2011 FRUITLAND OUTCROP MONITORING REPORT

LA PLATA COUNTY COLORADO

DECEMBER 2011

Prepared for:

THE GROUP
Durango, Colorado

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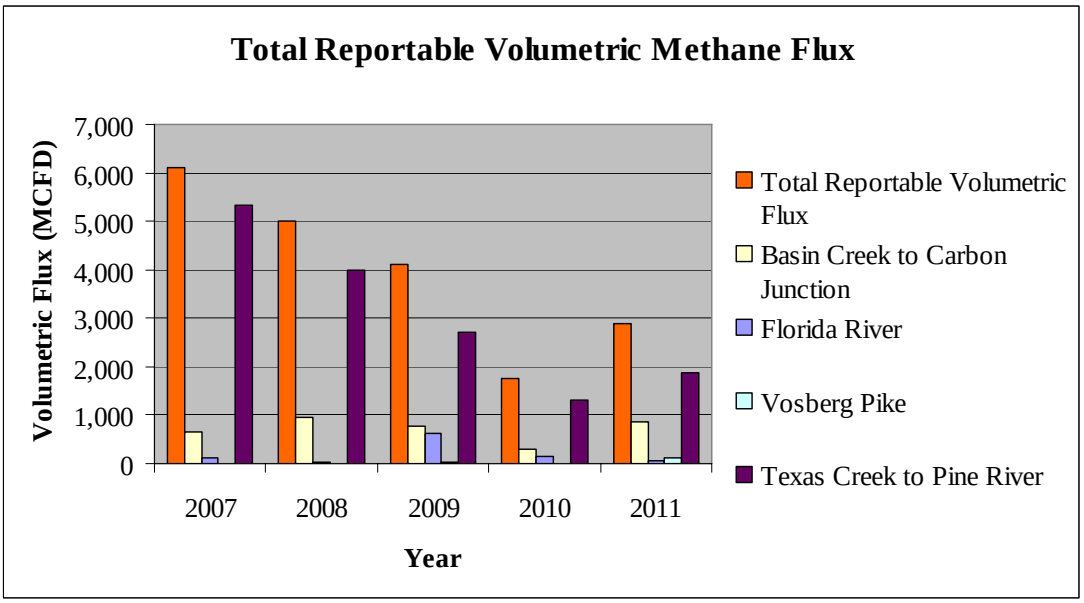
EXECUTIVE SUMMARY

This 2011 Fruitland Outcrop Monitoring Report has been prepared on behalf of Chevron Corporation (Chevron), BP, Inc. (BP), and XTO Energy, Inc. (XTO). These companies are collectively referred to as "The Group". The Fruitland Formation (Kf) outcrop monitoring is conducted in order to comply with the Colorado Oil and Gas Conservation Commission (COGCC) Orders 112-156 and 112-157.

The 2011 methane seep survey was performed from May 9, 2011, through July 25, 2011. The surveys were conducted at four 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 abandoned/shut-in well locations. The 2011 survey area included 981 acres of the Kf outcrop.

A total estimated methane volumetric flux rate for mapped areas, utilizing only those values that were greater than the 0.2 moles per meter squared per day (mol/m^2·day) instrument reporting limit, was 2,900 thousand cubic feet per day (MCFD), down from 6,099 MCFD in 2007. Denial of property access and/or no response to property access requests in areas of known methane seepage does account for a portion of the decrease in methane seepage estimated for 2011. The 2011 estimated volumetric flux rate reflects a general decreasing trend that has been observed for the past five years. In addition, the mitigation systems at the South Fork Texas Creek (SFTC) and the Pine River mapping areas have captured approximately 10 MCFD of methane from each seep area. Below is a graphical representation of the change in reportable volumetric methane flux over the last five years along the entire Kf outcrop and by area.



The total estimated carbon dioxide volumetric flux rate for mapped areas was 1,950 MCFD. Hydrogen sulfide (H_2S) flux values along the Kf outcrop continue to remain very low and most measured values were reported only slightly above the detection limit of the flux meter. Due to the low flux rates recorded, volumetric flux of H_2S for the mapped areas was not estimated.

Two natural springs were sampled in May 2011. The dissolved methane concentrations in the natural spring water samples were below the 2 milligram per liter (mg/L) COGCC threshold to identify water for further investigation of the origin of methane in the water.

At the request of the COGCC, flux measurements were collected at the areas surrounding abandoned production wells Baird 1-25 (API #05-067-06568) and Federal 34-1/2-34-1 (API #05-067-07514). Methane was not detected at any of the abandoned production well locations above the flux meter reporting limit. Property access to the shut-in production well, Pole Barn Monitor Well #1 (API #05-067-07969), was not granted during field activities. As a result, flux mapping was not conducted at Pole Barn Monitor Well #1 in 2011.

A regional reconnaissance infrared imagery (IR) aerial survey was conducted from July 25, 2011, through August 19, 2011. Field verification was conducted at 29 accessible suspect locations. Subsurface methane was detected at 4 of the 29 accessible suspect locations at concentrations ranging from 1,500 parts per million (ppm) to 100% methane.

Based on the results of the 2011 Kf outcrop monitoring event, LTE recommends the following:

- Conduct detailed methane seep mapping and flux estimation using the portable flux meter in June 2012. LTE will return to the sample locations visited during the 2011 field activities. The 2012 mapping event should include the four suspect areas (5, 8, 18, and 29) identified during the 2011 regional reconnaissance IR aerial survey to observe changes in subsurface methane over time and space;

- Sample natural springs every year to assess any changes in the flow rates, and/or the chemistry of natural springs. The next natural spring sampling event will be the spring of 2012; and

- Conduct the next regional reconnaissance IR aerial survey in 2014 to identify any changes to the methane seepage along the Kf outcrop in La Plata County.

SECTION 1.0

INTRODUCTION

This 2011 Fruitland Outcrop Monitoring Report has been prepared on behalf of Chevron Corporation (Chevron), BP, Inc. (BP), and XTO Energy, Inc. (XTO). These companies are collectively referred to as "The Group".

Since 1997, LT Environmental, Inc. (LTE) 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 north 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.

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 those areas with the greatest potential for seeps 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), northeastward to the boundary between La Plata and Archuleta counties (Figure 1).

1.3 BACKGROUND INFORMATION

There have been a number of previous and continuing studies, which 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 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. The probes are sampled by the BLM approximately six times per year;

- Installation of six flux chambers in the primary seep areas and periodic monitoring of the flux chambers from 1998 to 2005. The flux chambers measured gas flow on 10-minute intervals and have since been removed;
- Annual pedestrian reconnaissance surveys of the Kf outcrop by LTE from 1998 through 2001;
- Detailed seep mapping, and an infrared imagery (IR) pilot study performed 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 seep mapping in the known seep areas in October 2002, May 2003, May 2004, June 2005, May 2006, September 2007, June 2008, June 2009, and June 2010;
- Regional reconnaissance of the 23-mile section of the Kf outcrop in the project area in July 2003, September 2005, and October 2008. The regional reconnaissance included the collection of IR imagery, identification of 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, and June 2010;
- 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; and
- Expansion of the SFTC methane mitigation systems during June 2010.

1.4 SCOPE OF WORK

The scope of work for the 2011 methane seep monitoring included the following tasks:

1) Obtaining permission to access private properties;
2) Conducting detailed seep mapping at four key areas of interest;
3) Conducting regional reconnaissance;
4) Conducting detailed seep mapping at three abandoned/shut-in production well locations;
5) Monitoring accessible natural springs; and
6) Preparing this report.

1.5 ORGANIZATION OF THE REPORT

This report is organized into eight sections including this introduction (Section 1.0), which presents the objectives of the study and discusses background information related to the project. The field methods are described in Section 2.0. The results of the detailed flux mapping are

summarized in Section 3.0. The regional reconnaissance IR aerial survey results are presented in Section 4.0. The natural springs monitoring results are presented in Section 5.0. The results of the abandoned/shut-in wells flux mapping are presented in Section 6.0. The summary, conclusions, and recommendations of this survey are presented in Section 7.0. The report references are listed in Section 8.0. Figures, tables, and appendices follow the text in separate sections.

SECTION 2.0

FIELD METHODS

2.1 PROPERTY ACCESS

Prior to conducting 2011 field activities, LTE acquired landowner information from the La Plata County Assessor's office. LTE cross-referenced parcel data and the Kf outcrop geometry to identify owners of parcels located on the Kf outcrop. Much of the Kf outcrop is on federal land with unrestricted access. LTE attempted to contact private landowners along the Kf outcrop in La Plata County.

