



30-045-23257

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13 March 2019

Sabre Beebe  
BP America  
380 Airport Rd.  
Durango, CO 81303  
RE: API

NMOC  
MAR 13 2019  
DISTRICT III

Enclosed are the results of analyses for samples received by the laboratory on 02/25/19 12:30.  
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads 'Debbie Zufelt'.

Debbie Zufelt  
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8.



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BP America	Project: API	
380 Airport Rd.	Project Name / Number: [none]	<b>Reported:</b>
Durango CO, 81303	Project Manager: Sabre Beebe	03/13/19 09:49

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Bolack 002	1902141-02	Water	02/25/19 08:45	02/25/19 12:30	

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Debbie Zufelt, Reports Manager

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03/13/19 09:49

### Bolack 002

#### 1902141-02 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
<b>General Chemistry</b>									
Alkalinity, Bicarbonate as CaCO <sub>3</sub> *	160	10.0		mg/L	5	02/28/19	2320 B		JDA
Alkalinity, Carbonate as CaCO <sub>3</sub> *	<10.0	10.0		mg/L	5	02/28/19	2320 B		JDA
Alkalinity, Hydroxide as CaCO <sub>3</sub> *	<10.0	10.0		mg/L	5	02/28/19	2320 B		JDA
Alkalinity, Total as CaCO <sub>3</sub> *	160	10.0		mg/L	5	02/28/19	2320 B		JDA
Chloride*	4700	200	20.5	mg/L	200	02/25/19	EPA300.0		AES
Conductivity*	15700	10.0		uS/cm	1	02/26/19	2510 B		JDA
pH*	6.81			pH Units	1	02/26/19	EPA150.1		JDA
Resistivity	63.7			ohm/cm	1	03/01/19	2510 B		JDA
Total Dissolved Solids*	8220	20.0		mg/L	2	02/26/19	EPA160.1		jda
Specific Gravity	1.008	0.8000		No Unit	1	03/01/19	ASTM D1429-03		JDA
Sulfate*	<200	200	42.6	mg/L	200	02/25/19	EPA300.0		AES
<b>Total Recoverable Metals by ICP (E200.7)</b>									
Iron*	51.5	1.00	0.348	mg/L	20	02/28/19	EPA200.7		AES
<b>Dissolved Metals by ICP</b>									
Hardness	141	13.2	2.19	mg/L	20	02/25/19	2340 B		AES
Barium*	4.02	0.400	0.042	mg/L	20	02/25/19	EPA200.7		AES
Calcium*	44.2	2.00	0.257	mg/L	20	02/25/19	EPA200.7		AES
Iron*	11.1	1.00	0.553	mg/L	20	02/25/19	EPA200.7		AES
Magnesium*	7.42	2.00	0.375	mg/L	20	02/25/19	EPA200.7		AES
Manganese*	<0.400	0.400	0.054	mg/L	20	02/25/19	EPA200.7		AES
Potassium*	30.0	20.0	1.91	mg/L	20	02/25/19	EPA200.7		AES
Sodium*	2980	20.0	7.34	mg/L	20	02/25/19	EPA200.7		AES
Strontium*	6.04	2.00	0.057	mg/L	20	02/25/19	EPA200.7		AES
Cation/Anion Balance	-54								

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BP America 380 Airport Rd. Durango CO, 81303	Project: API Project Name / Number: [none] Project Manager: Sabre Beebe	Reported: 03/13/19 09:49
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### General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B902178 - General Prep - Wet Chem</b>										
<b>Blank (B902178-BLK1)</b>				Prepared & Analyzed: 02/25/19						
Chloride	ND	1.00	mg/L							
Sulfate	ND	1.00	mg/L							
<b>LCS (B902178-BS1)</b>				Prepared & Analyzed: 02/25/19						
Chloride	23.7	1.00	mg/L	25.0		94.8	90-110			
Sulfate	24.0	1.00	mg/L	25.0		95.9	90-110			
<b>LCS Dup (B902178-BSD1)</b>				Prepared & Analyzed: 02/25/19						
Chloride	23.6	1.00	mg/L	25.0		94.4	90-110	0.495	20	
Sulfate	23.5	1.00	mg/L	25.0		93.9	90-110	2.08	20	
<b>Batch B902185 - General Prep - Wet Chem</b>										
<b>Blank (B902185-BLK1)</b>				Prepared & Analyzed: 02/26/19						
Total Dissolved Solids	ND	10.0	mg/L							
<b>Duplicate (B902185-DUP1)</b>				Source: 1902112-01	Prepared & Analyzed: 02/26/19					
Total Dissolved Solids	305	10.0	mg/L		320			4.79	20	
<b>Reference (B902185-SRM1)</b>				Prepared & Analyzed: 02/26/19						
Total Dissolved Solids	415	10.0	mg/L	380		109	85-115			
<b>Batch B902207 - General Prep - Wet Chem</b>										
<b>Blank (B902207-BLK1)</b>				Prepared & Analyzed: 02/28/19						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
<b>LCS (B902207-BS1)</b>				Prepared & Analyzed: 02/28/19						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115			
<b>LCS Dup (B902207-BSD1)</b>				Prepared & Analyzed: 02/28/19						
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115	1.98	20	
<b>Batch B903002 - General Prep - Wet Chem</b>										
<b>Duplicate (B903002-DUP1)</b>				Source: 1902137-01	Prepared & Analyzed: 03/01/19					
Specific Gravity	1.013	0.8000	No Unit		1.013			0.00	20	
<b>Batch B903004 - General Prep - Wet Chem</b>										
<b>Duplicate (B903004-DUP1)</b>				Source: 1902141-01	Prepared & Analyzed: 02/26/19					
Conductivity	1390	10.0	uS/cm		1400			0.715	20	
<b>Reference (B903004-SRM1)</b>				Prepared & Analyzed: 02/26/19						
Conductivity	509	10.0	uS/cm	491		104	90-110.1			
<b>Batch B903008 - General Prep - Wet Chem</b>										

