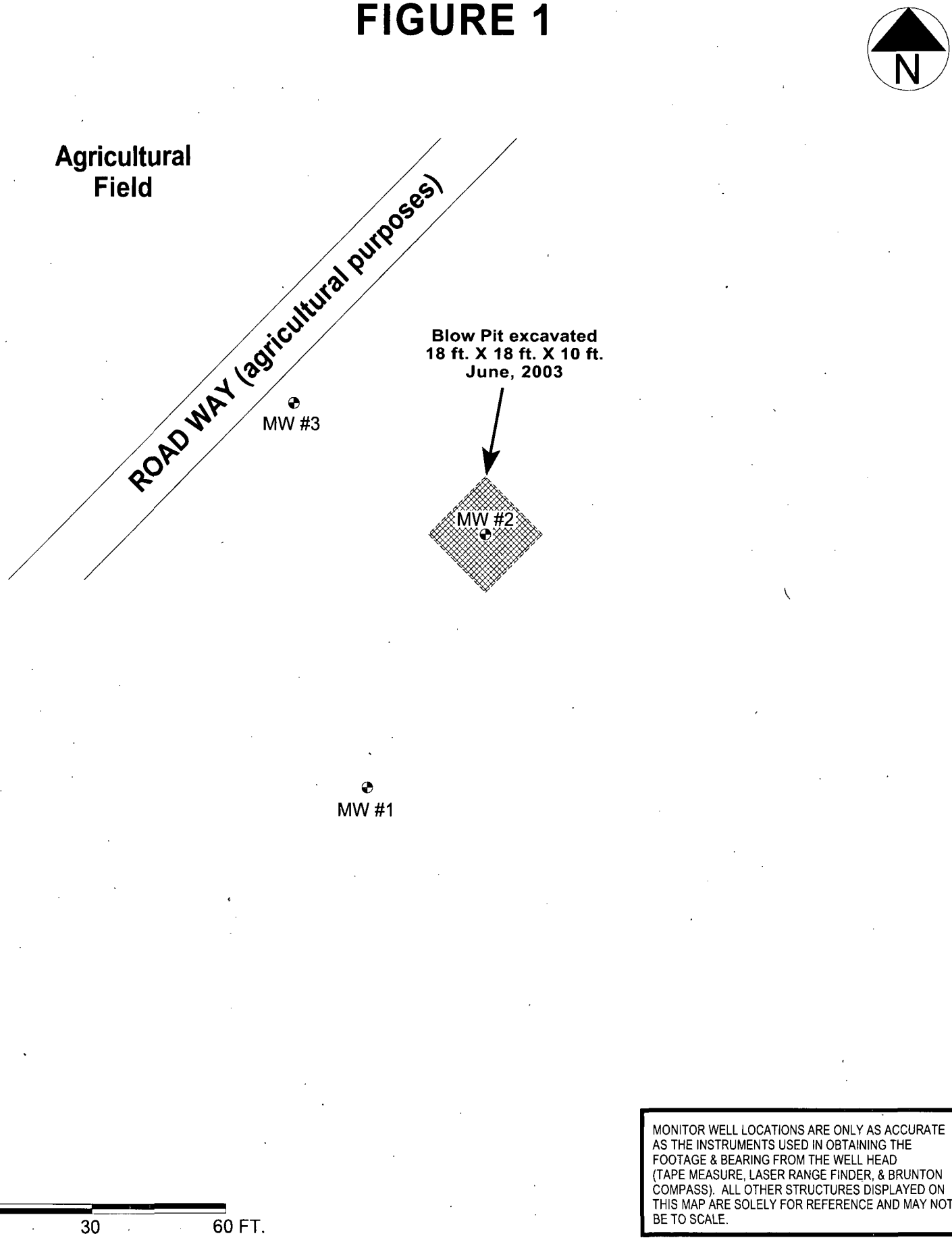
FILENAME: (204E4Q10.WK4) NJV

								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
16-Nov-09	MW #4	15.66		2,010	1,600	7.10		**2,200**	14	140	**950**
19-Feb-10		15.82			2,000	7.02		**5,800**	14	500	**1,800**
19-May-10		15.78			2,700	6.85		**5,200**	42	470	**1,500**
30-Oct-10		15.47			1,900	6.73		**6,500**	63	600	**1,500**
16-Nov-09	MW #5	13.77		1,090	1,300	7.01		**1,100**	200	430	**2,800**
19-Feb-10		13.84			1,900	6.99		**790**	100	370	**2,600**
19-May-10		13.94			2,600	6.82		**1,200**	180	370	**2,600**
30-Oct-10		13.32			1,300	6.88		**380**	140	450	**2,200**
					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) .**
4) **NMWQCC INDICATES NEW MEXICO WATER QUALITY CONTROL COMMISSION.**

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.

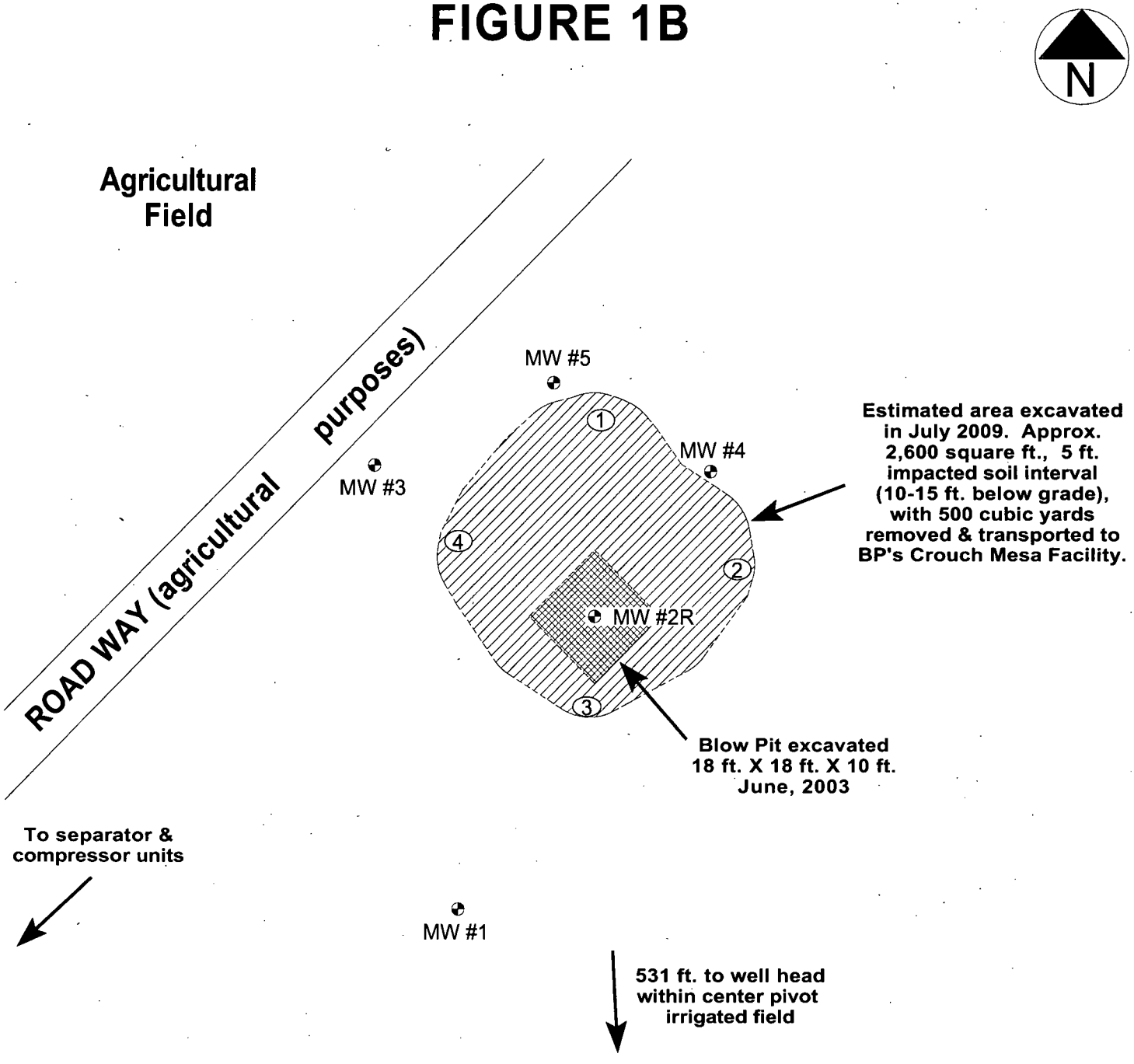
BP AMERICA PRODUCTION CO.
GCU #204E
NE/4 SE/4 SEC. 34, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW INSTALL.
DRAWN BY: NJV
FILENAME: GCU 204E-SM.SKF
DRAFTED: 01-30-07 NJV

SITE MAP
01/07

FIGURE 1B



SAMPLE I.D.	DATE	TIME	OVM (ppm)	TPH (ppm)	Benzene (ppm)	Tot. BTEX (ppm)
1 @ 12.5 ft.	7/8/09	1117	0.0	ND	ND	ND
2 @ 13.5 ft.	7/8/09	1030	280	120	ND	2.36
3 @ 14 ft.	7/8/09	1012	0.0	ND	ND	ND
4 @ 15 ft.	7/8/09	1053	0.0	ND	ND	ND
NMOCD CLOSURE STANDARDS				100	10	50

NOTE: OVM - Organic Vapor Meter or Photo Ionization Detector (P.I.D.); TPH - Total petroleum hydrocarbon; BTEX - benzene, toluene, ethylbenzene, total xylenes; ppm - parts per million or milligrams/Kilograms (mg/Kg); NMOCD - New Mexico Oil Conservation Division.

OVM CALIBRATION
52.8 ppm; RF = 0.52 (RF = response factor).
100 ppm calibration gas - Isobutylene.
Date - 7/8/09 Time - 1130.

0 30 60 FT.

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

BP AMERICA PRODUCTION CO.
GCU #204E
NE/4 SE/4 SEC. 34, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: REMEDIATION
DRAWN BY: NJV
FILENAME: 07-08-09-SM.SKF
REVISED: 11-16-09 NJV

SITE MAP
07/09

Hall Environmental Analysis Laboratory, Inc.

Date: *21-Jul-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	1 @ 12.5'
Lab Order:	0907162	**Collection Date:**	7/8/2009 11:17:00 AM
Project:	GCU #204E- Blow Pit	**Date Received:**	7/9/2009
Lab ID:	0907162-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/16/2009
Surr: DNOP	90.2	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2009 2:01:48 PM
Surr: BFB	88.5	58.8-123		%REC	1	7/15/2009 2:01:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	7/15/2009 2:01:48 PM
Toluene	ND	0.050		mg/Kg	1	7/15/2009 2:01:48 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2009 2:01:48 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2009 2:01:48 PM
Surr: 4-Bromofluorobenzene	91.6	66.8-139		%REC	1	7/15/2009 2:01:48 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

Hall Environmental Analysis Laboratory, Inc.