LTE was denied access to several properties; as a result, no investigation activities were conducted on these properties during the 2011 monitoring event. Detailed flux mapping was limited in Carbon Junction area where methane had been identified in previous mapping events. Field verification of suspect methane seeps was limited throughout the Kf outcrop in La Plata due to property access denial or no responses. As a result, LTE was able to conduct field verifications at 29 of the 40 suspect seep areas identified through IR imagery. Property access to the shut-in production well, Pole Barn Monitor Well #1 (API #05-067-07969), was not granted, therefore flux mapping was not conducted in 2011.

The 2011 status of property access is presented in Table 1.

2.2 PROJECT AREA

LTE conducted detailed flux surveys at the following four areas of interest along the Kf outcrop in La Plata County (Figure 1):

- Basin Creek to Carbon Junction (subdivided into Basin Creek, Basin Creek North, and Carbon Junction);
- Florida River;
- Vosburg Pike; and
- SFTC to Pine River (subdivided into West SFTC, Central SFTC, East SFTC; 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 (ft^2) to 40,000 ft^2. 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 known methane seep areas. The grid mapping system has proven to be systematic, consistent, repeatable, representative, and successful in delineating the lateral extent of seepage.

LTE collected a flux measurement at the corner of each grid square. When methane was detected along the outer edges of the mapping area, additional grid points were developed and measured to determine the lateral extent of methane seepage.

Full-color spectrum aerial photographs used as base maps for field use and figures for this report are dated 2009 and do not necessarily indicate present surface conditions. The geologic contacts depicted on the aerial photographic maps were derived from geologic maps prepared by the Colorado Geological Survey (CGS) and digitized at a scale of 1:25,000. Accuracy of the formation contact is reduced when aerial photographs are viewed at a smaller scale.

The flux of soil gases moving across the soil surface to the atmosphere were measured using a West Systems, LLC (West Systems) portable gas flux meter. The flux meter has been used to measure soil gas seepage on the Kf outcrop since 2007. The meter measures the flux of methane, hydrogen sulfide, and carbon dioxide by employing individual gas-specific sensors that record the increases, if any, of gas concentrations over time for a given surface area. These increases in concentration over time are proportional to the flux of each gas measured. A brief description of the flux meter is summarized below. Information on the West Systems portable gas flux meter is provided in Appendix A.

The flux meter components include an accumulation chamber connected by circulation tubes to the gas detector unit. At each sampling point, the accumulation chamber was placed on the ground surface to capture gas seeping from the ground. Captured gases are continuously mixed by a small fan within the accumulation chamber during the measurement process. A pump moves the gases in the accumulation chamber to the detector unit. After passing through the detector unit, gases are returned to the chamber. This closed loop process allows soil gases discharging to the chamber to increase over time. Any increases in concentrations are measured and recorded automatically. No gas is allowed to escape the system; however, a vacuum is not created during the process. This enables the measurement of natural seep conditions, if present. The result for each gas is reported as a mass flux in units of moles per square meter per day ($mol/m^2 \cdot day$).

Flux measurement accuracy can be limited by surface conditions. One of the most important factors is the quality of the seal between the accumulation chamber base and the ground surface. To ensure a proper seal between the ground surface and the chamber, LTE personnel chose relatively flat surfaces where possible and placed loose soil around the base of the chamber to reduce the potential for gas loss at the base of the chamber. In addition, LTE personnel attempted to minimize ground disturbance during the measurement process in order to maintain the natural seep conditions. In areas with heterogeneous surfaces, the seal was sometimes difficult to achieve. This scenario was evident at locations with poorly developed soil or where the soil surface was obscured by decayed organic matter on the forest floor.

The accuracy of the total flux estimation within the project area is influenced by the ability of the grid spacing system to represent the actual flux on a detailed level relative to the subsurface

fracture system, coal quality, and stratigraphy within the Kf. The accuracy of the field meters also influences the flux estimation.

The methane sensor within the flux meter unit has a range of 60 parts per million (ppm) to 50,000 ppm. The flux meter methane measurement range is 0.0 to 300 mol/m^2·day. Methane flux values below 0.2 mol/m^2·day are detectable, although with decreased accuracy. Due to the low accuracy and confidence level of methane flux values below 0.2 mol/m^2·day, the reporting limit set for the flux meter is 0.2 mol/m^2·day. As a result, reporting of methane flux values did not include values below the reporting limit and were not included in methane flux contours or in the calculation of total methane flux volumes. Supporting flux data are included in Appendix B.

The carbon dioxide sensor has a full-scale range of 0.0 ppm to 20,000 ppm and a flux measurement range of 0.0 mol/m^2·day to 600 mol/m^2·day at an accuracy of ±25 percent (%).

The hydrogen sulfide detector has a full-scale range of 0.0 ppm to 20 ppm and a flux measurement range of 0.0025 mol/m^2·day to 0.5 mol/m^2·day at an accuracy of ±25%. The sensor is an electrochemical cell that measures hydrogen sulfide through a chemical oxidation process. The sensing process consumes a small amount of the hydrogen sulfide, which is not returned to the flux meter accumulation chamber. Therefore, the flux meter can underestimate hydrogen sulfide flux by as much as 10%.

During the measurement process, gas concentrations were recorded at 1-second intervals and directly downloaded via a Bluetooth® connection to a portable digital assistant (PDA) integrated with the Trimble GeoXT® global positioning system (GPS) unit (described below). Other measurements recorded included barometric pressure, temperature, date, and time.

Integrated West Systems Flux Manager® software on the GPS unit recorded the gas measurement data. The software plotted the curve of gas concentration versus time for each measurement collected. LTE selected the best-fit line for the curve generated. The slope of the best-fit line is proportional to the flux at the measurement point.

2.4 GLOBAL POSITIONING SYSTEM DATA MANAGEMENT

Each sample location was recorded using a GPS unit. Soil gas sampling grids were created in ArcView® and pre-loaded into the GPS unit so LTE field personnel could quickly and accurately position detection equipment along the project area. Soil gas measurements and other relevant field data were then stored as attributes in the GPS unit along with the associated location data. The data stored in the GPS unit were then downloaded for processing and reporting.

The GPS unit location data were collected in the World Geodetic System 1984 (WGS 84) and projected in Colorado State Plane South (feet), North American Datum 1983 (NAD 83) for use in an ArcView® project file. On average, 25 GPS log positions were collected for each point in order to obtain more accurate positioning.

Readings collected with the GPS unit can be located within 1-meter accuracy; however, the terrain along the Kf outcrop can adversely affect GPS unit accuracy. North-facing slopes and heavily wooded areas can distort or block satellite signals. When satellite signals are limited, positioning accuracy decreases. In locations where the GPS unit could not obtain a signal, LTE

field personnel noted measurement data on their field reference maps. Specifications of the GPS unit are included in Appendix A.

2.5 REGIONAL RECONNAISSANCE

IR imagery was used to assist in the regional reconnaissance monitoring of the Kf outcrop to identify potential locations of methane seepage in between detailed mapping areas. While the imagery cannot identify specific seeps, it can be useful in identifying areas of dead and/or stressed vegetation that may or may not be attributable to methane.

Suspect areas are defined as areas observed within the IR 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 vegetation, shadows, rock outcrops, exposed surface soil, water bodies, and patches of stressed vegetation.

2.5.1 Aerial Infrared Photography

Imagery acquisition by Agro Engineering (Agro) of Alamosa, Colorado, was selected based on image quality, availability, logistical considerations, and cost. Agro conducted the image flights on June 3, 2011**.** This time of year was selected to provide the greatest potential for healthy seasonal vegetation conditions with minimal influence from drought and/or senescence. Agro was able to accurately and completely follow the GPS flight path supplied by LTE.

The imagery or photo-mission traversed the Kf outcrop from the boundary of the SUIT Reservation in Archuleta County through La Plata County to the SUIT Reservation boundary. There were two flights at two different elevations and two different resolutions: one with an approximate resolution of 1.5 meters and the other with an approximate resolution of 0.75 meters.

The flight elevations were over rugged terrain with surface elevations ranging between 6,400 feet to 8,400 feet above mean sea level (amsl). The interpretation and analysis for the entire outcrop was performed using the 1.5 meter resolution images since they were determined to be more useful for identifying suspect areas and also required fewer images to rectify and evaluate across the entire outcrop area. Agro geo-referenced the 1.5 meter resolution photographs for La Plata County by creating mosaics forming two large format images.

