THE GROUP

2020 FRUITLAND OUTCROP MONITORING REPORT

LA PLATA COUNTY, COLORADO

APRIL 19, 2021



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WSP USA INC.
848 E 2ND AVENUE
DURANGO, CO 81301

T: 970-385-1096
F: 970-385-1873
WWW.WSP.COM

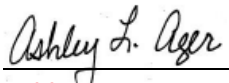
SIGNATURES

PREPARED BY



Devin Hencmann
Senior Consultant, Geologist

APPROVED BY *(must be reviewed for technical accuracy prior to approval)*



Ashley Ager
Managing Director, Geologist

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EXECUTIVE SUMMARY

This 2020 Fruitland Outcrop Monitoring Report has been prepared on behalf of Enduring Resources, LLC; IKAV Energy, Inc. (formerly BP America Production Company); and Hilcorp Energy Company (Hilcorp). These companies are collectively referred to as “The Group”. The Fruitland Formation (Kf) outcrop monitoring is conducted to comply with the Colorado Oil and Gas Conservation Commission (COGCC) Orders 112-156 and 112-157. WSP USA Inc. (WSP), formerly LT Environmental (LTE), was tasked with monitoring the magnitude and extent of methane seepage along the Kf outcrop in La Plata County, Colorado. In addition to methane seepage, the annual monitoring event evaluates contribution of carbon dioxide and hydrogen sulfide to the seepage, presence or absence of methane in natural springs along the Kf outcrop, and presence or absence of seepage at one shut-in production well and two abandoned production wells.

The 2020 methane seep survey was conducted over 1,239 acres of the Kf outcrop from May 11 through July 17, 2020. The surveys were conducted at seven key areas of interest along the Kf outcrop in La Plata County north of the Southern Ute Indian Tribe (SUIT) Reservation boundary, plus three additional shut-in/abandoned well locations.

LTE has conducted the seepage survey since 2007. When evaluating seepage area over time, it is most applicable to compare the 2020 monitoring event to the 2012 historical monitoring event, which was the earliest event with similar mappable areas. Results suggest the area of seepage has shown little change. A comparison of results from 2020 to those in 2012 indicates the seepage area increased by 1.6 percent (%). Similarly, the seepage area remained relatively static on an annual time scale. Compared to the 2019 survey results, seepage area exhibited only a 5% increase.

Although the seepage area showed little change, the reportable volumetric methane flux rate has fluctuated over time. Historically, methane flux rates across the project area decreased from 2007 to 2011. From 2011 to 2017, total volumetric methane flux rates increased each year with two exceptions: 2012 to 2013 and 2016 to 2017. In 2018, LTE measured a flux rate of 26,101 thousand cubic feet per day (MCFD), which at the time represented the largest (9,451 MCFD) yearly increase and the highest methane flux recorded. Following that dramatic increase, the methane flux rates measured in 2019 abruptly declined to 9,153 MCFD, the largest 1-year (16,948 MCFD) decrease observed. Another significant increase was observed in 2020, with methane flux rates rising 158% above 2019 results. A total of 23,583 MCFD was measured, now representing the largest (14,430 MCFD) yearly increase and second highest methane flux recorded.

The total estimated volumetric carbon dioxide flux measured in 2020 was 2,037 MCFD. Similar to previous years, hydrogen sulfide flux values remained low and measured values were reported only slightly above the detection limit of the flux meter. Due to the low flux rates recorded, hydrogen sulfide flux for the mapped areas was not estimated.

As in past years, a mitigation system at the South Fork of Texas Creek (SFTC) continues to affect the methane flux results for the SFTC area, which consistently contributes some of the highest flux values measured. While the mitigation system does capture methane gas, it is not capable of capturing all the

methane gas within the footprint of the collection system. As a result, the collection system appears to have created a preferential pathway in which methane gas appears to seep out along the edges of the footprint, resulting in elevated flux values at this seep area. Elevated methane flux values have been recorded at the edges of the system footprint with a rapid decrease in methane flux values moving away from the system footprint. These elevated flux values affect interpolation and flux estimations for the area, leading to biased high results in 2012. To eliminate the bias, additional flux points were added in the vicinity of the SFTC mitigation system during the subsequent years.

Out of eleven natural springs originally identified along the Kf outcrop in La Plata County, six natural springs were sampled in April through June of 2020 with comparable analytical results to previous years' results.

At the request of the COGCC, flux measurements were collected in the areas surrounding the shut-in production well Pole Barn Monitor Well #1 (API #05-067-07969) and the abandoned production wells Federal 34-1/2-34-1 (API #05-067-07514), and Baird 1-25 (API #05-067-06568). Consistent with historical results, methane was not detected at any of the shut-in/abandoned production well locations above the flux meter reporting limit.

A regional reconnaissance infrared imagery (IR) aerial survey was conducted from June 2 to June 6, 2020. WSP evaluated the aerial images and identified eight new suspect seep areas. Soil gas surveys were conducted to verify the occurrence of methane at the identified potential seep locations. Field verification was completed between August 18 and August 21, 2020. Subsurface methane was detected at two of the eight suspect locations with concentrations ranging from 100 parts per million (ppm) to 50,000 ppm. These areas have the potential to increase the total volumetric methane flux and total seepage area in future surveys.

Based on the results of the 2020 Kf outcrop monitoring event, WSP recommends the following continued compliance with the COGCC orders:

- Conduct detailed methane seep mapping and flux estimation using the portable flux meter in June 2021. LTE will return to the sample locations visited during the 2020 field activities to observe changes in subsurface methane over time and space. Grid spacing will be revised based on the 2020 results.

Based on the results of the 2020 and previous year's Kf outcrop monitoring events, WSP recommends the following changes:

- Reduce the frequency of sampling of the natural springs to match the frequency of the regional reconnaissance infrared (IR) aerial survey conducted once every three years. The natural spring survey has been conducted on an annual basis since 2007, establishing data points with predictable results. Conducting the natural spring survey on 3-year intervals will allow continued addition of newly identified springs to the data set while using resources more efficiently. The next regional reconnaissance event will occur in 2023 and subsequently continue in 3-year intervals.
- Remove three natural springs (Rancho Durango East Spring, Rancho Durango LTD Spring, and Rancho Durango North Spring) from the 2021 sampling event.

1 INTRODUCTION

This 2020 Fruitland Outcrop Monitoring Report has been prepared on behalf of Enduring Resources, LLC; IKAV Energy, Inc. (IKAV, formerly BP America Production Company); and Hilcorp Energy Company. (Hilcorp). These companies are collectively referred to as “The Group”. Since 1997, LT Environmental, Inc. (LTE), now WSP USA Inc. (WSP) has conducted methane seep monitoring along the Fruitland Formation (Kf) outcrop in La Plata County, Colorado (Figure 1). The project area is located along the northern rim of the San Juan Basin, north of the Southern Ute Indian Tribe (SUIT) Reservation boundary. The Kf outcrop monitoring is conducted in order to comply with the Colorado Oil and Gas Conservation Commission (COGCC) Orders 112-156 and 112-157. Because each entity within The Group is affected by those orders, compliance with the seep mapping program is conducted cooperatively in this single effort.

1.1 OBJECTIVE

The objective of the methane seep monitoring program is to observe and document the relative change in methane seepage from the Kf outcrop over time and space. In total, the scope of work provides an efficient and repeatable means to characterize gas seepage, if any, in the project area by inspecting the areas with the greatest potential for seepage based on geological characteristics and historical field observations.

1.2 PROJECT AREA

The project area consists of approximately 23 miles of the Kf outcrop extending from the northern boundary of the SUIT Reservation near Basin Creek (southwest of Durango), northeast to the boundary between La Plata and Archuleta counties (Figure 1).

1.3 BACKGROUND INFORMATION

There have been several previous and continuing studies that support the overall methane seepage evaluation. Some of these studies include:

- Detailed mapping, methane seepage data collection, and mitigation in the Pine River area by BP between 1994 and 2004.
- A reconnaissance survey by Stonebrooke Energy and Environmental in 1995, on behalf of several oil and gas operators and with assistance from the Bureau of Land Management (BLM). The survey consisted of over 1,100 surface and subsurface methane sample points. In addition to Pine River, this survey identified four additional primary methane gas seepage areas including Basin Creek, Carbon Junction, Florida River, and South Fork Texas Creek (SFTC).
- Installation of 162 permanent soil gas monitoring probes by LTE in 1997, with additional probes installed at various locations since 1997, and ongoing monitoring of the points by the BLM.
- Installation of six flux chambers in the primary seepage areas and periodic monitoring of the flux chambers from 1998 to 2005. The flux chambers have since been removed.
- Annual pedestrian reconnaissance surveys of the Kf outcrop by LTE from 1998 through 2001.

- Detailed seepage mapping and an infrared (IR) imagery pilot study conducted in August 2002. The pilot study demonstrated that IR imagery is useful in identifying suspect areas based on stressed vegetation, which can be subsequently field verified for the presence or absence of methane.
- Detailed methane seepage mapping in the known seep areas in October 2002, May 2003, May 2004, June 2005, May 2006, September 2007, and annually in June from 2008 through 2020.
- Regional reconnaissance of the 23-mile section of the Kf outcrop in the project area in July 2003, September 2005, October 2008, August 2011, August 2014, August 2017, and May 2020. The regional reconnaissance included collecting IR imagery, identifying suspect areas, and field verification.
- Natural spring surveys along the 23-mile outcrop in La Plata County, north of the SUIT Reservation boundary, in September 2005, May 2006, October 2007, June and October 2008, May and October 2009, June 2010, and annually in May from 2011 through 2020.
- Private Airborne Natural Gas Emission Lidar (ANGEL) data acquisition by ITT Corporation (ITT) during the summer of 2008.
- Installation of methane mitigation systems at SFTC and at Pine River 2009.
- Expansion of the SFTC methane mitigation system during June 2010.
- Methane investigation completed at SFTC in June 2015 using a forward-looking infrared (FLIR) GF320 optical gas imaging (OGI) camera to identify the most prominent methane seepage areas at the vapor collection and barrier system and measured the rate of seepage lost through a focused methane flux survey.

1.4 SCOPE OF WORK

The scope of work for the 2020 methane seep monitoring included the following tasks:

- Obtaining permission to access private properties
- Regional reconnaissance of the 23-mile section of the Kf outcrop
- Conducting detailed seepage mapping at seven key areas of interest
- Monitoring accessible natural springs
- Conducting detailed seepage mapping at three shut-in/abandoned production well locations
- Preparing this report

2 FIELD METHODS

2.1 PROPERTY ACCESS

Prior to conducting field activities, WSP acquired landowner information from the La Plata County Assessor's office. WSP cross-referenced parcel data and the Kf outcrop boundaries to identify owners of parcels located on the Kf outcrop. Much of the Kf outcrop is on federal land with unrestricted access. WSP attempted to contact private landowners along the Kf outcrop in La Plata County. No investigation activities were conducted on properties with denied access during the monitoring event. The 2020 status of property access is presented in Table 1.

2.2 PROJECT AREA

WSP conducted detailed flux surveys at the following seven areas of interest along the Kf outcrop in La Plata County (Figure 1). These include:

- Basin Creek to Carbon Junction (subdivided into Basin Creek, Basin Creek North, and Carbon Junction)
- Florida River
- SEC18T35NR8W
- SEC17T35NR8W
- Vosburg Pike
- SEC12T35NR8W
- SFTC to Pine River (subdivided into SFTC West, SFTC Central, SFTC East; BP Highlands, and Pine River)

To standardize the flux comparison process from year-to-year, these geographical areas are grouped according to location along the Kf outcrop. Notable observations and field results within the subdivided areas are discussed below.

2.3 DETAILED MAPPING

The grids for detailed mapping areas consisted of a varying number of squares, ranging in area from 2,500 square feet to 40,000 square feet. In general, 50-foot and 200-foot grid spacings were used, depending on site-specific needs. The smaller grid spacing was used to map the relatively small methane seepage areas. The grid mapping system has proven to be systematic, consistent, repeatable, representative, and successful in delineating the lateral extent of seepage. A detailed description of the flux meter and mapping process can be found in previous reports on the COGCC website at http://cogcc.state.co.us/. Specifications and information on the West Systems portable gas flux meter and Global Positioning System (GPS) unit are provided in Appendix A.

2.4 REGIONAL RECONNAISSANCE

A regional reconnaissance survey of the Kf outcrop was originally conducted in 2004 and subsequently conducted every three years beginning in 2008. The latest regional reconnaissance was conducted in 2020. The regional reconnaissance is conducted to supplement the detailed mapping of drainage transects. Reconnaissance includes low-altitude, analogous aerial imagery to map the vegetation along the outcrop and identify suspect areas for further field investigation. Additionally, imagery is used to assist in the scheduled regional reconnaissance monitoring of the Kf outcrop to identify potential locations of methane seepage or coal fires between detailed mapping areas. While the imagery cannot identify specific seepages or coal fires, it can be useful in identifying areas of dead and/or stressed vegetation that may or may not be attributable to methane and/or coal fires. The regional reconnaissance is primarily used to identify potential methane seepage areas, however, anomalies from coal fires can be identified on the color-infrared (CIR) imagery as well.

Suspect areas are defined as areas observed on the CIR image that appear anomalous when compared to the surrounding areas. For example, a light gray area surrounded by bright red areas would be considered a suspect area. The natural features that often produce such suspect areas include areas of dead/stressed vegetation, shadows, rocky outcrops, exposed surface soil, water bodies, and/or coal fires. A detailed description of the regional reconnaissance process is discussed in the 2011 Fruitland Outcrop Monitoring Report, which can be viewed on the COGCC website.

2.5 NATURAL SPRINGS MONITORING

At any natural spring sampled, WSP personnel collected water samples and monitored for subsurface methane near the springs using a multi-gas meter. WSP personnel located the position and elevation using the GPS at each natural spring. Water quality measurements, including pH, oxygen reduction potential (ORP), electrical conductivity (EC), and temperature were collected at each natural spring sampled.

Water samples for laboratory analysis were collected in bottles and containers prepared by the subcontracted analytical laboratories at each accessible and flowing natural spring. Each sample bottle was labeled, indicating project and sample identification, and the date and time of sample collection. Samples were delivered directly to the laboratories under strict chain-of-custody (COC) protocols. The natural spring water samples were collected and submitted to Isotech Laboratories, Inc., in Champaign, Illinois, for analysis of dissolved methane. General water chemistry samples were submitted to Green Analytical Laboratories, in Durango, Colorado.

2.6 SHUT-IN/ABANDONED PRODUCTION WELL FLUX MAPPING

At the request of the COGCC, flux measurements were collected at areas surrounding the shut-in production well Pole Barn Monitor Well #1 (API #05-067-07969), and abandoned production wells Federal 34-1/2-34-1 (API #05-067-07514), and Baird 1-25 (API #05-067-06568). WSP recorded 25

methane flux points next to each shut-in/abandoned production well utilizing the flux meter. Flux measurements were collected on 50-foot grid spacing centered on the abandoned production well. If methane was detected in soil, the seep area was then delineated in the four cardinal directions.

3 DETAILED MAPPING RESULTS

This section describes the results of the detailed flux mapping conducted from May 11, 2020, through June 17, 2020, for the seven main mapping areas. A total of 1,697 flux measurements were collected over 1,239 acres of land in the project area during the 2020 monitoring event. Methane flux measurements are presented on Figure 2. Carbon dioxide flux measurements are presented on Figure 3. Methane and carbon dioxide flux measurements are summarized by Kf outcrop areas of interest in Tables 2 and 3, respectively. Flux meter data is included as Appendix B.

WSP has reported flux measurements in this report as mass flux with the units of moles per square meter per day (mol/m2·day). Conversion to volumetric flux rates in units of thousand cubic feet per day (MCFD) have been provided as a reference for the natural gas production industry, which typically uses volumetric flow rates. The conversion of mass flux units to volumetric flux is discussed in Section 3.4, with calculation details provided in Appendix C.

3.1 OVERALL METHANE RESULTS

The 2020 monitoring event recorded methane flux above the reportable limit (0.2 mol/m^2·day) at 261 of the 1,697 (15.4 percent (%)) sample locations. The reportable methane flux values of each measured location area for the entire project area ranged from 0.2 mol/m^2·day to a maximum of 24,038.4 mol/m^2·day. Methane flux results for each area of interest are discussed in Section 3.5.

3.2 OVERALL CARBON DIOXIDE RESULTS

The 2020 monitoring event detected carbon dioxide flux at 1,662 of the 1,697 (98%) sample locations. The carbon dioxide flux values of each measured location area for the entire project area ranged from 0.8 mol/m^2·day to a maximum 363.4 mol/m^2·day. Carbon dioxide flux results for each area of interest are discussed in Section 3.5.

3.3 OVERALL HYDROGEN SULFIDE RESULTS

The flux meter is a highly sensitive field meter capable of detecting very low flux rates of hydrogen sulfide resulting in 235 points (13.8%) that were slightly above the unit's reliable detection limit of 0.0025 mol/m^2·day. Given the flux meter's accuracy of plus or minus (±)25%, these measured values are not considered to pose a threat to human health.

Hydrogen sulfide has been identified in the Carbon Junction and SFTC areas since the inception of the monitoring program in 1997, but concentrations in the atmosphere above the ground surface have not been detected at levels that pose a risk to human health. Hydrogen sulfide concentrations have been detected in the shallow subsurface soil; however, concentrations were found to dissipate quickly to below-detectable limits above the ground surface. The source of the hydrogen sulfide detected along the Kf outcrop is believed to be from local, near surface anaerobic microbial activity, as hydrogen sulfide is not present in the coalbed methane production gas developed within the northern San Juan Basin.

Due to the very low flux values of hydrogen sulfide measured during the 2020 detailed mapping program, maps of hydrogen sulfide measurements were not deemed useful and, therefore, were not prepared. Estimates of total hydrogen sulfide flux were not calculated due to the low levels detected.

3.4 OVERALL METHANE RESULTS

WSP estimated the total volumetric flux of methane and carbon dioxide by combining generally contiguous areas of interest of the Kf outcrop in La Plata County. Flux data were interpolated, gridded, and then contoured and processed to estimate the total volumetric flux rates. The results were converted to volumetric flux rates common to the natural gas production industry in units of MCFD. For a better perspective of the methane flux and carbon dioxide flux rates, WSP converted the mass flux values into volumetric flux units of cubic feet per day (CFD), assuming equal areas. The unit conversion is based on the molecular weight of the gas and the density of the gas at approximately 7,000 feet above mean sea level. For methane flux, the calculation is as follows:

$$\frac{\text{mol } CH_4}{\text{day}} \times \frac{16.04276 \text{ g } CH_4}{\text{mol } CH_4} \times \frac{0.0698 \text{ ft}^3 CH_4}{\text{g } CH_4} = \frac{\text{ft}^3 CH_4}{\text{day}}$$

For example: 1.0 mole/day CH_4 = 1.12 CFD CH_4

For carbon dioxide flux, the calculation is as follows:

$$\frac{\text{mol } CO_2}{\text{day}} \times \frac{44.01 \text{ g } CO_2}{\text{mol } CO_2} \times \frac{0.0253 \text{ ft}^3 CO_2}{\text{g } CO_2} = \frac{\text{ft}^3 CO_2}{\text{day}}$$

For example: 1.0 mole/day CO_2 = 1.11 CFD CO_2

Notes:

CH_4 – methane
g – grams
mol - mole
ft^3 – cubic feet
CO_2 – carbon dioxide

The volumetric flux values calculated herein are estimates and may not represent actual values for the specific areas. Interpolation calculation techniques are highly sensitive to data skewness and can result in large changes in calculated flux values based on measurements made at only a few locations. Methane flux volumes were calculated using values that were at, or above, the reporting limit as described in previous reports referenced in Section 2.3. A discussion of the methods and calculations used to determine total methane flux is presented in Appendix C.

The total estimated reportable methane flux volume for the mapped areas on the Kf outcrop in La Plata County in 2020 was 23,583 MCFD. The total estimated volumetric carbon dioxide flux for the mapped areas on the Kf outcrop in La Plata County in 2020 was 2,037 MCFD. Figures 2 and 3 illustrate methane and carbon dioxide flux results of the detailed mapping event, respectively. A summary of the flux

measurements is presented in Table 2. Table 3 summarizes the total flux volumes for each mapping area and includes historical comparisons.

3.5 SPECIFIC AREA RESULTS

3.5.1 BASIN CREEK TO CARBON JUNCTION

The Basin Creek and Carbon Junction survey areas are located south of the city of Durango and consist of approximately 6.9 miles of the Kf outcrop. The detailed flux mapping of Basin Creek to Carbon Junction area was conducted between May 11 and May 29, 2020. A total of 652 flux sample points was measured. The Basin Creek to Carbon Junction survey area has an estimated methane seepage area of approximately 83 acres with a flux rate of 4,544 MCFD. Carbon dioxide was mapped over approximately 433 acres with a total flux rate of 1,131 MCFD.

3.5.2 FLORIDA RIVER

The survey area at Florida River extends approximately 1.5 miles along the Kf outcrop. The Florida River mapping was conducted on June 3 and June 9, 2020. A total of 141 flux sample points was measured. The Florida River mapping area has an estimated methane seepage area of approximately 15 acres with a total flux rate of 2,831 MCFD. Carbon dioxide was mapped over approximately 85 acres with a total flux rate of 119 MCFD.

3.5.3 SEC18T35NR8W

The survey area at SEC18T35NR8W is located in Section 18, Township 35 North, Range 8 West, located between the Florida River and SEC17T35NR8W mapping areas. SEC18T35NR8W mapping was conducted on June 3, 2020. A total of 20 flux sample points was measured. The SEC18T35NR8W seepage area has an estimated methane seepage area of approximately two acres with a total flux rate of 0.49 MCFD. Carbon dioxide was mapped over approximately five acres with a total flux rate of 1.5 MCFD.

3.5.4 SEC17T35NR8W

The survey area at SEC17T35NR8W is located in Section 17, Township 35 North, Range 8 West, located between the Florida River and Vosburg Pike mapping areas. SEC17T35NR8W mapping was conducted on June 10, 2020. A total of 18 flux sample points was measured. The SEC17T35NR8W seepage area has an estimated methane seepage area of two acres with a total flux rate of three MCFD. Carbon dioxide was mapped over approximately four acres with a total flux rate of 3.2 MCFD.

3.5.5 VOSBURG PIKE

The mapping area at Vosburg Pike is an upland portion of the Kf outcrop, located approximately halfway between the Florida River and SFTC mapping areas. The Vosburg Pike mapping area covers approximately 1.3 miles along the Kf outcrop. Flux mapping occurred between June 9 and June 16, 2020.

A total of 94 flux sample points was measured. The Vosburg Pike mapping area has an estimated methane seepage area of approximately 9 acres with a total flux rate of 456 MCFD. Carbon dioxide was mapped over approximately 72 acres with a total flux rate of 101 MCFD.

3.5.6 SEC12T35NR8W

WSP detected methane in the subsurface within a suspect seepage area from the 2011 regional reconnaissance. As a result, this area was included in the detailed flux survey program since 2012. The methane seepage area, identified as SEC12T35NR8W, is located in Section 12, Township 35 North, Range 8 West, between Vosburg Pike and SFTC. The landowners did not grant access to this seepage area in 2012, 2013, or 2014; therefore, flux surveys were not conducted for SEC12T35NR8W in that time interval. Access was granted during the field verification portion of the 2014 regional reconnaissance and, as such, the area was field verified to confirm the presence of methane seepage. The 2020 methane flux survey was the sixth time flux measurements have been collected in the SEC12T35NR8W area. Measurements were collected on June 15 and 16, 2020. A total of 148 flux sample points were measured. The SEC12T35NR8W mapping area has an estimated methane seepage area of approximately 20 acres with a total flux rate of 10,453 MCFD. Carbon dioxide was mapped over approximately 73 acres with a total flux rate of 172 MCFD.

3.5.7 SOUTH FORK TEXAS CREEK TO PINE RIVER

The SFTC to Pine River mapping area consists of five individual areas including SFTC West, SFTC Central, SFTC East, BP Highlands, and Pine River. The entire mapping area is approximately 4.4 miles of the Kf outcrop. The flux survey from SFTC to Pine River was conducted between June 4 and July 17, 2020. The survey area collectively known as SFTC (SFTC West, SFTC Central, and SFTC East) is located where the Texas Creek transects the Kf outcrop. A large alluvial grass-covered valley parallels the strike of the outcrop but eventually turns northward and transects the contact between the Kf and the Pictured Cliffs Formation (Kpc). Areas west of the creek are designated as SFTC West. The main seepage area within SFTC, including the BP properties, has been designated SFTC Central. The seepage area located approximately 0.25 miles east of the creek has been labeled SFTC East.
The seepage at SFTC is one of the most active methane seepages within the project area. A mitigation system (Figure 2) is located in SFTC Central. The flow rate of the methane gas captured by the mitigation system is approximately 30 MCFD under normal conditions with approximately 95% to 100% of the gas collected consisting of methane (less than 1% consists of oxygen). The volume of gas captured by the mitigation system exceeds the volume of gas used by the turbine-driven electrical generator. This result is based on optimizing the system efficiency and is routinely monitored to maximize the system output.

Methane continues to be detected around the collection system boundary. Due to the excess methane that the system is not capturing, it appears that the remaining methane is following preferential pathways to the surface.

The BP Highlands is an upland area directly east of SFTC and west of Pine River. The mapping area at Pine River is located where the Pine River transects the Kf outcrop. The seepage at Pine River was evaluated for mitigation if the methane seepage. According to data, the flow rate of methane captured from the mitigation system was diluted by naturally occurring oxygen and other gases, which reduced the

effectiveness of operating the active system. Due to the low concentration of methane, the system was converted to passive venting in June 2012.

A total of 624 flux sample points was measured in the SFTC to Pine River survey area. The SFTC to Pine River survey area has an estimated methane seepage area of 60 acres with a total flux rate of 5,296 MCFD. Carbon dioxide was mapped over approximately 364 acres with a total flux rate of 509 MCFD.

3.6 HISTORICAL FLUX DATA COMPARISON

Elevated methane flux in 2012 prompted LTE to revise the grid spacing in the vicinity of flux points with significantly elevated methane flux to better bracket the seepage and report a more accurate methane flux. The revised grid spacing was utilized in the 2013 through the 2020 surveys. The increased resolution of the 2013 survey reported a methane flux rate of 6,526 MCFD, approximately 30% less than the 2012 results (Table 3). The decrease from 2012 to 2013 established that the revised grid spacing better defined seepage volume in areas with high individual flux point measurements. Using the revised grid spacing, the methane flux rate increased by 11,639 MCFD from 2013 to 2016.

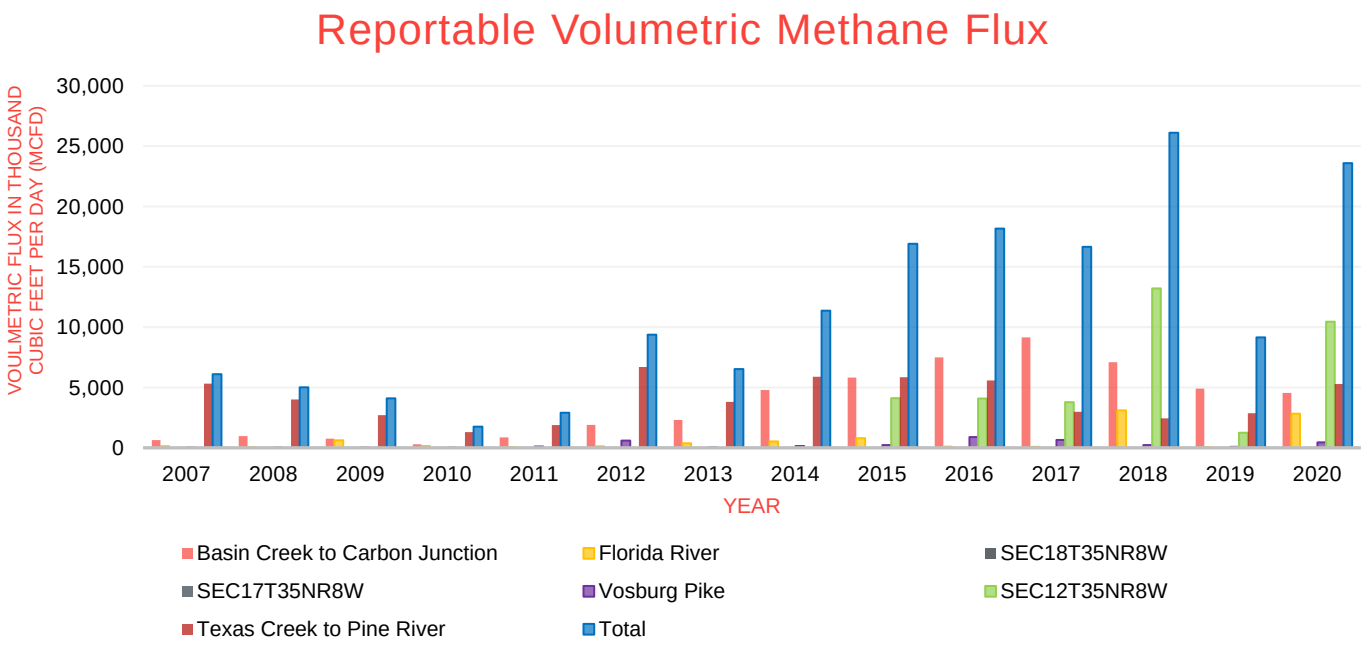
In 2016, the total methane flux was estimated at 18,165 MCFD and was the highest total methane flux recorded since first using the flux meter in 2007. Total methane flux in 2017 decreased and this was the first decrease observed since the 2013 survey, however the 2017 estimated flux was still the third highest flux recorded since 2007. Total methane flux in 2018 increased to 26,101 MCFD, exceeding the previous high in 2016. This increase was largely controlled by significant methane flux increases in SEC12T35R8W and the Florida River mapping areas.

A significant decrease was observed in 2019, with total methane flux measuring 9,153 MCFD. Although methane flux decreased in most areas, SEC12T35R8W and the Florida River areas recorded the steepest declines. The combined decreases were the largest annual change observed since 2007 when the flux meter was first implemented to calculate methane flux.

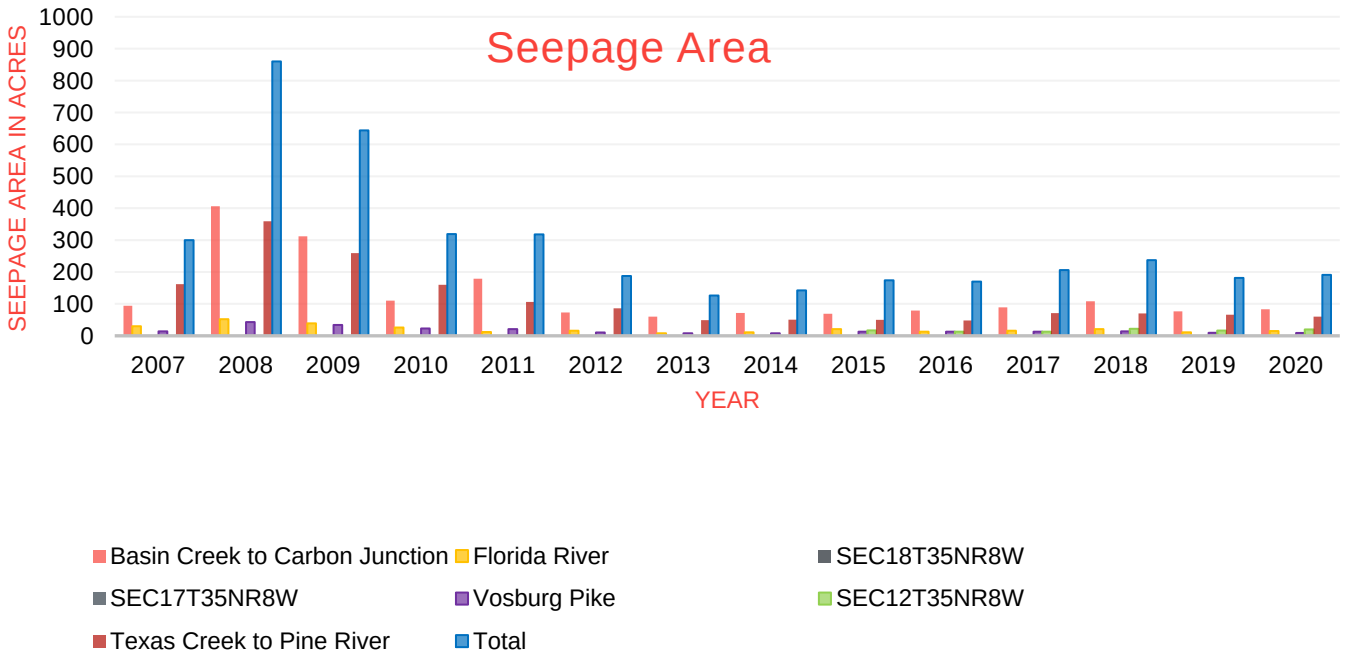
That sharp decline was followed in 2020 by another significant increase. Total methane flux in 2020 was 23,583 MCFD, and increase of 14,430 MCFD over the results measured in 2019. Similar to the decline in 2019, SEC12T35R8W and Florida River mapping areas changed the most, returning to higher levels observed in 2018 (Table 3).

The mitigation system at SFTC, which was installed in 2009, accounts for some of the effect on the methane flux results. While the mitigation system does capture methane gas, it is not capable of capturing all the methane gas within the footprint of the collection system. As a result, the system footprint appears to have created a preferential pathway in which methane gas seeps out along the edges of the footprint. The methane seepage at the edges of the system is concentrated as compared to the natural seepage. Elevated methane flux values have been recorded at the edges of the system footprint with a rapid decrease in methane flux values moving away from the system footprint. These elevated flux values affected interpolation and flux estimation in 2012 as described above and lead to biased high results. The additional flux points in the vicinity of the mitigation system in 2013 through 2020 appear to have reduced the bias high effect observed in 2012.

Below is a graphical representation of the change in methane flux over the last 14 years along the entire Kf outcrop by area.



Due to the discovery of additional seeps during the initial years of the survey the survey area increased nearly 3.5 times (186%) in acreage between 2007 and 2008; therefore to be consistent in comparing areas measured, it does not make sense to compare the 2020 monitoring event to the 2007 monitoring event. From 2009 to 2011 the seepage area decreased by approximately 50%. However, the seepage area has been relatively consistent since 2012; therefore, it makes more sense to compare the 2020 monitoring event to the 2012 monitoring event, where mappable areas are similar. From 2012 to 2020 the seepage area increased by 1.6%. From 2019 to 2020, seepage area increased by 5%.



Figures 4-9 depict the methane seepage extents compared to the survey area from 2007 through 2020. To compare methane flux for each year, the figures depict methane flux measurements. This visual representation of methane flux delineates areas of elevated methane seepage throughout the Kf outcrop and provides an understanding as to why these specific areas are investigated. Table 3 summarizes the changes in seepage area extent and the methane flux from 2007 through 2020.

4 REGIONAL RECONNAISSNCE

The regional reconnaissance of the Kf outcrop has evolved since it was introduced in 1995. Initially, the regional reconnaissance was a pedestrian survey with the collection of surface methane concentration and qualitative observations of vegetative conditions. The qualitative nature of the pedestrian survey and the subjective bias by the varying field crews over the years warranted the development of an alternative approach to monitor the far-reaching extents of the Kf outcrop area, particularly those areas not exhibiting active methane seepage. IR aerial photography, in conjunction with follow-up field verification, began in 2005 and continues every three years. Regional reconnaissance was conducted in 2020 and will be conducted next in 2023.

4.1 FIELD VERIFICATION ACTIVITIES

The 2020 regional reconnaissance effort included IR aerial photography and imagery review for stressed vegetation, followed by field verification with the collection of subsurface methane concentration measurements in identified suspect areas. The 2020 regional reconnaissance included similar IR imagery review and field verification tasks as conducted in 2005, 2008, 2011, 2014, and 2017.

This section describes the results of the 2020 IR aerial imagery reconnaissance, imagery review, and field verification activities conducted in La Plata County along the Kf outcrop. Aerial photography was conducted on June 6 and June 7, 2020.

WSP conducted the field verification at eight suspect seep areas from August 18 to September 3, 2020. Field verification was conducted using a slide hammer to drive a 0.5-inch diameter steel rod into the soil to a depth of approximately 2 feet to 3 feet below ground surface (bgs). Polyethylene tubing with perforations along the bottom 6-inches was inserted into the boring and sealed with native material at the surface. An RKI Eagle II Multi-gas meter was connected to the tubing and WSP monitored the concentration of methane, carbon monoxide, hydrogen sulfide, and oxygen. WSP recorded the peak concentrations measured by the multi-gas meter over a period of approximately 1 minute to 2 minutes of monitoring. A suspect seep area location map of the aerial images and subsurface methane concentration measurements are illustrated on Figure 9. Subsurface gas measurement data are presented in Appendix D.

4.2 SPECIFIC SUSPECT SEEP AREAS

Of the eight accessible suspect areas, two areas contained detectable subsurface methane gas. Measuring methane flux from suspect areas was not part of the 2020 scope of work. Now that these seep areas have been confirmed, they will be included in the 2021 Kf outcrop monitoring event for flux mapping. Below is a description of the suspect area.

4.2.1 SUSPECT AREAS 1 AND 2

Suspect Areas 1 and 2 are located ½-mile to the west of seep area SEC12T35NR8W. Dead and stressed vegetation, including trees, shurbs, and grass, was observed within Suspect Areas 1 and 2. Subsurface methane was detected at 15 points ranging from 100 parts per million (ppm) to 50,000 ppm.



Suspect Areas 1 and 2 Photograph – Dead and stressed vegetation in the vicinity of the suspect seep area identified in IR imagery.

5 NATURAL SPRINGS MONITORING

In 2020 a total of eleven natural springs were identified for sampling on the Kf outcrop in La Plata County north of the SUIT boundary. Of the eleven springs, six were sampled during the 2020 sampling event: Animas River Spring, Darwin Rather Spring #1, Hoier Spring, Wilborn Spring #2, Wilborn Spring #6 and Vosburg Pike Spring/Kane Ranch Spring. Two were either dry or stagnant during the sampling event and not sampled: Darwin Rather Spring #2, and the Gun Club Spring, and landowner access was not granted for three Rancho Durango East Spring, Rancho Durango LTD spring, and Rancho Durango North Springs. LTE recommends removing 3 natural springs (Rancho Durango East Spring, Rancho Durango LTD spring, and Rancho Durango North Springs from the 2021 sampling event due to lack of access in 2020 and previous years. The locations of natural springs are depicted on Figure 10. A summary of natural springs sampled in 2020, along with past natural springs sampling status, is presented in Table 4.

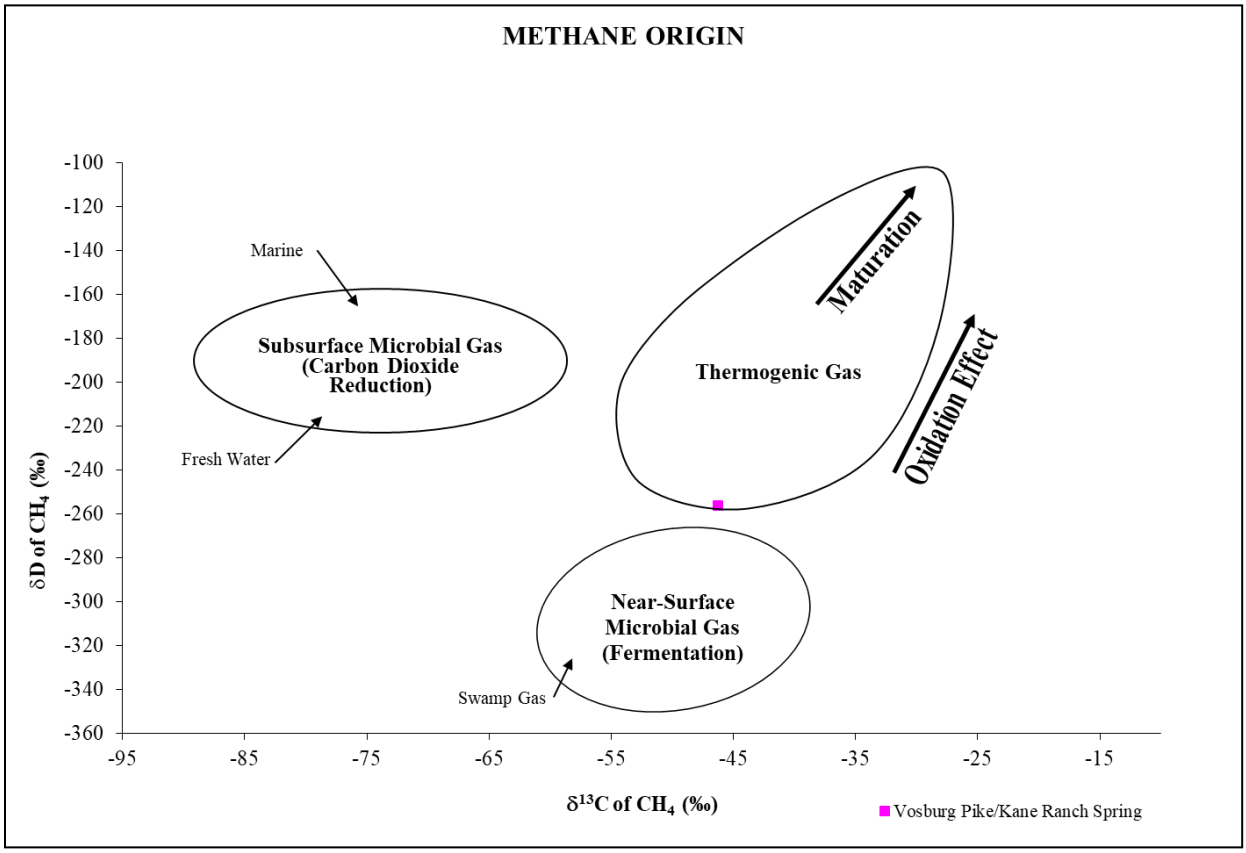
5.1 FIELD OBSERVATIONS

Field parameters were measured at six natural springs: the Animas River Spring, Darwin Rather Springs #1 and #3, the Hoier Spring, the Vosburg Pike/Kane Ranch Spring, and the Wilbourn Spring. The springs were sampled between April and June 2020. The 2020 field observations and measurements for the natural springs, including historical measurements, are summarized in Table 5.

5.2 NATURAL SPRINGS SAMPLING AND ANALYSIS

In COGCC Orders 112-156 and 112-157, the COGCC uses 2 milligrams per liter (mg/L) for dissolved methane in domestic water systems as the threshold to identify water for further investigation of the origin of methane. The COGCC states that water systems containing dissolved methane concentrations above 2 mg/L have an increased risk of desorption from the water, creating potentially explosive conditions in confined spaces.

During the 2020 natural springs sampling, dissolved methane was detected in spring water sampled from the Hoier Spring and the Wilbourn Spring #2 at concentrations of 0.31 mg/L and 0.022 mg/L, respectively. Dissolved methane was previously detected in the Hoier Spring in 2006, and 2013. This is the first time methane was detected in the Wilborn Spring #2 Isotopic analysis has not been performed because concentrations of dissolved methane in these springs have not exceeded the COGCC 2 mg/L threshold necessary for further investigation. In 2020, dissolved methane was detected in the Vosburg Pike/Kane Ranch Spring water sample at a concentration of 17 mg/L. In 2018, dissolved methane concentrations for the same spring were 15 mg/L. In 2018, LTE collected a water sample from the Vosburg Pike/Kane Ranch Spring for compositional and isotopic analysis by Isotech Laboratories of Champaign, Illinois. Results of the isotopic analyses indicated the methane present in the Vosburg Pike/Kane Ranch Spring sample appeared to be thermogenic in origin. The graph below illustrates methane origin (thermogenic versus biogenic) of the methane gas detected using a cross plot of the carbon and hydrogen isotopes of methane.



Based on the water chemistry of the natural springs, the six springs did not vary in water type except for one: the Animas River Spring which is predominantly calcium-sulfate. Of the remaining five springs sampled, all springs were calcium-bicarbonate in water type makeup. Figure 10 depicts the tri-linear diagrams and Stiff diagrams for the sampled spring. Laboratory analytical results for dissolved methane, including historical results, are summarized in Table 6. Major ion chemistry of the natural spring samples is summarized in Table 7. The laboratory analytical reports are presented in Appendix E.

5.3 SUBSURFACE SOIL GAS MEASUREMENTS

During the 2020 natural springs sampling event, six subsurface soil gas measurements were collected at six of the sampled natural springs using traditional subsurface soil gas sampling techniques and a multi-gas meter. Subsurface methane was not detected in the subsurface at of the natural springs; however, a methane concentration of 0.04% (2% LEL) volume was detected in the subsurface at Vosburg Pike/ Kane Ranch Spring.

6 ABANDONED/SHUT-IN WELLS FULX RESULTS

WSP conducted detailed flux surveys utilizing the flux meter at three shut-in/abandoned production gas well sites: Federal 34-1/2-34-1 (API #05-067-07514), Pole Barn Monitor Well #1 (API #05-067-07969), and Baird 1-25 (API #05-067-06568). The three well sites were surveyed between June 2 and June 6, 2020. Monitoring was conducted at the request of the COGCC to determine whether methane seepage exists within the vicinity of these three sites.

Flux measurements were collected at each location (Figure 2). A total of 25 measurements were collected at Pole Barn Monitor Well #1, Federal 34-1/2-34-1, and Baird 1-25. Methane flux values were not detected above the reportable limit (0.2 mol/m^2·day) at any shut-in/abandoned production gas well sample locations. Methane flux values have not been detected at any of the three shut-in/abandoned production gas wells in the previous 13 years of monitoring.

7 CONCLUSIONS AND RECCOMENDATIONS

7.1 CONCLUSIONS

LTE/WSP has surveyed methane flux in La Plata County since 2007. Generally, methane flux rates across the project area decreased from 6,099 MCFD in 2007 to 2,900 MCFD in 2011. An increase in methane flux was observed during the 2012 survey, estimated to be 9,371 MCFD. The increase in 2012 was significant because of the locations the increase was observed in (SFTC and Basin Creek areas), and how grid spacing in induvial seeps within seep areas affected volume calculations. After the 2012 survey, grid spacing around specific methane seepages was revised. Using the revised grid spacing, methane flux rates decreased in 2013 from 2012 and then subsequently increased every year from 2013 to 2016. In 2017 the first decrease in methane flux since 2013 was observed, with flux values decreasing from 18,165 MCFD to 16,650 MCD. The 2018 survey yielded the highest methane flux measured to date, 26,101 MCFD. This also represented the largest yearly increase of 9,451 MCFD over the previous year. In contrast the 2019 survey resulted in the largest annual decrease of methane flux measured, a decrease of 16,948 MCFD from the measured flux in 2018 of 26,101 MCFD to 9,153 MCFD in 2019. In 2020, methane flux rates increased from 2019 by 14,430 MCFD to a total of 23,583 MCFD. 2020 now represents the largest yearly increase and second highest methane flux recorded since 2007.

The mitigation system at SFTC appears to influence the methane flux results for that area. While the mitigation system does capture methane gas, they are not capable of capturing all the methane gas within the footprint of the collection system. As a result, the collection system has created preferential pathways in which methane gas appears to seep out along the edges of the footprint, resulting in elevated flux values being reported. Elevated methane flux values have been recorded at the edges of the system footprint with a rapid decrease in methane flux values moving away from the system footprint. These elevated flux values affected interpolation and flux estimation as described above and biased the results high in 2012. The additional flux points in the vicinity of the mitigation system in 2013 through 2020 reduced the bias high affect observed in 2012.

The survey area increased nearly 3.5 times (186%) in acreage between 2007 and 2008; therefore, it is not accurate to compare the 2020 monitoring event to the 2007 monitoring event. From 2009 to 2011 the seepage area decreased by approximately 50%. However, the seepage area has been relatively consistent since 2012. From 2012 to 2020 the seepage area increased by only 1.6%, with a 5% increase between 2019 and 2020.

With the presence of subsurface methane gas identified in two locations during field verification activities associated with the regional reconnaissance survey, these areas have the potential to add to the total volumetric methane flux and total seepage area in the future. The identified areas will be added to the 2021 detailed mapping.

Out of 11 natural springs identified along the Kf outcrop in La Plata County, six natural springs were sampled in April 2020 with comparable analytical results to previous years' results.

Data continues to indicate that hydrogen sulfide is present in the subsurface at measurable levels in only a few locations. Measured values above the ground surface are very low, if detected at all, and are not considered a threat to human health. The source of the hydrogen sulfide is believed to be local, near-surface anaerobic microbial activity.

7.2 RECOMMENDATIONS

Based on the results of the 2020 Kf outcrop monitoring event, LTE recommends continued compliance with the COGCC orders, including:

- Conduct detailed methane seep mapping and flux estimation using the portable flux meter in June 2021. LTE will return to the sample locations visited during the 2020 field activities to observe changes in subsurface methane over time and space. Add new seep area identified during the 2020 regional reconnaissance to the 2021 detailed mapping. Grid spacing will be revised based on the 2020 results.

Based on the results of the 2020 and previous year's Kf outcrop monitoring events, LTE recommends the following changes:

- Reduce the frequency of sampling of the natural springs to match the frequency of the regional reconnaissance IR aerial survey conducted once every three years. The natural spring survey has been conducted on an annual basis since 2007, establishing data points with predictable results. Conducting the natural spring survey in 3-year intervals will allow continued addition of newly identified springs to the data set while using resources more efficiently. The next IR event will occur in 2023 and subsequently continue in 3-year intervals, therefore, the next natural springs sampling could start in 2023 with 3-year interval sampling to create efficiency to mobilize with the IR events.
- Remove three natural springs (Rancho Durango East Spring, Rancho Durango LTD Spring, and Rancho Durango North Spring) from the 2021 sampling event.

8 REFERENCES

Armstrong, M. and N. Champigny. 1988. *A Study on Kriging Small Blocks*.

Cressie, N.A.C. 1993. *Statistics for Spatial Data*.

Crow, E.L. and K. Shimizu, Eds, *Lognormal Distributions: Theory and Application*, Dekker, New York. 1988.

Gilbert, Richard O. Van Nostrand-Reinhold, New York. 1987. *Statistical Methods for Environmental Pollution Monitoring*.

Golden Software, 1993. Surfer 8 - Contouring and 3D Surface Mapping for Scientists and Engineers – User's Guide. Golden, CO: Golden Software, Inc.

LT Environmental, Inc. (LTE) 2003. *Fruitland Outcrop Monitoring, Data Acquisition Modification Report*, La Plata County, Colorado, January 2003.

----- 2003. *Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. October 2003.

----- 2006. *Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. March 2006.

----- 2007. *Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. January 2007.

----- 2008. *2007 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. June 2008.

----- 2009. *2008 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. March 2009.

----- 2010. *2009 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. February 2010.

----- 2011a. *2010 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. February 2011.

----- 2011b. *2011 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. December 2011.

----- 2012. *2012 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. November 2012.

----- 2013. *2013 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. September 2013.

----- 2014. *2014 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. December 2014.

----- 2015. *2015 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. September 2015.

----- 2016. *2016 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. November 2016.

----- 2017. *2017 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. November 2017.

----- 2018. *2018 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. February 2019.

----- 2019. *2019 Fruitland Outcrop Monitoring Report*, La Plata County, Colorado. January 2020.

Sichel, H.S. 1966. The estimation of means and associated confidence limits for small samples from lognormal populations. Journal of the South African Institute of Mining and Metallurgy, Symposium on Mathematical Statistics and Computer Applications in Ore Valuation, 106-122.

Sinclair, A.J. 1989. *A Fundamental Approach to Threshold Estimation in Exploration Geochemistry: Probability Plots Revisited*. A.W. Rose and P.M. Taufen (Editors), Journal of Geochemical Exploration, 41: 1-22.

West Systems. July 2007. *Portable Diffuse Flux Meter, Carbon Dioxide, Methane, & Hydrogen Sulfide, Release 7.00 Handbook*.

TABLES

TABLE 1

PROPERTY ACCESS STATUS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO (a)

PARCEL NUMBER(S)	LANDOWNER NAME	CITY, STATE ZIPCODE
567110300856, 567115200857, 567115200858, 567115200366	BETKER, KRISTINE J & CRANDALL, DUSTIN A	DURANGO, CO 81301
567920100140	BEEMAN, JOSEPH L & MARY L	DURANGO, CO 81303
567915200003	BLACKLEDGE, JAMES D JR	STRINGER, MS, 39481
567514201008, 567514201006, 567514201007, 567514201016, 567514300017, 567514201004, 567509300144, 567508400169, 567508400263, 567508400193, 567508400192	BP AMERICA PRODUCTION CO	DURANGO, CO 81301
567508300307	BRYSON, PHILIP JAMES & LUCY T	BAYFIELD, CO 81122
566525100135	BUSBY, JOEL JR	DURANGO, CO 81301
566904200021, 566905100808, 566905400803	CITY OF DURANGO	DURANGO, CO 81301
567914201020	CONN, CAROLYN & ALLEN, THEODORE	BAYFIELD, CO 81122
566904200808, 566904200809, 566904200067, 566904200068	EWING PARK, LLC.	DURANGO, CO 81301
567110300889	FIDDLER, BARBARA DILLOW LIV TRUST	DURANGO, CO 81301
567509200375	FINCHER, RONALD C & DARLENE A	BAYFIELD, CO 81122
567514300014	FOSSEL, JON S	BAYFIELD, CO 81122
567514201018	GREEN, BRYAN F & JULIE A	RIO RANCHO, NM 87144
567507300278	GIBBONS, DAVID & JOYCE	BAYFIELD, CO 81122
567118100812, 567117201011, 567117301008	GORTON, TOM D	DURANGO, CO, 81302
567915200004	HEDIN, BRUCE, RICHARD, VICKI JEAN, & DO	SIMI VALLEY, CA, 93065
567515200183, 567514201003	IRRIGO, LLC.	IGNACIO, CO 81137
567919200124	JACKSON, DALE C & PAMELA D & JUSTIN DALE	CLAYTON, OK, 74536
567112100261	KANE RANCH LLC	BAYFIELD, CO 81122
567509200167	KURTZ, H RICHARD & ADELE MARIE	BAYFIELD, CO 81122
566905400810, 566905300811	LA PLATA COUNTY	DURANGO, CO 81301
566905400024	LA PLATA COUNTY HUMANE SOCIETY	DURANGO, CO 81301
567102400804, 567111100803, 567101300802	LIDDELL, CORINNE & ANTHONY J	RIDGWAY, CO 81432
566524100054	LOEHR, WILLIAM & SHERRY	OJAI, CA 93023
567118300800, 566524100806	MACHO FAMILY TRUST	DURANGO, CO 81301
567508300309	MARABLE, CHARLES C & SHERRY L	BLOOMFIELD, NM 87413
567509300188, 567509400231	MASSY, DALE P & GORETSKI, MICHAEL & MARI	WATERFORD, MI 48327
567111300824	MCCULLOUGH, SHERI LYNN TRUSTEE & ETALS	TEMPE, AZ 85283
567913300010	MCDAVID TRUST	SCOTTSDALE, AZ, 85266
567524101017	MILES, JOHN W & DELORES A	PARIS, TX, 75461
567914201019	MIMMACK, NICHOLAS & KATHRYN	BAYFIELD, CO 81122
567507200277	MITCHELL, JEFFERY SPENCER & NANCY	FARMINGTON, NM, 87401
567921200067	NOLLET, BILLY KAY & KAREN	BAYFIELD, CO 81122
567118400806, 567119200229, 567119200898, 566524400831	PALMER RANCH LIMITED II & PALMER RANCH LTD	DURANGO, CO 81301
567915101004	PINE SPRING RANCH PROPERTY	BAYFIELD, CO 81122
567508300308	POTTER, RODNEY L	BAYFIELD, CO 81122
567507400270	RATHER, DARWIN R & MAXINE J	BASALT, CO 81621
567514100015, 567514100002	REMMOW LAND CO LIMITED PARTNERSHIP	BAYFIELD, CO 81122
567914201018	ROSENBAUM, ALLEN W & BERYL R	BAYFIELD, CO 81122
567921100068, 567916400102	SPEER, DIANA KAY REVOCABLE LIVING TRUST	BAYFIELD, CO 81122
566524400817, 566524300818	SUBSURFACE MACHINE & MFG INC	DURANGO, CO 81301
567915400062, 567923200001	THIBODEAUX, STEVEN M & JACOBSEN, JAREN S	IGNACIO, CO 81137
567510400009, 567509400065	ULLMAN RANCHES LLC	VALENCIA, CA 91355
567117301006	VILLELLI, THOMAS R	COEUR D'ALENE, ID, 83816
567915400006	WADLEIGH, MARION K	BAYFIELD, CO 81122
567919100130	WOODS, RONALD GENE	JUPITER, FL, 33477
567920300133	WOLF CREEK RIDER, LTD	PARIS, TX, 75461
567514201019	YOUNG, JENNIFER SUE TRUST	DURANGO, CO 81301
567524200806, 567513300805	YIANNAKIS LINE, LLC	BAYFIELD, CO 81122

a/

Green indicates access granted by landowner
Red indicates access denied by landowner
White indicates no response from landowner

TABLE 2

METHANE AND CARBON DIOXIDE MEASUREMENTS SUMMARY
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO (a)

Mapping Area	Total Number of Sample Points	Methane Flux		Carbon Dioxide Flux	
		Number of Reportable Sample Points w/ CH_4 [1]	Maximum flux value[2]	Number of Sample Points w/ CO_2	Maximum flux value
Basin Creek to Carbon Junction	652	104	24,038.4	632	363.4
Florida River	141	21	1,158.9	138	4.9
SEC18T35NR8W	20	1	1.9	20	2.1
SEC17T35NR8W	18	4	190.2	17	6.8
Vosburg Pike	94	10	96.7	93	7.1
SEC12T35NR8W	148	43	30,125	146	64.8
Texas Creek to Pine River	624	78	9,940.4	616	15.1
Total	**1,697**	**261**	**----------**	**1,662**	**----------**

a/

Flux measurements are in units of moles per square meter per day ($mol/m^2 \cdot day$)

CH_4 - Methane

CO_2 - Carbon dioxide

[1] - Based on methane flux values that are greater than the flux meter reportable limit of 0.2 $mol/m^2 \cdot day$

[2] - Statistics based on measurements greater than the flux meter reportable limit

TABLE 3

HISTORICAL METHANE AND CARBON DIOXIDE FLUX COMPARISON
2020 FRUITLAND OUTCROP MONITROING
LA PLATA COUNTY, COLORADO (a)

Methane

Mapping Area	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)
Basin Creek to Carbon Junction	94	641	406	967	312	760	110	293	179	860	73	1,904	60	2,310	72	4,794	69	5,827	79	7,498	89	9,146	108	7,090	76.78	4,909	83	4,544
Florida River	30	131	52	27	39	622	26	154	12	45	16	119	8	373	11	529	21	801	13	89	16	86	21	3,105	10.83	41	15	2,831
SEC18T35NR8W	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	1	2	0.24	2	0.17	0	0	0	0	2	0.49
SEC17T35NR8W	---	---	---	---	---	---	---	---	---	---	2	49	2	9	2	0.43	2	75	2	9	2	5	2	24	1.81	3	2	3
Vosburg Pike	14	2	43	11	34	15	23	1	21	115	11	598	8	29	8	147	13	234	13	892	13	654	14	228	9.4	80	9	456
SEC12T35NR8W	---	---	---	---	---	---	---	---	---	---	---	---	NM	NM	NM	NM	17	4,114	13	4,090	13	3,779	22	13,206	16.45	1,251	20	10,453
Texas Creek to Pine River	162	5,325	359	4,006	259	2,702	160	1,300	106	1,880	86	6,701	49	3,805	50	5,891	50	5,852	48	5,587	71	2,980	70	2,448	66.23	2,869	60	5,296
TOTAL	**300**	**6,099**	**860**	**5,011**	**644**	**4,099**	**319**	**1,748**	**318**	**2,900**	**188**	**9,371**	**126**	**6,526**	**143**	**11,361**	**174**	**16,904**	**170**	**18,165**	**206**	**16,650**	**237**	**26,101**	**182**	**9,153**	**191**	**23,583**

Carbon Dioxide

Mapping Area	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Volumetric Flux (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Reportable Volumetric Flux* (MCFD)
Basin Creek to Carbon Junction	137	231	582	740	506	747	415	458	515	976	419	2,698	432	656	471	1,368	469	1,455	472	1,019	467	1,214	463	1,205	430	525	433	1,131
Florida River	48	68	61	73	55	119	61	90	67	126	84	197	68	72	66	149	86	263	86	173	88	127	86	91	86	117	85	119
SEC18T35NR8W	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4	1	5	2.0	5	1.5	5	1.0	5	1.8	5	1.5
SEC17T35NR8W	---	---	---	---	---	---	---	---	---	---	5	15	3	4	4	3	4	25	4	3.6	4	3.2	4	12.3	4	1	4	3.2
Vosburg Pike	28	44	55	52	41	56	74	132	106	193	103	155	105	106	70	208	74	471	74	224	73	189	72	93	73	65	72	101
SEC12T35NR8W	---	---	---	---	---	---	---	---	---	---	---	---	NM	NM	NM	NM	70	306	73	199	72	241	72	383	72	121	73	172
Texas Creek to Pine River	173	715	537	1,161	452	580	441	546	404	649	487	1,473	424	526	425	818	414	1,817	389	649	414	1,020	427	859	403	407	364	509
TOTAL	**386**	**1,058**	**1,235**	**2,026**	**1,054**	**1,502**	**991**	**1,226**	**1,092**	**1,944**	**1,099**	**4,538**	**1,032**	**1,364**	**1,036**	**2,546**	**1,121**	**4,338**	**1,103**	**2,270**	**1,123**	**2,796**	**1,129**	**2,644**	**1,073**	**1,238**	**1,036**	**2,037**

a/
MCFD - thousand cubic feet per day
* Reportable methane flux volumes calculated using points greater than 0.2 moles per squared meter per day
-- denotes sample location not part of sampling program for that year
NM- not measured due to no property access at the time of the flux survey event

TABLE 4

NATURAL SPRINGS SAMPLING STATUS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

	2005	2006	2007	2008		2009		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Natural Spring	**September**	**May**	**October**	**June**	**November**	**May**	**October**	**June**	**May**	**May**	**May/June**	**May**	**May/June**	**May/June**	**May**	**August**	**June-August**	**April**
Animas River Spring	--	--	--	--	--	--	--	--	--	--	--	--	Sampled	Sampled	Sampled	Dry	Sampled	Sampled
Darwin Rather Spring #1	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	No Access	Sampled	Sampled
Darwin Rather Spring #2	Sampled	Sampled	Not Sampled	Sampled	Sampled	Sampled	Dry	Sampled	Sampled	Sampled	Dry	No Access	Dry	No Flow	No Flow	No Access	Stagnant	Stagnant
Wilborn Spring #6	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	No Access	No Access	No Access	No Access	No Access	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Sampled
Hoier Spring	Not Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Dry	Not Sampled	Not Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Dry	Dry	Sampled
Gun Club Spring	--	--	--	--	--	--	--	--	--	--	Sampled	Sampled	Sampled	No Flow	Dry	Dry	Dry	Dry
Rancho Durango East Spring	Not Sampled	Not Sampled	Sampled	Not Sampled	Sampled	Dry	Dry	Not Sampled	Not Sampled	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access
Rancho Durango LTD Spring	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Not Sampled	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access
Rancho Durango North Spring	Not Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Not Sampled	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access
Vosburg Pike Spring/ Kane Ranch Spring	--	--	--	--	--	--	--	--	--	--	--	--	No Flow	No Flow	No Flow	Sampled	Sampled	Sampled
Wilbourn Spring #2	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	No Access	Sampled

-- denotes sample location not part of sampling program for that year

TABLE 5

NATURAL SPRINGS FIELD MEASUREMENTS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Date	Temperature (°C)	pH	Electrical Conductivity (µS/cm)	TDS (mg/L)	ORP (mV)	Flow (GPM)	Subsurface Methane (ppm)
Animas River Spring	6/22/2015	14.57	6.47	3,576	2,310.78	555.8	0.49	0
	6/6/2016	15.3	7.01	3,106	2,015.05	86.6	0.56	0
	5/5/2017	16.08	7.14	288.4	1,950.22	364.8	0.25	0
	6/19/2018	Dry- Not Measured						
	6/20/2019	14.77	6.85	1,463	--	120.4	--	0
	4/16/2020	14.95	7.43	2,876	2,323.38	-89.9	--	0
Darwin Rather Spring #1	9/17/2005	10.6	7.20	479.9	329.2	59	0.50	--
	5/24/2006	12.3	7.76	425.9	288.4	52	1.0	--
	10/8/2007	15.2	8.05	399.5	210.6	55	1.0	--
	6/23/2008	12.6	7.34	432.0	308.9	81	--	0
	10/15/2008	Dry - Not Measured						
	5/12/2009	7.9	7.16	437.0	--	--	0.23	0
	10/6/2009	8.4	7.18	475	--	--	--	0
	6/29/2010	11.6	6.72	476	--	--	--	0
	5/4/2012	11.1	6.59	429	216	77.4	--	0
	5/21/2012	10.1	6.32	492	244	74.5	--	0
	5/23/2013	9.5	7.2	521	259	50.2	0.11	0
	5/15/2014	8.2	7.5	375	235	270.70	--	0
	5/20/2015	10.35	7.17	390.5	--	148.00	1.13	0
	5/20/2016	10.16	7.68	430.5	277.57	89.9	0.4	0
	5/5/2017	12.66	7.41	401.7	263.24	205.40	5.99	0
	7/16/2018	No Access - Not measured						
	8/22/2019	12.95	7.38	443	--	137.4	--	0
	4/14/2020	9.76	8.81	329.7	312.81	-80.5	--	0
Darwin Rather Spring #2	9/17/2005	14.4	7.50	271.4	178.3	45	<0.25	--
	5/24/2006	13.0	7.69	344	222.9	-62	<1.0	--
	10/8/2007	Dry - Not Measured						
	6/26/2008	18	7.31	261.4	180.5	76	0.63	0
	10/15/2008	10.9	6.9	289	188	3	0.25	0
	5/12/2009	10.5	7.43	270	--	--	1.80	0
	10/6/2009	Dry - Not Measured						
	6/29/2010	21.1	7.58	252	--	--	--	0
	5/4/2011	14.8	7.5	282	142	49.8	--	0
	5/21/2012	15.66	7.36	270	134	14.3	2.573	0
	5/23/2013	Dry - Not Measured						
	5/15/2014	No Access - Not Measured						
	5/20/2015	Dry - Not Measured						
	5/20/2016	Stagnant Water - Not Measured						
	5/5/2017	Stagnant Water - Not Measured						
	7/16/2018	No Access - Not measured						
	8/22/2019	Stagnant Water - Not Measured						
	4/16/2020	Stagnant Water - Not Measured						

