



November 17, 2022

Mr. & Mrs. Gerald and Irene Pfannensteil  
13410 Grandby St.  
Brighton, CO 80601

**RE: BASELINE GROUNDWATER QUALITY TESTING RESULTS**

Dear Mr. & Mrs. Pfannensteil,

Aquionix, Inc. has been retained by Providence Operating DBA POCO Operating (POCO) to conduct a baseline groundwater quality evaluation in conjunction with oil and gas development activities. This activity is required under Rule 609 of the Colorado Oil and Gas Conservation Commission's (COGCC) Rules and Regulations for the groundwater baseline sampling and monitoring program.

The purpose of this letter is to provide you with a copy of the groundwater quality test results collected on August 02, 2022 at the water well in the table below:

Permit #	Receipt #	Latitude (Permit)	Longitude (Permit)	Sample Location Information (Field)	Sample I.D.
113862	9005101	39.940306	-104.809596	Spigot near barn	113862-Pfannensteil

Please find enclosed field documentation and a copy of the test results conduct by Origins Laboratory (Origins), Denver, CO. The results were also released to the COGCC for their review and use, which may include posting to publicly available databases. These results include a duplicate sample used for quality assurance.

If you have any questions or concerns, please contact Scott Legg at 303-289-7520. Thank you for your cooperation with this matter.

Sincerely,

Scott Legg  
Project Manager II

Enclosures:

- Field Documentation (Field Sampling Data Sheets & Calibration Forms)
- Origins Test Results: Y208067



General

POCO Operating  
9635 Maroon Circle  
Englewood, CO 80112

Contact: Meghan Grimes  
Project Name: Brighton Lakes

**Purpose of Sampling:** Initial baseline sampling for water source 113862.

Quality Control

As a standard quality control practice, sample containers, tubing, and filters are new, sealed, and unopened until the time of collection. Any non-disposable sampling equipment is thoroughly cleaned and rinsed in accordance with Rule 609 Colorado Oil and Gas Conservation Commission (COGCC) Model Sampling and Analysis Plan. This precludes the use of any equipment that may contain trace amounts of pollutant. Each sample is labeled prior to, or at the time of, sampling on a self-adhesive label with waterproof ink. As a minimum, the sample number, name of collector, date and time of collection, and sample preservative are included on the label.

Samples are immediately stored on ice to begin the cooling process to the COGCC recommended storage temperature of 4°C during collection and transit to the laboratory.

Summary of Samples Taken

**Sample Identification Number:** 113862 - Pfannensteil

Sample Date: 08/02/2022

Sample Time: 09:21

Type/Description of Sample:

Groundwater baseline sample collected at a domestic well (Latitude: 39.94000, Longitude: -104.80979) in Brighton, CO. 113862 is located approximately ½ mile to the surface hole location of well Brighton Lakes.

Method of Preservation:

Samples were preserved in accordance with COGCC Rule 609 Table 5.1 *Sample Preservation and Handling*.

Analysis Requested:

Analysis requested in accordance with COGCC Rule 609 Table 7-1 *Analytical Parameters*.

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Analysis requested in accordance with COGCC Rule 609 Table 7-1 *Analytical Parameters*.

Authorization:

\_\_\_\_\_  
Scott Legg

11/17/2022

Date



Photograph 1  
113862-Pfannensteil  
Sample Location



Photograph 2  
113862-Pfannensteil  
Wellhead



Photograph 3  
113862-Pfannensteil  
Initial Water Quality



Photograph 4  
113862-Pfannensteil  
Final Water Quality

# Field Sampling Data Sheet

COGCC Facility ID: 762064  
Site Address: see property owner  
Site Contact: see property owner  
Phone #: see property owner  
Date of Sample: 08/02/2022  
Sample Type (baseline, post-drill, complaint): Baseline  
Oil & Gas Well API Number: \_\_\_\_\_

Property Owner Name: Gerald + Irene Pfannenstiel  
Property Owner Phone Number: 303-659-0921  
Property Owner Mailing Address: 13410 Granby St.  
Brighton, CO 80601

Individuals Present (Who was on-site during the sampling event?)

Irene Pfannenstiel

## Water Well Information from Permit Records

Permit No.: 113862  
Receipt No.: 9005101  
Total Depth (ft.): 460'  
Static Water Level (ft.): 160'  
Yield (GPM): 14  
Well Diameter (in.): 6" (-0'-150'), 4" (40'-460')

## Water Well Information Onsite

GPS Location (field): 39.94000, -104.80979  
GPS Location (post-processed): same  
Water well casing height (in.): 15"  
Ground Elevation (ft.): 5060 How determined: cell  
Approximate distance to the Oil & Gas well pad: 2718'  
%LEL at wellhead (if measured): N/A  
%CH<sub>4</sub> at wellhead (if measured): N/A  
Weather conditions: 94°F  
Photo(s) Taken?  **Y**  **N**  
Handed Out Landowner Introduction Letter?  **Y**  **N**  
Handed Out FAQ Sheet?  **Y**  **N**  
Handed Out "How Well Do You Know Your Water Well" Pamphlet?  **Y**  **N**

Where was the Sample Taken? Outside Tap  
(Outside Tap, Well House, Kitchen Tap, Spring, Seep, etc.)