The accuracy of a geo-rectified base map is proportional to the number of control points available and the time and effort exerted during the rectification process. Digital Ortho Quarter Quads (DOQQs) were used as the reference map and the IR image was rectified to the DOQQ. Therefore, the accuracy of the IR base map image is limited but still provides a frame of reference for the field mapping data. In some cases, the IR image is accurate to within one meter of the actual location because a control point is available nearby. In certain portions of the same image, accuracy can be skewed as much as 15 meters due to lack of a control point. When viewing the data presented in this report, note that GPS data are accurate to within one meter and the actual position of the feature mapped should be trusted over the position of the features (i.e., trees, buildings, landmarks) observed within the IR image. Ultimately, this approach allows LTE to provide the required accuracy to perform the field verification while controlling project costs.

2.5.2 Imagery Review

The images acquired within the study area were evaluated by LTE using visual observations. Based on professional experience in evaluating IR imagery and knowledge gained during previous regional reconnaissance surveys in La Plata County, LTE identified suspect areas along the 23-mile Kf outcrop that appeared to contain dead or stressed vegetation. Suspect areas were delineated as polygons and uploaded to the GPS unit for field verification.

2.5.3 Field Verification

Upon completion of the imagery review activities, LTE initiated field verification of suspect areas with the goal of identifying the presence or absence of methane in subsurface soil gas. A majority of the land intersecting the Kf outcrop in La Plata County is federal land but significant portions of the outcrop and many of the key methane seepage areas are located on private lands. Due to private property considerations, not all areas of the outcrop could be inspected because landowners did not grant access to or across their properties. The 2011 status of access is summarized in Table 1.

The field verification was conducted from July 25, 2011 through August 19, 2011. The LTE field crews were equipped with aerial photographs, topographic maps, a digital camera, boring equipment (slide-hammer), GPS, and MSA GasPort® unit. LTE visited each of the accessible suspect areas and collected subsurface soil gas measurements. LTE also photographed the suspect areas and described the features observed.

2.6 NATURAL SPRINGS MONITORING

At each sampled natural spring, LTE personnel collected water samples and monitored for methane near the springs using the portable flux meter. LTE personnel located the position and elevation using the GPS at each natural spring. A water discharge rate was measured using a graduated cylinder and stopwatch. Water quality measurements, including pH, electrical conductivity (EC), and temperature were collected at each sampled natural spring.

Laboratory analytical water samples were collected at each accessible and flowing natural spring in bottles and containers prepared by the subcontracted analytical laboratories. Each sample bottle was labeled, indicating project and sample identification, and the date and time of sample collection. Samples were delivered directly or shipped to the laboratories under chain-of-custody controls.

The 2011 natural spring water samples were collected and submitted to Four Corners Geoscience, Inc. for analysis of dissolved methane. General water chemistry samples were submitted to Green Analytical Laboratories.

2.7 ABANDONED/SHUT-IN PRODUCTION WELL FLUX MAPPING

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

067-07969), was not granted during field activities. As a result, flux mapping was not conducted at Pole Barn Monitor Well #1 in 2011.

LTE mapped the collected methane flux points next to each abandoned/shut-in production well utilizing the flux meter. If methane was detected in soil, the seep area was then delineated in all four directions.

SECTION 3.0

DETAILED MAPPING RESULTS

This section describes the results of the detailed flux mapping conducted from May 9, 2011, through July 25, 2011, in the four main mapping areas. Previous soil gas mapping events were conducted in October 2002, May 2003, May 2004, June 2005, May June 2006, September 2007, June 2008, June 2009, and June 2010. Monitoring events through 2006 were conducted exclusively using the multi-gas meter. Beginning in 2007, the flux meter was utilized to conduct detailed soil gas mapping. A total of 1,374 flux measurements were collected over 981 acres of land in the project area during the 2011 monitoring event.

Methane and carbon dioxide flux measurements are summarized by Kf outcrop areas of interest in Table 2. Methane and carbon dioxide measurements are presented on Figures 2 through 21. Flux meter data are included as Appendix B.

LTE has reported flux measurements in this document as mass flux with the units of mol/m^2·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 2011 monitoring event recorded flux above the reportable limit (0.2 mol/m^2·day) at 156 of the 1,374 (11.4%) sample locations. Detectable methane flux were recorded at 265 of the 1,374 (19.3%) sample locations. The detected methane flux values of each measured location area for the entire project area ranged from 0.002 mol/m^2·day to a maximum of 873.0 mol/m^2·day. Methane flux results for each location of interest are discussed in Section 3.5.

3.2 OVERALL CARBON DIOXIDE RESULTS

The 2011 monitoring event detected carbon dioxide flux at 1,319 of the 1,615 (81.7%) sample locations. The carbon dioxide flux values of each measured location area for the entire project area ranged from 0.0007 mol/m^2·day to a maximum 12.05 mol/m^2·day. Carbon dioxide flux results for each location of interest are discussed in Section 3.5.

3.3 OVERALL HYDROGEN SULFIDE RESULTS

Hydrogen sulfide flux (though only slightly above sensor detection limits) was recorded at 1,076 sample locations. The flux meter is a highly sensitive field meter capable of detecting very low flux rates of hydrogen sulfide. Thus, it is not surprising that hydrogen sulfide flux was detected at 66.6% of the sampling points during the 2011 detailed mapping event. However, only 266 points (24.7%) were slightly above the unit's reliable detection limit of 0.0025 mol/m^2·day. Given the flux meter's accuracy of ±25%, the majority of 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, 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 2011 detailed mapping program, maps of hydrogen sulfide measurements were not deemed useful and, therefore, were not prepared. Estimates of total volumetric flux for hydrogen sulfide were also not calculated due to the low levels detected.

3.4 TOTAL FLUX VOLUME ESTIMATIONS

LTE 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 and 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, LTE 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 amsl. 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,

$$1.0 \text{ mole/day } CH_4 = 1.12 \text{ CFD } CH_4$$

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,

$$1.0 \text{ mole/day } CO_2 = 1.11 \text{ CFD } CO_2$$

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 Section 2.3. A discussion of the methods and calculations used to determine total methane flux is presented in Appendix C.

The total estimated methane volumetric flux rate for the mapped areas on the Kf outcrop in La Plata County utilizing all methane flux values was 2,939 MCFD. A total estimated methane flux volume utilizing only those values above the reporting limit was 2,900 MCFD.

The total estimated carbon dioxide volumetric flux rate for the mapped areas on the Kf outcrop in La Plata County was 1,950 MCFD.

Table 3 summarizes the total flux volumes for each mapping area and includes historical comparisons.

3.5 SPECIFIC PROJECT AREA RESULTS

3.5.1 Basin Creek to Carbon Junction

The Basin Creek and Carbon Junction survey areas are located just 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 June 20 and July 22, 2011. A summary of the 567 flux measurements is presented in Table 2.

The Basin Creek mapping area is centered near the Animas-La Plata Ridges Basin Dam. Figures 2 through 5 illustrate methane and carbon dioxide flux results of the detailed mapping in the Basin Creek and Basin Creek North areas, respectively.

The Carbon Junction mapping area is centered on the Animas River near the Wal-Mart shopping center on Highway 160. Figures 6 and 7 illustrate methane and carbon dioxide flux results of the detailed mapping in the Carbon Junction area, respectively.

The Basin Creek to Carbon Junction survey area has an estimated methane seepage area of 179 acres with a total reportable volumetric flux rate of 860 MCFD. Carbon dioxide was mapped over approximately 515 acres with a total volumetric flux rate of 976 MCFD. Detailed mapping in the Carbon Junction area was limited due to denial of property access. Methane and carbon dioxide had been detected in this area during past mapping events. As a result, the methane and carbon dioxide volumetric flux rates have the potential to be lower than if all areas were mapped and calculated together.

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 July 22, 2011. A total of 65 flux sample points were measured. The Florida River mapping area has an estimated methane seepage area of 12 acres

with a total reportable volumetric flux of 45 MCFD. Carbon dioxide seepage area is approximately 67 acres with a total volumetric flux of 126 MCFD.

A summary of the flux measurements is presented in Table 2. Figures 8 and 9 illustrate the methane and carbon dioxide flux results of the Florida River area, respectively.

3.5.3 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 from July 11, 2011 to July 13, 2011.

A total of 107 flux sample points were measured. The Vosburg Pike mapping area has an estimated methane seepage area of 21 acres with a total reportable volumetric flux rate of 115 MCFD. Carbon dioxide was mapped over approximately 106 acres with a total volumetric flux rate of 193 MCFD.

A summary of the flux measurements is presented in Table 2. Figures 10 and 11 illustrate the methane and carbon dioxide flux results for the Vosburg Pike area, respectively.

3.5.4 Texas Creek to Pine River

The Texas Creek to Pine River mapping area consists of five individual areas including Texas Creek West, Texas Creek Central, Texas Creek West, BP Highlands, and Pine River. The entire mapping area is approximately 4.4 miles of the Kf outcrop. The flux survey from Texas Creek to Pine River was conducted between July 14 and July 25, 2011. A summary of the 472 flux measurements is presented in Table 2.