TABLE 5

NATURAL SPRINGS FIELD MEASUREMENTS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Date	Temperature (°C)	pH	Electrical Conductivity (µS/cm)	TDS (mg/L)	ORP (mV)	Flow (GPM)	Subsurface Methane (ppm)
Wilborn Spring #6	4/14/2020	9.32	8.6	238.3	230.46	-84.8	--	0
Hoier Spring	5/24/2006	17.5	7.24	670.5	453.9	35	--	--
	10/8/2007	21.0	8.23	221.6	111.9	20	<0.25	--
	6/23/2008	20.8	8.2	257.0	173.0	52.0	0.042	--
	10/15/2008	12.33	7.78	254	165	90.4	0.031	0
	5/14/2009	18.1	6.9	380.0	--	--	0.050	0
	10/6/2009	Dry - Not Measured						
	6/29/2010	Spring pipe cut during monitoring well installation; not enough water to sample						
	5/4/2011	Dry - Not Measured						
	5/21/2012	21.0	6.75	272	135	82.9	0.025	0
	5/23/2013	17.8	6.6	965	475	85.3	0.11	0
	5/15/2014	13.8	7.4	200	--	248.80	0	0
	5/20/2015	14.55	6.34	208.7	--	136.5	0.368	0
	5/20/2016	15.83	7.40	265.5	173.14	1.5	0.2	0
	5/5/2017	14.12	7.75	526.1	344.64	150.2	0.125	0
	6/1/2018	Dry - Not Measured						
	8/22/2019	Dry - Not Measured						
	4/16/2020	11.88	8.48	204.5	177.54	-99.3	--	0
Gun Club Spring	5/29/2013	15.5	7.6	--	--	--	0.13	54.0
	6/11/2014	25.7	7.4	1,674.40	1,055	-72.60	0.04	0
	6/3/2015	18.51	6.89	2,022.20	1,312	-131.10	--	0
	5/20/2016	Stagnant Water - Not Measured						
	6/16/2017	Dry - Not Measured						
	6/19/2018	Dry - Not Measured						
	7/18/2019	Dry- Not Measured						
	4/16/2020	Dry- Not Measured						
Rancho Durango East Spring	10/15/2008	7.8	6.5	510	0.334	87.2	0.19	0
	5/12/2009	Dry - Not Measured						
	10/6/2009	Dry - Not Measured						
	6/29/2010	No Access - Not Measured						
	5/4/2011	No Access - Not Measured						
	5/21/2012	No Access - Not Measured						
	5/23/2013	No Access - Not Measured						
	5/15/2014	No Access - Not Measured						
	5/20/2015	No Access - Not Measured						
	5/20/2016	No Access - Not Measured						
	5/5/2017	No Access - Not Measured						
	6/1/2018	No Access - Not Measured						
	8/22/2019	No Access - Not measured						
	4/16/2020	No Access - Not measured						

TABLE 5

NATURAL SPRINGS FIELD MEASUREMENTS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Date	Temperature (°C)	pH	Electrical Conductivity (µS/cm)	TDS (mg/L)	ORP (mV)	Flow (GPM)	Subsurface Methane (ppm)
Rancho Durango LTD Spring	9/14/2005	14.6	8.05	494.1	338.0	66	>1	--
	5/24/2006	19.3	7.38	524.5	345.9	77	1.5	--
	10/8/2007	19.0	7.29	499.7	245.8	529	<0.25	--
	6/23/2008	12.4	8.02	526	376	20	0.48	0
	10/15/2008	12.4	7.4	561	365	126.9	1.5	0
	5/12/2009	10.9	7.36	593	--	--	1.47	0
	10/6/2009	7.1	7.25	635	--	--	0.4	0
	6/29/2010	13.9	7.05	574	--	--	0.49	0
	2011- 2020	No Access - Not measured						
Rancho Durango North Spring	5/24/2006	13.4	7.67	533.2	360.7	87	2.0	--
	10/8/2007	19.2	7.28	514.8	263.9	43	<0.5	--
	6/23/2008	19	6.93	728	510.8	51	0.38	0
	10/15/2008	11.4	6.9	617	401	112.8	1.5	0
	5/12/2009	9.7	7.1	591	--	--	2.82	0
	10/6/2009	12.1	7.25	651	--	--	0.6	0
	6/29/2010	13.7	7.03	586	--	--	0.6	0
	5/4/2011	No Access - Not Measured						
	5/21/2012	No Access - Not Measured						
	5/23/2013	No Access - Not Measured						
	5/15/2014	No Access - Not Measured						
	5/20/2015	No Access - Not Measured						
	5/20/2016	No Access - Not Measured						
	5/5/2017	No Access - Not Measured						
	6/1/2018	No Access - Not Measured						
	8/22/2019	No Access - Not measured						
	4/16/2020	No Access - Not measured						

TABLE 5

NATURAL SPRINGS FIELD MEASUREMENTS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Date	Temperature (°C)	pH	Electrical Conductivity (µS/cm)	TDS (mg/L)	ORP (mV)	Flow (GPM)	Subsurface Methane (ppm)
Vosburg Pike Spring/ Kane Ranch Spring	7/17/2015	No Flow - Not Measured						
	5/20/2016	No Flow - Not Measured						
	5/5/2017	No Flow - Not Measured						
	8/7/2018	20.47	8.78	0.35	227.69	125.2	<0.25	0
	7/18/2019	18.9	7.09	642.2	415.5	--	--	0
	4/16/2020	10.07	9.11	149.4	136.22	-98.7	--	20,000
Wilbourn Spring #2	6/2/2020	23.05	9	821.5	554.22	-110.8	--	0

°C - degrees Celsius
GPM - gallons per minute
mg/L - milligrams per liter
mV - millivolts
-- denotes a measurement was not collected
ORP - oxidation reduction potential
ppm - parts per million
TDS - total dissolved solids
µS/cm - micro Siemens per centimeter
< - less than
> - greater than

TABLE 6

NATURAL SPRINGS DISSOLVED METHANE CONCENTRATIONS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	DISSOLVED METHANE (mg/L)																	
	2005	2006	2007	2008		2009		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	September	May	October	June	October	May	October	June	May	May	May/June	May/June	May/June	May/June	May	August	June-August	April
Animas River Spring	--	--	--	--	--	--	--	--	--	--	--	--	<0.02	<0.02	0.0042	--	0.0008	<0.001
Darwin Rather Spring #1	<0.0005	<0.0010	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0010	--	0.001	<0.001
Darwin Rather Spring #2	0.002	0.0017	--	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	--	--	--	--	--	--	--	--
Wilborn Spring #6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.001
Hoier Spring	--	0.0017	<0.02	<0.02	<0.02	<0.02	--	--	--	<0.02	1.27	<0.02	1.14	0.36	0.0314	--	--	0.31
Gun Club Spring	--	--	--	--	--	--	--	--	--	--	4.22	4.22	2.50	--	--	--	--	--
Rancho Durango North Spring	--	<0.0010	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--	--	--	--	--	--	--	--
Rancho Durango East Spring	--	--	--	--	<0.02	--	--	--	--	--	--	--	--	--	--	--	--	--
Rancho Durango LTD Spring	<0.0005	0.0016	<0.02	<0.02	<0.02	<0.02	<0.02	0.1	--	--	--	--	--	--	--	--	--	--
Vosburg Pike Spring/ Kane Ranch Spring	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	8.1	17
Wilbourn Spring #2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.022

mg/L - milligrams per liter
< - less than the stated laboratory method detection limit
-- denotes not sampled

TABLE 7

NATURAL SPRING MAJOR IONS CONCENTRATIONS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Sample Date	Cations				Anions				TDS (mg/L)
		Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Carbonate (mg/L)	Bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	
Animas River Spring	6/22/2015	289	231	265	5.4	<10.0	510	1,620	67	2,830
	6/6/2016	249	182	230	<10.0	<10.0	507	1,250	66.2	2,720
	5/5/2017	273	205	262	5.2	<10.0	488	1,190	72	2,440
	6/19/2018	Not Sampled				Not Sampled				Not Sampled
	6/20/2019	240	174	244	4.35	<10.0	488	1190	72.0	2,440
	4/16/2020	271	203	239	4.29	<10.0	479	1570	53.3	3,120
Darwin Rather Spring #1	6/23/2008	65	21.4	9.0	1.3	<10.0	212	39	<10	230
	10/15/2008	56.7	18.6	7.5	0.9	<10.0	208	34	11	230
	5/12/2009	54.7	17.6	7.8	1.1	<10.0	200	33	10	205
	6/29/2010	59.9	19.6	8.4	1.3	<10.0	204	44	<10	245
	5/4/2011	52.4	17.3	7.4	2.1	<10.0	178	38	13	255
	5/21/2012	56.0	18.4	7.5	1.48	<10.0	178	36.0	14.0	255
	5/23/2013	63.8	20.9	7.85	1.14	<10.0	189	41.0	<10.0	295
	5/15/2014	60.7	20	7.92	1.80	<10.0	182	29.0	24.0	235
	5/20/2015	52.7	17.3	7.62	1.14	<10.0	166	28.8	27.0	215
	5/20/2016	55.0	16.5	6.55	<5.00	<10.0	158	27.4	15.7	290
	5/5/2017	58.0	17.2	7.83	1.21	<10.0	189	28.8	13.1	250
	7/16/2018	Not Sampled				Not Sampled				Not Sampled
	8/22/2019	67.2	19.8	8.35	2.12	<10.0	185	35.9	16.4	215
	4/14/2020	50.4	15.4	7.36	1.06	<10.0	165	31.5	12.3	270
Darwin Rather Spring #2	6/23/2008	39.3	6.1	13.6	<0.5	<10.0	138	19	<10	130
	10/15/2008	33.7	6.6	10.9	0.5	<10.0	133	16	<10	170
	5/12/2009	35.3	6.7	11.3	0.8	<10.0	123	22	<10	150
	6/29/2010	37.9	6.5	11.8	1.3	<10.0	119	12	<10	140
	5/4/2011	35.4	6.1	13	0.7	<10.0	120	28	<10	185
	5/21/2012	30.7	4.89	13.4	<1.00	<10.0	103	23.0	<10.0	170
	5/23/2013	Not Sampled				Not Sampled				Not Sampled
	5/15/2014	Not Sampled				Not Sampled				Not Sampled
	5/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/20/2015	Not Sampled				Not Sampled				Not Sampled
	5/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/5/2017	Not Sampled				Not Sampled				Not Sampled
	7/16/2018	Not Sampled				Not Sampled				Not Sampled
	8/22/2019	Not Sampled				Not Sampled				Not Sampled
	4/14/2020	Not Sampled				Not Sampled				Not Sampled
Wilborn Spring #6	4/14/2020	44.8	9.93	10.7	<1.00	<10.0	119	48.2	7.55	250

TABLE 7

NATURAL SPRING MAJOR IONS CONCENTRATIONS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Sample Date	Cations				Anions				TDS (mg/L)
		Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Carbonate (mg/L)	Bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	
Hoier Spring	6/23/2008	25.8	12.4	13.9	1.3	<10.0	144	<10	<10	105
	10/15/2008	23.7	11.8	13.7	1.4	<10.0	138	<10	<10	135
	5/14/2009	24.0	11.2	11.9	1.2	<10.0	133	<10	<10	100
	6/29/2010	Not Sampled				Not Sampled				Not Sampled
	5/4/2011	Not Sampled				Not Sampled				Not Sampled
	5/21/2012	22.8	11.0	11.5	1.21	<10.0	120	<10.0	<10.0	185
	5/23/2013	23.5	11.4	12.2	1.26	<10.0	119	<10.0	<10.0	145
	5/15/2014	30.6	15.5	12.8	1.65	<10.0	154	<10.0	<20.0	150
	5/20/2015	22.1	10.2	7.54	1.27	<10.0	100	<10.0	<10.0	135
	5/20/2016	22.7	11.1	10.3	<5.00	<10.0	118	5.1	1.4	135
	5/5/2017	25.4	12.3	11.8	1.11	<10.0	119	15.50	1.41	175
	6/1/2018	Not Sampled				Not Sampled				Not Sampled
	8/22/2019	Not Sampled				Not Sampled				Not Sampled
	4/16/2020	20.2	9.63	9.98	1.00	<10.0	95.0	16.9	1.56	175
Gun Club Spring	5/29/2013	465	198	65.0	15.2	NA	NA	2,650	12.0	3,930
	6/11/2014	165	121	68.6	8.42	<10.0	167	1,180	16	1,670
	6/3/2015	359	155	63	15.9	<10.0	79	1,630	<100	2,460
	6/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/5/2017	Not Sampled				Not Sampled				Not Sampled
	6/19/2018	Not Sampled				Not Sampled				Not Sampled
	6/20/2019	Not Sampled				Not Sampled				Not Sampled
	4/16/2020	Not Sampled				Not Sampled				Not Sampled
Rancho Durango LTD Spring	6/23/2008	79.5	20.1	16.7	0.9	<10.0	252	69	<10	305
	10/15/2008	69.7	17.5	14.9	1.0	<10.0	252	71	<10	300
	5/12/2009	79.8	19.1	16.4	1.2	<10.0	258	80	<10	305
	6/29/2010	80.3	18.7	16.9	1.4	<10.0	250	69	<10	350
	5/4/2011	Not Sampled				Not Sampled				Not Sampled
	5/21/2012	Not Sampled				Not Sampled				Not Sampled
	5/23/2013	Not Sampled				Not Sampled				Not Sampled
	5/15/2014	Not Sampled				Not Sampled				Not Sampled
	5/20/2015	Not Sampled				Not Sampled				Not Sampled
	5/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/5/2017	Not Sampled				Not Sampled				Not Sampled
	6/1/2018	Not Sampled				Not Sampled				Not Sampled
	8/22/2019	Not Sampled				Not Sampled				Not Sampled
	4/16/2020	Not Sampled				Not Sampled				Not Sampled

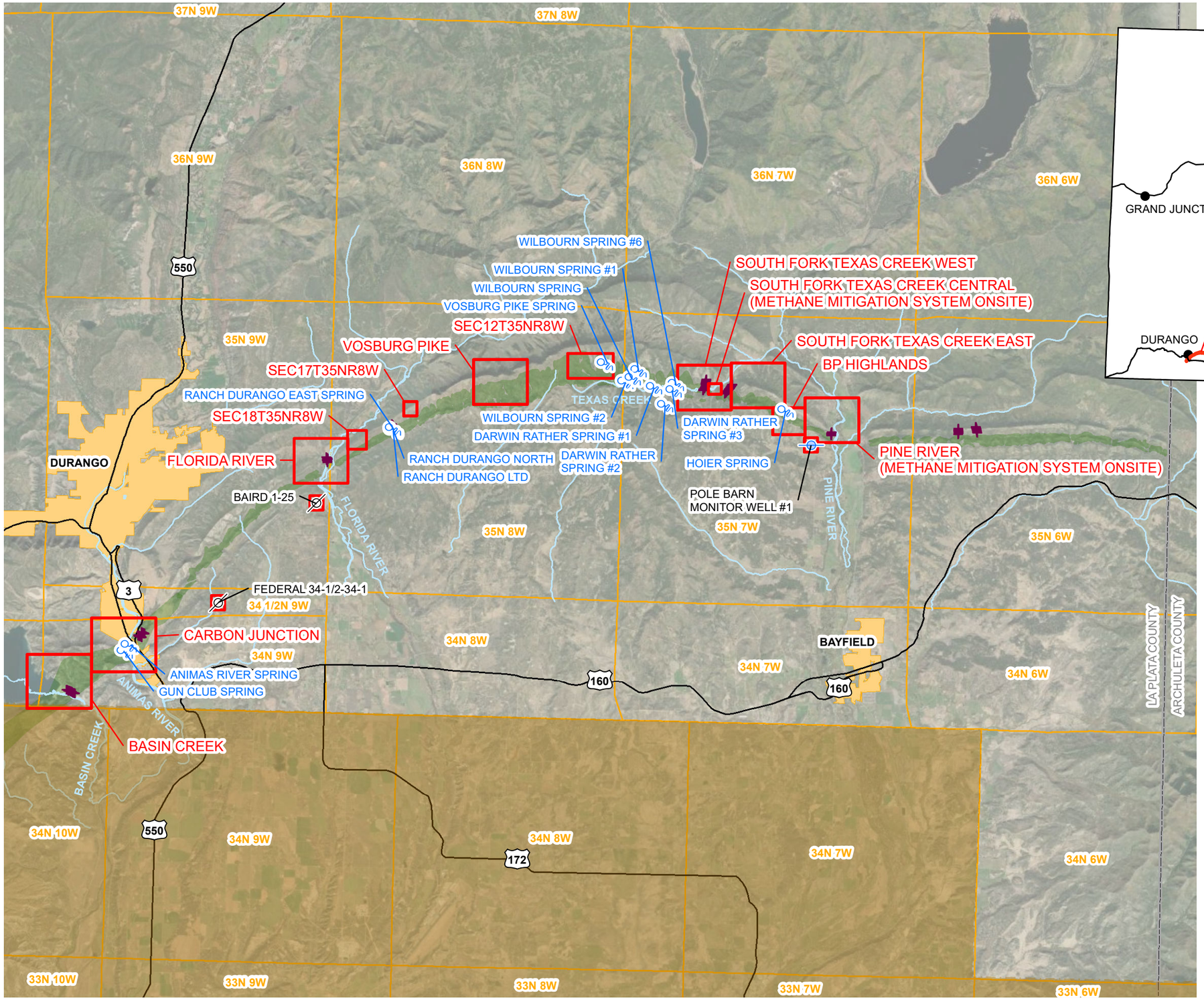
TABLE 7

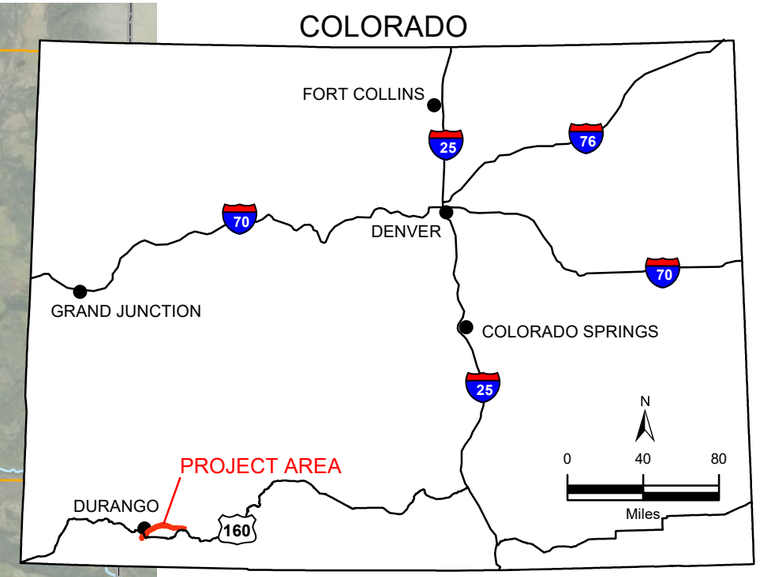
NATURAL SPRING MAJOR IONS CONCENTRATIONS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

Natural Spring	Sample Date	Cations				Anions				TDS (mg/L)
		Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Carbonate (mg/L)	Bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	
Rancho Durango North Spring	6/23/2008	108	31.9	14.5	2.0	<10.0	332	122	<10	460
	10/15/2008	77.1	22.0	13.7	1.1	<10.0	276	79	<10	355
	5/12/2009	80.1	19.3	15.5	1.1	<10.0	262	71	<10	335
	6/29/2010	83.4	19.8	16.8	1.1	<10.0	252	80	<10	340
	5/4/2011	Not Sampled				Not Sampled				Not Sampled
	5/21/2012	Not Sampled				Not Sampled				Not Sampled
	5/23/2013	Not Sampled				Not Sampled				Not Sampled
	5/15/2014	Not Sampled				Not Sampled				Not Sampled
	5/20/2015	Not Sampled				Not Sampled				Not Sampled
	5/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/5/2017	Not Sampled				Not Sampled				Not Sampled
	6/1/2018	Not Sampled				Not Sampled				Not Sampled
	8/22/2019	Not Sampled				Not Sampled				Not Sampled
	4/16/2020	Not Sampled				Not Sampled				Not Sampled
Rancho Durango East Spring	10/15/2008	60.5	12.9	14.8	0.7	<10.0	206	42	<10	250
	5/12/2009	Not Sampled				Not Sampled				Not Sampled
	6/29/2010	Not Sampled				Not Sampled				Not Sampled
	5/4/2010	Not Sampled				Not Sampled				Not Sampled
	5/4/2011	Not Sampled				Not Sampled				Not Sampled
	5/21/2012	Not Sampled				Not Sampled				Not Sampled
	5/23/2013	Not Sampled				Not Sampled				Not Sampled
	5/23/2013	Not Sampled				Not Sampled				Not Sampled
	5/20/2015	Not Sampled				Not Sampled				Not Sampled
	5/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/5/2017	Not Sampled				Not Sampled				Not Sampled
	6/1/2018	Not Sampled				Not Sampled				Not Sampled
	8/22/2019	Not Sampled				Not Sampled				Not Sampled
	4/16/2020	Not Sampled				Not Sampled				Not Sampled
Vosburg Pike Spring/Kane Ranch Spring	7/17/2015	Not Sampled				Not Sampled				Not Sampled
	5/20/2016	Not Sampled				Not Sampled				Not Sampled
	5/5/2017	Not Sampled				Not Sampled				Not Sampled
	8/7/2018	46.8	17.8	12.7	6.08	<10.0	49	128	3.36	510
	7/18/2019	91.3	33.1	16.4	5.62	<10.0	50.0	353	3.60	560
	4/16/2020	20.4	8.17	3.43	2.14	<10.0	88.0	5.64	1.43	140
Wilbourn Spring #2	6/2/2020	116	33.9	13.5	1.95	<10.0	332.0	124	2.44	585

< - less than laboratory reporting limit
mg/L - milligrams per liter
NA - not analyzed due to acidity (510 mg/L)
TDS - total dissolved solids

FIGURES





LEGEND

- NATURAL SPRING
- ABANDONED WELL
- SHUT-IN WELL
- GAS MONITORING PROBE
- HIGHWAY
- SURFACE WATER
- SOUTHERN UTE INDIAN TRIBE RESERVATION BOUNDARY
- COUNTY BOUNDARY
- CITY
- TOWNSHIP AND RANGE LINES

GEOLOGY

- FRUITLAND FORMATION (Kf) - COLORADO GEOLOGICAL SURVEY

COGCC: COLORADO OIL AND GAS CONSERVATION COMMISSION
IMAGE COURTESY OF ESRI

0 2 4
Miles

N

FIGURE 1
PROJECT AREA MAP
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

wsp

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_FIG 01 PROJ AREA.mxd

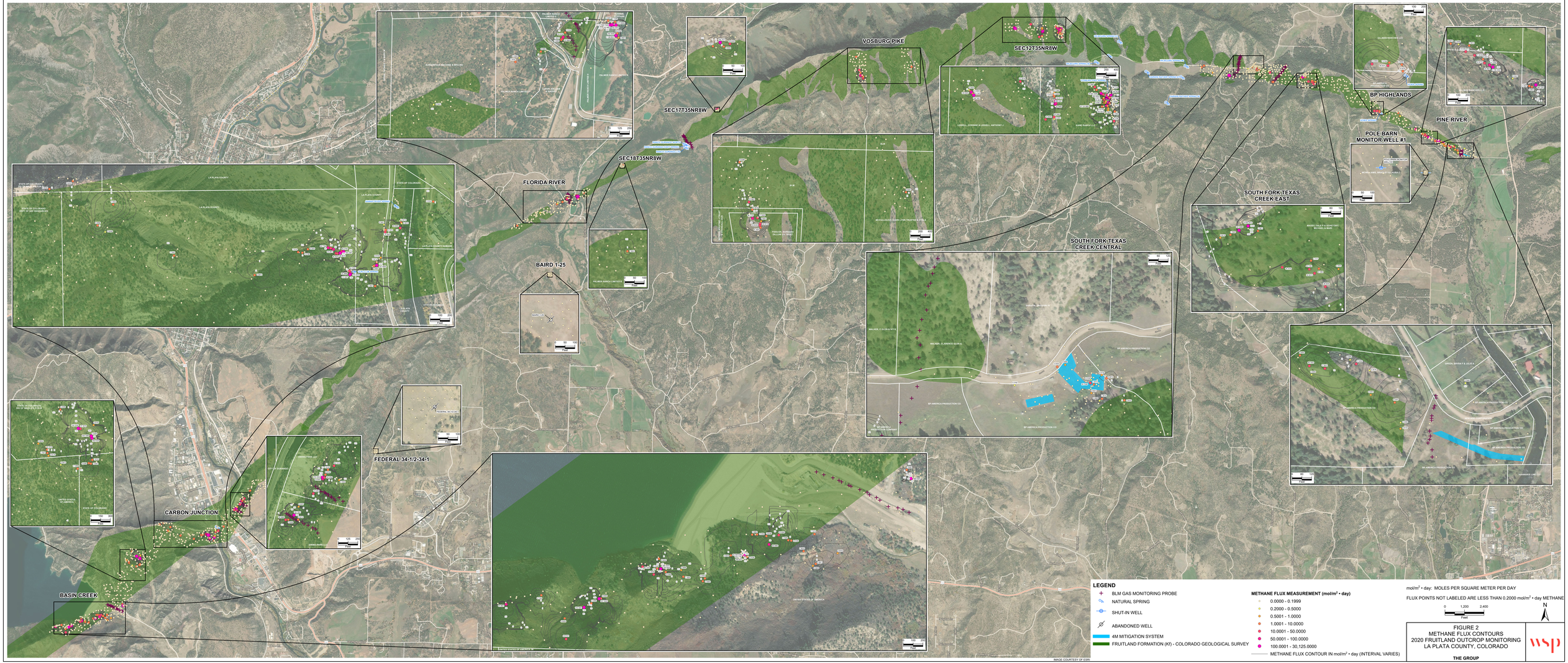


FIGURE 2
METHANE FLUX CONTOURS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

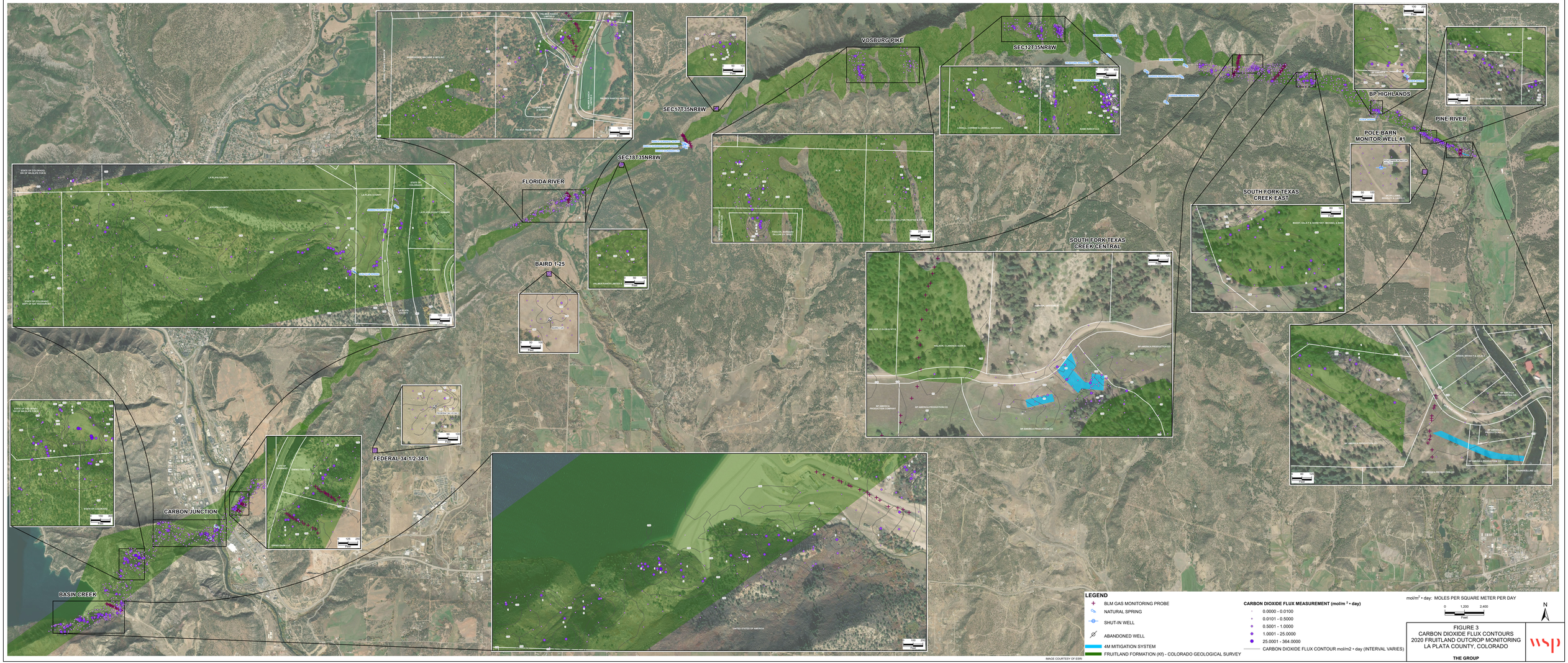
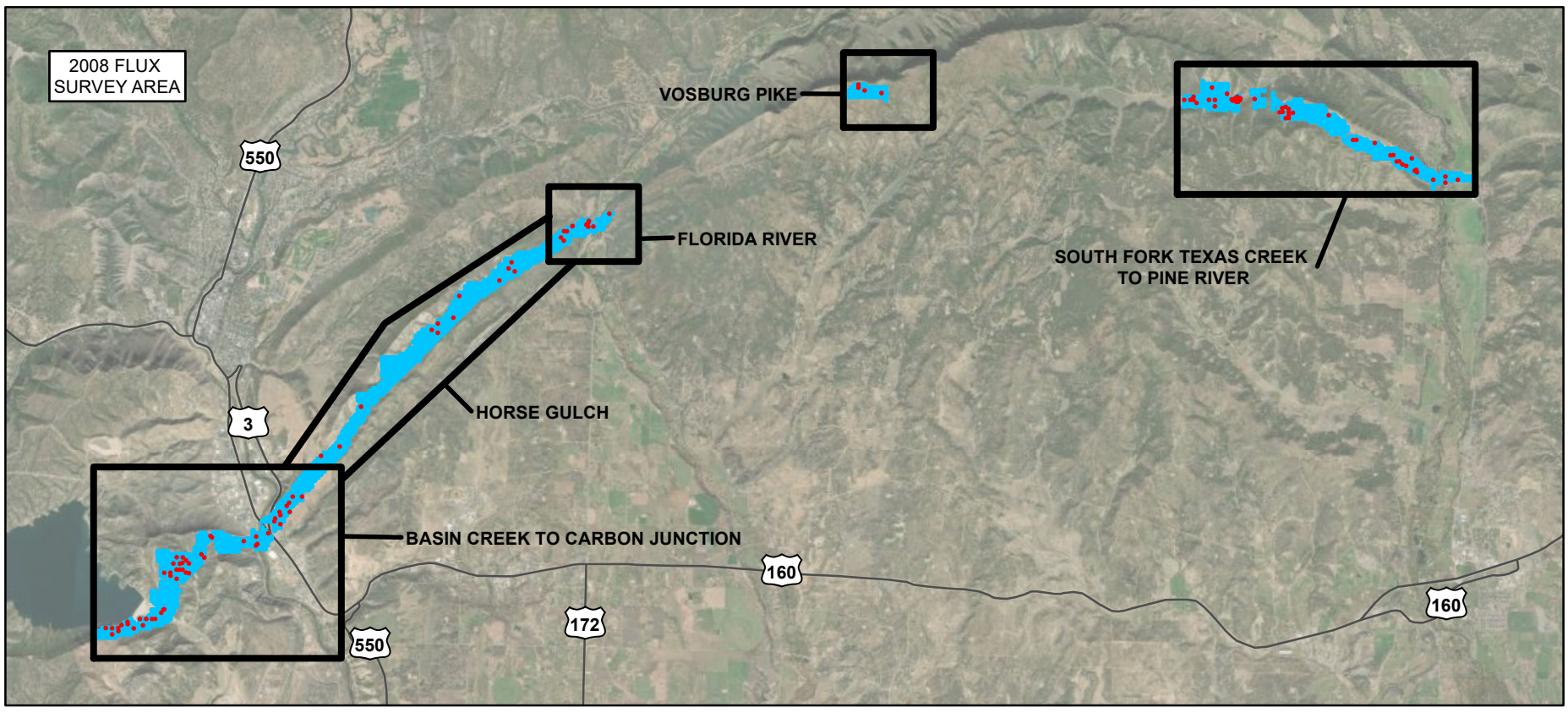
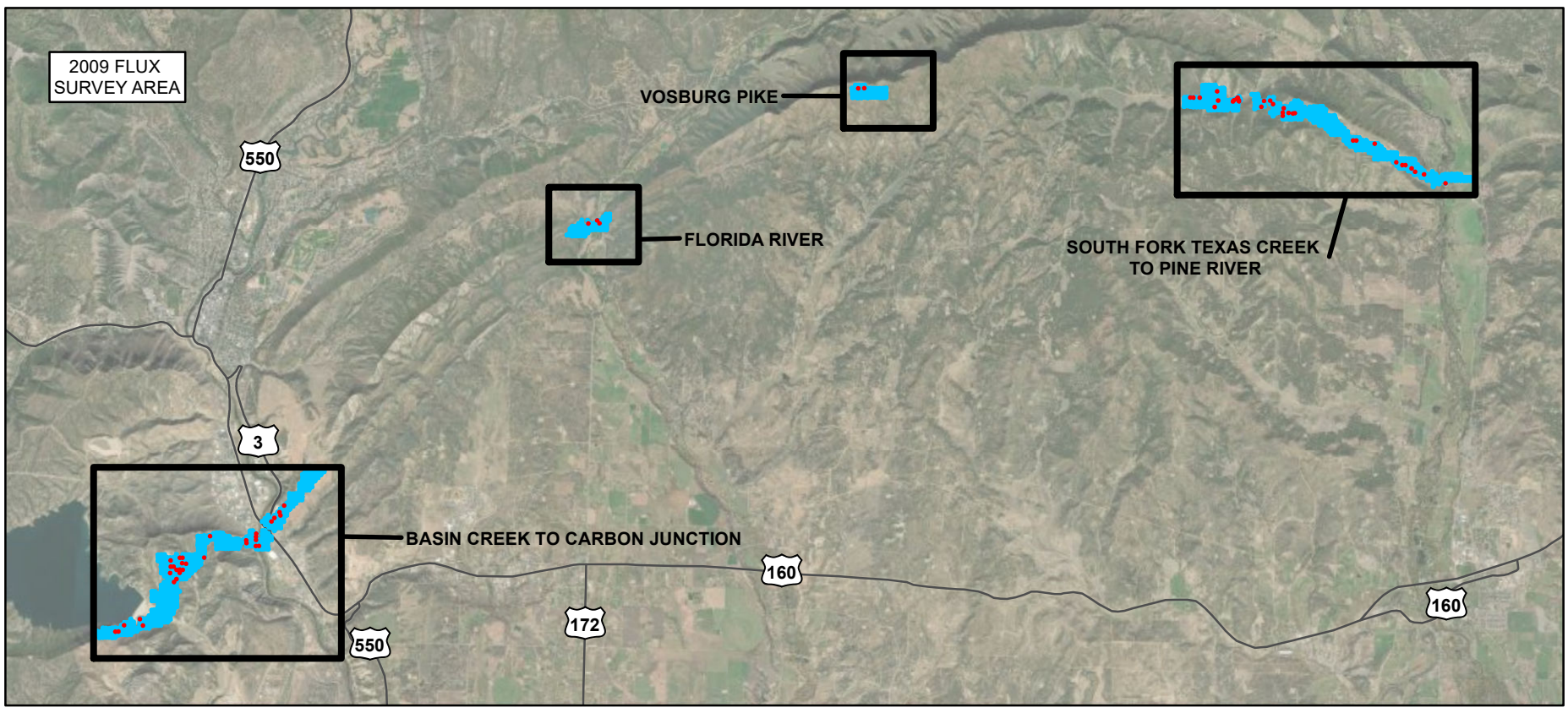


FIGURE 3
CARBON DIOXIDE FLUX CONTOURS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP





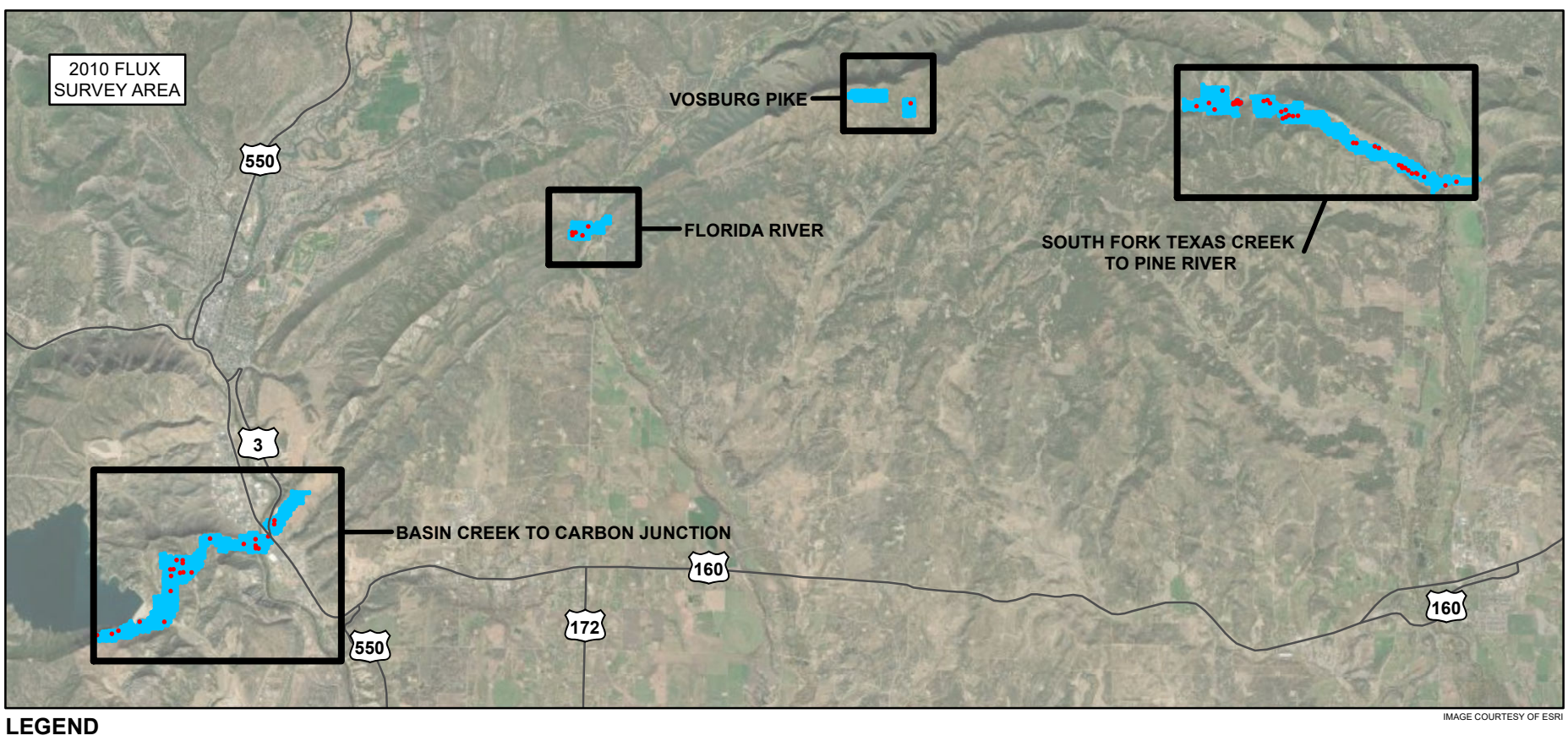


IMAGE COURTESY OF ESRI

LEGEND

- HIGHWAY
- AREA OF INTEREST
- METHANE DETECTED GREATER THAN 0.2000 mol/m ^{2} • day
- mol/m ^{2} • day: MOLES PER SQUARE METER PER DAY
- SURVEY BOUNDARY

SEE FIGURE 5 FOR 2011, 2012, & 2013 METHANE FLUX COMPARISON
SEE FIGURE 6 FOR 2014, 2015, & 2016 METHANE FLUX COMPARISON
SEE FIGURE 7 FOR 2017, 2018, & 2019 METHANE FLUX COMPARISON

0 2 4
Miles

N

FIGURE 4
METHANE FLUX COMPARISON 2008-2010
2019 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_LAPLATA_FIG 04 CH4 COMP 2008-2010.mxd

2011 FLUX SURVEY AREA

VOSBURG PIKE

FLORIDA RIVER

SOUTH FORK TEXAS CREEK TO PINE RIVER

BASIN CREEK TO CARBON JUNCTION

550 3 160 172 550 160

2012 FLUX SURVEY AREA

VOSBURG PIKE

SEC17T35NR8W

FLORIDA RIVER

SOUTH FORK TEXAS CREEK TO PINE RIVER

BASIN CREEK TO CARBON JUNCTION

550 3 160 172 550 160

2013 FLUX SURVEY AREA

VOSBURG PIKE

SEC17T35NR8W

FLORIDA RIVER

SOUTH FORK TEXAS CREEK TO PINE RIVER

BASIN CREEK TO CARBON JUNCTION

550 3 160 172 550 160

IMAGE COURTESY OF ESRI

LEGEND

HIGHWAY

AREA OF INTEREST

METHANE DETECTED GREATER THAN 0.2000 mol/m ^{2} • day

mol/m ^{2} • day: MOLES PER SQUARE METER PER DAY

SURVEY BOUNDARY

SEE FIGURE 6 FOR 2014, 2015, & 2016 METHANE FLUX COMPARISON
SEE FIGURE 7 FOR 2017, 2018, & 2019 METHANE FLUX COMPARISON

0 2 4
Miles

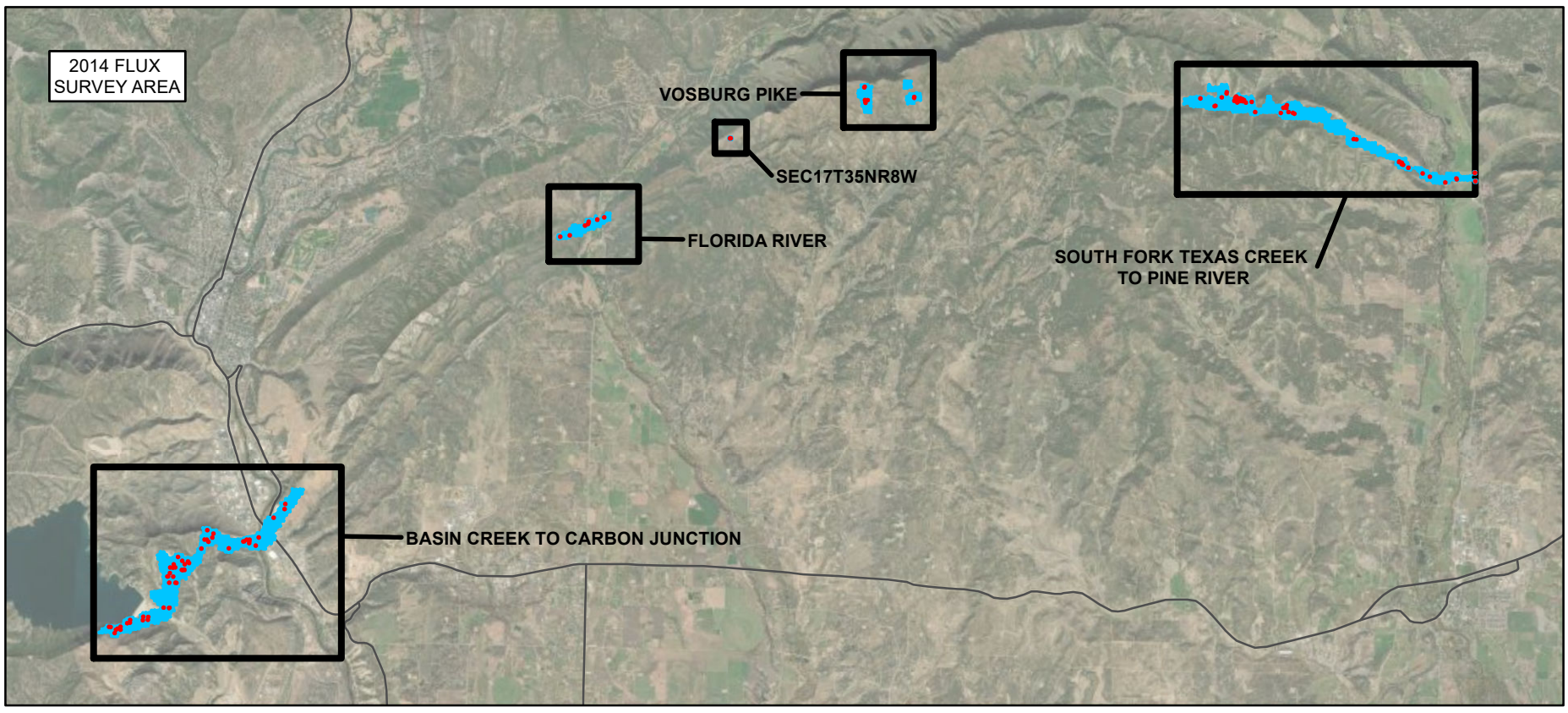
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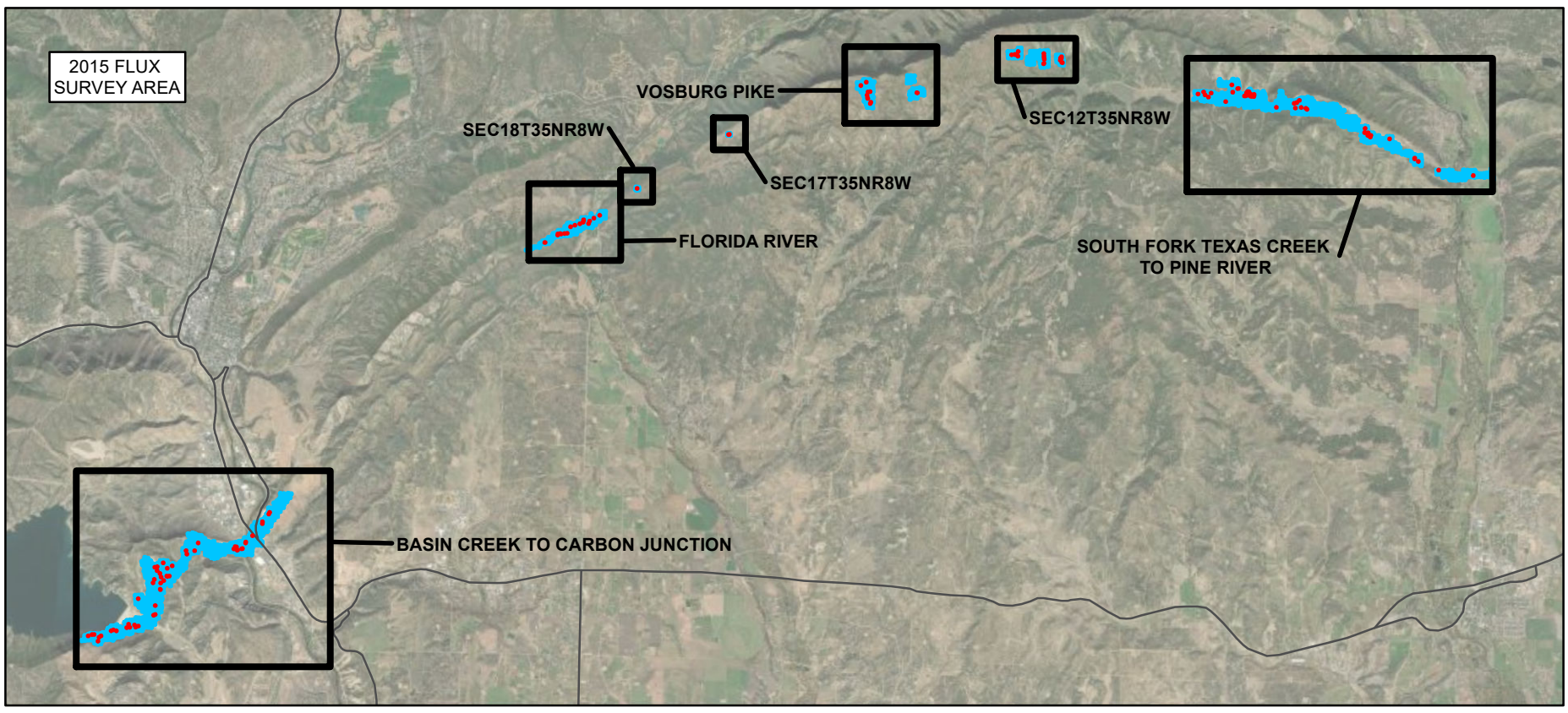
FIGURE 5
METHANE FLUX COMPARISON 2011-2013
2019 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_LAPLATA_FIG 05 CH4 COMP 2011-2013.mxd





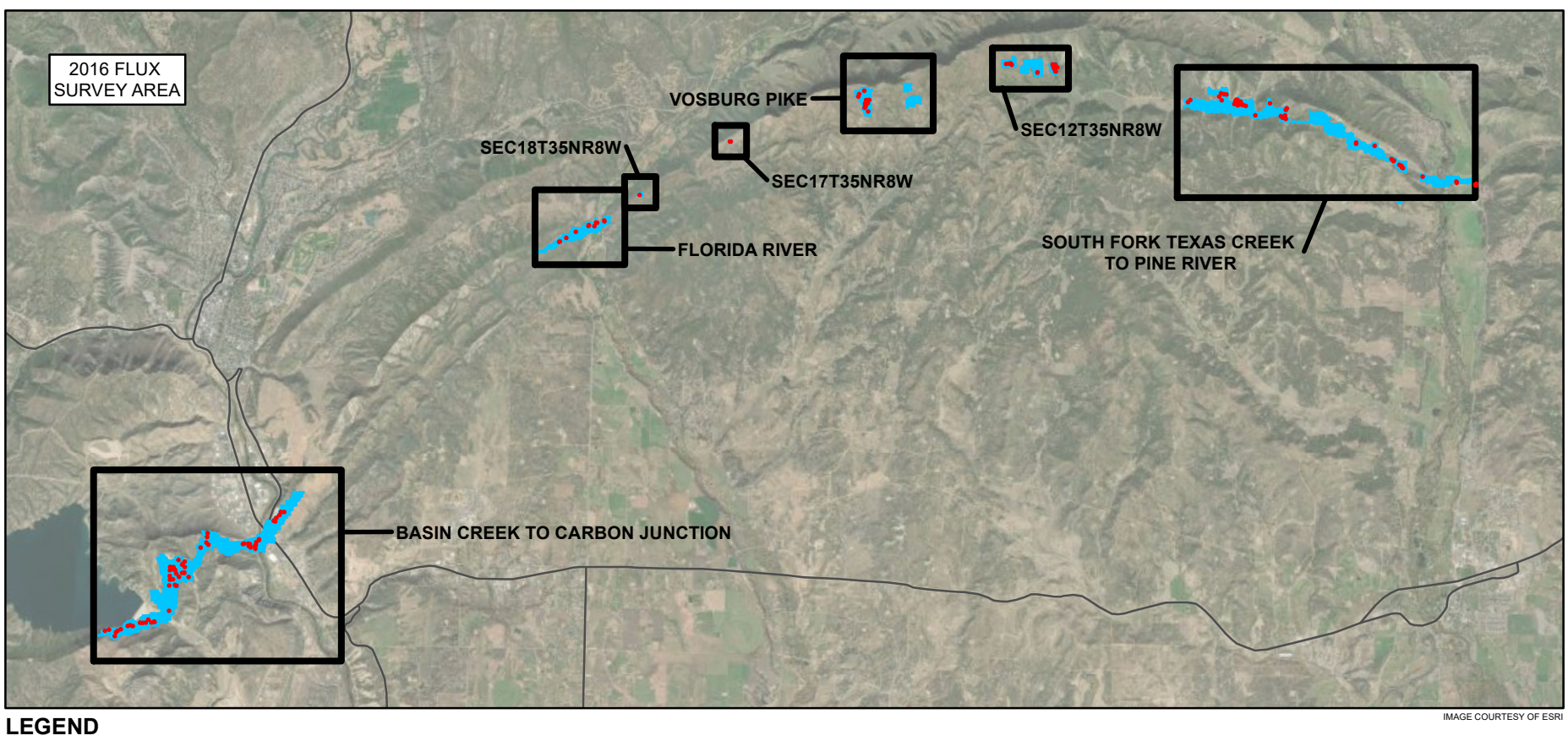


IMAGE COURTESY OF ESRI

LEGEND

- HIGHWAY
- AREA OF INTEREST
- METHANE DETECTED GREATER THAN 0.2000 mol/m ^{2} • day
- mol/m ^{2} • day: MOLES PER SQUARE METER PER DAY
- SURVEY BOUNDARY

SEE FIGURE 7 FOR 2017, 2018, & 2019 METHANE FLUX COMPARISON

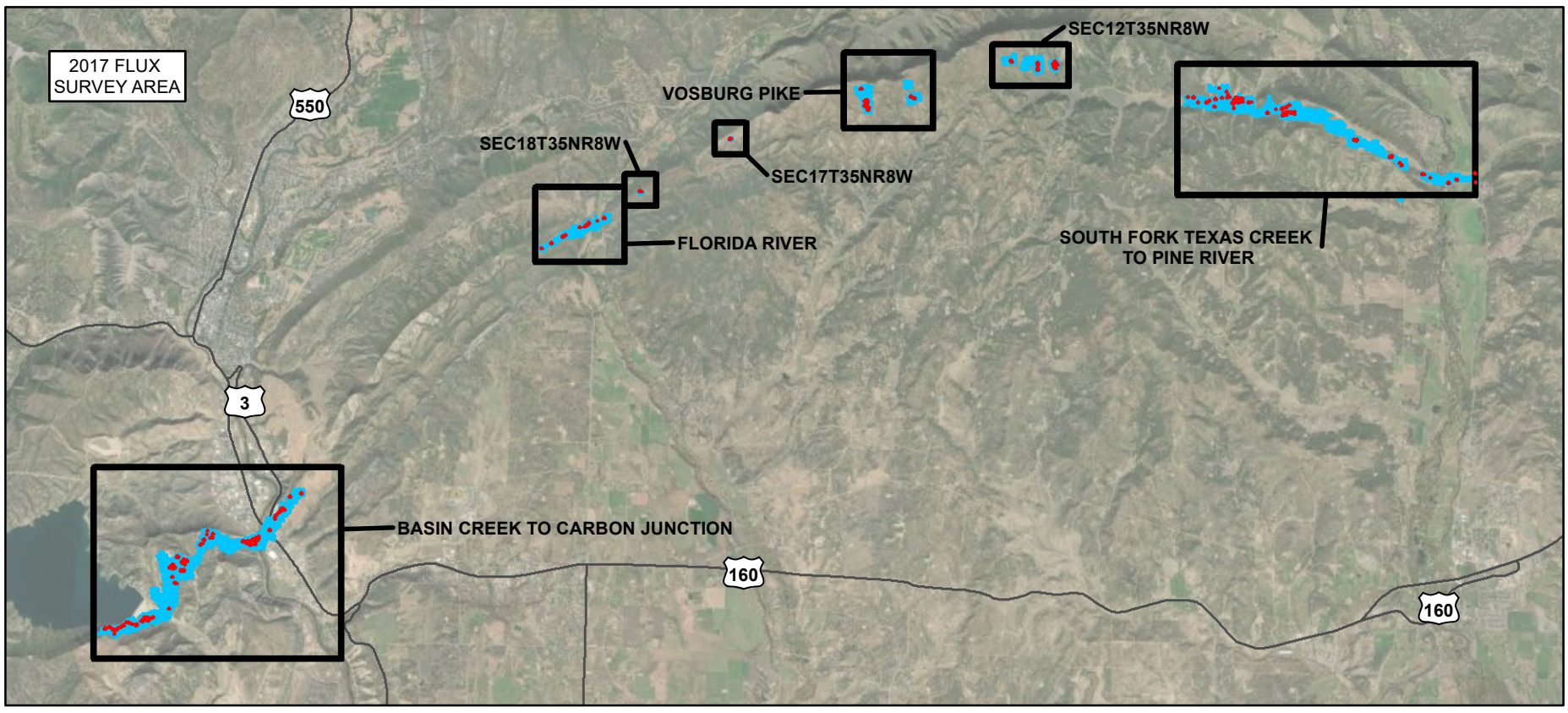
0 2 4
Miles

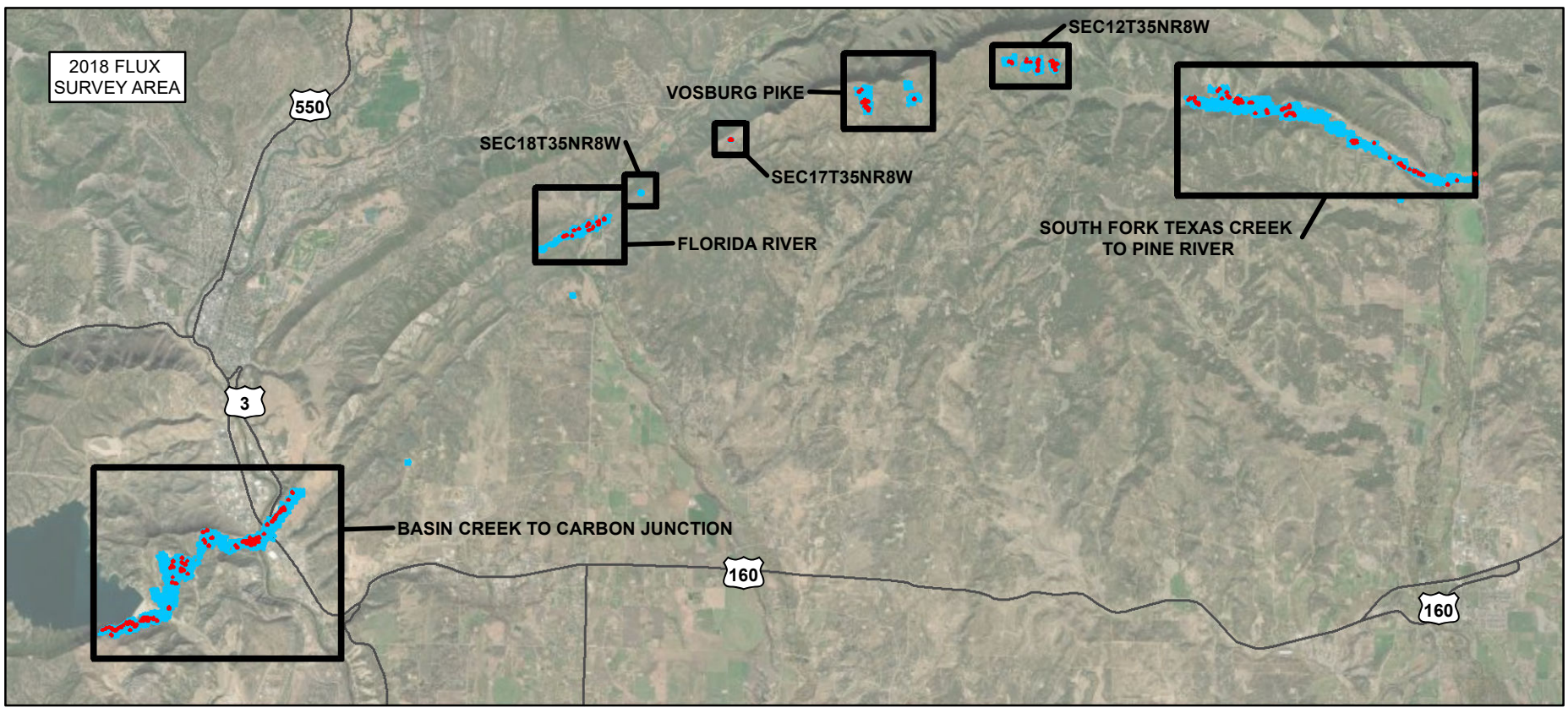
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FIGURE 6
METHANE FLUX COMPARISON 2014-2016
2019 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_LAPLATA_FIG 06 CH4 COMP 2014-2016.mxd





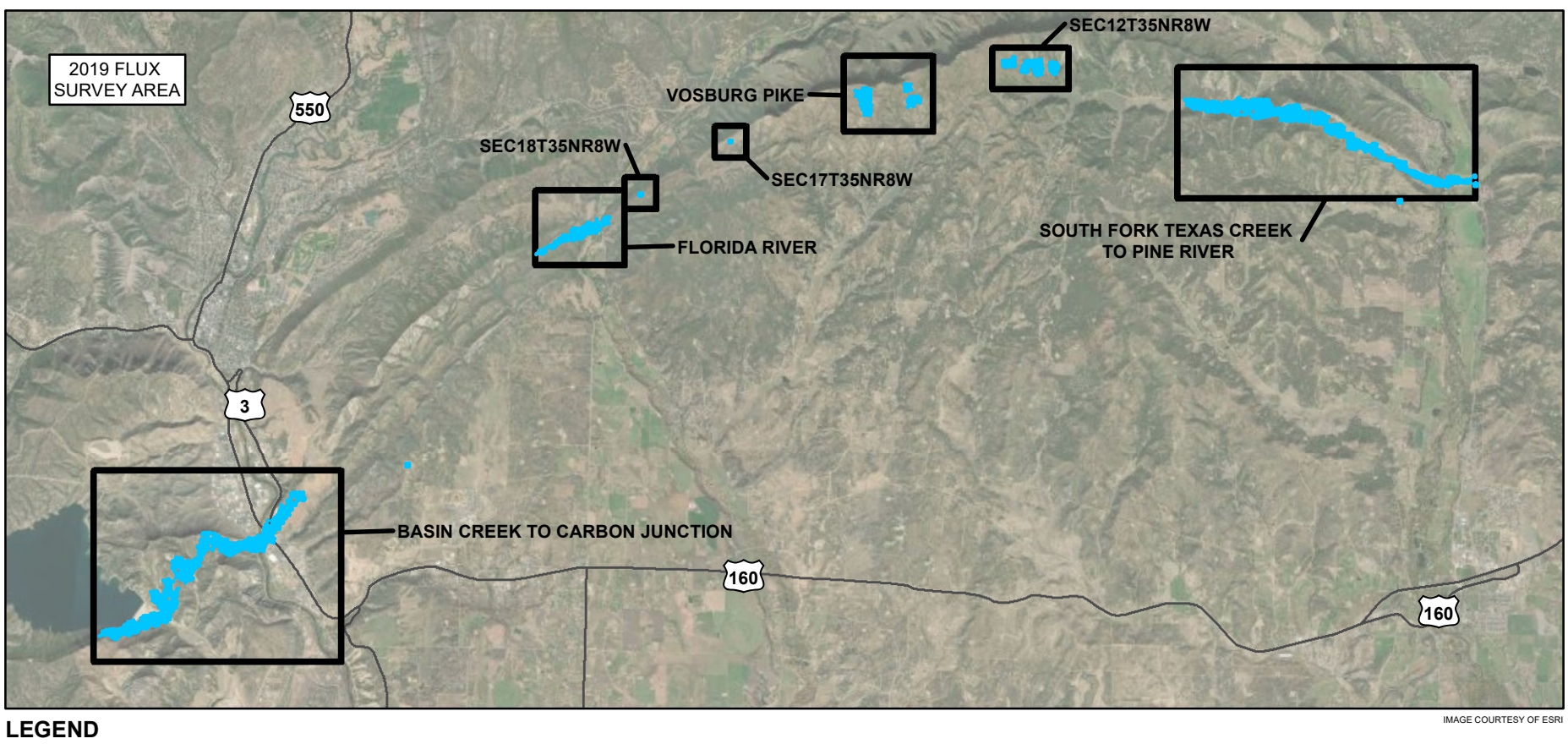


IMAGE COURTESY OF ESRI

LEGEND

- HIGHWAY
- AREA OF INTEREST
- METHANE DETECTED GREATER THAN 0.2000 mol/m ^{2} • day
- mol/m ^{2} • day: MOLES PER SQUARE METER PER DAY
- SURVEY BOUNDARY

0 2 4
Miles

N

FIGURE 7
METHANE FLUX COMPARISON 2017-2019
2019 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_LAPLATA_FIG 07 CH4 COMP 2017-2019.mxd

SEC12T35NR8W

VOSBURG PIKE

SEC18T35NR8W

SEC17T35NR8W

FLORIDA RIVER

SOUTH FORK TEXAS CREEK
TO PINE RIVER

BASIN CREEK TO CARBON JUNCTION

550

3

160

160

550

172

IMAGE COURTESY OF ESRI

LEGEND

- HIGHWAY
- AREA OF INTEREST
- METHANE DETECTED GREATER THAN 0.2000 mol/m ^{2} • day
- mol/m ^{2} • day: MOLES PER SQUARE METER PER DAY
- SURVEY BOUNDARY

0 2 4
Miles

N

FIGURE 8
METHANE FLUX COMPARISON 2020
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_LAPLATA_FIG 08 CH4 COMP 2020.mxd

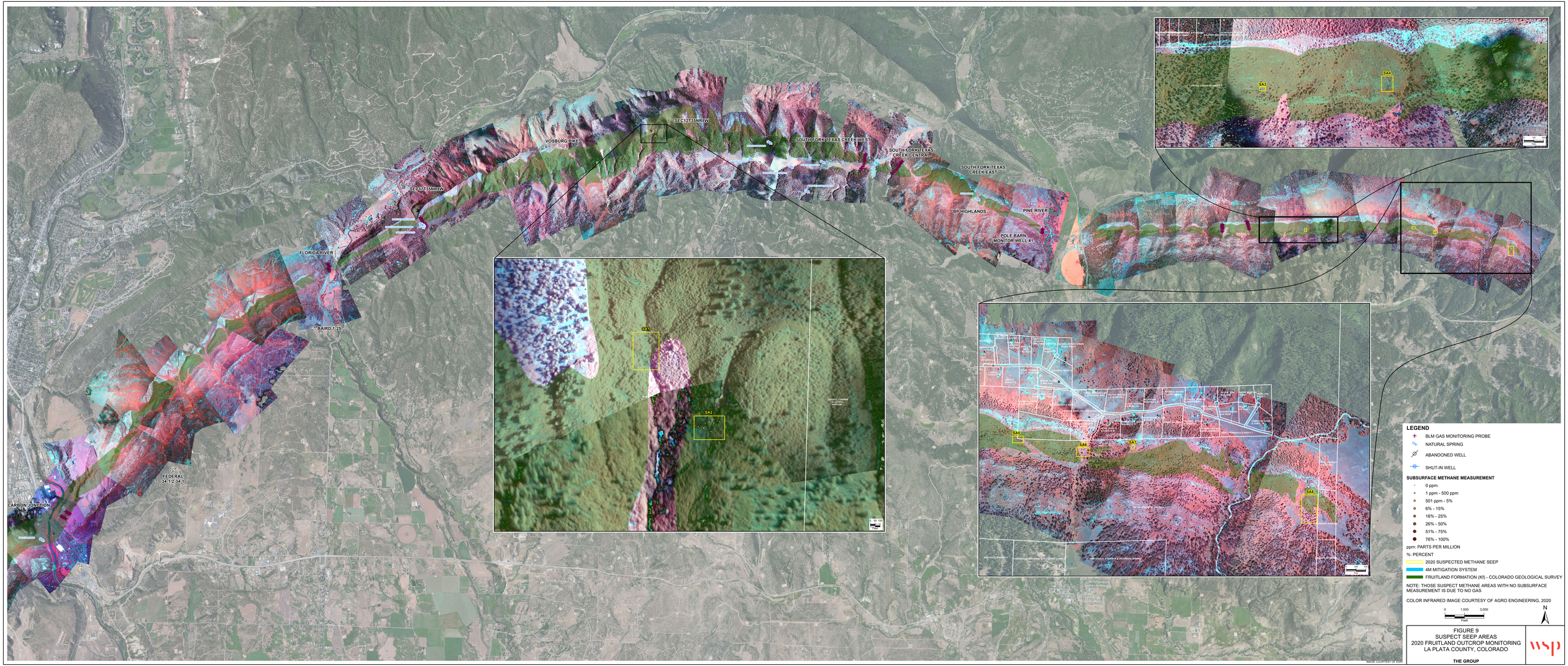
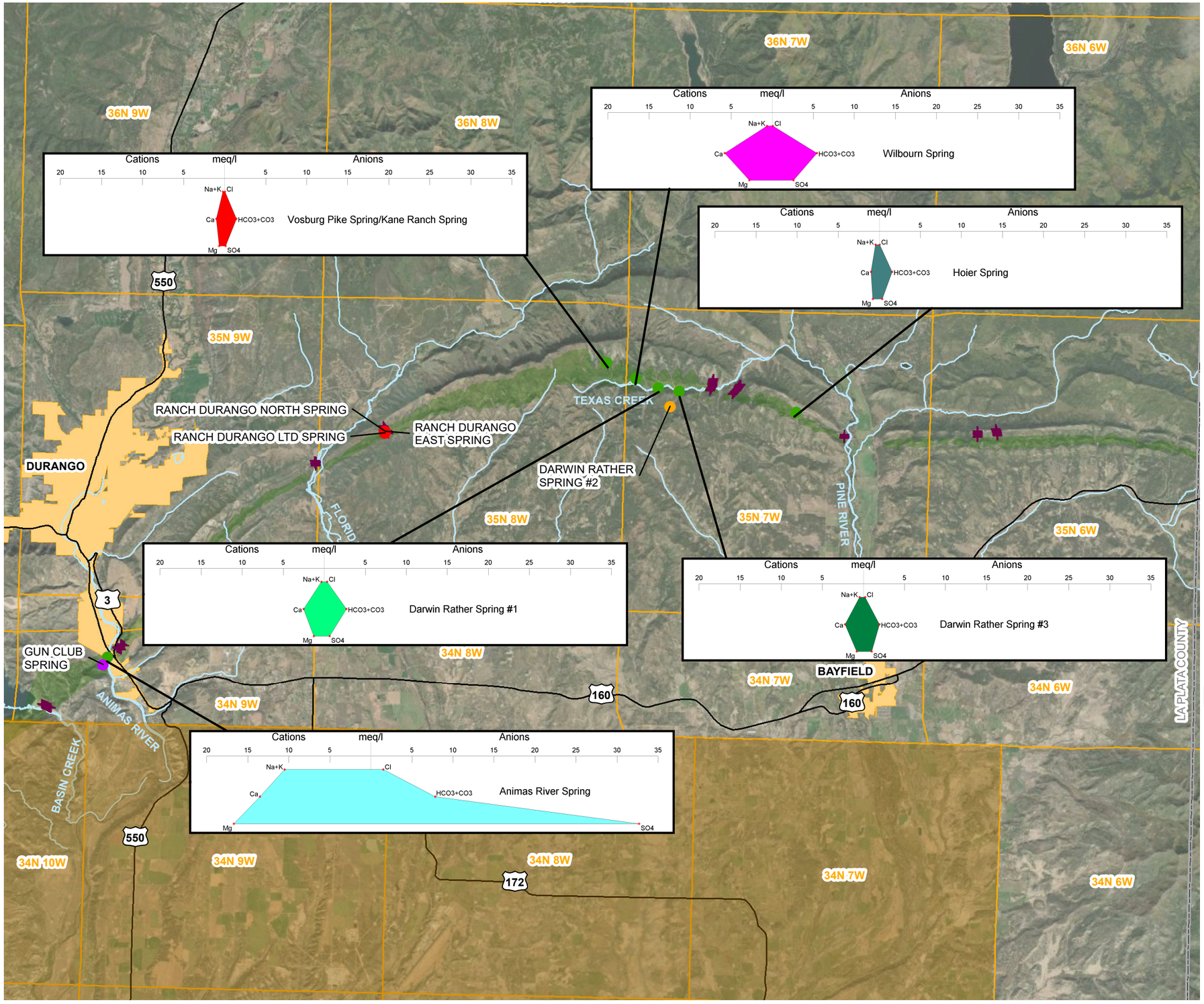


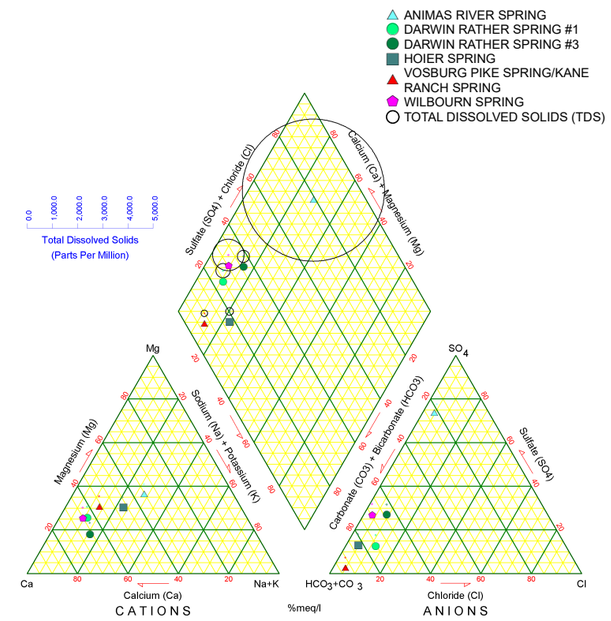
FIGURE 9
SUSPECT SEEP AREAS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

wsp

IMAGE COURTESY OF EMG





LEGEND

- GAS MONITORING PROBE

NATURAL SPRING

- SAMPLED
- NO FLOW/STAGNANT
- DRY
- NO ACCESS
- HIGHWAY
- SURFACE WATER
- SOUTHERN UTE INDIAN TRIBE RESERVATION BOUNDARY
- COUNTY BOUNDARY
- CITY
- TOWNSHIP AND RANGE LINES

GEOLOGY

- FRUITLAND FORMATION (Kf) - COLORADO GEOLOGICAL SURVEY

IMAGE COURTESY OF ESRI

0 2 4
Miles

N

FIGURE 10
NATURAL SPRINGS
2020 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

wsp

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2020\2020_LAPLATA_FIG 10 NATURAL SPRINGS.mxd

APPENDIX

A EQUIPMENT SPECIFICATIONS

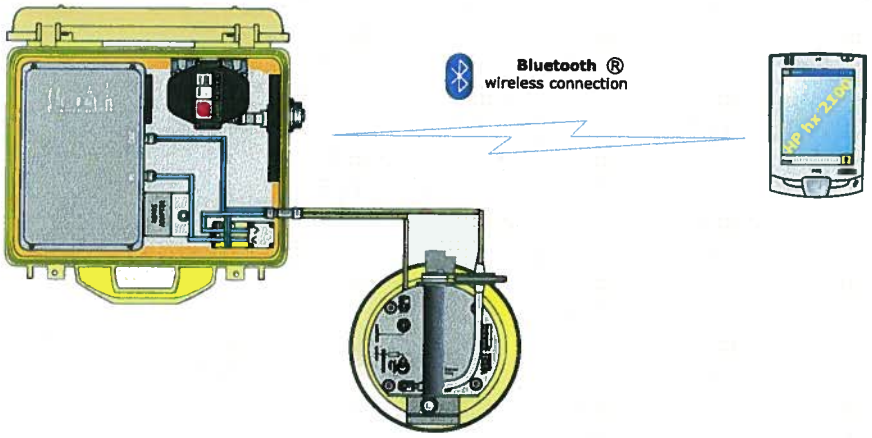
APPENDIX A

EQUIPMENT SPECIFICATIONS

WEST Systems portable soil flux meter

for Carbon dioxide, Methane and Hydrogen sulfide fluxes

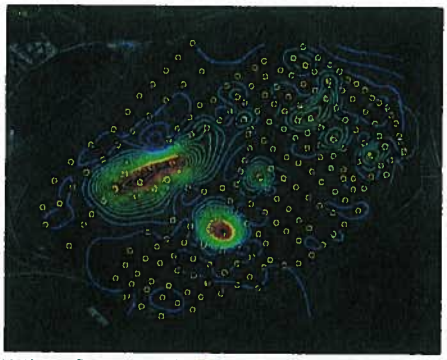
The WEST Systems Fluxmeter is a portable instrument for the measurement of soil gas diffuse degassing phenomena that uses the accumulation chamber method.