Date: *21-Jul-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	2 @ 13.5'
Lab Order:	0907162	**Collection Date:**	7/8/2009 10:30:00 AM
Project:	GCU #204E- Blow Pit	**Date Received:**	7/9/2009
Lab ID:	0907162-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	41	10		mg/Kg	1	7/16/2009
Surr: DNOP	90.6	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	79	25		mg/Kg	5	7/15/2009 2:32:15 PM
Surr: BFB	193	58.8-123	S	%REC	5	7/15/2009 2:32:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.25		mg/Kg	5	7/15/2009 2:32:15 PM
Toluene	0.56	0.25		mg/Kg	5	7/15/2009 2:32:15 PM
Ethylbenzene	ND	0.25		mg/Kg	5	7/15/2009 2:32:15 PM
Xylenes, Total	1.8	0.50		mg/Kg	5	7/15/2009 2:32:15 PM
Surr: 4-Bromofluorobenzene	96.4	66.8-139		%REC	5	7/15/2009 2:32:15 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Estimated value
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: *21-Jul-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	3 @ 14'
Lab Order:	0907162	**Collection Date:**	7/8/2009 10:12:00 AM
Project:	GCU #204E- Blow Pit	**Date Received:**	7/9/2009
Lab ID:	0907162-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/16/2009
Surr: DNOP	91.9	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2009 3:02:38 PM
Surr: BFB	110	58.8-123		%REC	1	7/15/2009 3:02:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	7/15/2009 3:02:38 PM
Toluene	ND	0.050		mg/Kg	1	7/15/2009 3:02:38 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2009 3:02:38 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2009 3:02:38 PM
Surr: 4-Bromofluorobenzene	98.9	66.8-139		%REC	1	7/15/2009 3:02:38 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

Hall Environmental Analysis Laboratory, Inc.

Date: *21-Jul-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	4 @ 15'
Lab Order:	0907162	**Collection Date:**	7/8/2009 10:53:00 AM
Project:	GCU #204E- Blow Pit	**Date Received:**	7/9/2009
Lab ID:	0907162-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/16/2009
Surr: DNOP	92.1	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2009 3:33:05 PM
Surr: BFB	93.5	58.8-123		%REC	1	7/15/2009 3:33:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	7/15/2009 3:33:05 PM
Toluene	ND	0.050		mg/Kg	1	7/15/2009 3:33:05 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2009 3:33:05 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2009 3:33:05 PM
Surr: 4-Bromofluorobenzene	89.1	66.8-139		%REC	1	7/15/2009 3:33:05 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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 ENGR. / BP AMERICA

Mailing 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)

☒ Standard ☐ Rush

Project Name: ECU #204E - BLOW PIT

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.6

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	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0907102	(BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				GRAB SAMPLE	Air Bubbles (Y or N)
7/8/09	1117	SOIL	① @ 12.5'	1-4oz.	COOL	1	✓		✓												✓	
7/8/09	1030	SOIL	② @ 13.5'	1-4oz.	COOL	2	✓		✓												✓	
7/8/09	1012	SOIL	③ @ 14'	1-4oz.	COOL	3	✓		✓												✓	
7/8/09	1053	SOIL	④ @ 15'	1-4oz.	COOL	4	✓		✓												✓	

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/8/09	1610			7/9/09	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: GRO & DRO ONLY ON TPH.

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

ient: Blagg Engineering
oject: GCU #204E- Blow Pit **Work Order:** 0907162

nalyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
thod: **EPA Method 8015B: Diesel Range Organics**									
mple ID: **0907162-01AMSD**		*MSD*			Batch ID: **19611**		Analysis Date:		7/16/2009
sel Range Organics (DRO)	55.90	mg/Kg	10	112	67.4	117	13.4	17.4	
mple ID: **MB-19611**		*MBLK*			Batch ID: **19611**		Analysis Date:		7/15/2009
sel Range Organics (DRO)	ND	mg/Kg	10						
mple ID: **LCS-19611**		*LCS*			Batch ID: **19611**		Analysis Date:		7/15/2009
sel Range Organics (DRO)	43.07	mg/Kg	10	86.1	64.6	116			
mple ID: **LCSD-19611**		*LCSD*			Batch ID: **19611**		Analysis Date:		7/16/2009
sel Range Organics (DRO)	44.12	mg/Kg	10	88.2	64.6	116	2.41	17.4	
mple ID: **0907162-01AMS**		*MS*			Batch ID: **19611**		Analysis Date:		7/16/2009
sel Range Organics (DRO)	48.87	mg/Kg	10	97.7	67.4	117			
thod: **EPA Method 8015B: Gasoline Range**									
mple ID: **MB-19584**		*MBLK*			Batch ID: **19584**		Analysis Date:		7/14/2009 8:43:33 PM
soline Range Organics (GRO)	ND	mg/Kg	5.0						
mple ID: **LCS-19584**		*LCS*			Batch ID: **19584**		Analysis Date:		7/14/2009 6:41:42 PM
soline Range Organics (GRO)	28.93	mg/Kg	5.0	108	64.4	133			
mple ID: **LCSD-19584**		*LCSD*			Batch ID: **19584**		Analysis Date:		7/14/2009 7:12:12 PM
soline Range Organics (GRO)	30.24	mg/Kg	5.0	113	69.5	120	4.43	11.6	
thod: **EPA Method 8021B: Volatiles**									
mple ID: **MB-19584**		*MBLK*			Batch ID: **19584**		Analysis Date:		7/14/2009 8:43:33 PM
nzene	ND	mg/Kg	0.050						
luene	ND	mg/Kg	0.050						
hylbenzene	ND	mg/Kg	0.050						
lenes, Total	ND	mg/Kg	0.10						
mple ID: **LCS-19584**		*LCS*			Batch ID: **19584**		Analysis Date:		7/14/2009 7:42:38 PM
nzene	0.8925	mg/Kg	0.050	88.1	78.8	132			
oluene	0.8836	mg/Kg	0.050	88.4	78.9	112			
nylbenzene	0.9013	mg/Kg	0.050	90.1	69.3	125			
lenes, Total	2.675	mg/Kg	0.10	89.2	73	128			
ample ID: **LCSD-19584**		*LCSD*			Batch ID: **19584**		Analysis Date:		7/14/2009 8:13:03 PM
enzene	0.9255	mg/Kg	0.050	91.4	78.8	132	3.63	27	
luene	0.9262	mg/Kg	0.050	92.6	78.9	112	4.71	19	
hylbenzene	0.9596	mg/Kg	0.050	96.0	69.3	125	6.27	10	
vlenes, Total	2.849	mg/Kg	0.10	95.0	73	128	6.29	13	

Qualifiers:

E	Estimated value	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: **7/9/2009**

Work Order Number **0907162** Received by: **TLS**

Checklist completed by: 18 Signature 7/9/09 Date

Sample ID labels checked by: AT 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 ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**4.6°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

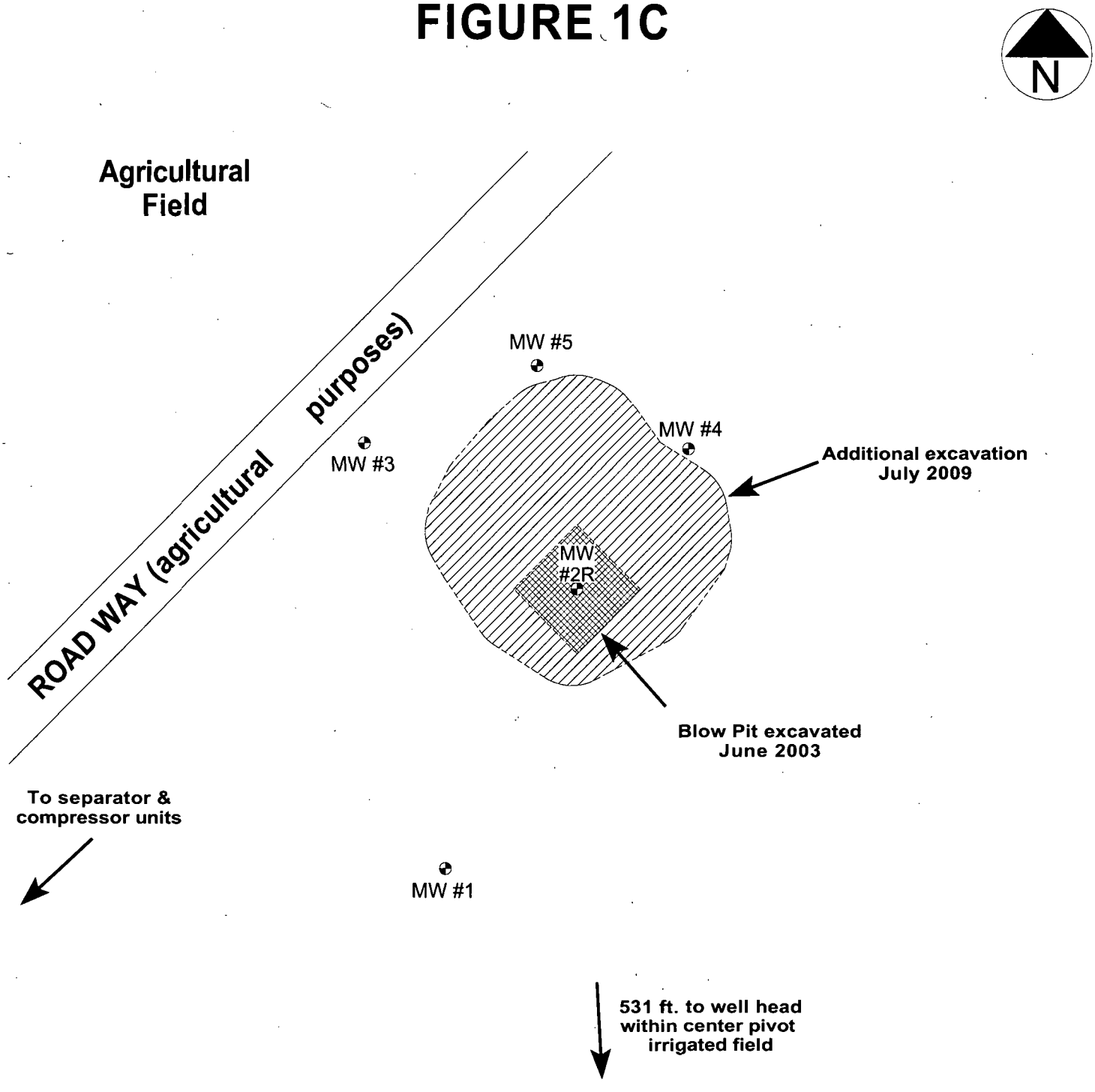
Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

FIGURE 1C



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.