The survey area collectively known as SFTC (Texas Creek West, Texas Creek Central, and Texas Creek East) is located where the creek transects the Kf outcrop (Figures 12 through 17). A large alluvial grass-covered valley parallels the strike of the outcrop but eventually turns northward and transects the contact between the Kf and Pictured Cliffs Formation (Kpc). The main seep area within SFTC and the Ward and Kurtz properties has been designated SFTC Central (Figures 14 and 15). The seep area located approximately 0.25 miles east of the creek has been labeled SFTC East (Figures 16 and 17). Areas west of the creek are designated Texas Creek West (Figures 12 and 13).

The seep at SFTC is one of the most active methane seeps within the project area and is currently undergoing a pilot study funded by the COGCC and BP to evaluate mitigation technologies for methane seepage. A decrease of methane seepage in the SFTC Central area appears to be the result of the mitigation system (Figure 14), which was expanded in 2010. The flow rate of the methane gas captured by the mitigation system is approximately 10 MCFD under normal conditions. 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. As seen on Figure 14, methane continues to be detected on and around the collection system boundary. Due to the

excess methane that the system is not capturing, it appears the remaining methane is following preferential pathways to the surface.

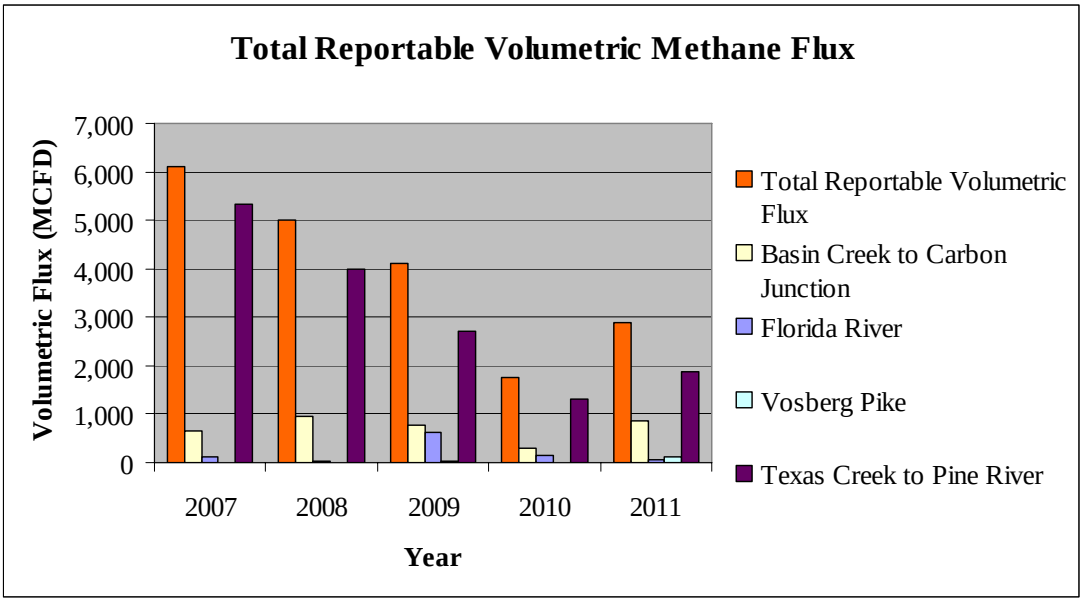
The mapping area at Pine River is located where the Pine River transects the Kf outcrop. The seep at Pine River is also currently undergoing a pilot study funded by the COGCC and BP to evaluate mitigation technologies for the methane seepage. As with the SFTC Central area, the Pine River area appears to be positively influenced by the mitigation system due to the decrease in methane flux values measured during the 2010 monitoring survey. According to data, the flow rate of methane that is captured from the mitigation system is approximately 10 MCFD. Figures 20 and 21 illustrate the methane and carbon dioxide flux results for the survey performed at Pine River, respectively. The location of the mitigation system is illustrated in both figures.

The Texas Creek to Pine River survey area has an estimated methane seepage area of 106 acres with a total reportable volumetric flux rate of 1,880 MCFD. Carbon dioxide was mapped over approximately 404 acres with a total volumetric flux rate of 649 MCFD.

3.6 HISTORICAL FLUX DATA COMPARISON

From 2007 to 2008, LTE expanded the detailed survey area from 554 acres to 1,951 acres, roughly 3.5 times the area of the previous survey (Figure 22). The increase in survey area was due largely to the addition of the Horse Gulch mapping area. However, in 2008 reportable methane flux seepage was limited in the Horse Gulch area; therefore, it was not considered an active seep area. As a result, surveys from 2009 to present exclude the Horse Gulch area. The 2011 survey area included 981 acres of the Kf outcrop.

In 2007, LTE estimated the total methane flux over the accessible Kf outcrop in La Plata County north of the SUIT boundary at 6,120 MCFD. Results of the 2008 survey estimated a total volumetric methane flux of 5,170 MCFD, while the results of the 2009 survey estimated a total volumetric methane flux of 4,150 MCFD. The results of the 2010 survey estimated a total volumetric methane flux of 1,776 MCFD. In 2011, the estimated total volumetric flux increased to 2,900 MCFD, but still less than half of the 2007 volumetric methane flux. Below is a graphical representation of the change in reportable volumetric methane flux over the last five years along the entire Kf outcrop and by area.



While the survey area increased by nearly 3.5 times in acreage between 2007 and 2008 (Figure 22), the total volumetric methane flux decreased. Total volumetric methane flux from 2010 to 2011 increased, however, over the past five years, total volumetric methane flux has decreased. It appears the methane seep along the Kf Outcrop in La Plata County has contracted.

Table 3 summarizes the changes in the seepage extent and the volumetric methane flux from 2007 through 2011. Figures 23 and 24 depict methane seepage extent compared to survey area from 2007 through 2011, respectively. In order to compare methane fluxes for each year, the figures depict reportable methane flux measurements. This visual representation of methane flux is able to show areas of elevated methane seepage throughout the Kf outcrop and an understanding as to why these specific areas are investigated. Visual comparison shows the decrease in reported methane flux along the Kf outcrop.

SECTION 4.0

REGIONAL RECONNAISSANCE RESULTS

The regional reconnaissance of the Kf outcrop has evolved since it was introduced 14 years ago. Initially, the regional reconnaissance was a pedestrian survey with the collection of surface methane concentration and qualitative observations of vegetative condition. 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.

4.1 FIELD VERIFICATION ACTIVITIES

The 2011 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 2011 regional reconnaissance included similar IR imagery review and field verification tasks as conducted in 2005 and 2008.

This section describes the results of the 2011 aerial IR imagery reconnaissance, imagery review, and field verification activities conducted in La Plata County along the Kf outcrop. Aerial photography was conducted on June 3, 2011.

LTE conducted the field verification at 29 of the 40 suspect areas from July 25, 2011, through August 19, 2011. Eleven locations that were not inspected were inaccessible due to property access issues (Table 2).

A suspect area location map of the aerial images is illustrated on Figure 25. Locations of suspect areas identified on the aerial photographs, and subsurface methane concentration measurements are illustrated on Figures 26 through 34.

Subsurface gas measurement data are presented in Appendix D.

4.2 SPECIFIC SUSPECT AREAS

Of the 29 accessible suspect areas, four suspect areas had subsurface methane gas detected. Collecting methane flux data from suspect areas was not part of the 2011 scope of work. These four seep areas will be included in the 2012 outcrop monitoring event for flux mapping. Below is a description of the four suspect areas.

4.2.1 Suspect Area 5

Suspect Area 5 is located approximately a quarter-mile west of County Road 234 and just west of a Quaternary Gravel deposit in a valley east of the Carbon Junction flux mapping area (Figure 27). Subsurface methane was detected at five locations within the suspect area polygon ranging from 1,500 to 4,500 ppm. The seep appears to be approximately 300 feet by 250 feet in dimension with an area of approximately 75,000 ft^2 or 1.72 acres.

Dead and stressed vegetation were observed within Suspect Area 5 including trees and vegetation. LTE field personnel observed the dead vegetation within an approximate 300-foot diameter area. Photographs 1 and 2 depict examples of the dead and stressed vegetation within Suspect Area 5.

Photograph 1 – Dead tree and brush in Suspect Area 5.

Photograph 2 – Dead and stressed brush within Suspect Area 5.

4.2.2 Suspect Area 8

Suspect Area 8 is located between Florida River and Vosburg Pike flux mapping areas on the Kf outcrop (Figure 28). Subsurface methane was detected at three locations ranging from 4,500 ppm to 100%. The seep is isolated to a small area less than 1 acre in size.