This method studied for soil respiration in agronomy (Parkinson) and for soil degassing in volcanic areas (R. Cioni et al.), has been designed by WEST Systems to obtain a portable instrument that allows the performance of measurements with very good accuracy in a short time. The instrument allows a wide range evaluation of the amount of soil gas flux and can be utilized for the evaluation of biogas degassing (landfills), for the survey of non visible degassing phenomena in volcanic and geothermal areas as well as soil respiration rate in agronomy. In the picture below, the results of the degassing survey of a landfill.



Portable fluxmeter



Methane flux contour linees



a group of researchers during a flux mapping fieldwork, using the WS-LI820 flux meter

Courtesy of United States Geological Survey

WEST Systems

West Systems Srl
Via Molise 3 - Zona Ind. Gello - 56025 Pontedera (PI) Italy
Phone +39 0587 294216 www.westsystems.com
Fax +39 0587 296068 g.virgili@westsystems.com

Portable soil flux meter

Common physical characteristics:
Total Weight = 8.3 Kg/16 lbs. to be carried on the back using the backpack-like support vest. The field operator will also have to carry one of the accumulation chambers and the palmtop:

Warm Up
Only at instrument cold start-up a warm-up time of 20 minutes is required. The typical measurement time ranges from 2 to 4 minutes and the autonomy of the instrument is about 4 hours with a single NiMH 14.4 Volts, 2.6 A/h battery. The instrument comes with two interchangeable batteries.

Accumulation Chamber specifications:
- Accumulation chamber A diameter : 200 mm / Height: 100 mm / weight: 1.5 Kg/3.3 lbs
- Accumulation chamber B diameter : 200 mm / Height: 200mm / weight : 2.2 Kg /4.84 lbs

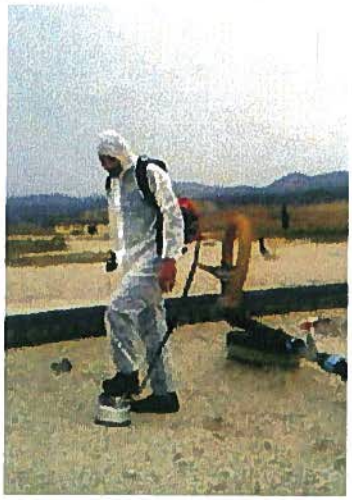
Palm top computer: PocketPC Color Display based on Windows Mobile operating system.
- PalmTop with cables, 0.3 Kg/0.7 lbs.
- Size 125mm (4.8") x 82mm (3.2") * 25 mm (1").

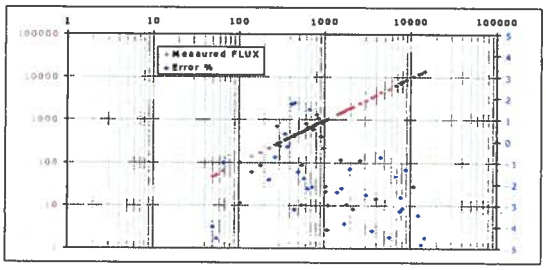
Software The instrument is supplied with a custom software, FluxManager, which allows recording and visualization of the increase in concentration of the target gas in the accumulation chamber, and then the flux calculations. The obtained measurements can be saved on the palmtop computer and then transferred to a desktop PC with a USB connection or using a SD card.

The instrument is supplied complete with:
- backpack-like support vest
- Carrying case for transport and storage
- 2 batteries NiMH 14.4 Volts 2.6 A/h and 1 NiMH battery charger Accumulation chamber A and B
- Palmtop Pocket PC
- User Manual, in English
- FLUX Manager Software for Windows Mobile, in English

The standard flux meter configuration is supplied with a single gas detector, normally the carbon dioxide detector. The fluxmeter can host two sensors by the way special releases, based on specific customer request, it can be supplied with a maximum of 3 sensors.

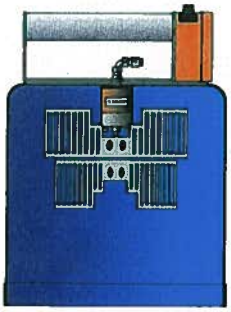
Finally we improved the connection between the instrument and the palmtop that now is based on BlueTooth wireless embedded device.





The measured carbon dioxide flux vs imposed flux (grams m^{-2} day^{-1});
The error % vs imposed flux (in blue).

The instrument is extremely versatile and allows measurement of flux in 2/4 minutes. In the picture: Soil bio-gas flux monitoring in a landifll.



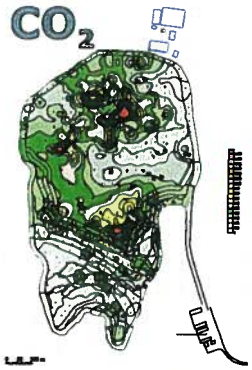
Accumulation Chamber Type B

The accumulation chambers

In the normal use of instrument only the chamber B is used. To extend the instrument sensitivity to very low fluxes the accumulation chamber A is supplied.

	Type A	Type B
net area m^2	0.0314	
net volume m^3	0.003	0.006

WEST Systems
West Systems Srl
Via Molise 3 - Zona Ind. Gello - 56025 Pontedera (PI) Italy
Phone +39 0587 294216 www.westsystems.com
Fax +39 0587 296068 g.virgili@westsystems.com



CO_2 - LI820

LI820 based Carbon dioxide fluxmeter

The CO_2 Fluxmeter is equipped with the LICOR LI-820 the most accurate and reliable portable carbon dioxide detector. The LI-820 is a double beam infrared sensor compensated for temperature variation in the range from -10 to 45°C and for atmospheric pressure variation in the range 660-1060 HPa. Accuracy 2% repeatability ±5ppm. The full scale range can be set to 1000 , 2000, 5000 or 20000 ppmV of carbon dioxide. The characteristics of precision refer to the sensor set to a full scale range of 20000 ppmV. If a very high sensitivity is required, the detector can be set to 1000 or 2000 ppm full scale value to measure with very high precision fluxes in the range from 0 to 10 moles m^{-2} day^{-1}

CO_2 FLUX Measurement range:
from 0 up 600 moles m^{-2} day^{-1}

The accuracy depends on the measured flux:

0 to 0.5 moles m^{-2} day^{-1}	25% (Acc.ch.A)
0.5 to 1 moles m^{-2} day^{-1}	15% (Acc.ch.A or B)
1 to 150 moles m^{-2} day^{-1}	10% (Acc.ch.B)
150 to 300 moles m^{-2} day^{-1}	10% (Acc.ch.B)
300 to 600 moles m^{-2} day^{-1}	20% (Acc.ch.B)

WS-DRAGER CO_2

WS-DRAGER: CO_2 Flux measurement:

A double beam infrared sensor compensated for temperature variation in the range from -20 to 65°C. Accuracy 3%. The full scale value can be set from 2,000 to 300,000 ppm of carbon dioxide. Carbon Dioxide flux measurement range from 0.5 to 1500 moles/m^2 per day.

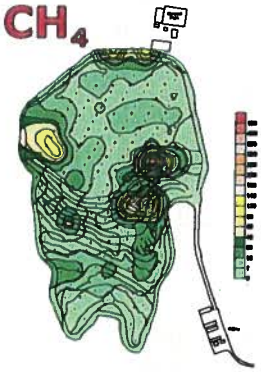
The precision depends on the measured flux:

range:0.5 – 5 moles/m^2 per day 25% (Acc. chamber A)

5-350 moles/m^2/day 10% (Acc. chamber B)

350-600 moles/ m^2/day 25% (Acc. chamber B)

600-1500 moles/ m^2/day 25% (Acc.Ch.B / F.S.=10%)



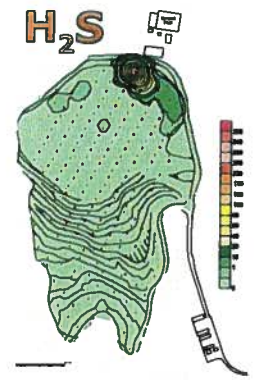
WS-HC CH^4

Methane fluxmeter

The methane sensor is an IR spectrometer. The full-scale range is 50000ppm, accuracy of 5% of reading, and repeatability is 2% of span. Detection limit 60 ppm, resolution 22 ppm. The detector was designed to measure the not controlled emissions of landfill, but it can be used to detect methane emission from coal or wherever the 0.2 moles/m^2/day detection limit is acceptable.

Methane Flux measurement range
from 0.2 up 300 moles m^{-2} day^{-1}
The fluxmeter is provided with 2 accumulation chambers and the accuracy depends on the measured flux:

0.2 to 10 moles m^{-2} day^{-1}	25% (Acc.Ch.A)
10 to 150 moles m^{-2} day^{-1}	15% (Acc.Ch.A)
150 to 300 moles m^{-2} day^{-1}	20% (Acc.Ch.B)



H_2S - WEST

Hydrogen sulfide

The hydrogen sulphide detector is a electrochemical cell with the following specifications:
The full-scale range is 20ppm, with a precision of 3% of reading, and the repeatability is 1.5% of span with a zero offset of 0.3%.

H_2S Flux measurement range: from 0.0025 to 0.5 moles/m^2 per day.
The precision depends on the measured flux:
0.0025 – 0.05 moles/m^2 per day ±25% (Acc. Chamber A)
0.05 – 0.5 moles/m^2 per day ±10% (Acc. Chamber B)

NOTE: The hydrogen sulphide flux evaluation can be affected by the presence of large quantities of water in both liquid and vapour phases.

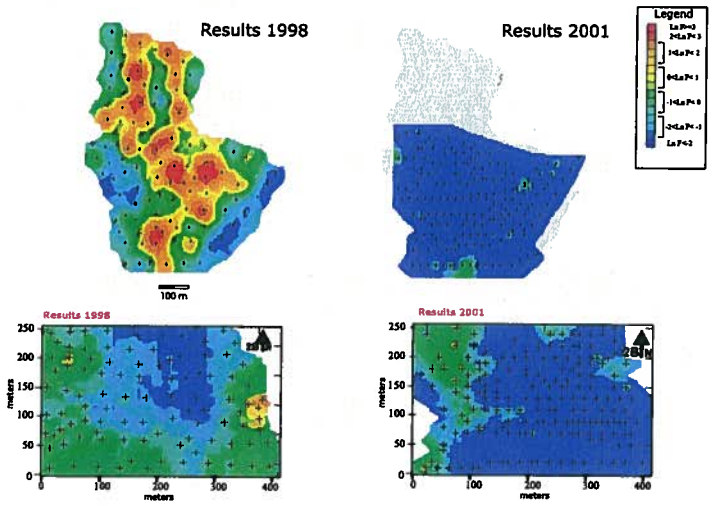
We thanks to N.Lima et al. for the maps.

WEST Systems

West Systems Srl
Via Molise 3 - Zona Ind. Gello - 56025 Pontedera (PI) Italy
Phone +39 0587 294216 www.westsystems.com
Fax +39 0587 296068 g.virgili@westsystems.com

Application on a landfill: mapping the biogas non controlled emissions.

The figure shows the compare between the results of the measurement regime of a land/fill undertaken in 1998 and 2001: the mapping performed in 1998 gave clear indications of the areas which required intervention to improve the cover and the capture system.
The interventions were performed only where necessary with a significant economic savings.
The measurement regime of 2001 indicates without any doubt that the intervensions were efficient and state-of-the-art.



The obtained results:

- Minor atmospheric emissions;
- Higher quantity and better quality of biogas for cogeneration;
- Optimisation of management costs.

Continuous soil flux monitoring

WEST Systems produces a soil gas station for the continuous monitoring of carbon dioxide and hydrogen sulfide flux, soil temperature , soil water content, soil pressure gradient, soil heat flux and meteorological parameters.
For more information contact your local representative, visit our web site or e-mail to: g.virgili@westsystems.com

Local sales representative

H.Q.

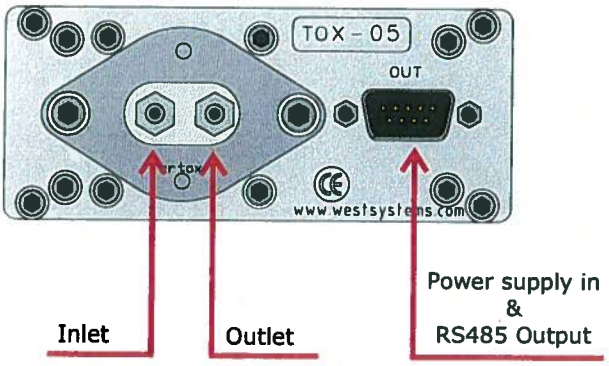
West Systems Srl
Via Molise 3 - Zona Ind. Gello - 56025 Pontedera (PI) Italy
Phone +39 0587 294216 www.westsystems.com (or .it)
Fax +39 0587 296068 g.virgili@westsystems.com (or .it)

Japan

SHOKO CO., LTD.
7-13,1-chome, Shibakoen, Minato-ku Tokyo
105-8432, Japan
TEL : 03-3459-5106 FAX : 03-3459-5081
WEB SITE http://www.shoko.co.jp
e-mail s-isotope@shoko.co.jp

WEST Systems
West Systems Srl
Via Molise 3 - Zona Ind. Gello - 56025 Pontedera (PI) Italy
Phone +39 0587 294216 www.westsystems.com
Fax +39 0587 296068 g.virgili@westsystems.com

Hydrogen Sulfide Detector



Pin	Signal
1	Gnd
2	+VDC
3	Gnd
4	RS485-B
5	RS485-A
6	Gnd
7	+12V
8	Gnd
9	RS485-B

Legenda
Gnd: Ground reference for power supply and RS485
+VDC: 10-28 Volts Power supply input
RS485-A: Digital signal output A
RS485-B: Digital signal output B

Sensor specifications
Ambient conditions:
Air temperature -40°C to 65 °C
Air pressure 700 hPa to 1300 hPa
Air RH 5% - 95% non condensating.
Expected sensor life > 24 months.
Chemical cell order code: WEST H2S-BH
Detector order code: WEST TOX-05-H2S-BH
Factory calibration : 20 ppm
RMS Noise <= 0.02 ppm
Zero Offset <= 0.2 ppm
Max Overrange >= 200 ppm

The chemical cell reaction is:

$$H_2S + 2O_2 = H_2SO_4$$

the gas sample specific consuption is very low:

2.5×10^{-10} moles/Sec per ppm

Due to this consuption the H2S flux is methodically understimated by a -10% with the AccumulationChamber A and by a -5% when using the accumulation chamber B. Then we advise to use the accumulation chamber B except when the flux is very very low.

Appendix M

WS-HC detector

WS-HC Hydrocarbon Flux measurement:
The HydroCarbon detector is based on a double beam infrared spectrometer able to detect methane, hexane , propane and other molecules with HC linkages. The instrument comes calibrated for the methane. *The instrument requires a frequent **zero base-line** calibration that will be done using atmospheric air. The calibration requires 20 second.*

Detector specifications:

Accuracy 5%

Repeatibility 2%

Resolution 22 ppm (Methane equivalent)

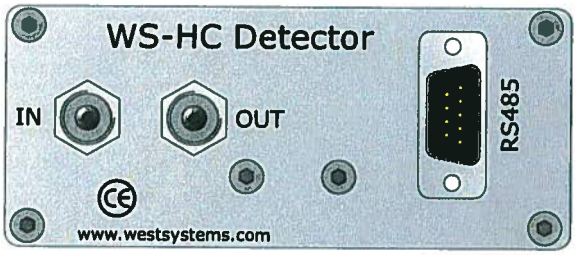
Full scale range is 50000 ppm of methane.

Detection limit 60 ppm.

Methane flux measurement range from 0.1 to 150 moles/m^2 per day.
The precision depends on the measured flux:

```
range 0.1  5      moles/ m^2 per day ±25%
      5 - 150     moles/ m^2 per day ±10%
```

The measurement of very low fluxes (< 0.1 moles/m^2/day) is possible but the error will increase due to the low detector sensitivity.



RS485 Connector DB9 Male panel

Pin 1	**Gnd**
Pin 2	**+Power supply**
Pin 3	**Gnd**
Pin 4	**RS485 B**
Pin 5	**RS485 A**
Pin 6	**Gnd**
Pin 7	**+Power supply**
Pin 8	**Gnd**
Pin 9	**RS485 B**

The gas fittings can be used with rilsan 6x4 mm tubes or silicon 5x3.2 tubes. Please respect inlet and outlet ports.

LI-820 Specifications

CO_2 Specifications

Measurement Range: 0-1000 ppm, 0-2000 ppm with 14 cm bench; 0-5000 ppm, 0-20000 ppm with 5 cm bench

Accuracy: < 2.5% of reading with 14 cm bench; 4% of reading with 5 cm bench

Calibration Drift

[1]Zero Drift: < 0.15 ppm / °C

[2]Span Drift at 370 ppm: < 0.03% / °C

[3]Total Drift at 370 ppm: <0.4 ppm / °C

RMS Noise at 370 ppm with 1 sec Signal Filtering: < 1 ppm

[1] Zero drift is the change with temperature at 0 concentration
[2] Span drift is the change after re-zeroing following a temperature change
[3] Total drift is the change with temperature without re-zeroing or re-spanning

Measurement Principle: Non-Dispersive Infrared

Traceability: Traceable gases to WMO standards from 0-3000 ppm. Traceable gases to EPA protocol gases from 3000 to 20000 ppm

Pressure Compensation Range: 15 kPa-115 kPa

Maximum Gas Flow Rate: 1 liter/minute

Output Signals: Two Analog Voltage (0-2.5 V or 0-5 V) and Two Current (4-20 mA)
Digital: TTL (0-5 V) or Open Collector

DAC Resolution: 14-bits across user-specified range

Source Life: 18000 hours

Power Requirements: Input Voltage 12-30 VDC
1.2A @ 12V (14 W) maximum during warm-up with heaters on
0.3 A @ 12 V (3.6 W) average after warm-up with heaters on

Supply Operating Range: 12-30 VDC

Operating Temperature Range: -20 to 45 °C

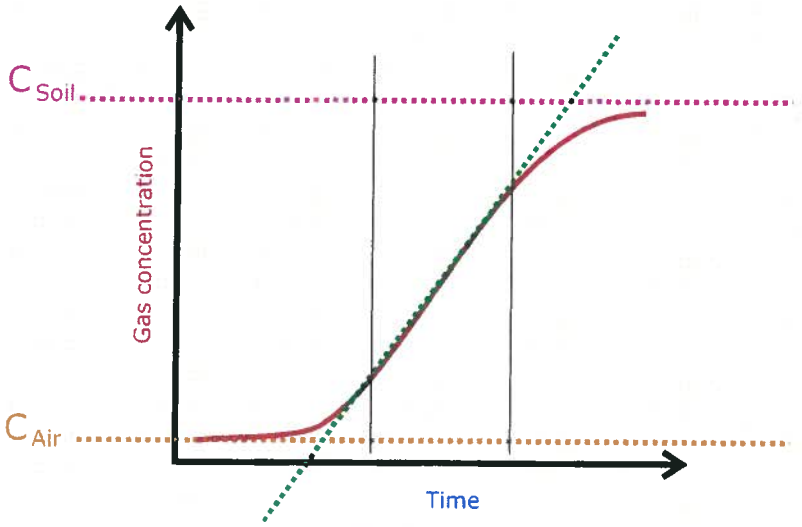
Relative Humidity Range: 0 to 95% RH, Non-Condensing

Dimensions: 8.75" x 6" x 3" (22.23 x 15.25 x 7.62 cm)

Weight: 2.2 lbs (1 kg)

Quantifying the flux

How explained in the chapter 3 the flux is proportional to the concentration increase ratio ppm/sec. The proportionality factor depends on the chamber volume/surface ratio as well as the barometric pressure and the air temperature inside the accumulation chamber.



There are two methods to carry out the field work, in both cases for each measurement you have to record the type of accumulation chamber used, the barometric pressure, and the air temperature.
The variation of few mBar of the pressure and or few degrees of temperature do not affect the evaluation of flux very much, then you can use a mean value for both parameters. Of course that depends on the accuracy you want to reach for the evaluation of flux.
The instrument measures the barometric pressure, using the embedded pressure sensor of the LICOR, with a good accuracy. A platinum Pt100 or a thermo-couple thermometer can be used to measure the air temperature as well as the soil temperature.

Choosing the flux measurement unit

The first measurements made, 10 years ago, with the accumulation chamber was expressed in cm/sec which is a speed, the speed of carbon dioxide flowing out from the soil. During the last ten years several units have been used by volcanologist and by geochemistry researchers. The most common unit is grams/squaremeter per day, but using the same instrument for two gas species to express the flux using this unit means to have two different conversion factors. Actually we use the unit **moles/squaremeter per day** that has two advantages: A single conversion factor for every gas specie and an easy conversion of the flux in grams/sm per day simply multiplying the result expressed in moles/sm per day for the molecular weight of the target gas.

From the [tools][settings] menu you can set the accumulation chamber factor in the "A.c.K." field.

If this factor is set to 1 the instrument will give you results expressed in ppm/sec, that's simply the slope of the curve in the selected interval.

If you set the A.c.K to a value different from 1 the instrument will give you the results expressed in moles per square meter per day.

Please see next page.

Quantifying the flux

Method 1: Measuring the slope

Set the Accumulation Chamber factor to 1 in order to have the flux measurement expressed in the slope unit "ppm/sec" and translate it in the desired unit with a post processing.
Using this method you can focus only on the accumulation chamber interfacing with the soil, the flux curve shape and the other aspects of the measurement, putting off choosing the correct accumulation chamber factor.

Method 2: Measuring the flux directly in moles/sm/day.

To get the results directly in moles/sm/day you have to set the Accumulation Chamber factor to the correct value, taking it from the tables.
For each measurement, if there are variations in the air temperature, or of the barometric pressure, or if you changed the accumulation chamber you have to select the [tools][settings] menu and put the correct accumulation chamber factor in the "A.c.K." field. This operation can be "critical". In any case on the saved files you'll find the results of flux evaluation expressed in both units , the raw ppm/sec and the moles/sm/day computed with the A.c.K. you set.

The accumulation chamber factors

Here following the formula used to compute the A.c.K.:

$$K = \frac{86400 \cdot P}{10^6 \cdot R \cdot T_k} \cdot \frac{V}{A}$$

Where

- **P** is the barometric pressure expressed in mBar (HPa)
- **R** is the gas constant 0.08314510 bar L K^{-1} mol^{-1}
- **T_k** is the air temperature expressed in Kelvin degree
- **V** is the chamber net volume in cubic meters
- **A** is the chamber inlet net area in square meters.

The dimensions of the A.c.K. are

$$K = \frac{moles \cdot meter^{-2} \cdot day^{-1}}{ppm \cdot sec^{-1}}$$

In the table the conversion factors vs temperaure and barometric pressure for the Accumulation Chamber Type A and B are reported.

An example:

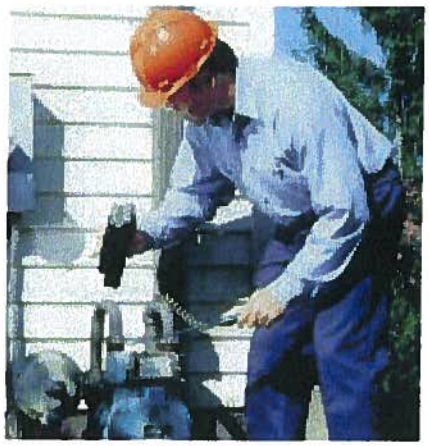
You're using the accumulation chamber B, the slope of the flux curve is 2.5 ppm/sec, the barometric pressure is 1008 mBar (HPa) and the air temperature is 22 °C.
From the table B get the value that correspond to the barometric pressure and temperature. In this case I get the value computed for 25°C and 1013 mBar : 0.696.

Then the flux is: 2.5 x 0.696= 1.74 moles per square meter per day.

Gasport® Gas Tester

MSA

The Gasport Gas Tester is designed for gas utility workers to detect methane and certain toxic gases. It is a reliable, simple, versatile tool to help your service technicians get the job done quickly! With multiple ranges and sensing capabilities built into one rugged housing, the Gasport Tester simplifies your work by reducing the number of meters you have to carry on the job.



Applications

The Gasport Tester's poison-tolerant methane sensor provides three measurement ranges for your daily service needs:

- Open air, safety sampling
- Small, in-home leak detection
- Street/outdoor service line leak detection



Features and Benefits

- **Proven in field use–rugged and reliable**
  Less costly to maintain, less time in repair
- **Multiple functions in one instrument**
  No need to buy, carry & maintain multiple instruments
- **New, poison-tolerant combustible gas sensor**
  Reduces meter ownership costs
- **User-selectable, "silent" operation mode**
  Reduces customer disturbances and worries
- **Fast warm up time**
  Fastest warm up time in industry saves time
- **Can monitor up to four gases at a time**
  Fewer instruments to carry
- **Show all gas concentrations simultaneously**
  Eliminates guesswork on what reading is displayed
- **Autoranging methane sensor**
  Automatically switches between 0-5% and 5-100% methane ranges
- **Gas readings recorded for later retrieval**
  Can double check readings after job is done
- **Simple manual or automated calibration options**
  Reduces training time and helps ensure accuracy
- **Intrinsically safe**
  Meets safety standards for work in hazardous areas
- **Lifetime warranty on case and electronics**
  Reduced maintenance and lifetime costs

Specifications

Gas	Range	Resolution
Methane	0–5000 ppm	50 ppm
Methane	0–100% LEL or 0–5% CH_4	1 % LEL or 0.1% CH_4
Methane	5–100% CH_4	1% CH_4
Oxygen	0–25%	0.1%
Carbon Monoxide	0–1000 ppm	1 ppm
Hydrogen Sulfide	0–100 ppm	1 ppm

Battery types: NiCd and Alkaline
Case material: Impact resistant, stainless-steel-fiber-filled polycarbonate
Operating temperature: normal -10 to 40°C; extended -20 to 50°C
Operating humidity: Continuous: 15-95% RH, non-condensing
Intermittent duty: 5-95% RH, non condensing
Warm up time: Less than 20 seconds to initial readings
Datalog capacity: 12 hours
Input: 3 clearly marked, metal domed keys
Warranty: Case and Electronics: Lifetime
Sensors and consumable parts: 1 year

The answer for gas utilities' gas detection needs

Gasport® Gas Tester

Ordering Information

Battery Chargers

Part No.	Description
494716	Omega 120 VAC 50/60Hz
495965	Omega 220 VAC 50/60Hz
801759	Omega 110/220 VAC, Five Unit, 50/60Hz
800525	Omega 8 - 24VDC for vehicle use

Battery Packs

Part No.	Description
496990	Standard NiCd Rechargeable
800526	Alkaline, Type C
711041	Alkaline, with Thumbscrews
800527	Heavy Duty NiCd Rechargeable

Sensors

Part No.	Description
813693	Combustible Gas
480566	O_2
812389	CO
812390	H_2S

Protective Boots

Part No.	Description
804955	Black, for NiCd Battery Packs
802806	Orange, for NiCd Battery Packs
806751	Black, for Alkaline Battery Packs
806750	Orange, for Alkaline Battery Packs
806749	Black, for HD NiCd Battery Packs
806748	Orange, for HD NiCd Battery Packs
812833	Yellow Soft Carrying Case with Harness
711022	Black padded Vinyl Carrying Case with Harness

Sampling Equipment

Part No.	Description
800332	Probe - 1 ft., plastic
800333	Probe - 3 ft., plastic
803561	Probe - 3 ft., plastic (holes 2" from end) (bar hole probe)
803962	Probe - 3 ft., plastic (holes 2" from handle) (solid probe)
803848	Probe - Hot Gas Sampler
710465	Sampling Line - 5 ft., coiled
497333	Sampling Line - 10 ft.
497334	Sampling Line - 15 ft.
497335	Sampling Line - 25 ft.

Sampling Accessories

Part No.	Description
801582	Replacement Filter, Probe, pkg. of 10
801291	External Filter Holder
014318	Charcoal Filter
711039	Line Scrubber Filter Holder
711059	Line Scrubber Replacement Cartridges, Box of 12
808935	Dust Filter, Pump Module
802897	Water Trap (Teflon) Filter, Pump Module

Calibration Check Equipment

Part No.	Description
477149	Calibration Kit Model RP with 0.25 lpm Regulator
491041	Calibration Gas - methane, 2.5%
473180	Calibration Gas - 300 ppm CO
813718	Calibration Gas - methane, 2.5% oxygen, 15%60 ppm CO
813720	Calibration Gas - methane, 2.5% oxygen, 15%300 ppm CO 10 ppm H_2S
710288	Gasmiser™ Demand Regulator 0 - 3.0 lpm

Accessories

Part No.	Description
804679	Data Docking Module Kit. Includes the Data Docking Module, MSA Link Software and Instruction Manual

Approvals

The Gasport Gas Tester has been designed to meet intrinsic safety testing requirements in certain hazardous atmospheres.

The Gasport Gas Tester is approved by MET (an OSHA Nationally Recognized Testing Laboratory [NRTL]) for use in Class I, Division I, Groups A, B, C, D; Class II, Division I, Groups E, F, G; and Class III Hazardous locations. Gaspor tGas Testers sold in Canada are approved by CSA for use in Class I, Division I, Groups A, B, C, and D locations.

Contact MSA at 1-800-MSA-2222 for more information or with questions regarding the status of approvals.

Gasport Gas Tester Kits

	LEL Display	O_2	CO	H_2S	Alarms Always	Alarms Optional	Leak Detect Page	Peak	Alkaline Battery	NiCd Battery	5ft Coiled Line	1ft Probe	Part No.
4-Gas, Selectable, NiCd	•	•	•	•		•	•	•		•	•	•	711489
4-Gas, Selectable, Alkaline	•	•	•	•		•	•	•	•		•	•	711490
3-Gas, Selectable, NiCd	•	•	•			•	•	•		•	•	•	711493
3-Gas, Selectable, Alkaline	•	•	•			•	•	•	•		•	•	711494
2-Gas, Selectable, NiCd	•		•			•	•	•		•	•	•	711495
2-Gas, Selectable, Alkaline	•		•			•	•	•	•		•	•	711496
4-Gas, Alarms On, NiCd	•	•	•	•	•		•	•		•	•	•	711491
4-Gas, Alarms On, Alkaline	•	•	•	•	•		•	•	•		•	•	711492

Assemble-to-Order (ATO) System: You Make the Choices

The ATO System makes it easy to "custom order" the Gasport Gas Tester, configured exactly the way you want it. You can choose from an extensive line of base instrument components and accessories. To obtain a copy of the "ATO System and Price Information for the Gasport Gas Tester," call toll-free 1-800-MSA-2222, and request Bulletin 0804-28. **To obtain a copy of the ATO via FAX, call MSA QuickLit Information Service at 1-800-672-9010. At the prompt, request QuickLit Document #2345 (ATO for Gasport Gas Tester).**

Note: This Data Sheet contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.

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Corporate Headquarters
P.O. Box 426
Pittsburgh, PA 15230 USA
Phone (412) 967-3000
www.MSAnet.com

U.S. Customer Service Center
1-800-MSA-2222

MSA International
Phone (412) 967-3354
FAX (412) 967-3451

Offices and representatives worldwide
For further information:

MSA

QRAE II User's Guide



Covers QRAE II Diffusion & Pump Models with Firmware Version 3.60 or higher

RAE SYSTEMS by Honeywell

P/N 020-4100-000 Rev. F
May 2013

1.2 Specifications

QRAE II Specifications

Configuration	Pumped or diffusion 4-gas with datalogging			
Dimensions:	Diffusion: 5" L x 2.8" W x 1.5" H (125mm x 72mm x 38mm)			
	Pump: 5" L x 2.8" W x 1.5" H (125mm x 72mm x 38mm)			
Weight:	Diffusion: 9 oz (250g)			
	Pump: 12 oz (350 g) with battery			
Detectors:	2 Electrochemical toxic gases sensors			
	1 Solid Polymer Electrolyte oxygen sensor			
	1 Catalytic sensor for combustible level organics			
Battery:	Rechargeable 3.7V Li-ion battery pack (6-hour charge time) or a 3 AA alkaline battery adapter.			
Operating Time:	Up to 10 hours continuous w/ Li-ion battery pack			
Display:	4-line graphical LCD with automatic LED backlight for dim lighting conditions			
Keypad:	2 programming/operation keys			
Direct Readout:	Up to 4 simultaneous values with sensor name, battery charge, high and low values for all sensors, elapsed time, and datalogging on/off state			
Sampling Method:	Diffusion or pumped (depending on model)			
Range, Resolution & Response Time:	LEL	0-100%	1 %	15 sec
	O_2	0-30%	0.1 %	20 sec
	CO	0-1000 ppm	1 ppm	25 sec
	H_2S	0-100 ppm	0.1 ppm	30 sec
Alarm Settings:	Separate limits for TWA, STEL, High, Low			
Alarms:	≥95 dB @ 30 cm buzzer, flashing red LEDs, vibration alarm, LCD to indicate exceeded preset limits, low battery, or sensor failure			
Calibration:	Two-point field calibration for fresh air and standard reference gas			
Protection:	Password protected calibration settings, alarm limits, and data			
Intrinsic Safety:	CSA Class I, Division 1, Group A, B, C, D, T4 (US & Canada), SIRA ATEX II 2G Ex ia d II C T4 Gb (Europe), IECEx Ex d ia II C T4 Gb			
EM Immunity:	No effect when exposed to 0.43mW/cm^2 RF interference (5-watt transmitter at 12"/10cm).			
Data Storage:	64,000 readings (64 hours, 4 channels at 1 minute interval) in non-volatile memory.			
Datalog Interval:	Programmable 1- to 3,600-second intervals			
Alarm Settings:	Separate alarm limit settings for TWA, STEL, Low and High alarm.			
Communication:	Download data to PC and upload monitor setup from PC through an RS-232 link to PC serial port			
Temperature:	-20° C to 50° C (-4° F to 122° F)			
Humidity:	0% to 95% relative humidity (non-condensing)			

Caution:

Refer to RAE Systems Technical Note TN-114 for sensor cross-sensitivities.
Refer to RAE Systems Technical Note TN-144 for LEL sensor poisoning.

GeoXT

The total GPS platform for all your GIS field requirements

The GeoXT™ handheld, from the GeoExplorer® series, is an essential tool for maintaining your GIS. It's all you need to collect location data, keep existing GIS information up to date, and even mobilize your GIS.

The unique GeoExplorer series combines a Trimble® GPS receiver with a rugged field-ready handheld computer running the Microsoft® Windows Mobile™ 2003 software for Pocket PCs. Plus there's an internal battery that easily lasts for a whole day of GPS operation. The result is tightly integrated, tough, and incredibly powerful.

High-accuracy integrated GPS

The GeoXT is optimized to provide the reliable, high-accuracy location data you need. Advanced features like EVEREST™ multipath rejection technology let you work under canopy, in urban canyons, or anywhere where accuracy is crucial.

Need submeter accuracy in real-time? Use corrections from a satellite-based augmentation system (SBAS) like WAAS[1] or EGNOS[2]. Want to get that extra edge in precision? Collect data with Trimble's TerraSync™ or GPScorrect™ software, and then postprocess back in the office.

Because the GPS receiver and antenna are built into the handheld computer, it's never been easier to use GPS in your application. The system is more than just cable-free: it's a totally integrated solution.

Optimized productivity

Take advantage of the power and flexibility of Windows Mobile software for Pocket PCs by choosing from the most comprehensive range of field software available—whether off-the-shelf or purpose-built. Whatever your needs, Windows Mobile lets you choose a software solution to match your workflow.

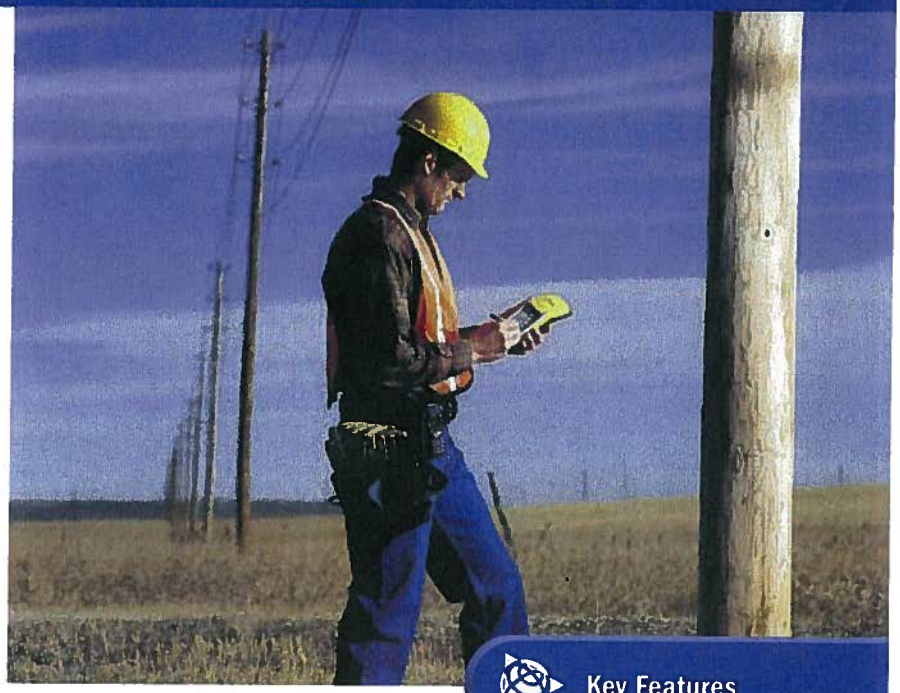
Windows Mobile includes familiar Microsoft productivity tools, including Pocket Word, Pocket Excel, and Pocket Outlook®. Pocket Outlook lets you synchronize e-mails, contacts, appointments, and data with your office computer, so whether you're in the office or in the field, you're always up to date.

Go wireless with integrated Bluetooth®* for connection to other Bluetooth-enabled devices, including cell phones and PCs. You also have the option to use the USB support module to connect to a desktop computer, or use the optional serial clip for cabled connections in the field.

Receive a free copy of Microsoft Streets & Trips** 2004 software with your GeoXT handheld, and take advantage of comprehensive map and travel information for easy navigation and route planning.

All the memory you need

There's plenty of storage space in the GeoXT for all your GIS data. The fast processor and large memory mean even big graphics files load quickly—and they're crisp and crystal-clear on the advanced TFT outdoor color screen.



Key Features

- High-performance submeter GPS with integrated WAAS/EGNOS
- Windows Mobile 2003 software for Pocket PCs, allowing maximum flexibility in software choice
- Rugged handheld with all-day battery
- Advanced color TFT display with backlight
- Integrated Bluetooth for wireless connectivity

From data collection to data maintenance, to mobile GIS and beyond ... the GeoXT is the handheld of choice.

* *Bluetooth type approvals are country specific. GeoExplorer series handhelds are approved for use with Bluetooth in the USA. For a complete list of other countries with Bluetooth approval please refer to: www.trimble.com/geo_bluetooth.html.*

** *Microsoft Streets & Trips 2004 software available in US/Canada; Microsoft AutoRoute® 2004 in Europe.*

Trimble.

GeoXT

The total GPS platform for all your GIS field requirements

Standard features

System
- Microsoft Windows Mobile 2003 software for Pocket PCs
- 206 MHz Intel StrongARM processor
- 512 MB non-volatile Flash data storage
- Outdoor color display
- Ergonomic cable-free handheld
- Rugged and water-resistant design
- All-day internally rechargeable battery
- Bluetooth wireless

GPS
- Submeter accuracy
- Integrated WAAS[1]/EGNOS[2]
- RTCM real-time correction support
- NMEA and TSIP protocol support
- EVEREST multipath rejection technology

Software
- GPS Controller for control of integrated GPS and in-field mission planning
- GPS Connector for connecting integrated GPS to external ports
- File Explorer, Internet Explorer, Pocket Outlook (Inbox, Calendar, Contacts, Tasks, Notes), Sprite Pocket Backup, Transcriber, Pocket Word, Pocket Excel, Pictures, Windows® Media Player, Bluetooth File Transfer, Calculator, ActiveSync®
- Microsoft Streets & Trips/AutoRoute 2004 software

Accessories
- Support module with power supply and USB data cable
- Getting Started Guide
- Companion CD includes Outlook 2002 and ActiveSync 3.7.1
- Hand strap
- Pouch
- Stylus

Optional Features

Software
- TerraSync
- GPScorrect for ESRI® ArcPad®
- GPS Pathfinder® Tools Software Development Kit (SDK)
- GPS Pathfinder Office
- Trimble GPS Analyst extension for ArcGIS®

Accessories
- Serial clip for field data and power input
- Vehicle power adaptor[3]
- Portable power kit[3]
- Hurricane antenna
- External patch antenna
- Pole-mountable ground plane
- Baseball cap with antenna sleeve
- Beacon-on-a-Belt (BoB™) differential correction receiver[3]
- Hard carry case
- Null modem cable[3]
- Backpack kit

Specifications subject to change without notice.

Technical specifications

Physical

Size	21.5 cm × 9.9 cm × 7.7 cm (8.5 in × 3.9 in × 3.0 in)
Weight	0.72 kg (1.59 lb) with battery
Processor	206 MHz Intel StrongARM SA-1110
Memory	64 MB RAM and 512 MB internal Flash disk
Power	
Low (no GPS)	0.6 Watts
Normal (with GPS)	1.4 Watts
High (with GPS, backlight, and Bluetooth)	2.5 Watts
Battery	Internal lithium-ion, rapidly rechargeable in unit, 21 Watt-hours

Environmental

Temperature	
Operating	-10 °C to +50 °C (14 °F to 122 °F)
Storage	-20 °C to +70 °C (-4 °F to 158 °F)
Humidity	99% non-condensing
Casing	Wind-driven rain and dust-resistant per IP 54 standard Slip-resistant grip, shock- and vibration-resistant

Input/output

Communications	Bluetooth for wireless connectivity USB vie support module, serial via optional DE9 serial clip adaptor
Bluetooth	
Certification	Bluetooth type approvals are country specific. GeoExplorer series handhelds are approved for use with Bluetooth in the USA. For a complete list of other countries with Bluetooth approval please refer to www.trimble.com/geoxt_ts.asp.
Profiles	
Both client and host support	Serial Port, File Transfer (using OBEX)
Client support only	Dial-Up Networking, Lan Access
Host support only	Basic Imaging, Object Push
Display	Advanced outdoor TFT, 240 × 320 pixel, 65,536 colors, with backlight
Audio	Microphone and half duplex speaker, record and playback utilities
Interface	Anti-glare coated touch screen, Soft Input Panel (SIP) virtual keyboard 2 hardware control keys plus 4 programmable permanent touch buttons Handwriting recognition software, Audio system events, warnings, and notifications

GPS

Channels	12
Integrated real-time	WAAS[1] or EGNOS[2]
Update rate	1 Hz
Time to first fix	30 sec (typical)
Protocols	NMEA (GGA, VTG, GLL, GSA, ZDA, GSV, RMC), TSIP (Trimble Standard Interface Protocol)

Accuracy (RMS)[4] after differential correction

Postprocessed[5]	Submeter
Carrier postprocessed[6]	
With 10 minutes tracking satellites	30 cm
Real-time	Submeter

1 *WAAS (Wide Area Augmentation System). Available in North America only. For more information, see http://gps.faa.gov/programs/index.htm.*
2 *EGNOS (European Geostationary Navigation Overlay System). Available in Europe only. For more information, see http://www.esa.int/export/esaSA/navigation.html.*
3 *Serial clip also required.*
4 *Horizontal accuracy. Requires data to be collected with minimum of 4 satellites, maximum PDOP of 6, minimum SNR of 4, minimum elevation of 15 degrees, and reasonable multipath conditions. Ionospheric conditions, multipath signals or obstruction of the sky by buildings or heavy tree canopy may degrade precision by interfering with signal reception. Accuracy varies with proximity to base station by +1 ppm for postprocessing and real-time, and by +5 ppm for carrier postprocessing.*
5 *Postprocessing with GPS Pathfinder Office software or GPS Analyst extension for ArcGIS.*
6 *Requires collection of carrier data. (Only available with the GPS Pathfinder Office software).*

YOUR LOCAL TRIMBLE OFFICE OR REPRESENTATIVE

www.trimble.com

NORTH & SOUTH AMERICA
Trimble Navigation Limited
7403 Church Ranch Blvd • Suite 100
Westminster, CO 80021 • USA
+1-720-887-4374 Phone • +1-720-887-8019 Fax

EUROPE, AFRICA & MIDDLE EAST
Trimble GmbH
Am Prime Parc 11 • 65479 Raunheim • GERMANY
+49-6142-2100-0 Phone • +49-6142-2100-550 Fax

ASIA-PACIFIC
Trimble Navigation Australia Pty. Ltd
Level 1 • 123 Gotha St • Fortitude Valley
Queensland 4006 • AUSTRALIA
+61-7-3216-0044 Phone • +61-7-3216-0088 Fax

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In-Situ Inc.

Innovations in Water Monitoring

Operator's Manual

SMARTROLL™ MP Handheld Instrument



Information subject to change without notice. In-Situ, In-Situ logo, Baro Merge, BaroTROLL, HERMIT, iSitu, Pocket-Situ, RDO, RuggedCable, RuggedReader, TROLL, and Win-Situ are trademarks or registered trademarks of In-Situ Inc.© 2013. All rights reserved.

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General Specifications

Operating temperature	-5 to 50° C (23 to 122° F)
Storage temperature	-40 to 65° C (-40 to 149° F)
Dimensions	4.7 cm (1.85 in.) OD x 26.9 cm (10.6 in.) with restrictor installed (does not include connector)
Weight	694 g (1.53 lbs)
Wetted materials	PVC, 316 stainless steel, titanium, Acetal, Viton®, PC/PMMA
Environmental rating	IP68 with all sensors and cable attached. IP67 with sensors removed and cable detached.
Reading rate	1 reading every 10 seconds; data logged to smartphone.
Power	6 VDC from battery pack
Interface	iPhone® 4S, iPod touch® 5, or iPad® 3, 4, mini or later; iOS 6.0 or later. Bluetooth® Low Energy (BLE) radio. Purchase the iSitu™ App at the Apple® App Store.
Cable	Black polyurethane. Standard lengths available: 1.5 m, 4.6 m, 9.1 m, 30.5 m (5 ft, 15 ft, 30 ft, 100 ft)
Warranty	2-years
Notes	Specifications are subject to change without notice. Apple, iPhone, iPod touch, and iPad are trademarks of Apple Inc. registered in U.S. and other countries. Bluetooth is a registered trademark of Bluetooth SIG, Inc. Viton is a registered trademark of DuPont Performance Elastomers L.L.C.

Sensor Specifications

Level, Depth, Pressure Sensor Specifications

Accuracy	Typical ±0.1% FS @ 15° C; ±0.3% FS max. from 0 to 50° C
Range	76 m (250 ft); absolute (non-vented)
Resolution	±0.01% FS or better
Sensor Type	Fixed
Response Time	Instantaneous in thermal equilibrium
Units of Measure	Pressure: psi, kPa, bar, mbar, mmHg, inHg Level: mm, cm, m, in, ft
Methodology	Piezoresistive; ceramic

Barometric Pressure Sensor Specifications (Battery Pack)

Accuracy	±3 mbar max.
Range	300 to 1100 mbar
Resolution	0.01 mbar
Sensor Type	Fixed
Response Time	Instantaneous in thermal equilibrium
Units of Measure	psi, kPa, bar, mbar, mmHg, inHg, Torr, atm
Methodology	Piezoresistive pressure sensor

Conductivity Sensor Specifications

Accuracy	Typical ±0.5% + 1 µS/cm; ±1% max.
Range	5 to 100,000 µS/cm
Resolution	0.1 µS/cm
Sensor Type	Fixed
Response Time	Instantaneous in thermal equilibrium
Units of Measure	Actual conductivity (µS/cm, mS/cm) Specific conductivity (µS/cm, mS/cm) Salinity (PSU) Total dissolved solids (ppt, ppm) Resistivity (Ohms-cm) Density (g/cm3)
Methodology	Std. Methods 2510 EPA 120.1

Dissolved Oxygen RDO Fast Cap (Optical Sensor) Specifications

Accuracy	±0.1 mg/L; ±0.2 mg/L; ±10% of reading
Range	0 to 8 mg/L; 8 to 20 mg/L; 20 to 50 mg/L; Full operating range: 0 to 50 mg/L
Resolution	0.01 mg/L
Sensor Type	Fixed with replaceable RDO Fast Cap (life: 1 year typical)
Response Time	T90: <30 sec. T95: <45 sec.
Units of Measure	mg/L, % saturation, ppm
Methodology	EPA-approved In-Situ Methods 1002-8-2009 1003-8-2009 1004-8-2009

ORP Sensor Specifications

Accuracy	±5.0 mV
Range	±1400 mV
Resolution	0.1 mV
Sensor Type	Replaceable pH/ORP combo sensor
Response Time	<15 sec.
Units of Measure	mV
Methodology	Std. Methods 2580

pH Sensor Specifications

Accuracy	±0.1 pH unit from 0 to 12 pH units
Range	0 to 14 pH units
Resolution	0.01 pH unit
Sensor Type	Replaceable pH/ORP combo sensor
Response Time	<15 sec., pH 7 to pH 4
Units of Measure	pH units
Methodology	Std. Methods 4500-H+ EPA 150.2

Air Temperature Sensor Specifications (Battery Pack)

Accuracy	±2° C
Range	-20 to 70° C (-4 to 158° F)
Resolution	0.1° C
Sensor Type	Fixed
Response Time	<30 sec.
Units of Measure	Celsius, Fahrenheit
Methodology	EPA 170.1

Sample Temperature Sensor Specifications (Probe)

Accuracy	±0.1° C
Range	-5 to 50° C (23 to 122° F)
Resolution	0.01° C or better
Sensor Type	Fixed
Response Time	<30 sec.
Units of Measure	Celsius, Fahrenheit
Methodology	EPA 170.1

Battery Pack Specifications

Battery Type	Four 1.5V AA lithium or alkaline batteries
Operating temperature	-5 to 50° C (23 to 122° F); 95% relative humidity, non-condensing
Storage temperature	-40 to 65° C (-40 to 149° F); 95% relative humidity, non-condensing
Dimensions & weight	9.5 x 7.6 x 5.7 cm (3.75 x 3 x 2.25 in.) (H x D x W). Weight: 165 g (5.8 oz)
Materials	PC/ABS
Environmental rating	IP67 with battery cover closed
Output options	BLE radio
Battery type	4 AA Lithium or Alkaline
Warranty on battery pack	1-year
Warranty on cable	1-year

APPENDIX

B FLUX METER DATA

Individual Flux Measurements and Calculations

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
Baird060520_01	1230790	2330629	A	785.3	26.4	6/5/2020	-1.165	-0.002	0.388	0.2451983	0.000000	0.000000	0.095137
Baird060520_02	1230788	2330685	A	785.5	27.2	6/5/2020	-0.043	-0.003	0.155	0.2446074	0.000000	0.000000	0.037914
Baird060520_03	1230804	2330762	A	785.6	27.9	6/5/2020	-0.21	-0.005	0.103	0.2440698	0.000000	0.000000	0.025139
Baird060520_04	1230778	2330806	A	785.6	28.7	6/5/2020	-0.453	-0.005	2.241	0.2434229	0.000000	0.000000	0.545511
Baird060520_05	1230793	2330849	A	785.6	29.4	6/5/2020	-0.066	-0.004	0.74	0.2428597	0.000000	0.000000	0.179716
Baird060520_06	1230747	2330839	A	785.6	30.3	6/5/2020	-0.718	-0.005	0.344	0.2421394	0.000000	0.000000	0.083296
Baird060520_07	1230735	2330808	A	785.6	31.1	6/5/2020	-0.872	-0.007	0.235	0.2415027	0.000000	0.000000	0.056753
Baird060520_08	1230699	2330814	A	785.5	31.9	6/5/2020	-0.791	-0.004	0.146	0.2408387	0.000000	0.000000	0.035162
Baird060520_09	1230687	2330851	A	785.5	32.8	6/5/2020	0	-0.005	0.375	0.2401302	0.000000	0.000000	0.090049
Baird060520_10	1230665	2330810	A	785.5	33.6	6/5/2020	0	-0.003	0.246	0.239504	0.000000	0.000000	0.058918
Baird060520_11	1230650	2330839	A	785.5	34.4	6/5/2020	0	-0.006	0.506	0.238881	0.000000	0.000000	0.120874
Baird060520_12	1230612	2330860	A	785.8	35.1	6/5/2020	-0.045	-0.009	0.318	0.2384295	0.000000	0.000000	0.075821
Baird060520_13	1230595	2330778	A	785.5	35.9	6/5/2020	-1.909	-0.019	0.255	0.2377215	0.000000	0.000000	0.060619
Baird060520_14	1230610	2330731	A	785.5	36.6	6/5/2020	0	-0.006	0.375	0.2371843	0.000000	0.000000	0.088944
Baird060520_15	1230606	2330688	A	785.5	37.2	6/5/2020	-0.186	-0.011	0.101	0.2367258	0.000000	0.000000	0.023909
Baird060520_16	1230630	2330644	A	785.5	37.8	6/5/2020	-0.614	-0.005	0.16	0.236269	0.000000	0.000000	0.037803
Baird060520_17	1230657	2330647	A	785.3	38.5	6/5/2020	0	-0.002	0.29	0.2356783	0.000000	0.000000	0.068347
Baird060520_18	1230688	2330654	A	785.3	39.0	6/5/2020	0	-0.004	0.26	0.2353008	0.000000	0.000000	0.061178
Baird060520_19	1230695	2330700	A	785.3	39.5	6/5/2020	0	-0.009	0.122	0.2349245	0.000000	0.000000	0.028661
Baird060520_20	1230652	2330706	A	785.3	40.0	6/5/2020	0	-0.005	0.293	0.2345494	0.000000	0.000000	0.068723
Baird060520_21	1230677	2330760	A	785.3	40.5	6/5/2020	-1.172	-0.011	0.41	0.2341755	0.000000	0.000000	0.096012
Baird060520_22	1230723	2330752	A	785.3	41.1	6/5/2020	0	-0.002	0.002	0.2337284	0.000000	0.000000	0.000467

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
Baird060520_23	1230695	2330746	A	785.3	41.5	6/5/2020	0	-0.002	0.028	0.2334312	0.000000	0.000000	0.006536
Baird060520_24	1230739	2330707	A	785.3	41.8	6/5/2020	0	-0.002	0.248	0.2332089	0.000000	0.000000	0.057836
Baird060520_25	1230741	2330657	A	785.3	42.2	6/5/2020	0	-0.001	0.324	0.2329131	0.000000	0.000000	0.075464
BasinCreek051120_01	1214812	2309976	A	804.6	25.5	5/11/2020	-1.922	0.005	0.258	0.2519815	0.000000	0.001260	0.065011
BasinCreek051120_02	1214938	2309781	A	804.6	26.2	5/11/2020	-7.717	0.003	0.461	0.2513922	0.000000	0.000754	0.115892
BasinCreek051120_03	1214772	2309733	A	804.3	26.7	5/11/2020	-1.342	0.009	0.705	0.2508795	0.000000	0.002258	0.176870
BasinCreek051120_04	1214795	2309655	A	803.8	27.1	5/11/2020	-1.006	0.004	0.306	0.2503895	0.000000	0.001002	0.076619
BasinCreek051120_05	1214746	2309633	A	803.3	27.5	5/11/2020	-1.605	0.005	0.492	0.2499008	0.000000	0.001250	0.122951
BasinCreek051120_06	1214702	2309610	A	803.4	27.9	5/11/2020	243.508	0.021	9.7	0.2495998	60.779560	0.005242	2.421118
BasinCreek051120_07	1214698	2309637	A	803.4	28.3	5/11/2020	93.863	0.016	4.4	0.2492686	23.397100	0.003988	1.096782
BasinCreek051120_08	1214686	2309664	A	803.4	28.7	5/11/2020	357.365	0.041	7.248	0.2489383	88.961840	0.010206	1.804305
BasinCreek051120_09	1214650	2309730	A	803.5	29.2	5/11/2020	243.017	0.048	3.732	0.2485576	60.403720	0.011931	0.927617
BasinCreek051120_10	1214665	2309748	A	803.5	29.6	5/11/2020	178.369	0.007	3.634	0.2482292	44.276390	0.001738	0.902065
BasinCreek051120_11	1214662	2309768	A	804.1	30.1	5/11/2020	735.222	0.009	22.705	0.248005	182.338700	0.002232	5.630952
BasinCreek051120_12	1214595	2309737	A	804.1	30.6	5/11/2020	-1.14	0.013	3.257	0.2475967	0.000000	0.003219	0.806423
BasinCreek051120_13	1214566	2309720	A	803.3	31.1	5/11/2020	-1.647	0.009	0.85	0.2469439	0.000000	0.002222	0.209902
BasinCreek051120_14	1214512	2309776	A	802.9	31.6	5/11/2020	-0.736	0.012	0.277	0.246416	0.000000	0.002957	0.068257

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051120_15	1214496	2309776	A	803.0	31.9	5/11/2020	-0.612	0.006	0.284	0.2462043	0.000000	0.001477	0.069922
BasinCreek051120_16	1214491	2309795	A	803.0	32.3	5/11/2020	-2.765	0.009	0.568	0.2458819	0.000000	0.002213	0.139661
BasinCreek051120_17	1214460	2309813	A	803.0	32.7	5/11/2020	-1.349	0.014	6.482	0.2455603	0.000000	0.003438	1.591722
BasinCreek051120_18	1214435	2309839	A	803.1	33.0	5/11/2020	421.049	0.014	2.64	0.2453502	103.304500	0.003435	0.647725
BasinCreek051120_19	1214427	2309834	A	803.1	33.4	5/11/2020	455.2	0.014	4.59	0.2450301	111.537700	0.003430	1.124688
BasinCreek051120_20	1214456	2309832	A	803.3	33.7	5/11/2020	91.112	0.014	5.978	0.2448515	22.308910	0.003428	1.463722
BasinCreek051120_21	1214465	2309828	A	803.3	34.0	5/11/2020	174.748	0.013	2.991	0.2446123	42.745520	0.003180	0.731636
BasinCreek051120_22	1214472	2309846	A	803.1	34.5	5/11/2020	-0.383	0.001	0.017	0.244154	0.000000	0.000244	0.004151
BasinCreek051120_23	1214629	2309944	A	803.1	34.9	5/11/2020	-0.304	0.003	0.831	0.243837	0.000000	0.000732	0.202629
BasinCreek051120_24	1214418	2310003	A	804.2	35.3	5/11/2020	-1.437	0.008	1.074	0.2438543	0.000000	0.001951	0.261900
BasinCreek051120_25	1214509	2310064	A	803.7	35.6	5/11/2020	-4.669	0.012	1.811	0.2434659	0.000000	0.002922	0.440917
BasinCreek051120_26	1214523	2310089	A	804.9	35.8	5/11/2020	-2.653	0.012	1.392	0.2436716	0.000000	0.002924	0.339191
BasinCreek051120_27	1214555	2310107	A	805.0	36.0	5/11/2020	32.731	0.013	3.528	0.2435442	7.971444	0.003166	0.859224
BasinCreek051120_28	1214589	2310133	A	805.5	36.2	5/11/2020	-0.67	0.015	0.439	0.2435379	0.000000	0.003653	0.106913
BasinCreek051120_29	1214772	2310165	A	805.7	36.6	5/11/2020	-4.765	0.008	1.235	0.2432838	0.000000	0.001946	0.300455
BasinCreek051120_30	1214880	2310182	A	805.4	36.8	5/11/2020	-3.505	0.01	1.331	0.2430363	0.000000	0.002430	0.323481