0 30 60 FT.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALLATIONS

DRAWN BY: NJV

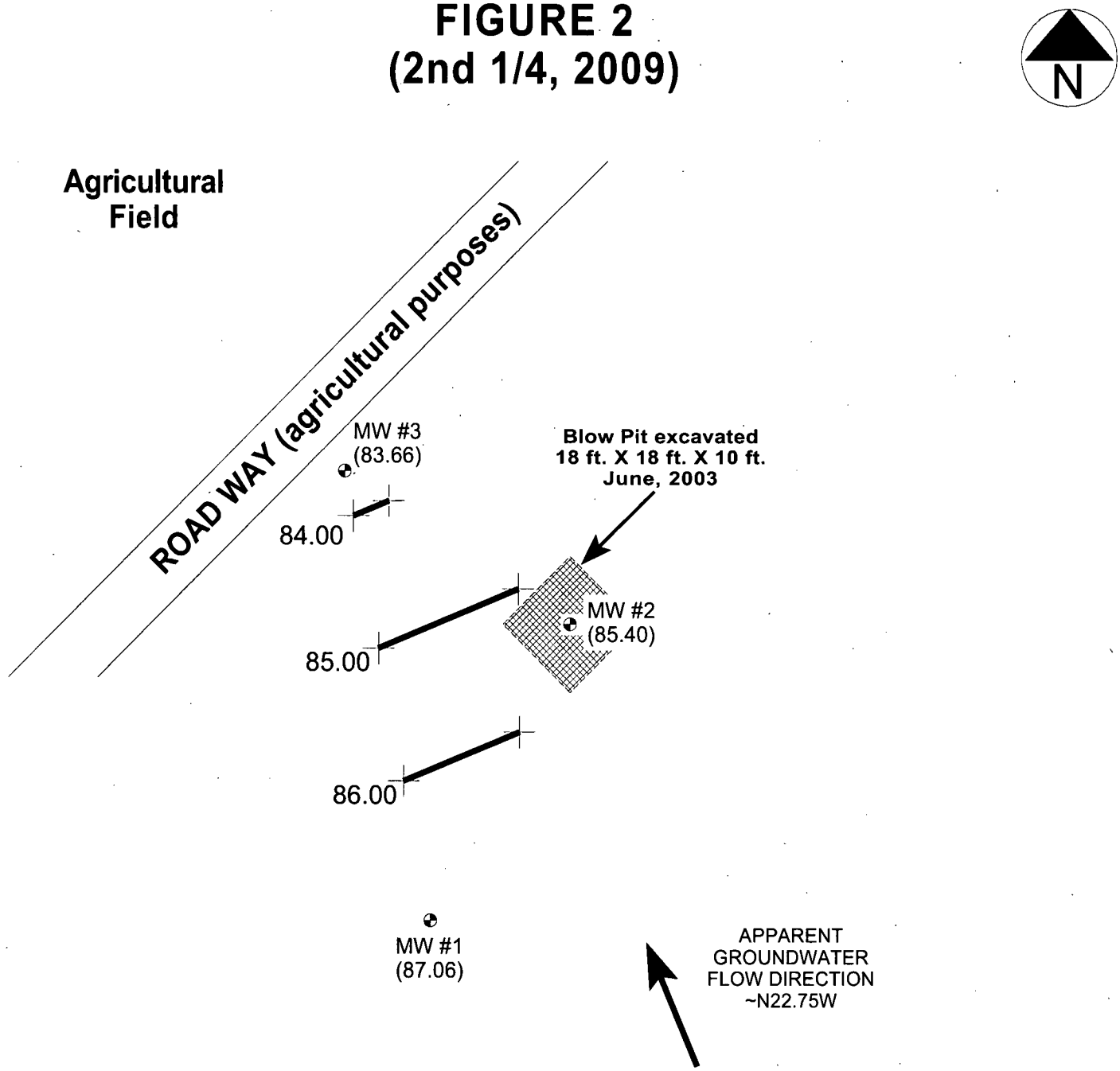
FILENAME: 10-19-09-SM.SKF

REVISED: 11-16-09 NJV

SITE MAP

10/09

FIGURE 2
(2nd 1/4, 2009)



		Top of Well Elevation
MW #1		(103.89)
MW #2		(100.00)
MW #3		(95.66)
MW #1 (87.06)		Groundwater Elevation as of 5/19/09.

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.

0 30 60 FT.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

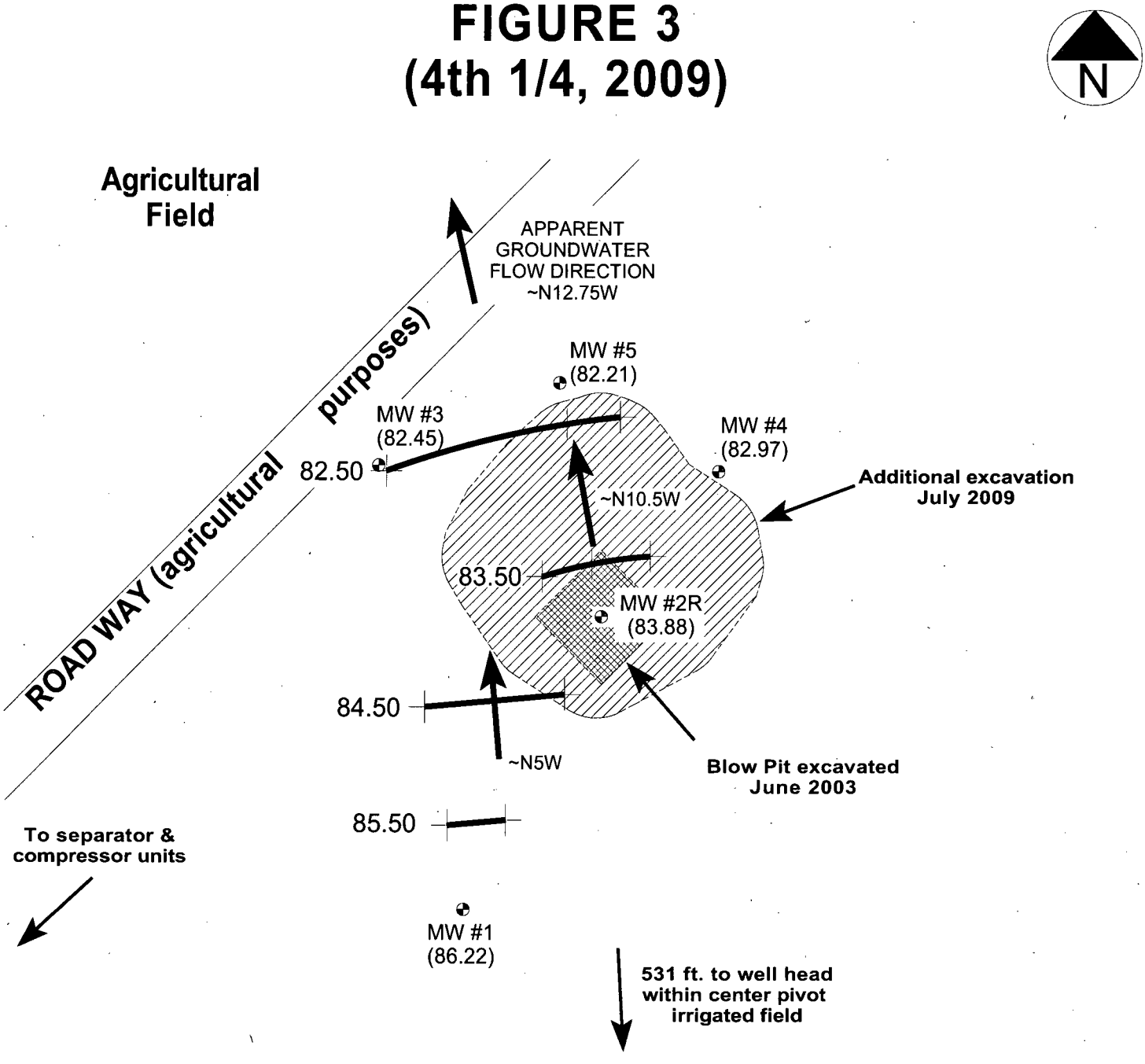
FILENAME: 05-19-09-GW.SKF

DRAFTED: 5-22-09 NJV

GROUNDWATER CONTOUR MAP

05/09

FIGURE 3
(4th 1/4, 2009)



	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (86.22)	Groundwater Elevation as of 11/16/09.

Monitor well tops resurveyed on 10/16/09.

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.

0 30 60 FT.

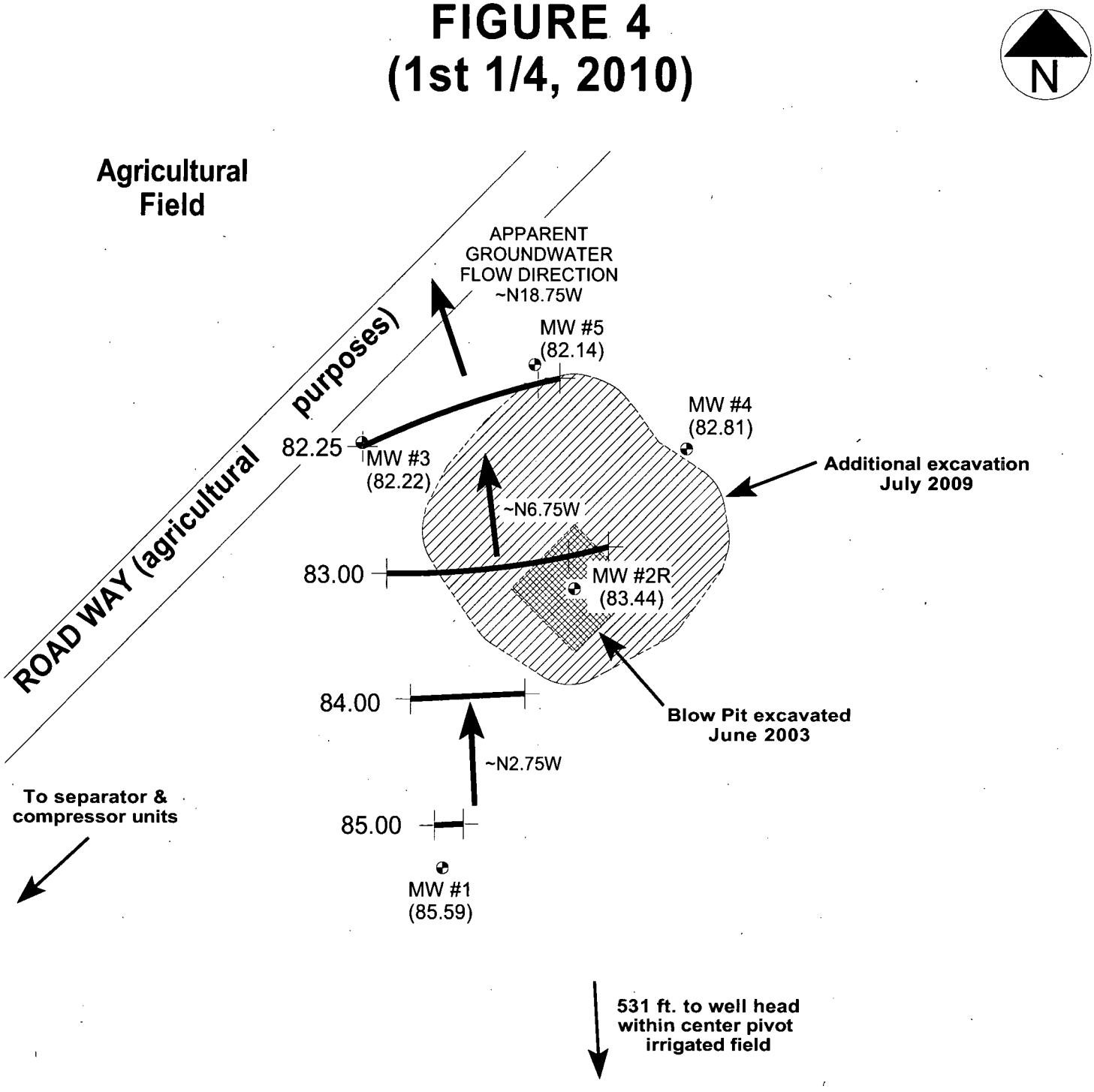
BP AMERICA PRODUCTION CO.
GCU #204E
NE/4 SE/4 SEC. 34, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 11-16-09-GW.SKF
REVISED: 11-16-09 NJV

GROUNDWATER CONTOUR MAP
11/09

FIGURE 4
(1st 1/4, 2010)



	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (85.59)	Groundwater Elevation as of 2/19/10.