Dead and stressed vegetation was observed by LTE field personnel at Suspect Area 8 in an area approximately 100 feet in diameter. Elevated methane readings were recorded on a hill slope within a coal seam present at Suspect Area 8. Photograph 3 depict examples of dead and stressed vegetation within Suspect Area 8.

Photograph 3 – Dead and stressed vegetation within Suspect Area 8.

4.2.3 Suspect Area 18

Suspect Area 18 is located east of Suspect Area 8, between Florida River and Vosburg Pike flux mapping areas on the Kf outcrop (Figure 29). Subsurface methane was detected at 10 locations ranging from 2,000 ppm to 100%. The seep appears to be approximately 450 feet by 250 in dimension with an area of approximately 112,500 ft^2 or 2.58 acres.

Dead and stressed vegetation were observed by LTE field personnel in an area approximately 200 feet in diameter. Vegetation appeared to be limited within the center of the seep. Elevated subsurface methane concentrations were recorded within what appeared to be the center of the seep. Photographs 4 and 5 depict examples of dead and stressed vegetation within Suspect Area 18.

Photograph 4 – Dead and stressed vegetation within Suspect Area 18.

Photograph 5 – Dead brush within Suspect Area 18.

4.2.4 Suspect Area 29

Suspect Area 29 is located just west of the South Fork Texas Creek West flux mapping area (Figure 31). Subsurface methane was detected at one location at a concentration of 100%. The seep is isolated to one location, which is less than 1 acre in size.

Dead and stressed vegetation were observed within an area approximately 60 feet in diameter. The 100% methane concentrations was located within the presumed center of the seep, which contained approximately 95% or more dead vegetation. Photograph 6 depicts the presumed center of Suspect Area 29.

Photograph 6 – Dead vegetation within Suspect Area 29.

SECTION 5.0

NATURAL SPRINGS MONITORING

Nine natural springs have been previously identified on the Kf outcrop in La Plata County north of the SUIT boundary.

The locations of natural springs are presented on Figures 35 through 37. A summary of natural springs sampled in 2011, along with past natural springs sampling status, is presented in Table 4.

5.1 FIELD OBSERVATIONS

Discharge rates and field parameters were measured at two natural springs (Darwin Rather Spring #1 and Darwin Rather Spring #2), which were sampled in May 2011. The remaining four natural springs were dry or inaccessible at the time of sampling. As a result, field parameters and water samples for analysis were not collected at these locations.

The 2011 field observations and measurements for the natural springs, including historical measurements, are summarized in Table 5. Figure 38 depicts the Tri-Linear diagram for the two springs sampled. Stiff diagrams, illustrated on Figure 39, indicate that the water type for each spring sampled is calcium-carbonate.

5.2 NATURAL SPRINGS SAMPLING AND ANALYSIS

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 holds 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.

In 2011, methane was not detected in the two natural spring water samples. Historically, methane had not been detected in natural spring waters along the Kf in La Plata County at concentrations exceeding the 2 mg/L COGCC threshold for further investigation.

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. Analytical results are presented in Appendix E.

5.3 SUBSURFACE SOIL GAS MEASUREMENTS

During the June 2011 natural spring sampling event, one subsurface soil gas measurement was collected at Darwin Rather #1 and Darwin Rather #2 springs using traditional subsurface soil-gas sampling techniques and the multi-gas meter. Subsurface methane was not detected in any of the subsurface soil gas probes at the measured natural springs.

SECTION 6.0

ABANDONED/SHUT-IN WELLS FLUX RESULTS

LTE did not receive property access to the shut-in production well Pole Barn Monitor Well #1 (API #05-067-07969, Figure 40) during the 2011 flux mapping event. As a result, no flux points were collected within the Pole Barn Well #1 area.

LTE conducted detailed methane, carbon dioxide, and hydrogen sulfide subsurface mapping utilizing the flux meter at two abandoned production gas well sites Federal 34-1/2-34-1 (API #05-067-07514) and Baird 1-25 (API #05-067-06568) on July 6 and June 27, 2011, respectively. Monitoring was conducted at the request of the COGCC to determine whether methane seepage exists within the vicinity of the sites.

Flux measurements were collected at each location. A total of 54 measurements were collected at Federal 34-1/2-34-1 (Figure 41) and 108 measurements at Baird 1-25 (Figure 42). Methane was not detected at any sample location above the reportable limit.

SECTION 7.0

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

7.1 SUMMARY

The 2011 Kf outcrop monitoring event was conducted from May 4, 2011, through August 9, 2010. This was the fifth survey event where the portable flux meter was used to conduct methane seep mapping. Mapping was performed at four key areas of interest along the Kf outcrop in La Plata County north of the SUIT Reservation boundary, 29 suspect seep areas, and at two abandoned well locations.

The detailed flux mapping program included the same areas mapped in 2009 and 2010. A total estimated methane volumetric flux rate, for areas mapped along the Kf outcrop in La Plata County utilizing only those values that were greater than the reporting limit, was 2,900 MCFD. The total estimated carbon dioxide volumetric flux rate for those areas mapped along the Kf outcrop in La Plata County was 1,950 MCFD. Hydrogen sulfide flux values along the Kf outcrop continue to remain low and most concentrations were only slightly above the detection limit of the flux meter.

Two natural springs were sampled in May 2011. The dissolved methane concentrations of the two water samples collected during 2011 were below the laboratory method detection limit of 0.02 mg/L and were below the 2 mg/L COGCC threshold to identify water for further investigation of the origin of methane in the water.

Property access around shut-in production well Pole Barn Monitor Well #1 (API #05-067-07969) was not granted at the time of the mapping event and as a result, the flux measurements around Pole Barn Monitor Well #1 were not collected.

At the request of the COGCC, flux measurements were collected at the areas surrounding abandoned production wells Federal 34-1/2-34-1 (API #05-067-07514) and Baird 1-25 (API #05-067-06568). Methane was not detected at either of the abandoned production wells above the flux meter reporting limit.

LTE conducted a regional reconnaissance survey of the Kf outcrop within La Plata County in July and August 2011. LTE identified 40 suspect areas along the Kf outcrop. Of the 29 accessible suspect areas, subsurface methane was detected at four locations.

7.2 CONCLUSIONS

Total reportable volumetric flux rates across the project area have decreased from 6,099 MCFD in 2007 to 2,900 MCFD in 2011. The decreasing trend of methane flux in the project area has been observed for the past five years. Denial of property access and/or no response to property access requests in areas of known methane seepage does account for a portion of the decrease in methane seepage estimated for 2011. The 2011 estimated volumetric flux rate reflects a general decreasing trend that has been observed for the past five years and property access restrictions. In addition, expansions of the mitigation systems at the South Fork Texas Creek (SFTC) and the

Pine River mapping areas have captured approximately 10 MCFD of methane from each seep area.

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 not detected, 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.

7.3 RECOMMENDATIONS

Based on the results of the 2011 Kf outcrop monitoring event, LTE recommends the following:

- Conduct detailed methane seep mapping and flux estimation using the portable flux meter in June 2011. LTE will return to the sample locations visited during the 2012 field activities. The 2012 mapping event should include the four suspect areas (5, 8, 18, and 29) to observe changes in subsurface methane over time and space;

- Sample natural springs every year to assess any changes in the flow rates and/or the chemistry of natural springs. The next natural spring sampling event will be the spring of 2012; and

- Conduct the next regional reconnaissance IR aerial survey in 2014 to confirm the presence or absence of methane seepage along the Kf outcrop in La Plata County.