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051120_31	1214892	2310182	A	805.4	37.0	5/11/2020	-1.151	0.01	0.957	0.2428796	0.000000	0.002429	0.232436
BasinCreek051120_32	1214940	2310182	A	805.3	37.1	5/11/2020	-3.956	0.01	2.234	0.2427711	0.000000	0.002428	0.542351
BasinCreek051120_33	1215051	2310126	A	805.1	37.4	5/11/2020	-1.188	0.01	1.083	0.2424764	0.000000	0.002425	0.262602
BasinCreek051120_34	1215054	2309966	A	804.5	37.8	5/11/2020	-2.433	0.004	0.644	0.241984	0.000000	0.000968	0.155838
BasinCreek051120_35	1215068	2309829	A	803.8	38.1	5/11/2020	-3.029	0.014	1.644	0.2415404	0.000000	0.003382	0.397092
BasinCreek051120_36	1215065	2309703	A	802.6	38.4	5/11/2020	-3.443	0.01	1.208	0.2409475	0.000000	0.002409	0.291065
BasinCreek051120_37	1214952	2309580	A	802.6	38.6	5/11/2020	-3.492	-0.01	0.125	0.240793	0.000000	0.000000	0.030099
BasinCreek051120_38	1214880	2309463	A	802.3	38.9	5/11/2020	-3.669	0.005	0.402	0.2404716	0.000000	0.001202	0.096670
BasinCreek051120_39	1214786	2309411	A	800.7	39.1	5/11/2020	-4.213	0.017	0.546	0.2398383	0.000000	0.004077	0.130952
BasinCreek051120_40	1214790	2309189	A	799.8	39.3	5/11/2020	-3.59	0.008	0.652	0.2394153	0.000000	0.001915	0.156099
BasinCreek051120_41	1214798	2309053	A	798.0	39.5	5/11/2020	-3.618	0.02	0.674	0.2387237	0.000000	0.004774	0.160900
BasinCreek051120_42	1214584	2309142	A	796.5	40.5	5/11/2020	-1.622	-0.006	-0.347	0.2375153	0.000000	0.000000	0.000000
BasinCreek051120_43	1214541	2309315	A	796.0	40.8	5/11/2020	-3.427	-0.002	1.009	0.2371394	0.000000	0.000000	0.239274
BasinCreek051120_44	1214654	2309312	A	796.5	40.9	5/11/2020	-2.648	0.008	0.833	0.2372128	0.000000	0.001898	0.197598
BasinCreek051120_45	1214658	2309302	A	796.5	41.0	5/11/2020	5.534	0.019	4.439	0.2371373	1.312318	0.004506	1.052652
BasinCreek051120_46	1214652	2309345	A	797.9	41.1	5/11/2020	13.975	0.023	4.61	0.2374785	3.318762	0.005462	1.094776

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051120_47	1214659	2309368	A	798.1	41.3	5/11/2020	-3.304	-0.001	0.988	0.2373869	0.000000	0.000000	0.234538
BasinCreek051120_48	1214687	2309401	A	798.5	41.4	5/11/2020	36.905	0.012	8.66	0.2374304	8.762369	0.002849	2.056147
BasinCreek051120_49	1214737	2309389	A	798.8	41.6	5/11/2020	0	0.011	1.368	0.2373687	0.000000	0.002611	0.324720
BasinCreek051120_50	1214578	2309569	A	798.8	41.6	5/11/2020	-0.099	0.003	0.201	0.2373687	0.000000	0.000712	0.047711
BasinCreek051120_51	1214646	2309689	A	800.7	41.6	5/11/2020	56.685	0.015	9.71	0.2379333	13.487250	0.003569	2.310332
BasinCreek051120_52	1214643	2309702	A	800.7	41.6	5/11/2020	198.045	0.242	5.423	0.2379333	47.121490	0.057580	1.290312
BasinCreek051120_53	1214648	2309733	A	801.2	41.6	5/11/2020	1383.147	2.659	14.299	0.2380819	329.302200	0.633060	3.404332
BasinCreek051220_100	1214611	2308617	A	795.6	42.2	5/12/2020	-0.425	0.026	3.265	0.235968	0.000000	0.006135	0.770435
BasinCreek051220_101	1214695	2308769	A	790.4	42.3	5/12/2020	-1.13	0.024	1.695	0.2343514	0.000000	0.005624	0.397226
BasinCreek051220_102	1214656	2308808	A	791.7	42.4	5/12/2020	-1.678	-0.01	0.677	0.2346624	0.000000	0.000000	0.158866
BasinCreek051220_103	1214667	2308860	A	792.1	42.6	5/12/2020	-1.277	0.001	0.259	0.2346323	0.000000	0.000235	0.060770
BasinCreek051220_104	1214455	2308609	A	792.1	42.7	5/12/2020	-3.689	0.019	1.346	0.234558	0.000000	0.004457	0.315715
BasinCreek051220_105	1214383	2308823	A	791.0	42.8	5/12/2020	-0.927	0.008	1.647	0.2341581	0.000000	0.001873	0.385658
BasinCreek051220_106	1214422	2308855	A	791.4	42.8	5/12/2020	11.513	0	-0.171	0.2342765	2.697226	0.000000	0.000000
BasinCreek051220_107	1209768	2304538	A	795.6	30.0	5/14/2020	0	-0.006	0.337	0.2454643	0.000000	0.000000	0.082721
BasinCreek051220_108	1209966	2304587	A	795.6	31.1	5/14/2020	0	-0.028	0.285	0.2445768	0.000000	0.000000	0.069704

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051220_109	1209964	2304390	A	795.2	32.0	5/14/2020	-0.049	-0.015	5.51	0.2437329	0.000000	0.000000	1.342968
BasinCreek051220_110	1210112	2304411	A	794.9	32.8	5/14/2020	0	-0.005	2.347	0.2430038	0.000000	0.000000	0.570330
BasinCreek051220_111	1210165	2304355	A	794.9	33.5	5/14/2020	0	-0.002	2.279	0.2424491	0.000000	0.000000	0.552542
BasinCreek051220_112	1210195	2304205	A	794.8	34.0	5/14/2020	0	-0.031	3.67	0.242024	0.000000	0.000000	0.888228
BasinCreek051220_113	1210164	2304025	A	794.1	34.7	5/14/2020	0	-0.006	0.315	0.241261	0.000000	0.000000	0.075997
BasinCreek051220_114	1210147	2303797	A	794.2	35.3	5/14/2020	0	-0.011	0.69	0.240822	0.000000	0.000000	0.166167
BasinCreek051220_115	1210182	2303548	A	794.6	35.8	5/14/2020	0	-0.026	0.53	0.2405534	0.000000	0.000000	0.127493
BasinCreek051220_116	1210164	2303373	A	794.4	36.4	5/14/2020	-0.23	-0.03	0.421	0.2400267	0.000000	0.000000	0.101051
BasinCreek051220_117	1210028	2303360	A	794.2	36.9	5/14/2020	0	0	0.771	0.2395793	0.000000	0.000000	0.184716
BasinCreek051220_118	1210023	2303164	A	795.2	37.3	5/14/2020	0	-0.016	0.138	0.2395719	0.000000	0.000000	0.033061
BasinCreek051220_119	1210016	2302983	A	795.5	37.6	5/14/2020	0	0.027	0.281	0.2394309	0.000000	0.006465	0.067280
BasinCreek051220_120	1210005	2302848	A	795.0	37.9	5/14/2020	0	-0.018	0.257	0.2390496	0.000000	0.000000	0.061436
BasinCreek051220_121	1209896	2302681	A	794.6	38.2	5/14/2020	0	-0.006	1.325	0.2386991	0.000000	0.000000	0.316276
BasinCreek051220_122	1209735	2302819	A	793.8	38.5	5/14/2020	-0.301	-0.034	1.593	0.2382292	0.000000	0.000000	0.379499
BasinCreek051220_123	1209733	2302880	A	792.2	38.7	5/14/2020	7.097	0.005	2.026	0.2375966	1.686223	0.001188	0.481371
BasinCreek051220_124	1209733	2302912	A	792.2	39.0	5/14/2020	-0.074	0.011	0.398	0.2373682	0.000000	0.002611	0.094473

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051220_125	1209734	2302930	A	792.5	39.2	5/14/2020	6.22	-0.002	0.486	0.2373061	1.476044	0.000000	0.115331
BasinCreek051220_126	1209718	2303025	A	792.8	39.3	5/14/2020	16.09	-0.013	5.145	0.2373199	3.818478	0.000000	1.221011
BasinCreek051220_127	1209728	2303152	A	793.0	39.6	5/14/2020	78.401	-0.004	19.728	0.2371521	18.592960	0.000000	4.678537
BasinCreek051220_128	1209675	2303249	A	794.4	40.6	5/14/2020	9.132	0.015	6.712	0.2368136	2.162582	0.003552	1.589493
BasinCreek051220_129	1209671	2303280	A	794.1	40.8	5/14/2020	14.45	-0.031	6.707	0.2365734	3.418485	0.000000	1.586697
BasinCreek051220_130	1209798	2303333	A	794.0	41.1	5/14/2020	-13.813	-0.011	0.009	0.2363177	0.000000	0.000000	0.002127
BasinCreek051220_131	1209810	2303511	A	795.0	41.3	5/14/2020	0	-0.036	0.858	0.2364649	0.000000	0.000000	0.202887
BasinCreek051220_132	1209738	2303518	A	794.6	41.4	5/14/2020	4.789	0.018	28.946	0.2362708	1.131501	0.004253	6.839093
BasinCreek051220_133	1209693	2303621	A	794.4	41.6	5/14/2020	0	-0.001	2.021	0.2360612	0.000000	0.000000	0.477080
BasinCreek051220_134	1209682	2303747	A	793.7	41.6	5/14/2020	0	-0.033	8.596	0.2358532	0.000000	0.000000	2.027394
BasinCreek051220_135	1209751	2303772	A	793.7	41.8	5/14/2020	0	-0.041	-2.071	0.2357034	0.000000	0.000000	0.000000
BasinCreek051220_136	1209792	2303943	A	794.1	41.8	5/14/2020	-0.35	-0.048	0.605	0.2358222	0.000000	0.000000	0.142672
BasinCreek051220_137	1209796	2304197	A	794.1	41.8	5/14/2020	-0.37	-0.012	7.715	0.2358222	0.000000	0.000000	1.819368
BasinCreek051220_138	1209789	2304385	A	794.5	41.8	5/14/2020	-0.389	0	3.216	0.235941	0.000000	0.000000	0.758786
BasinCreek051220_139	1209961	2304176	A	794.0	41.8	5/14/2020	-0.243	-0.044	1.91	0.2357925	0.000000	0.000000	0.450364
BasinCreek051220_140	1209983	2303945	A	800.2	41.8	5/14/2020	0	0.004	0.328	0.2376337	0.000000	0.000951	0.077944

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051220_141	1210009	2303850	A	794.8	41.7	5/14/2020	0	-0.025	0.989	0.2361051	0.000000	0.000000	0.233508
BasinCreek051220_142	1210001	2303568	A	795.0	41.6	5/14/2020	-0.284	-0.055	0.328	0.2362395	0.000000	0.000000	0.077487
BasinCreek051220_54	1214309	2310091	A	802.9	29.7	5/12/2020	5.453	-0.014	6.911	0.2479619	1.352136	0.000000	1.713665
BasinCreek051220_55	1214262	2310105	A	802.9	30.6	5/12/2020	-2.629	0.003	3.272	0.2472272	0.000000	0.000742	0.808927
BasinCreek051220_56	1214212	2309969	A	802.5	31.5	5/12/2020	-1.153	0.002	0.047	0.2463741	0.000000	0.000493	0.011580
BasinCreek051220_57	1214224	2309811	A	800.0	32.2	5/12/2020	-0.636	0.004	0.93	0.2450435	0.000000	0.000980	0.227890
BasinCreek051220_58	1214295	2309723	A	798.7	32.9	5/12/2020	-0.891	0.008	2.475	0.2440857	0.000000	0.001953	0.604112
BasinCreek051220_59	1214335	2309619	A	804.1	33.6	5/12/2020	0	0.004	1.112	0.2451752	0.000000	0.000981	0.272635
BasinCreek051220_60	1214356	2309380	A	802.9	35.2	5/12/2020	-0.001	0.012	1.318	0.2435391	0.000000	0.002922	0.320984
BasinCreek051220_61	1214324	2309170	A	792.2	35.7	5/12/2020	-1.232	0.003	1.949	0.2399045	0.000000	0.000720	0.467574
BasinCreek051220_62	1214210	2309070	A	792.2	36.5	5/12/2020	-1.133	0.004	-0.577	0.2392847	0.000000	0.000957	0.000000
BasinCreek051220_63	1214264	2308965	A	790.1	37.1	5/12/2020	-1.25	0.021	1.154	0.2381888	0.000000	0.005002	0.274870
BasinCreek051220_64	1214116	2308779	A	789.4	38.1	5/12/2020	-2.223	0.008	0.372	0.2372132	0.000000	0.001898	0.088243
BasinCreek051220_65	1214069	2308639	A	787.8	38.5	5/12/2020	-0.69	0.005	0.264	0.2364286	0.000000	0.001182	0.062417
BasinCreek051220_66	1214026	2308604	A	787.2	38.7	5/12/2020	-2.255	0	0.215	0.236097	0.000000	0.000000	0.050761
BasinCreek051220_67	1213935	2308438	A	787.2	38.7	5/12/2020	-2.443	-0.002	1.432	0.236097	0.000000	0.000000	0.338091

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051220_68	1214015	2308268	A	785.6	38.7	5/12/2020	-2.427	0.001	0.413	0.2356171	0.000000	0.000236	0.097310
BasinCreek051220_69	1214138	2308105	A	787.1	38.6	5/12/2020	-1.519	-0.001	1.371	0.2361427	0.000000	0.000000	0.323752
BasinCreek051220_70	1214200	2307927	A	787.5	37.5	5/12/2020	-1.003	0.008	1.892	0.2370993	0.000000	0.001897	0.448592
BasinCreek051220_71	1214321	2307828	A	785.1	37.5	5/12/2020	-2.41	0.011	2.428	0.2363767	0.000000	0.002600	0.573923
BasinCreek051220_72	1214511	2307745	A	782.8	37.7	5/12/2020	-2.035	0.019	3.599	0.2355326	0.000000	0.004475	0.847682
BasinCreek051220_73	1214607	2307624	A	781.3	37.9	5/12/2020	-1.579	0.001	0.715	0.2349301	0.000000	0.000235	0.167975
BasinCreek051220_74	1214720	2307590	A	779.4	38.2	5/12/2020	-0.57	0.01	0.244	0.234133	0.000000	0.002341	0.057128
BasinCreek051220_75	1214849	2307438	A	778.7	38.6	5/12/2020	-2.153	0.01	0.306	0.2336226	0.000000	0.002336	0.071489
BasinCreek051220_76	1214910	2307348	A	777.3	38.9	5/12/2020	-1.561	0.014	13.34	0.2329784	0.000000	0.003262	3.107931
BasinCreek051220_77	1214977	2307511	A	776.9	39.4	5/12/2020	-3.316	0.019	-0.62	0.232486	0.000000	0.004417	0.000000
BasinCreek051220_78	1215147	2307407	A	786.8	39.8	5/12/2020	32.972	0.029	6.68	0.2351476	7.753286	0.006819	1.570786
BasinCreek051220_79	1215357	2307346	A	780.5	40.0	5/12/2020	-2.042	0.026	2.848	0.2331157	0.000000	0.006061	0.663914
BasinCreek051220_80	1215361	2307489	A	779.5	40.4	5/12/2020	-1.833	0.009	1.094	0.2325201	0.000000	0.002093	0.254377
BasinCreek051220_81	1215199	2307586	A	786.4	41.0	5/12/2020	-0.001	0.025	1.079	0.2341303	0.000000	0.005853	0.252627
BasinCreek051220_82	1215180	2307730	A	782.4	41.2	5/12/2020	0	0.043	0.343	0.2327912	0.000000	0.010010	0.079847
BasinCreek051220_83	1215078	2307779	A	783.5	41.3	5/12/2020	0	0.022	1.359	0.2330443	0.000000	0.005127	0.316707

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051220_84	1215032	2307953	A	783.7	41.4	5/12/2020	-0.762	0.016	2.327	0.2330297	0.000000	0.003728	0.542260
BasinCreek051220_85	1214977	2308142	A	784.8	41.4	5/12/2020	-2.259	0.005	1.021	0.2333568	0.000000	0.001167	0.238257
BasinCreek051220_86	1214969	2308254	A	786.5	41.4	5/12/2020	-2.61	0.019	0.754	0.2338623	0.000000	0.004443	0.176332
BasinCreek051220_87	1214800	2308180	A	787.1	41.3	5/12/2020	-2.928	-0.024	0.189	0.2341151	0.000000	0.000000	0.044248
BasinCreek051220_88	1214689	2308066	A	787.4	40.9	5/12/2020	0	0.003	0.509	0.2345026	0.000000	0.000704	0.119362
BasinCreek051220_89	1214611	2308060	A	784.1	40.9	5/12/2020	0	0.017	1.534	0.2335198	0.000000	0.003970	0.358219
BasinCreek051220_90	1214622	2308029	A	784.0	41.0	5/12/2020	4.864	-0.053	1.449	0.2334157	1.135334	0.000000	0.338219
BasinCreek051220_91	1214701	2307852	A	783.9	41.4	5/12/2020	-1.636	0.008	0.418	0.2330892	0.000000	0.001865	0.097431
BasinCreek051220_92	1214398	2307961	A	780.9	41.8	5/12/2020	-1.114	0.006	0.392	0.2319022	0.000000	0.001391	0.090906
BasinCreek051220_93	1214390	2308090	A	784.6	41.9	5/12/2020	0	0.032	0.21	0.2329271	0.000000	0.007454	0.048915
BasinCreek051220_94	1214276	2308161	A	785.9	42.0	5/12/2020	-1.97	0.007	0.479	0.233239	0.000000	0.001633	0.111721
BasinCreek051220_95	1214207	2308305	A	787.4	42.0	5/12/2020	0	0.028	1.183	0.2336841	0.000000	0.006543	0.276448
BasinCreek051220_96	1214305	2308358	A	788.5	42.0	5/12/2020	-0.765	0.013	0.419	0.2340106	0.000000	0.003042	0.098050
BasinCreek051220_97	1214503	2308414	A	795.3	42.0	5/12/2020	-1.321	0.026	0.622	0.2360287	0.000000	0.006137	0.146810
BasinCreek051220_98	1214689	2308564	A	791.0	42.0	5/12/2020	-0.967	0.009	0.65	0.2347525	0.000000	0.002113	0.152589
BasinCreek051220_99	1214732	2308499	A	789.4	42.1	5/12/2020	-0.089	0.014	-0.117	0.2342034	0.000000	0.003279	0.000000

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051520_144	1209623	2304195	A	796.8	26.5	5/15/2020	-0.564	-0.002	0.157	0.2487059	0.000000	0.000000	0.039047
BasinCreek051520_145	1209566	2303924	A	797.0	28.2	5/15/2020	-0.903	0.001	1.689	0.247365	0.000000	0.000247	0.417799
BasinCreek051520_146	1209542	2303756	A	795.9	29.4	5/15/2020	3.852	0.001	2.935	0.2460438	0.947761	0.000246	0.722139
BasinCreek051520_147	1209392	2303767	A	795.5	30.8	5/15/2020	-1.283	0.003	0.692	0.2447875	0.000000	0.000734	0.169393
BasinCreek051520_148	1209380	2303612	A	795.0	32.9	5/15/2020	-1.463	0.014	0.784	0.242955	0.000000	0.003401	0.190477
BasinCreek051520_149	1209433	2303532	A	793.6	34.2	5/15/2020	18.994	-0.002	3.2	0.2415013	4.587077	0.000000	0.772804
BasinCreek051520_150	1209413	2303502	A	800.0	34.7	5/15/2020	2.398	0.002	2.529	0.2430535	0.582842	0.000486	0.614682
BasinCreek051520_151	1209373	2303484	A	793.6	35.3	5/15/2020	-1.876	0.004	0.464	0.2406401	0.000000	0.000963	0.111657
BasinCreek051520_152	1209442	2303421	A	793.6	36.2	5/15/2020	-1.579	0.003	0.773	0.23994	0.000000	0.000720	0.185474
BasinCreek051520_153	1209583	2303505	A	793.4	37.1	5/15/2020	-2.607	0.009	2.986	0.2391837	0.000000	0.002153	0.714202
BasinCreek051520_154	1209609	2303508	A	793.2	37.7	5/15/2020	-1.683	0.007	2.333	0.2386618	0.000000	0.001671	0.556798
BasinCreek051520_155	1209563	2303406	A	793.3	38.5	5/15/2020	6.223	0.003	4.038	0.2380792	1.481567	0.000714	0.961364
BasinCreek051520_156	1209528	2303173	A	792.2	39.5	5/15/2020	-1.247	0.003	1.895	0.2369886	0.000000	0.000711	0.449093
BasinCreek051520_157	1209355	2303113	A	854.2	40.4	5/15/2020	-0.002	0.004	0.812	0.2548026	0.000000	0.001019	0.206900
BasinCreek051520_158	1209255	2303086	A	789.4	40.6	5/15/2020	-5.733	-0.001	0.6	0.2353231	0.000000	0.000000	0.141194
BasinCreek051520_159	1209206	2303002	A	788.4	40.7	5/15/2020	-3.332	0.005	0.321	0.2349501	0.000000	0.001175	0.075419

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051520_160	1209295	2302970	A	788.0	40.8	5/15/2020	-4.561	-0.005	0.401	0.2347561	0.000000	0.000000	0.094137
BasinCreek051520_161	1209213	2302833	A	787.2	40.9	5/15/2020	-7.083	-0.008	0.701	0.2344431	0.000000	0.000000	0.164345
BasinCreek051520_162	1209198	2302812	A	785.6	41.0	5/15/2020	-1.935	-0.001	0.703	0.2338921	0.000000	0.000000	0.164426
BasinCreek051520_163	1209333	2302726	A	785.8	41.0	5/15/2020	-3.274	-0.008	0.874	0.2339516	0.000000	0.000000	0.204474
BasinCreek051520_164	1209417	2302695	A	786.8	41.1	5/15/2020	-3.242	0.002	0.432	0.2341748	0.000000	0.000468	0.101164
BasinCreek051520_165	1209519	2302661	A	787.5	41.2	5/15/2020	16.832	0.002	7.449	0.2343086	3.943882	0.000469	1.745365
BasinCreek051520_166	1209498	2302745	A	788.2	41.3	5/15/2020	-2.263	-0.009	1.386	0.2344423	0.000000	0.000000	0.324937
BasinCreek051520_167	1209496	2302752	A	788.2	41.4	5/15/2020	-0.889	0	0.495	0.2343678	0.000000	0.000000	0.116012
BasinCreek051520_168	1209479	2302788	A	787.9	41.3	5/15/2020	-2.992	-0.008	1.588	0.2343531	0.000000	0.000000	0.372153
BasinCreek051520_169	1209472	2302833	A	787.8	41.1	5/15/2020	-0.975	-0.005	0.357	0.2344724	0.000000	0.000000	0.083707
BasinCreek051520_170	1209504	2302829	A	788.2	41.0	5/15/2020	10.562	-0.003	2.554	0.2346662	2.478544	0.000000	0.599337
BasinCreek051520_171	1209510	2302838	A	788.2	40.8	5/15/2020	0	0.01	1.255	0.2348157	0.000000	0.002348	0.294694
BasinCreek051520_172	1209511	2302811	A	788.4	40.6	5/15/2020	-0.004	0.001	6.22	0.235025	0.000000	0.000235	1.461855
BasinCreek051520_173	1209520	2302796	A	788.4	40.6	5/15/2020	102280.4	8.614	1546.295	0.235025	24038.440000	2.024505	363.417900
BasinCreek051520_174	1209520	2302792	A	794.4	40.5	5/15/2020	2012.413	0	75.056	0.2368891	476.718700	0.000000	17.779950
BasinCreek051520_175	1209515	2302793	A	788.4	38.8	5/15/2020	-34.251	-0.144	0.37	0.2363811	0.000000	0.000000	0.087461

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051520_176	1209519	2302797	A	788.2	39.4	5/15/2020	714.824	0.019	27.051	0.2358675	168.603700	0.004481	6.380451
BasinCreek051520_177	1209511	2302796	A	788.0	39.8	5/15/2020	-2.795	-0.01	2.588	0.2355062	0.000000	0.000000	0.609490
BasinCreek051520_178	1209507	2302794	A	787.9	40.1	5/15/2020	-1.564	-0.006	3.483	0.2352508	0.000000	0.000000	0.819379
BasinCreek051520_179	1209526	2302783	A	787.9	40.3	5/15/2020	-2.67	-0.005	3.686	0.2351007	0.000000	0.000000	0.866581
BasinCreek051520_180	1209543	2302768	A	793.0	40.5	5/15/2020	0	0.019	0.589	0.2364716	0.000000	0.004493	0.139282
BasinCreek051520_181	1209574	2302769	A	788.7	40.6	5/15/2020	-0.162	-0.009	0.633	0.2351144	0.000000	0.000000	0.148827
BasinCreek051520_182	1209563	2302798	A	789.0	40.7	5/15/2020	0	-0.006	0.369	0.2351289	0.000000	0.000000	0.086763
BasinCreek051520_183	1209552	2302826	A	789.0	40.8	5/15/2020	0	-0.014	1.057	0.235054	0.000000	0.000000	0.248452
BasinCreek051520_184	1209530	2303007	A	788.8	40.9	5/15/2020	0	0.001	4.671	0.2349196	0.000000	0.000235	1.097309
BasinCreek051520_185	1209632	2303053	A	790.5	41.0	5/15/2020	384.94	0.011	49.644	0.2353509	90.595990	0.002589	11.683760
BasinCreek051520_186	1210315	2304317	A	793.2	40.7	5/15/2020	-1.223	0.001	0.07	0.2363805	0.000000	0.000236	0.016547
BasinCreek051520_187	1210428	2304445	A	793.7	40.7	5/15/2020	0	-0.002	8.931	0.2365295	0.000000	0.000000	2.112445
BasinCreek051520_188	1210398	2304464	A	793.8	40.8	5/15/2020	6.031	-0.002	27.439	0.236484	1.426235	0.000000	6.488883
BasinCreek051520_189	1210351	2304519	A	793.6	41.0	5/15/2020	-4.903	-0.002	4.213	0.2362739	0.000000	0.000000	0.995422
BasinCreek051520_190	1210379	2304545	A	793.0	41.1	5/15/2020	-6.212	0.001	11.987	0.2360201	0.000000	0.000236	2.829173
BasinCreek051520_191	1210334	2304553	A	792.8	41.2	5/15/2020	-1.56	-0.01	-0.191	0.2358855	0.000000	0.000000	0.000000

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051520_192	1210357	2304606	A	792.6	41.3	5/15/2020	-1.501	-0.01	0.222	0.235751	0.000000	0.000000	0.052337
BasinCreek051520_193	1210323	2304608	A	792.6	41.4	5/15/2020	0	0.001	0.169	0.2356761	0.000000	0.000236	0.039829
BasinCreek051520_194	1210297	2304719	A	791.9	41.5	5/15/2020	-0.91	-0.001	0.428	0.2353931	0.000000	0.000000	0.100748
BasinCreek051520_195	1210223	2304555	A	791.5	41.6	5/15/2020	-0.289	-0.001	0.378	0.2351995	0.000000	0.000000	0.088905
BasinCreek051520_196	1210280	2304498	A	793.0	41.7	5/15/2020	0	-0.004	0.437	0.2355703	0.000000	0.000000	0.102944
BasinCreek051520_197	1210305	2304503	A	793.3	41.7	5/15/2020	0	0.007	3.05	0.2356595	0.000000	0.001650	0.718761
BasinCreek051520_198	1210309	2304508	A	793.3	41.7	5/15/2020	3768.568	0.013	28.064	0.2356595	888.098700	0.003064	6.613547
BasinCreek051520_199	1210318	2304526	A	793.3	41.6	5/15/2020	-0.195	0.023	0.682	0.2357343	0.000000	0.005422	0.160771
BasinCreek051520_200	1210334	2304521	A	793.0	41.6	5/15/2020	0	0.018	1.521	0.2356452	0.000000	0.004242	0.358416
BasinCreek051520_201	1210324	2304544	A	792.9	41.7	5/15/2020	-2.501	0.002	0.48	0.2355406	0.000000	0.000471	0.113059
BasinCreek051520_202	1210298	2304530	A	792.9	41.7	5/15/2020	-2.218	0.005	1.123	0.2355406	0.000000	0.001178	0.264512
BasinCreek051820_203	1209773	2302428	A	795.6	32.3	5/18/2020	-2.661	-0.007	0.161	0.243616	0.000000	0.000000	0.039222
BasinCreek051820_204	1209553	2302354	A	795.5	33.1	5/18/2020	-1.568	-0.004	0.005	0.242949	0.000000	0.000000	0.001215
BasinCreek051820_205	1209415	2302392	A	795.5	33.6	5/18/2020	-2.502	-0.003	0.059	0.242553	0.000000	0.000000	0.014311
BasinCreek051820_206	1209283	2302396	A	795.3	34.0	5/18/2020	13.297	0.006	3.559	0.2421763	3.220218	0.001453	0.861905
BasinCreek051820_207	1209255	2302373	A	794.8	34.4	5/18/2020	14.721	0.007	7.342	0.2417092	3.558202	0.001692	1.774629

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051820_208	1209190	2302325	A	794.5	34.9	5/18/2020	-0.631	0.003	1.66	0.2412258	0.000000	0.000724	0.400435
BasinCreek051820_209	1209110	2302141	A	794.4	36.2	5/18/2020	-1.773	-0.003	0.644	0.2401819	0.000000	0.000000	0.154677
BasinCreek051820_210	1209301	2302174	A	791.0	37.4	5/18/2020	7.48	0.013	11.759	0.2382298	1.781959	0.003097	2.801344
BasinCreek051820_211	1209369	2302152	A	791.5	38.1	5/18/2020	2.479	0.024	5.623	0.2378443	0.589616	0.005708	1.337398
BasinCreek051820_212	1209434	2302149	A	797.7	38.7	5/18/2020	0	0.008	2.307	0.2392461	0.000000	0.001914	0.551941
BasinCreek051820_213	1209529	2302122	A	792.6	39.4	5/18/2020	-2.003	-0.002	0.446	0.2371842	0.000000	0.000000	0.105784
BasinCreek051820_214	1209728	2302192	A	793.2	40.0	5/18/2020	-3.429	-0.008	0.013	0.2369089	0.000000	0.000000	0.003080
BasinCreek051820_215	1209579	2302018	A	793.4	40.6	5/18/2020	-4.459	0.004	0.027	0.2365155	0.000000	0.000946	0.006386
BasinCreek051820_216	1209615	2301963	A	792.6	41.0	5/18/2020	-1.472	0.004	0.264	0.2359761	0.000000	0.000944	0.062298
BasinCreek051820_217	1209629	2301865	A	792.8	41.4	5/18/2020	-5.985	0.001	0.429	0.2357355	0.000000	0.000236	0.101131
BasinCreek051820_218	1209500	2301918	A	793.0	41.8	5/18/2020	-3.244	0.001	1.175	0.2354955	0.000000	0.000235	0.276707
BasinCreek051820_219	1209485	2301925	A	790.3	41.9	5/18/2020	38.106	0.002	19.743	0.2346192	8.940400	0.000469	4.632087
BasinCreek051820_220	1209446	2301929	A	789.9	42.0	5/18/2020	-5.823	-0.004	5.942	0.2344261	0.000000	0.000000	1.392960
BasinCreek051820_221	1209431	2301945	A	789.5	42.0	5/18/2020	-2.727	0.008	1.524	0.2343074	0.000000	0.001874	0.357084
BasinCreek051820_222	1209423	2301989	A	789.5	42.0	5/18/2020	-3.076	-0.001	1.411	0.2343074	0.000000	0.000000	0.330608
BasinCreek051820_223	1209379	2301998	A	789.6	42.0	5/18/2020	-4.65	0.003	1.696	0.234337	0.000000	0.000703	0.397436

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051820_224	1209349	2301994	A	789.1	42.0	5/18/2020	39.408	0.004	8.884	0.2341886	9.228907	0.000937	2.080532
BasinCreek051820_225	1209357	2301959	A	788.8	42.1	5/18/2020	-1.757	0.013	2.096	0.2340254	0.000000	0.003042	0.490517
BasinCreek051820_226	1209381	2301944	A	788.8	42.1	5/18/2020	1054.802	0.012	65.592	0.2340254	246.850400	0.002808	15.350190
BasinCreek051820_227	1209382	2301943	A	788.6	42.2	5/18/2020	21328.18	2.403	140.916	0.2338918	4988.488000	0.562042	32.959100
BasinCreek051820_228	1209385	2301906	A	788.6	42.3	5/18/2020	20.113	-0.102	9.093	0.2338177	4.702775	0.000000	2.126104
BasinCreek051820_229	1209367	2301908	A	788.3	42.4	5/18/2020	-1.787	-0.012	1.272	0.2336547	0.000000	0.000000	0.297209
BasinCreek051820_230	1209323	2301871	A	788.2	42.3	5/18/2020	93.428	-0.007	12.294	0.2336991	21.834040	0.000000	2.873096
BasinCreek051820_231	1209404	2301756	A	787.6	42.3	5/18/2020	200.08	0.001	15.442	0.2335212	46.722920	0.000234	3.606034
BasinCreek051820_232	1209436	2301747	A	789.9	42.3	5/18/2020	-1.53	-0.005	3.337	0.2342031	0.000000	0.000000	0.781536
BasinCreek051820_233	1209432	2301783	A	790.3	42.3	5/18/2020	0	0.001	13.952	0.2343217	0.000000	0.000234	3.269257
BasinCreek051820_234	1209407	2301812	A	789.9	42.4	5/18/2020	-2.563	0.007	6.365	0.2341289	0.000000	0.001639	1.490230
BasinCreek051820_235	1209374	2301771	A	789.3	42.5	5/18/2020	-1.459	0.002	4.018	0.2338769	0.000000	0.000468	0.939718
BasinCreek051820_236	1209410	2301714	A	789.3	42.6	5/18/2020	-1.209	0.001	2.535	0.2338029	0.000000	0.000234	0.592690
BasinCreek051820_237	1209435	2301636	A	789.6	42.7	5/18/2020	-1.52	0	0.058	0.2338177	0.000000	0.000000	0.013561
BasinCreek051820_238	1209384	2301571	A	791.3	42.8	5/18/2020	-4.097	0.001	0.038	0.2342469	0.000000	0.000234	0.008901
BasinCreek051820_239	1209273	2301545	A	790.2	42.8	5/18/2020	-1.497	0.001	-0.055	0.2339213	0.000000	0.000234	0.000000

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051820_240	1209149	2301461	A	787.8	42.8	5/18/2020	-1.363	0.003	-0.007	0.2332108	0.000000	0.000700	0.000000
BasinCreek051820_241	1209133	2301382	A	787.8	42.8	5/18/2020	-1.33	0	-0.742	0.2332108	0.000000	0.000000	0.000000
BasinCreek051820_242	1209078	2301331	A	788.9	42.9	5/18/2020	20.811	0.002	2.164	0.2334626	4.858590	0.000467	0.505213
BasinCreek051820_243	1209075	2301311	A	789.8	43.0	5/18/2020	973.025	0.019	18.837	0.233655	227.352200	0.004439	4.401359
BasinCreek051820_244	1209112	2301316	A	790.1	43.2	5/18/2020	-2.216	0	0.577	0.233596	0.000000	0.000000	0.134785
BasinCreek051820_245	1209177	2301317	A	790.2	43.5	5/18/2020	-1.677	-0.002	0.3	0.2334042	0.000000	0.000000	0.070021
BasinCreek051820_246	1209028	2301231	A	790.2	43.9	5/18/2020	11.778	0.003	0.929	0.2331097	2.745566	0.000699	0.216559
BasinCreek051820_247	1209011	2301196	A	789.4	44.1	5/18/2020	-2.597	0	0.963	0.2327269	0.000000	0.000000	0.224116
BasinCreek051820_248	1208986	2301156	A	789.1	44.2	5/18/2020	473.545	0.004	14.207	0.2325652	110.130100	0.000930	3.304053
BasinCreek051820_249	1208934	2301068	A	789.0	44.2	5/18/2020	-1.177	0.002	1.688	0.2325357	0.000000	0.000465	0.392520
BasinCreek051820_250	1208873	2300958	A	789.0	44.4	5/18/2020	21.173	0.006	4.931	0.2323892	4.920377	0.001394	1.145911
BasinCreek051820_251	1208934	2300915	A	787.6	44.6	5/18/2020	-0.641	0.002	2.853	0.2318309	0.000000	0.000464	0.661413
BasinCreek051820_252	1208986	2300964	A	788.0	44.7	5/18/2020	-3.014	0.001	0.492	0.2318756	0.000000	0.000232	0.114083
BasinCreek051820_253	1209032	2301041	A	789.3	44.9	5/18/2020	-3.769	0.005	0.636	0.2321121	0.000000	0.001161	0.147623
BasinCreek051820_254	1209071	2301062	A	790.8	45.1	5/18/2020	-1.929	0.01	0.839	0.2324071	0.000000	0.002324	0.194990
BasinCreek051820_255	1209110	2301148	A	791.2	45.3	5/18/2020	-3.662	0.003	0.604	0.2323786	0.000000	0.000697	0.140357

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051920_01	1209109	2302480	A	789.8	29.3	5/19/2020	-0.993	-0.002	0.317	0.2442388	0.000000	0.000000	0.077424
BasinCreek051920_02	1208986	2302506	A	789.9	30.7	5/19/2020	-1.097	0.001	0.654	0.2431442	0.000000	0.000243	0.159016
BasinCreek051920_03	1208883	2302348	A	787.9	31.8	5/19/2020	-1.599	0	0.247	0.2416538	0.000000	0.000000	0.059688
BasinCreek051920_04	1208885	2302150	A	786.8	32.5	5/19/2020	-0.449	0.004	0.859	0.2407637	0.000000	0.000963	0.206816
BasinCreek051920_05	1208719	2301934	A	786.5	33.7	5/19/2020	-2.48	-0.005	0.352	0.2397307	0.000000	0.000000	0.084385
BasinCreek051920_06	1208785	2301767	A	784.4	34.3	5/19/2020	-3.741	-0.004	0.306	0.238624	0.000000	0.000000	0.073019
BasinCreek051920_07	1208946	2301964	A	784.8	34.9	5/19/2020	-3.225	0	0.534	0.2382807	0.000000	0.000000	0.127242
BasinCreek051920_08	1209019	2301811	A	786.5	35.4	5/19/2020	-3.109	0.004	0.514	0.2384099	0.000000	0.000954	0.122543
BasinCreek051920_09	1209093	2301903	A	784.3	35.7	5/19/2020	-2.534	0	0.201	0.2375121	0.000000	0.000000	0.047740
BasinCreek051920_10	1209154	2301753	A	784.7	36.2	5/19/2020	-3.548	-0.003	0.909	0.2372491	0.000000	0.000000	0.215659
BasinCreek051920_11	1208931	2301573	A	783.2	36.8	5/19/2020	-1.687	-0.001	0.177	0.2363372	0.000000	0.000000	0.041832
BasinCreek051920_12	1208822	2301515	A	782.4	37.3	5/19/2020	-2.069	-0.001	-0.06	0.2357156	0.000000	0.000000	0.000000
BasinCreek051920_13	1208777	2301383	A	782.2	37.7	5/19/2020	-3.012	-0.004	0.464	0.2353521	0.000000	0.000000	0.109203
BasinCreek051920_14	1208830	2301305	A	782.1	38.1	5/19/2020	-2.24	0.003	0.355	0.2350196	0.000000	0.000705	0.083432
BasinCreek051920_15	1208703	2301204	A	782.6	38.3	5/19/2020	-1.19	-0.004	0.23	0.2350188	0.000000	0.000000	0.054054
BasinCreek051920_16	1208634	2301187	A	780.9	38.3	5/19/2020	-3.575	-0.006	0.384	0.2345083	0.000000	0.000000	0.090051

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051920_17	1208527	2301144	A	780.6	38.3	5/19/2020	-1.291	-0.005	0.302	0.2344182	0.000000	0.000000	0.070794
BasinCreek051920_18	1208479	2300982	A	785.9	38.2	5/19/2020	-0.158	-0.001	0.2	0.2360856	0.000000	0.000000	0.047217
BasinCreek051920_19	1208573	2300805	A	779.1	37.8	5/19/2020	-1.434	-0.001	0.367	0.234344	0.000000	0.000000	0.086004
BasinCreek051920_20	1208650	2300750	A	780.5	37.7	5/19/2020	-0.143	0.001	12.305	0.2348406	0.000000	0.000235	2.889714
BasinCreek051920_21	1208661	2300973	A	781.4	37.7	5/19/2020	97.452	0.001	27.482	0.2351114	22.912080	0.000235	6.461331
BasinCreek051920_22	1208791	2300719	A	782.2	38.3	5/19/2020	-3.904	-0.002	0.706	0.2348987	0.000000	0.000000	0.165838
BasinCreek051920_23	1208758	2300636	A	781.3	38.8	5/19/2020	-2.784	-0.001	0.662	0.2342523	0.000000	0.000000	0.155075
BasinCreek051920_24	1208769	2300369	A	780.0	39.4	5/19/2020	-4.038	-0.004	0.478	0.2334136	0.000000	0.000000	0.111572
BasinCreek051920_25	1208759	2300130	A	777.3	39.9	5/19/2020	-2.765	0.002	0.855	0.2322342	0.000000	0.000464	0.198560
BasinCreek051920_26	1208680	2299993	A	778.3	40.2	5/19/2020	-5.661	0.006	2.035	0.2323103	0.000000	0.001394	0.472751
BasinCreek051920_27	1208959	2300175	A	778.2	40.6	5/19/2020	-1.878	-0.006	0.166	0.2319843	0.000000	0.000000	0.038509
BasinCreek051920_28	1209001	2300164	A	781.7	40.7	5/19/2020	-2.449	-0.003	0.774	0.2329534	0.000000	0.000000	0.180306
BasinCreek051920_29	1209026	2300274	A	782.6	40.6	5/19/2020	-2.961	-0.005	0.721	0.233296	0.000000	0.000000	0.168206
BasinCreek051920_30	1209017	2300359	A	781.7	40.5	5/19/2020	289.925	0.006	7.02	0.233102	67.582090	0.001399	1.636376
BasinCreek051920_31	1209036	2300354	A	781.3	40.5	5/19/2020	-3.481	-0.003	3.188	0.2329827	0.000000	0.000000	0.742749
BasinCreek051920_32	1209035	2300420	A	781.2	40.6	5/19/2020	-1.684	-0.003	0.665	0.2328786	0.000000	0.000000	0.154864

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek051920_33	1209093	2300403	A	781.4	40.8	5/19/2020	-2.466	-0.002	0.444	0.2327898	0.000000	0.000000	0.103359
BasinCreek051920_34	1209094	2300466	A	782.8	41.0	5/19/2020	-5.531	-0.003	0.377	0.2330585	0.000000	0.000000	0.087863
BasinCreek051920_35	1209081	2300461	A	782.5	41.2	5/19/2020	-3.45	0.002	0.539	0.2328209	0.000000	0.000466	0.125490
BasinCreek051920_36	1209100	2300548	A	782.5	41.4	5/19/2020	-6.634	0	0.39	0.2326729	0.000000	0.000000	0.090742
BasinCreek051920_37	1209115	2300607	A	782.9	41.6	5/19/2020	-5.56	0.002	0.329	0.2326439	0.000000	0.000465	0.076540
BasinCreek051920_38	1209151	2300735	A	782.4	41.8	5/19/2020	-1.488	0.002	0.355	0.2323477	0.000000	0.000465	0.082483
BasinCreek051920_39	1209110	2300719	A	783.2	41.9	5/19/2020	21.992	0.015	6.479	0.2325114	5.113391	0.003488	1.506442
BasinCreek051920_40	1208954	2300607	A	782.5	42.0	5/19/2020	-7.678	0.001	0.822	0.2322299	0.000000	0.000232	0.190893
BasinCreek051920_41	1209017	2300813	A	780.4	42.0	5/19/2020	-2.516	0.001	2.073	0.2316067	0.000000	0.000232	0.480121
BasinCreek051920_42	1209137	2300882	A	783.7	42.1	5/19/2020	-2.396	0	-0.049	0.2325123	0.000000	0.000000	0.000000
BasinCreek052120_100	1210933	2304622	A	792.4	41.0	5/21/2020	-2.628	-0.007	0.034	0.2359166	0.000000	0.000000	0.008021
BasinCreek052120_101	1210945	2304795	A	789.0	41.4	5/21/2020	-3.758	0.006	0.582	0.2346056	0.000000	0.001408	0.136540
BasinCreek052120_102	1210969	2304997	A	788.2	41.7	5/21/2020	-5.477	0.011	1.001	0.2341444	0.000000	0.002576	0.234379
BasinCreek052120_103	1210833	2305048	A	788.8	42.0	5/21/2020	-4.598	0.011	0.843	0.2340996	0.000000	0.002575	0.197346
BasinCreek052120_104	1210553	2304985	A	788.8	42.2	5/21/2020	-1.184	-0.003	0.04	0.2339512	0.000000	0.000000	0.009358
BasinCreek052120_105	1210573	2304857	A	790.5	42.4	5/21/2020	-6.48	0.017	0.48	0.2343068	0.000000	0.003983	0.112467

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052120_106	1210675	2304808	A	791.7	42.5	5/21/2020	-1.618	0.017	0.947	0.2345881	0.000000	0.003988	0.222155
BasinCreek052120_107	1210758	2304604	A	790.9	42.5	5/21/2020	-5.734	0.008	0.052	0.234351	0.000000	0.001875	0.012186
BasinCreek052120_108	1210740	2304506	A	790.6	42.4	5/21/2020	-0.765	0.017	1.848	0.2343364	0.000000	0.003984	0.433054
BasinCreek052120_109	1210619	2304600	A	792.1	42.3	5/21/2020	-5.242	0.007	0.836	0.2348554	0.000000	0.001644	0.196339
BasinCreek052120_110	1210532	2304447	A	792.8	42.2	5/21/2020	-1.413	0.006	2.18	0.2351375	0.000000	0.001411	0.512600
BasinCreek052120_43	1210326	2304153	A	794.5	25.4	5/21/2020	-2.683	0.003	2.21	0.2489017	0.000000	0.000747	0.550073
BasinCreek052120_44	1210375	2304037	A	794.0	26.6	5/21/2020	-0.499	0	-0.101	0.2477493	0.000000	0.000000	0.000000
BasinCreek052120_45	1210498	2304181	A	794.0	27.9	5/21/2020	-0.323	0.004	0.223	0.2466795	0.000000	0.000987	0.055010
BasinCreek052120_46	1210504	2303977	A	794.2	28.9	5/21/2020	-1.16	-0.001	0.269	0.2459247	0.000000	0.000000	0.066154
BasinCreek052120_47	1210542	2303870	A	792.9	29.6	5/21/2020	-1.461	0	0.305	0.2449545	0.000000	0.000000	0.074711
BasinCreek052120_48	1210681	2303841	A	791.5	30.3	5/21/2020	-2.309	-0.003	1.701	0.2439579	0.000000	0.000000	0.414972
BasinCreek052120_49	1210743	2303947	A	790.1	30.9	5/21/2020	-1.131	-0.001	0.878	0.2430458	0.000000	0.000000	0.213394
BasinCreek052120_50	1210871	2303617	A	790.1	32.2	5/21/2020	-0.736	0.009	0.335	0.2420111	0.000000	0.002178	0.081074
BasinCreek052120_51	1211000	2303450	A	789.3	33.2	5/21/2020	-1.38	0.002	0.199	0.2409769	0.000000	0.000482	0.047954
BasinCreek052120_52	1211024	2303572	A	787.1	34.0	5/21/2020	-0.514	0.015	1.117	0.2396793	0.000000	0.003595	0.267722
BasinCreek052120_53	1210993	2303669	A	787.0	34.6	5/21/2020	-0.93	0.001	0.384	0.2391816	0.000000	0.000239	0.091846

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052120_54	1211157	2303685	A	786.8	35.3	5/21/2020	-0.454	0.015	0.102	0.2385782	0.000000	0.003579	0.024335
BasinCreek052120_55	1211216	2303568	A	787.1	35.6	5/21/2020	-2.762	0.01	2.515	0.2384372	0.000000	0.002384	0.599670
BasinCreek052120_56	1211192	2303473	A	785.8	35.9	5/21/2020	-3.5	0.006	4.87	0.2378123	0.000000	0.001427	1.158146
BasinCreek052120_57	1211328	2303388	A	784.7	36.2	5/21/2020	-0.878	0	0.173	0.2372491	0.000000	0.000000	0.041044
BasinCreek052120_58	1211391	2303438	A	783.5	36.6	5/21/2020	-2.046	0.004	0.351	0.2365804	0.000000	0.000946	0.083040
BasinCreek052120_59	1211553	2303328	A	784.1	37.0	5/21/2020	-2.463	-0.002	0.276	0.2364562	0.000000	0.000000	0.065262
BasinCreek052120_60	1211602	2303489	A	788.4	37.6	5/21/2020	-0.554	0.012	0.943	0.2372939	0.000000	0.002848	0.223768
BasinCreek052120_61	1211613	2303703	A	784.4	38.2	5/21/2020	-1.952	0.008	0.554	0.235635	0.000000	0.001885	0.130542
BasinCreek052120_62	1211464	2303791	A	789.0	38.8	5/21/2020	-4.869	-0.001	0.144	0.236561	0.000000	0.000000	0.034065
BasinCreek052120_63	1211385	2303818	A	789.5	39.0	5/21/2020	-1.662	0.001	0.338	0.2365592	0.000000	0.000237	0.079957
BasinCreek052120_64	1211212	2303982	A	791.7	39.5	5/21/2020	-1.856	-0.004	0.919	0.2368391	0.000000	0.000000	0.217655
BasinCreek052120_65	1211233	2304116	A	792.5	39.8	5/21/2020	-2.202	0.008	0.532	0.2368511	0.000000	0.001895	0.126005
BasinCreek052120_66	1211360	2304199	A	792.2	40.1	5/21/2020	-2.333	-0.014	0.299	0.2365347	0.000000	0.000000	0.070724
BasinCreek052120_67	1211479	2304187	A	791.0	40.5	5/21/2020	-1.961	0.005	0.099	0.2358752	0.000000	0.001179	0.023352
BasinCreek052120_68	1211662	2304224	A	788.7	40.7	5/21/2020	-2.992	0	-0.038	0.2350395	0.000000	0.000000	0.000000
BasinCreek052120_69	1211692	2304352	A	786.8	40.8	5/21/2020	-3.959	0.004	0.221	0.2343986	0.000000	0.000938	0.051802

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052120_70	1211723	2304413	A	793.2	41.0	5/21/2020	-0.002	0.006	0.167	0.2361548	0.000000	0.001417	0.039438
BasinCreek052120_71	1211744	2304563	A	787.0	41.1	5/21/2020	-2.394	-0.001	0.357	0.2342343	0.000000	0.000000	0.083622
BasinCreek052120_72	1211945	2304618	A	791.1	41.0	5/21/2020	-2.02	0.019	1.008	0.2355296	0.000000	0.004475	0.237414
BasinCreek052120_73	1212112	2304588	A	781.7	40.8	5/21/2020	-3.08	-0.005	1.014	0.2328792	0.000000	0.000000	0.236140
BasinCreek052120_74	1212070	2304419	A	780.5	40.7	5/21/2020	-7.027	0.018	4.613	0.2325958	0.000000	0.004187	1.072964
BasinCreek052120_75	1212023	2304317	A	781.8	40.8	5/21/2020	-1.986	-0.005	0.769	0.232909	0.000000	0.000000	0.179107
BasinCreek052120_76	1212169	2304340	A	782.8	40.9	5/21/2020	-0.188	0.004	1.721	0.2331327	0.000000	0.000933	0.401221
BasinCreek052120_77	1212217	2304259	A	781.4	40.9	5/21/2020	-1.373	0	0.359	0.2327157	0.000000	0.000000	0.083545
BasinCreek052120_78	1212308	2304177	A	787.9	40.9	5/21/2020	-1.131	0.005	0.271	0.2346515	0.000000	0.001173	0.063591
BasinCreek052120_79	1212423	2304426	A	780.8	40.8	5/21/2020	-2.585	0.001	12.363	0.2326111	0.000000	0.000233	2.875771
BasinCreek052120_80	1212402	2304458	A	779.1	40.8	5/21/2020	-2.88	0.004	4.242	0.2321046	0.000000	0.000928	0.984588
BasinCreek052120_81	1212327	2304543	A	779.0	40.8	5/21/2020	-2.336	-0.004	1.854	0.2320749	0.000000	0.000000	0.430267
BasinCreek052120_82	1212245	2304759	A	778.6	40.7	5/21/2020	-1.339	0.008	1.288	0.2320296	0.000000	0.001856	0.298854
BasinCreek052120_83	1211793	2305041	A	780.0	40.7	5/21/2020	-2.012	-0.002	0.345	0.2324468	0.000000	0.000000	0.080194
BasinCreek052120_84	1211786	2305114	A	783.0	40.7	5/21/2020	-0.965	0.002	0.865	0.2333408	0.000000	0.000467	0.201840
BasinCreek052120_85	1211639	2304999	A	783.3	40.7	5/21/2020	-2.909	-0.004	0.689	0.2334302	0.000000	0.000000	0.160833

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052120_86	1211550	2304737	A	783.5	40.7	5/21/2020	-3.362	-0.002	0.425	0.2334898	0.000000	0.000000	0.099233
BasinCreek052120_87	1211629	2304697	A	783.3	40.7	5/21/2020	-1.775	0.005	-0.009	0.2334302	0.000000	0.001167	0.000000
BasinCreek052120_88	1211451	2304782	A	783.5	40.6	5/21/2020	-1.481	0.005	2.306	0.2335643	0.000000	0.001168	0.538599
BasinCreek052120_89	1211398	2305026	A	784.1	40.4	5/21/2020	-2.61	0.023	0.108	0.2338922	0.000000	0.005380	0.025260
BasinCreek052120_90	1211297	2304989	A	784.9	40.5	5/21/2020	-1.488	0.005	0.354	0.2340562	0.000000	0.001170	0.082856
BasinCreek052120_91	1211238	2304861	A	785.5	40.5	5/21/2020	-2.544	0.003	0.625	0.2342351	0.000000	0.000703	0.146397
BasinCreek052120_92	1211184	2304765	A	785.8	40.6	5/21/2020	-5.399	0.009	0.558	0.2342499	0.000000	0.002108	0.130711
BasinCreek052120_93	1211330	2304646	A	784.8	40.8	5/21/2020	-2.044	0.022	-0.063	0.2338028	0.000000	0.005144	0.000000
BasinCreek052120_94	1211375	2304525	A	785.9	40.8	5/21/2020	-3.726	0.007	0.386	0.2341305	0.000000	0.001639	0.090374
BasinCreek052120_95	1211218	2304363	A	788.0	40.9	5/21/2020	-5.284	0.005	0.245	0.2346813	0.000000	0.001173	0.057497
BasinCreek052120_96	1210978	2304149	A	791.4	41.0	5/21/2020	-3.791	0.006	6.03	0.2356189	0.000000	0.001414	1.420782
BasinCreek052120_97	1210928	2304075	A	790.6	41.0	5/21/2020	-5.419	-0.008	0.38	0.2353807	0.000000	0.000000	0.089445
BasinCreek052120_98	1210745	2304134	A	789.9	40.9	5/21/2020	-1.942	0.007	-0.241	0.2352472	0.000000	0.001647	0.000000
BasinCreek052120_99	1210946	2304352	A	790.3	40.7	5/21/2020	-3.083	0.011	2.865	0.2355163	0.000000	0.002591	0.674754
BasinCreek052220_111	1212330	2305921	A	786.7	35.7	5/22/2020	-1.366	-0.009	0.042	0.2382389	0.000000	0.000000	0.010006
BasinCreek052220_112	1212452	2306046	A	786.5	36.6	5/22/2020	-0.004	-0.029	0.392	0.2374863	0.000000	0.000000	0.093095

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052220_113	1212806	2306025	A	788.6	38.0	5/22/2020	-0.192	-0.001	2.3	0.237049	0.000000	0.000000	0.545213
BasinCreek052220_114	1212926	2306044	A	785.5	38.4	5/22/2020	-0.099	-0.001	1.09	0.235814	0.000000	0.000000	0.257037
BasinCreek052220_115	1213003	2306138	A	785.3	38.8	5/22/2020	-0.222	-0.001	0.017	0.2354516	0.000000	0.000000	0.004003
BasinCreek052220_116	1213329	2305980	A	785.9	39.3	5/22/2020	-0.128	-0.006	0.68	0.2352545	0.000000	0.000000	0.159973
BasinCreek052220_117	1213311	2306119	A	783.3	39.6	5/22/2020	-0.153	-0.002	0.509	0.2342512	0.000000	0.000000	0.119234
BasinCreek052220_118	1213222	2306182	A	784.1	39.8	5/22/2020	-0.131	-0.006	0.346	0.2343406	0.000000	0.000000	0.081082
BasinCreek052220_119	1213167	2306320	A	784.7	40.0	5/22/2020	-0.478	-0.001	0.005	0.2343702	0.000000	0.000000	0.001172
BasinCreek052220_120	1213307	2306518	A	784.9	40.1	5/22/2020	-0.238	-0.031	0.178	0.2343551	0.000000	0.000000	0.041715
BasinCreek052220_121	1213370	2306405	A	786.3	40.2	5/22/2020	-0.361	-0.002	0.326	0.2346982	0.000000	0.000000	0.076512
BasinCreek052220_122	1213582	2306421	A	786.0	40.4	5/22/2020	-0.458	-0.002	0.665	0.234459	0.000000	0.000000	0.155915
BasinCreek052220_123	1213613	2306538	A	783.3	40.4	5/22/2020	-0.286	-0.001	0.274	0.2336536	0.000000	0.000000	0.064021
BasinCreek052220_124	1213687	2306623	A	783.2	40.4	5/22/2020	-0.394	-0.021	0.267	0.2336237	0.000000	0.000000	0.062378
BasinCreek052220_125	1213969	2306591	A	782.8	40.4	5/22/2020	0	0	1.054	0.2335044	0.000000	0.000000	0.246114
BasinCreek052220_126	1213958	2306707	A	780.8	40.5	5/22/2020	0	-0.002	1.03	0.2328336	0.000000	0.000000	0.239819
BasinCreek052220_127	1214093	2306789	A	781.3	40.7	5/22/2020	0	-0.019	0.242	0.2328342	0.000000	0.000000	0.056346
BasinCreek052220_128	1214229	2306899	A	780.0	41.0	5/22/2020	0	-0.007	-0.417	0.2322248	0.000000	0.000000	0.000000

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052220_129	1214418	2306939	A	778.6	41.2	5/22/2020	0	-0.001	0.72	0.2316605	0.000000	0.000000	0.166796
BasinCreek052220_130	1214350	2307030	A	777.5	41.4	5/22/2020	0	-0.002	0.631	0.2311862	0.000000	0.000000	0.145878
BasinCreek052220_131	1214371	2307108	A	784.7	41.5	5/22/2020	0	-0.005	2.096	0.2332529	0.000000	0.000000	0.488898
BasinCreek052220_132	1214292	2307327	A	777.9	41.7	5/22/2020	-0.976	-0.049	0.264	0.2310847	0.000000	0.000000	0.061006
BasinCreek052220_133	1214435	2307376	A	777.0	41.9	5/22/2020	-0.078	-0.03	0.609	0.2306708	0.000000	0.000000	0.140479
BasinCreek052220_134	1214619	2307390	A	776.9	42.1	5/22/2020	-0.009	-0.012	0.382	0.2304948	0.000000	0.000000	0.088049
BasinCreek052220_135	1214704	2307404	A	776.3	42.3	5/22/2020	-0.49	-0.001	0.684	0.2301708	0.000000	0.000000	0.157437
BasinCreek052220_136	1214865	2307324	A	776.3	42.5	5/22/2020	1.83	0.016	12.652	0.2300249	0.420946	0.003680	2.910275
BasinCreek052220_137	1214931	2307245	A	775.1	42.4	5/22/2020	22.197	0.006	2.373	0.2297421	5.099586	0.001378	0.545178
BasinCreek052220_138	1214811	2307198	A	775.1	42.3	5/22/2020	-0.839	-0.006	1.71	0.229815	0.000000	0.000000	0.392984
BasinCreek052220_139	1214953	2307164	A	774.2	42.1	5/22/2020	-0.082	-0.006	0.523	0.2296938	0.000000	0.000000	0.120130
BasinCreek052220_140	1214954	2306988	A	774.3	42.0	5/22/2020	-0.197	-0.036	0.119	0.2297963	0.000000	0.000000	0.027346
BasinCreek052220_141	1215119	2306999	A	773.8	41.9	5/22/2020	-0.18	-0.022	1.839	0.2297208	0.000000	0.000000	0.422457
BasinCreek052220_142	1215133	2307036	A	772.7	42.0	5/22/2020	-0.473	-0.024	0.03	0.2293215	0.000000	0.000000	0.006880
BasinCreek052220_143	1215226	2306854	A	772.8	42.1	5/22/2020	-0.28	-0.037	1.503	0.2292784	0.000000	0.000000	0.344605
BasinCreek052220_144	1215306	2306753	A	773.5	42.3	5/22/2020	11.35	0.012	4.709	0.2293406	2.603015	0.002752	1.079965

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052220_145	1215260	2306741	A	773.2	42.5	5/22/2020	-1.449	-0.021	1.411	0.2291064	0.000000	0.000000	0.323269
BasinCreek052220_146	1215268	2306659	A	773.4	42.7	5/22/2020	0	-0.01	0.874	0.2290205	0.000000	0.000000	0.200164
BasinCreek052620_147	1213632	2306136	A	789.6	28.3	5/26/2020	-2.498	0	0.436	0.244987	0.000000	0.000000	0.106814
BasinCreek052620_148	1213701	2306182	A	789.8	28.8	5/26/2020	-0.386	-0.005	0.204	0.2446432	0.000000	0.000000	0.049907
BasinCreek052620_149	1213832	2306395	A	789.4	29.8	5/26/2020	-0.528	-0.001	1.343	0.2437122	0.000000	0.000000	0.327305
BasinCreek052620_150	1213977	2306436	A	788.2	30.4	5/26/2020	0	-0.003	0.108	0.2428607	0.000000	0.000000	0.026229
BasinCreek052620_151	1214104	2306420	A	787.9	30.6	5/26/2020	-0.764	-0.003	0.339	0.2426085	0.000000	0.000000	0.082244
BasinCreek052620_152	1214253	2306586	A	787.4	30.7	5/26/2020	-0.518	-0.001	2.666	0.2423747	0.000000	0.000000	0.646171
BasinCreek052620_153	1214426	2306773	A	785.2	30.7	5/26/2020	-0.847	-0.005	0.035	0.2416975	0.000000	0.000000	0.008459
BasinCreek052620_154	1214501	2306737	A	782.6	30.7	5/26/2020	-0.761	-0.002	0.187	0.2408972	0.000000	0.000000	0.045048
BasinCreek052620_155	1214544	2306827	A	782.4	30.7	5/26/2020	-0.183	-0.002	1.111	0.2408356	0.000000	0.000000	0.267568
BasinCreek052620_156	1214621	2306867	A	780.8	30.8	5/26/2020	-0.566	-0.001	1.358	0.240264	0.000000	0.000000	0.326279
BasinCreek052620_157	1214644	2307052	A	780.4	30.9	5/26/2020	-0.536	-0.001	2.472	0.240062	0.000000	0.000000	0.593433
BasinCreek052620_158	1214727	2306907	A	779.8	31.2	5/26/2020	0	-0.001	0.842	0.239641	0.000000	0.000000	0.201778
BasinCreek052620_159	1214770	2306805	A	780.2	31.5	5/26/2020	0	-0.002	4.275	0.2395278	0.000000	0.000000	1.023981
BasinCreek052620_160	1214935	2306744	A	781.3	31.9	5/26/2020	0	-0.002	0.557	0.2395509	0.000000	0.000000	0.133430

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052620_161	1214977	2306604	A	780.0	32.2	5/26/2020	0	-0.002	1.15	0.2389174	0.000000	0.000000	0.274755
BasinCreek052620_162	1214859	2306569	A	779.8	32.7	5/26/2020	-0.456	-0.003	0.262	0.2384657	0.000000	0.000000	0.062478
BasinCreek052620_163	1214571	2306519	A	781.3	33.4	5/26/2020	-0.391	-0.005	0.129	0.2383788	0.000000	0.000000	0.030751
BasinCreek052620_164	1214474	2306533	A	784.0	33.8	5/26/2020	-0.684	-0.01	0.646	0.2388909	0.000000	0.000000	0.154324
BasinCreek052620_165	1214539	2306367	A	784.7	34.2	5/26/2020	-0.276	-0.001	0.314	0.238793	0.000000	0.000000	0.074981
BasinCreek052620_166	1214438	2306362	A	784.5	34.5	5/26/2020	-0.26	-0.002	0.089	0.2384993	0.000000	0.000000	0.021226
BasinCreek052620_167	1213541	2305857	A	784.8	35.5	5/26/2020	-0.153	-0.014	0.945	0.2378175	0.000000	0.000000	0.224738
BasinCreek052620_168	1213605	2305721	A	787.1	35.7	5/26/2020	-0.05	-0.003	0.135	0.23836	0.000000	0.000000	0.032179
BasinCreek052620_169	1213493	2305710	A	786.4	36.3	5/26/2020	-0.324	-0.007	0.292	0.2376863	0.000000	0.000000	0.069404
BasinCreek052620_170	1213454	2305719	A	785.3	36.5	5/26/2020	-0.077	-0.012	0.805	0.2372005	0.000000	0.000000	0.190946
BasinCreek052620_171	1213358	2305745	A	785.2	36.7	5/26/2020	-0.416	-0.003	0.973	0.2370172	0.000000	0.000000	0.230618
BasinCreek052620_172	1213285	2305803	A	785.6	37.0	5/26/2020	-0.427	-0.008	0.646	0.2369086	0.000000	0.000000	0.153043
BasinCreek052620_173	1213191	2305857	A	786.3	37.3	5/26/2020	-0.177	-0.007	6.371	0.2368905	0.000000	0.000000	1.509230
BasinCreek052620_174	1213164	2305757	A	786.0	37.6	5/26/2020	-0.537	-0.007	2.53	0.2365716	0.000000	0.000000	0.598526
BasinCreek052620_175	1213195	2305604	A	785.1	38.0	5/26/2020	-0.408	-0.002	9.215	0.2359969	0.000000	0.000000	2.174711
BasinCreek052620_176	1213205	2305544	A	785.2	38.4	5/26/2020	4.388	0.016	15.859	0.2357239	1.034356	0.003772	3.738346