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.

0 30 60 FT.

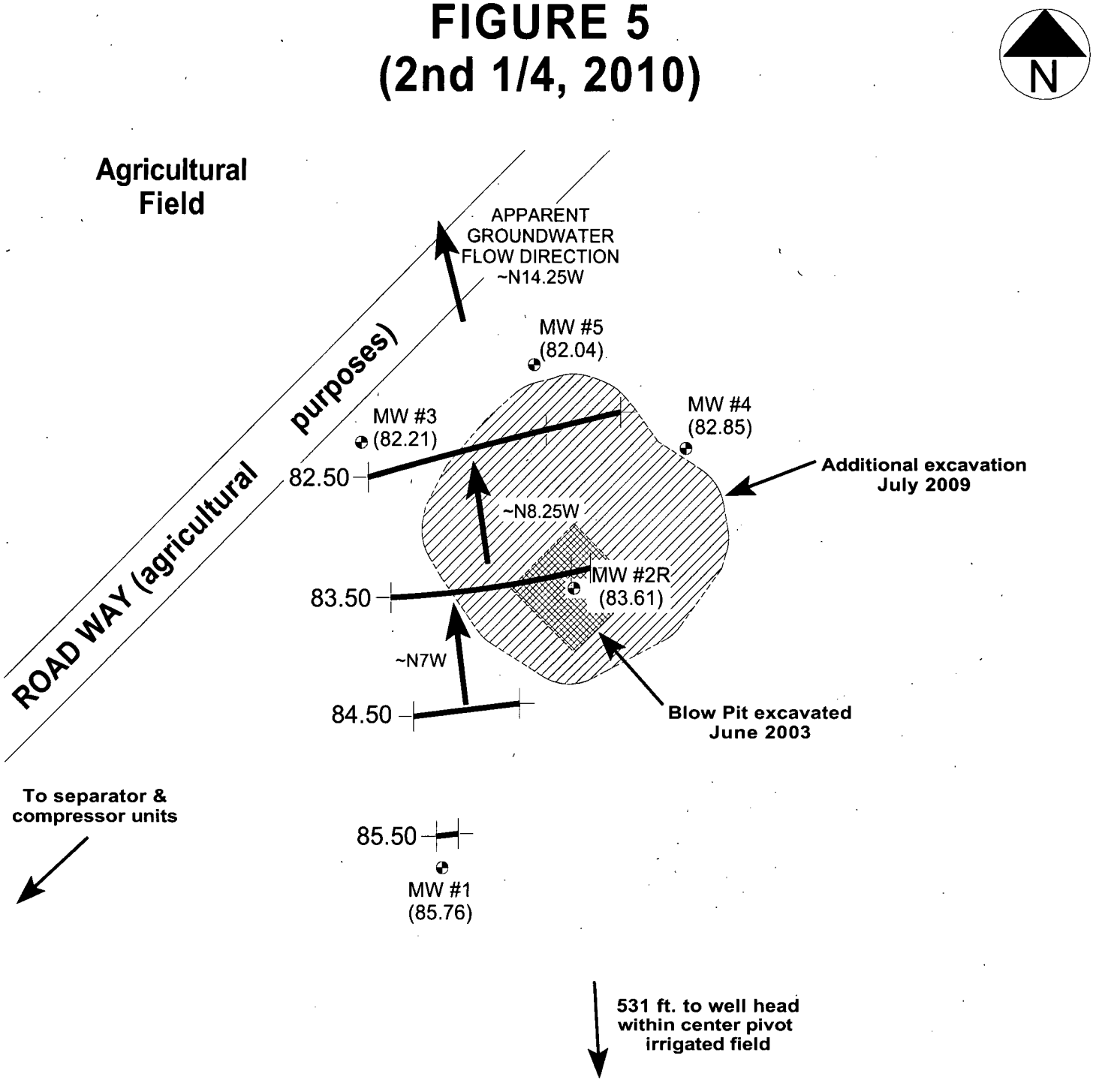
BP AMERICA PRODUCTION CO.
GCU #204E
NE/4 SE/4 SEC. 34, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 02-19-10-GW.SKF
REVISED: 02-19-10 NJV

GROUNDWATER CONTOUR MAP
02/10

FIGURE 5
(2nd 1/4, 2010)



	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (85.76)	Groundwater Elevation as of 5/19/10.

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.

0 30 60 FT.

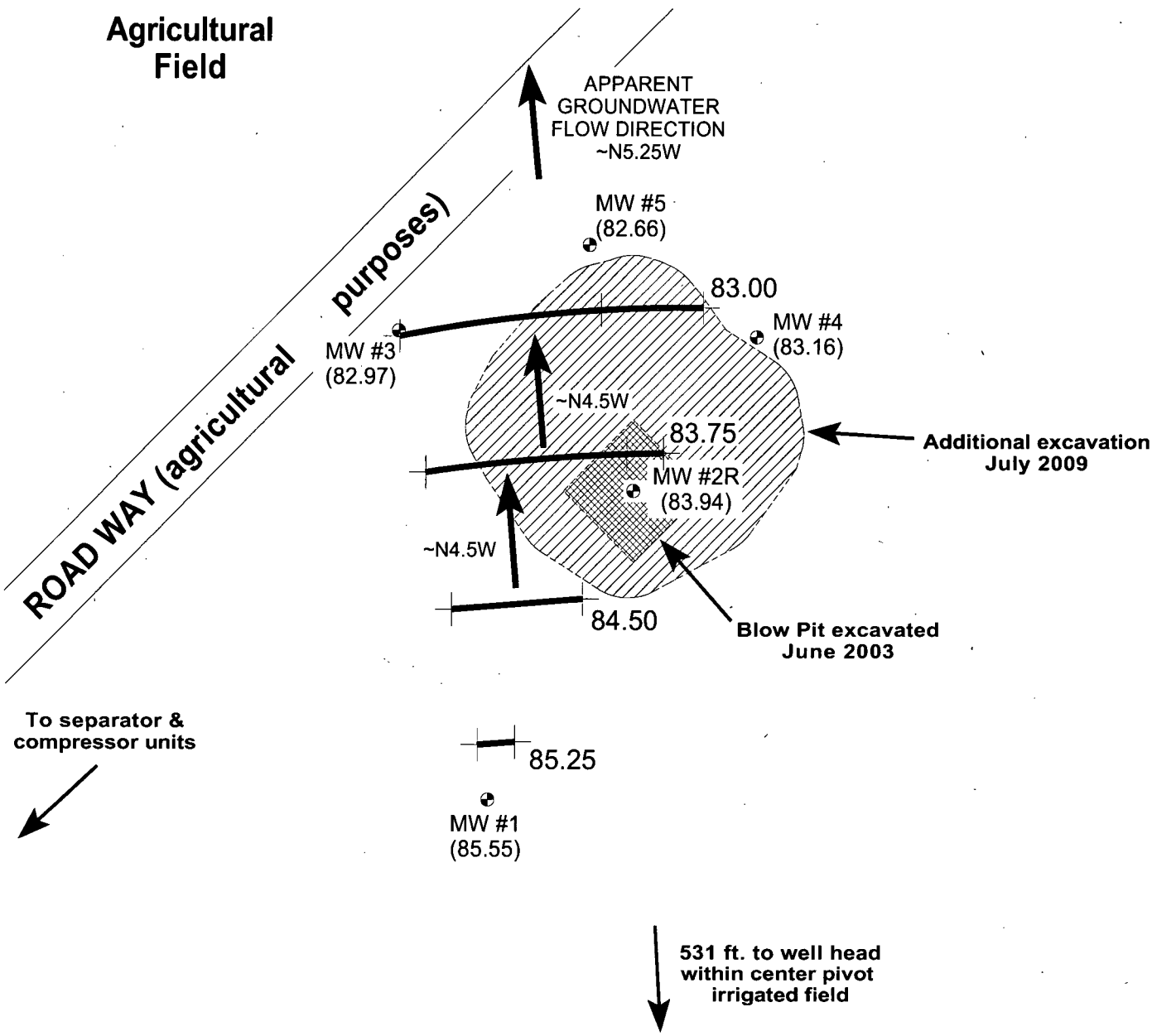
BP AMERICA PRODUCTION CO.
GCU #204E
NE/4 SE/4 SEC. 34, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 05-19-10-GW.SKF
REVISED: 05-19-10 NJV

GROUNDWATER CONTOUR MAP
05/10

FIGURE 6
(4th 1/4, 2010)



	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (85.55)	Groundwater Elevation as of 10/30/10.

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.

0 30 60 FT.