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03/13/19 09:49

### General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B903008 - General Prep - Wet Chem (Continued)

<b>Duplicate (B903008-DUP1)</b>		<b>Source: 1902141-01</b>		<b>Prepared &amp; Analyzed: 02/26/19</b>						
pH	6.28		pH Units		6.25			0.479	20	
<b>Reference (B903008-SRM1)</b>				<b>Prepared &amp; Analyzed: 02/26/19</b>						
pH	8.97		pH Units	9.13		98.2	97.8-102.2			

### Total Recoverable Metals by ICP (E200.7) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B902186 - Total Rec. 200.7/200.8/200.2

<b>Blank (B902186-BLK1)</b>				<b>Prepared: 02/26/19 Analyzed: 02/28/19</b>						
Iron	ND	0.050	mg/L							
<b>LCS (B902186-BS1)</b>				<b>Prepared: 02/26/19 Analyzed: 02/28/19</b>						
Iron	4.09	0.050	mg/L	4.00		102	85-115			
<b>LCS Dup (B902186-BSD1)</b>				<b>Prepared: 02/26/19 Analyzed: 02/28/19</b>						
Iron	4.12	0.050	mg/L	4.00		103	85-115	0.746	20	

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Durango CO, 81303	Project Manager: Sabre Beebe	03/13/19 09:49

### Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B902176 - Diss. 200.7/200.8

##### Blank (B902176-BLK1)

Prepared & Analyzed: 02/25/19

Barium	ND	0.020	mg/L
Calcium	ND	0.100	mg/L
Iron	ND	0.050	mg/L
Magnesium	ND	0.100	mg/L
Manganese	ND	0.020	mg/L
Potassium	ND	1.00	mg/L
Sodium	ND	1.00	mg/L
Strontium	ND	0.100	mg/L

##### LCS (B902176-BS1)

Prepared & Analyzed: 02/25/19

Barium	2.38	0.020	mg/L	2.50	95.4	85-115
Calcium	5.06	0.100	mg/L	5.00	101	85-115
Iron	4.97	0.050	mg/L	5.00	99.5	85-115
Magnesium	25.1	0.100	mg/L	25.0	100	85-115
Manganese	2.44	0.020	mg/L	2.50	97.8	85-115
Potassium	10.3	1.00	mg/L	10.0	103	85-115
Sodium	4.01	1.00	mg/L	4.05	99.0	85-115
Strontium	5.08	0.100	mg/L	5.00	102	85-115

##### LCS Dup (B902176-BSD1)

Prepared & Analyzed: 02/25/19

Barium	2.37	0.020	mg/L	2.50	94.9	85-115	0.455	20
Calcium	4.96	0.100	mg/L	5.00	99.2	85-115	1.95	20
Iron	4.83	0.050	mg/L	5.00	96.6	85-115	2.92	20
Magnesium	24.5	0.100	mg/L	25.0	98.0	85-115	2.28	20
Manganese	2.40	0.020	mg/L	2.50	96.0	85-115	1.81	20
Potassium	10.6	1.00	mg/L	10.0	106	85-115	2.84	20
Sodium	3.91	1.00	mg/L	4.05	96.7	85-115	2.42	20
Strontium	5.02	0.100	mg/L	5.00	100	85-115	1.25	20

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03/13/19 09:49

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
\*Results reported on as received basis unless designated as dry.  
RPD Relative Percent Difference  
LCS Laboratory Control Sample (Blank Spike)  
RL Report Limit  
MDL Method Detection Limit

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