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052620_177	1213196	2305540	A	785.6	38.6	5/26/2020	638.261	0.032	414.734	0.2356927	150.433500	0.007542	97.749780
BasinCreek052620_178	1213163	2305454	A	785.5	39.0	5/26/2020	-0.749	-0.013	0.652	0.2353607	0.000000	0.000000	0.153455
BasinCreek052620_179	1213228	2305530	A	785.5	39.5	5/26/2020	977.72	0.021	359.934	0.2349843	229.748900	0.004935	84.578840
BasinCreek052620_180	1213340	2305363	A	784.9	40.1	5/26/2020	116.522	0.009	36.227	0.2343551	27.307520	0.002109	8.489982
BasinCreek052620_181	1213346	2305331	A	784.9	40.4	5/26/2020	663.02	0.025	159.572	0.2341308	155.233400	0.005853	37.360730
BasinCreek052620_182	1213367	2305187	A	782.5	40.7	5/26/2020	-0.821	-0.022	2.974	0.2331918	0.000000	0.000000	0.693512
BasinCreek052620_183	1213396	2305566	A	782.2	41.1	5/26/2020	3.508	0.012	3.805	0.2328057	0.816682	0.002794	0.885826
BasinCreek052620_184	1213512	2305514	A	784.3	41.3	5/26/2020	-0.518	-0.001	2.869	0.2332823	0.000000	0.000000	0.669287
BasinCreek052620_185	1213646	2305391	A	783.5	41.5	5/26/2020	-0.75	-0.001	0.123	0.2328962	0.000000	0.000000	0.028646
BasinCreek052620_186	1213780	2305294	A	782.8	41.8	5/26/2020	-0.392	-0.013	0.07	0.2324665	0.000000	0.000000	0.016273
BasinCreek052620_187	1213794	2305070	A	781.4	42.0	5/26/2020	-0.516	-0.007	0.338	0.2319034	0.000000	0.000000	0.078383
BasinCreek052620_188	1213803	2304958	A	780.0	42.3	5/26/2020	-0.268	-0.019	0.416	0.2312678	0.000000	0.000000	0.096207
BasinCreek052620_189	1213672	2305028	A	779.1	42.5	5/26/2020	-0.324	-0.002	0.306	0.2308546	0.000000	0.000000	0.070642
BasinCreek052620_190	1213636	2305054	A	779.8	42.6	5/26/2020	18.316	-0.005	7.981	0.2309888	4.230792	0.000000	1.843522
BasinCreek052620_191	1213678	2305110	A	779.8	42.8	5/26/2020	-0.423	-0.001	0.407	0.2308426	0.000000	0.000000	0.093953
BasinCreek052620_192	1213612	2305079	A	780.1	42.9	5/26/2020	-0.649	-0.002	3.855	0.2308584	0.000000	0.000000	0.889959

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052620_193	1213559	2305001	A	779.6	43.0	5/26/2020	-0.64	-0.002	3.202	0.2306374	0.000000	0.000000	0.738501
BasinCreek052620_194	1213578	2304735	A	779.5	43.1	5/26/2020	-0.741	-0.007	0.069	0.2305349	0.000000	0.000000	0.015907
BasinCreek052620_195	1213482	2304707	A	778.3	42.1	5/26/2020	-1.281	-0.002	0.492	0.2309102	0.000000	0.000000	0.113608
BasinCreek052620_196	1213424	2304767	A	778.3	41.9	5/26/2020	-0.187	-0.013	0.881	0.2310567	0.000000	0.000000	0.203561
BasinCreek052620_197	1213440	2304783	A	778.8	41.9	5/26/2020	-0.349	-0.019	3.304	0.2312052	0.000000	0.000000	0.763902
BasinCreek052620_198	1213411	2304967	A	779.0	41.8	5/26/2020	-0.85	-0.003	0.469	0.231338	0.000000	0.000000	0.108498
BasinCreek052620_199	1213236	2305002	A	784.8	41.9	5/26/2020	0	-0.001	0.315	0.2329864	0.000000	0.000000	0.073391
BasinCreek052620_200	1213193	2305081	A	782.4	42.0	5/26/2020	-0.779	-0.011	-0.177	0.2322002	0.000000	0.000000	0.000000
BasinCreek052620_201	1213110	2305257	A	784.2	42.2	5/26/2020	-0.692	-0.003	0.294	0.2325868	0.000000	0.000000	0.068381
BasinCreek052620_202	1212926	2305360	A	784.1	42.6	5/26/2020	-0.768	-0.002	0.119	0.2322626	0.000000	0.000000	0.027639
BasinCreek052620_203	1212811	2305493	A	785.9	42.8	5/26/2020	19.474	0.007	14.487	0.2326484	4.530595	0.001629	3.370377
BasinCreek052620_204	1212803	2305525	A	786.2	42.9	5/26/2020	7.892	-0.006	6.517	0.2326636	1.836181	0.000000	1.516268
BasinCreek052620_205	1212861	2305545	A	786.6	43.0	5/26/2020	7.201	-0.007	9.823	0.2327083	1.675732	0.000000	2.285893
BasinCreek052620_206	1212831	2305612	A	787.1	43.2	5/26/2020	-0.529	-0.007	0.802	0.232709	0.000000	0.000000	0.186633
BasinCreek052620_207	1212859	2305693	A	787.4	43.4	5/26/2020	-0.174	-0.022	0.701	0.2326506	0.000000	0.000000	0.163088
BasinCreek052620_208	1213008	2305659	A	787.3	43.7	5/26/2020	-0.697	-0.004	0.089	0.2324008	0.000000	0.000000	0.020684

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052620_209	1212972	2305814	A	785.9	44.0	5/26/2020	-0.844	-0.016	0.154	0.2317681	0.000000	0.000000	0.035692
BasinCreek052720_01	1215380	2306689	A	780.2	33.8	5/27/2020	-0.914	-0.02	1.384	0.237733	0.000000	0.000000	0.329022
BasinCreek052720_02	1215422	2306848	A	780.1	35.4	5/27/2020	-0.134	0	0.081	0.2364699	0.000000	0.000000	0.019154
BasinCreek052720_03	1215412	2306940	A	780.4	36.4	5/27/2020	0	0.016	1.434	0.2357966	0.000000	0.003773	0.338132
BasinCreek052720_04	1215388	2306993	A	780.5	37.0	5/27/2020	40.546	0.046	18.27	0.2353706	9.543337	0.010827	4.300221
BasinCreek052720_05	1215400	2306998	A	780.5	37.5	5/27/2020	0	0.026	2.637	0.2349918	0.000000	0.006110	0.619673
BasinCreek052720_06	1215409	2307028	A	780.6	38.0	5/27/2020	0	0.019	0.991	0.2346442	0.000000	0.004458	0.232532
BasinCreek052720_07	1215375	2307042	A	780.9	38.7	5/27/2020	0	0.002	0.77	0.2342075	0.000000	0.000468	0.180340
BasinCreek052720_08	1215416	2307138	A	780.8	39.2	5/27/2020	0	0.007	0.151	0.2338026	0.000000	0.001637	0.035304
BasinCreek052720_09	1215383	2307180	A	781.7	39.6	5/27/2020	-2.117	-0.003	0.902	0.2337728	0.000000	0.000000	0.210863
BasinCreek052720_10	1212308	2305814	A	781.6	43.2	5/27/2020	-0.185	0.006	0.024	0.2310829	0.000000	0.001386	0.005546
BasinCreek052720_11	1212173	2305587	A	788.7	43.4	5/27/2020	-1.044	0.005	0.118	0.2330347	0.000000	0.001165	0.027498
BasinCreek052720_12	1212560	2305768	A	788.1	43.5	5/27/2020	-0.358	0.003	1.349	0.2327839	0.000000	0.000698	0.314025
BasinCreek052720_13	1212451	2305602	A	787.1	43.5	5/27/2020	-0.987	0.011	1.144	0.2324885	0.000000	0.002557	0.265967
BasinCreek052720_14	1212545	2305524	A	785.9	43.5	5/27/2020	-1.161	0.001	1.602	0.2321341	0.000000	0.000232	0.371879
BasinCreek052720_15	1212566	2305431	A	784.8	43.5	5/27/2020	-1.382	-0.006	2.926	0.2318092	0.000000	0.000000	0.678274

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052720_16	1212405	2305283	A	785.1	43.3	5/27/2020	-1.238	0.007	0.756	0.2320443	0.000000	0.001624	0.175426
BasinCreek052720_17	1212726	2305321	A	785.9	43.1	5/27/2020	4.861	0.005	16.115	0.2324277	1.129831	0.001162	3.745572
BasinCreek052720_18	1212737	2305372	A	784.7	43.1	5/27/2020	-1.235	-0.001	2.002	0.2320728	0.000000	0.000000	0.464610
BasinCreek052720_19	1212576	2305129	A	784.7	42.7	5/27/2020	-0.944	0	1.491	0.2323667	0.000000	0.000000	0.346459
BasinCreek052720_20	1212503	2304992	A	784.0	42.6	5/27/2020	-2.436	0.004	0.43	0.2322329	0.000000	0.000929	0.099860
BasinCreek052720_21	1212683	2305062	A	783.1	42.6	5/27/2020	-0.927	0.002	0.709	0.2319663	0.000000	0.000464	0.164464
BasinCreek052720_22	1212784	2305063	A	781.8	42.6	5/27/2020	2.104	0.004	3.903	0.2315813	0.487247	0.000926	0.903862
BasinCreek052720_23	1212732	2304999	A	781.6	42.7	5/27/2020	-0.785	0.004	0.543	0.2314487	0.000000	0.000926	0.125677
BasinCreek052720_24	1212925	2304872	A	780.9	42.8	5/27/2020	2.474	0.004	6.719	0.2311682	0.571910	0.000925	1.553219
BasinCreek052720_25	1212967	2304857	A	779.4	43.0	5/27/2020	7.382	0.001	7.729	0.2305782	1.702129	0.000231	1.782139
BasinCreek052720_26	1213017	2304851	A	779.4	43.1	5/27/2020	29.101	0.019	27.313	0.2305053	6.707936	0.004380	6.295792
BasinCreek052720_27	1213061	2304834	A	779.4	43.2	5/27/2020	-0.014	0.018	4.727	0.2304325	0.000000	0.004148	1.089254
BasinCreek052720_28	1213147	2304760	A	779.3	43.4	5/27/2020	-2.015	-0.016	7.158	0.2302573	0.000000	0.000000	1.648182
BasinCreek052720_29	1213112	2304715	A	777.8	43.7	5/27/2020	3.508	0.003	8.97	0.2295965	0.805425	0.000689	2.059481
BasinCreek052720_30	1213119	2304643	A	777.1	43.9	5/27/2020	-2.945	0.002	10.845	0.2292452	0.000000	0.000458	2.486164
BasinCreek052720_31	1213217	2304642	A	777.1	44.2	5/27/2020	-1.423	0.002	2.195	0.2290285	0.000000	0.000458	0.502718

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
BasinCreek052720_32	1213014	2304677	A	776.9	44.4	5/27/2020	-0.419	-0.007	1.302	0.2288253	0.000000	0.000000	0.297931
BasinCreek052720_33	1212866	2304620	A	777.5	44.6	5/27/2020	0	0.004	5.209	0.2288579	0.000000	0.000915	1.192121
BasinCreek052720_34	1212693	2304745	A	778.4	45.0	5/27/2020	-1.213	-0.002	0.753	0.2288348	0.000000	0.000000	0.172313
CarbonJunction052820_01	1215233	2310279	A	809.9	26.6	5/28/2020	0	-0.004	0.36	0.2527105	0.000000	0.000000	0.090976
CarbonJunction052820_02	1215199	2310297	A	810.1	27.9	5/28/2020	0	-0.003	2.466	0.2516814	0.000000	0.000000	0.620646
CarbonJunction052820_03	1215184	2310313	A	810.1	28.9	5/28/2020	0	-0.005	0.619	0.2508481	0.000000	0.000000	0.155275
CarbonJunction052820_04	1215172	2310325	A	810.7	31.9	5/28/2020	-0.445	-0.01	1.402	0.2485652	0.000000	0.000000	0.348488
CarbonJunction052820_05	1215154	2310327	A	810.5	32.6	5/28/2020	0	-0.006	0.157	0.2479349	0.000000	0.000000	0.038926
CarbonJunction052820_06	1214994	2310354	A	810.7	33.7	5/28/2020	-0.116	-0.005	1.13	0.2471071	0.000000	0.000000	0.279231
CarbonJunction052820_07	1214979	2310345	A	810.9	34.1	5/28/2020	-0.038	-0.005	0.383	0.2468462	0.000000	0.000000	0.094542
CarbonJunction052820_08	1214961	2310358	A	810.9	34.6	5/28/2020	7.593	0.032	3.058	0.2464452	1.871258	0.007886	0.753629
CarbonJunction052820_09	1214951	2310362	A	811.1	35.0	5/28/2020	1.549	0.019	7.366	0.246186	0.381342	0.004678	1.813406
CarbonJunction052820_10	1214911	2310354	A	811.1	35.4	5/28/2020	-0.213	-0.01	5.153	0.2458668	0.000000	0.000000	1.266952
CarbonJunction052820_11	1214905	2310347	A	811.1	35.8	5/28/2020	158.704	0.024	11.076	0.2455485	38.969530	0.005893	2.719695
CarbonJunction052820_12	1214831	2310293	A	811.1	36.5	5/28/2020	-0.276	-0.013	0.929	0.2449934	0.000000	0.000000	0.227599
CarbonJunction052820_13	1214655	2310332	A	810.7	37.0	5/28/2020	-0.352	-0.003	3.201	0.2444778	0.000000	0.000000	0.782574

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052820_14	1214492	2310336	A	810.5	37.6	5/28/2020	-0.252	-0.009	0.779	0.2439456	0.000000	0.000000	0.190034
CarbonJunction052820_15	1214233	2310317	A	810.5	38.2	5/28/2020	-0.399	-0.003	1.038	0.2434755	0.000000	0.000000	0.252728
CarbonJunction052820_16	1214212	2310186	A	810.3	38.7	5/28/2020	-0.014	-0.016	0.408	0.2430251	0.000000	0.000000	0.099154
CarbonJunction052820_17	1214324	2310115	A	809.5	39.3	5/28/2020	-0.26	-0.009	0.618	0.242319	0.000000	0.000000	0.149753
CarbonJunction052820_18	1214516	2310078	A	809.1	39.9	5/28/2020	39.16	0.018	11.006	0.241735	9.466344	0.004351	2.660536
CarbonJunction052820_19	1214522	2310107	A	808.9	40.4	5/28/2020	860.662	0.036	11.005	0.2412899	207.669000	0.008686	2.655395
CarbonJunction052820_20	1214558	2310109	A	809.5	40.9	5/28/2020	-0.961	-0.008	6.554	0.2410844	0.000000	0.000000	1.580067
CarbonJunction052820_21	1214601	2310149	A	809.7	41.3	5/28/2020	2.559	0.026	2.473	0.2408372	0.616302	0.006262	0.595591
CarbonJunction052820_22	1214785	2310176	A	809.7	41.7	5/28/2020	-0.721	-0.028	2.922	0.2405313	0.000000	0.000000	0.702832
CarbonJunction052820_23	1214865	2310195	A	809.8	42.2	5/28/2020	98.192	0.029	5.213	0.2401796	23.583710	0.006965	1.252056
CarbonJunction052820_24	1214886	2310200	A	809.8	42.5	5/28/2020	25.701	0.024	4.674	0.2399513	6.166988	0.005759	1.121532
CarbonJunction052820_25	1214907	2310182	A	809.5	42.9	5/28/2020	-0.182	-0.026	1.469	0.2395588	0.000000	0.000000	0.351912
CarbonJunction052820_26	1214939	2310182	A	809.5	43.2	5/28/2020	1.254	0.031	3.042	0.2393316	0.300122	0.007419	0.728047
CarbonJunction052820_27	1215009	2310186	A	809.5	43.6	5/28/2020	-0.087	-0.021	1.382	0.2390294	0.000000	0.000000	0.330339
CarbonJunction052820_28	1214809	2311176	A	809.6	45.5	5/28/2020	0	-0.008	0.719	0.2376335	0.000000	0.000000	0.170858
CarbonJunction052820_29	1214765	2311296	A	808.7	45.8	5/28/2020	0	-0.015	0.307	0.2371461	0.000000	0.000000	0.072804

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052820_30	1214964	2311128	A	808.7	46.2	5/28/2020	0	-0.027	0.671	0.236849	0.000000	0.000000	0.158926
CarbonJunction052820_31	1214954	2310988	A	809.4	46.4	5/28/2020	0	-0.026	0.506	0.2369057	0.000000	0.000000	0.119874
CarbonJunction052820_32	1215139	2310925	A	809.8	46.5	5/28/2020	-0.237	-0.033	0.743	0.2369486	0.000000	0.000000	0.176053
CarbonJunction052820_33	1215363	2310806	A	809.5	46.7	5/28/2020	-0.003	-0.033	1.334	0.2367127	0.000000	0.000000	0.315775
CarbonJunction052820_34	1215585	2310671	A	809.8	46.9	5/28/2020	-0.052	-0.024	0.021	0.2366525	0.000000	0.000000	0.004970
CarbonJunction052820_35	1215410	2310604	A	809.2	47.0	5/28/2020	-0.088	-0.024	1.432	0.2364033	0.000000	0.000000	0.338529
CarbonJunction052820_36	1215211	2310586	A	810.7	47.1	5/28/2020	-0.633	-0.033	1.751	0.2367675	0.000000	0.000000	0.414580
CarbonJunction052820_37	1215176	2310686	A	810.6	47.2	5/28/2020	4.539	0.026	2.453	0.2366644	1.074220	0.006153	0.580538
CarbonJunction052820_38	1215039	2310678	A	810.3	47.2	5/28/2020	-0.232	-0.039	0.403	0.2365768	0.000000	0.000000	0.095340
CarbonJunction052820_39	1214958	2310611	A	810.2	47.3	5/28/2020	-0.16	-0.013	2.516	0.2364738	0.000000	0.000000	0.594968
CarbonJunction052820_40	1214797	2310547	A	810.7	47.3	5/28/2020	-0.412	-0.027	2.593	0.2366198	0.000000	0.000000	0.613555
CarbonJunction052820_41	1214618	2310554	A	811.0	47.3	5/28/2020	-0.464	-0.02	1.434	0.2367073	0.000000	0.000000	0.339438
CarbonJunction052820_42	1214391	2310556	A	811.0	47.4	5/28/2020	-0.257	-0.011	1.767	0.2366335	0.000000	0.000000	0.418131
CarbonJunction052820_43	1214269	2310603	A	813.8	47.4	5/28/2020	0	-0.001	0.364	0.2374505	0.000000	0.000000	0.086432
CarbonJunction052820_44	1214212	2310667	A	810.4	47.4	5/28/2020	-0.106	-0.003	0.224	0.2364584	0.000000	0.000000	0.052967
CarbonJunction052820_45	1214381	2310695	A	809.8	47.4	5/28/2020	-0.263	-0.035	0.388	0.2362833	0.000000	0.000000	0.091678

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052820_46	1214543	2310744	A	809.9	47.4	5/28/2020	-0.32	-0.046	0.259	0.2363125	0.000000	0.000000	0.061205
CarbonJunction052820_47	1214749	2310740	A	809.8	47.4	5/28/2020	-0.486	-0.046	0.615	0.2362833	0.000000	0.000000	0.145314
CarbonJunction052820_48	1214751	2310868	A	809.8	47.4	5/28/2020	-0.159	-0.027	0.394	0.2362833	0.000000	0.000000	0.093096
CarbonJunction052820_49	1215893	2310918	A	808.1	42.3	5/28/2020	0	-0.014	1.37	0.2395994	0.000000	0.000000	0.328251
CarbonJunction052820_50	1215562	2310886	A	808.1	42.9	5/28/2020	-0.458	-0.003	0.602	0.2391445	0.000000	0.000000	0.143965
CarbonJunction052820_51	1215721	2310705	A	808.1	43.4	5/28/2020	0	-0.022	0.067	0.2387668	0.000000	0.000000	0.015997
CarbonJunction052820_52	1215931	2310780	A	808.5	43.9	5/28/2020	0	-0.045	0.436	0.2385082	0.000000	0.000000	0.103990
CarbonJunction052820_53	1216210	2310942	A	809.4	44.2	5/28/2020	0	-0.05	0.586	0.238548	0.000000	0.000000	0.139789
CarbonJunction052820_54	1215773	2310902	A	808.4	36.1	5/28/2020	-0.218	-0.001	0.264	0.2444937	0.000000	0.000000	0.064546
CarbonJunction052820_55	1215426	2311089	A	808.1	36.8	5/28/2020	0	-0.017	0.833	0.243851	0.000000	0.000000	0.203128
CarbonJunction052820_56	1215196	2311218	A	807.7	37.1	5/28/2020	0	-0.007	0.182	0.2434946	0.000000	0.000000	0.044316
CarbonJunction052820_57	1215034	2311368	A	807.6	37.4	5/28/2020	0	-0.009	0.144	0.2432293	0.000000	0.000000	0.035025
CarbonJunction052820_58	1215406	2311185	A	807.3	37.6	5/28/2020	0	-0.014	0.05	0.2429825	0.000000	0.000000	0.012149
CarbonJunction052820_59	1215435	2311374	A	807.0	37.8	5/28/2020	0	-0.011	0.035	0.2427359	0.000000	0.000000	0.008496
CarbonJunction052820_60	1215535	2311346	A	806.1	37.9	5/28/2020	0	-0.007	0.271	0.2423873	0.000000	0.000000	0.065687
CarbonJunction052820_61	1215615	2311454	A	805.7	38.0	5/28/2020	0	-0.001	0.072	0.2421891	0.000000	0.000000	0.017438

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052820_62	1215798	2311372	A	804.9	38.0	5/28/2020	0	-0.003	0.171	0.2419487	0.000000	0.000000	0.041373
CarbonJunction052820_63			A	804.6	38.1	5/28/2020	0	-0.009	0.584	0.2417808	0.000000	0.000000	0.141200
CarbonJunction052820_64	1216125	2311425	A	804.3	38.1	5/28/2020	0	-0.006	2.745	0.2416906	0.000000	0.000000	0.663441
CarbonJunction052820_65	1216190	2311510	A	804.6	38.1	5/28/2020	0	-0.009	0.759	0.2417808	0.000000	0.000000	0.183512
CarbonJunction052820_66	1216212	2311494	A	804.7	38.1	5/28/2020	10.509	-0.001	3.542	0.2418108	2.541190	0.000000	0.856494
CarbonJunction052820_67	1216269	2311441	A	805.3	38.2	5/28/2020	590.228	0.01	7.749	0.2419134	142.784100	0.002419	1.874587
CarbonJunction052820_68	1216212	2311368	A	806.4	38.3	5/28/2020	4.236	-0.003	4.94	0.2421661	1.025815	0.000000	1.196300
CarbonJunction052820_69	1216210	2311335	A	806.9	38.4	5/28/2020	75.904	0.004	48.375	0.2422384	18.386870	0.000969	11.718290
CarbonJunction052820_70	1216379	2311500	A	806.5	38.4	5/28/2020	2.167	-0.004	5.94	0.2421184	0.524670	0.000000	1.438183
CarbonJunction052820_71	1216417	2311431	A	807.0	38.4	5/28/2020	0	-0.028	0.214	0.2422685	0.000000	0.000000	0.051845
CarbonJunction052820_72	1216342	2311315	A	808.3	38.4	5/28/2020	-1.042	-0.006	0.256	0.2426587	0.000000	0.000000	0.062121
CarbonJunction052820_73	1216206	2311241	A	807.6	38.3	5/28/2020	0	-0.012	0.443	0.2425264	0.000000	0.000000	0.107439
CarbonJunction052820_74	1215997	2311247	A	808.4	38.3	5/28/2020	0	-0.008	1.753	0.2427667	0.000000	0.000000	0.425570
CarbonJunction052820_75	1215797	2311168	A	808.0	38.3	5/28/2020	0	-0.004	0.416	0.2426466	0.000000	0.000000	0.100941
CarbonJunction052820_76	1215659	2311170	A	807.8	38.3	5/28/2020	0	-0.004	0.036	0.2425865	0.000000	0.000000	0.008733
CarbonJunction052920_100	1217005	2312226	A	802.9	36.8	5/29/2020	0	-0.005	0.332	0.2422819	0.000000	0.000000	0.080438

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052920_101	1217089	2312195	A	803.7	37.3	5/29/2020	-0.013	-0.002	0.218	0.2421327	0.000000	0.000000	0.052785
CarbonJunction052920_102	1217138	2312223	A	805.3	37.7	5/29/2020	0	-0.006	0.05	0.2423025	0.000000	0.000000	0.012115
CarbonJunction052920_103	1217129	2312484	A	805.4	38.0	5/29/2020	-1.204	-0.005	0.23	0.242099	0.000000	0.000000	0.055683
CarbonJunction052920_104	1217148	2312536	A	802.3	38.2	5/29/2020	0	-0.006	0.144	0.2410122	0.000000	0.000000	0.034706
CarbonJunction052920_105	1217203	2312750	A	802.3	38.2	5/29/2020	0	-0.002	0.319	0.2410122	0.000000	0.000000	0.076883
CarbonJunction052920_106	1217329	2312655	A	802.0	38.3	5/29/2020	-1.905	-0.005	0.136	0.2408447	0.000000	0.000000	0.032755
CarbonJunction052920_107	1217404	2312798	A	802.0	38.4	5/29/2020	0	-0.005	0.874	0.2407674	0.000000	0.000000	0.210431
CarbonJunction052920_108	1217543	2312837	A	801.8	38.5	5/29/2020	0	-0.014	2.569	0.2406301	0.000000	0.000000	0.618179
CarbonJunction052920_109	1217530	2312960	A	801.6	38.7	5/29/2020	0	-0.014	0.503	0.2404158	0.000000	0.000000	0.120929
CarbonJunction052920_110	1217677	2312935	A	801.5	38.8	5/29/2020	0	-0.01	1.162	0.2403088	0.000000	0.000000	0.279239
CarbonJunction052920_111	1217756	2312847	A	802.0	39.0	5/29/2020	0	-0.004	2.871	0.2403046	0.000000	0.000000	0.689915
CarbonJunction052920_112	1217780	2313115	A	801.8	39.2	5/29/2020	0	-0.011	1.364	0.2400909	0.000000	0.000000	0.327484
CarbonJunction052920_113	1217647	2313153	A	801.4	39.5	5/29/2020	0	-0.01	0.515	0.2397408	0.000000	0.000000	0.123467
CarbonJunction052920_114	1217650	2313252	A	801.4	39.7	5/29/2020	0	-0.012	2.055	0.2395876	0.000000	0.000000	0.492352
CarbonJunction052920_115	1217522	2313204	A	801.4	40.0	5/29/2020	-0.174	-0.013	2.514	0.2393581	0.000000	0.000000	0.601746
CarbonJunction052920_116	1217532	2313300	A	801.5	40.2	5/29/2020	-0.425	-0.01	0.659	0.2392351	0.000000	0.000000	0.157656

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052920_117	1217617	2313358	A	801.1	40.4	5/29/2020	-0.704	-0.02	0.73	0.2389632	0.000000	0.000000	0.174443
CarbonJunction052920_118	1217704	2313304	A	800.8	40.6	5/29/2020	0	-0.015	0.296	0.2387214	0.000000	0.000000	0.070662
CarbonJunction052920_119	1217774	2313263	A	801.0	40.8	5/29/2020	0	-0.013	0.061	0.238629	0.000000	0.000000	0.014556
CarbonJunction052920_120	1217888	2313239	A	801.2	41.0	5/29/2020	-0.218	-0.008	1.43	0.2385366	0.000000	0.000000	0.341107
CarbonJunction052920_121	1218041	2313241	A	801.1	41.3	5/29/2020	0	-0.018	1.03	0.2382793	0.000000	0.000000	0.245428
CarbonJunction052920_122	1218035	2312993	A	801.1	41.5	5/29/2020	-0.486	-0.02	1.061	0.2381278	0.000000	0.000000	0.252654
CarbonJunction052920_123	1218036	2312807	A	801.1	41.8	5/29/2020	0	-0.03	1.42	0.237901	0.000000	0.000000	0.337819
CarbonJunction052920_124	1218038	2312677	A	801.7	42.0	5/29/2020	0	-0.009	0.34	0.2379281	0.000000	0.000000	0.080896
CarbonJunction052920_125	1217810	2312576	A	802.5	42.3	5/29/2020	-0.656	-0.025	4.193	0.237939	0.000000	0.000000	0.997678
CarbonJunction052920_126	1217881	2312538	A	804.4	42.5	5/29/2020	-0.954	-0.014	2.033	0.2383512	0.000000	0.000000	0.484568
CarbonJunction052920_127	1218003	2312501	A	804.6	42.6	5/29/2020	0	-0.038	0.398	0.238335	0.000000	0.000000	0.094857
CarbonJunction052920_128	1217947	2312439	A	805.2	42.8	5/29/2020	-0.598	-0.008	0.434	0.2383617	0.000000	0.000000	0.103449
CarbonJunction052920_129	1217812	2312456	A	804.8	42.9	5/29/2020	0	-0.023	0.614	0.2381679	0.000000	0.000000	0.146235
CarbonJunction052920_130	1217656	2312422	A	805.5	43.1	5/29/2020	-0.534	-0.016	1.24	0.2382243	0.000000	0.000000	0.295398
CarbonJunction052920_131	1217636	2312395	A	805.6	43.2	5/29/2020	-0.963	-0.024	1.082	0.2381786	0.000000	0.000000	0.257709
CarbonJunction052920_132	1217566	2312401	A	805.6	43.3	5/29/2020	0	-0.022	2.348	0.2381033	0.000000	0.000000	0.559067

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052920_133	1217509	2312187	A	805.9	43.4	5/29/2020	-0.33	-0.012	0.068	0.2381168	0.000000	0.000000	0.016192
CarbonJunction052920_134	1217388	2312237	A	804.6	43.8	5/29/2020	-0.858	-0.024	1.05	0.2374326	0.000000	0.000000	0.249304
CarbonJunction052920_135	1217376	2312300	A	806.7	44.1	5/29/2020	14.771	0.021	0.879	0.2378272	3.512946	0.004994	0.209050
CarbonJunction052920_136	1217394	2312322	A	805.3	44.3	5/29/2020	0	-0.017	0.15	0.2372649	0.000000	0.000000	0.035590
CarbonJunction052920_137	1217396	2312316	A	805.0	44.4	5/29/2020	16.318	0.013	0.708	0.2371018	3.869027	0.003082	0.167868
CarbonJunction052920_138	1217219	2311800	A	805.2	44.9	5/29/2020	0	-0.019	0.243	0.2367879	0.000000	0.000000	0.057539
CarbonJunction052920_139	1217179	2311875	A	804.5	45.1	5/29/2020	-2.286	-0.057	0.417	0.2364334	0.000000	0.000000	0.098593
CarbonJunction052920_140	1217008	2311858	A	805.3	45.4	5/29/2020	0	-0.015	0.129	0.2364456	0.000000	0.000000	0.030501
CarbonJunction052920_141	1216979	2311828	A	809.6	45.5	5/29/2020	-0.802	-0.006	0.953	0.2376335	0.000000	0.000000	0.226465
CarbonJunction052920_142	1216896	2311704	A	806.4	45.8	5/29/2020	0	-0.012	0.111	0.2364716	0.000000	0.000000	0.026248
CarbonJunction052920_143	1216803	2311686	A	806.8	46.0	5/29/2020	-0.661	-0.027	0.2	0.2364407	0.000000	0.000000	0.047288
CarbonJunction052920_144	1216651	2311663	A	807.2	46.2	5/29/2020	0	-0.032	0.197	0.2364097	0.000000	0.000000	0.046573
CarbonJunction052920_145	1216554	2311566	A	808.5	46.4	5/29/2020	-1.518	-0.04	0.2	0.2366423	0.000000	0.000000	0.047328
CarbonJunction052920_146	1216547	2311689	A	808.5	46.5	5/29/2020	57.189	0.011	4.753	0.2365682	13.529100	0.002602	1.124409
CarbonJunction052920_147	1216644	2311766	A	807.7	46.5	5/29/2020	-0.284	-0.056	1.23	0.2363341	0.000000	0.000000	0.290691
CarbonJunction052920_148	1216680	2311813	A	806.8	46.6	5/29/2020	-1.559	-0.035	2.812	0.235997	0.000000	0.000000	0.663624

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052920_149	1216735	2311810	A	806.4	46.7	5/29/2020	316.472	0.08	11.25	0.2358062	74.626070	0.018864	2.652820
CarbonJunction052920_150	1216755	2311807	A	806.7	46.9	5/29/2020	1148.459	0.048	7.737	0.2357465	270.745200	0.011316	1.823971
CarbonJunction052920_151	1216753	2311830	A	806.4	47.0	5/29/2020	70.371	0.012	0.207	0.2355853	16.578370	0.002827	0.048766
CarbonJunction052920_152	1216789	2311844	A	806.1	47.2	5/29/2020	28.38	0.018	4.556	0.2353506	6.679250	0.004236	1.072257
CarbonJunction052920_153	1216904	2311954	A	806.0	47.6	5/29/2020	192.025	0.03	8.383	0.2350279	45.131240	0.007051	1.970239
CarbonJunction052920_154	1216852	2311876	A	806.0	48.0	5/29/2020	6.434	0.033	3.123	0.2347352	1.510286	0.007746	0.733078
CarbonJunction052920_155	1216878	2311881	A	806.7	48.2	5/29/2020	-1.168	-0.036	-0.023	0.2347928	0.000000	0.000000	0.000000
CarbonJunction052920_77	1215670	2311699	A	806.9	27.0	5/29/2020	-0.741	-0.005	0.49	0.2514389	0.000000	0.000000	0.123205
CarbonJunction052920_78	1215753	2311687	A	807.0	27.6	5/29/2020	-0.786	-0.001	0.013	0.2509684	0.000000	0.000000	0.003263
CarbonJunction052920_79	1215795	2311609	A	806.9	28.2	5/29/2020	0	-0.003	0.005	0.2504376	0.000000	0.000000	0.001252
CarbonJunction052920_80	1215963	2311584	A	806.5	28.9	5/29/2020	-0.052	-0.007	0.038	0.2497334	0.000000	0.000000	0.009490
CarbonJunction052920_81	1216078	2311662	A	806.5	29.4	5/29/2020	0	-0.009	0.57	0.2493207	0.000000	0.000000	0.142113
CarbonJunction052920_82	1216196	2311741	A	805.1	29.9	5/29/2020	-0.332	-0.006	0.154	0.2484773	0.000000	0.000000	0.038266
CarbonJunction052920_83	1216274	2311797	A	804.5	30.4	5/29/2020	-0.717	-0.005	0.567	0.2478831	0.000000	0.000000	0.140550
CarbonJunction052920_84	1215981	2311760	A	804.5	30.8	5/29/2020	0	0	0.134	0.2475569	0.000000	0.000000	0.033173
CarbonJunction052920_85	1216055	2311938	A	804.3	31.1	5/29/2020	0	-0.01	0.326	0.2472513	0.000000	0.000000	0.080604

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
CarbonJunction052920_86	1216191	2311923	A	804.2	31.4	5/29/2020	0	0	0.419	0.246977	0.000000	0.000000	0.103483
CarbonJunction052920_87	1216373	2312114	A	804.2	31.9	5/29/2020	0	-0.012	0.217	0.2465722	0.000000	0.000000	0.053506
CarbonJunction052920_88	1216412	2312000	A	804.1	32.3	5/29/2020	0	-0.001	0.157	0.2462187	0.000000	0.000000	0.038656
CarbonJunction052920_89	1216521	2312025	A	803.9	32.8	5/29/2020	-0.718	-0.002	0.251	0.2457552	0.000000	0.000000	0.061685
CarbonJunction052920_90	1216751	2311986	A	804.6	34.1	5/29/2020	-0.494	-0.002	0.561	0.2449285	0.000000	0.000000	0.137405
CarbonJunction052920_91	1216721	2312019	A	805.4	34.6	5/29/2020	3.025	0.002	1.318	0.2447737	0.740440	0.000490	0.322612
CarbonJunction052920_92	1216732	2312031	A	804.9	35.0	5/29/2020	0	-0.002	1.478	0.2443042	0.000000	0.000000	0.361082
CarbonJunction052920_93	1216737	2312047	A	804.9	35.2	5/29/2020	0	-0.003	1.496	0.2441457	0.000000	0.000000	0.365242
CarbonJunction052920_94	1216750	2312168	A	807.4	35.5	5/29/2020	0	-0.002	0.243	0.244666	0.000000	0.000000	0.059454
CarbonJunction052920_95	1216545	2312151	A	806.0	35.7	5/29/2020	0	-0.015	0.348	0.2440836	0.000000	0.000000	0.084941
CarbonJunction052920_96	1216567	2312348	A	803.1	35.8	5/29/2020	-1.046	-0.004	0.108	0.2431266	0.000000	0.000000	0.026258
CarbonJunction052920_97	1216754	2312330	A	803.0	35.9	5/29/2020	0	-0.008	0.566	0.2430177	0.000000	0.000000	0.137548
CarbonJunction052920_98	1216924	2312502	A	802.7	36.2	5/29/2020	0	-0.003	0.408	0.2426913	0.000000	0.000000	0.099018
CarbonJunction052920_99	1216993	2312363	A	802.6	36.4	5/29/2020	0	-0.009	0.288	0.2425043	0.000000	0.000000	0.069841
Federal060220_01	1219738	2320124	A	793.4	30.5	6/2/2020	-2.794	-0.002	0.603	0.2443825	0.000000	0.000000	0.147363
Federal060220_02	1219769	2320131	A	793.3	31.3	6/2/2020	-0.841	-0.033	0.264	0.2437096	0.000000	0.000000	0.064339
Federal060220_03	1219823	2320136	A	793.0	32.0	6/2/2020	0	-0.001	0.455	0.2430586	0.000000	0.000000	0.110592

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
Federal060220_04	1219877	2320130	A	792.8	32.7	6/2/2020	-1.28	-0.02	0.824	0.2424411	0.000000	0.000000	0.199771
Federal060220_05	1219917	2320123	A	792.4	33.4	6/2/2020	-0.616	-0.007	0.171	0.2417655	0.000000	0.000000	0.041342
Federal060220_06	1219915	2320096	A	792.4	34.0	6/2/2020	-0.351	-0.027	0.513	0.2412932	0.000000	0.000000	0.123783
Federal060220_07	1219914	2320045	A	792.5	34.6	6/2/2020	-1.123	-0.01	1.086	0.2408531	0.000000	0.000000	0.261567
Federal060220_08	1219911	2319989	A	792.5	35.2	6/2/2020	-0.73	-0.016	0.666	0.2403845	0.000000	0.000000	0.160096
Federal060220_09	1219911	2319931	A	792.5	35.7	6/2/2020	-1.121	-0.014	0.693	0.2399953	0.000000	0.000000	0.166317
Federal060220_10	1219874	2319956	A	792.5	36.3	6/2/2020	-0.12	-0.007	0.769	0.23953	0.000000	0.000000	0.184199
Federal060220_11	1219877	2319989	A	792.5	36.9	6/2/2020	-0.9	-0.012	0.507	0.2390665	0.000000	0.000000	0.121207
Federal060220_12	1219872	2320029	A	792.5	37.4	6/2/2020	0	-0.009	1.616	0.2386816	0.000000	0.000000	0.385709
Federal060220_13	1219873	2320094	A	792.5	37.9	6/2/2020	-0.587	-0.012	2.376	0.2382979	0.000000	0.000000	0.566196
Federal060220_14	1219831	2320094	A	792.5	38.4	6/2/2020	0	-0.022	0.295	0.2379154	0.000000	0.000000	0.070185
Federal060220_15	1219829	2320020	A	792.5	39.0	6/2/2020	-1.81	-0.006	1.06	0.2374581	0.000000	0.000000	0.251706
Federal060220_16	1219816	2319983	A	792.5	39.4	6/2/2020	-0.061	-0.011	1.219	0.2371542	0.000000	0.000000	0.289091
Federal060220_17	1219815	2319929	A	792.4	39.9	6/2/2020	-1.349	-0.025	1.204	0.2367456	0.000000	0.000000	0.285042
Federal060220_18	1219775	2319944	A	792.5	40.3	6/2/2020	-0.514	-0.024	1.171	0.2364733	0.000000	0.000000	0.276910
Federal060220_19	1219714	2319927	A	792.6	40.7	6/2/2020	-0.219	-0.04	1.068	0.2362017	0.000000	0.000000	0.252263
Federal060220_20	1219718	2319980	A	792.6	41.1	6/2/2020	-0.666	-0.026	0.709	0.2359011	0.000000	0.000000	0.167254
Federal060220_21	1219782	2319995	A	792.6	41.4	6/2/2020	-1.187	-0.034	0.628	0.2356761	0.000000	0.000000	0.148005
Federal060220_22	1219781	2320041	A	792.6	41.8	6/2/2020	0	-0.019	0.808	0.2353767	0.000000	0.000000	0.190184
Federal060220_23	1219764	2320079	A	792.2	42.1	6/2/2020	0	-0.038	0.971	0.2350341	0.000000	0.000000	0.228218
Federal060220_24	1219711	2320040	A	792.2	42.3	6/2/2020	-0.821	-0.027	1.982	0.2348851	0.000000	0.000000	0.465542
Federal060220_25	1219729	2320080	A	792.5	42.6	6/2/2020	0	-0.024	0.154	0.2347508	0.000000	0.000000	0.036152

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060320_01	1234979	2331972	A	791.5	27.2	6/3/2020	-1.572	-0.002	0.465	0.2464759	0.000000	0.000000	0.114611
FloridaRiver060320_02	1235026	2332025	A	791.4	28.1	6/3/2020	-0.731	0.004	1.634	0.2457085	0.000000	0.000983	0.401488
FloridaRiver060320_03	1235160	2332048	A	791.8	29.2	6/3/2020	0	0.029	0.645	0.2449383	0.000000	0.007103	0.157985
FloridaRiver060320_04	1235196	2332117	A	791.7	30.0	6/3/2020	-0.833	0.012	0.466	0.244261	0.000000	0.002931	0.113826
FloridaRiver060320_05	1235333	2332131	A	791.8	30.9	6/3/2020	-0.73	0.006	1.739	0.2435688	0.000000	0.001461	0.423566
FloridaRiver060320_06	1235572	2332279	A	791.8	31.9	6/3/2020	-1.543	0.006	1.211	0.2427703	0.000000	0.001457	0.293995
FloridaRiver060320_07	1235572	2332245	A	791.8	32.4	6/3/2020	-0.001	0.007	1.237	0.242373	0.000000	0.001697	0.299815
FloridaRiver060320_08	1235561	2332336	A	791.8	33.1	6/3/2020	-0.831	0.013	1.169	0.2418191	0.000000	0.003144	0.282686
FloridaRiver060320_09	1235567	2332375	A	791.8	33.7	6/3/2020	11.722	0.033	18.285	0.2413462	2.829060	0.007964	4.413015
FloridaRiver060320_10	1235542	2332375	A	791.8	34.2	6/3/2020	-0.001	0.028	2.009	0.2409536	0.000000	0.006747	0.484076
FloridaRiver060320_11	1235515	2332399	A	791.8	34.7	6/3/2020	0	0.018	1.213	0.2405622	0.000000	0.004330	0.291802
FloridaRiver060320_12	1235511	2332403	A	791.8	35.1	6/3/2020	3848.925	-0.002	1.322	0.2402501	924.704500	0.000000	0.317611
FloridaRiver060320_13	1235513	2332431	A	791.8	35.7	6/3/2020	2296.227	0.027	2.061	0.2397833	550.597000	0.006474	0.494193
FloridaRiver060320_14	1235516	2332425	A	791.8	36.0	6/3/2020	638.312	0.031	4.748	0.2395507	152.908100	0.007426	1.137387
FloridaRiver060320_15	1235543	2332421	A	791.8	36.5	6/3/2020	-2.773	0.028	0.857	0.2391638	0.000000	0.006697	0.204963
FloridaRiver060320_16	1235553	2332463	A	791.8	37.0	6/3/2020	4.744	0.019	2.976	0.2387783	1.132764	0.004537	0.710604

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060320_17	1235520	2332454	A	791.8	37.5	6/3/2020	-3.22	0.044	1.455	0.238394	0.000000	0.010489	0.346863
FloridaRiver060320_18	1235510	2332474	A	791.8	38.1	6/3/2020	1146.789	0.025	3.136	0.2379344	272.860600	0.005948	0.746162
FloridaRiver060320_19	1235403	2332493	A	791.7	38.7	6/3/2020	36.549	0.029	3.541	0.2374466	8.678436	0.006886	0.840798
FloridaRiver060320_20	1235372	2332476	A	791.8	39.2	6/3/2020	4887.686	0.022	11.669	0.2370965	1158.853000	0.005216	2.766679
FloridaRiver060320_21	1235376	2332476	A	791.8	39.7	6/3/2020	2978.448	0.025	0.946	0.2367176	705.050900	0.005918	0.223935
FloridaRiver060320_22	1235348	2332508	A	791.7	40.2	6/3/2020	3.733	0.012	9.152	0.23631	0.882145	0.002836	2.162709
FloridaRiver060320_23	1235330	2332489	A	791.5	40.9	6/3/2020	-0.41	0.02	2.068	0.2357237	0.000000	0.004714	0.487477
FloridaRiver060320_24	1235331	2332474	A	791.7	41.4	6/3/2020	-2.158	0.016	1.696	0.2354085	0.000000	0.003767	0.399253
FloridaRiver060320_25	1235164	2332522	A	791.5	42.6	6/3/2020	-5.265	0.003	1.24	0.2344546	0.000000	0.000703	0.290724
FloridaRiver060320_26	1235154	2332370	A	791.5	43.1	6/3/2020	-4.453	0.047	2.823	0.2340839	0.000000	0.011002	0.660819
FloridaRiver060320_27	1234958	2332154	A	791.5	43.8	6/3/2020	-6.678	0.016	3.529	0.2335669	0.000000	0.003737	0.824258
FloridaRiver060320_28	1234948	2332323	A	791.4	44.1	6/3/2020	-2.636	0.015	1.559	0.2333165	0.000000	0.003500	0.363741
FloridaRiver060320_29	1235505	2332613	A	791.4	44.4	6/3/2020	-0.431	0.006	1.467	0.2330961	0.000000	0.001399	0.341952
FloridaRiver060320_30	1235414	2332813	A	791.3	44.3	6/3/2020	-1.346	0.011	-0.035	0.2331401	0.000000	0.002565	0.000000
FloridaRiver060320_31	1235525	2332737	A	789.8	44.2	6/3/2020	-1.704	0.004	0.3	0.2327715	0.000000	0.000931	0.069831
FloridaRiver060320_32	1235551	2332955	A	789.8	44.2	6/3/2020	-4.849	0.001	0.298	0.2327715	0.000000	0.000233	0.069366

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060320_33	1235654	2332851	A	787.8	44.2	6/3/2020	-2.243	-0.001	2.242	0.232182	0.000000	0.000000	0.520552
FloridaRiver060320_34	1235668	2332833	A	788.1	44.3	6/3/2020	-2.285	-0.001	1.141	0.2321973	0.000000	0.000000	0.264937
FloridaRiver060320_35	1235719	2332826	A	788.1	44.3	6/3/2020	4.37	0.012	9.165	0.2321973	1.014702	0.002786	2.128088
FloridaRiver060320_36	1235739	2332808	A	788.3	44.3	6/3/2020	-8.716	0.002	1.077	0.2322562	0.000000	0.000465	0.250140
FloridaRiver060320_37	1235728	2332768	A	788.3	44.3	6/3/2020	-2.15	0.018	0.189	0.2322562	0.000000	0.004181	0.043896
FloridaRiver060320_38	1235782	2332768	A	789.0	44.3	6/3/2020	-4.004	0.006	0.902	0.2324624	0.000000	0.001395	0.209681
FloridaRiver060320_39	1235909	2332845	A	789.0	44.2	6/3/2020	-3.377	-0.001	0.118	0.2325357	0.000000	0.000000	0.027439
FloridaRiver060320_40	1235985	2333036	A	788.2	44.2	6/3/2020	-1.089	0.003	0.592	0.2322999	0.000000	0.000697	0.137522
FloridaRiver060320_41	1235937	2333183	A	786.5	44.2	6/3/2020	-6.184	0.003	0.425	0.2317989	0.000000	0.000695	0.098515
FloridaRiver060320_42	1235854	2333094	A	785.6	44.1	6/3/2020	-1.54	0.002	0.895	0.2316066	0.000000	0.000463	0.207288
FloridaRiver060320_43	1235770	2332952	A	786.5	44.0	6/3/2020	-10.998	0.002	0.442	0.2319451	0.000000	0.000464	0.102520
FloridaRiver060320_44	1235547	2333102	A	787.0	43.9	6/3/2020	-1.353	-0.004	0.393	0.2321657	0.000000	0.000000	0.091241
FloridaRiver060320_65	1234875	2331993	A	778.1	43.8	6/3/2020	-9.943	-0.007	0.25	0.2296126	0.000000	0.000000	0.057403
FloridaRiver060320_66	1234977	2331861	A	789.7	43.7	6/3/2020	-5.053	-0.011	0.644	0.2331093	0.000000	0.000000	0.150122
FloridaRiver060320_67	1234880	2331851	A	789.7	43.6	6/3/2020	-7.28	-0.003	0.192	0.2331829	0.000000	0.000000	0.044771
FloridaRiver060320_68	1234876	2331810	A	789.1	43.5	6/3/2020	-4.807	-0.016	1.936	0.2330793	0.000000	0.000000	0.451241

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060320_69	1235182	2331803	A	789.0	43.3	6/3/2020	-9.308	0	1.057	0.233197	0.000000	0.000000	0.246489
FloridaRiver060320_70	1235834	2332276	A	789.4	42.9	6/3/2020	-4.637	-0.003	0.448	0.2336105	0.000000	0.000000	0.104658
FloridaRiver060520_100	1235116	2331082	A	785.6	47.7	6/5/2020	-1.852	0.007	0.495	0.2290079	0.000000	0.001603	0.113359
FloridaRiver060520_101	1235216	2330967	A	784.7	47.9	6/5/2020	-1.417	-0.003	0.243	0.2286031	0.000000	0.000000	0.055551
FloridaRiver060520_102	1235206	2330819	A	784.4	48.0	6/5/2020	-0.746	0.004	1.29	0.2284445	0.000000	0.000914	0.294693
FloridaRiver060520_103	1235084	2330668	A	784.2	48.1	6/5/2020	-5.433	0.014	-0.458	0.2283152	0.000000	0.003196	0.000000
FloridaRiver060520_104	1235006	2330768	A	783.6	48.1	6/5/2020	-3.919	-0.024	0.561	0.2281405	0.000000	0.000000	0.127987
FloridaRiver060520_105	1234943	2330852	A	784.2	48.1	6/5/2020	-2.986	-0.001	1.717	0.2283152	0.000000	0.000000	0.392017
FloridaRiver060520_106	1234996	2330971	A	784.4	48.0	6/5/2020	-1.038	-0.01	0.537	0.2284445	0.000000	0.000000	0.122675
FloridaRiver060520_107	1234734	2330979	A	784.6	48.0	6/5/2020	-2.791	-0.022	0.271	0.2285028	0.000000	0.000000	0.061924
FloridaRiver060520_108	1234594	2331034	A	784.8	47.9	6/5/2020	-1.574	0.009	2.429	0.2286322	0.000000	0.002058	0.555348
FloridaRiver060520_109	1234522	2330983	A	785.2	47.9	6/5/2020	-2.409	-0.002	0.918	0.2287488	0.000000	0.000000	0.209991
FloridaRiver060520_110	1234421	2330819	A	785.1	47.8	6/5/2020	-0.513	0.004	0.391	0.2287909	0.000000	0.000915	0.089457
FloridaRiver060520_111	1234559	2330756	A	784.8	47.7	6/5/2020	-1.16	-0.007	0.584	0.2287747	0.000000	0.000000	0.133604
FloridaRiver060520_112	1234783	2330771	A	784.4	47.7	6/5/2020	-0.618	0.01	0.43	0.2286581	0.000000	0.002287	0.098323
FloridaRiver060520_113	1234753	2330610	A	783.9	47.6	6/5/2020	-1.011	0.008	0.131	0.2285836	0.000000	0.001829	0.029944

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060520_114	1234619	2330584	A	783.8	47.6	6/5/2020	-1.035	-0.001	0.723	0.2285545	0.000000	0.000000	0.165245
FloridaRiver060520_115	1234496	2330566	A	784.0	47.5	6/5/2020	-1.717	-0.018	0.933	0.2286841	0.000000	0.000000	0.213362
FloridaRiver060520_116	1234419	2330410	A	784.0	47.4	6/5/2020	-1.713	-0.007	0.219	0.2287554	0.000000	0.000000	0.050097
FloridaRiver060520_117	1234465	2330357	A	783.4	47.3	6/5/2020	-1.112	-0.009	0.329	0.2286517	0.000000	0.000000	0.075226
FloridaRiver060520_118	1234531	2330358	A	783.2	47.3	6/5/2020	-0.98	-0.003	0.833	0.2285933	0.000000	0.000000	0.190418
FloridaRiver060520_119	1234548	2330323	A	782.8	47.2	6/5/2020	-1.571	-0.008	3.061	0.2285479	0.000000	0.000000	0.699585
FloridaRiver060520_120	1234579	2330381	A	783.2	47.1	6/5/2020	-1.376	-0.014	0.874	0.2287361	0.000000	0.000000	0.199915
FloridaRiver060520_121	1234745	2330375	A	783.2	47.0	6/5/2020	-1.952	-0.012	1.083	0.2288075	0.000000	0.000000	0.247799
FloridaRiver060520_122	1234789	2330175	A	782.7	46.8	6/5/2020	-1.215	0.004	0.049	0.2288044	0.000000	0.000915	0.011211
FloridaRiver060520_123	1234531	2330161	A	781.3	46.8	6/5/2020	-1.634	-0.009	0.985	0.2283951	0.000000	0.000000	0.224969
FloridaRiver060520_124	1234523	2330242	A	782.0	46.8	6/5/2020	-0.884	-0.012	2.564	0.2285997	0.000000	0.000000	0.586130
FloridaRiver060520_125	1234489	2330139	A	781.7	46.8	6/5/2020	2.022	-0.001	0.9	0.228512	0.462051	0.000000	0.205661
FloridaRiver060520_126	1234378	2330172	A	781.7	46.8	6/5/2020	-1.344	-0.002	0.418	0.228512	0.000000	0.000000	0.095518
FloridaRiver060520_71	1235286	2331796	A	787.9	37.4	6/5/2020	0	-0.063	3.365	0.2372961	0.000000	0.000000	0.798502
FloridaRiver060520_72	1235333	2331776	A	787.6	37.9	6/5/2020	6.581	0.01	6.718	0.2368245	1.558542	0.002368	1.590987
FloridaRiver060520_73	1235320	2331774	A	787.6	38.3	6/5/2020	6.355	0.025	6.026	0.2365203	1.503087	0.005913	1.425272

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060520_74	1235336	2331789	A	787.6	38.9	6/5/2020	101.618	0.034	5.984	0.2360656	23.988510	0.008026	1.412616
FloridaRiver060520_75	1235356	2331798	A	787.2	39.4	6/5/2020	326.767	0.021	10.559	0.2355682	76.975910	0.004947	2.487365
FloridaRiver060520_76	1235415	2331824	A	786.8	39.9	6/5/2020	4.315	0.003	3.815	0.2350725	1.014338	0.000705	0.896801
FloridaRiver060520_77	1235374	2331886	A	786.7	40.3	6/5/2020	-1.859	0.001	3.893	0.2347426	0.000000	0.000235	0.913853
FloridaRiver060520_78	1235401	2331941	A	787.1	40.6	6/5/2020	0	-0.003	0.315	0.2346374	0.000000	0.000000	0.073911
FloridaRiver060520_79	1235540	2331927	A	787.1	41.0	6/5/2020	-0.382	0.008	0.588	0.2343387	0.000000	0.001875	0.137791
FloridaRiver060520_80	1235568	2331840	A	786.5	41.5	6/5/2020	-0.025	0.004	-0.155	0.2337879	0.000000	0.000935	0.000000
FloridaRiver060520_81	1235576	2331739	A	786.7	41.8	6/5/2020	-0.898	0.019	1.111	0.2336246	0.000000	0.004439	0.259557
FloridaRiver060520_82	1235502	2331649	A	787.0	42.1	6/5/2020	-0.114	0.003	0.221	0.2334913	0.000000	0.000700	0.051602
FloridaRiver060520_83	1235398	2331588	A	787.5	42.5	6/5/2020	-3.139	0.002	0.335	0.2333436	0.000000	0.000467	0.078170
FloridaRiver060520_84	1235218	2331702	A	788.2	43.0	6/5/2020	-1.063	-0.003	5.342	0.2331816	0.000000	0.000000	1.245656
FloridaRiver060520_85	1235234	2331662	A	788.6	43.3	6/5/2020	-0.457	0.003	2.387	0.2330788	0.000000	0.000699	0.556359
FloridaRiver060520_86	1235183	2331592	A	788.5	43.8	6/5/2020	-0.701	0.005	2.339	0.2326816	0.000000	0.001163	0.544242
FloridaRiver060520_87	1235171	2331567	A	787.5	44.1	6/5/2020	-0.775	-0.005	1.195	0.2321668	0.000000	0.000000	0.277439
FloridaRiver060520_88	1235171	2331513	A	787.0	44.3	6/5/2020	38.807	0.02	21.174	0.2318732	8.998302	0.004637	4.909682
FloridaRiver060520_89	1235341	2331448	A	786.6	44.6	6/5/2020	-1.327	-0.006	0.407	0.2315365	0.000000	0.000000	0.094235

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060520_90	1234997	2331407	A	786.6	45.0	6/5/2020	-0.574	-0.015	0.142	0.2312454	0.000000	0.000000	0.032837
FloridaRiver060520_91	1234786	2331438	A	786.5	45.3	6/5/2020	-1.763	0	0.563	0.2309982	0.000000	0.000000	0.130052
FloridaRiver060520_92	1234746	2331554	A	786.7	45.6	6/5/2020	-0.677	-0.007	0.296	0.2308395	0.000000	0.000000	0.068328
FloridaRiver060520_93	1234563	2331386	A	786.7	45.8	6/5/2020	-0.497	0.003	0.711	0.2306947	0.000000	0.000692	0.164024
FloridaRiver060520_94	1234517	2331199	A	786.5	46.5	6/5/2020	-1.347	0.002	0.232	0.230131	0.000000	0.000460	0.053390
FloridaRiver060520_95	1234768	2331251	A	786.0	46.8	6/5/2020	-1.494	0.012	0.355	0.2297691	0.000000	0.002757	0.081568
FloridaRiver060520_96	1235038	2331187	A	785.8	47.0	6/5/2020	5.241	-0.003	2.253	0.2295671	1.203161	0.000000	0.517215
FloridaRiver060520_97	1235089	2331236	A	785.8	47.1	6/5/2020	1.572	0.029	3.02	0.2294954	0.360767	0.006655	0.693076
FloridaRiver060520_98	1235158	2331361	A	785.8	47.3	6/5/2020	-0.935	-0.007	0.057	0.2293522	0.000000	0.000000	0.013073
FloridaRiver060520_99	1235192	2331242	A	785.8	47.5	6/5/2020	-1.552	0.004	1.175	0.2292091	0.000000	0.000917	0.269321
FloridaRiver060920_127	1234255	2329882	A	782.0	34.0	6/9/2020	-0.284	-0.015	1.141	0.2381263	0.000000	0.000000	0.271702
FloridaRiver060920_128	1234302	2329948	A	782.0	34.5	6/9/2020	-1.102	-0.018	0.226	0.2377393	0.000000	0.000000	0.053729
FloridaRiver060920_129	1234349	2329878	A	781.4	34.9	6/9/2020	-0.323	-0.007	2.392	0.2372484	0.000000	0.000000	0.567498
FloridaRiver060920_130	1234378	2329925	A	781.4	35.2	6/9/2020	-0.095	-0.018	0.643	0.2370176	0.000000	0.000000	0.152402
FloridaRiver060920_131	1234470	2329944	A	781.3	35.5	6/9/2020	-1.843	-0.024	1.995	0.2367569	0.000000	0.000000	0.472330
FloridaRiver060920_132	1234542	2329951	A	780.9	35.8	6/9/2020	-0.16	-0.036	0.288	0.2364059	0.000000	0.000000	0.068085

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060920_133	1234589	2330000	A	780.2	36.0	6/9/2020	-1.237	-0.027	0.219	0.2360412	0.000000	0.000000	0.051693
FloridaRiver060920_134	1234533	2329878	A	780.6	36.3	6/9/2020	-1.342	-0.014	0.309	0.2359333	0.000000	0.000000	0.072903
FloridaRiver060920_135	1234489	2329858	A	780.2	36.6	6/9/2020	-0.848	-0.017	0.416	0.235584	0.000000	0.000000	0.098003
FloridaRiver060920_136	1234355	2329780	A	780.4	36.9	6/9/2020	-1.211	-0.011	3.065	0.2354164	0.000000	0.000000	0.721551
FloridaRiver060920_137	1234351	2329608	A	781.3	37.2	6/9/2020	0	-0.025	0.596	0.23546	0.000000	0.000000	0.140334
FloridaRiver060920_138	1234112	2329730	A	781.0	37.6	6/9/2020	-0.108	-0.04	0.562	0.2350666	0.000000	0.000000	0.132107
FloridaRiver060920_139	1234099	2329621	A	782.4	37.8	6/9/2020	-0.695	0	0.72	0.2353366	0.000000	0.000000	0.169442
FloridaRiver060920_140	1233990	2329599	A	783.0	37.9	6/9/2020	-1.439	-0.02	0.723	0.2354413	0.000000	0.000000	0.170224
FloridaRiver060920_141	1233908	2329469	A	783.6	38.1	6/9/2020	0	-0.016	0.097	0.2354703	0.000000	0.000000	0.022841
FloridaRiver060920_142	1233977	2329331	A	783.7	38.2	6/9/2020	-0.497	-0.01	2.37	0.2354247	0.000000	0.000000	0.557957
FloridaRiver060920_143	1233992	2329344	A	783.7	38.3	6/9/2020	-0.079	-0.018	1.828	0.2353491	0.000000	0.000000	0.430218
FloridaRiver060920_144	1234030	2329389	A	783.2	38.4	6/9/2020	-0.956	-0.015	4.008	0.2351235	0.000000	0.000000	0.942375
FloridaRiver060920_145	1234080	2329398	A	782.8	38.5	6/9/2020	0	-0.018	0.422	0.234928	0.000000	0.000000	0.099140
FloridaRiver060920_146	1234117	2329377	A	782.5	38.7	6/9/2020	0	-0.014	0.119	0.2346874	0.000000	0.000000	0.027928
FloridaRiver060920_147	1234085	2329261	A	782.5	38.8	6/9/2020	-0.535	-0.009	0.079	0.2346121	0.000000	0.000000	0.018534
FloridaRiver060920_148	1234009	2329133	A	782.6	38.9	6/9/2020	-1.241	-0.026	0.356	0.2345669	0.000000	0.000000	0.083506

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060920_149	1233935	2329021	A	782.4	39.1	6/9/2020	-1.109	-0.023	0.429	0.2343568	0.000000	0.000000	0.100539
FloridaRiver060920_150	1233690	2329007	A	782.2	39.3	6/9/2020	-0.612	-0.003	0.011	0.2341469	0.000000	0.000000	0.002576
FloridaRiver060920_151	1233544	2328856	A	780.9	39.5	6/9/2020	-0.277	-0.01	0.109	0.2336082	0.000000	0.000000	0.025463
FloridaRiver060920_152	1233694	2328799	A	780.5	39.6	6/9/2020	-0.556	-0.008	1.136	0.2334139	0.000000	0.000000	0.265158
FloridaRiver060920_153	1233710	2328732	A	780.4	39.8	6/9/2020	41.068	-0.006	6.563	0.2332348	9.578488	0.000000	1.530720
FloridaRiver060920_154	1233577	2328676	A	780.2	39.9	6/9/2020	-1.491	-0.017	0.467	0.2331006	0.000000	0.000000	0.108858
FloridaRiver060920_155	1233524	2328398	A	779.1	39.9	6/9/2020	-1.854	-0.015	0.786	0.2327719	0.000000	0.000000	0.182959
FloridaRiver060920_156	1233575	2328427	A	778.7	39.9	6/9/2020	0	-0.04	0.759	0.2326524	0.000000	0.000000	0.176583
FloridaRiver060920_157	1233641	2328560	A	779.4	39.9	6/9/2020	-1.715	-0.046	0.595	0.2328616	0.000000	0.000000	0.138553
FloridaRiver060920_158	1233714	2328552	A	780.1	40.0	6/9/2020	-1.766	-0.018	0.513	0.2329963	0.000000	0.000000	0.119527
FloridaRiver060920_159	1233760	2328573	A	780.4	40.1	6/9/2020	-0.798	-0.004	0.314	0.2330115	0.000000	0.000000	0.073166
FloridaRiver060920_160	1233815	2328737	A	780.6	40.2	6/9/2020	-1.777	-0.03	0.587	0.2329968	0.000000	0.000000	0.136769
FloridaRiver060920_161	1233839	2328844	A	781.6	40.3	6/9/2020	-1.423	-0.022	0.171	0.2332209	0.000000	0.000000	0.039881
PoleBarn060220_01	1237074	2384490	A	784.0	30.5	6/2/2020	0	-0.006	1.839	0.2414871	0.000000	0.000000	0.444095
PoleBarn060220_02	1237044	2384504	A	783.9	31.2	6/2/2020	0	-0.023	1.604	0.2409009	0.000000	0.000000	0.386405
PoleBarn060220_03	1237066	2384549	A	783.9	31.9	6/2/2020	-0.958	-0.034	1.489	0.2403481	0.000000	0.000000	0.357878