BP AMERICA PRODUCTION CO.
GCU #204E
NE/4 SE/4 SEC. 34, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 10-30-10-GW.SKF
REVISED: 10-30-10 NJV

GROUNDWATER CONTOUR MAP
10/10

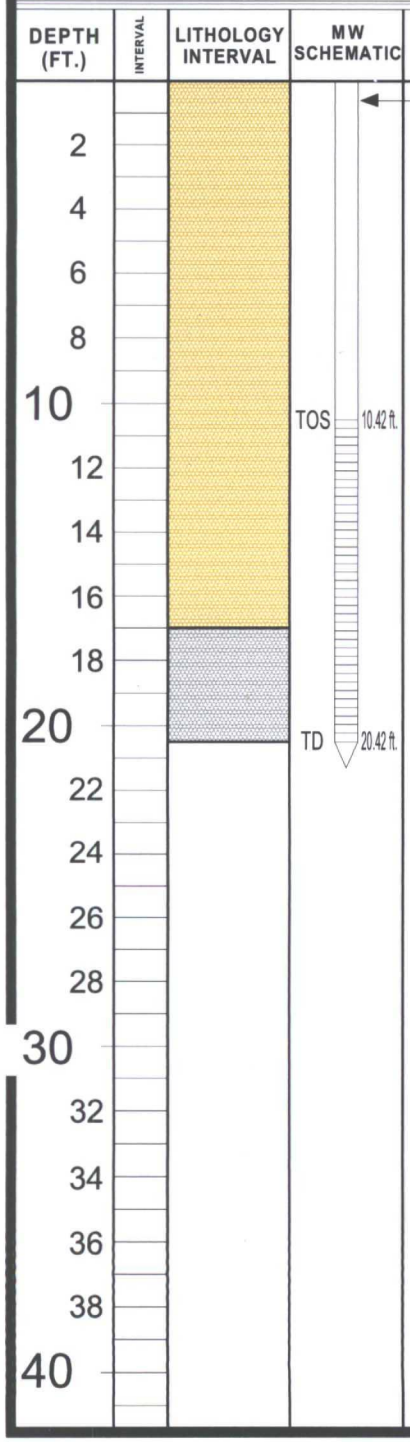
BLAGG ENGINEERING, Inc.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2R

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	GCU # 204E UNIT I, SEC. 34, T28N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	61.5 FEET, S25.5W FROM MW #1.

BORING #.....	BH - 4
MW #.....	2R
PAGE #.....	4
DATE STARTED	10/13/09
DATE FINISHED	10/13/09
OPERATOR.....	KP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.23 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 17.0 FT. BELOW GRADE).

13.11 ft. BELOW GRADE; MEASURED 10/19/09.

MEDIUM GRAY SAND, NON COHESIVE, SATURATED, DENSE, APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (17.0 - 20.5 FT. BELOW GRADE).

NOTES: - SAND.

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

Monitor well consist of 2 inch PVC piping - casing from 2.23 ft. above grade to 10.42 ft. below grade, 0.010 slotted screen between 10.42 to 20.42 ft. below grade, sand packed annular to 8.0 ft. below grade, bentonite grout between 6.0 to 8.0 ft. below grade, clean fill dirt between 1.0 to 6.0 ft. below grade. Cemented well protector encompassing above grade casing and secured with padlock.

DRAWING: GCU 204E MW2R-BH4. SKF | DATE: 10/30/09 | DWN BY: NJV

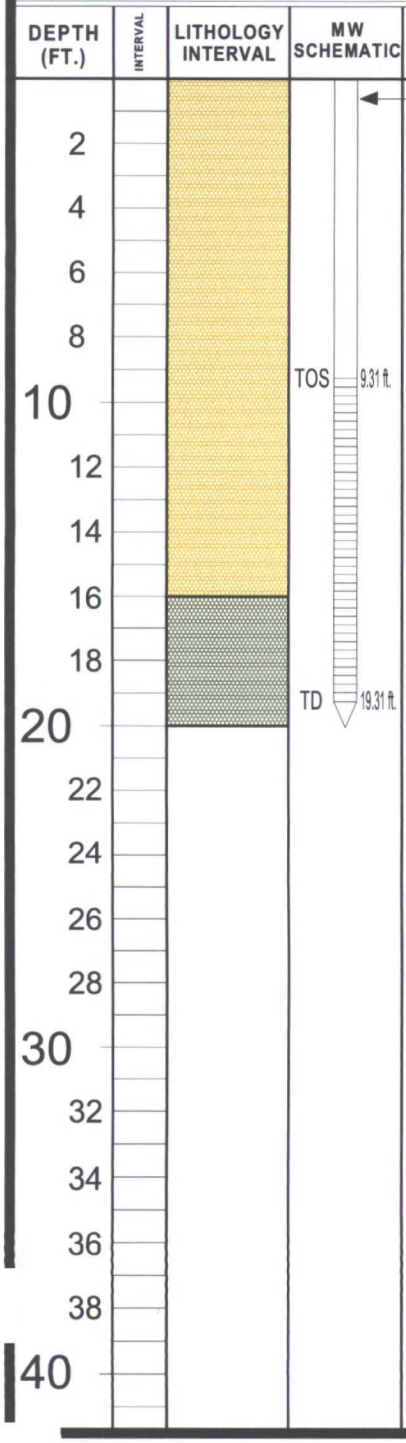
BLAGG ENGINEERING, Inc.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #4

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	GCU # 204E UNIT I, SEC. 34, T28N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	96.5 FEET, S30.5W FROM MW #1.

BORING #.....	BH - 5
MW #.....	4
PAGE #.....	5
DATE STARTED	10/13/09
DATE FINISHED	10/13/09
OPERATOR.....	KP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.63 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE TO MODERATE BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 16.0 FT. BELOW GRADE).

▼ **12.67 ft. BELOW GRADE; MEASURED 10/19/09.**

DARK OLIVE GRAY SAND PHASING INTO SANDSTONE, NON COHESIVE, SATURATED, DENSE, APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (16.0 - 20.0 FT. BELOW GRADE).

NOTES: - SAND.

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

Monitor well consist of 2 inch PVC piping - casing from 2.63 ft. above grade to 9.31 ft. below grade, 0.010 slotted screen between 9.31 to 19.31 ft. below grade, sand packed annular to 7.0 ft. below grade, bentonite grout between 5.0 to 7.0 ft. below grade, clean fill dirt between 1.0 to 5.0 ft. below grade. Cemented well protector encompassing above grade casing and secured with padlock.

DRAWING: GCU 204E MW4-BH5. SKF | DATE: 10/30/09 | DWN BY: NJV

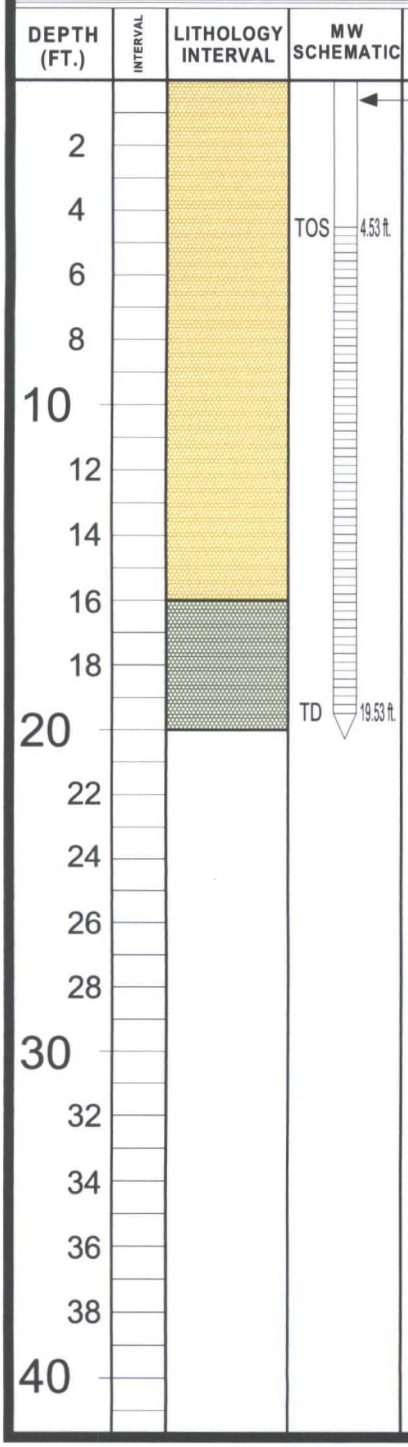
BLAGG ENGINEERING, Inc.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #5

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	GCU # 204E UNIT I, SEC. 34, T28N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	101.5 FEET, S10.5W FROM MW #1.

BORING #.....	BH - 6
MW #.....	5
PAGE #.....	6
DATE STARTED	10/13/09
DATE FINISHED	10/13/09
OPERATOR.....	KP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.25 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE TO MODERATE BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 16.0 FT. BELOW GRADE).

▼ **11.24 ft. BELOW GRADE; MEASURED 10/19/09.**

DARK OLIVE GRAY SAND PHASING INTO SANDSTONE, NON COHESIVE, SATURATED, DENSE, APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (16.0 - 20.0 FT. BELOW GRADE).

NOTES: - SAND.

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

Monitor well consist of 2 inch PVC piping - casing from 2.25 ft. above grade to 4.53 ft. below grade, 0.010 slotted screen between 4.53 to 19.53 ft. below grade, sand packed annular to 2.5 ft. below grade, bentonite grout between 0.5 to 2.5 ft. below grade. Cemented well protector encompassing above grade casing and secured with padlock.

DRAWING: GCU 204E MW5-BH6. SKF | DATE: 10/30/09 | DWN BY: NJV

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **May 19, 2009**

SAMPLER : N J V

Filename : **05-19-09.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	103.89	87.06	16.83	27.00	-	-	-	-	-
MW - 2	100.00	85.40	14.60	27.50	1430	7.32	800	19.9	6.25
MW - 3	95.66	83.66	12.00	25.00	1350	7.01	800	18.8	6.50

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	05/16/09	0810

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 & # 3 . Collected samples for BTEX per US EPA Method 8021B from MW # 2 & # 3 . Collected duplicate from MW # 2 - labeled as MW # 1X and recorded on separate COCR as GCU # 1X .

Top of casing MW # 1 ~ 2.40 ft., MW # 2 ~ 2.30 ft., MW # 3 ~ 2.30 ft. above grade .

on-site	1:22	temp	87 F
off-site	2:41	temp	88 F
sky cond.	Partly cloudy		
wind speed	5 - 10	direct.	West

Hall Environmental Analysis Laboratory, Inc.

Date: *02-Jun-09*

CLIENT: Blagg Engineering
Project: GCU #204E
Lab Order: 0905360

Lab ID: 0905360-01
Collection Date: 5/19/2009 2:30:00 PM
Client Sample ID: MW #2
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	140	50		µg/L	50	5/29/2009 11:19:31 PM
Toluene	83	50		µg/L	50	5/29/2009 11:19:31 PM
Ethylbenzene	1200	50		µg/L	50	5/29/2009 11:19:31 PM
Xylenes, Total	6700	100		µg/L	50	5/29/2009 11:19:31 PM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	50	5/29/2009 11:19:31 PM

Lab ID: 0905360-02
Collection Date: 5/19/2009 1:50:00 PM
Client Sample ID: MW #3
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	350	10		µg/L	10	5/29/2009 11:49:54 PM
Toluene	170	10		µg/L	10	5/29/2009 11:49:54 PM
Ethylbenzene	380	10		µg/L	10	5/29/2009 11:49:54 PM
Xylenes, Total	700	20		µg/L	10	5/29/2009 11:49:54 PM
Surr: 4-Bromofluorobenzene	96.5	65.9-130		%REC	10	5/29/2009 11:49:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

Hall Environmental Analysis Laboratory, Inc.