SECTION 8.0

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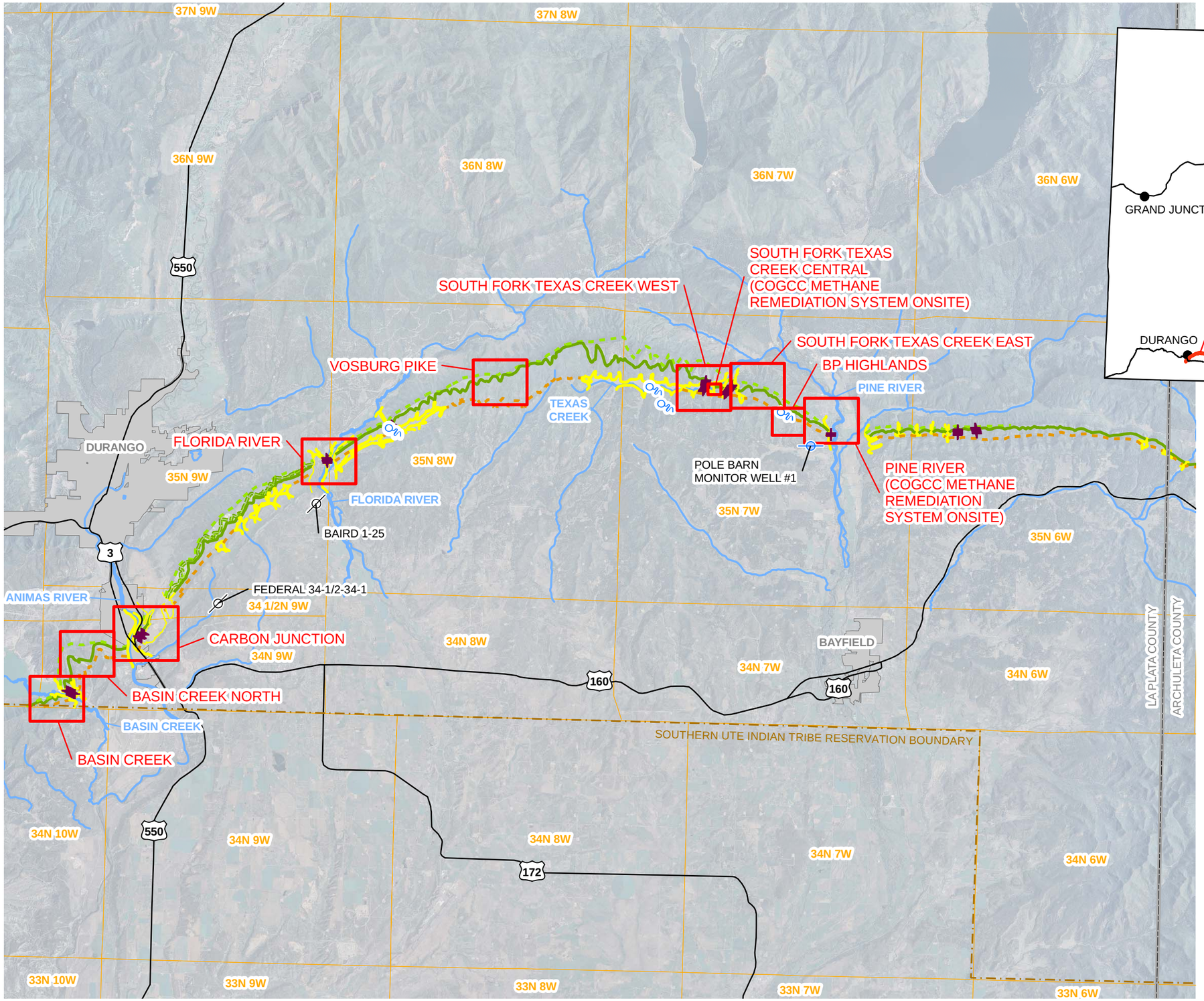
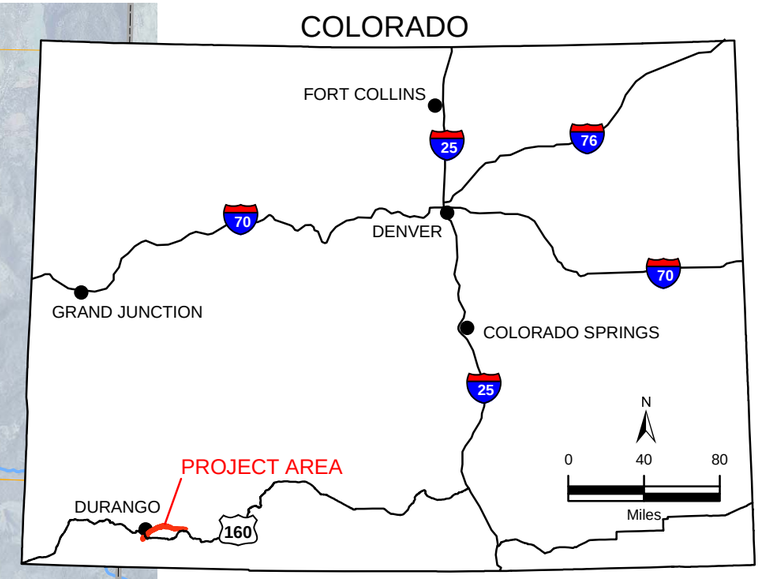
FIGURES





LEGEND

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

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

COGCC: COLORADO OIL AND GAS CONSERVATION COMMISSION

IMAGE COURTESY OF USDA/NRCS, 2009

0 2 4

Miles

N

FIGURE 1
PROJECT AREA MAP
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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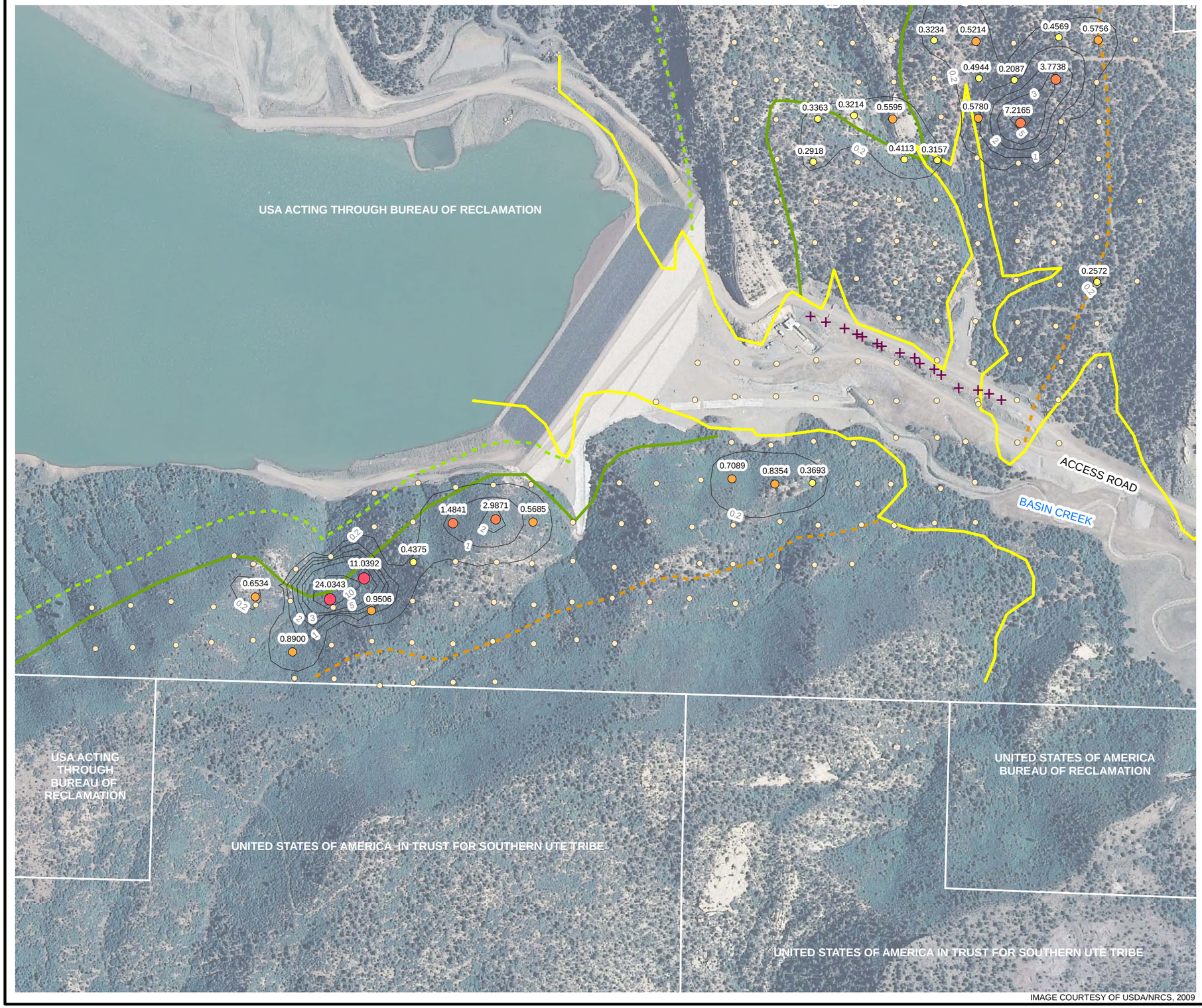


IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000
- METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