Condition of the Well, Spring or Seep (Wellhead sealed? Does the ground slope away from the well?, Visible contamination of spring/seep?, etc.):

Wellhead sealed, in good condition



## Sample Collection Field Sheet

**Sample ID:** 113862 - Pfannenstiel

### Groundwater Monitoring Well Purging/Sampling Information

Purge Start Time: 8:50 Purge End Time: 9:20

Purge Rate (gpm): 2.5 Total Purge Volume (gal): 75

Final Field Parameters	pH (s.u.)	Temp (°C)	Sp. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (ntu)
	8.65	16.1	445.7	191.0	3.85	0.02

### Water Quality Field Parameters

Time	Volume Removed (gal)	pH (s.u.)	Temp (°C)	Sp. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (ntu)	Bubbles or Effervescence?
8:50	0	8.48	16.8	460	190.4	9.24	.02	no color, odor
8:55	12.5	8.49	16.6	445.2	197.2	4.27	.02	"
9:00	25	8.44	16.2	447.6	196.7	2.77	.02	"
9:05	37.5	8.46	16.1	445.7	196.0	3.47	.02	"
9:10	50	8.55	16.1	424.1	193.0	3.81	.02	"
9:15	62.5	8.62	16.1	445.6	192.6	3.83	.02	"
9:20	75	8.65	16.1	445.7	191.0	3.85	.02	"

Notes: Measure field parameters every 3-5 minutes.  
 Minimum of 6 parameter measurements required.  
 Stabilization is demonstrated per COGCC Model Sampling and Analysis Plan version 2 using a required variance of no more than: temperature (+/- 3%), specific conductance (+/- 3%) & pH (+/- 0.2 s.u.). Recommended stabilization includes the following: turbidity (+/- 10% or 1 NTU, whichever is greater), DO (+/- 10% or 2 mg/L, whichever is greater); and ORP (+/- 10% or 10 mV). Stabilization is required over the final three successive measurements.

Comments: \_\_\_\_\_  
 \_\_\_\_\_

# Aquionix, Inc.

# YSI Multi Meter Calibration Form

Client Name: POCO Corp

Meter 1: S/N # 12C100181

Aquionix Project Number: 113862-Pfannersteil / 35953-Gonzales

Meter 2: S/N # 15A104951

Date: 8/2/22

Pre Sampling Time: 7:42

Post Sampling Time: 11:23

Performed By: Kevin Teiken

## Calibration

The multimeter must be calibrated/verified **before and after** sample collection. In addition, the meter must be calibrated/verified for **all** field parameters that are to be measured and recorded.

Perform a three point pH calibration. Record measured value for each buffer solution after calibration has been completed. In addition, record pH mV values. After accepting a good calibration, navigate to the GLP file and check the pH Slope and Slope % of ideal. A good slope should be between 55 and 60 mVs while the ideal is 59 mV.

- A value of +50 or -50 mVs in buffer 7 does not indicate a bad sensor.
- The mV span between pH 4 and 7 and 7 and 10 mV values should be  $\approx$  165 to 180 mV. 177 is the ideal distance.
- If the mV span between pH 4 and 7 or 7 and 10 drops below 160, clean the sensor and try to recalibrate.
- If the slope drops below 53, the sensor should be reconditioned and recalibrated.

Calibration/Standard	Pre Sampling Value	Post Sampling Value
<b>pH 4.0 Buffer</b> Lot#: P10010412101 Exp Date: 2/10/2023	s.u. <u>3.99</u>	s.u. <u>4.03</u>
<b>pH 7.0 Buffer</b> Lot#: P10020402101 Exp Date: 2/9/2023	s.u. <u>6.98</u>	s.u. <u>7.05</u>
<b>pH 10.0 Buffer</b> Lot#: P10052792101 Exp Date: 10/06/2023	s.u. <u>10.02</u>	s.u. <u>10.01</u>
<b>Conductivity Standard</b> <b>1413 (<math>\mu</math>S/cm)</b> Lot#: 2GD997 Exp Date: April 2023	<u>1439</u>	<u>1425</u>
<b>ORP Standard</b> <b>220 (mV)</b> Lot#: 2GF637 Exp Date: March 2023	<u>219.9</u>	<u>218.9</u>
<b>DO</b> <b>Water Saturated Air</b> <b>(100%)</b>	<u>100%</u>	<u>100%</u>

## Sample Collection Field Sheet

Sample ID: 113862 - Pfannens teil

Aquionix™, Inc.

Turbidity Meter Calibration Form

Client Name: POCO Corp

Date: 07/02/22

Pre Sampling Time: 08:29

Post Sampling Time: ~~09:44~~ 11:12

Performed By: Kevin Terken

KT  
*[Signature]*

### Calibration Pre/Post Sampling Check

Standard	Pre Sampling Value	Post Sampling Value
<b>Source 1</b> <b>&lt;0.1 ntu</b> Lot No: 21D Expiration: 01/23	ntu <u>0.02</u>	ntu <u>0.02</u>
<b>Source 2</b> <b>20 ntu</b> Lot No: 28D Expiration: 01/23	ntu <u>20.5</u>	ntu <u>19.9</u>
<b>Source 3</b> <b>100 ntu</b> Lot No: 32D Expiration: 04/23	ntu <u>97.5</u>	ntu <u>98.5</u>
<b>Source 4</b> <b>800 ntu</b> Lot No: 32D Expiration: 04/23	ntu <u>798</u>	sntu <u>798</u>

\*The turbidity meter was calibrated on the same day of the sample analysis using the following standards:

**Calibration results outside of +/- 5% from the standard shall require the calibration procedure to be conducted again.**