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PoleBarn060220_04	1237080	2384604	A	783.9	32.6	6/2/2020	-0.455	-0.043	0.592	0.2397979	0.000000	0.000000	0.141960
PoleBarn060220_05	1237081	2384658	A	786.5	33.3	6/2/2020	-0.149	-0.011	1.122	0.2400436	0.000000	0.000000	0.269329
PoleBarn060220_06	1237084	2384692	A	786.5	33.9	6/2/2020	-0.89	-0.021	1.765	0.2395746	0.000000	0.000000	0.422849
PoleBarn060220_07	1237052	2384698	A	783.6	37.9	6/2/2020	0	-0.046	1.376	0.2356217	0.000000	0.000000	0.324216
PoleBarn060220_08	1237025	2384651	A	783.6	38.5	6/2/2020	-0.201	-0.031	1.814	0.2351681	0.000000	0.000000	0.426595
PoleBarn060220_09	1236986	2384677	A	783.6	39.0	6/2/2020	-0.206	-0.034	0.306	0.2347914	0.000000	0.000000	0.071846
PoleBarn060220_10	1236970	2384700	A	783.7	39.5	6/2/2020	-1.681	-0.014	1.182	0.2344458	0.000000	0.000000	0.277115
PoleBarn060220_11	1236914	2384676	A	783.9	40.0	6/2/2020	0	-0.02	1.325	0.2341312	0.000000	0.000000	0.310224
PoleBarn060220_12	1236886	2384646	A	784.0	40.5	6/2/2020	0	-0.021	0.336	0.2337878	0.000000	0.000000	0.078553
PoleBarn060220_13	1236928	2384645	A	784.0	40.7	6/2/2020	0	-0.041	0.514	0.2336388	0.000000	0.000000	0.120090
PoleBarn060220_14	1236941	2384608	A	784.0	41.0	6/2/2020	0	-0.031	0.395	0.2334157	0.000000	0.000000	0.092199
PoleBarn060220_15	1236879	2384607	A	784.0	41.2	6/2/2020	-0.135	-0.01	1.549	0.2332672	0.000000	0.000000	0.361331
PoleBarn060220_16	1236888	2384547	A	784.0	41.4	6/2/2020	0	-0.056	1.364	0.2331189	0.000000	0.000000	0.317974
PoleBarn060220_17	1236904	2384493	A	783.9	41.5	6/2/2020	0	-0.026	0.969	0.2330151	0.000000	0.000000	0.225792
PoleBarn060220_18	1236940	2384492	A	783.9	41.6	6/2/2020	0	-0.038	1.501	0.2329411	0.000000	0.000000	0.349645
PoleBarn060220_19	1236944	2384536	A	783.9	41.7	6/2/2020	0	-0.022	0.49	0.2328671	0.000000	0.000000	0.114105

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PoleBarn060220_20	1236980	2384496	A	783.9	41.8	6/2/2020	0	-0.021	1.201	0.2327931	0.000000	0.000000	0.279585
PoleBarn060220_21	1236984	2384537	A	783.9	41.9	6/2/2020	0	-0.044	1.167	0.2327192	0.000000	0.000000	0.271583
PoleBarn060220_22	1236983	2384592	A	783.8	41.9	6/2/2020	0	-0.035	0.946	0.2326896	0.000000	0.000000	0.220124
PoleBarn060220_23	1236983	2384638	A	783.8	41.9	6/2/2020	0	-0.031	1.257	0.2326896	0.000000	0.000000	0.292491
PoleBarn060220_24	1237029	2384612	A	783.8	41.9	6/2/2020	-0.435	-0.025	0.87	0.2326896	0.000000	0.000000	0.202440
PoleBarn060220_25	1237019	2384558	A	783.8	41.9	6/2/2020	0	-0.019	0.38	0.2326896	0.000000	0.000000	0.088422
PineRiver062920_01	1242564	2378823	A	758.3	27.3	6/29/2020	-0.211	-0.004	0.389	0.2360587	0.000000	0.000000	0.091827
PineRiver062920_02	1242598	2378941	A	758.1	28.0	6/29/2020	-0.224	-0.007	1.516	0.2354479	0.000000	0.000000	0.356939
PineRiver062920_03	1242718	2378857	A	760.1	28.5	6/29/2020	0	-0.001	0.246	0.2356777	0.000000	0.000000	0.057977
PineRiver062920_04	1242828	2378839	A	756.6	29.0	6/29/2020	-0.521	-0.006	1.271	0.2342043	0.000000	0.000000	0.297674
PineRiver062920_05	1242622	2379176	A	756.6	29.9	6/29/2020	0	-0.001	0.58	0.2335088	0.000000	0.000000	0.135435
PineRiver062920_06	1242727	2379228	A	756.2	30.6	6/29/2020	0	-0.002	0.143	0.2328475	0.000000	0.000000	0.033297
PineRiver062920_07	1242727	2379321	A	754.6	31.4	6/29/2020	-0.173	-0.005	0.541	0.2317444	0.000000	0.000000	0.125374
PineRiver062920_08	1242668	2379365	A	754.4	32.0	6/29/2020	-0.183	-0.004	0.345	0.2312275	0.000000	0.000000	0.079773
PineRiver062920_09	1242705	2379530	A	754.9	33.0	6/29/2020	0	-0.002	0.616	0.2306249	0.000000	0.000000	0.142065
PineRiver062920_10	1242605	2379609	A	753.8	33.4	6/29/2020	-0.628	-0.001	0.073	0.2299884	0.000000	0.000000	0.016789

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver062920_11	1242569	2379725	A	754.5	33.8	6/29/2020	-0.089	-0.002	0.698	0.229902	0.000000	0.000000	0.160472
PineRiver062920_12	1242454	2379953	A	754.6	34.2	6/29/2020	-0.839	-0.001	0.92	0.2296332	0.000000	0.000000	0.211263
PineRiver062920_13	1242326	2379713	A	755.3	34.9	6/29/2020	-0.335	-0.001	5.005	0.2293239	0.000000	0.000000	1.147766
PineRiver062920_14	1242347	2379607	A	757.0	35.3	6/29/2020	-0.708	-0.006	0.131	0.229542	0.000000	0.000000	0.030070
PineRiver062920_15	1242382	2379395	A	757.6	36.0	6/29/2020	-0.151	-0.007	0.307	0.2292038	0.000000	0.000000	0.070366
PineRiver062920_16	1242429	2379168	A	758.0	36.6	6/29/2020	0	0	0.073	0.2288806	0.000000	0.000000	0.016708
PineRiver062920_17	1242373	2378986	A	758.5	37.1	6/29/2020	0	-0.002	0.667	0.2286625	0.000000	0.000000	0.152518
PineRiver062920_18	1242230	2378988	A	758.3	37.5	6/29/2020	0	-0.016	0.505	0.2283078	0.000000	0.000000	0.115295
PineRiver062920_19	1242201	2379145	A	758.9	37.9	6/29/2020	0	-0.005	0.178	0.2281947	0.000000	0.000000	0.040619
PineRiver062920_20	1242236	2379326	A	760.4	38.3	6/29/2020	-0.008	-0.012	0.634	0.228352	0.000000	0.000000	0.144775
PineRiver062920_21	1242143	2379632	A	759.9	38.8	6/29/2020	-0.743	-0.011	1.192	0.2278361	0.000000	0.000000	0.271581
PineRiver062920_22	1242140	2379735	A	759.5	41.2	6/29/2020	-0.93	-0.014	0.067	0.2259776	0.000000	0.000000	0.015141
PineRiver062920_23	1242168	2379812	A	761.6	41.7	6/29/2020	0	-0.006	0.438	0.2262426	0.000000	0.000000	0.099094
PineRiver062920_24	1242002	2379870	A	758.7	42.2	6/29/2020	-0.75	-0.025	0.269	0.2250237	0.000000	0.000000	0.060531
PineRiver062920_25	1242002	2379774	A	760.0	42.5	6/29/2020	-0.261	-0.011	0.567	0.2251951	0.000000	0.000000	0.127686
PineRiver062920_26	1241993	2379521	A	760.6	42.9	6/29/2020	-0.368	-0.027	2.686	0.2250876	0.000000	0.000000	0.604585

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver062920_27	1241999	2379204	A	760.8	43.2	6/29/2020	-0.483	-0.018	0.725	0.2249333	0.000000	0.000000	0.163077
PineRiver062920_28	1242065	2378980	A	760.7	43.4	6/29/2020	-0.777	-0.046	0.761	0.2247616	0.000000	0.000000	0.171044
PineRiver062920_29	1242378	2378784	A	759.5	43.5	6/29/2020	0	-0.022	0.371	0.2243362	0.000000	0.000000	0.083229
PineRiver070120_30	1241120	2380906	A	770.1	34.4	7/1/2020	-2.316	-0.025	0.437	0.2341976	0.000000	0.000000	0.102344
PineRiver070120_31	1241165	2380775	A	770.1	35.4	7/1/2020	-0.17	-0.014	0.219	0.2334386	0.000000	0.000000	0.051123
PineRiver070120_32	1241181	2380612	A	768.9	36.2	7/1/2020	-0.583	-0.023	1.089	0.2324721	0.000000	0.000000	0.253162
PineRiver070120_33	1241150	2380560	A	769.9	36.7	7/1/2020	-0.643	-0.016	0.855	0.2323988	0.000000	0.000000	0.198701
PineRiver070120_34	1241328	2380680	A	769.9	37.9	7/1/2020	-1.127	-0.004	0.362	0.2315022	0.000000	0.000000	0.083804
PineRiver070120_35	1241518	2380670	A	768.2	38.8	7/1/2020	0	-0.037	0.662	0.2303247	0.000000	0.000000	0.152475
PineRiver070120_36	1241504	2380745	A	766.3	39.4	7/1/2020	0	-0.007	0.521	0.2293139	0.000000	0.000000	0.119473
PineRiver070120_37	1241487	2380943	A	766.2	40.1	7/1/2020	0	-0.007	0.417	0.2287716	0.000000	0.000000	0.095398
PineRiver070120_38	1241644	2380903	A	766.2	40.5	7/1/2020	0	-0.035	0.659	0.2284799	0.000000	0.000000	0.150568
PineRiver070120_39	1241766	2380958	A	764.2	40.9	7/1/2020	0	-0.025	0.212	0.2275932	0.000000	0.000000	0.048250
PineRiver070120_40	1241916	2380823	A	762.3	41.4	7/1/2020	-0.126	-0.036	0.606	0.2266665	0.000000	0.000000	0.137360
PineRiver070120_41	1241965	2380747	A	761.5	41.7	7/1/2020	-0.041	-0.023	0.417	0.2262129	0.000000	0.000000	0.094331
PineRiver070120_42	1241963	2380525	A	761.4	42.1	7/1/2020	0	-0.026	0.486	0.2258962	0.000000	0.000000	0.109786

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver070120_43	1241822	2380538	A	762.8	42.6	7/1/2020	-0.301	-0.04	1.121	0.2259532	0.000000	0.000000	0.253294
PineRiver070120_44	1241936	2380313	A	764.5	43.0	7/1/2020	-0.155	-0.032	0.734	0.2261702	0.000000	0.000000	0.166009
PineRiver070120_45	1241928	2380188	A	764.1	43.3	7/1/2020	0	-0.017	0.186	0.2258376	0.000000	0.000000	0.042006
PineRiver070120_46	1241808	2380042	A	764.3	43.4	7/1/2020	0	-0.022	0.225	0.2258253	0.000000	0.000000	0.050811
PineRiver070120_47	1241740	2380387	A	766.5	43.3	7/1/2020	0	-0.035	1.658	0.2265469	0.000000	0.000000	0.375615
PineRiver070120_48	1241695	2380341	A	765.8	43.3	7/1/2020	0	-0.025	0.705	0.22634	0.000000	0.000000	0.159570
PineRiver070120_49	1241586	2380269	A	769.2	43.3	7/1/2020	0	-0.003	0.382	0.2273449	0.000000	0.000000	0.086846
PineRiver070120_50	1241518	2380240	A	767.9	43.3	7/1/2020	0	-0.044	0.429	0.2269607	0.000000	0.000000	0.097366
PineRiver070120_51	1241601	2380093	A	771.1	43.5	7/1/2020	0	-0.004	0.772	0.2277626	0.000000	0.000000	0.175833
PineRiver070120_52	1241570	2379971	A	767.9	43.7	7/1/2020	-0.583	-0.032	0.325	0.2266742	0.000000	0.000000	0.073669
PineRiver070120_53	1241656	2379732	A	769.3	43.9	7/1/2020	-0.273	-0.038	0.239	0.2269442	0.000000	0.000000	0.054240
PineRiver070120_54	1241537	2379790	A	769.2	44.2	7/1/2020	-0.233	-0.042	0.221	0.2267002	0.000000	0.000000	0.050101
PineRiver070120_55	1241387	2380008	A	770.5	44.3	7/1/2020	0	-0.053	0.414	0.2270118	0.000000	0.000000	0.093983
PineRiver070120_56	1241322	2380131	A	769.9	44.4	7/1/2020	-0.239	-0.054	0.362	0.2267636	0.000000	0.000000	0.082088
PineRiver070120_57	1241338	2380376	A	769.9	44.4	7/1/2020	-0.537	-0.032	0.378	0.2267636	0.000000	0.000000	0.085717
PineRiver070120_58	1241341	2380534	A	769.5	44.4	7/1/2020	-0.452	-0.033	0.442	0.2266458	0.000000	0.000000	0.100177

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver070920_01	1238221	2386988	A	788.0	32.1	7/9/2020	-0.389	-0.018	0.156	0.2414469	0.000000	0.000000	0.037666
PineRiver070920_02	1238462	2386990	A	788.0	33.4	7/9/2020	1.067	0.008	1.029	0.240423	0.256531	0.001923	0.247395
PineRiver070920_03	1238345	2387041	A	787.9	34.4	7/9/2020	0	-0.015	0.274	0.2396109	0.000000	0.000000	0.065653
PineRiver070920_04	1238400	2387128	A	787.9	35.2	7/9/2020	0	-0.008	1.643	0.2389892	0.000000	0.000000	0.392659
PineRiver070920_05	1238337	2387302	A	787.9	36.2	7/9/2020	0	-0.004	0.555	0.2382166	0.000000	0.000000	0.132210
PineRiver070920_06	1238288	2387562	A	787.9	37.8	7/9/2020	0	-0.018	0.923	0.2369909	0.000000	0.000000	0.218743
PineRiver070920_07	1238099	2387548	A	787.8	38.8	7/9/2020	0	-0.004	0.402	0.2362012	0.000000	0.000000	0.094953
PineRiver070920_08	1238031	2387519	A	787.9	39.8	7/9/2020	0	-0.011	0.12	0.2354763	0.000000	0.000000	0.028257
PineRiver070920_09	1237984	2387586	A	787.9	40.2	7/9/2020	0	-0.011	0.679	0.2351757	0.000000	0.000000	0.159684
PineRiver070920_10	1237947	2387622	A	787.9	40.5	7/9/2020	0	-0.004	0.988	0.2349508	0.000000	0.000000	0.232131
PineRiver070920_11	1237924	2387670	A	787.9	40.7	7/9/2020	0	-0.008	1.132	0.2348011	0.000000	0.000000	0.265795
PineRiver070920_12	1237920	2387736	A	788.0	41.0	7/9/2020	-0.3	-0.022	1.019	0.2346066	0.000000	0.000000	0.239064
PineRiver070920_13	1237955	2387686	A	787.9	41.3	7/9/2020	0	-0.005	3.63	0.2343531	0.000000	0.000000	0.850702
PineRiver070920_14	1238143	2387119	A	787.9	41.9	7/9/2020	0	-0.017	0.03	0.2339067	0.000000	0.000000	0.007017
PineRiver070920_15	1238151	2387373	A	788.2	42.3	7/9/2020	0	-0.016	0.179	0.2336991	0.000000	0.000000	0.041832
PineRiver070920_16	1237995	2387333	A	788.3	42.7	7/9/2020	0	-0.042	0.146	0.2334327	0.000000	0.000000	0.034081

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver070920_17	1237980	2387182	A	788.1	42.8	7/9/2020	-0.339	-0.027	0.82	0.2332996	0.000000	0.000000	0.191306
PineRiver070920_18	1238003	2386967	A	788.0	42.9	7/9/2020	-0.73	-0.018	0.212	0.2331962	0.000000	0.000000	0.049438
PineRiver070920_19	1238008	2386811	A	788.1	43.0	7/9/2020	0	-0.01	0.388	0.2331521	0.000000	0.000000	0.090463
PineRiver070920_20	1238213	2386770	A	788.1	43.2	7/9/2020	0	-0.02	0.112	0.2330047	0.000000	0.000000	0.026097
PineRiver070920_21	1238419	2386795	A	787.9	43.5	7/9/2020	-0.217	-0.02	0.01	0.2327248	0.000000	0.000000	0.002327
PineRiver070920_22	1238566	2386741	A	787.9	43.7	7/9/2020	-0.083	-0.022	1.066	0.2325779	0.000000	0.000000	0.247928
PineRiver070920_23	1238580	2386638	A	787.5	44.0	7/9/2020	0	-0.012	0.285	0.23224	0.000000	0.000000	0.066188
PineRiver071020_24	1240356	2381717	A	780.4	33.6	7/10/2020	-0.562	-0.003	0.126	0.237949	0.000000	0.000000	0.029982
PineRiver071020_25	1240356	2381581	A	780.2	34.8	7/10/2020	-1.162	-0.006	0.034	0.236961	0.000000	0.000000	0.008057
PineRiver071020_26	1240384	2381390	A	779.4	36.0	7/10/2020	-0.672	-0.015	1.073	0.2357992	0.000000	0.000000	0.253012
PineRiver071020_27	1240483	2381185	A	778.5	37.4	7/10/2020	0	-0.017	0.327	0.2344651	0.000000	0.000000	0.076670
PineRiver071020_28	1240772	2381177	A	777.4	39.0	7/10/2020	-0.426	-0.013	0.484	0.2329337	0.000000	0.000000	0.112740
PineRiver071020_29	1240974	2381206	A	776.6	40.7	7/10/2020	0	-0.032	0.658	0.2314336	0.000000	0.000000	0.152283
PineRiver071020_30	1241142	2381236	A	776.9	42.0	7/10/2020	-0.422	0	1.133	0.2305679	0.000000	0.000000	0.261233
PineRiver071020_31	1241357	2381170	A	775.8	43.1	7/10/2020	-0.872	-0.049	0.689	0.2294406	0.000000	0.000000	0.158085
PineRiver071020_32	1241389	2381365	A	773.1	43.6	7/10/2020	0	-0.005	0.246	0.2282812	0.000000	0.000000	0.056157

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071020_33	1241342	2381539	A	773.9	43.9	7/10/2020	-1.012	-0.041	0.204	0.2283012	0.000000	0.000000	0.046573
PineRiver071020_34	1241269	2381438	A	773.2	44.4	7/10/2020	0	-0.046	0.79	0.2277355	0.000000	0.000000	0.179911
PineRiver071020_35	1241204	2381527	A	773.5	44.7	7/10/2020	-0.332	-0.048	0.888	0.2276089	0.000000	0.000000	0.202117
PineRiver071020_36	1241143	2381428	A	774.0	45.1	7/10/2020	-0.819	-0.033	0.081	0.2274698	0.000000	0.000000	0.018425
PineRiver071020_37	1241034	2381360	A	774.6	45.5	7/10/2020	-0.11	-0.005	1.118	0.2273603	0.000000	0.000000	0.254189
PineRiver071020_38	1240955	2381601	A	775.9	45.8	7/10/2020	0	-0.057	0.945	0.2275277	0.000000	0.000000	0.215014
PineRiver071020_39	1240987	2381749	A	776.5	46.0	7/10/2020	0	-0.014	0.25	0.2275609	0.000000	0.000000	0.056890
PineRiver071020_40	1240944	2381933	A	777.4	46.2	7/10/2020	0	-0.05	0.166	0.227682	0.000000	0.000000	0.037795
PineRiver071020_41	1240842	2381920	A	776.8	46.3	7/10/2020	-0.882	-0.041	0.225	0.2274351	0.000000	0.000000	0.051173
PineRiver071020_42	1240773	2381745	A	778.0	46.4	7/10/2020	12.412	0.033	10.119	0.2277151	2.826400	0.007515	2.304250
PineRiver071020_43	1240792	2381616	A	778.5	46.5	7/10/2020	31.665	0.021	5.482	0.2277902	7.212976	0.004784	1.248746
PineRiver071020_44	1240762	2381603	A	778.5	46.5	7/10/2020	205.6	0.018	13.032	0.2277902	46.833660	0.004100	2.968562
PineRiver071020_45	1240778	2381439	A	778.4	46.6	7/10/2020	52.727	0.012	17.668	0.2276897	12.005400	0.002732	4.022821
PineRiver071020_46	1240616	2381363	A	778.4	46.8	7/10/2020	-0.445	-0.05	0.22	0.2275474	0.000000	0.000000	0.050060
PineRiver071020_47	1240647	2381580	A	778.4	46.9	7/10/2020	-0.101	-0.005	0.721	0.2274763	0.000000	0.000000	0.164010
PineRiver071020_48	1240552	2381635	A	779.3	47.0	7/10/2020	-0.056	-0.004	0.579	0.2276682	0.000000	0.000000	0.131820

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071020_49	1240627	2381802	A	779.6	47.1	7/10/2020	-0.734	-0.044	2.493	0.2276847	0.000000	0.000000	0.567618
PineRiver071020_50	1240705	2381755	A	778.8	47.1	7/10/2020	37.581	0.027	19.255	0.227451	8.547837	0.006141	4.379570
PineRiver071020_51	1240770	2382143	A	778.5	47.1	7/10/2020	-0.511	-0.036	0.227	0.2273634	0.000000	0.000000	0.051611
PineRiver071020_52	1240769	2382258	A	775.3	47.2	7/10/2020	-0.649	-0.063	0.265	0.2263582	0.000000	0.000000	0.059985
PineRiver071020_53	1240651	2382372	A	775.0	47.1	7/10/2020	-1.511	-0.076	1.425	0.2263412	0.000000	0.000000	0.322536
PineRiver071020_54	1240601	2382180	A	778.6	47.0	7/10/2020	1.781	0.015	1.433	0.2274636	0.405113	0.003412	0.325955
PineRiver071020_55	1240564	2382040	A	775.5	46.8	7/10/2020	-0.859	-0.07	0.646	0.2266996	0.000000	0.000000	0.146448
PineRiver071020_56	1240470	2381991	A	777.0	46.7	7/10/2020	-0.584	-0.049	0.173	0.2272091	0.000000	0.000000	0.039307
PineRiver071020_57	1240376	2382195	A	777.5	46.5	7/10/2020	-0.512	-0.073	1.335	0.2274976	0.000000	0.000000	0.303709
PineRiver071020_58	1240360	2382363	A	777.5	46.2	7/10/2020	-0.615	-0.05	0.327	0.2277113	0.000000	0.000000	0.074462
PineRiver071020_59	1240193	2382333	A	778.9	46.1	7/10/2020	0	-0.052	0.388	0.2281928	0.000000	0.000000	0.088539
PineRiver071320_60	1239999	2383011	A	774.2	33.0	7/13/2020	-1.213	0	0.876	0.2365212	0.000000	0.000000	0.207193
PineRiver071320_61	1240026	2382830	A	774.2	33.7	7/13/2020	-0.505	0	0.337	0.2359816	0.000000	0.000000	0.079526
PineRiver071320_62	1240138	2382768	A	774.2	34.0	7/13/2020	0	-0.001	0.473	0.2357511	0.000000	0.000000	0.111510
PineRiver071320_63	1240199	2382972	A	773.9	35.9	7/13/2020	-0.897	-0.005	0.613	0.234211	0.000000	0.000000	0.143571
PineRiver071320_64	1240303	2382942	A	773.2	36.9	7/13/2020	-0.332	-0.004	0.242	0.2332444	0.000000	0.000000	0.056445

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071320_65	1240379	2382820	A	772.9	37.7	7/13/2020	0	-0.005	0.513	0.2325539	0.000000	0.000000	0.119300
PineRiver071320_66	1240347	2382643	A	772.5	38.2	7/13/2020	-1.536	-0.005	0.96	0.2320602	0.000000	0.000000	0.222778
PineRiver071320_67	1240267	2382593	A	773.8	38.9	7/13/2020	0	-0.006	0.206	0.2319293	0.000000	0.000000	0.047777
PineRiver071320_68	1240595	2382535	A	774.2	39.7	7/13/2020	-0.621	-0.01	1.14	0.2314558	0.000000	0.000000	0.263860
PineRiver071320_69	1240557	2382748	A	772.5	40.3	7/13/2020	-0.477	-0.011	0.282	0.2305055	0.000000	0.000000	0.065003
PineRiver071320_70	1240636	2382892	A	771.1	40.4	7/13/2020	0	-0.002	1.228	0.2300144	0.000000	0.000000	0.282458
PineRiver071320_71	1240652	2382899	A	770.1	40.5	7/13/2020	11.662	0.025	13.637	0.2296429	2.678095	0.005741	3.131640
PineRiver071320_72	1240688	2382856	A	770.3	40.6	7/13/2020	0	-0.007	0.342	0.2296293	0.000000	0.000000	0.078533
PineRiver071320_73	1240719	2382822	A	770.3	40.7	7/13/2020	0	-0.012	0.378	0.2295561	0.000000	0.000000	0.086772
PineRiver071320_74	1240728	2382977	A	770.3	40.9	7/13/2020	0	-0.015	0.223	0.2294099	0.000000	0.000000	0.051158
PineRiver071320_75	1240685	2383089	A	769.6	41.1	7/13/2020	0	-0.013	0.092	0.2290556	0.000000	0.000000	0.021073
PineRiver071320_76	1240616	2383089	A	769.9	41.5	7/13/2020	0	-0.013	0.025	0.2288536	0.000000	0.000000	0.005721
PineRiver071320_77	1240467	2383015	A	770.8	42.1	7/13/2020	2.669	0.007	1.919	0.228685	0.610360	0.001601	0.438847
PineRiver071320_78	1240459	2383024	A	770.8	42.4	7/13/2020	5.078	0.013	5.953	0.2284676	1.160159	0.002970	1.360068
PineRiver071320_79	1240452	2383040	A	771.5	42.7	7/13/2020	1.619	0.02	4.04	0.2284579	0.369873	0.004569	0.922970
PineRiver071320_80	1240485	2383164	A	771.4	43.1	7/13/2020	0	-0.027	1.184	0.2281394	0.000000	0.000000	0.270117

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071320_81	1240294	2383303	A	771.1	43.4	7/13/2020	-0.535	-0.026	0.709	0.2278345	0.000000	0.000000	0.161535
PineRiver071320_82	1240193	2383350	A	771.0	43.6	7/13/2020	-0.944	-0.022	0.679	0.2276611	0.000000	0.000000	0.154582
PineRiver071320_83	1240187	2383419	A	771.9	43.7	7/13/2020	0	-0.012	0.217	0.2278549	0.000000	0.000000	0.049445
PineRiver071320_84	1240135	2383173	A	772.2	43.9	7/13/2020	0	-0.025	0.339	0.2277997	0.000000	0.000000	0.077224
PineRiver071320_85	1239967	2383224	A	772.6	44.1	7/13/2020	-0.456	-0.039	0.29	0.227774	0.000000	0.000000	0.066054
PineRiver071320_86	1239946	2383414	A	773.5	44.3	7/13/2020	-0.329	-0.037	0.338	0.2278957	0.000000	0.000000	0.077029
PineRiver071320_87	1239944	2383619	A	773.4	44.7	7/13/2020	0	-0.034	0.575	0.2275795	0.000000	0.000000	0.130858
PineRiver071320_88	1239838	2383346	A	774.7	45.0	7/13/2020	0	-0.028	0.704	0.227747	0.000000	0.000000	0.160334
PineRiver071320_89	1239785	2383248	A	774.6	45.2	7/13/2020	-0.316	-0.034	1.072	0.2275746	0.000000	0.000000	0.243960
PineRiver071620_100	1239622	2384198	A	779.7	33.1	7/16/2020	0	-0.003	1.013	0.2381237	0.000000	0.000000	0.241219
PineRiver071620_101	1239787	2384020	A	780.8	33.7	7/16/2020	0	0	0.596	0.2379933	0.000000	0.000000	0.141844
PineRiver071620_102	1239802	2383981	A	780.2	33.9	7/16/2020	0	0	0.469	0.2376556	0.000000	0.000000	0.111460
PineRiver071620_103	1239786	2384196	A	780.5	34.1	7/16/2020	0	-0.002	0.618	0.2375922	0.000000	0.000000	0.146832
PineRiver071620_104	1239695	2384282	A	781.0	34.2	7/16/2020	0	0	0.595	0.237667	0.000000	0.000000	0.141412
PineRiver071620_105	1239647	2384334	A	781.6	34.4	7/16/2020	0	-0.002	0.702	0.2376949	0.000000	0.000000	0.166862
PineRiver071620_106	1239601	2384566	A	781.7	34.6	7/16/2020	0	-0.003	0.281	0.2375709	0.000000	0.000000	0.066757

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071620_107	1239525	2384764	A	781.3	34.9	7/16/2020	0	-0.004	0.381	0.2372181	0.000000	0.000000	0.090380
PineRiver071620_108	1239536	2384955	A	780.9	35.1	7/16/2020	0	-0.005	0.306	0.2369428	0.000000	0.000000	0.072504
PineRiver071620_109	1239410	2384974	A	780.1	35.4	7/16/2020	0	-0.001	0.178	0.2364699	0.000000	0.000000	0.042092
PineRiver071620_110	1239248	2385011	A	781.3	35.9	7/16/2020	0	0	0.257	0.2364505	0.000000	0.000000	0.060768
PineRiver071620_111	1239348	2384756	A	783.0	36.9	7/16/2020	0	-0.002	1.417	0.2362007	0.000000	0.000000	0.334696
PineRiver071620_112	1239331	2384636	A	782.8	37.2	7/16/2020	0	-0.004	2.322	0.2359121	0.000000	0.000000	0.547788
PineRiver071620_113	1239344	2384554	A	782.0	37.3	7/16/2020	9.683	0.002	6.786	0.2355951	2.281267	0.000471	1.598748
PineRiver071620_114	1239283	2384518	A	781.2	37.5	7/16/2020	79.234	0.004	13.788	0.2352025	18.636040	0.000941	3.242973
PineRiver071620_115	1239357	2384444	A	782.6	37.7	7/16/2020	1.913	0.009	4.205	0.2354724	0.450459	0.002119	0.990162
PineRiver071620_116	1239365	2384364	A	780.2	37.8	7/16/2020	6.636	0.005	3.744	0.2346748	1.557302	0.001173	0.878623
PineRiver071620_117	1239380	2384317	A	780.2	37.9	7/16/2020	0	-0.003	2.288	0.2345994	0.000000	0.000000	0.536763
PineRiver071620_118	1239227	2384409	A	780.0	38.0	7/16/2020	-0.686	-0.008	0.744	0.2344639	0.000000	0.000000	0.174441
PineRiver071620_119	1239067	2384553	A	779.3	38.1	7/16/2020	-0.382	-0.005	0.195	0.2341782	0.000000	0.000000	0.045665
PineRiver071620_120	1239191	2384532	A	779.1	38.1	7/16/2020	0	-0.003	0.986	0.2341181	0.000000	0.000000	0.230840
PineRiver071620_121	1239244	2384609	A	780.5	38.2	7/16/2020	48.416	0.002	5.21	0.2344635	11.351780	0.000469	1.221555
PineRiver071620_122	1239205	2384695	A	781.3	38.2	7/16/2020	17.989	0.008	17.177	0.2347038	4.222086	0.001878	4.031507

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071620_123	1239165	2384711	A	781.4	38.2	7/16/2020	97.462	0.006	26.341	0.2347338	22.877630	0.001408	6.183123
PineRiver071620_124	1239131	2384667	A	781.0	38.2	7/16/2020	0	-0.001	0.353	0.2346136	0.000000	0.000000	0.082819
PineRiver071620_125	1239145	2384763	A	781.0	38.2	7/16/2020	287.188	0.006	13.877	0.2346136	67.378220	0.001408	3.255733
PineRiver071620_126	1239124	2384791	A	781.8	38.2	7/16/2020	106.377	0.01	15.225	0.234854	24.983060	0.002349	3.575652
PineRiver071620_127	1239124	2384796	A	781.8	38.2	7/16/2020	13605.71	0.207	-0.651	0.234854	3195.355000	0.048615	0.000000
PineRiver071620_128	1239150	2384831	A	782.0	38.2	7/16/2020	0	-0.004	0.528	0.234914	0.000000	0.000000	0.124035
PineRiver071620_129	1239070	2384788	A	782.0	38.1	7/16/2020	-0.872	-0.004	1.347	0.2349895	0.000000	0.000000	0.316531
PineRiver071620_130	1239068	2384856	A	782.0	38.1	7/16/2020	0	-0.005	5.007	0.2349895	0.000000	0.000000	1.176593
PineRiver071620_131	1239025	2384948	A	782.1	38.0	7/16/2020	0	-0.008	3.196	0.2350951	0.000000	0.000000	0.751364
PineRiver071620_132	1239007	2385000	A	782.4	38.0	7/16/2020	1.51	0	1.595	0.2351853	0.355130	0.000000	0.375121
PineRiver071620_133	1239090	2385015	A	782.6	37.9	7/16/2020	0	-0.005	2.283	0.235321	0.000000	0.000000	0.537238
PineRiver071620_134	1238937	2384972	A	783.2	37.8	7/16/2020	0	-0.004	0.564	0.2355772	0.000000	0.000000	0.132866
PineRiver071620_90	1239696	2383557	A	778.7	29.8	7/16/2020	-2.364	-0.002	0.551	0.2404088	0.000000	0.000000	0.132465
PineRiver071620_91	1239698	2383752	A	778.7	30.3	7/16/2020	0	-0.001	0.459	0.2400127	0.000000	0.000000	0.110166
PineRiver071620_92	1239633	2383756	A	778.7	30.6	7/16/2020	0	-0.003	0.479	0.2397756	0.000000	0.000000	0.114853
PineRiver071620_93	1239677	2383905	A	778.6	30.9	7/16/2020	-0.498	-0.001	4.263	0.2395083	0.000000	0.000000	1.021024

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071620_94	1239614	2383924	A	778.3	31.2	7/16/2020	0	-0.002	0.294	0.23918	0.000000	0.000000	0.070319
PineRiver071620_95	1239638	2383997	A	777.9	31.6	7/16/2020	211.37	0.007	8.165	0.2387433	50.463170	0.001671	1.949339
PineRiver071620_96	1239639	2384023	A	778.3	31.8	7/16/2020	0	-0.004	0.907	0.2387094	0.000000	0.000000	0.216509
PineRiver071620_97	1239553	2384018	A	778.1	32.2	7/16/2020	-0.399	-0.001	0.592	0.2383354	0.000000	0.000000	0.141095
PineRiver071620_98	1239558	2384146	A	777.9	32.6	7/16/2020	0	-0.001	0.466	0.2379624	0.000000	0.000000	0.110890
PineRiver071620_99	1239574	2384177	A	779.1	32.9	7/16/2020	0	-0.001	1.566	0.2380959	0.000000	0.000000	0.372858
PineRiver071720_01	1238181	2386590	A	790.7	29.9	7/17/2020	2.519	0.036	0.313	0.244033	0.614719	0.008785	0.076382
PineRiver071720_02	1238219	2386591	A	790.9	30.9	7/17/2020	1.377	0.01	0.5	0.2432919	0.335013	0.002433	0.121646
PineRiver071720_03	1238343	2386555	A	790.5	32.0	7/17/2020	38.525	0.036	8.045	0.2422923	9.334311	0.008723	1.949242
PineRiver071720_04	1238390	2386408	A	790.1	33.2	7/17/2020	2.156	0.029	0.463	0.2412211	0.520073	0.006995	0.111685
PineRiver071720_05	1238540	2386400	A	788.3	34.1	7/17/2020	1.465	0.024	0.18	0.2399666	0.351551	0.005759	0.043194
PineRiver071720_06	1238580	2386318	A	788.3	35.2	7/17/2020	48.234	0.04	23.512	0.2391105	11.533260	0.009564	5.621966
PineRiver071720_07	1238605	2386281	A	787.9	35.8	7/17/2020	1.107	0.02	2.158	0.2385251	0.264047	0.004771	0.514737
PineRiver071720_08	1238636	2386218	A	787.8	36.7	7/17/2020	0	-0.003	0.356	0.237802	0.000000	0.000000	0.084658
PineRiver071720_09	1238650	2386146	A	788.0	37.5	7/17/2020	-1.276	-0.002	0.669	0.2372499	0.000000	0.000000	0.158720
PineRiver071720_10	1238708	2386018	A	788.0	38.2	7/17/2020	-0.743	-0.003	0.618	0.2367165	0.000000	0.000000	0.146291

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071720_11	1238754	2385870	A	787.9	38.6	7/17/2020	0	-0.001	0.359	0.2363827	0.000000	0.000000	0.084861
PineRiver071720_12	1238818	2385767	A	787.4	38.9	7/17/2020	0	-0.006	0.757	0.2360056	0.000000	0.000000	0.178656
PineRiver071720_13	1238890	2385663	A	786.8	39.2	7/17/2020	0	-0.003	0.153	0.2355993	0.000000	0.000000	0.036047
PineRiver071720_14	1238910	2385566	A	786.1	39.4	7/17/2020	0	-0.007	1.874	0.235239	0.000000	0.000000	0.440838
PineRiver071720_15	1238921	2385456	A	786.1	39.6	7/17/2020	0	-0.014	2.421	0.2350886	0.000000	0.000000	0.569150
PineRiver071720_16	1238945	2385403	A	785.6	39.7	7/17/2020	550.905	0.019	18.948	0.234864	129.387700	0.004462	4.450203
PineRiver071720_17	1239000	2385400	A	785.9	39.8	7/17/2020	0	-0.009	0.961	0.2348786	0.000000	0.000000	0.225718
PineRiver071720_18	1238953	2385371	A	785.5	39.9	7/17/2020	0	-0.004	13.946	0.2346841	0.000000	0.000000	3.272904
PineRiver071720_19	1238959	2385278	A	785.1	40.0	7/17/2020	0	-0.005	0.966	0.2344896	0.000000	0.000000	0.226517
PineRiver071720_20	1238941	2385236	A	784.7	40.2	7/17/2020	1668.191	0.012	7.184	0.2342206	390.724700	0.002811	1.682641
PineRiver071720_21	1238978	2385235	A	784.4	40.3	7/17/2020	-0.722	-0.009	8.957	0.2340564	0.000000	0.000000	2.096443
PineRiver071720_22	1238921	2385197	A	784.4	40.5	7/17/2020	13.181	0.012	11.926	0.2339071	3.083129	0.002807	2.789576
PineRiver071720_23	1238930	2385169	A	783.9	40.6	7/17/2020	5.532	0.007	14.774	0.2336835	1.292737	0.001636	3.452440
PineRiver071720_24	1238805	2385202	A	786.1	40.8	7/17/2020	0	-0.003	0.497	0.23419	0.000000	0.000000	0.116392
PineRiver071720_25	1238825	2385317	A	783.5	40.9	7/17/2020	0	-0.005	0.348	0.2333411	0.000000	0.000000	0.081203
PineRiver071720_26	1238804	2385389	A	784.0	41.0	7/17/2020	-0.175	-0.008	0.566	0.2334157	0.000000	0.000000	0.132113

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071720_27	1238827	2385430	A	784.5	41.1	7/17/2020	-0.063	-0.026	1.451	0.2334903	0.000000	0.000000	0.338794
PineRiver071720_28	1238854	2385554	A	785.1	41.1	7/17/2020	2.252	0.041	5.982	0.2336688	0.526222	0.009580	1.397807
PineRiver071720_29	1238797	2385637	A	785.6	41.2	7/17/2020	80.81	0.014	6.105	0.2337433	18.888790	0.003272	1.427003
PineRiver071720_30	1238795	2385654	A	785.6	41.3	7/17/2020	1054.964	0.048	64.463	0.2336689	246.512300	0.011216	15.063000
PineRiver071720_31	1238742	2385718	A	785.9	41.4	7/17/2020	2.988	0.017	21.16	0.2336839	0.698247	0.003973	4.944750
PineRiver071720_32	1238764	2385618	A	788.0	41.6	7/17/2020	3.648	0.017	5.237	0.2341594	0.854213	0.003981	1.226293
PineRiver071720_33	1238782	2385522	A	784.9	41.7	7/17/2020	0	-0.013	1.969	0.2331641	0.000000	0.000000	0.459100
PineRiver071720_34	1238717	2385507	A	784.5	41.9	7/17/2020	0	-0.011	1.198	0.2328974	0.000000	0.000000	0.279011
PineRiver071720_35	1238689	2385381	A	784.0	42.1	7/17/2020	0	-0.015	0.708	0.2326013	0.000000	0.000000	0.164682
PineRiver071720_36	1238573	2385547	A	783.6	42.3	7/17/2020	-1.247	0	0.207	0.2323352	0.000000	0.000000	0.048093
PineRiver071720_37	1238685	2385606	A	784.0	42.4	7/17/2020	0	-0.016	1.394	0.2323801	0.000000	0.000000	0.323938
PineRiver071720_38	1238634	2385704	A	784.7	42.5	7/17/2020	0	-0.004	0.818	0.2325139	0.000000	0.000000	0.190196
PineRiver071720_39	1238643	2385725	A	784.8	42.7	7/17/2020	2.474	0.031	1.415	0.2323963	0.574948	0.007204	0.328841
PineRiver071720_40	1238517	2385765	A	784.7	42.8	7/17/2020	0	-0.016	0.125	0.2322931	0.000000	0.000000	0.029037
PineRiver071720_41	1238617	2385840	A	784.5	43.0	7/17/2020	10.883	0.023	1.546	0.232087	2.525803	0.005338	0.358807
PineRiver071720_42	1238706	2385842	A	785.3	43.1	7/17/2020	0	-0.008	1.443	0.2322502	0.000000	0.000000	0.335137

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
PineRiver071720_43	1238633	2385973	A	788.3	43.3	7/17/2020	41.14	0.011	6.427	0.2329901	9.585214	0.002563	1.497428
PineRiver071720_44	1238620	2385960	A	788.3	43.5	7/17/2020	-0.804	-0.02	1.266	0.232843	0.000000	0.000000	0.294779
PineRiver071720_45	1238568	2386030	A	785.3	43.6	7/17/2020	115.546	0.03	10.707	0.2318836	26.793230	0.006957	2.482778
PineRiver071720_46	1238552	2386126	A	784.9	43.7	7/17/2020	77.012	0.031	9.103	0.2316924	17.843090	0.007182	2.109096
PineRiver071720_47	1238513	2386044	A	784.9	43.8	7/17/2020	1.705	0.011	2.678	0.2316193	0.394911	0.002548	0.620276
PineRiver071720_48	1238552	2385970	A	784.7	43.8	7/17/2020	-0.324	-0.01	2.449	0.2315602	0.000000	0.000000	0.567091
PineRiver071720_49	1238424	2386021	A	784.5	43.9	7/17/2020	0	-0.014	0.319	0.2314282	0.000000	0.000000	0.073826
PineRiver071720_50	1238363	2386110	A	787.7	44.0	7/17/2020	-0.63	-0.004	0.863	0.2322989	0.000000	0.000000	0.200474
PineRiver071720_51	1238195	2386315	A	786.3	44.0	7/17/2020	-1.143	-0.018	0.154	0.2318861	0.000000	0.000000	0.035710
VosburgPike061520_113	1245950	2359373	A	756.4	26.1	6/15/2020	-0.022	-0.009	0.263	0.2364114	0.000000	0.000000	0.062176
VosburgPike061520_114	1245940	2359264	A	756.4	27.3	6/15/2020	1.495	0.008	6.272	0.2354672	0.352023	0.001884	1.476850
VosburgPike061520_115	1245913	2359301	A	755.9	28.3	6/15/2020	55.849	0.01	1.603	0.234531	13.098320	0.002345	0.375953
VosburgPike061520_116	1245886	2359318	A	756.5	29.1	6/15/2020	535.715	0.007	3.754	0.2340959	125.408700	0.001639	0.878796
VosburgPike061520_117	1245863	2359342	A	756.5	30.2	6/15/2020	3.33	0.001	3.142	0.233247	0.776712	0.000233	0.732862
VosburgPike061520_118	1245832	2359362	A	756.9	30.9	6/15/2020	679.436	0.008	6.563	0.232833	158.195100	0.001863	1.528083
VosburgPike061520_119	1245722	2359365	A	757.3	31.9	6/15/2020	-1.989	-0.009	1.15	0.2321924	0.000000	0.000000	0.267021

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061520_120	1245749	2359140	A	757.3	32.9	6/15/2020	-1.178	-0.008	1.369	0.2314337	0.000000	0.000000	0.316833
VosburgPike061520_121	1245713	2359007	A	755.8	34.1	6/15/2020	-0.128	-0.002	0.709	0.2300732	0.000000	0.000000	0.163122
VosburgPike061520_122	1245715	2358773	A	754.8	35.3	6/15/2020	0	-0.01	1.829	0.2288749	0.000000	0.000000	0.418612
VosburgPike061520_123	1245931	2358752	A	754.0	36.1	6/15/2020	0	-0.021	0.446	0.2280409	0.000000	0.000000	0.101706
VosburgPike061520_124	1246124	2358745	A	754.2	37.1	6/15/2020	0	-0.021	0.577	0.2273662	0.000000	0.000000	0.131190
VosburgPike061520_125	1246128	2358950	A	753.3	37.7	6/15/2020	-0.806	-0.019	0.393	0.2266565	0.000000	0.000000	0.089076
VosburgPike061520_126	1245961	2359027	A	754.0	38.2	6/15/2020	-1.312	-0.01	1.572	0.2265028	0.000000	0.000000	0.356062
VosburgPike061520_127	1245914	2358977	A	755.0	38.6	6/15/2020	-0.598	-0.02	0.882	0.2265122	0.000000	0.000000	0.199784
VosburgPike061520_128	1245921	2359164	A	755.0	39.0	6/15/2020	-0.417	-0.015	1.761	0.2262219	0.000000	0.000000	0.398377
VosburgPike061520_129	1246134	2359149	A	755.3	40.7	6/15/2020	-1.663	-0.019	0.654	0.225086	0.000000	0.000000	0.147206
VosburgPike061520_130	1246143	2359398	A	755.6	41.2	6/15/2020	-1.843	-0.053	0.683	0.2248172	0.000000	0.000000	0.153550
VosburgPike061520_131	1246361	2359413	A	755.7	41.6	6/15/2020	-0.942	-0.033	1.402	0.2245612	0.000000	0.000000	0.314835
VosburgPike061520_132	1246335	2359552	A	754.9	41.8	6/15/2020	0	-0.007	0.351	0.2241811	0.000000	0.000000	0.078688
VosburgPike061520_133	1246153	2359526	A	754.9	42.0	6/15/2020	0	-0.013	1.319	0.2240388	0.000000	0.000000	0.295507
VosburgPike061520_134	1245910	2359554	A	755.3	42.1	6/15/2020	0	-0.025	0.778	0.2240864	0.000000	0.000000	0.174339
VosburgPike061520_135	1245746	2359540	A	756.9	42.1	6/15/2020	-0.422	-0.021	0.748	0.2245611	0.000000	0.000000	0.167972

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061520_136	1245798	2360027	A	757.7	42.2	6/15/2020	-0.215	-0.026	0.614	0.2247272	0.000000	0.000000	0.137982
VosburgPike061520_137	1245732	2360109	A	757.5	42.3	6/15/2020	0	-0.02	0.572	0.2245966	0.000000	0.000000	0.128469
VosburgPike061520_138	1245905	2360177	A	757.2	42.3	6/15/2020	-0.349	-0.016	0.364	0.2245077	0.000000	0.000000	0.081721
VosburgPike061520_139	1245912	2360279	A	756.5	42.4	6/15/2020	0	-0.022	1	0.224229	0.000000	0.000000	0.224229
VosburgPike061520_140	1245981	2360280	A	756.8	42.4	6/15/2020	0	-0.019	0.469	0.224318	0.000000	0.000000	0.105205
VosburgPike061520_141	1246102	2360220	A	757.2	42.3	6/15/2020	0	-0.038	0.428	0.2245077	0.000000	0.000000	0.096089
VosburgPike061520_142	1246114	2360316	A	759.5	42.3	6/15/2020	165.601	0.017	14.655	0.2251896	37.291630	0.003828	3.300154
VosburgPike061520_143	1245789	2360396	A	757.5	42.3	6/15/2020	-1.508	-0.006	0.564	0.2245966	0.000000	0.000000	0.126672
VosburgPike061520_144	1245766	2360505	A	758.5	42.4	6/15/2020	0	-0.015	0.297	0.2248219	0.000000	0.000000	0.066772
VosburgPike061520_145	1245889	2360544	A	759.5	42.5	6/15/2020	0	-0.011	0.63	0.2250469	0.000000	0.000000	0.141780
VosburgPike061520_146	1246127	2360477	A	760.3	42.5	6/15/2020	0	-0.051	0.038	0.225284	0.000000	0.000000	0.008561
VosburgPike061520_147	1246150	2360736	A	759.6	42.5	6/15/2020	0	-0.034	0.043	0.2250766	0.000000	0.000000	0.009678
VosburgPike061520_148	1246160	2360974	A	759.1	42.5	6/15/2020	-0.653	-0.006	0.422	0.2249284	0.000000	0.000000	0.094920
VosburgPike061520_149	1246218	2361247	A	759.2	42.3	6/15/2020	-1.088	-0.02	1.702	0.2251007	0.000000	0.000000	0.383121
VosburgPike061520_150	1246039	2361224	A	756.6	42.3	6/15/2020	-0.556	-0.008	1.566	0.2243298	0.000000	0.000000	0.351300
VosburgPike061520_151	1246021	2361071	A	758.1	42.1	6/15/2020	-0.085	-0.015	1.844	0.2249171	0.000000	0.000000	0.414747

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061520_152	1245833	2361301	A	758.5	41.9	6/15/2020	0	-0.037	0.02	0.2251786	0.000000	0.000000	0.004504
VosburgPike061520_153	1245585	2361340	A	758.4	41.8	6/15/2020	0	-0.007	0.72	0.2252205	0.000000	0.000000	0.162159
VosburgPike061520_154	1245439	2361288	A	759.9	41.7	6/15/2020	0	-0.025	0.138	0.2257376	0.000000	0.000000	0.031152
VosburgPike061520_155	1245240	2361279	A	761.1	41.7	6/15/2020	0	-0.034	0.335	0.2260941	0.000000	0.000000	0.075742
VosburgPike061520_156	1245155	2361086	A	762.4	41.7	6/15/2020	0	-0.017	2.437	0.2264802	0.000000	0.000000	0.551932
VosburgPike061520_157	1245190	2360916	A	768.8	41.9	6/15/2020	-0.09	-0.003	2.599	0.2282365	0.000000	0.000000	0.593187
VosburgPike061520_158	1245334	2360835	A	764.1	42.1	6/15/2020	55.15	-0.011	8.569	0.2266972	12.502350	0.000000	1.942569
VosburgPike061520_159	1245497	2360753	A	762.7	42.3	6/15/2020	-1.124	-0.009	2.049	0.2261384	0.000000	0.000000	0.463358
VosburgPike061520_160	1245383	2361008	A	762.2	42.6	6/15/2020	89.897	0.008	6.996	0.2257754	20.296540	0.001806	1.579525
VosburgPike061520_161	1245341	2361010	A	764.4	42.8	6/15/2020	1.344	0.039	2.566	0.2262838	0.304125	0.008825	0.580644
VosburgPike061520_162	1245602	2361034	A	764.5	43.2	6/15/2020	-0.385	-0.035	3.684	0.2260272	0.000000	0.000000	0.832684
VosburgPike061520_163	1245650	2361033	A	762.1	43.4	6/15/2020	1183.678	0.016	15.245	0.2251753	266.535100	0.003603	3.432797
VosburgPike061520_164	1245660	2361047	A	761.8	43.6	6/15/2020	224.453	0.012	8.547	0.2249445	50.489480	0.002699	1.922601
VosburgPike061520_165	1245713	2361046	A	761.8	43.8	6/15/2020	591.059	0.015	6.766	0.2248026	132.871600	0.003372	1.521014
VosburgPike061520_166	1245803	2361013	A	761.4	44.1	6/15/2020	15.806	0.028	5.576	0.2244721	3.548006	0.006285	1.251656
VosburgPike061520_167	1245834	2361006	A	760.4	44.2	6/15/2020	31.403	0.02	4.093	0.2241066	7.037621	0.004482	0.917268

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061520_168	1245881	2361015	A	760.0	44.4	6/15/2020	3.378	0.009	2.461	0.2238477	0.756157	0.002015	0.550889
VosburgPike061520_169	1245899	2360749	A	759.6	44.6	6/15/2020	-1.788	-0.03	1.065	0.223589	0.000000	0.000000	0.238122
VosburgPike061520_170	1245773	2360702	A	761.6	44.7	6/15/2020	-0.222	-0.011	0.141	0.2241072	0.000000	0.000000	0.031599
VosburgPike061520_171	1245566	2360348	A	761.3	44.8	6/15/2020	-1.168	-0.049	0.793	0.2239485	0.000000	0.000000	0.177591
VosburgPike061520_172	1245409	2360388	A	759.2	44.8	6/15/2020	-0.796	-0.089	1.013	0.2233307	0.000000	0.000000	0.226234
VosburgPike061520_173	1245353	2360243	A	760.7	44.7	6/15/2020	-0.67	-0.012	0.006	0.2238424	0.000000	0.000000	0.001343
VosburgPike061520_174	1245449	2360190	A	760.7	44.7	6/15/2020	-0.404	-0.017	0.301	0.2238424	0.000000	0.000000	0.067377
VosburgPike061520_175	1245396	2359963	A	760.2	44.7	6/15/2020	-0.392	-0.019	1.968	0.2236952	0.000000	0.000000	0.440232
VosburgPike061520_176	1245510	2359937	A	760.0	44.8	6/15/2020	-0.758	-0.029	0.495	0.2235661	0.000000	0.000000	0.110665
VosburgPike061620_01	1245300	2362238	A	764.3	28.4	6/16/2020	203.003	-0.002	3.27	0.2370586	48.123600	0.000000	0.775182
VosburgPike061620_02	1245235	2362220	A	767.8	29.2	6/16/2020	0	-0.003	1.134	0.237514	0.000000	0.000000	0.269341
VosburgPike061620_03	1245279	2362291	A	764.3	30.3	6/16/2020	-0.136	-0.008	1.122	0.2355743	0.000000	0.000000	0.264314
VosburgPike061620_04	1245256	2362080	A	763.2	30.9	6/16/2020	-1.517	-0.002	0.355	0.234771	0.000000	0.000000	0.083344
VosburgPike061620_05	1245284	2362020	A	761.9	31.1	6/16/2020	-1.335	-0.011	0.445	0.234217	0.000000	0.000000	0.104227
VosburgPike061620_06	1245368	2362018	A	761.2	31.3	6/16/2020	-0.456	-0.009	0.311	0.2338481	0.000000	0.000000	0.072727
VosburgPike061620_07	1245463	2362048	A	761.0	31.6	6/16/2020	-0.934	0	0.414	0.2335566	0.000000	0.000000	0.096692

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061620_08	1245555	2362038	A	760.1	31.9	6/16/2020	-0.118	-0.003	1.816	0.2330509	0.000000	0.000000	0.423220
VosburgPike061620_09	1245598	2362020	A	759.7	32.2	6/16/2020	-1.816	-0.002	5.699	0.2326994	0.000000	0.000000	1.326154
VosburgPike061620_10	1245598	2361992	A	759.5	32.7	6/16/2020	22.525	0.004	24.203	0.2322579	5.231608	0.000929	5.621337
VosburgPike061620_11	1245460	2361847	A	759.1	33.2	6/16/2020	-0.561	0	0.439	0.2317567	0.000000	0.000000	0.101741
VosburgPike061620_12	1245687	2361806	A	759.1	34.6	6/16/2020	0	-0.004	0.757	0.2307024	0.000000	0.000000	0.174642
VosburgPike061620_13	1245888	2361785	A	756.8	35.2	6/16/2020	0	-0.002	1.354	0.2295558	0.000000	0.000000	0.310819
VosburgPike061620_14	1245937	2361833	A	756.9	35.7	6/16/2020	-0.627	-0.006	1.114	0.2292145	0.000000	0.000000	0.255345
VosburgPike061620_15	1246001	2361842	A	757.3	36.1	6/16/2020	44.92	0.012	5.867	0.229039	10.288430	0.002748	1.343772
VosburgPike061620_16	1246013	2361776	A	756.8	36.4	6/16/2020	-1.369	-0.005	1.041	0.2286659	0.000000	0.000000	0.238041
VosburgPike061620_17	1246079	2361844	A	756.4	36.7	6/16/2020	0	-0.005	0.425	0.2283238	0.000000	0.000000	0.097038
VosburgPike061620_18	1246025	2361898	A	756.9	37.0	6/16/2020	-1.925	-0.006	1.577	0.2282537	0.000000	0.000000	0.359956
VosburgPike061620_19	1245943	2361879	A	757.7	37.2	6/16/2020	11.289	0.007	4.802	0.2283477	2.577817	0.001598	1.096526
VosburgPike061620_20	1245888	2361960	A	758.1	37.3	6/16/2020	11.307	0.001	3.544	0.2283947	2.582458	0.000228	0.809431
VosburgPike061620_21	1245862	2361977	A	759.2	37.4	6/16/2020	1368.402	0.001	15.172	0.2286524	312.888400	0.000229	3.469114
VosburgPike061620_22	1245680	2362034	A	759.2	37.5	6/16/2020	7.303	0.006	15.416	0.2285788	1.669311	0.001371	3.523771
VosburgPike061620_23	1245677	2362056	A	760.1	37.6	6/16/2020	3.069	0.004	4.591	0.2287761	0.702114	0.000915	1.050311

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061620_24	1245707	2362071	A	760.5	37.7	6/16/2020	4.009	0.01	1.749	0.2288229	0.917351	0.002288	0.400211
VosburgPike061620_25	1245741	2362032	A	760.3	37.8	6/16/2020	73.742	0.016	14.188	0.2286891	16.863990	0.003659	3.244641
VosburgPike061620_26	1245758	2362016	A	760.3	37.9	6/16/2020	17.204	0.008	2.844	0.2286156	3.933103	0.001829	0.650183
VosburgPike061620_27	1245786	2362028	A	759.6	38.0	6/16/2020	1.967	0.009	2.546	0.2283317	0.449129	0.002055	0.581333
VosburgPike061620_28	1245844	2362018	A	759.6	38.2	6/16/2020	64.508	0.013	9.596	0.2281851	14.719760	0.002966	2.189664
VosburgPike061620_29	1245967	2361975	A	759.5	38.3	6/16/2020	-0.784	-0.007	0.927	0.2280818	0.000000	0.000000	0.211432
VosburgPike061620_30	1246039	2361961	A	758.3	38.5	6/16/2020	-0.597	-0.017	1.134	0.2275753	0.000000	0.000000	0.258070
VosburgPike061620_31	1246016	2362056	A	758.1	38.7	6/16/2020	0	-0.011	0.508	0.2273693	0.000000	0.000000	0.115504
VosburgPike061620_32	1245979	2362111	A	758.9	38.9	6/16/2020	-1.153	-0.014	0.194	0.2274634	0.000000	0.000000	0.044128
VosburgPike061620_33	1245974	2362147	A	759.2	39.1	6/16/2020	-0.174	-0.006	0.14	0.2274075	0.000000	0.000000	0.031837
VosburgPike061620_34	1245969	2362226	A	759.2	39.2	6/16/2020	-0.785	-0.014	0.123	0.2273347	0.000000	0.000000	0.027962
VosburgPike061620_35	1245930	2362233	A	760.1	39.3	6/16/2020	-0.488	-0.007	1.277	0.2275314	0.000000	0.000000	0.290558
VosburgPike061620_36	1245846	2362256	A	760.5	39.3	6/16/2020	-1.443	-0.013	0.545	0.2276511	0.000000	0.000000	0.124070
VosburgPike061620_37	1245832	2362316	A	760.3	39.3	6/16/2020	0	-0.007	0.606	0.2275913	0.000000	0.000000	0.137920
VosburgPike061620_38	1245818	2362354	A	760.1	39.3	6/16/2020	0	-0.01	0.691	0.2275314	0.000000	0.000000	0.157224
VosburgPike061620_39	1245785	2362374	A	760.4	39.2	6/16/2020	0	-0.004	0.626	0.2276941	0.000000	0.000000	0.142536

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061620_40	1245740	2362349	A	760.8	39.2	6/16/2020	0	-0.005	0.812	0.2278138	0.000000	0.000000	0.184985
VosburgPike061620_41	1245765	2362315	A	760.8	39.2	6/16/2020	0	-0.016	1.125	0.2278138	0.000000	0.000000	0.256291
VosburgPike061620_42	1245779	2362282	A	760.5	39.2	6/16/2020	0	-0.009	0.753	0.227724	0.000000	0.000000	0.171476
VosburgPike061620_44	1245742	2362265	A	761.4	39.2	6/16/2020	0	-0.009	1.557	0.2279935	0.000000	0.000000	0.354986
VosburgPike061620_45	1245721	2362288	A	761.4	39.2	6/16/2020	0	-0.017	0.247	0.2279935	0.000000	0.000000	0.056314
VosburgPike061620_46	1245695	2362305	A	764.5	39.3	6/16/2020	0	-0.005	0.477	0.2288485	0.000000	0.000000	0.109161
VosburgPike061620_47	1245702	2362342	A	761.0	39.3	6/16/2020	0	-0.008	1.225	0.2278008	0.000000	0.000000	0.279056
VosburgPike061620_48	1245656	2362340	A	761.0	39.2	6/16/2020	0	-0.011	1.171	0.2278737	0.000000	0.000000	0.266840
VosburgPike061620_49	1245599	2362360	A	761.4	39.2	6/16/2020	0	-0.02	1.197	0.2279935	0.000000	0.000000	0.272908
VosburgPike061620_50	1245626	2362322	A	761.6	39.1	6/16/2020	0	-0.007	2.719	0.2281264	0.000000	0.000000	0.620276
VosburgPike061620_51	1245596	2362289	A	761.6	39.0	6/16/2020	0	-0.011	0.045	0.2281995	0.000000	0.000000	0.010269
VosburgPike061620_52	1245606	2362230	A	762.2	38.9	6/16/2020	0	-0.003	-0.015	0.2284525	0.000000	0.000000	0.000000
VosburgPike061620_53	1245650	2362244	A	761.6	38.9	6/16/2020	0	-0.01	1.087	0.2282726	0.000000	0.000000	0.248132
VosburgPike061620_54	1245637	2362220	A	761.5	38.8	6/16/2020	0	-0.012	1.925	0.2283158	0.000000	0.000000	0.439508
VosburgPike061620_55	1245672	2362209	A	761.1	38.7	6/16/2020	0	-0.008	0.603	0.2282691	0.000000	0.000000	0.137646
VosburgPike061620_56	1245719	2362203	A	760.7	38.7	6/16/2020	0	-0.009	0.213	0.2281491	0.000000	0.000000	0.048596

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061620_57	1245753	2362193	A	760.5	38.7	6/16/2020	0	-0.011	0.366	0.2280891	0.000000	0.000000	0.083481
VosburgPike061620_58	1245780	2362178	A	760.5	38.8	6/16/2020	0	-0.013	0.673	0.228016	0.000000	0.000000	0.153455
VosburgPike061620_59	1245821	2362160	A	760.0	38.9	6/16/2020	-2.362	-0.008	0.276	0.2277931	0.000000	0.000000	0.062871
VosburgPike061620_60	1245838	2362171	A	760.0	39.0	6/16/2020	1452.896	0.011	6.591	0.2277201	330.853600	0.002505	1.500903
VosburgPike061620_61	1245872	2362158	A	759.7	39.1	6/16/2020	-8.033	-0.006	1.22	0.2275573	0.000000	0.000000	0.277620
VosburgPike061620_62	1245865	2362129	A	759.6	39.2	6/16/2020	-0.696	-0.012	0.148	0.2274545	0.000000	0.000000	0.033663
VosburgPike061620_63	1245831	2362102	A	759.9	39.4	6/16/2020	346.14	-0.001	4.273	0.2273987	78.711800	0.000000	0.971675
VosburgPike061620_64	1245810	2362101	A	760.0	39.5	6/16/2020	14.735	0.014	7.189	0.2273559	3.350090	0.003183	1.634462
VosburgPike061620_65	1245781	2362084	A	759.7	39.6	6/16/2020	1716.992	0.013	11.077	0.2271935	390.089400	0.002954	2.516622
VosburgPike061620_66	1245680	2362127	A	763.1	40.0	6/16/2020	2520.305	0.012	10.965	0.2279188	574.424900	0.002735	2.499130
VosburgPike061620_67	1245633	2362093	A	760.3	40.2	6/16/2020	69.128	0.011	26.646	0.2269376	15.687740	0.002496	6.046978
VosburgPike061620_68	1245617	2362088	A	759.9	40.4	6/16/2020	1074.883	0.003	10.493	0.2266735	243.647500	0.000680	2.378485
VosburgPike061620_69	1245611	2362104	A	759.9	40.6	6/16/2020	29.795	0	3.583	0.226529	6.749432	0.000000	0.811653
VosburgPike061620_70	1245563	2362120	A	759.9	40.8	6/16/2020	2.546	0.003	0.746	0.2263847	0.576375	0.000679	0.168883
VosburgPike061620_71	1245525	2362116	A	760.0	41.0	6/16/2020	2.489	0.009	4.668	0.2262703	0.563187	0.002036	1.056230
VosburgPike061620_72	1245641	2362163	A	760.4	41.4	6/16/2020	-2.531	-0.02	0.186	0.2261015	0.000000	0.000000	0.042055

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061620_73	1245656	2362142	A	760.8	41.6	6/16/2020	133251.2	0.028	286.76	0.2260767	30124.990000	0.006330	64.829770
VosburgPike061620_74	1245668	2362144	A	760.7	41.8	6/16/2020	13.882	0.001	3.374	0.2259035	3.135992	0.000226	0.762198
VosburgPike061620_75	1245707	2362171	A	760.7	42.0	6/16/2020	-0.85	-0.019	0.713	0.2257601	0.000000	0.000000	0.160967
VosburgPike061620_76	1245771	2362134	A	760.4	42.2	6/16/2020	83450.19	0.037	80.678	0.225528	18820.350000	0.008345	18.195150
VosburgPike061620_77	1245782	2362149	A	760.4	42.3	6/16/2020	25.236	0.027	2.431	0.2254565	5.689619	0.006087	0.548085
VosburgPike061620_78	1245553	2362205	A	760.0	42.6	6/16/2020	-2.766	-0.023	0.265	0.2251238	0.000000	0.000000	0.059658
VosburgPike061620_79	1245548	2362219	A	761.4	42.8	6/16/2020	-0.937	-0.013	0.06	0.2253957	0.000000	0.000000	0.013524
VosburgPike061620_80	1245497	2362253	A	764.8	43.0	6/16/2020	22.935	0.02	3.795	0.226259	5.189249	0.004525	0.858653
VosburgPike061620_81	1245489	2362293	A	764.8	43.1	6/16/2020	-0.734	-0.01	3.463	0.2261874	0.000000	0.000000	0.783287
VosburgPike061620_82	1245379	2362224	A	761.6	43.2	6/16/2020	-1.841	-0.027	0.482	0.2251698	0.000000	0.000000	0.108532
VosburgPike061620_83	1245398	2362199	A	761.6	43.3	6/16/2020	-12.084	-0.003	0.709	0.2250987	0.000000	0.000000	0.159595
VosburgPike061620_84	1245434	2362187	A	761.4	43.4	6/16/2020	-0.736	-0.012	13.013	0.2249685	0.000000	0.000000	2.927515
VosburgPike061020_48	1240919	2340960	A	754.5	41.8	6/10/2020	-4.104	0.021	1.712	0.2240623	0.000000	0.004705	0.383595
VosburgPike061020_49	1240920	2340985	A	765.5	42.3	6/10/2020	-1.582	-0.027	-5.686	0.2269686	0.000000	0.000000	0.000000
VosburgPike061020_50	1240861	2340953	A	766.1	42.5	6/10/2020	-1.572	-0.01	0.131	0.2270026	0.000000	0.000000	0.029737
VosburgPike061020_51	1240860	2341003	A	766.1	42.7	6/10/2020	8.955	0.038	4.101	0.2268588	2.031521	0.008621	0.930348