Date: *02-Jun-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #1X
Lab Order:	0905366	**Collection Date:**	5/18/2009
Project:	GCU #1X	**Date Received:**	5/20/2009
Lab ID:	0905366-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	150	10		µg/L	10	5/30/2009 2:21:49 AM
Toluene	68	10		µg/L	10	5/30/2009 2:21:49 AM
Ethylbenzene	1300	50		µg/L	50	5/30/2009 3:02:38 PM
Xylenes, Total	7200	100		µg/L	50	5/30/2009 3:02:38 PM
Surr: 4-Bromofluorobenzene	111	65.9-130		%REC	10	5/30/2009 2:21:49 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value	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

Mailing 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)

☒ Standard ☐ Rush

Project Name: GCU #204E

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8

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	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0905340	(BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	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)
5/19/09	1430	WATER	MW #2	40ml-2	HCl	1	✓															
5/19/09	1350	WATER	MW #3	40ml-2	HCl	2	✓															

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/19/09	1425	Nelson Velez		5/20/09	850
Date:	Time:	Relinquished by:	Received by:	Date	Time

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.

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing 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: GCU #1X

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☐ Yes ☐ No

Sample Temperature: 3.0

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	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0905366	BTEX + MTBE + TMBs (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	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)
5/12/09 5/18/09	—	WATER	MW #1X	40 ml-2	HCl	-1	✓															

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/19/09	1425	Nelson Velez			
Date:	Time:	Relinquished by:	Received by:	5/20/09	850

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #204E **Work Order:** 0905360

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R33878**	Analysis Date:		5/29/2009 9:06:58 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:	**R33878**	Analysis Date:		5/30/2009 5:24:25 AM
Benzene	19.92	µg/L	1.0	99.6	85.9	113			
Toluene	19.82	µg/L	1.0	99.1	86.4	113			
Ethylbenzene	20.29	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.55	µg/L	2.0	101	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID:	**R33878**	Analysis Date:		5/30/2009 5:54:51 AM
Benzene	20.56	µg/L	1.0	103	85.9	113	3.18	27	
Toluene	20.46	µg/L	1.0	102	86.4	113	3.14	19	
Ethylbenzene	20.86	µg/L	1.0	104	83.5	118	2.79	10	
Xylenes, Total	62.33	µg/L	2.0	104	83.4	122	2.90	13	

Qualifiers:

E	Estimated value	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: 5/20/2009

Work Order Number 0905360 | Received by: TLS

Checklist completed by: _____ Signature | 5/20/09 Date | Sample ID labels checked by: _____ Initials

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐		
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑		
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:	
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 ☑	*<2 >12 unless noted below.*	
Container/Temp Blank temperature?	**3.8°**	*<6° C Acceptable* If given sufficient time to cool.			

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #1X **Work Order:** 0905366

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R33878**		Analysis Date:		5/29/2009 9:06:58 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: **R33878**		Analysis Date:		5/30/2009 5:24:25 AM
Benzene	19.92	µg/L	1.0	99.6	85.9	113			
Toluene	19.82	µg/L	1.0	99.1	86.4	113			
Ethylbenzene	20.29	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.55	µg/L	2.0	101	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID: **R33878**		Analysis Date:		5/30/2009 5:54:51 AM
Benzene	20.56	µg/L	1.0	103	85.9	113	3.18	27	
Toluene	20.46	µg/L	1.0	102	86.4	113	3.14	19	
Ethylbenzene	20.86	µg/L	1.0	104	83.5	118	2.79	10	
Xylenes, Total	62.33	µg/L	2.0	104	83.4	122	2.90	13	

Qualifiers:

E	Estimated value	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: 5/20/2009

Work Order Number 0905366 | Received by: TLS

Checklist completed by: _____ 5/20/09 | Sample ID labels checked by: _____

Signature | Date | Initials

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**3.8°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: per NV use 5/19/09 for collection date / for 5/20/09

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **November 16, 2009**

DEVELOPER / SAMPLER : N J V

Filename : **11-16-09.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	103.89	86.22	17.67	27.00	-	-	-	-	-
2R	99.49	83.88	15.61	22.65	1405	7.71	900	13.8	3.50
3	95.66	82.45	13.21	25.00	1415	7.18	800	13.8	5.75
4	98.63	82.97	15.66	21.94	1315	7.10	1,600	13.5	3.00
5	95.98	82.21	13.77	21.78	1345	7.01	1,300	13.4	4.00
					INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800		
					DATE & TIME =	11/16/09	1330		

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW 's sampled . Collected BTEX sample from MW # 3 , collected samples for BTEX , TDS , chloride , fluoride , nitrate , sulfate , & iron from MW # 2R , # 4 , & # 5 .

Top of casing MW # 1 ~ 2.40 ft. , MW # 2R ~ 2.23 ft. , MW # 3 ~ 2.30 ft. , MW # 4 ~ 2.63 ft. , MW # 5 ~ 2.25 ft. above grade .

on-site	12:00	temp	34 F
off-site	3:00	temp	40 F
sky cond.	sunny		
wind speed	0 - 5	direct.	SW

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Nov-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2R
Lab Order:	0911317	**Collection Date:**	11/16/2009 2:05:00 PM
Project:	GCU #204E	**Date Received:**	11/17/2009
Lab ID:	0911317-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	13	10		µg/L	10	11/24/2009 3:39:22 AM
Toluene	ND	10		µg/L	10	11/24/2009 3:39:22 AM
Ethylbenzene	240	10		µg/L	10	11/24/2009 3:39:22 AM
Xylenes, Total	1900	20		µg/L	10	11/24/2009 3:39:22 AM
Surr: 4-Bromofluorobenzene	100	65.9-130		%REC	10	11/24/2009 3:39:22 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Fluoride	0.47	0.10		mg/L	1	11/17/2009 1:15:30 PM
Chloride	30	2.0		mg/L	20	11/17/2009 1:32:54 PM
Nitrogen, Nitrite (As N)	1.9	0.10		mg/L	1	11/17/2009 1:15:30 PM
Nitrogen, Nitrate (As N)	0.73	0.10		mg/L	1	11/17/2009 1:15:30 PM
Sulfate	96	10		mg/L	20	11/17/2009 1:32:54 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **RAGS**
Iron	ND	0.020		mg/L	1	11/20/2009 5:59:11 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MMS**
Total Dissolved Solids	710	20.0		mg/L	1	11/19/2009 3:11:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Nov-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #4
Lab Order:	0911317	**Collection Date:**	11/16/2009 1:15:00 PM
Project:	GCU #204E	**Date Received:**	11/17/2009
Lab ID:	0911317-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	2200	50		µg/L	50	11/24/2009 5:02:34 PM
Toluene	14	10		µg/L	10	11/24/2009 4:09:41 AM
Ethylbenzene	140	10		µg/L	10	11/24/2009 4:09:41 AM
Xylenes, Total	950	20		µg/L	10	11/24/2009 4:09:41 AM
Surr: 4-Bromofluorobenzene	103	65.9-130		%REC	10	11/24/2009 4:09:41 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Fluoride	0.57	0.10		mg/L	1	11/17/2009 1:50:19 PM
Chloride	950	5.0		mg/L	50	11/18/2009 7:33:37 PM
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/17/2009 2:07:44 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/17/2009 1:50:19 PM
Sulfate	63	10		mg/L	20	11/17/2009 2:07:44 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **RAGS**
Iron	ND	0.020		mg/L	1	11/20/2009 6:16:05 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MMS**
Total Dissolved Solids	2010	20.0		mg/L	1	11/20/2009 2:54:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Nov-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #5
Lab Order:	0911317	**Collection Date:**	11/16/2009 1:45:00 PM
Project:	GCU #204E	**Date Received:**	11/17/2009
Lab ID:	0911317-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1100	50		µg/L	50	11/24/2009 10:06:16 PM
Toluene	200	10		µg/L	10	11/24/2009 4:40:00 AM
Ethylbenzene	430	10		µg/L	10	11/24/2009 4:40:00 AM
Xylenes, Total	2800	20		µg/L	10	11/24/2009 4:40:00 AM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	10	11/24/2009 4:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Fluoride	0.60	0.10		mg/L	1	11/17/2009 2:25:09 PM
Chloride	370	2.0		mg/L	20	11/17/2009 3:17:22 PM
Nitrogen, Nitrite (As N)	2.5	2.0		mg/L	20	11/17/2009 3:17:22 PM
Nitrogen, Nitrate (As N)	2.2	0.10		mg/L	1	11/17/2009 2:25:09 PM
Sulfate	23	0.50		mg/L	1	11/17/2009 2:25:09 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **RAGS**
Iron	6.0	0.20		mg/L	10	11/23/2009 12:59:37 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MMS**
Total Dissolved Solids	1090	20.0		mg/L	1	11/20/2009 2:54:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Nov-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #3
Lab Order:	0911317	**Collection Date:**	11/16/2009 2:15:00 PM
Project:	GCU #204E	**Date Received:**	11/17/2009
Lab ID:	0911317-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	240	10		µg/L	10	11/24/2009 5:10:15 AM
Toluene	1700	50		µg/L	50	11/24/2009 10:36:37 PM
Ethylbenzene	600	10		µg/L	10	11/24/2009 5:10:15 AM
Xylenes, Total	1500	20		µg/L	10	11/24/2009 5:10:15 AM
Surr: 4-Bromofluorobenzene	104	65.9-130		%REC	10	11/24/2009 5:10:15 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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

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

Phone #: (505) 632-1199

email or Fax#:

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

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: GCU #204E

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.5

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	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0911512	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	FERROUS IRON	TDS	NITRATE-N/NITRITE-N		Air Bubbles (Y or N)
11/16/09	1405	WATER	MW #2R	40ml-2	HCl & COOL	1	X															
"	"	"	"	125ml-1	H_2SO_4 & COOL	1														X		
"	"	"	"	125ml-1	HNO_3 & COOL	1												X				
"	"	"	"	250ml-1	COOL	1								X					X			
11/16/09	1315	WATER	MW # 4	40ml-2	~~H_2SO_4~~ HCl & COOL	2	X															
"	"	"	"	125ml-1	HNO_3 & COOL	2												X				
"	"	"	"	125ml-1	H_2SO_4 & COOL	2														X		
"	"	"	"	250ml-1	COOL	2								X					X			
11/16/09	1345	WATER	MW #5	40ml-2	HCl & COOL	3	X															
"	"	"	"	125ml-1	H_2SO_4 & COOL	3														X		
"	"	"	"	125ml-1	HNO_3 & COOL	3												X				
"	"	"	"	250ml-1	COOL	3																
11/16/09	1415	WATER	MW #3	40ml-2	HCl & COOL	4	X							X					X			

Date: 11/16/09 Time: 1545 Relinquished by: [signature]
Received by: [signature] Date: 11/17/09 Time: 7:20

Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
IF ANION NO_3 CAN NOT BE ANALYZED WITHIN 48 HRS. THEN RUN NITRATE-N/NITRITE-N.