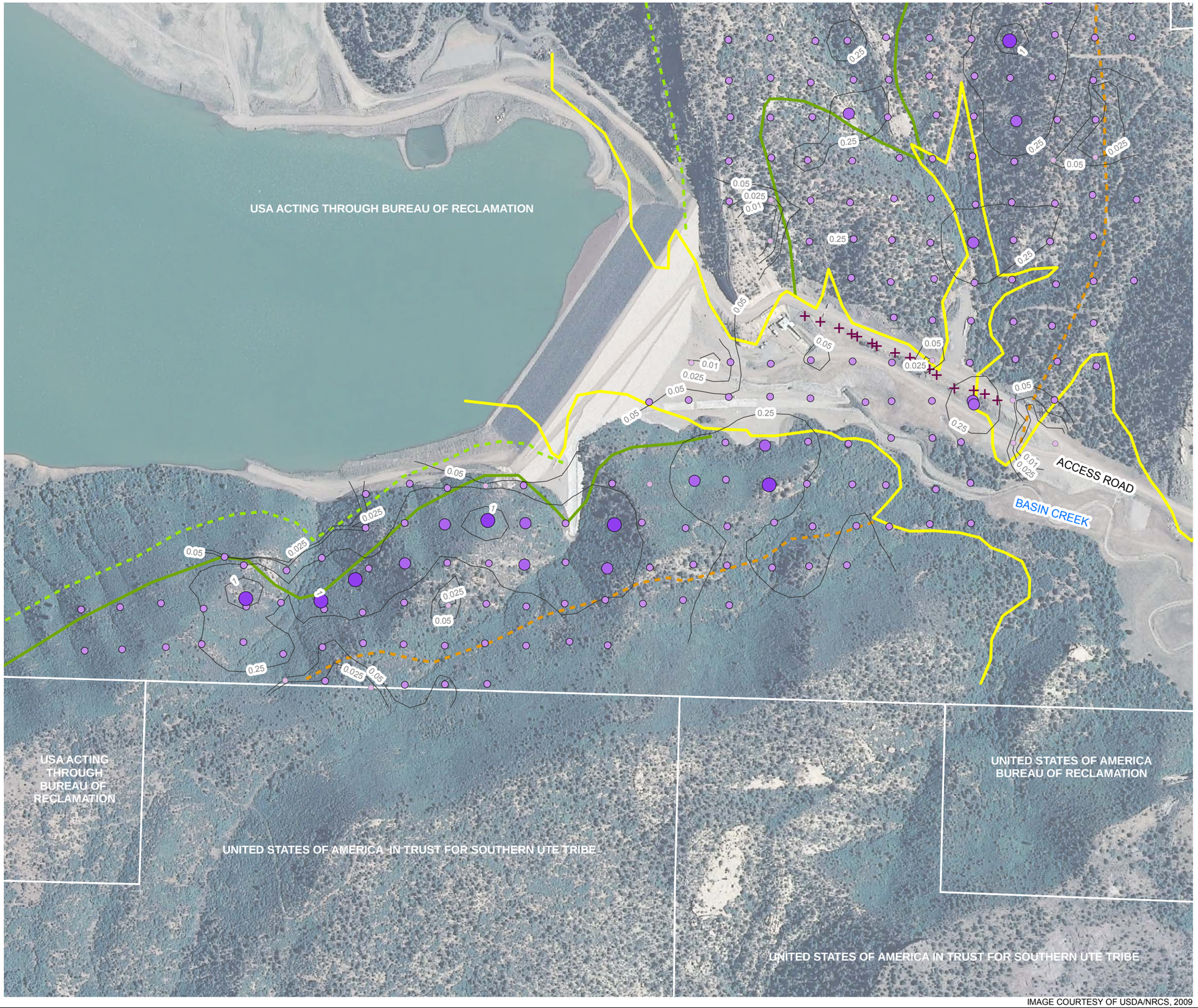
0 500 1,000
Feet

N

FIGURE 2
METHANE FLUX CONTOURS
BASIN CREEK
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd



LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 500 1,000
Feet

N

FIGURE 3
CARBON DIOXIDE FLUX CONTOURS
BASIN CREEK
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

STATE OF COLORADO BENEFIT OF DIV OF WILDLIFE

STATE OF COLORADO BENEFIT OF DIV OF WILDLIFE

LA PLATA COUNTY

USA ACTING THROUGH BUREAU OF RECLAMATION

STATE OF COLORADO BENEFIT OF DIV OF WILDLIFE

STATE OF COLORADO DIVISION OF WILDLIFE

BLM

0.3274
0.2621
0.2285
0.3964
0.6003
8.8770
8.7868
0.8754
5.0669
1.3392
0.9681
4.7095
9.8000
1.2541
5.7016
26.2911
1.0050
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0.3336
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4.8593
10.0232
1.0424
0.4376
0.2707
0.2938
0.9171
0.9975
0.3002
0.2582
0.2377
0.6837
0.4333
0.2372
0.6654
0.5706
2.8631
4.2239
4.9269
0.2251
1.0733
2.4369

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000
- METHANE FLUX CONTOUR IN mol/m ^{2} • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m ^{2} • day METHANE

0 500 1,000
Feet

N

FIGURE 4
METHANE FLUX CONTOURS
BASIN CREEK NORTH
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

STATE OF COLORADO BENEFIT OF DIV OF WILDLIFE

STATE OF COLORADO
BENEFIT OF DIV OF WILDLIFE

LA PLATA COUNTY

USA ACTING THROUGH
BUREAU OF RECLAMATION

STATE OF COLORADO
BENEFIT OF DIV OF WILDLIFE

STATE OF
COLORADO
DIVISION OF
WILDLIFE

BLM

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 500 1,000
Feet

N

FIGURE 5
CARBON DIOXIDE FLUX CONTOURS
BASIN CREEK NORTH
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

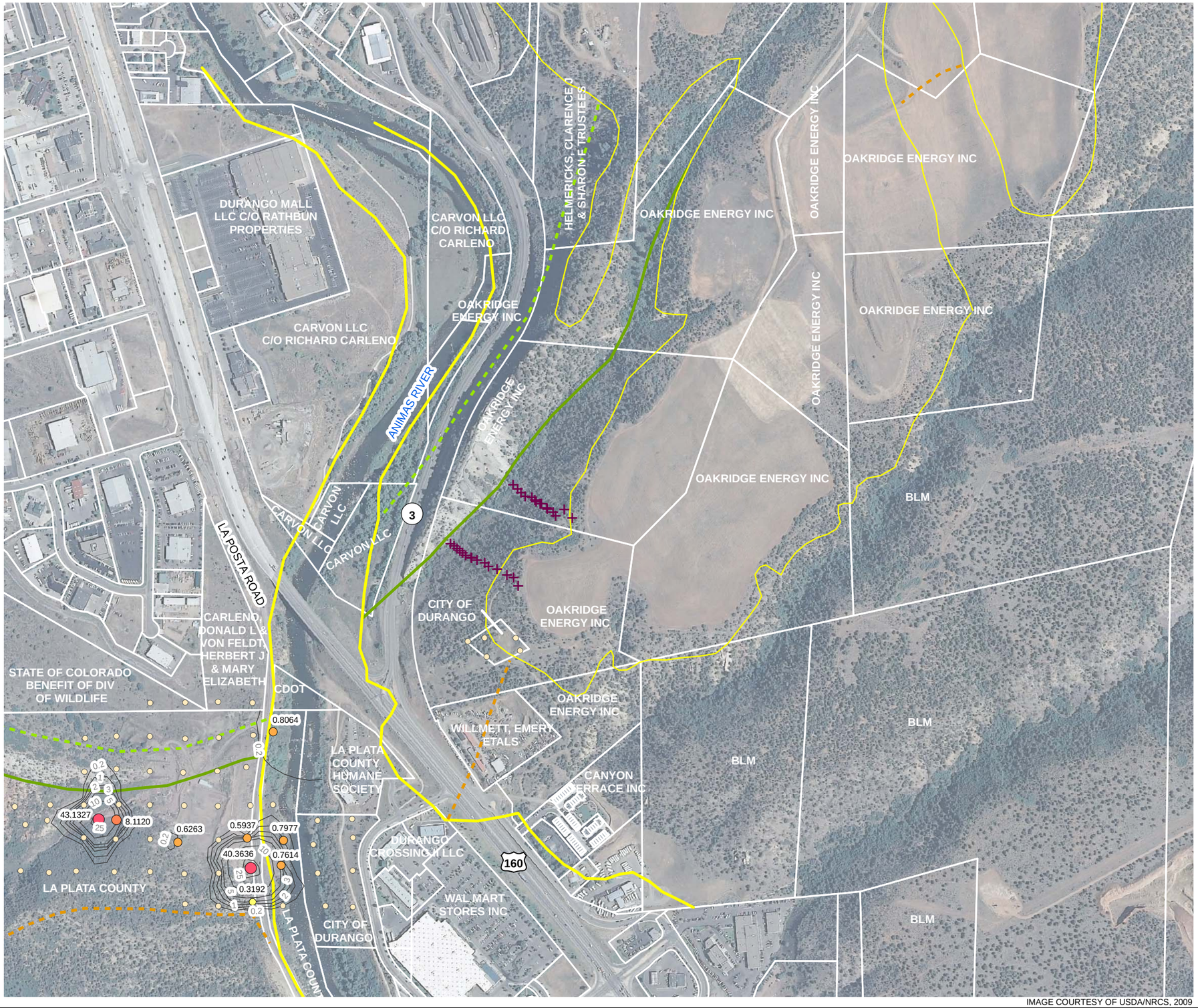

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m^2 • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000
- METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