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061020_52	1240853	2341018	A	766.1	42.8	6/10/2020	-0.165	0.018	1.439	0.226787	0.000000	0.004082	0.326347
VosburgPike061020_53	1240879	2341040	A	766.6	42.9	6/10/2020	838.219	0.001	29.767	0.2268632	190.161100	0.000227	6.753038
VosburgPike061020_54	1240912	2341033	A	766.5	43.0	6/10/2020	-3.911	-0.012	0.385	0.2267619	0.000000	0.000000	0.087303
VosburgPike061020_55	1240858	2341058	A	766.5	43.1	6/10/2020	21.543	0.072	18.633	0.2266902	4.883586	0.016322	4.223918
VosburgPike061020_56	1240914	2341094	A	767.0	43.1	6/10/2020	-5.277	0.003	0.483	0.2268381	0.000000	0.000681	0.109563
VosburgPike061020_57	1240906	2341117	A	767.4	43.2	6/10/2020	-2.721	-0.008	1.064	0.2268846	0.000000	0.000000	0.241405
VosburgPike061020_58	1240884	2341108	A	767.8	43.2	6/10/2020	-5.316	-0.007	0.001	0.2270029	0.000000	0.000000	0.000227
VosburgPike061020_59	1240872	2341090	A	767.7	43.3	6/10/2020	130.11	0.054	26.442	0.2269016	29.522170	0.012253	5.999732
VosburgPike061020_60	1240872	2341129	A	767.7	43.3	6/10/2020	-0.46	0.011	0.139	0.2269016	0.000000	0.002496	0.031539
VosburgPike061020_61	1240830	2341115	A	768.1	43.4	6/10/2020	-4.453	-0.004	1.777	0.2269481	0.000000	0.000000	0.403287
VosburgPike061020_62	1240809	2341101	A	768.0	43.5	6/10/2020	-2.11	0.004	1.439	0.2268469	0.000000	0.000907	0.326433
VosburgPike061020_63	1240821	2341045	A	767.7	43.5	6/10/2020	-2.198	-0.005	2.471	0.2267583	0.000000	0.000000	0.560320
VosburgPike061020_64	1240806	2340994	A	767.0	43.6	6/10/2020	-0.268	0.004	1.208	0.22648	0.000000	0.000906	0.273588
VosburgPike061020_65	1240796	2340961	A	767.0	43.7	6/10/2020	-2.134	0	0.326	0.2264085	0.000000	0.000000	0.073809
FloridaRiver060320_45	1237319	2335244	A	788.6	44.3	6/3/2020	-2.983	0.006	0.004	0.2323446	0.000000	0.001394	0.000929
FloridaRiver060320_46	1237315	2335167	A	778.6	44.6	6/3/2020	-3.404	-0.004	0.288	0.2291817	0.000000	0.000000	0.066004

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060320_47	1237335	2335121	A	778.2	44.9	6/3/2020	-4.759	0.003	0.253	0.2288479	0.000000	0.000687	0.057899
FloridaRiver060320_48	1237347	2335083	A	778.1	45.1	6/3/2020	-7.653	0	0.457	0.2286747	0.000000	0.000000	0.104504
FloridaRiver060320_49	1237382	2335075	A	777.5	45.4	6/3/2020	-2.494	-0.004	0.182	0.2282832	0.000000	0.000000	0.041548
FloridaRiver060320_50	1237415	2335070	A	777.3	45.6	6/3/2020	-2.078	-0.002	0.392	0.2280813	0.000000	0.000000	0.089408
FloridaRiver060320_51	1237416	2335119	A	776.9	45.8	6/3/2020	-4.346	0	0.278	0.2278209	0.000000	0.000000	0.063334
FloridaRiver060320_52	1237444	2335125	A	776.9	45.9	6/3/2020	-8.763	0	0.902	0.2277495	0.000000	0.000000	0.205430
FloridaRiver060320_53	1237524	2335126	A	776.6	46.0	6/3/2020	-4.638	-0.005	0.574	0.2275902	0.000000	0.000000	0.130637
FloridaRiver060320_54	1237504	2335179	A	775.9	46.1	6/3/2020	-4.29	0.001	0.14	0.2273139	0.000000	0.000227	0.031824
FloridaRiver060320_55	1237503	2335248	A	776.1	46.1	6/3/2020	-2.932	0.011	0.262	0.2273725	0.000000	0.002501	0.059572
FloridaRiver060320_56	1237478	2335296	A	776.3	46.0	6/3/2020	-1.053	0.014	0.352	0.2275023	0.000000	0.003185	0.080081
FloridaRiver060320_57	1237442	2335307	A	776.9	46.0	6/3/2020	-4.49	0.015	2.158	0.2276782	0.000000	0.003415	0.491329
FloridaRiver060320_58	1237435	2335265	A	777.4	45.9	6/3/2020	-7.52	0.003	1.676	0.2278961	0.000000	0.000684	0.381954
FloridaRiver060320_59	1237416	2335227	A	777.4	45.9	6/3/2020	8.355	0.017	9.117	0.2278961	1.904072	0.003874	2.077729
FloridaRiver060320_60	1237417	2335187	A	777.0	45.9	6/3/2020	-2.667	0.066	1.7	0.2277788	0.000000	0.015033	0.387224
FloridaRiver060320_61	1237385	2335194	A	777.4	45.9	6/3/2020	-7.101	-0.004	0.309	0.2278961	0.000000	0.000000	0.070420
FloridaRiver060320_62	1237364	2335235	A	777.7	45.9	6/3/2020	-4.213	0.007	0.262	0.227984	0.000000	0.001596	0.059732

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
FloridaRiver060320_63	1237358	2335259	A	777.7	45.9	6/3/2020	-3.053	0.002	0.236	0.227984	0.000000	0.000456	0.053804
FloridaRiver060320_64	1237381	2335298	A	777.8	45.8	6/3/2020	-2.241	-0.007	0.137	0.2280848	0.000000	0.000000	0.031248
SFTC060420_01	1243373	2373788	A	777.9	26.2	6/4/2020	-0.528	-0.013	0.035	0.24305	0.000000	0.000000	0.008507
SFTC060420_02	1243366	2373677	A	777.9	27.1	6/4/2020	1.305	0.013	0.899	0.2423215	0.316229	0.003150	0.217847
SFTC060420_03	1243382	2373579	A	777.9	28.1	6/4/2020	-0.14	-0.001	-0.029	0.2415171	0.000000	0.000000	0.000000
SFTC060420_04	1243414	2373561	A	777.9	28.9	6/4/2020	-0.529	-0.004	0.512	0.2408774	0.000000	0.000000	0.123329
SFTC060420_05	1243446	2373400	A	777.9	29.7	6/4/2020	-1.036	-0.01	1.148	0.2402411	0.000000	0.000000	0.275797
SFTC060420_06	1243421	2373412	A	777.8	30.5	6/4/2020	-0.489	-0.018	0.462	0.2395774	0.000000	0.000000	0.110685
SFTC060420_07	1243435	2373184	A	777.8	31.7	6/4/2020	-0.781	-0.015	2.884	0.2386343	0.000000	0.000000	0.688221
SFTC060420_08	1243417	2372792	A	777.4	33.0	6/4/2020	-0.92	-0.003	-0.252	0.2374988	0.000000	0.000000	0.000000
SFTC060420_09	1243453	2372555	A	776.9	33.9	6/4/2020	-0.761	-0.016	0.718	0.2366503	0.000000	0.000000	0.169915
SFTC060420_10	1243432	2372568	A	776.9	34.6	6/4/2020	0	-0.013	-0.004	0.2361121	0.000000	0.000000	0.000000
SFTC060420_11	1243476	2372334	A	776.7	35.6	6/4/2020	-1.26	-0.013	0.662	0.2352867	0.000000	0.000000	0.155760
SFTC060420_12	1243444	2372322	A	776.7	36.3	6/4/2020	-0.205	-0.009	2.992	0.2347545	0.000000	0.000000	0.702385
SFTC060420_13	1243451	2371990	A	777.0	37.6	6/4/2020	-0.336	-0.004	-0.088	0.2338627	0.000000	0.000000	0.000000
SFTC060420_14	1243527	2371785	A	776.7	38.4	6/4/2020	-0.894	-0.011	0.696	0.2331721	0.000000	0.000000	0.162288
SFTC060420_15	1243502	2371672	A	776.5	39.0	6/4/2020	-1.997	-0.031	1.081	0.232664	0.000000	0.000000	0.251510
SFTC060420_16	1243501	2371587	A	776.3	39.6	6/4/2020	-1.594	-0.015	3.059	0.2321579	0.000000	0.000000	0.710171
SFTC060420_17	1243557	2371355	A	776.2	40.3	6/4/2020	-2.018	-0.008	0.082	0.2316096	0.000000	0.000000	0.018992
SFTC060420_18	1243579	2371197	A	776.0	40.9	6/4/2020	-3.101	-0.03	2.139	0.2311075	0.000000	0.000000	0.494339
SFTC060420_19	1243553	2371138	A	775.9	41.5	6/4/2020	-0.774	-0.006	0.071	0.2306371	0.000000	0.000000	0.016375
SFTC060420_20	1243582	2371138	A	775.9	41.9	6/4/2020	-0.003	-0.006	1.035	0.2303443	0.000000	0.000000	0.238406

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC060420_21	1243584	2371094	A	775.9	42.4	6/4/2020	-2.648	-0.024	0.251	0.2299793	0.000000	0.000000	0.057725
SFTC060420_22	1243591	2370963	A	775.6	42.9	6/4/2020	-1.304	-0.013	1.373	0.2295267	0.000000	0.000000	0.315140
SFTC060420_23	1243559	2370961	A	775.6	43.4	6/4/2020	15.88	0.032	17.066	0.2291641	3.639126	0.007333	3.910915
SFTC060420_24	1243565	2370781	A	775.5	44.0	6/4/2020	-1.899	-0.021	0.105	0.2287011	0.000000	0.000000	0.024014
SFTC060420_25	1243596	2370751	A	775.5	44.4	6/4/2020	-1.609	-0.01	2.453	0.228413	0.000000	0.000000	0.560297
SFTC060420_26	1243592	2370601	A	775.5	44.7	6/4/2020	-1.311	-0.048	0.016	0.2281974	0.000000	0.000000	0.003651
SFTC060420_27	1243566	2370599	A	775.5	45.1	6/4/2020	0	-0.015	0.037	0.2279106	0.000000	0.000000	0.008433
SFTC060420_28	1243465	2370815	A	775.4	45.6	6/4/2020	25.741	0.039	10.627	0.2275237	5.856688	0.008873	2.417895
SFTC060420_29	1243446	2370750	A	776.3	45.9	6/4/2020	-1.868	-0.055	3.778	0.2275736	0.000000	0.000000	0.859773
SFTC060420_30	1243352	2370754	A	776.5	46.1	6/4/2020	-1.287	-0.022	0.756	0.2274897	0.000000	0.000000	0.171982
SFTC060420_31	1243232	2370731	A	776.3	46.3	6/4/2020	-1.65	-0.036	1.433	0.2272887	0.000000	0.000000	0.325705
SFTC060420_32	1243379	2370952	A	776.5	46.6	6/4/2020	-3.337	-0.04	1.488	0.2271339	0.000000	0.000000	0.337975
SFTC060420_33	1243207	2370925	A	776.5	46.7	6/4/2020	-0.994	-0.068	1.331	0.2270629	0.000000	0.000000	0.302221
SFTC060420_34	1243071	2371014	A	776.3	46.7	6/4/2020	-1.21	-0.057	0.544	0.2270044	0.000000	0.000000	0.123490
SFTC060420_35	1242970	2371202	A	775.9	46.7	6/4/2020	-1.368	-0.036	0.586	0.2268875	0.000000	0.000000	0.132956
SFTC060420_36	1243164	2371252	A	775.8	46.5	6/4/2020	-2.741	-0.062	0.904	0.2270002	0.000000	0.000000	0.205208
SFTC060420_37	1243362	2371246	A	776.6	46.5	6/4/2020	0	-0.008	1.059	0.2272342	0.000000	0.000000	0.240641
SFTC060420_38	1243325	2371423	A	776.5	46.4	6/4/2020	0	-0.053	1.119	0.2272761	0.000000	0.000000	0.254322
SFTC060420_39	1243375	2371559	A	776.3	46.3	6/4/2020	0	-0.044	0.922	0.2272887	0.000000	0.000000	0.209560
SFTC060420_40	1243227	2371378	A	776.3	46.1	6/4/2020	0	-0.033	0.182	0.2274311	0.000000	0.000000	0.041392
SFTC060420_41	1243220	2371483	A	776.6	46.1	6/4/2020	-0.254	-0.029	5.422	0.227519	0.000000	0.000000	1.233608
SFTC060420_42	1243132	2371505	A	776.8	46.1	6/4/2020	4.219	0.008	8.105	0.2275776	0.960150	0.001821	1.844516

Individual Flux Measurements and Calculations (Continued)

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SFTC060420_43	1243135	2371567	A	776.8	46.1	6/4/2020	-0.005	-0.047	1.565	0.2275776	0.000000	0.000000	0.356159
SFTC060420_44	1243008	2371440	A	776.6	46.1	6/4/2020	0	-0.017	0.3	0.227519	0.000000	0.000000	0.068256
SFTC060420_45	1242947	2371583	A	776.6	46.2	6/4/2020	0	-0.032	1.085	0.2274477	0.000000	0.000000	0.246781
SFTC060420_46	1243208	2371752	A	776.6	46.1	6/4/2020	0	-0.042	3.561	0.227519	0.000000	0.000000	0.810195
SFTC060420_47	1243259	2371778	A	776.6	46.2	6/4/2020	0	-0.011	0.422	0.2274477	0.000000	0.000000	0.095983
SFTC060420_48	1242984	2371753	A	776.5	46.1	6/4/2020	0	-0.04	1.008	0.2274897	0.000000	0.000000	0.229310
SFTC060420_49	1243232	2371981	A	776.6	46.1	6/4/2020	0	-0.06	0.997	0.227519	0.000000	0.000000	0.226836
SFTC060420_50	1242914	2371968	A	776.8	46.1	6/4/2020	0	-0.022	0.47	0.2275776	0.000000	0.000000	0.106961
SFTC060420_51	1242805	2371998	A	776.8	46.1	6/4/2020	0	-0.027	0.218	0.2275776	0.000000	0.000000	0.049612
SFTC060420_52	1242806	2372157	A	776.8	46.0	6/4/2020	0	-0.024	0.276	0.2276489	0.000000	0.000000	0.062831
SFTC060420_53	1242831	2372319	A	776.3	46.0	6/4/2020	0	-0.02	0.156	0.2275023	0.000000	0.000000	0.035490
SFTC060420_54	1242795	2372533	A	775.9	45.9	6/4/2020	0	-0.065	0.578	0.2274564	0.000000	0.000000	0.131470
SFTC060420_55	1242787	2372738	A	775.7	45.8	6/4/2020	0	-0.04	0.047	0.227469	0.000000	0.000000	0.010691
SFTC060420_56	1242890	2372768	A	775.9	45.7	6/4/2020	0	-0.007	0.283	0.2275991	0.000000	0.000000	0.064411
SFTC060420_57	1242914	2372568	A	777.0	45.5	6/4/2020	0	-0.029	0.706	0.2280648	0.000000	0.000000	0.161014
SFTC060420_58	1242949	2372536	A	777.0	45.5	6/4/2020	852.825	0.025	7.7	0.2280648	194.499300	0.005702	1.756099
SFTC060420_59	1242953	2372506	A	777.0	45.4	6/4/2020	0	-0.018	4.832	0.2281364	0.000000	0.000000	1.102355
SFTC060420_60	1242962	2372493	A	776.9	45.4	6/4/2020	620.556	0.035	4.971	0.228107	141.553200	0.007984	1.133920
SFTC060420_61	1243000	2372376	A	776.6	45.4	6/4/2020	0	-0.05	0.484	0.2280189	0.000000	0.000000	0.110361
SFTC060420_62	1242991	2372339	A	776.8	45.4	6/4/2020	0	-0.012	0.063	0.2280777	0.000000	0.000000	0.014369
SFTC060420_63	1243003	2372159	A	776.6	45.5	6/4/2020	0	-0.057	0.842	0.2279474	0.000000	0.000000	0.191932
SFTC060420_64	1243259	2372201	A	776.6	45.5	6/4/2020	0	-0.041	2.575	0.2279474	0.000000	0.000000	0.586964

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC060420_65	1243346	2372195	A	776.5	45.5	6/4/2020	0	-0.026	1.151	0.227918	0.000000	0.000000	0.262334
SFTC060420_66	1243374	2372177	A	776.5	45.5	6/4/2020	0	-0.03	2.119	0.227918	0.000000	0.000000	0.482958
SFTC060420_67	1243395	2372241	A	776.5	45.5	6/4/2020	0	-0.02	1.15	0.227918	0.000000	0.000000	0.262106
SFTC060420_68	1243375	2372287	A	776.5	45.5	6/4/2020	0	-0.011	0.796	0.227918	0.000000	0.000000	0.181423
SFTC060420_69	1243361	2372405	A	776.1	45.5	6/4/2020	0	-0.036	1.196	0.2278006	0.000000	0.000000	0.272450
SFTC060420_70	1243395	2372576	A	775.9	45.4	6/4/2020	0	-0.021	0.372	0.2278134	0.000000	0.000000	0.084747
SFTC060420_71	1243181	2372377	A	776.1	45.4	6/4/2020	0	-0.008	0.311	0.2278721	0.000000	0.000000	0.070868
SFTC060420_72	1243154	2372530	A	776.6	45.4	6/4/2020	0	-0.029	0.128	0.2280189	0.000000	0.000000	0.029186
SFTC060420_73	1243187	2372715	A	776.5	45.3	6/4/2020	0	-0.044	0.611	0.2280612	0.000000	0.000000	0.139345
SFTC060420_74	1243201	2372962	A	776.6	45.2	6/4/2020	0	-0.055	0.403	0.2281622	0.000000	0.000000	0.091949
SFTC060420_75	1243157	2373128	A	776.7	45.1	6/4/2020	0	-0.002	2.443	0.2282633	0.000000	0.000000	0.557647
SFTC060420_76	1243156	2373366	A	777.0	45.0	6/4/2020	0	-0.028	0.27	0.2284232	0.000000	0.000000	0.061674
SFTC060420_77	1243060	2373390	A	777.0	44.9	6/4/2020	0	-0.013	0.781	0.228495	0.000000	0.000000	0.178455
SFTC060420_78	1242928	2373176	A	776.8	44.7	6/4/2020	0	-0.057	0.652	0.2285799	0.000000	0.000000	0.149034
SFTC060420_79	1242997	2372968	A	775.8	44.5	6/4/2020	0	-0.031	1.259	0.2284294	0.000000	0.000000	0.287593
SFTC060420_80	1242840	2372930	A	775.9	44.3	6/4/2020	0	-0.021	0.928	0.2286028	0.000000	0.000000	0.212143
SFTC060420_81	1242851	2373138	A	775.1	44.1	6/4/2020	0	-0.007	1.344	0.2285111	0.000000	0.000000	0.307119
SFTC060420_82	1242728	2373353	A	774.9	43.9	6/4/2020	0	-0.039	0.714	0.2285962	0.000000	0.000000	0.163218
SFTC060420_83	1242805	2373574	A	774.6	43.8	6/4/2020	0	-0.031	1.023	0.2285798	0.000000	0.000000	0.233837
SFTC060420_84	1242613	2373729	A	775.8	43.7	6/4/2020	0	-0.014	0.569	0.2290062	0.000000	0.000000	0.130305
SFTC060420_85	1242579	2373910	A	776.2	43.6	6/4/2020	0	-0.022	0.015	0.2291966	0.000000	0.000000	0.003438
SFTC060420_86	1242579	2374079	A	776.2	43.6	6/4/2020	0	-0.029	0.178	0.2291966	0.000000	0.000000	0.040797

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC060420_87	1242780	2374075	A	776.6	43.5	6/4/2020	0	-0.021	0.362	0.2293871	0.000000	0.000000	0.083038
SFTC060420_88	1242829	2373961	A	776.5	43.5	6/4/2020	0	-0.035	1.427	0.2293576	0.000000	0.000000	0.327293
SFTC060420_89	1242985	2374067	A	776.6	43.5	6/4/2020	0	-0.034	0.419	0.2293871	0.000000	0.000000	0.096113
SFTC060420_90	1242978	2373974	A	777.0	43.5	6/4/2020	0	-0.013	0.692	0.2295053	0.000000	0.000000	0.158818
SFTC060420_91	1242796	2373779	A	776.8	43.6	6/4/2020	0	-0.032	0.533	0.2293737	0.000000	0.000000	0.122256
SFTC060420_92	1242879	2373766	A	776.8	43.6	6/4/2020	0	-0.007	0.098	0.2293737	0.000000	0.000000	0.022479
SFTC060420_93	1242977	2373760	A	776.6	43.7	6/4/2020	0	-0.019	0.046	0.2292423	0.000000	0.000000	0.010545
SFTC060420_94	1243035	2373579	A	776.9	43.8	6/4/2020	0	-0.03	0.861	0.2292585	0.000000	0.000000	0.197392
SFTC060420_95	1243160	2373557	A	776.5	43.9	6/4/2020	0	-0.018	0.074	0.2290682	0.000000	0.000000	0.016951
SFTC060420_96	1243251	2373581	A	776.9	43.9	6/4/2020	0	-0.005	0.269	0.2291862	0.000000	0.000000	0.061651
SFTC061720_01	1243374	2373775	A	775.9	26.4	6/17/2020	-0.639	-0.018	-0.146	0.2422632	0.000000	0.000000	0.000000
SFTC061720_02	1243304	2373712	A	775.9	27.3	6/17/2020	0	-0.006	0.267	0.2415376	0.000000	0.000000	0.064491
SFTC061720_03	1243299	2373764	A	776.0	28.0	6/17/2020	0	-0.004	0.528	0.2410072	0.000000	0.000000	0.127252
SFTC061720_04	1243299	2373818	A	776.0	28.5	6/17/2020	0	-0.019	2.718	0.2406077	0.000000	0.000000	0.653972
SFTC061720_05	1243297	2373845	A	776.2	29.4	6/17/2020	0	-0.008	1.778	0.2399538	0.000000	0.000000	0.426638
SFTC061720_06	1243306	2373880	A	776.3	29.8	6/17/2020	-0.255	-0.002	3.806	0.2396678	0.000000	0.000000	0.912176
SFTC061720_07	1243327	2373900	A	776.3	30.3	6/17/2020	-0.046	-0.028	0.689	0.2392729	0.000000	0.000000	0.164859
SFTC061720_08	1243299	2373924	A	776.5	30.8	6/17/2020	0	-0.017	0.969	0.2389409	0.000000	0.000000	0.231534
SFTC061720_09	1243245	2373920	A	776.5	31.3	6/17/2020	-0.636	-0.01	2.034	0.2385484	0.000000	0.000000	0.485208
SFTC061720_10	1243238	2373861	A	776.5	31.9	6/17/2020	0	-0.016	0.861	0.2380792	0.000000	0.000000	0.204986
SFTC061720_100	1243440	2373927	A	774.9	43.2	6/17/2020	-0.56	-0.023	0.228	0.229102	0.000000	0.000000	0.052235
SFTC061720_11	1243250	2373829	A	776.5	32.3	6/17/2020	0	-0.013	0.155	0.2377675	0.000000	0.000000	0.036854

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061720_12	1243264	2373803	A	776.5	32.8	6/17/2020	0	-0.001	0.136	0.2373789	0.000000	0.000000	0.032284
SFTC061720_13	1243224	2373783	A	776.2	33.5	6/17/2020	-0.714	-0.02	0.291	0.2367455	0.000000	0.000000	0.068893
SFTC061720_14	1243204	2373743	A	776.5	34.0	6/17/2020	0	-0.003	0.039	0.2364515	0.000000	0.000000	0.009222
SFTC061720_15	1243264	2373671	A	776.5	34.8	6/17/2020	-0.001	-0.001	0.074	0.2358372	0.000000	0.000000	0.017452
SFTC061720_16	1243164	2373688	A	776.3	35.4	6/17/2020	0	-0.009	0.799	0.235318	0.000000	0.000000	0.188019
SFTC061720_17	1243160	2373768	A	776.5	35.8	6/17/2020	0	-0.029	1.029	0.2350739	0.000000	0.000000	0.241891
SFTC061720_18	1243170	2373874	A	776.6	36.2	6/17/2020	-0.123	-0.037	1.736	0.2348002	0.000000	0.000000	0.407613
SFTC061720_19	1243193	2373968	A	776.6	36.6	6/17/2020	-0.713	-0.032	0.453	0.2344969	0.000000	0.000000	0.106227
SFTC061720_20	1243217	2373981	A	776.6	37.2	6/17/2020	0	-0.03	0.623	0.2340436	0.000000	0.000000	0.145809
SFTC061720_21	1243236	2373988	A	776.5	37.6	6/17/2020	0	-0.006	0.465	0.2337122	0.000000	0.000000	0.108676
SFTC061720_22	1243207	2374048	A	776.6	37.9	6/17/2020	-1.315	-0.031	1.305	0.2335169	0.000000	0.000000	0.304740
SFTC061720_23	1243164	2374018	A	776.6	38.2	6/17/2020	0	-0.011	0.237	0.2332919	0.000000	0.000000	0.055290
SFTC061720_24	1243167	2374043	A	776.6	38.3	6/17/2020	0	-0.011	0.032	0.233217	0.000000	0.000000	0.007463
SFTC061720_25	1243159	2374082	A	776.2	38.4	6/17/2020	0	-0.027	0.413	0.233022	0.000000	0.000000	0.096238
SFTC061720_26	1243167	2374118	A	775.6	38.5	6/17/2020	0	-0.014	0.226	0.2327672	0.000000	0.000000	0.052605
SFTC061720_27	1243193	2374155	A	778.1	38.5	6/17/2020	0	-0.001	0.458	0.2335175	0.000000	0.000000	0.106951
SFTC061720_28	1243215	2374178	A	775.4	38.5	6/17/2020	0	-0.015	0.254	0.2327072	0.000000	0.000000	0.059108
SFTC061720_29	1243230	2374219	A	775.4	38.4	6/17/2020	0	-0.019	0.349	0.2327819	0.000000	0.000000	0.081241
SFTC061720_30	1243215	2374254	A	775.1	38.3	6/17/2020	0	-0.018	0.369	0.2327665	0.000000	0.000000	0.085891
SFTC061720_31	1243245	2374268	A	775.4	38.2	6/17/2020	0	-0.018	0.226	0.2329314	0.000000	0.000000	0.052642
SFTC061720_32	1243254	2374193	A	775.4	38.0	6/17/2020	0	-0.014	0.915	0.2330811	0.000000	0.000000	0.213269
SFTC061720_33	1243271	2374199	A	778.7	37.9	6/17/2020	1.224	0.017	3.725	0.2341483	0.286598	0.003981	0.872203

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061720_34	1243283	2374215	A	776.0	37.8	6/17/2020	5.317	0.01	0.913	0.2334115	1.241049	0.002334	0.213105
SFTC061720_35	1243268	2374148	A	776.0	37.7	6/17/2020	0	-0.019	2.221	0.2334866	0.000000	0.000000	0.518574
SFTC061720_36	1243251	2374114	A	776.3	37.7	6/17/2020	0	-0.011	1.298	0.2335769	0.000000	0.000000	0.303183
SFTC061720_37	1243225	2374087	A	776.5	37.7	6/17/2020	0	-0.013	1.026	0.233637	0.000000	0.000000	0.239712
SFTC061720_38	1243286	2374109	A	776.6	37.7	6/17/2020	0	-0.006	2.106	0.2336671	0.000000	0.000000	0.492103
SFTC061720_39	1243268	2374118	A	776.3	37.7	6/17/2020	0	-0.028	1.747	0.2335769	0.000000	0.000000	0.408059
SFTC061720_40	1243293	2374121	A	776.3	37.8	6/17/2020	0	-0.028	2.118	0.2335017	0.000000	0.000000	0.494557
SFTC061720_41	1243317	2374163	A	776.3	37.9	6/17/2020	0	-0.011	0.448	0.2334267	0.000000	0.000000	0.104575
SFTC061720_42	1243318	2374149	A	776.3	38.0	6/17/2020	2.666	0.003	10.574	0.2333517	0.622115	0.000700	2.467461
SFTC061720_43	1243339	2374135	A	776.5	38.2	6/17/2020	0	-0.01	0.691	0.2332618	0.000000	0.000000	0.161184
SFTC061720_44	1243348	2374145	A	776.5	38.4	6/17/2020	0	-0.005	0.778	0.2331121	0.000000	0.000000	0.181361
SFTC061720_45	1243360	2374148	A	776.5	38.7	6/17/2020	0	-0.011	0.569	0.2328878	0.000000	0.000000	0.132513
SFTC061720_46	1243361	2374158	A	776.5	38.9	6/17/2020	0	-0.013	0.473	0.2327386	0.000000	0.000000	0.110085
SFTC061720_47	1243372	2374165	A	776.5	39.2	6/17/2020	5.794	0.005	1.556	0.2325151	1.347192	0.001163	0.361793
SFTC061720_48	1243371	2374180	A	779.3	39.4	6/17/2020	0	-0.01	0.392	0.2332042	0.000000	0.000000	0.091416
SFTC061720_49	1243362	2374193	A	778.9	39.6	6/17/2020	0	-0.006	0.481	0.2329354	0.000000	0.000000	0.112042
SFTC061720_50	1243380	2374194	A	778.9	39.9	6/17/2020	-0.032	-0.009	0.363	0.2327122	0.000000	0.000000	0.084475
SFTC061720_51	1243343	2374233	A	776.3	40.1	6/17/2020	-0.298	-0.009	0.908	0.2317873	0.000000	0.000000	0.210463
SFTC061720_52	1243358	2374266	A	776.3	40.3	6/17/2020	-0.281	-0.005	0.582	0.2316394	0.000000	0.000000	0.134814
SFTC061720_53	1243364	2374254	A	776.3	40.5	6/17/2020	-0.376	-0.012	0.427	0.2314917	0.000000	0.000000	0.098847
SFTC061720_54	1243387	2374230	A	776.3	40.7	6/17/2020	0	-0.014	1.663	0.2313442	0.000000	0.000000	0.384725
SFTC061720_55	1243410	2374243	A	776.3	40.9	6/17/2020	35.845	0.02	2.522	0.2311968	8.287251	0.004624	0.583078

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061720_56	1243428	2374238	A	776.5	41.1	6/17/2020	0	-0.022	1.998	0.2311092	0.000000	0.000000	0.461756
SFTC061720_57	1243429	2374212	A	779.3	41.3	6/17/2020	2.214	0.058	3.542	0.2317951	0.513194	0.013444	0.821018
SFTC061720_58	1243436	2374179	A	776.5	41.5	6/17/2020	-0.41	-0.042	1.827	0.2308154	0.000000	0.000000	0.421700
SFTC061720_59	1243441	2374149	A	776.3	41.6	6/17/2020	-0.323	-0.043	1.358	0.2306827	0.000000	0.000000	0.313267
SFTC061720_60	1243416	2374149	A	776.5	41.8	6/17/2020	-0.59	-0.013	1.571	0.2305956	0.000000	0.000000	0.362266
SFTC061720_61	1243413	2374162	A	776.5	42.0	6/17/2020	-0.707	-0.008	0.315	0.2304492	0.000000	0.000000	0.072592
SFTC061720_62	1243399	2374185	A	776.3	42.1	6/17/2020	0	-0.018	0.25	0.2303168	0.000000	0.000000	0.057579
SFTC061720_63	1243400	2374148	A	776.3	42.2	6/17/2020	1.185	0.028	2.352	0.2302438	0.272839	0.006447	0.541533
SFTC061720_64	1243380	2374142	A	776.3	42.3	6/17/2020	90.166	0.039	8.617	0.2301708	20.753580	0.008977	1.983382
SFTC061720_65	1243341	2374095	A	776.2	42.4	6/17/2020	-0.002	-0.06	0.356	0.2300682	0.000000	0.000000	0.081904
SFTC061720_66	1243301	2374091	A	776.1	42.5	6/17/2020	-0.138	-0.017	1.809	0.2299657	0.000000	0.000000	0.416008
SFTC061720_67	1243284	2374063	A	776.2	42.6	6/17/2020	0	-0.034	1.006	0.2299225	0.000000	0.000000	0.231302
SFTC061720_68	1243271	2374044	A	776.2	42.7	6/17/2020	0	-0.022	0.585	0.2298497	0.000000	0.000000	0.134462
SFTC061720_69	1243337	2374040	A	776.1	42.7	6/17/2020	-1.049	-0.008	0.553	0.22982	0.000000	0.000000	0.127090
SFTC061720_70	1243362	2374032	A	776.1	42.8	6/17/2020	0	-0.011	0.472	0.2297473	0.000000	0.000000	0.108441
SFTC061720_71	1243340	2373984	A	775.9	42.9	6/17/2020	0	-0.02	0.315	0.2296154	0.000000	0.000000	0.072329
SFTC061720_72	1243371	2373992	A	775.9	43.0	6/17/2020	-0.386	-0.011	0.875	0.2295428	0.000000	0.000000	0.200850
SFTC061720_73	1243402	2373998	A	775.9	43.0	6/17/2020	-0.84	-0.021	4.667	0.2295428	0.000000	0.000000	1.071276
SFTC061720_74	1243409	2374013	A	775.9	43.1	6/17/2020	0	-0.005	0.173	0.2294702	0.000000	0.000000	0.039698
SFTC061720_75	1243420	2373979	A	778.5	43.1	6/17/2020	-0.485	-0.01	1.295	0.2302392	0.000000	0.000000	0.298160
SFTC061720_76	1243453	2373944	A	775.5	43.1	6/17/2020	0	-0.02	0.662	0.2293519	0.000000	0.000000	0.151831
SFTC061720_77	1243480	2373939	A	775.5	43.2	6/17/2020	8.906	0.017	4.991	0.2292794	2.041962	0.003898	1.144334

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061720_78	1243492	2373988	A	775.5	43.2	6/17/2020	2.568	0.014	2.479	0.2292794	0.588790	0.003210	0.568384
SFTC061720_79	1243463	2374030	A	775.8	43.2	6/17/2020	-0.134	-0.019	1.578	0.2293681	0.000000	0.000000	0.361943
SFTC061720_80	1243442	2374068	A	775.9	43.2	6/17/2020	-0.302	-0.016	0.426	0.2293977	0.000000	0.000000	0.097723
SFTC061720_81	1243396	2374066	A	775.9	43.3	6/17/2020	-0.467	-0.026	0.342	0.2293252	0.000000	0.000000	0.078429
SFTC061720_82	1243411	2374099	A	775.9	43.3	6/17/2020	0	-0.02	0.441	0.2293252	0.000000	0.000000	0.101132
SFTC061720_83	1243390	2374116	A	776.1	43.3	6/17/2020	-0.081	-0.021	0.601	0.2293843	0.000000	0.000000	0.137860
SFTC061720_84	1243439	2374119	A	775.9	43.3	6/17/2020	-0.387	-0.017	0.816	0.2293252	0.000000	0.000000	0.187129
SFTC061720_85	1243505	2374062	A	775.9	43.3	6/17/2020	-0.477	-0.001	0.474	0.2293252	0.000000	0.000000	0.108700
SFTC061720_86	1243534	2374057	A	775.8	43.3	6/17/2020	-0.429	-0.029	0.568	0.2292956	0.000000	0.000000	0.130240
SFTC061720_87	1243555	2374048	A	775.9	43.4	6/17/2020	-0.169	-0.007	0.648	0.2292527	0.000000	0.000000	0.148556
SFTC061720_88	1243606	2374056	A	775.8	43.4	6/17/2020	-0.134	-0.004	0.534	0.2292232	0.000000	0.000000	0.122405
SFTC061720_89	1243563	2374107	A	775.8	43.4	6/17/2020	0	-0.001	0.201	0.2292232	0.000000	0.000000	0.046074
SFTC061720_90	1243509	2374104	A	778.8	43.4	6/17/2020	-0.163	-0.002	0.365	0.2301096	0.000000	0.000000	0.083990
SFTC061720_91	1243490	2374190	A	776.1	43.4	6/17/2020	-0.463	-0.027	0.362	0.2293118	0.000000	0.000000	0.083011
SFTC061720_92	1243735	2374132	A	776.2	43.3	6/17/2020	-0.895	-0.01	0.081	0.2294139	0.000000	0.000000	0.018583
SFTC061720_93	1243685	2374057	A	775.8	43.3	6/17/2020	-0.383	-0.01	-0.042	0.2292956	0.000000	0.000000	0.000000
SFTC061720_94	1243651	2374021	A	775.8	43.3	6/17/2020	-0.103	-0.005	0.126	0.2292956	0.000000	0.000000	0.028891
SFTC061720_95	1243605	2373982	A	775.5	43.3	6/17/2020	-0.32	-0.007	0.004	0.229207	0.000000	0.000000	0.000917
SFTC061720_96	1243564	2373969	A	775.4	43.3	6/17/2020	-0.602	-0.007	0.028	0.2291774	0.000000	0.000000	0.006417
SFTC061720_97	1243521	2373922	A	775.3	43.3	6/17/2020	-0.13	-0.005	0.066	0.2291479	0.000000	0.000000	0.015124
SFTC061720_98	1243487	2373885	A	775.3	43.3	6/17/2020	-0.076	-0.003	0.024	0.2291479	0.000000	0.000000	0.005500
SFTC061720_99	1243445	2373808	A	774.9	43.2	6/17/2020	-0.281	-0.013	0.103	0.229102	0.000000	0.000000	0.023598

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061820_101	1243550	2374185	A	777.0	27.0	6/18/2020	-0.732	-0.008	0.74	0.2421217	0.000000	0.000000	0.179170
SFTC061820_102	1243540	2374275	A	777.0	27.8	6/18/2020	-0.611	-0.001	1.21	0.2414781	0.000000	0.000000	0.292189
SFTC061820_103	1243504	2374306	A	776.9	28.5	6/18/2020	-0.179	-0.008	0.137	0.2408867	0.000000	0.000000	0.033001
SFTC061820_104	1243521	2374396	A	777.0	29.1	6/18/2020	-0.538	-0.009	-0.014	0.2404395	0.000000	0.000000	0.000000
SFTC061820_105	1243545	2374575	A	777.1	29.9	6/18/2020	-0.682	-0.01	1.448	0.2398356	0.000000	0.000000	0.347282
SFTC061820_106	1243460	2374466	A	777.1	30.5	6/18/2020	0	-0.008	0.209	0.2393617	0.000000	0.000000	0.050027
SFTC061820_107	1243462	2374354	A	777.0	31.1	6/18/2020	0	-0.012	0.677	0.238859	0.000000	0.000000	0.161708
SFTC061820_108	1243411	2374333	A	776.9	31.7	6/18/2020	-0.019	-0.001	0.667	0.2383582	0.000000	0.000000	0.158985
SFTC061820_109	1243332	2374366	A	776.7	32.3	6/18/2020	-0.315	-0.007	5.527	0.2378287	0.000000	0.000000	1.314479
SFTC061820_110	1243344	2374458	A	776.6	32.9	6/18/2020	-1.193	-0.007	1.271	0.2373319	0.000000	0.000000	0.301649
SFTC061820_111	1243300	2374417	A	776.3	33.5	6/18/2020	-1.185	-0.009	0.894	0.236776	0.000000	0.000000	0.211678
SFTC061820_112	1243274	2374352	A	776.0	34.1	6/18/2020	14.592	0.009	1.324	0.2362223	3.446956	0.002126	0.312758
SFTC061820_113	1243251	2374351	A	775.9	34.7	6/18/2020	-0.805	-0.01	3.311	0.2357315	0.000000	0.000000	0.780507
SFTC061820_114	1243197	2374353	A	775.5	35.1	6/18/2020	-0.748	-0.01	0.519	0.2353043	0.000000	0.000000	0.122123
SFTC061820_115	1243293	2374565	A	775.2	35.7	6/18/2020	-1.406	-0.007	2.909	0.2347563	0.000000	0.000000	0.682906
SFTC061820_116	1243342	2374630	A	776.3	36.1	6/18/2020	0	-0.006	0.269	0.2347853	0.000000	0.000000	0.063157
SFTC061820_117	1243435	2374739	A	776.3	36.4	6/18/2020	-0.862	-0.012	0.598	0.2345578	0.000000	0.000000	0.140266
SFTC061820_118	1243261	2374758	A	776.3	36.9	6/18/2020	0	-0.002	0.262	0.2341795	0.000000	0.000000	0.061355
SFTC061820_119	1243256	2374661	A	775.0	37.2	6/18/2020	0	-0.014	1.084	0.2335614	0.000000	0.000000	0.253181
SFTC061820_120	1243192	2374643	A	775.4	37.4	6/18/2020	0	-0.012	0.685	0.2335314	0.000000	0.000000	0.159969
SFTC061820_121	1243181	2374560	A	775.0	37.5	6/18/2020	0	-0.028	1.865	0.2333358	0.000000	0.000000	0.435171
SFTC061820_122	1243162	2374508	A	775.1	37.6	6/18/2020	0	-0.002	0.816	0.2332909	0.000000	0.000000	0.190365

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061820_123	1243076	2374574	A	775.1	37.6	6/18/2020	0	-0.008	0.065	0.2332909	0.000000	0.000000	0.015164
SFTC061820_124	1243067	2374618	A	774.3	37.6	6/18/2020	0	-0.019	0.344	0.2330501	0.000000	0.000000	0.080169
SFTC061820_125	1243143	2374736	A	773.9	37.7	6/18/2020	0	-0.003	0.146	0.2328547	0.000000	0.000000	0.033997
SFTC061820_126	1242988	2374744	A	773.5	37.7	6/18/2020	0	-0.008	0.543	0.2327344	0.000000	0.000000	0.126375
SFTC061820_127	1243003	2374662	A	773.8	37.8	6/18/2020	-0.033	-0.003	0.183	0.2327498	0.000000	0.000000	0.042593
SFTC061820_128	1242960	2374553	A	776.5	38.0	6/18/2020	-0.455	-0.01	0.283	0.2334118	0.000000	0.000000	0.066056
SFTC061820_129	1242950	2374426	A	773.4	38.1	6/18/2020	0	-0.008	0.154	0.2324052	0.000000	0.000000	0.035790
SFTC061820_130	1242990	2374330	A	773.8	38.2	6/18/2020	-0.335	-0.009	0.287	0.2324508	0.000000	0.000000	0.066713
SFTC061820_131	1243036	2374329	A	774.4	38.3	6/18/2020	0	-0.01	0.399	0.2325563	0.000000	0.000000	0.092790
SFTC061820_132	1243095	2374376	A	774.3	38.4	6/18/2020	-0.327	-0.013	0.204	0.2324516	0.000000	0.000000	0.047420
SFTC061820_133	1243055	2374437	A	774.2	38.5	6/18/2020	-0.092	-0.008	0.413	0.232347	0.000000	0.000000	0.095959
SFTC061820_134	1242847	2374554	A	774.0	38.5	6/18/2020	-0.164	-0.011	0.424	0.232287	0.000000	0.000000	0.098490
SFTC061820_135	1242604	2374406	A	773.8	38.5	6/18/2020	-0.264	-0.005	0.358	0.232227	0.000000	0.000000	0.083137
SFTC061820_136	1242604	2374558	A	773.8	38.4	6/18/2020	-0.105	-0.009	0.23	0.2323015	0.000000	0.000000	0.053429
SFTC061820_137	1242707	2374743	A	773.8	38.4	6/18/2020	-0.864	-0.021	0.401	0.2323015	0.000000	0.000000	0.093153
SFTC061820_138	1242841	2374750	A	773.6	38.3	6/18/2020	-0.059	-0.01	0.57	0.2323161	0.000000	0.000000	0.132420
SFTC061820_139	1242867	2374828	A	772.9	38.3	6/18/2020	-0.535	-0.013	0.629	0.2321059	0.000000	0.000000	0.145995
SFTC061820_140	1243046	2374991	A	773.1	38.2	6/18/2020	-0.461	-0.019	0.503	0.2322405	0.000000	0.000000	0.116817
SFTC061820_141	1243047	2375046	A	773.8	38.1	6/18/2020	-1.179	-0.014	0.071	0.2325254	0.000000	0.000000	0.016509
SFTC061820_142	1243151	2375014	A	774.0	38.1	6/18/2020	71.505	0	20.839	0.2325855	16.631030	0.000000	4.846850
SFTC061820_143	1243179	2374912	A	774.0	38.1	6/18/2020	-0.33	-0.018	0.426	0.2325855	0.000000	0.000000	0.099081
SFTC061820_144	1243218	2374939	A	773.1	38.1	6/18/2020	1.11	0.02	3.716	0.2323151	0.257870	0.004646	0.863283

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061820_145	1243258	2374955	A	773.8	38.2	6/18/2020	-0.438	-0.006	1.086	0.2324508	0.000000	0.000000	0.252441
SFTC061820_146	1243276	2375031	A	773.9	38.3	6/18/2020	-0.124	-0.016	0.237	0.2324062	0.000000	0.000000	0.055080
SFTC061820_147	1243384	2374967	A	774.6	38.5	6/18/2020	-0.015	-0.014	0.541	0.2324671	0.000000	0.000000	0.125765
SFTC061820_148	1243424	2375037	A	775.1	38.6	6/18/2020	-0.952	-0.009	0.129	0.2325425	0.000000	0.000000	0.029998
SFTC061820_149	1243577	2374951	A	775.5	38.8	6/18/2020	-0.284	-0.011	0.148	0.2325134	0.000000	0.000000	0.034412
SFTC061920_150	1243461	2375101	A	776.5	30.6	6/19/2020	-2.031	-0.014	0.197	0.2390982	0.000000	0.000000	0.047102
SFTC061920_151	1243329	2375145	A	776.3	31.4	6/19/2020	-0.033	-0.01	0.061	0.2384087	0.000000	0.000000	0.014543
SFTC061920_152	1243204	2375171	A	775.9	32.0	6/19/2020	-0.514	-0.003	0.026	0.2378173	0.000000	0.000000	0.006183
SFTC061920_153	1243011	2375157	A	775.8	32.8	6/19/2020	-0.982	-0.004	0.056	0.2371649	0.000000	0.000000	0.013281
SFTC061920_154	1242574	2374967	A	775.5	33.8	6/19/2020	-0.386	-0.009	0.248	0.2363008	0.000000	0.000000	0.058603
SFTC061920_155	1242504	2374947	A	774.7	34.3	6/19/2020	0	-0.003	0.48	0.2356732	0.000000	0.000000	0.113123
SFTC061920_156	1242389	2375092	A	774.7	34.9	6/19/2020	-0.225	-0.009	0.074	0.2352142	0.000000	0.000000	0.017406
SFTC061920_157	1242559	2375179	A	774.8	35.4	6/19/2020	29.197	0.025	4.646	0.2348633	6.857304	0.005872	1.091175
SFTC061920_158	1242760	2375235	A	775.1	35.8	6/19/2020	-0.127	-0.008	0.315	0.23465	0.000000	0.000000	0.073915
SFTC061920_159	1242756	2375278	A	775.1	36.2	6/19/2020	-0.353	-0.009	1.014	0.2343466	0.000000	0.000000	0.237628
SFTC061920_160	1242548	2375392	A	775.2	36.6	6/19/2020	-0.892	-0.005	0.064	0.2340742	0.000000	0.000000	0.014981
SFTC061920_161	1242363	2375319	A	774.2	36.9	6/19/2020	-1.185	-0.02	0.294	0.2335461	0.000000	0.000000	0.068663
SFTC061920_162	1242558	2375221	A	774.3	37.3	6/19/2020	11.542	0.027	6.086	0.2332753	2.692463	0.006298	1.419713
SFTC061920_163	1242419	2375507	A	774.6	37.5	6/19/2020	-1.466	-0.006	0.481	0.2332154	0.000000	0.000000	0.112177
SFTC061920_164	1242565	2375525	A	773.5	37.8	6/19/2020	-0.214	-0.02	1.236	0.2326595	0.000000	0.000000	0.287567
SFTC061920_165	1242738	2375514	A	773.9	38.0	6/19/2020	-0.206	-0.02	1.15	0.2326302	0.000000	0.000000	0.267525
SFTC061920_166	1242724	2375770	A	774.0	38.2	6/19/2020	0	-0.012	0.992	0.2325108	0.000000	0.000000	0.230651

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061920_167	1242571	2375769	A	772.8	38.4	6/19/2020	0	-0.002	1.615	0.2320013	0.000000	0.000000	0.374682
SFTC061920_168	1242422	2375741	A	772.4	38.6	6/19/2020	0	-0.022	1.04	0.2317325	0.000000	0.000000	0.241002
SFTC061920_169	1242479	2375956	A	772.8	38.7	6/19/2020	0	-0.007	0.622	0.2317781	0.000000	0.000000	0.144166
SFTC061920_170	1242590	2375991	A	771.3	38.7	6/19/2020	0	-0.014	0.061	0.2313283	0.000000	0.000000	0.014111
SFTC061920_171	1242764	2375926	A	771.6	38.7	6/19/2020	0	-0.02	1.249	0.2314182	0.000000	0.000000	0.289041
SFTC061920_172	1242561	2376173	A	771.2	38.7	6/19/2020	0	-0.021	1.425	0.2312983	0.000000	0.000000	0.329600
SFTC061920_173	1242582	2376371	A	770.8	38.7	6/19/2020	0	-0.017	0.735	0.2311783	0.000000	0.000000	0.169916
SFTC061920_174	1242739	2376319	A	769.6	38.6	6/19/2020	0	-0.011	0.181	0.2308924	0.000000	0.000000	0.041792
SFTC061920_175	1242805	2376220	A	768.5	38.6	6/19/2020	0	-0.011	1.05	0.2305624	0.000000	0.000000	0.242091
SFTC061920_176	1242960	2376305	A	769.0	38.6	6/19/2020	0	-0.015	0.798	0.2307124	0.000000	0.000000	0.184109
SFTC061920_177	1242967	2376177	A	769.2	38.7	6/19/2020	0	-0.017	0.505	0.2306984	0.000000	0.000000	0.116503
SFTC061920_178	1243183	2376140	A	768.8	38.8	6/19/2020	0	-0.026	1.613	0.2305045	0.000000	0.000000	0.371804
SFTC061920_179	1243195	2376256	A	767.3	39.0	6/19/2020	-1.147	-0.017	1.048	0.2299074	0.000000	0.000000	0.240943
SFTC061920_180	1243381	2376096	A	768.8	39.0	6/19/2020	-0.475	-0.028	0.768	0.2303569	0.000000	0.000000	0.176914
SFTC061920_181	1243329	2376023	A	767.1	39.0	6/19/2020	0	-0.018	0.674	0.2298475	0.000000	0.000000	0.154917
SFTC061920_182	1243555	2376055	A	766.2	38.9	6/19/2020	0	-0.019	0.446	0.2296514	0.000000	0.000000	0.102425
SFTC061920_183	1243592	2376013	A	768.0	38.9	6/19/2020	0	-0.02	0.35	0.2301909	0.000000	0.000000	0.080567
SFTC061920_184	1243568	2375894	A	768.0	38.9	6/19/2020	0	-0.019	0.053	0.2301909	0.000000	0.000000	0.012200
SFTC061920_185	1243401	2375875	A	768.8	38.9	6/19/2020	0	-0.005	0.152	0.2304307	0.000000	0.000000	0.035025
SFTC061920_186	1243136	2375958	A	767.0	39.0	6/19/2020	0	-0.018	0.561	0.2298175	0.000000	0.000000	0.128928
SFTC061920_187	1242982	2375985	A	768.8	39.0	6/19/2020	0	-0.038	0.621	0.2303569	0.000000	0.000000	0.143052
SFTC061920_188	1242981	2375740	A	770.3	39.0	6/19/2020	0	-0.022	0.903	0.2308063	0.000000	0.000000	0.208418

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC061920_189	1243004	2375660	A	771.6	39.1	6/19/2020	0	-0.02	1.788	0.2311218	0.000000	0.000000	0.413246
SFTC061920_190	1243114	2375805	A	771.5	39.1	6/19/2020	0	-0.01	0.035	0.2310918	0.000000	0.000000	0.008088
SFTC061920_191	1243271	2375755	A	770.0	39.1	6/19/2020	0	-0.034	0.62	0.2306425	0.000000	0.000000	0.142998
SFTC061920_192	1243150	2375641	A	769.4	39.1	6/19/2020	0	-0.025	0.632	0.2304628	0.000000	0.000000	0.145653
SFTC061920_193	1243300	2375586	A	771.2	39.1	6/19/2020	0	-0.023	0.262	0.231002	0.000000	0.000000	0.060523
SFTC061920_194	1243443	2375672	A	771.1	39.0	6/19/2020	0	-0.022	0.13	0.231046	0.000000	0.000000	0.030036
SFTC061920_195	1243508	2375743	A	768.9	39.0	6/19/2020	0	-0.014	0.136	0.2303868	0.000000	0.000000	0.031333
SFTC061920_196	1243591	2375710	A	769.3	38.9	6/19/2020	0	-0.027	0.504	0.2305805	0.000000	0.000000	0.116213
SFTC061920_197	1243482	2375494	A	770.8	39.0	6/19/2020	0	-0.025	0.17	0.2309561	0.000000	0.000000	0.039263
SFTC061920_198	1243607	2375530	A	771.9	39.0	6/19/2020	0	-0.014	0.425	0.2312857	0.000000	0.000000	0.098296
SFTC061920_199	1243568	2375395	A	773.2	39.0	6/19/2020	-1.828	-0.021	0.358	0.2316752	0.000000	0.000000	0.082940
SFTC061920_200	1243465	2375347	A	774.3	38.9	6/19/2020	0	-0.009	0.119	0.2320792	0.000000	0.000000	0.027617
SFTC061920_201	1243303	2375408	A	773.8	38.9	6/19/2020	0	-0.024	0.187	0.2319293	0.000000	0.000000	0.043371
SFTC061920_202	1243184	2375483	A	772.8	38.8	6/19/2020	0	-0.017	0.148	0.2317038	0.000000	0.000000	0.034292
SFTC061920_203	1243042	2375456	A	773.4	38.8	6/19/2020	0	-0.017	0.498	0.2318837	0.000000	0.000000	0.115478
SFTC061920_204	1243185	2375363	A	773.8	38.8	6/19/2020	0	-0.025	0.221	0.2320037	0.000000	0.000000	0.051273
SFTC061920_205	1243317	2375297	A	774.2	38.8	6/19/2020	-1.408	-0.037	0.299	0.2321236	0.000000	0.000000	0.069405
SFTC061920_206	1243504	2375249	A	774.8	38.8	6/19/2020	0	-0.023	0.354	0.2323035	0.000000	0.000000	0.082235
SFTC061920_207	1243611	2375251	A	775.8	38.9	6/19/2020	0	-0.005	0.504	0.2325288	0.000000	0.000000	0.117195
SFTC061920_208	1243585	2375081	A	775.9	38.9	6/19/2020	0	-0.022	0.485	0.2325587	0.000000	0.000000	0.112791
SFTC062420_209	1242640	2376806	A	775.1	27.7	6/24/2020	-1.317	-0.002	4.087	0.2409677	0.000000	0.000000	0.984835
SFTC062420_210	1242743	2376809	A	775.1	28.2	6/24/2020	-2.133	0.003	0.005	0.2405679	0.000000	0.000722	0.001203

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC062420_211	1242603	2376604	A	775.1	28.7	6/24/2020	-1.761	0.007	0.434	0.2401694	0.000000	0.001681	0.104234
SFTC062420_212	1242779	2376517	A	774.4	29.2	6/24/2020	-0.189	0.013	0.142	0.2395557	0.000000	0.003114	0.034017
SFTC062420_213	1242997	2376540	A	773.8	30.0	6/24/2020	-1.88	0.025	0.824	0.2387384	0.000000	0.005968	0.196720
SFTC062420_214	1243027	2376729	A	775.8	30.6	6/24/2020	-1.06	0.002	0.635	0.2388826	0.000000	0.000478	0.151690
SFTC062420_215	1242949	2376889	A	775.0	31.3	6/24/2020	-0.761	0	0.085	0.2380876	0.000000	0.000000	0.020237
SFTC062420_216	1242810	2376915	A	773.6	31.8	6/24/2020	2.621	0.002	3.399	0.2372679	0.621879	0.000475	0.806473
SFTC062420_217	1242762	2376973	A	773.8	32.2	6/24/2020	-1.329	0	1.418	0.2370183	0.000000	0.000000	0.336092
SFTC062420_218	1242833	2376993	A	773.4	32.6	6/24/2020	7.534	0.01	4.25	0.2365859	1.782438	0.002366	1.005490
SFTC062420_219	1242867	2377059	A	773.1	32.9	6/24/2020	456.69	0.023	3.927	0.2362623	107.898600	0.005434	0.927802
SFTC062420_220	1242901	2377128	A	772.4	33.2	6/24/2020	42153.02	0.087	16.495	0.2358172	9940.407000	0.020516	3.889805
SFTC062420_221	1242880	2377129	A	772.0	33.6	6/24/2020	-203.352	-0.003	2.184	0.2353877	0.000000	0.000000	0.514087
SFTC062420_222	1242813	2377183	A	771.6	33.9	6/24/2020	-1.88	0.005	3.275	0.2350359	0.000000	0.001175	0.769743
SFTC062420_223	1242862	2377204	A	770.9	34.2	6/24/2020	5.802	0.001	1.42	0.2345935	1.361111	0.000235	0.333123
SFTC062420_224	1242919	2377204	A	770.8	34.5	6/24/2020	-1.645	0	1.653	0.2343343	0.000000	0.000000	0.387355
SFTC062420_225	1242952	2377244	A	770.5	34.7	6/24/2020	-1.047	0	5.843	0.2340909	0.000000	0.000000	1.367793
SFTC062420_226	1243012	2377259	A	770.4	35.1	6/24/2020	-1.506	0.016	2.839	0.2337568	0.000000	0.003740	0.663636
SFTC062420_227	1243025	2377184	A	770.1	35.5	6/24/2020	-1.381	0.001	0.239	0.233363	0.000000	0.000233	0.055774
SFTC062420_228	1242973	2377132	A	770.6	36.0	6/24/2020	-3.523	-0.001	0.124	0.2331368	0.000000	0.000000	0.028909
SFTC062420_229	1242934	2377069	A	771.6	36.5	6/24/2020	-0.824	0.004	0.243	0.2330624	0.000000	0.000932	0.056634
SFTC062420_230	1243040	2377080	A	771.7	37.2	6/24/2020	-1.119	-0.002	0.013	0.2325669	0.000000	0.000000	0.003023
SFTC062420_231	1243090	2377164	A	770.6	37.9	6/24/2020	-0.66	0	0.2	0.2317127	0.000000	0.000000	0.046343
SFTC062420_232	1243105	2377224	A	769.7	38.5	6/24/2020	0	-0.001	0.041	0.2309965	0.000000	0.000000	0.009471

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC062420_233	1243192	2377368	A	769.0	39.3	6/24/2020	-1.141	0.001	1.062	0.2301956	0.000000	0.000230	0.244468
SFTC062420_234	1243173	2377513	A	767.1	40.1	6/24/2020	-1.386	0	0.258	0.2290404	0.000000	0.000000	0.059092
SFTC062420_235	1243250	2377807	A	765.9	41.2	6/24/2020	-4.835	0.001	0.193	0.2278818	0.000000	0.000228	0.043981
SFTC062420_236	1243213	2377982	A	762.1	41.6	6/24/2020	-1.951	-0.002	0.192	0.226463	0.000000	0.000000	0.043481
SFTC062420_237	1243046	2378069	A	761.4	41.6	6/24/2020	-4.566	-0.006	0.13	0.226255	0.000000	0.000000	0.029413
SFTC062420_238	1242998	2377925	A	763.4	41.7	6/24/2020	-2.372	0.009	0.532	0.2267773	0.000000	0.002041	0.120646
SFTC062420_239	1242991	2377813	A	764.2	41.9	6/24/2020	-2.021	0.003	0.237	0.2268708	0.000000	0.000681	0.053768
SFTC062420_240	1243030	2377572	A	764.6	42.1	6/24/2020	-5.52	0.006	0.529	0.2268456	0.000000	0.001361	0.120001
SFTC062420_241	1243064	2377394	A	766.1	42.4	6/24/2020	-2.465	0.001	0.848	0.2270745	0.000000	0.000227	0.192559
SFTC062420_242	1243005	2377366	A	768.1	42.7	6/24/2020	-1.966	0.013	2.549	0.2274511	0.000000	0.002957	0.579773
SFTC062420_243	1242873	2377377	A	768.3	43.0	6/24/2020	-0.984	0.001	0.307	0.2272944	0.000000	0.000227	0.069779
SFTC062620_01	1242590	2376900	A	775.4	26.1	6/26/2020	-1.55	-0.001	1.974	0.2423498	0.000000	0.000000	0.478399
SFTC062620_02	1242529	2376996	A	775.2	26.9	6/26/2020	-3.485	-0.005	0.884	0.2416413	0.000000	0.000000	0.213611
SFTC062620_03	1242360	2377193	A	774.7	27.7	6/26/2020	-0.307	-0.006	0.833	0.2408433	0.000000	0.000000	0.200622
SFTC062620_04	1242445	2377177	A	774.2	28.3	6/26/2020	-1.114	-0.008	1.938	0.2402088	0.000000	0.000000	0.465525
SFTC062620_05	1242561	2377144	A	773.8	29.0	6/26/2020	-0.603	-0.001	4.264	0.2395285	0.000000	0.000000	1.021350
SFTC062620_06	1242586	2377297	A	773.4	29.9	6/26/2020	-0.768	-0.001	3.469	0.2386937	0.000000	0.000000	0.828029
SFTC062620_07	1242582	2377391	A	775.1	30.6	6/26/2020	67.466	0.008	5.29	0.2386671	16.101920	0.001909	1.262549
SFTC062620_08	1242416	2377645	A	771.7	31.9	6/26/2020	-0.39	0	7.305	0.2366075	0.000000	0.000000	1.728418
SFTC062620_09	1242433	2377722	A	771.9	32.4	6/26/2020	155.831	0.007	7.795	0.2362816	36.819990	0.001654	1.841815
SFTC062620_10	1242447	2377802	A	771.5	33.0	6/26/2020	-1.141	-0.003	1.133	0.2356963	0.000000	0.000000	0.267044
SFTC062620_11	1242569	2377824	A	771.1	33.5	6/26/2020	3.391	0.009	2.147	0.23519	0.797529	0.002117	0.504953

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
SFTC062620_12	1242603	2377711	A	770.1	33.9	6/26/2020	-0.351	-0.01	1.687	0.234579	0.000000	0.000000	0.395735
SFTC062620_13	1242572	2377673	A	770.8	34.3	6/26/2020	37.308	0.012	1.856	0.2344868	8.748232	0.002814	0.435207
SFTC062620_14	1242536	2377639	A	771.2	34.7	6/26/2020	87.756	0.011	2.538	0.2343036	20.561550	0.002577	0.594663
SFTC062620_15	1242567	2377599	A	771.2	35.1	6/26/2020	179.984	0.014	18.02	0.2339996	42.116180	0.003276	4.216672
SFTC062620_16	1242634	2377612	A	771.1	35.6	6/26/2020	5.016	0.004	4.783	0.2335903	1.171689	0.000934	1.117262
SFTC062620_17	1242788	2377598	A	770.1	36.3	6/26/2020	-0.81	-0.017	0.514	0.2327597	0.000000	0.000000	0.119638
SFTC062620_18	1242757	2377831	A	769.3	37.1	6/26/2020	-0.633	-0.024	0.748	0.2319183	0.000000	0.000000	0.173475
SFTC062620_19	1242822	2377997	A	768.5	37.9	6/26/2020	0	-0.002	0.519	0.2310813	0.000000	0.000000	0.119931
SFTC062620_20	1242632	2377942	A	766.8	38.6	6/26/2020	0	-0.015	0.632	0.2300524	0.000000	0.000000	0.145393
SFTC062620_21	1242572	2378155	A	768.9	39.0	6/26/2020	0	-0.009	1.023	0.2303868	0.000000	0.000000	0.235686
SFTC062620_22	1242756	2378213	A	768.8	39.3	6/26/2020	-0.181	-0.023	0.011	0.2301357	0.000000	0.000000	0.002531
SFTC062620_23	1242809	2378362	A	767.7	39.5	6/26/2020	-0.155	-0.016	0.729	0.2296594	0.000000	0.000000	0.167422
SFTC062620_24	1242723	2378544	A	765.5	39.5	6/26/2020	-0.389	-0.015	0.986	0.2290013	0.000000	0.000000	0.225795
SFTC062620_25	1242612	2378570	A	764.9	39.5	6/26/2020	-0.058	-0.02	0.536	0.2288218	0.000000	0.000000	0.122648
SFTC062620_26	1242645	2378426	A	765.3	39.5	6/26/2020	-1.002	-0.019	1.048	0.2289414	0.000000	0.000000	0.239931
SFTC062620_27	1242459	2378381	A	766.5	39.7	6/26/2020	-0.16	-0.017	0.687	0.2291538	0.000000	0.000000	0.157429
SFTC062620_28	1242439	2378272	A	766.8	39.8	6/26/2020	-0.323	-0.029	0.664	0.2291703	0.000000	0.000000	0.152169
SFTC062620_29	1242440	2378539	A	767.0	40.1	6/26/2020	0	-0.012	0.282	0.2290105	0.000000	0.000000	0.064581
SFTC062620_30	1242202	2378350	A	765.9	40.5	6/26/2020	-0.082	-0.016	0.405	0.2283904	0.000000	0.000000	0.092498
SFTC062620_31	1242247	2378244	A	768.2	40.7	6/26/2020	0	-0.028	0.65	0.2289303	0.000000	0.000000	0.148805
SFTC062620_32	1242199	2378020	A	768.4	41.0	6/26/2020	0	-0.033	0.574	0.2287712	0.000000	0.000000	0.131315
SFTC062620_33	1242428	2378027	A	769.7	41.4	6/26/2020	-0.282	-0.017	0.285	0.2288669	0.000000	0.000000	0.065227

Individual Flux Measurements and Calculations (Continued)