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: GCU #204E **Work Order:** 0911317

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: MB		*MBLK*				**Batch ID: R36209**			**Analysis Date:**	11/17/2009 11:48:27 AM	
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								
Sulfate	ND	mg/L	0.50								
Sample ID: MB		*MBLK*				**Batch ID: R36234**			**Analysis Date:**	11/18/2009 7:22:24 AM	
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								
Sulfate	ND	mg/L	0.50								
Sample ID: LCS		*LCS*				**Batch ID: R36209**			**Analysis Date:**	11/17/2009 12:05:52 PM	
Fluoride	0.5238	mg/L	0.10	0.5	0	105	90	110			
Chloride	5.072	mg/L	0.10	5	0	101	90	110			
Nitrogen, Nitrite (As N)	1.019	mg/L	0.10	1	0	102	90	110			
Nitrogen, Nitrate (As N)	2.535	mg/L	0.10	2.5	0	101	90	110			
Sulfate	10.16	mg/L	0.50	10	0	102	90	110			
Sample ID: LCS		*LCS*				**Batch ID: R36234**			**Analysis Date:**	11/18/2009 7:39:49 AM	
Fluoride	0.5259	mg/L	0.10	0.5	0	105	90	110			
Chloride	5.065	mg/L	0.10	5	0	101	90	110			
Nitrogen, Nitrite (As N)	0.9799	mg/L	0.10	1	0	98.0	90	110			
Nitrogen, Nitrate (As N)	2.510	mg/L	0.10	2.5	0	100	90	110			
Sulfate	10.05	mg/L	0.50	10	0	100	90	110			

Qualifiers:

E	Estimated value	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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #204E **Work Order:** 0911317

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R36309**	Analysis Date:	11/23/2009 9:27:00 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		*MBLK*				Batch ID:	**R36327**	Analysis Date:	11/24/2009 9:30:18 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:	**R36309**	Analysis Date:	11/23/2009 7:34:42 PM		
Benzene	20.32	µg/L	1.0	20	0	102	85.9	113			
Toluene	21.67	µg/L	1.0	20	0	108	86.4	113			
Ethylbenzene	21.49	µg/L	1.0	20	0.116	107	83.5	118			
Xylenes, Total	63.92	µg/L	2.0	60	0	107	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*				Batch ID:	**R36327**	Analysis Date:	11/24/2009 6:03:12 PM		
Benzene	19.83	µg/L	1.0	20	0	99.1	85.9	113			
Toluene	20.24	µg/L	1.0	20	0	101	86.4	113			
Ethylbenzene	19.72	µg/L	1.0	20	0	98.6	83.5	118			
Xylenes, Total	59.28	µg/L	2.0	60	0	98.8	83.4	122			
Method: EPA Method 6010B: Dissolved Metals											
Sample ID: MB		*MBLK*				Batch ID:	**R36271**	Analysis Date:	11/20/2009 4:08:59 PM		
Iron	ND	mg/L	0.020								
Sample ID: MB		*MBLK*				Batch ID:	**R36295**	Analysis Date:	11/23/2009 12:50:27 PM		
Iron	ND	mg/L	0.020								
Sample ID: LCS		*LCS*				Batch ID:	**R36271**	Analysis Date:	11/20/2009 4:11:44 PM		
Iron	0.4764	mg/L	0.020	0.5	0	95.3	80	120			
Sample ID: LCS		*LCS*				Batch ID:	**R36295**	Analysis Date:	11/23/2009 12:53:21 PM		
Iron	0.4981	mg/L	0.020	0.5	0	99.6	80	120			
Method: SM2540C MOD: Total Dissolved Solids											
Sample ID: MB-20663		*MBLK*				Batch ID:	**20663**	Analysis Date:	11/19/2009 3:11:00 PM		
Total Dissolved Solids	ND	mg/L	20.0								
Sample ID: MB-20676		*MBLK*				Batch ID:	**20676**	Analysis Date:	11/20/2009 2:54:00 PM		
Total Dissolved Solids	ND	mg/L	20.0								
Sample ID: LCS-20663		*LCS*				Batch ID:	**20663**	Analysis Date:	11/19/2009 3:11:00 PM		
Total Dissolved Solids	1021	mg/L	20.0	1000	0	102	80	120			
Sample ID: LCS-20676		*LCS*				Batch ID:	**20676**	Analysis Date:	11/20/2009 2:54:00 PM		
Total Dissolved Solids	1012	mg/L	20.0	1000	0	101	80	120			

Qualifiers:

E	Estimated value	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: **11/17/2009**

Work Order Number **0911317** Received by: ARS

Checklist completed by: _____ 11/17/09 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☑	No ☐	N/A ☐	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐	
Container/Temp Blank temperature?	**4.6°**	*<6° C Acceptable* If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

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

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **February 19, 2010**

DEVELOPER / SAMPLER : N J V

Filename : **02-19-10.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	103.89	85.59	18.30	27.00	-	-	-	-	-
2R	99.49	83.44	16.05	22.65	0815	7.86	1,000	11.3	3.25
3	95.66	82.22	13.44	25.00	0900	7.36	800	10.9	5.75
4	98.63	82.81	15.82	21.94	0940	7.02	2,000	11.6	3.00
5	95.98	82.14	13.84	21.78	1020	6.99	1,900	10.5	4.00

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	02/18/10	1325

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

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW 's sampled (MW # 2R , # 3 , # 4 , & # 5). MW # 2R , # 4 , # 5 - pale yellowish orange tint in appearance . MW # 3 - dark gray tint in appearance . Collected samples for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.40 ft., MW # 2R ~ 2.23 ft., MW # 3 ~ 2.30 ft., MW # 4 ~ 2.63 ft., MW # 5 ~ 2.25 ft. above grade .

on-site	7:33	temp	30 F
off-site	10:30	temp	32 F
sky cond.	cloudy		
wind speed	0-10	direct.	E

Hall Environmental Analysis Laboratory, Inc.

Date: *02-Mar-10*

CLIENT: Blagg Engineering
Project: GCU #204E
Lab Order: 1002460

Lab ID: 1002460-01 **Collection Date:** 2/19/2010 8:15:00 AM
Client Sample ID: MW #2R **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	10		µg/L	10	2/27/2010 2:51:09 AM
Toluene	ND	10		µg/L	10	2/27/2010 2:51:09 AM
Ethylbenzene	150	10		µg/L	10	2/27/2010 2:51:09 AM
Xylenes, Total	1300	20		µg/L	10	2/27/2010 2:51:09 AM
Surr: 4-Bromofluorobenzene	104	65.9-130		%REC	10	2/27/2010 2:51:09 AM

Lab ID: 1002460-02 **Collection Date:** 2/19/2010 9:00:00 AM
Client Sample ID: MW #3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	96	10		µg/L	10	2/27/2010 4:22:18 AM
Toluene	940	10		µg/L	10	2/27/2010 4:22:18 AM
Ethylbenzene	480	10		µg/L	10	2/27/2010 4:22:18 AM
Xylenes, Total	1100	20		µg/L	10	2/27/2010 4:22:18 AM
Surr: 4-Bromofluorobenzene	108	65.9-130		%REC	10	2/27/2010 4:22:18 AM

Lab ID: 1002460-03 **Collection Date:** 2/19/2010 9:40:00 AM
Client Sample ID: MW #4 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	5800	100		µg/L	100	3/1/2010 4:59:47 PM
Toluene	14	10		µg/L	10	2/27/2010 6:53:39 AM
Ethylbenzene	500	10		µg/L	10	2/27/2010 6:53:39 AM
Xylenes, Total	1800	20		µg/L	10	2/27/2010 6:53:39 AM
Surr: 4-Bromofluorobenzene	109	65.9-130		%REC	10	2/27/2010 6:53:39 AM

Lab ID: 1002460-04 **Collection Date:** 2/19/2010 10:20:00 AM
Client Sample ID: MW #5 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	790	10		µg/L	10	2/27/2010 8:24:19 AM
Toluene	100	10		µg/L	10	2/27/2010 8:24:19 AM
Ethylbenzene	370	10		µg/L	10	2/27/2010 8:24:19 AM
Xylenes, Total	2600	100		µg/L	50	2/27/2010 7:54:11 AM
Surr: 4-Bromofluorobenzene	103	65.9-130		%REC	10	2/27/2010 8:24:19 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: BLAGG ENER. / BP AMERICA	☒ Standard ☐ Rush
	Project Name: GCU #204E
Mailing Address: P.O. BOX 87 BLFD. NM 87413	Project #:
Phone #: (505) 632-1199	
email or Fax#:	Project Manager: NELSON VELEZ
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)	Sampler: NELSON VELEZ
☐ Other ☐ EDD (Type)	On Ice: ☒ Yes ☐ No
	Sample Temperature: 5.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1002-H20	BTEX + MTBE + TMBs (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	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)
2/19/10	0815	WATER	MW #2R	2-40ml	HCl & COOL	1	✓														
2/19/10	0900	WATER	MW #3	2-40ml	HCl & COOL	2	✓														
2/19/10	0940	WATER	MW #4	2-40ml	HCl & COOL	3	✓														
2/19/10	1020	WATER	MW #5	2-40ml	HCl & COOL	4	✓														

Date	Time	Relinquished by:	Received by:	Date	Time
2/19/10	1615			2/24/10	755
Date:	Time:	Relinquished by:	Received by:	Date	Time

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: GCU #204E **Work Order:** 1002460

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID: **R37547**		Analysis Date:	2/26/2010 9:10:28 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		*MBLK*				Batch ID: **R37565**		Analysis Date:	3/1/2010 9:25:06 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: **R37547**		Analysis Date:	2/26/2010 8:48:12 PM		
Benzene	22.46	µg/L	1.0	20	0	112	85.9	113			
Toluene	22.01	µg/L	1.0	20	0	110	86.4	113			
Ethylbenzene	22.18	µg/L	1.0	20	0	111	83.5	118			
Xylenes, Total	66.34	µg/L	2.0	60	0	111	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*				Batch ID: **R37565**		Analysis Date:	3/2/2010 6:07:50 AM		
Benzene	22.44	µg/L	1.0	20	0	112	85.9	113			
Toluene	22.13	µg/L	1.0	20	0	111	86.4	113			
Ethylbenzene	21.98	µg/L	1.0	20	0.148	109	83.5	118			
Xylenes, Total	65.70	µg/L	2.0	60	0	110	83.4	122			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG** Date Received: **2/24/2010**

Work Order Number **1002460** Received by: **TLS**

Checklist completed by: _____ 2/24/10 Sample ID labels checked by: TS
Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**3.4°**	*<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

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **May 19, 2010**

DEVELOPER / SAMPLER : N J V

Filename : **05-19-10.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	103.89	85.76	18.13	27.00	-	-	-	-	-
2R	99.49	83.61	15.88	22.65	1045	7.75	1,100	17.9	3.25
3	95.66	82.21	13.45	25.00	1115	7.19	1,000	15.9	5.75
4	98.63	82.85	15.78	21.94	1145	6.85	2,700	17.3	3.00
5	95.98	82.04	13.94	21.78	1215	6.82	2,600	15.0	3.75
					INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800		
					DATE & TIME =	05/19/10	1035		

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW 's sampled (MW # 2R , # 3 , # 4 , & # 5). MW # 2R , # 4 , # 5 - pale yellowish orange tint in appearance . MW # 3 - dark gray tint in appearance . Collected samples for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.40 ft., MW # 2R ~ 2.23 ft., MW # 3 ~ 2.30 ft., MW # 4 ~ 2.63 ft., MW # 5 ~ 2.25 ft. above grade .

on-site	10:22	temp	62 F
off-site	12:25	temp	67 F
sky cond.	Sunny		
wind speed	10 - 20	direct.	W - WNW

Hall Environmental Analysis Laboratory, Inc.