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SFTC062620_34	1242238	2377664	A	770.3	41.9	6/26/2020	-0.052	-0.019	0.358	0.2286818	0.000000	0.000000	0.081868
SFTC062620_35	1242214	2377595	A	772.2	42.1	6/26/2020	-0.226	-0.013	0.324	0.2291004	0.000000	0.000000	0.074229
SFTC062620_36	1242202	2377370	A	772.3	42.2	6/26/2020	-0.334	-0.016	0.02	0.2290574	0.000000	0.000000	0.004581
SFTC062620_37	1242363	2377363	A	773.6	42.2	6/26/2020	-0.572	-0.036	0.478	0.229443	0.000000	0.000000	0.109674
SFTC062620_38	1242206	2377204	A	773.9	42.3	6/26/2020	0	-0.035	0.125	0.2294592	0.000000	0.000000	0.028682
SFTC062620_39	1242278	2377037	A	774.5	42.4	6/26/2020	-0.263	-0.031	0.19	0.2295643	0.000000	0.000000	0.043617
SFTC062620_40	1242231	2376828	A	774.6	42.4	6/26/2020	-0.784	-0.005	0.157	0.2295939	0.000000	0.000000	0.036046
SFTC062620_41	1242407	2376976	A	773.9	42.5	6/26/2020	-0.13	-0.048	1.224	0.2293138	0.000000	0.000000	0.280680
SFTC062620_42	1242459	2376844	A	775.3	42.5	6/26/2020	-0.129	-0.016	1.108	0.2297286	0.000000	0.000000	0.254539
VosburgPike060920_01	1243092	2352557	A	760.4	24.5	6/9/2020	-0.812	-0.005	0.061	0.2389392	0.000000	0.000000	0.014575
VosburgPike060920_02	1243257	2352760	A	760.5	25.0	6/9/2020	-0.449	-0.003	0.114	0.2385698	0.000000	0.000000	0.027197
VosburgPike060920_03	1243197	2352865	A	766.3	25.2	6/9/2020	-0.355	-0.001	0.334	0.2402281	0.000000	0.000000	0.080236
VosburgPike060920_04	1243169	2352969	A	760.4	25.4	6/9/2020	-0.756	-0.003	0.387	0.2382189	0.000000	0.000000	0.092191
VosburgPike060920_05	1243361	2352968	A	766.3	25.6	6/9/2020	0	-0.01	0.654	0.2399065	0.000000	0.000000	0.156899
VosburgPike060920_06	1243364	2352877	A	758.9	25.9	6/9/2020	-0.928	-0.006	0.741	0.2373514	0.000000	0.000000	0.175877
VosburgPike060920_07	1243440	2352753	A	758.8	26.3	6/9/2020	-0.224	-0.002	0.525	0.2370031	0.000000	0.000000	0.124427
VosburgPike060920_08	1243593	2352802	A	758.7	26.8	6/9/2020	-0.242	-0.002	0.697	0.2365769	0.000000	0.000000	0.164894
VosburgPike060920_09	1243590	2352949	A	757.2	27.1	6/9/2020	0	-0.002	0.576	0.2358733	0.000000	0.000000	0.135863
VosburgPike060920_10	1243577	2352971	A	757.6	27.4	6/9/2020	0	0	1.154	0.2357623	0.000000	0.000000	0.272070

Individual Flux Measurements and Calculations (Continued)

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VosburgPike060920_11	1243503	2352936	A	757.7	27.7	6/9/2020	0	-0.017	0.165	0.2355583	0.000000	0.000000	0.038867
VosburgPike060920_12	1243490	2352988	A	758.1	27.9	6/9/2020	20.489	0.011	3.877	0.2355261	4.825694	0.002591	0.913135
VosburgPike060920_13	1243653	2353133	A	758.4	28.3	6/9/2020	0	-0.004	0.618	0.2353066	0.000000	0.000000	0.145419
VosburgPike060920_14	1243441	2353167	A	759.9	28.7	6/9/2020	0	-0.001	0.58	0.2354596	0.000000	0.000000	0.136567
VosburgPike060920_15	1243383	2353357	A	760.8	29.2	6/9/2020	-0.446	-0.003	0.307	0.2353486	0.000000	0.000000	0.072252
VosburgPike060920_16	1243575	2353397	A	765.3	29.7	6/9/2020	0	0	0.264	0.2363498	0.000000	0.000000	0.062396
VosburgPike060920_17	1243704	2353303	A	757.7	30.0	6/9/2020	-1.392	-0.008	0.479	0.2337711	0.000000	0.000000	0.111976
VosburgPike060920_18	1243814	2353186	A	757.5	30.5	6/9/2020	0	-0.007	0.132	0.2333246	0.000000	0.000000	0.030799
VosburgPike060920_19	1243785	2352919	A	758.3	31.1	6/9/2020	-0.955	-0.009	2.777	0.2331104	0.000000	0.000000	0.647348
VosburgPike060920_20	1243773	2352716	A	756.8	31.7	6/9/2020	-0.56	-0.006	0.684	0.2321914	0.000000	0.000000	0.158819
VosburgPike060920_21	1244139	2352387	A	756.4	32.6	6/9/2020	0	-0.005	0.401	0.2313855	0.000000	0.000000	0.092786
VosburgPike060920_22	1244361	2352507	A	752.7	33.2	6/9/2020	-2.38	-0.01	0.232	0.2298027	0.000000	0.000000	0.053314
VosburgPike060920_23	1244398	2352398	A	751.5	33.7	6/9/2020	-1.825	-0.012	0.635	0.2290625	0.000000	0.000000	0.145455
VosburgPike060920_24	1244608	2352376	A	750.7	34.0	6/9/2020	0	-0.009	0.282	0.2285952	0.000000	0.000000	0.064464
VosburgPike060920_25	1244575	2352577	A	750.0	34.3	6/9/2020	-2.463	-0.02	0.689	0.2281591	0.000000	0.000000	0.157202
VosburgPike060920_26	1244589	2352760	A	751.7	34.5	6/9/2020	-1.701	-0.023	0.623	0.2285277	0.000000	0.000000	0.142373

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike060920_27	1244303	2352738	A	751.3	34.6	6/9/2020	-2.982	-0.018	0.42	0.2283318	0.000000	0.000000	0.095899
VosburgPike060920_28	1244215	2352794	A	753.5	34.7	6/9/2020	-2.61	-0.008	0.272	0.228926	0.000000	0.000000	0.062268
VosburgPike060920_29	1244145	2352561	A	754.0	34.8	6/9/2020	-0.793	-0.002	0.316	0.2290036	0.000000	0.000000	0.072365
VosburgPike060920_30	1243580	2352547	A	753.8	34.9	6/9/2020	-2.461	-0.011	0.558	0.2288685	0.000000	0.000000	0.127709
VosburgPike060920_31	1243445	2352559	A	758.0	35.1	6/9/2020	-1.427	-0.002	0.402	0.2299944	0.000000	0.000000	0.092458
VosburgPike061020_32	1242577	2349733	A	766.5	27.3	6/10/2020	-4.498	0.012	0.52	0.2386113	0.000000	0.002863	0.124078
VosburgPike061020_33	1242741	2349741	A	766.6	28.2	6/10/2020	-1.682	0	0.133	0.2379297	0.000000	0.000000	0.031645
VosburgPike061020_34	1242954	2349607	A	765.3	29.3	6/10/2020	-1.341	0.001	0.269	0.2366624	0.000000	0.000237	0.063662
VosburgPike061020_35	1243195	2349510	A	762.7	30.3	6/10/2020	-0.992	0.011	0.312	0.2350811	0.000000	0.002586	0.073345
VosburgPike061020_36	1243278	2349485	A	761.1	31.0	6/10/2020	-2.71	0.019	0.588	0.234048	0.000000	0.004447	0.137620
VosburgPike061020_37	1243293	2349574	A	760.5	31.7	6/10/2020	-1.928	0.033	0.14	0.2333265	0.000000	0.007700	0.032666
VosburgPike061020_38	1243385	2349560	A	760.3	32.3	6/10/2020	-3.107	0.003	0.668	0.232807	0.000000	0.000698	0.155515
VosburgPike061020_39	1243547	2349588	A	759.5	33.1	6/10/2020	-2.83	0.013	0.48	0.2319545	0.000000	0.003015	0.111338
VosburgPike061020_40	1243560	2349449	A	758.5	33.8	6/10/2020	-1.286	0.003	0.441	0.2311208	0.000000	0.000693	0.101924
VosburgPike061020_41	1243769	2349515	A	758.4	34.6	6/10/2020	-0.734	0.013	0.346	0.2304896	0.000000	0.002996	0.079749
VosburgPike061020_42	1243793	2349368	A	757.5	35.3	6/10/2020	-4.263	0	0.665	0.2296936	0.000000	0.000000	0.152746

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061020_43	1243826	2349206	A	763.0	36.2	6/10/2020	0	0.007	0.127	0.2306883	0.000000	0.001615	0.029297
VosburgPike061020_44	1243946	2349245	A	756.4	36.8	6/10/2020	-4.356	-0.005	-0.012	0.2282501	0.000000	0.000000	0.000000
VosburgPike061020_45	1243968	2349418	A	756.1	37.3	6/10/2020	-3.016	-0.003	1.704	0.2277921	0.000000	0.000000	0.388158
VosburgPike061020_46	1244128	2349370	A	755.8	37.8	6/10/2020	-3.946	-0.011	1.255	0.2273356	0.000000	0.000000	0.285306
VosburgPike061020_47	1244199	2349186	A	754.8	38.3	6/10/2020	-3.255	0.003	1.666	0.2266703	0.000000	0.000680	0.377633
VosburgPike061120_100	1243617	2349990	A	760.3	44.1	6/11/2020	-1.119	-0.021	0.242	0.2241478	0.000000	0.000000	0.054244
VosburgPike061120_101	1243568	2349920	A	761.9	44.0	6/11/2020	-0.782	-0.032	0.305	0.2246903	0.000000	0.000000	0.068531
VosburgPike061120_102	1243562	2349805	A	762.6	43.9	6/11/2020	-0.283	-0.008	0.059	0.2249677	0.000000	0.000000	0.013273
VosburgPike061120_103	1243485	2349789	A	763.1	43.8	6/11/2020	-0.957	-0.06	0.664	0.2251862	0.000000	0.000000	0.149524
VosburgPike061120_104	1243427	2349764	A	763.9	43.8	6/11/2020	-0.484	-0.035	13.344	0.2254223	0.000000	0.000000	3.008035
VosburgPike061120_105	1243384	2349780	A	764.6	43.7	6/11/2020	-1.619	-0.014	3.582	0.2257001	0.000000	0.000000	0.808458
VosburgPike061120_106	1243385	2349810	A	764.6	43.7	6/11/2020	-0.622	-0.004	0.338	0.2257001	0.000000	0.000000	0.076287
VosburgPike061120_107	1243353	2349808	A	765.0	43.6	6/11/2020	-0.461	-0.002	0.629	0.2258894	0.000000	0.000000	0.142084
VosburgPike061120_108	1243287	2349770	A	765.5	43.5	6/11/2020	106.078	-0.004	11.45	0.2261085	23.985130	0.000000	2.588942
VosburgPike061120_109	1243206	2349810	A	766.1	43.3	6/11/2020	-1.595	-0.02	3.068	0.2264287	0.000000	0.000000	0.694683
VosburgPike061120_110	1243131	2349837	A	766.5	43.3	6/11/2020	37.88	-0.003	7.545	0.2265469	8.581598	0.000000	1.709297

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061120_111	1243043	2349778	A	766.9	43.2	6/11/2020	-0.9	-0.032	1.173	0.2267368	0.000000	0.000000	0.265962
VosburgPike061120_112	1242954	2349844	A	767.3	43.1	6/11/2020	426.189	-0.01	6.898	0.2269268	96.713700	0.000000	1.565341
VosburgPike061120_66	1242598	2349957	A	770.5	29.0	6/11/2020	-2.509	-0.003	0.762	0.238507	0.000000	0.000000	0.181742
VosburgPike061120_67	1242570	2350117	A	770.5	30.5	6/11/2020	-0.145	-0.008	0.711	0.2373288	0.000000	0.000000	0.168741
VosburgPike061120_68	1242714	2350137	A	770.4	31.4	6/11/2020	-0.642	-0.004	0.603	0.2365967	0.000000	0.000000	0.142668
VosburgPike061120_69	1242762	2350008	A	769.9	32.3	6/11/2020	26.259	0	6.114	0.2357465	6.190468	0.000000	1.441354
VosburgPike061120_70	1242808	2349994	A	769.4	32.8	6/11/2020	142.958	0.025	13.114	0.2352084	33.624920	0.005880	3.084523
VosburgPike061120_71	1242843	2349999	A	769.0	33.2	6/11/2020	146.699	0.013	18.852	0.2347792	34.441870	0.003052	4.426057
VosburgPike061120_72	1242894	2350019	A	768.9	34.4	6/11/2020	3.507	0.006	5.048	0.2338327	0.820051	0.001403	1.180387
VosburgPike061120_73	1242963	2349943	A	768.5	35.0	6/11/2020	74.596	0	30.43	0.233256	17.399970	0.000000	7.097980
VosburgPike061120_74	1242979	2349957	A	768.0	35.5	6/11/2020	0	0	1.056	0.2327266	0.000000	0.000000	0.245759
VosburgPike061120_75	1242914	2350184	A	768.0	36.3	6/11/2020	-0.015	-0.015	0.193	0.232125	0.000000	0.000000	0.044800
VosburgPike061120_76	1243223	2350203	A	768.4	37.2	6/11/2020	-0.101	-0.013	0.773	0.2315724	0.000000	0.000000	0.179005
VosburgPike061120_77	1243319	2350125	A	765.0	37.7	6/11/2020	-0.057	-0.02	0.476	0.2301769	0.000000	0.000000	0.109564
VosburgPike061120_78	1243205	2349954	A	764.5	38.1	6/11/2020	-0.229	-0.004	1.497	0.2297308	0.000000	0.000000	0.343907
VosburgPike061120_79	1243351	2349977	A	765.5	38.6	6/11/2020	0	-0.011	3.687	0.2296624	0.000000	0.000000	0.846765

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061120_80	1243561	2350059	A	763.9	39.2	6/11/2020	0	-0.021	15.022	0.2287421	0.000000	0.000000	3.436164
VosburgPike061120_81	1243586	2350154	A	761.8	39.5	6/11/2020	0	-0.026	0.289	0.2278944	0.000000	0.000000	0.065861
VosburgPike061120_82	1243782	2350149	A	761.0	39.9	6/11/2020	0	-0.014	0.157	0.2273642	0.000000	0.000000	0.035696
VosburgPike061120_83	1243952	2350084	A	757.9	40.7	6/11/2020	-0.157	-0.005	0.412	0.2258608	0.000000	0.000000	0.093055
VosburgPike061120_84	1243974	2350152	A	757.9	41.0	6/11/2020	-0.5	-0.028	0.777	0.2256451	0.000000	0.000000	0.175326
VosburgPike061120_85	1244120	2350044	A	758.0	41.4	6/11/2020	-0.906	-0.03	0.457	0.2253879	0.000000	0.000000	0.103002
VosburgPike061120_86	1244244	2350181	A	757.2	41.9	6/11/2020	-0.38	-0.006	0.655	0.2247927	0.000000	0.000000	0.147239
VosburgPike061120_87	1244307	2349931	A	756.8	42.6	6/11/2020	-1.148	-0.044	0.414	0.2241759	0.000000	0.000000	0.092809
VosburgPike061120_88	1244335	2349784	A	756.1	43.1	6/11/2020	-0.397	-0.019	0.679	0.2236144	0.000000	0.000000	0.151834
VosburgPike061120_89	1244319	2349637	A	757.1	43.5	6/11/2020	-0.507	-0.016	0.253	0.2236273	0.000000	0.000000	0.056578
VosburgPike061120_90	1244233	2349753	A	757.6	43.7	6/11/2020	0	-0.04	0.829	0.2236338	0.000000	0.000000	0.185392
VosburgPike061120_91	1244164	2349709	A	757.9	43.9	6/11/2020	-0.485	-0.028	0.618	0.2235812	0.000000	0.000000	0.138173
VosburgPike061120_92	1244115	2349650	A	758.5	44.1	6/11/2020	0	-0.006	0.426	0.2236171	0.000000	0.000000	0.095261
VosburgPike061120_93	1244136	2349576	A	759.0	44.2	6/11/2020	-0.796	-0.027	0.414	0.223694	0.000000	0.000000	0.092609
VosburgPike061120_94	1244102	2349508	A	758.8	44.3	6/11/2020	0	-0.014	2.558	0.2235646	0.000000	0.000000	0.571878
VosburgPike061120_95	1244105	2349577	A	758.8	44.4	6/11/2020	37.763	-0.006	7.435	0.2234942	8.439813	0.000000	1.661680

Individual Flux Measurements and Calculations (Continued)

Site Point ID	Northing	Easting	Accum Chamber	Pressure (HPa)	Temp (DegC)	Date	CH4 slope	H2S slope	CO2 slope	AcK factor	CH4 flux (moles/day/m^2)	H2S flux (moles/day/m^2)	CO2 flux (moles/day/m^2)
VosburgPike061120_96	1244017	2349594	A	759.2	44.4	6/11/2020	-0.595	-0.004	0.607	0.223612	0.000000	0.000000	0.135733
VosburgPike061120_97	1243921	2349794	A	759.6	44.3	6/11/2020	-0.251	-0.051	0.511	0.2238003	0.000000	0.000000	0.114362
VosburgPike061120_98	1243781	2349765	A	759.3	44.3	6/11/2020	-0.792	-0.029	0.05	0.223712	0.000000	0.000000	0.011186
VosburgPike061120_99	1243794	2349927	A	760.0	44.2	6/11/2020	-1.274	-0.022	0.202	0.2239887	0.000000	0.000000	0.045246

APPENDIX

C VOLUMETRIC FLUX CALCULATIONS

Grid Volume Computations

Thu Sep 03 09:30:01 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\BAIRD_CO2.grd
Grid Size:	22 rows x 23 columns
X Minimum:	2330579.402
X Maximum:	2330909.922
X Spacing:	15.023636363637
Y Minimum:	1230534.766
Y Maximum:	1230853.978
Y Spacing:	15.200571428563
Z Minimum:	0.0022198706743124
Z Maximum:	0.52561122765598

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	682.61433557944
Simpson's Rule:	680.20175469457
Simpson's 3/8 Rule:	685.53792359984

Cut & Fill Volumes

Positive Volume [Cut]:	682.61433557944
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	682.61433557944

Areas

Planar Areas

Positive Planar Area [Cut]:	86779.785911646
Negative Planar Area [Fill]:	0

Blanked Planar Area:	18726.164328302
Total Planar Area:	105505.95023995

Surface Areas

Positive Surface Area [Cut]:	86779.788349587
Negative Surface Area [Fill]:	0

Grid Volume Computations

Thu Sep 03 09:19:27 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\BC2CJ_CH4max3notail.grd
Grid Size:	652 rows x 905 columns
X Minimum:	2299892.681
X Maximum:	2313457.732
X Spacing:	15.005587389381
Y Minimum:	1208379.429
Y Maximum:	1218141.408
Y Spacing:	14.995359447005
Z Minimum:	-3299.4470943249
Z Maximum:	3562.0416061604

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	2493069.0810571
Simpson's Rule:	2601727.9552902
Simpson's 3/8 Rule:	2485860.8144864

Cut & Fill Volumes

Positive Volume [Cut]:	4057116.4058507
Negative Volume [Fill]:	1564047.3247934
Net Volume [Cut-Fill]:	2493069.0810573

Areas

Planar Areas

Positive Planar Area [Cut]:	12281562.034325
Negative Planar Area [Fill]:	16178906.066749

Blanked Planar Area:	103961274.89486
Total Planar Area:	132421742.99593

Surface Areas

Positive Surface Area [Cut]:	12350223.9434
Negative Surface Area [Fill]:	16252546.534951

Grid Volume Computations

Thu Sep 03 09:30:51 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\BC2CJ_CO2.grd
Grid Size:	164 rows x 227 columns
X Minimum:	2299892.681
X Maximum:	2313457.732
X Spacing:	60.022349557522
Y Minimum:	1208379.429
Y Maximum:	1218141.408
Y Spacing:	59.889441717792
Z Minimum:	-18.387421857063
Z Maximum:	72.539215761274

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	911890.15476488
Simpson's Rule:	903159.27453844
Simpson's 3/8 Rule:	913030.24223281

Cut & Fill Volumes

Positive Volume [Cut]:	1019159.9630985
Negative Volume [Fill]:	107269.80833362
Net Volume [Cut-Fill]:	911890.15476489

Areas

Planar Areas

Positive Planar Area [Cut]:	23565937.206023
Negative Planar Area [Fill]:	3743036.7214456

Blanked Planar Area:	105112769.06846
Total Planar Area:	132421742.99593

Surface Areas

Positive Surface Area [Cut]:	23566034.48083
Negative Surface Area [Fill]:	3743044.4570441

Grid Volume Computations

Thu Sep 03 09:31:33 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\FED_CO2.grd
Grid Size:	21 rows x 22 columns
X Minimum:	2319877.095
X Maximum:	2320185.689
X Spacing:	14.694952380932
Y Minimum:	1219660.598
Y Maximum:	1219966.798
Y Spacing:	15.309999999998
Z Minimum:	0.0052040933426658
Z Maximum:	0.51928068384704

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	1579.2955022346
Simpson's Rule:	1570.2848963144
Simpson's 3/8 Rule:	1587.4920781747

Cut & Fill Volumes

Positive Volume [Cut]:	1579.2955022346
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	1579.2955022346

Areas

Planar Areas

Positive Planar Area [Cut]:	79867.800937973
Negative Planar Area [Fill]:	0

Blanked Planar Area:	14623.681861882
Total Planar Area:	94491.482799856

Surface Areas

Positive Surface Area [Cut]:	79867.804863752
Negative Surface Area [Fill]:	0

Grid Volume Computations

Thu Sep 03 09:48:30 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\FR_CH4notail.grd
Grid Size:	45 rows x 84 columns
X Minimum:	2328298.024
X Maximum:	2333283.386
X Spacing:	60.064602409635
Y Minimum:	1233423.631
Y Maximum:	1236084.68
Y Spacing:	60.478386363634
Z Minimum:	-184.26878739071
Z Maximum:	578.24847097164

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	436667.75762147
Simpson's Rule:	341025.6800699
Simpson's 3/8 Rule:	430418.92952706

Cut & Fill Volumes

Positive Volume [Cut]:	2527279.1643729
Negative Volume [Fill]:	2090611.4067515
Net Volume [Cut-Fill]:	436667.75762147

Areas

Planar Areas

Positive Planar Area [Cut]:	1255215.0610648
Negative Planar Area [Fill]:	4424371.0355852

Blanked Planar Area:	7586706.4680867
Total Planar Area:	13266292.564737

Surface Areas

Positive Surface Area [Cut]:	1263755.9157346
Negative Surface Area [Fill]:	4425674.6886546

Grid Volume Computations

Thu Sep 03 10:19:01 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\FR_CO2.grd
Grid Size:	45 rows x 84 columns
X Minimum:	2328298.024
X Maximum:	2333283.386
X Spacing:	60.064602409635
Y Minimum:	1233423.631
Y Maximum:	1236084.68
Y Spacing:	60.478386363634
Z Minimum:	-0.89811108891494
Z Maximum:	3.7411949852414

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	99829.16582888
Simpson's Rule:	99407.382454026
Simpson's 3/8 Rule:	100173.10880669

Cut & Fill Volumes

Positive Volume [Cut]:	106948.90070886
Negative Volume [Fill]:	7119.734879978
Net Volume [Cut-Fill]:	99829.16582888

Areas

Planar Areas

Positive Planar Area [Cut]:	4848421.1281335
Negative Planar Area [Fill]:	831164.96851655

Blanked Planar Area:	7586706.4680867
Total Planar Area:	13266292.564737

Surface Areas

Positive Surface Area [Cut]:	4848421.5447319
Negative Surface Area [Fill]:	831165.00536102

Grid Volume Computations

Thu Sep 03 09:33:50 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\PB_CO2.grd
Grid Size:	21 rows x 22 columns
X Minimum:	2384440.166
X Maximum:	2384750.419
X Spacing:	14.773952380954
Y Minimum:	1236828.57
Y Maximum:	1237133.588
Y Spacing:	15.250899999996
Z Minimum:	0.093182416798891
Z Maximum:	0.44247558897038

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	2132.7599918377
Simpson's Rule:	2114.6924004674
Simpson's 3/8 Rule:	2148.2261820776

Cut & Fill Volumes

Positive Volume [Cut]:	2132.7599918377
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	2132.7599918377

Areas

Planar Areas

Positive Planar Area [Cut]:	79536.57283942
Negative Planar Area [Fill]:	0

Blanked Planar Area:	15096.176714564
Total Planar Area:	94632.749553984

Surface Areas

Positive Surface Area [Cut]:	79536.575695316
Negative Surface Area [Fill]:	0

Grid Volume Computations

Thu Sep 03 09:34:31 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\SEC12_CH4notail.grd
Grid Size:	24 rows x 65 columns
X Minimum:	2358645.153
X Maximum:	2362473.915
X Spacing:	59.824406250002
Y Minimum:	1245054.993
Y Maximum:	1246460.812
Y Spacing:	61.122565217387
Z Minimum:	-993.81556470582
Z Maximum:	6685.1008901002

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	5706594.9673605
Simpson's Rule:	3331900.6482773
Simpson's 3/8 Rule:	6649685.3955717

Cut & Fill Volumes

Positive Volume [Cut]:	9333477.96209
Negative Volume [Fill]:	3626882.9947295
Net Volume [Cut-Fill]:	5706594.9673605

Areas

Planar Areas

Positive Planar Area [Cut]:	1639393.2330444
Negative Planar Area [Fill]:	2967949.4444406

Blanked Planar Area:	775203.68859272
Total Planar Area:	5382546.3660778

Surface Areas

Positive Surface Area [Cut]:	1886036.1867005
Negative Surface Area [Fill]:	2998822.5912937

Grid Volume Computations

Thu Sep 03 09:35:11 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\SEC12_CO2.grd
Grid Size:	24 rows x 65 columns
X Minimum:	2358645.153
X Maximum:	2362473.915
X Spacing:	59.824406250002
Y Minimum:	1245054.993
Y Maximum:	1246460.812
Y Spacing:	61.122565217387
Z Minimum:	-0.99774410935078
Z Maximum:	16.414563530158

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	145461.07879117
Simpson's Rule:	140809.67721003
Simpson's 3/8 Rule:	147777.39947802

Cut & Fill Volumes

Positive Volume [Cut]:	154565.55358576
Negative Volume [Fill]:	9104.4747945899
Net Volume [Cut-Fill]:	145461.07879117

Areas

Planar Areas

Positive Planar Area [Cut]:	4075636.507677
Negative Planar Area [Fill]:	531706.16980803

Blanked Planar Area:	775203.68859272
Total Planar Area:	5382546.3660778

Surface Areas

Positive Surface Area [Cut]:	4075641.1443088
Negative Surface Area [Fill]:	531706.23522422

Grid Volume Computations

Thu Sep 03 09:35:54 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\SEC17_CH4notail.grd
Grid Size:	16 rows x 19 columns
X Minimum:	2340902.733
X Maximum:	2341178.918
X Spacing:	15.343611111114
Y Minimum:	1240746.383
Y Maximum:	1240969.752
Y Spacing:	14.891266666679
Z Minimum:	-1.4630547843207
Z Maximum:	6.4969255207881

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	1929.9675396646
Simpson's Rule:	1927.4873872596
Simpson's 3/8 Rule:	1870.5266286218

Cut & Fill Volumes

Positive Volume [Cut]:	2767.2408537959
Negative Volume [Fill]:	837.27331413128
Net Volume [Cut-Fill]:	1929.9675396646

Areas

Planar Areas

Positive Planar Area [Cut]:	23856.783955641
Negative Planar Area [Fill]:	22297.348590813

Blanked Planar Area:	15537.034718608
Total Planar Area:	61691.167265062

Surface Areas

Positive Surface Area [Cut]:	23857.458509183
Negative Surface Area [Fill]:	22297.390010169

Grid Volume Computations

Thu Sep 03 09:36:31 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\SEC17_CO2.grd
Grid Size:	16 rows x 19 columns
X Minimum:	2340902.733
X Maximum:	2341178.918
X Spacing:	15.343611111114
Y Minimum:	1240746.383
Y Maximum:	1240969.752
Y Spacing:	14.891266666679
Z Minimum:	-1.4630547843207
Z Maximum:	6.4969255207881

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	2020.2760168844
Simpson's Rule:	2021.6498079272
Simpson's 3/8 Rule:	1960.9926596634

Cut & Fill Volumes

Positive Volume [Cut]:	2841.8706714413
Negative Volume [Fill]:	821.5946545569
Net Volume [Cut-Fill]:	2020.2760168844

Areas

Planar Areas

Positive Planar Area [Cut]:	26626.071445131
Negative Planar Area [Fill]:	19528.061101323

Blanked Planar Area:	15537.034718608
Total Planar Area:	61691.167265062

Surface Areas

Positive Surface Area [Cut]:	26626.738247517
Negative Surface Area [Fill]:	19528.104603909

Grid Volume Computations

Thu Sep 03 09:36:57 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\Sec18_CH4notail.grd
Grid Size:	22 rows x 23 columns
X Minimum:	2335019.535
X Maximum:	2335356.945
X Spacing:	15.336818181804
Y Minimum:	1237265.305
Y Maximum:	1237574.42
Y Spacing:	14.719761904761
Z Minimum:	-0.1687305997271
Z Maximum:	1.4981221237462

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	274.81881126307
Simpson's Rule:	261.53782913133
Simpson's 3/8 Rule:	276.03935750384

Cut & Fill Volumes

Positive Volume [Cut]:	435.78595900697
Negative Volume [Fill]:	160.9671477439
Net Volume [Cut-Fill]:	274.81881126307

Areas

Planar Areas

Positive Planar Area [Cut]:	30437.608005824
Negative Planar Area [Fill]:	56026.293495066

Blanked Planar Area:	17834.590649009
Total Planar Area:	104298.4921499

Surface Areas

Positive Surface Area [Cut]:	30437.646342998
Negative Surface Area [Fill]:	56026.296571764

Grid Volume Computations

Thu Sep 03 09:42:19 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\Sec18_CO2.grd
Grid Size:	22 rows x 23 columns
X Minimum:	2335019.535
X Maximum:	2335356.945
X Spacing:	15.336818181804
Y Minimum:	1237265.305
Y Maximum:	1237574.42
Y Spacing:	14.719761904761
Z Minimum:	-0.13984337259113
Z Maximum:	1.6836115498371

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	1296.0384371879
Simpson's Rule:	1290.2051154959
Simpson's 3/8 Rule:	1301.0735869607

Cut & Fill Volumes

Positive Volume [Cut]:	1332.5183160343
Negative Volume [Fill]:	36.479878846401
Net Volume [Cut-Fill]:	1296.0384371879

Areas

Planar Areas

Positive Planar Area [Cut]:	74023.723532244
Negative Planar Area [Fill]:	12440.177968646

Blanked Planar Area:	17834.590649009
Total Planar Area:	104298.4921499

Surface Areas

Positive Surface Area [Cut]:	74023.760542191
Negative Surface Area [Fill]:	12440.179217615

Grid Volume Computations

Thu Sep 03 09:37:33 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\TC2PR_CH4notail.grd
Grid Size:	101 rows x 290 columns
X Minimum:	2370498.518
X Maximum:	2387835.807
X Spacing:	59.990619377162
Y Minimum:	1237819.684
Y Maximum:	1243834.748
Y Spacing:	60.15064
Z Minimum:	-1279.1461113108
Z Maximum:	3544.7056763051

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	-4356960.5316085
Simpson's Rule:	-3647602.7984033
Simpson's 3/8 Rule:	-4637957.9744439

Cut & Fill Volumes

Positive Volume [Cut]:	4728484.6532709
Negative Volume [Fill]:	9085445.1848795
Net Volume [Cut-Fill]:	-4356960.5316086

Areas

Planar Areas

Positive Planar Area [Cut]:	6615121.3416585
Negative Planar Area [Fill]:	17612174.098304

Blanked Planar Area:	80057607.481533
Total Planar Area:	104284902.9215

Surface Areas

Positive Surface Area [Cut]:	6703382.9219676
Negative Surface Area [Fill]:	17649055.687879

Grid Volume Computations

Thu Sep 03 09:38:09 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\TC2PR_CO2.grd
Grid Size:	101 rows x 295 columns
X Minimum:	2370198.518
X Maximum:	2387835.807
X Spacing:	59.990778911564
Y Minimum:	1237819.684
Y Maximum:	1243834.748
Y Spacing:	60.15064
Z Minimum:	-2.8958330743708
Z Maximum:	11.120811978007

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	392067.84628602
Simpson's Rule:	391434.95646738
Simpson's 3/8 Rule:	392469.07107155

Cut & Fill Volumes

Positive Volume [Cut]:	458725.49535622
Negative Volume [Fill]:	66657.649070203
Net Volume [Cut-Fill]:	392067.84628602

Areas

Planar Areas

Positive Planar Area [Cut]:	21084646.501094
Negative Planar Area [Fill]:	3229316.9769549

Blanked Planar Area:	81775458.643447
Total Planar Area:	106089422.1215

Surface Areas

Positive Surface Area [Cut]:	21084650.09274
Negative Surface Area [Fill]:	3229317.2834009

Grid Volume Computations

Thu Sep 03 09:38:36 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\VP_CH4notail.grd
Grid Size:	38 rows x 75 columns
X Minimum:	2349085.601
X Maximum:	2353496.577
X Spacing:	59.607783783787
Y Minimum:	1242470.413
Y Maximum:	1244707.824
Y Spacing:	60.47056756757
Z Minimum:	-13.58594490174
Z Maximum:	83.189740650981

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	231636.97584926
Simpson's Rule:	226079.83421539
Simpson's 3/8 Rule:	232256.41079787

Cut & Fill Volumes

Positive Volume [Cut]:	407287.29495743
Negative Volume [Fill]:	175650.31910816
Net Volume [Cut-Fill]:	231636.97584926

Areas

Planar Areas

Positive Planar Area [Cut]:	1843947.081659
Negative Planar Area [Fill]:	3011336.6665388

Blanked Planar Area:	5013882.4749392
Total Planar Area:	9869166.2231369

Surface Areas

Positive Surface Area [Cut]:	1844043.0451315
Negative Surface Area [Fill]:	3011347.5643367

Grid Volume Computations

Thu Sep 03 09:39:04 2020

Upper Surface

Grid File Name:	C:\LTE\LaPlataMethane\2020\Surfer\VP_CO2.grd
Grid Size:	38 rows x 75 columns
X Minimum:	2349085.601
X Maximum:	2353496.577
X Spacing:	59.607783783787
Y Minimum:	1242470.413
Y Maximum:	1244707.824
Y Spacing:	60.47056756757
Z Minimum:	-0.98855096579566
Z Maximum:	5.7033001812283

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	80848.995927458
Simpson's Rule:	80208.377668401
Simpson's 3/8 Rule:	81589.281423615

Cut & Fill Volumes

Positive Volume [Cut]:	91145.327268011
Negative Volume [Fill]:	10296.331340552
Net Volume [Cut-Fill]:	80848.995927458

Areas

Planar Areas

Positive Planar Area [Cut]:	4242202.9600751
Negative Planar Area [Fill]:	613080.78812266

Blanked Planar Area:	5013882.4749392
Total Planar Area:	9869166.2231369

Surface Areas

Positive Surface Area [Cut]:	4242203.6368988
Negative Surface Area [Fill]:	613080.84664644

APPENDIX

D SUBSURFACE SOIL GAS MEASUREMENTS

Appendix D

Subsurface Soil Gas Measurements
La Plata County, Colorado

Suspect Area	Sub CH_4 (ppm)	Sub 0_2 (ppm)	Sub H_2S (ppm)	Sub CO (ppm)	Sub CO_2 (ppm)	GPS Date	GPS Time	GNSS Heigh	Northing	Easting	Location
8	0	20.9	0	0	200	8/18/2020	09:08:20am	7740.935	1236841.350132	2422762.794523	SEC13T35NR6W
8	0	20.9	0	0	200	8/18/2020	09:23:20am	7768.936	1236908.877158	2422710.498802	SEC13T35NR6W
8	0	20.9	0	0	600	8/18/2020	09:27:47am	7780.580	1236942.735720	2422749.948669	SEC13T35NR6W
8	0	20.9	0	0	600	8/18/2020	09:30:40am	7756.004	1236896.686411	2422787.348140	SEC13T35NR6W
8	0	20.9	0	0	800	8/18/2020	09:33:04am	7738.276	1236860.765185	2422822.317084	SEC13T35NR6W
8	0	20.9	0	0	200	8/18/2020	09:37:05am	7730.322	1236800.888921	2422804.466909	SEC13T35NR6W
8	0	20.9	0	0	200	8/18/2020	09:40:14am	7743.239	1236862.275273	2422883.552411	SEC13T35NR6W
8	0	20.9	0	0	200	8/18/2020	09:48:20am	7726.894	1236909.895580	2423083.870174	SEC13T35NR6W
8	0	20.9	0	0	3,800	8/18/2020	09:58:06am	7634.234	1236522.723474	2423153.130147	SEC13T35NR6W
8	0	20.9	0	0	800	8/18/2020	09:59:54am	7613.776	1236416.896579	2423146.577754	SEC13T35NR6W
7	0	20.9	0	0	28,000	8/31/2020	09:23:37am	7540.666	1238251.031113	2418271.095681	SEC14T35NR6W
7	0	20.9	0	0	2,000	8/31/2020	09:28:06am	7545.222	1238263.783042	2418265.075209	SEC14T35NR6W
6	0	20.9	0	0	3,200	8/31/2020	09:45:20am	7409.096	1238163.448816	2417034.914547	SEC14T35NR6W
6	0	20.9	0	0	4,000	8/31/2020	09:49:18am	7424.583	1238091.575844	2416950.045475	SEC14T35NR6W
6	0	20.9	0	0	1,600	8/31/2020	09:52:50am	7434.114	1238187.654620	2416982.880306	SEC14T35NR6W
5	0	20.9	0	0	1,800	8/31/2020	10:35:03am	7568.215	1238393.750260	2415427.761307	SEC14T35NR6W
5	0	20.9	0	0	2,800	8/31/2020	10:39:36am	7608.885	1238460.115506	2415253.037668	SEC14T35NR6W
4	0	20.9	0	0	4,000	9/1/2020	09:00:01am	7424.583	1238091.575844	2416950.045475	SEC14T35NR6W
4	0	20.9	0	0	1,600	9/1/2020	09:05:40am	7434.114	1238187.654620	2416982.880306	SEC14T35NR6W
4	0	20.9	0	0	1,800	9/1/2020	09:11:43am	7568.215	1238393.750260	2415427.761307	SEC15T35NR6W
3	0	20.9	0	0	2,800	9/1/2020	09:52:01am	7608.885	1238460.115506	2415253.037668	SEC15T35NR6W
3	0	20.9	0	0	200	9/1/2020	09:54:51am	7692.801	1238223.068026	2407039.954767	SEC16T35NR6W
2	2,400	20.8	0	0	2,400	9/3/2020	09:33:07am	8361.813	1245548.576150	2357018.870002	SEC11T35NR8W
2	400	20.9	0	0	1,800	9/3/2020	09:38:32am	8343.698	1245524.262225	2356962.408989	SEC11T35NR8W
2	50,000	15.4	0	27	26,600	9/3/2020	09:41:03am	8350.883	1245516.586126	2356990.896469	SEC11T35NR8W
2	200	20.9	0	0	1,000	9/3/2020	09:44:26am	8356.020	1245498.907525	2357027.617871	SEC11T35NR8W
2	200	20.9	0	0	800	9/3/2020	09:47:09am	8350.095	1245481.173540	2357011.691407	SEC11T35NR8W
2	100	20.9	0	0	800	9/3/2020	09:51:26am	8374.410	1245550.295992	2357072.123996	SEC11T35NR8W
1	12,000	12.1	0	0	50,000	9/3/2020	09:59:56am	8345.781	1245855.659410	2356698.468510	SEC11T35NR8W
1	1,600	19.2	0	0	9,200	9/3/2020	10:04:52am	8352.966	1245882.339250	2356713.892062	SEC11T35NR8W
1	1,400	19.7	0	0	8,000	9/3/2020	10:06:54am	8358.148	1245898.403522	2356709.095715	SEC11T35NR8W
1	500	20.1	0	0	5,000	9/3/2020	10:09:00am	8364.828	1245931.954134	2356723.406937	SEC11T35NR8W
1	11,500	18.8	0	0	10,600	9/3/2020	10:16:10am	8386.376	1245989.543623	2356693.022294	SEC11T35NR8W
1	100	20.7	0	0	3,800	9/3/2020	10:20:10am	8371.392	1245918.491064	2356666.209819	SEC11T35NR8W
1	200	20.4	0	0	4,400	9/3/2020	10:22:12am	8360.889	1245895.811208	2356675.685559	SEC11T35NR8W
1	200	20.6	0	0	4,600	9/3/2020	10:24:25am	8355.928	1245887.614301	2356691.822071	SEC11T35NR8W
1	200	20.9	0	0	2,200	9/3/2020	10:26:56am	8345.812	1245842.045902	2356686.847813	SEC11T35NR8W

ppm - parts per million

APPENDIX

E LABORATORY ANALYTICAL REPORTS

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

27 April 2020

Caitlin McGinn
LT Environmental
848 E 2nd Ave
Durango, CO 81301

RE: La Plata Springs

Enclosed are the results of analyses for samples received by the laboratory on 04/16/20 14:10.
If you need any further assistance, please feel free to contact me.

Sincerely,



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.

dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Darwin Ratner #1	2004114-01	Water	04/14/20 09:20	04/16/20 14:10	
Darwin Ratner #3	2004114-02	Water	04/14/20 12:00	04/16/20 14:10	
Kane Ranch Spring	2004114-03	Water	04/16/20 09:12	04/16/20 14:10	
Hoier Spring	2004114-04	Water	04/16/20 10:43	04/16/20 14:10	
Animas River Spring	2004114-05	Water	04/16/20 12:14	04/16/20 14:10	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

Darwin Ratner #1

2004114-01 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**165**	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO3*	**165**	10.0	7.16	mg/L	1	04/20/20 14:00	2320 B		VJW
Bromide	<0.100	0.100	0.0309	mg/L	1	04/23/20 18:10	EPA300.0		AES
Chloride*	**12.3**	1.00	0.0886	mg/L	1	04/20/20 15:57	EPA300.0		AES
Fluoride*	**0.139**	0.100	0.00971	mg/L	1	04/20/20 15:57	EPA300.0		AES
Total Dissolved Solids*	**270**	10.0		mg/L	1	04/17/20 16:30	EPA160.1		VJW
Sulfate*	**31.5**	1.00	0.152	mg/L	1	04/20/20 15:57	EPA300.0		AES
Dissolved Metals by ICP									
Calcium*	**50.4**	0.100	0.017	mg/L	1	04/24/20 14:33	EPA200.7		AES
Iron*	<0.050	0.050	0.018	mg/L	1	04/24/20 14:34	EPA200.7		AES
Magnesium*	**15.4**	0.100	0.023	mg/L	1	04/24/20 14:34	EPA200.7		AES
Potassium*	**1.06**	1.00	0.130	mg/L	1	04/24/20 14:33	EPA200.7		AES
Sodium*	**7.36**	1.00	0.101	mg/L	1	04/24/20 14:33	EPA200.7		AES

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

Darwin Ratner #3

2004114-02 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**119**	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO3*	**119**	10.0	7.16	mg/L	1	04/20/20 14:00	2320 B		VJW
Bromide	<0.100	0.100	0.0309	mg/L	1	04/23/20 18:28	EPA300.0		AES
Chloride*	**7.55**	1.00	0.0886	mg/L	1	04/20/20 16:17	EPA300.0		AES
Fluoride*	**0.166**	0.100	0.00971	mg/L	1	04/20/20 16:17	EPA300.0		AES
Total Dissolved Solids*	**250**	10.0		mg/L	1	04/17/20 16:30	EPA160.1		VJW
Sulfate*	**48.2**	1.00	0.152	mg/L	1	04/20/20 16:17	EPA300.0		AES
Dissolved Metals by ICP									
Calcium*	**44.8**	0.100	0.017	mg/L	1	04/24/20 14:36	EPA200.7		AES
Iron*	<0.050	0.050	0.018	mg/L	1	04/24/20 14:36	EPA200.7		AES
Magnesium*	**9.93**	0.100	0.023	mg/L	1	04/24/20 14:36	EPA200.7		AES
Potassium*	<1.00	1.00	0.130	mg/L	1	04/24/20 14:36	EPA200.7		AES
Sodium*	**10.7**	1.00	0.101	mg/L	1	04/24/20 14:36	EPA200.7		AES

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

Kane Ranch Spring

2004114-03 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**88.0**	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO3*	**88.0**	10.0	7.16	mg/L	1	04/20/20 14:00	2320 B		VJW
Bromide	<0.100	0.100	0.0309	mg/L	1	04/23/20 19:23	EPA300.0		AES
Chloride*	**1.43**	1.00	0.0886	mg/L	1	04/20/20 16:36	EPA300.0		AES
Fluoride*	<0.100	0.100	0.00971	mg/L	1	04/20/20 16:36	EPA300.0		AES
Total Dissolved Solids*	**140**	10.0		mg/L	1	04/17/20 16:30	EPA160.1		VJW
Sulfate*	**5.64**	1.00	0.152	mg/L	1	04/20/20 16:36	EPA300.0		AES
Dissolved Metals by ICP									
Calcium*	**20.4**	0.100	0.017	mg/L	1	04/24/20 14:38	EPA200.7		AES
Iron*	**0.399**	0.050	0.018	mg/L	1	04/24/20 14:38	EPA200.7		AES
Magnesium*	**8.17**	0.100	0.023	mg/L	1	04/24/20 14:38	EPA200.7		AES
Potassium*	**2.14**	1.00	0.130	mg/L	1	04/24/20 14:38	EPA200.7		AES
Sodium*	**3.43**	1.00	0.101	mg/L	1	04/24/20 14:38	EPA200.7		AES

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

Hoier Spring

2004114-04 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**95.0**	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO3*	**95.0**	10.0	7.16	mg/L	1	04/20/20 14:00	2320 B		VJW
Bromide	<0.100	0.100	0.0309	mg/L	1	04/23/20 19:42	EPA300.0		AES
Chloride*	**1.56**	1.00	0.0886	mg/L	1	04/20/20 16:56	EPA300.0		AES
Fluoride*	**0.184**	0.100	0.00971	mg/L	1	04/20/20 16:56	EPA300.0		AES
Total Dissolved Solids*	**175**	10.0		mg/L	1	04/17/20 16:30	EPA160.1		VJW
Sulfate*	**16.9**	1.00	0.152	mg/L	1	04/20/20 16:56	EPA300.0		AES
Dissolved Metals by ICP									
Calcium*	**20.2**	0.100	0.017	mg/L	1	04/24/20 14:45	EPA200.7		AES
Iron*	**4.31**	0.050	0.018	mg/L	1	04/24/20 14:45	EPA200.7		AES
Magnesium*	**9.63**	0.100	0.023	mg/L	1	04/24/20 14:45	EPA200.7		AES
Potassium*	**1.00**	1.00	0.130	mg/L	1	04/24/20 14:45	EPA200.7		AES
Sodium*	**9.98**	1.00	0.101	mg/L	1	04/24/20 14:45	EPA200.7		AES

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

Animas River Spring

2004114-05 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**479**	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	04/20/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO3*	**479**	10.0	7.16	mg/L	1	04/20/20 14:00	2320 B		VJW
Bromide	<0.300	0.300	0.0928	mg/L	3	04/23/20 20:00	EPA300.0		AES
Chloride*	**53.3**	5.00	0.443	mg/L	5	04/20/20 17:54	EPA300.0		AES
Fluoride*	<0.500	0.500	0.0486	mg/L	5	04/20/20 17:54	EPA300.0		AES
Total Dissolved Solids*	**3120**	10.0		mg/L	1	04/17/20 16:30	EPA160.1		VJW
Sulfate*	**1570**	50.0	7.62	mg/L	50	04/21/20 08:20	EPA300.0		AES
Dissolved Metals by ICP									
Calcium*	**271**	0.300	0.050	mg/L	3	04/24/20 14:48	EPA200.7		AES
Iron*	<0.150	0.150	0.055	mg/L	3	04/24/20 14:48	EPA200.7		AES
Magnesium*	**203**	0.300	0.070	mg/L	3	04/24/20 14:48	EPA200.7		AES
Potassium*	**4.29**	3.00	0.390	mg/L	3	04/24/20 14:48	EPA200.7		AES
Sodium*	**239**	3.00	0.302	mg/L	3	04/24/20 14:48	EPA200.7		AES

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303
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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B200633 - General Prep - Wet Chem										
Blank (B200633-BLK1)				Prepared & Analyzed: 04/17/20						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B200633-DUP1)			**Source: 2004083-01**	Prepared & Analyzed: 04/17/20						
Total Dissolved Solids	745	10.0	mg/L		775			3.95	20	
Reference (B200633-SRM1)				Prepared & Analyzed: 04/17/20						
Total Dissolved Solids	555	10.0	mg/L	570		97.4	85-115			
Batch B200637 - General Prep - Wet Chem										
Blank (B200637-BLK1)				Prepared: 04/17/20 Analyzed: 04/20/20						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B200637-BS1)				Prepared: 04/17/20 Analyzed: 04/20/20						
Chloride	23.4	1.00	mg/L	25.0		93.5	90-110			
Fluoride	2.45	0.100	mg/L	2.50		97.8	90-110			
Sulfate	23.5	1.00	mg/L	25.0		93.9	90-110			
LCS Dup (B200637-BSD1)				Prepared: 04/17/20 Analyzed: 04/20/20						
Chloride	24.1	1.00	mg/L	25.0		96.3	90-110	2.98	20	
Fluoride	2.50	0.100	mg/L	2.50		100	90-110	2.34	20	
Sulfate	24.0	1.00	mg/L	25.0		95.9	90-110	2.17	20	
Batch B200643 - General Prep - Wet Chem										
Blank (B200643-BLK1)				Prepared & Analyzed: 04/20/20						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B200643-BS1)				Prepared & Analyzed: 04/20/20						
Alkalinity, Total as CaCO3	97.0	10.0	mg/L	100		97.0	85-115			
LCS Dup (B200643-BSD1)				Prepared & Analyzed: 04/20/20						
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115	3.05	20	
Batch B200671 - General Prep - Wet Chem										
Blank (B200671-BLK1)				Prepared & Analyzed: 04/23/20						
Bromide	ND	0.100	mg/L							
LCS (B200671-BS1)				Prepared & Analyzed: 04/23/20						
Bromide	2.51	0.100	mg/L	2.50		100	90-110			
LCS Dup (B200671-BSD1)				Prepared & Analyzed: 04/23/20						
Bromide	2.53	0.100	mg/L	2.50		101	90-110	0.635	20	

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	04/27/20 12:41

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B200630 - Diss. 200.7/200.8										
Blank (B200630-BLK1)				Prepared: 04/17/20 Analyzed: 04/24/20						
Calcium	ND	0.100	mg/L							
Iron	ND	0.050	mg/L							
Magnesium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							
Sodium	ND	1.00	mg/L							
LCS (B200630-BS1)				Prepared: 04/17/20 Analyzed: 04/24/20						
Calcium	4.77	0.100	mg/L	5.00		95.4	85-115			
Iron	4.55	0.050	mg/L	5.00		91.0	85-115			
Magnesium	24.2	0.100	mg/L	25.0		96.9	85-115			
Potassium	9.63	1.00	mg/L	10.0		96.3	85-115			
Sodium	4.02	1.00	mg/L	4.05		99.2	85-115			
LCS Dup (B200630-BSD1)				Prepared: 04/17/20 Analyzed: 04/24/20						
Calcium	4.77	0.100	mg/L	5.00		95.4	85-115	0.0238	20	
Iron	4.56	0.050	mg/L	5.00		91.2	85-115	0.241	20	
Magnesium	24.3	0.100	mg/L	25.0		97.1	85-115	0.244	20	
Potassium	9.76	1.00	mg/L	10.0		97.6	85-115	1.30	20	
Sodium	4.04	1.00	mg/L	4.05		99.7	85-115	0.544	20	

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LT Environmental	Project:	La Plata Springs	
848 E 2nd Ave	Project Name / Number:	2020 Fruitland Outcrop Monitoring #005220004	**Reported:**
Durango CO, 81301	Project Manager:	Caitlin McGinn	04/27/20 12:41

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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GREEN GAL Analytical Laboratories

(970) 247-4220
Fax: (970) 247-4227

jenna.emerick@greenanalytical.com or
dzufelt@greenanalytical.com
75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client:	LT Environmental
Address:	848 E. 2nd Avenue
City:	Durango **State:** CO **Zip:** 81301
Phone #:	970-385-1096
Contact Person:	~~dH~~ Devin Hennmann
Email Report to:	dhenmann@ltenv.com, cmcginn@ltenv.com
Project Name(optional):	2020 Fruitland Outcrop Monitoring #005220004
Sampler Name (Print):	Caitlin McGinn, Travis Short

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

For Lab Use	Sample Name or Location	Collected Date	Collected Time	Matrix: GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	ANALYSIS REQUEST: Alkalinity	Metals (Dissolved)	Bromide	Calcium	Chloride	Flouride	Sulfate	TDS
2004-114-01	Darwin Rather #1	4.14.20	0920								2			1			X	X	X	X	X	X	X	X
-02	Darwin Rather #3	4.14.20	1200														X	X	X	X	X	X	X	X
-03	Kane Ranch Spring	4.16.20	0912														X	X	X	X	X	X	X	X
-04	Haier Spring	4.16.20	1043														X	X	X	X	X	X	X	X
-05	Animas River Spring	4.16.20	1214														X	X	X	X	X	X	X	X

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date:	Time:	Received By:
Caitlin McGinn	4.16.20	1410	Fed Ex
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ADDITIONAL REMARKS:

Report to State? (Circle)
Yes (No)

Please see attached for analysis on ice Lasco #01

5.1/5.2°C — Temperature at receipt:
EH — CHECKED BY

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

15 June 2020

Caitlin McGinn
LT Environmental
848 E 2nd Ave
Durango, CO 81301

RE: La Plata Springs

Enclosed are the results of analyses for samples received by the laboratory on 06/02/20 15:40.
If you need any further assistance, please feel free to contact me.

Sincerely,



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.

dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

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LT Environmental	Project:	La Plata Springs	
848 E 2nd Ave	Project Name / Number:	2020 Fruitland Outcrop Monitoring La Plata County	**Reported:**
Durango CO, 81301	Project Manager:	Caitlin McGinn	06/15/20 10:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Wilbourn Spring	2006022-01	Water	06/02/20 12:15	06/02/20 15:40	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring La Plata County	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	06/15/20 10:49

Wilbourn Spring

2006022-01 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**332**	10.0	7.16	mg/L	1	06/03/20 13:35	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	06/03/20 13:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	06/03/20 13:35	2320 B		VJW
Alkalinity, Total as CaCO3*	**332**	10.0	7.16	mg/L	1	06/03/20 13:35	2320 B		VJW
Bromide	<0.100	0.100	0.0309	mg/L	1	06/12/20 12:15	EPA300.0		AES
Chloride*	**2.44**	1.00	0.0886	mg/L	1	06/09/20 17:34	EPA300.0		AES
Fluoride*	**0.209**	0.100	0.00971	mg/L	1	06/09/20 17:34	EPA300.0		AES
Total Dissolved Solids*	**585**	10.0		mg/L	1	06/09/20 16:55	EPA160.1		VJW
Sulfate*	**124**	5.00	0.762	mg/L	5	06/10/20 10:00	EPA300.0		AES
Dissolved Metals by ICP									
Calcium*	**116**	0.100	0.017	mg/L	1	06/05/20 11:46	EPA200.7		AES
Iron*	**0.107**	0.050	0.018	mg/L	1	06/05/20 11:46	EPA200.7		AES
Magnesium*	**33.9**	0.100	0.023	mg/L	1	06/05/20 11:46	EPA200.7		AES
Potassium*	**1.95**	1.00	0.130	mg/L	1	06/05/20 11:46	EPA200.7		AES
Sodium*	**13.5**	1.00	0.101	mg/L	1	06/05/20 11:46	EPA200.7		AES

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring La Plata County	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	06/15/20 10:49

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B200937 - General Prep - Wet Chem										
Blank (B200937-BLK1)				Prepared & Analyzed: 06/03/20						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B200937-BS1)				Prepared & Analyzed: 06/03/20						
Alkalinity, Total as CaCO3	97.0	10.0	mg/L	100		97.0	85-115			
LCS Dup (B200937-BSD1)				Prepared & Analyzed: 06/03/20						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	1.03	20	
Batch B200985 - General Prep - Wet Chem										
Blank (B200985-BLK1)				Prepared & Analyzed: 06/09/20						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B200985-BS1)				Prepared & Analyzed: 06/09/20						
Chloride	24.1	1.00	mg/L	25.0		96.3	90-110			
Fluoride	2.69	0.100	mg/L	2.50		108	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.5	90-110			
LCS Dup (B200985-BSD1)				Prepared & Analyzed: 06/09/20						
Chloride	24.2	1.00	mg/L	25.0		96.7	90-110	0.452	20	
Fluoride	2.61	0.100	mg/L	2.50		104	90-110	3.10	20	
Sulfate	24.6	1.00	mg/L	25.0		98.3	90-110	0.817	20	
Batch B200986 - General Prep - Wet Chem										
Blank (B200986-BLK1)				Prepared & Analyzed: 06/09/20						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B200986-DUP1)		**Source: 2006022-01**		Prepared & Analyzed: 06/09/20						
Total Dissolved Solids	585	10.0	mg/L		585			0.00	20	
Reference (B200986-SRM1)				Prepared & Analyzed: 06/09/20						
Total Dissolved Solids	595	10.0	mg/L	570		104	85-115			
Batch B201008 - General Prep - Wet Chem										
Blank (B201008-BLK1)				Prepared: 06/11/20 Analyzed: 06/12/20						
Bromide	ND	0.100	mg/L							
LCS (B201008-BS1)				Prepared: 06/11/20 Analyzed: 06/12/20						
Bromide	2.56	0.100	mg/L	2.50		102	90-110			
LCS Dup (B201008-BSD1)				Prepared: 06/11/20 Analyzed: 06/12/20						
Bromide	2.53	0.100	mg/L	2.50		101	90-110	1.06	20	

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LT Environmental	Project: La Plata Springs	
848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring La Plata County	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	06/15/20 10:49

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B200928 - Diss. 200.7/200.8										
Blank (B200928-BLK1)				Prepared: 06/04/20 Analyzed: 06/05/20						
Calcium	ND	0.100	mg/L							
Iron	ND	0.050	mg/L							
Magnesium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							
Sodium	ND	1.00	mg/L							
LCS (B200928-BS1)				Prepared: 06/04/20 Analyzed: 06/05/20						
Calcium	5.10	0.100	mg/L	5.00		102	85-115			
Iron	4.93	0.050	mg/L	5.00		98.5	85-115			
Magnesium	25.9	0.100	mg/L	25.0		104	85-115			
Potassium	10.4	1.00	mg/L	10.0		104	85-115			
Sodium	4.19	1.00	mg/L	4.05		104	85-115			
LCS Dup (B200928-BSD1)				Prepared: 06/04/20 Analyzed: 06/05/20						
Calcium	4.97	0.100	mg/L	5.00		99.3	85-115	2.61	20	
Iron	4.88	0.050	mg/L	5.00		97.6	85-115	0.926	20	
Magnesium	25.5	0.100	mg/L	25.0		102	85-115	1.60	20	
Potassium	10.3	1.00	mg/L	10.0		103	85-115	0.609	20	
Sodium	4.14	1.00	mg/L	4.05		102	85-115	1.33	20	

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848 E 2nd Ave	Project Name / Number: 2020 Fruitland Outcrop Monitoring La Plata County	**Reported:**
Durango CO, 81301	Project Manager: Caitlin McGinn	06/15/20 10:49

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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GREEN GAL Analytical Laboratories

(970) 247-4220
Fax: (970) 247-4227

jenna.emerick@greenanalytical.com or
dzufelt@greenanalytical.com
75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: LT Environmental
Address: 848 E. 2nd Ave
City: Durango **State:** CO **Zip:** 81301
Phone #: 970. 385. 1096
Contact Person: Devin Hencmann & Caitlin McGinn
Email Report to: dhencmann@ltenv.com, cmcginn@ltenv.com
Project Name(optional): 2020 Fruitland Outcrop Monitoring
La Plata County
Sampler Name (Print): Caitlin McGinn, Travis Short

Bill to (if different):
P.O. #: 005220004
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

For Lab Use	Sample Name or Location	Collected Date	Collected Time	Matrix (check one): GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	ANALYSIS REQUEST: See Attached
2006-022-01	Wilbourn Spring	6.2.20	1215		X						2	1					X

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date:	Time:	Received By:
Caitlin McGinn	6.2.20	1510	Travis Short
Travis Short	6/2/20	1540	Dublin Zufelt

ADDITIONAL REMARKS:
#1 On Ice

Report to State? (Circle)
Yes No

20.2/20.3°C Temperature at receipt: DZ CHECKED BY

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

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Lab #:	760214	Job #:	44747	IS-65828	Co. Job#:
Sample Name:	Darwin Rather #1				Co. Lab#:
Company:	LT Environmental				
API/Well:					
Container:	VOA Vial				
Field/Site Name:	2020 Fruitland Outcrop Monitoring				
Location:	La Plata County, CO				
Formation/Depth:					
Sampling Point:					
Date Sampled:	4/14/2020	9:37	Date Received:	4/17/2020	Date Reported: 4/28/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide	nd					
Helium	na					
Hydrogen	nd					
Argon	0.601					
Oxygen	11.46					
Nitrogen	29.60					
Carbon Dioxide	58.34					
Methane	nd				< 0.002	< 0.001
Ethane	nd				< 0.001	< 0.001
Ethylene	nd					
Propane	nd				< 0.001	< 0.002
Propylene	nd					
Iso-butane	nd					
N-butane	nd					
Iso-pentane	nd					
N-pentane	nd					
Hexanes +	nd					

Remarks:
Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.92
*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

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Lab #:	760215	Job #:	44747	IS-65828	Co. Job#:
Sample Name:	Darwin Rather #3				Co. Lab#:
Company:	LT Environmental				
API/Well:					
Container:	VOA Vial				
Field/Site Name:	2020 Fruitland Outcrop Monitoring				
Location:	La Plata County, CO				
Formation/Depth:					
Sampling Point:					
Date Sampled:	4/14/2020	9:45	Date Received:	4/17/2020	Date Reported: 4/28/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide	nd					
Helium	na					
Hydrogen	nd					
Argon	0.776					
Oxygen	13.45					
Nitrogen	37.40					
Carbon Dioxide	48.37					
Methane	nd				< 0.002	< 0.001
Ethane	nd				< 0.001	< 0.001
Ethylene	nd					
Propane	nd				< 0.001	< 0.002
Propylene	nd					
Iso-butane	nd					
N-butane	nd					
Iso-pentane	nd					
N-pentane	nd					
Hexanes +	nd					

Remarks:
Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.93
*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

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Lab #:	760216	Job #:	44747	IS-65828	Co. Job#:
Sample Name:	Kane Ranch Spring				Co. Lab#:
Company:	LT Environmental				
API/Well:					
Container:	VOA Vial				
Field/Site Name:	2020 Fruitland Outcrop Monitoring				
Location:	La Plata County, CO				
Formation/Depth:					
Sampling Point:					
Date Sampled:	4/16/2020	9:12	Date Received:	4/17/2020	Date Reported: 4/28/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide	nd					
Helium	na					
Hydrogen	nd					
Argon	0.506					
Oxygen	12.95					
Nitrogen	25.29					
Carbon Dioxide	27.92					
Methane	33.29				26	17
Ethane	0.0391				0.031	0.039
Ethylene	nd					
Propane	0.0027				0.0021	0.0039
Propylene	nd					
Iso-butane	nd					
N-butane	nd					
Iso-pentane	nd					
N-pentane	nd					
Hexanes +	nd					

Remarks:
Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.93
*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

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Lab #:	760217	Job #:	44747	IS-65828	Co. Job#:
Sample Name:	Hoier Spring				Co. Lab#:
Company:	LT Environmental				
API/Well:					
Container:	VOA Vial				
Field/Site Name:	2020 Fruitland Outcrop Monitoring				
Location:	La Plata County, CO				
Formation/Depth:					
Sampling Point:					
Date Sampled:	4/16/2020 10:43	Date Received:	4/17/2020	Date Reported:	4/28/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide	nd					
Helium	na					
Hydrogen	nd					
Argon	0.687					
Oxygen	11.20					
Nitrogen	33.07					
Carbon Dioxide	54.42					
Methane	0.626				0.46	0.31
Ethane	nd				< 0.001	< 0.001
Ethylene	nd					
Propane	nd				< 0.001	< 0.002
Propylene	nd					
Iso-butane	nd					
N-butane	nd					
Iso-pentane	nd					
N-pentane	nd					
Hexanes +	nd					

Remarks:
Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.93
*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

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Lab #:	760218	Job #:	44747	IS-65828	Co. Job#:
Sample Name:	Animas River Spring				Co. Lab#:
Company:	LT Environmental				
API/Well:					
Container:	VOA Vial				
Field/Site Name:	2020 Fruitland Outcrop Monitoring				
Location:	La Plata County, CO				
Formation/Depth:					
Sampling Point:					
Date Sampled:	4/16/2020 12:14	Date Received:	4/17/2020	Date Reported:	4/28/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide	nd					
Helium	na					
Hydrogen	nd					
Argon	0.253					
Oxygen	4.15					
Nitrogen	11.67					
Carbon Dioxide	83.93					
Methane	nd				< 0.002	< 0.001
Ethane	nd				< 0.001	< 0.001
Ethylene	nd					
Propane	nd				< 0.001	< 0.002
Propylene	nd					
Iso-butane	nd					
N-butane	nd					
Iso-pentane	nd					
N-pentane	nd					
Hexanes +	nd					

Remarks:
Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.85
*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

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Lab #:	762884	Job #:	45030	IS-65828	Co. Job#:
Sample Name:	Wilbourn Spring				Co. Lab#:
Company:	LT Environmental				
API/Well:					
Container:	VOA Vial				
Field/Site Name:	La Plata Springs				
Location:					
Formation/Depth:					
Sampling Point:					
Date Sampled:	6/02/2020 12:15	Date Received:	6/03/2020	Date Reported:	6/18/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide	nd					
Helium	na					
Hydrogen	nd					
Argon	0.757					
Oxygen	17.03					
Nitrogen	53.34					
Carbon Dioxide	28.86					
Methane	0.0085				0.033	0.022
Ethane	nd				< 0.001	< 0.002
Ethylene	nd					
Propane	nd				< 0.001	< 0.003
Propylene	nd					
Iso-butane	nd					
N-butane	nd					
Iso-pentane	nd					
N-pentane	nd					
Hexanes +	nd					

Remarks:
Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.72
*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.