Date: *04-Jun-10*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2R
Lab Order:	1005611	**Collection Date:**	5/19/2010 10:45:00 AM
Project:	GCU #204E	**Date Received:**	5/21/2010
Lab ID:	1005611-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	11	1.0		µg/L	1	6/1/2010 5:20:24 PM
Toluene	1.8	1.0		µg/L	1	6/1/2010 5:20:24 PM
Ethylbenzene	220	10		µg/L	10	6/1/2010 4:50:14 PM
Xylenes, Total	1800	20		µg/L	10	6/1/2010 4:50:14 PM
Surr: 4-Bromofluorobenzene	101	65.9-130		%REC	10	6/1/2010 4:50:14 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *04-Jun-10*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #3
Lab Order:	1005611	**Collection Date:**	5/19/2010 11:15:00 AM
Project:	GCU #204E	**Date Received:**	5/21/2010
Lab ID:	1005611-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	210	10		µg/L	10	6/1/2010 6:51:41 PM
Toluene	2200	100		µg/L	100	6/2/2010 1:17:28 PM
Ethylbenzene	680	10		µg/L	10	6/1/2010 6:51:41 PM
Xylenes, Total	2500	20		µg/L	10	6/1/2010 6:51:41 PM
Surr: 4-Bromofluorobenzene	118	65.9-130		%REC	10	6/1/2010 6:51:41 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *04-Jun-10*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #4
Lab Order:	1005611	**Collection Date:**	5/19/2010 11:45:00 AM
Project:	GCU #204E	**Date Received:**	5/21/2010
Lab ID:	1005611-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	5200	100		µg/L	100	6/1/2010 10:54:06 PM
Toluene	42	10		µg/L	10	6/1/2010 11:24:15 PM
Ethylbenzene	470	10		µg/L	10	6/1/2010 11:24:15 PM
Xylenes, Total	1500	20		µg/L	10	6/1/2010 11:24:15 PM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	10	6/1/2010 11:24:15 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *04-Jun-10*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #5
Lab Order:	1005611	**Collection Date:**	5/19/2010 12:15:00 PM
Project:	GCU #204E	**Date Received:**	5/21/2010
Lab ID:	1005611-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1200	100		µg/L	100	6/2/2010 12:24:49 AM
Toluene	180	10		µg/L	10	6/2/2010 12:55:07 AM
Ethylbenzene	370	10		µg/L	10	6/2/2010 12:55:07 AM
Xylenes, Total	2600	200		µg/L	100	6/2/2010 12:24:49 AM
Surr: 4-Bromofluorobenzene	100	65.9-130		%REC	10	6/2/2010 12:55:07 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

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

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: GCU # 204E

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.0

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	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1005041	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	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)
5/19/10	1045	WATER	MW #2R	2-40ml	HCl & COOL	1	✓															
5/19/10	1115	WATER	MW #3	2-40ml	HCl & COOL	2	✓															
5/19/10	1145	WATER	MW #4	2-40ml	HCl & COOL	3	✓															
5/19/10	1215	WATER	MW #5	2-40ml	HCl & COOL	4	✓															

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/20/10	1600			5/21/10	900
Date:	Time:	Relinquished by:	Received by:	Date	Time

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: GCU #204E **Work Order:** 1005611

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				**Batch ID:**	**R39030**	**Analysis Date:**		**6/1/2010 9:34:51 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								
Surr: 4-Bromofluorobenzene	18.26	µg/L	0	20	0	91.3	65.9	130			
Sample ID: 100NG BTEX LCS		*LCS*				**Batch ID:**	**R39030**	**Analysis Date:**		**6/1/2010 7:52:20 PM**	
Benzene	19.46	µg/L	1.0	20	0	97.3	87.9	121			
Toluene	19.81	µg/L	1.0	20	0	99.0	83	124			
Ethylbenzene	19.87	µg/L	1.0	20	0	99.4	81.7	122			
Xylenes, Total	62.71	µg/L	2.0	60	0	105	85.6	121			
Surr: 4-Bromofluorobenzene	20.45	µg/L	0	20	0	102	81.2	129			
Sample ID: 100NG BTEX LCSD		*LCSD*				**Batch ID:**	**R39030**	**Analysis Date:**		**6/1/2010 8:22:56 PM**	
Benzene	20.08	µg/L	1.0	20	0	100	87.9	121	3.15	14.6	
Toluene	20.67	µg/L	1.0	20	0	103	83	124	4.27	18	
Ethylbenzene	20.96	µg/L	1.0	20	0	105	81.7	122	5.36	15.8	
Xylenes, Total	65.03	µg/L	2.0	60	0	108	85.6	121	3.64	15.9	
Surr: 4-Bromofluorobenzene	22.49	µg/L	0	20	0	112	81.2	129	0	0	

Qualifiers:

J	Estimated value	H	Holding times for preparation or analysis exceeded
*	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG** Date Received: **5/21/2010**

Work Order Number **1005611** Received by: TLS

Checklist completed by: _____ 5/21 Sample ID labels checked by: _____
Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**-0.6°**	*<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

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : October 30, 2010

DEVELOPER / SAMPLER : N J V

Filename : 10-30-10.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	103.89	85.55	18.34	27.00	-	-	-	-	-
2R	99.49	83.94	15.55	22.65	1010	7.82	1,000	16.9	3.50
3	95.66	82.97	12.69	25.00	1045	6.95	1,100	16.2	6.00
4	98.63	83.16	15.47	21.94	1140	6.73	1,900	17.1	3.25
5	95.98	82.66	13.32	21.78	1215	6.88	1,300	17.4	4.25
					INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800		
					DATE & TIME =	10/28/10	0800		

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

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW 's sampled (MW # 2R , # 3 , # 4 , & # 5). MW # 2R , # 4 , # 5 - pale yellowish orange tint in appearance . MW # 3 - dark gray tint in appearance . Collected samples for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.40 ft., MW # 2R ~ 2.23 ft., MW # 3 ~ 2.30 ft., MW # 4 ~ 2.63 ft., MW # 5 ~ 2.25 ft. above grade .

on-site	9:30	temp	47 F
off-site	12:30	temp	66 F
sky cond.	Sunny		
wind speed	0 - 10	direct.	E -ESE

Hall Environmental Analysis Laboratory, Inc.

Date: *09-Nov-10*

CLIENT: Blagg Engineering
Project: GCU #204E
Lab Order: 1011106

Lab ID: 1011106-01 **Collection Date:** 10/30/2010 10:00:00 AM
Client Sample ID: MW #2R **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	6.3	1.0		µg/L	1	11/8/2010 5:44:18 PM
Toluene	ND	1.0		µg/L	1	11/8/2010 5:44:18 PM
Ethylbenzene	86	1.0		µg/L	1	11/8/2010 5:44:18 PM
Xylenes, Total	410	20		µg/L	10	11/8/2010 5:18:04 PM
Surr: 4-Bromofluorobenzene	97.7	76.4-106		%REC	1	11/8/2010 5:44:18 PM

Lab ID: 1011106-02 **Collection Date:** 10/30/2010 10:45:00 AM
Client Sample ID: MW #3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	350	10		µg/L	10	11/8/2010 6:36:54 PM
Toluene	210	10		µg/L	10	11/8/2010 6:36:54 PM
Ethylbenzene	340	10		µg/L	10	11/8/2010 6:36:54 PM
Xylenes, Total	1100	20		µg/L	10	11/8/2010 6:36:54 PM
Surr: 4-Bromofluorobenzene	98.4	76.4-106		%REC	10	11/8/2010 6:36:54 PM

Lab ID: 1011106-03 **Collection Date:** 10/30/2010 11:35:00 AM
Client Sample ID: MW #4 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	6500	100		µg/L	100	11/8/2010 7:03:23 PM
Toluene	63	10		µg/L	10	11/8/2010 7:29:44 PM
Ethylbenzene	600	10		µg/L	10	11/8/2010 7:29:44 PM
Xylenes, Total	1500	20		µg/L	10	11/8/2010 7:29:44 PM
Surr: 4-Bromofluorobenzene	98.7	76.4-106		%REC	10	11/8/2010 7:29:44 PM

Lab ID: 1011106-04 **Collection Date:** 10/30/2010 12:15:00 PM
Client Sample ID: MW #5 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	380	10		µg/L	10	11/8/2010 8:22:41 PM
Toluene	140	10		µg/L	10	11/8/2010 8:22:41 PM
Ethylbenzene	450	10		µg/L	10	11/8/2010 8:22:41 PM
Xylenes, Total	2200	200		µg/L	100	11/8/2010 7:56:09 PM
Surr: 4-Bromofluorobenzene	98.5	76.4-106		%REC	10	11/8/2010 8:22:41 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

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

Phone #: (505) 632-1199

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
GCU # 204E

Project #:

Project Manager:
NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1011401	Analysis Request: (BTEX + MTBE + TMBs (8021B))	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	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)
10/30/10	1000	WATER	MW #2R	40ml-2	HCl & COOL	1	✓															
10/30/10	1045	WATER	MW # 3	40ml-2	HCl & COOL	2	✓															
10/30/10	1135	WATER	MW # 4	40ml-2	HCl & COOL	3	✓															
10/30/10	1215	WATER	MW #5	40ml-2	HCl & COOL	4	✓															

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/1/10	1450		Michael Garcia	11/2/10	10:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

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: GCU #204E **Work Order:** 1011106

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 5ml-rb		*MBLK*				Batch ID: **R42024**		Analysis Date:	11/8/2010 9:50:36 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: b5		*MBLK*				Batch ID: **R42024**		Analysis Date:	11/8/2010 9:14:52 PM		
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 lcs		*LCS*				Batch ID: **R42024**		Analysis Date:	11/8/2010 10:43:06 AM		
Benzene	20.74	µg/L	1.0	20	0	104	84.6	109			
Toluene	19.27	µg/L	1.0	20	0	96.3	81	114			
Sample ID: 100ng lcs2		*LCS*				Batch ID: **R42024**		Analysis Date:	11/8/2010 10:07:09 PM		
Benzene	19.45	µg/L	1.0	20	0	97.2	84.6	109			
Toluene	19.15	µg/L	1.0	20	0	95.8	81	114			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date Received: 11/2/2010

Work Order Number 1011106 | Received by: MMG

Checklist completed by: Signature 11/2/10 Date | Sample ID labels checked by: Initials

Matrix: | Carrier name: Priority US Mail

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 ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**0.8°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____