0 600 1,200
Feet

N

FIGURE 6
METHANE FLUX CONTOURS
CARBON JUNCTION
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

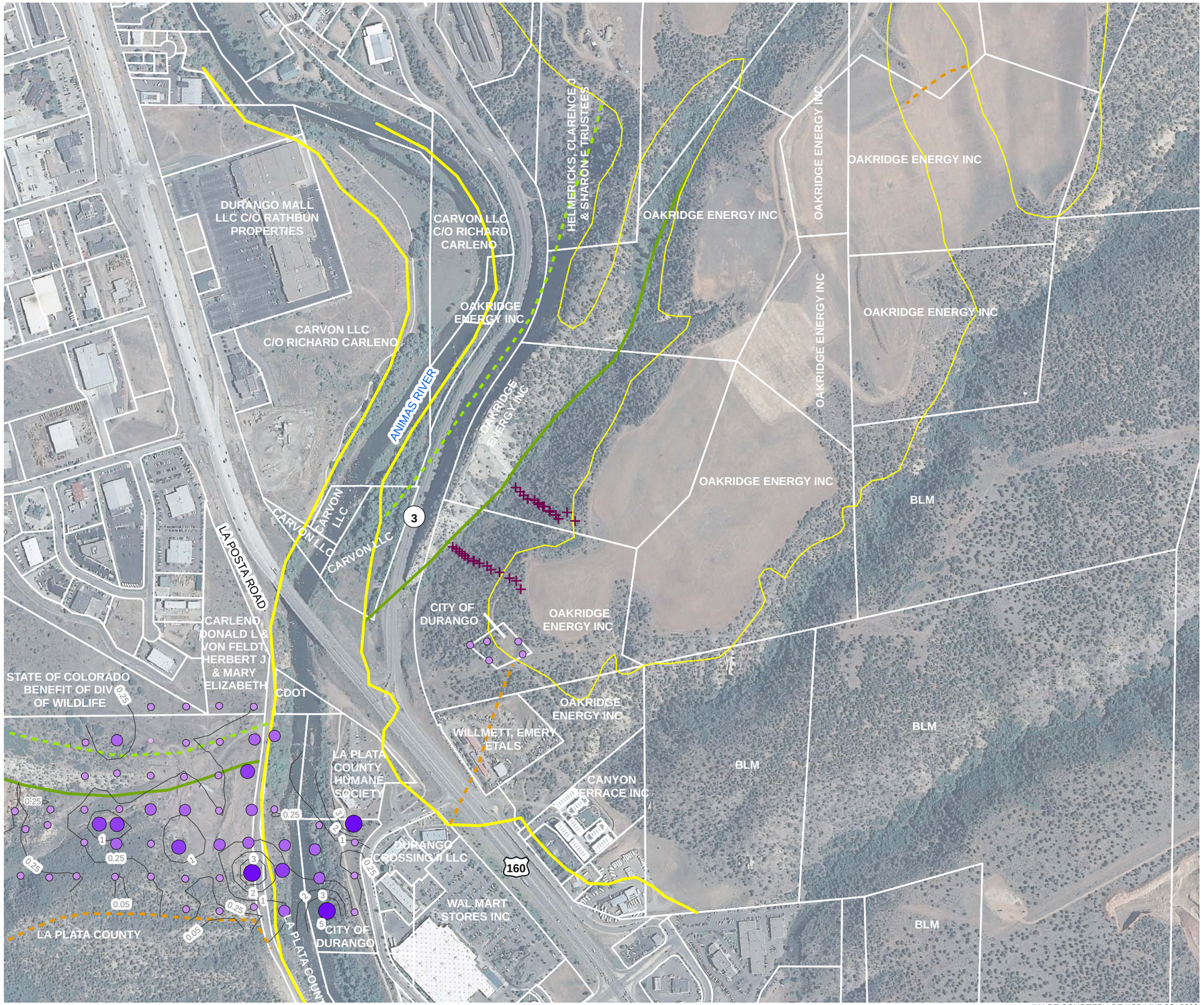

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 600 1,200
Feet

N

FIGURE 7
CARBON DIOXIDE FLUX CONTOURS
CARBON JUNCTION
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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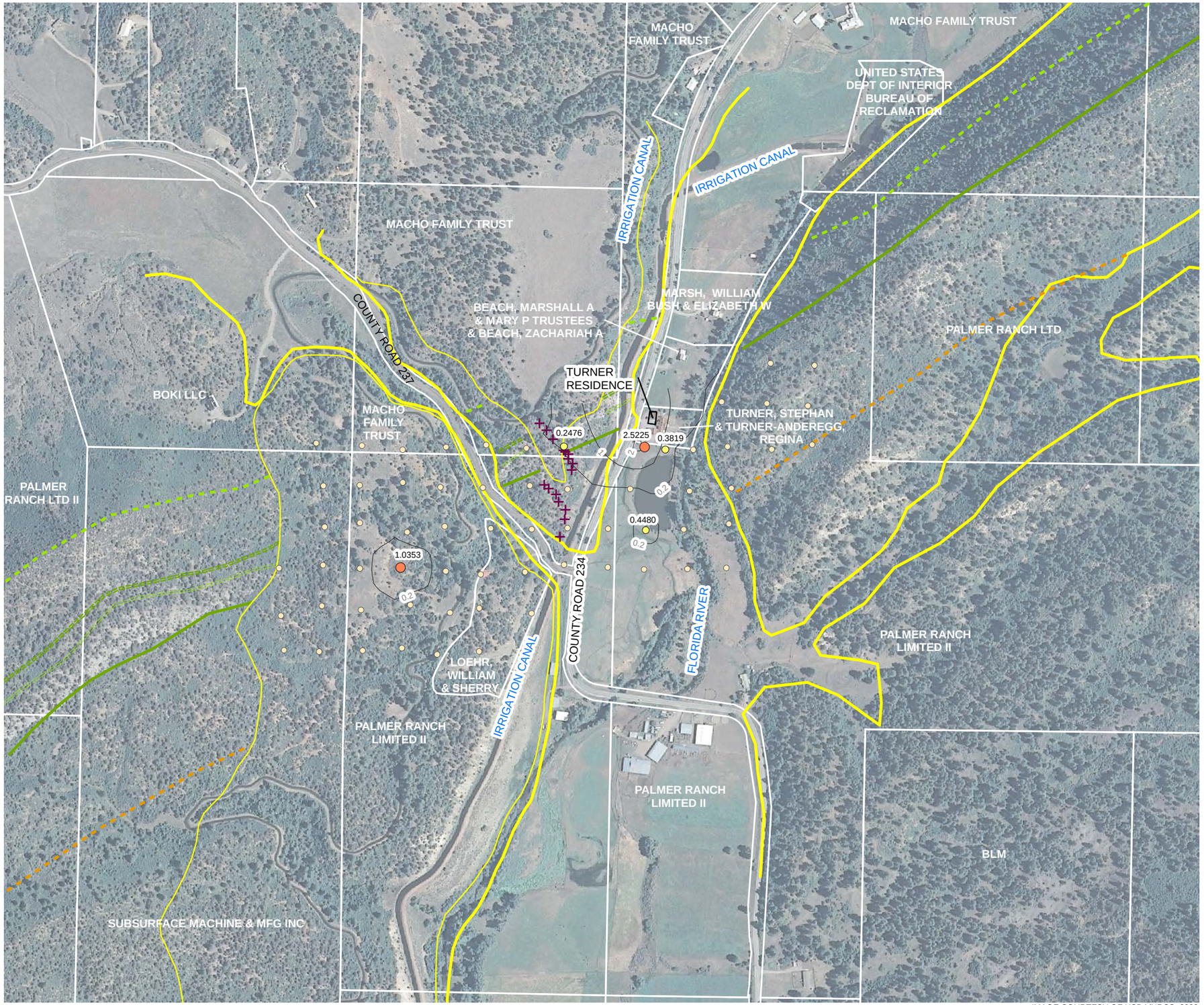

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

0 500 1,000
Feet

N

FIGURE 8
METHANE FLUX CONTOURS
FLORIDA RIVER
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

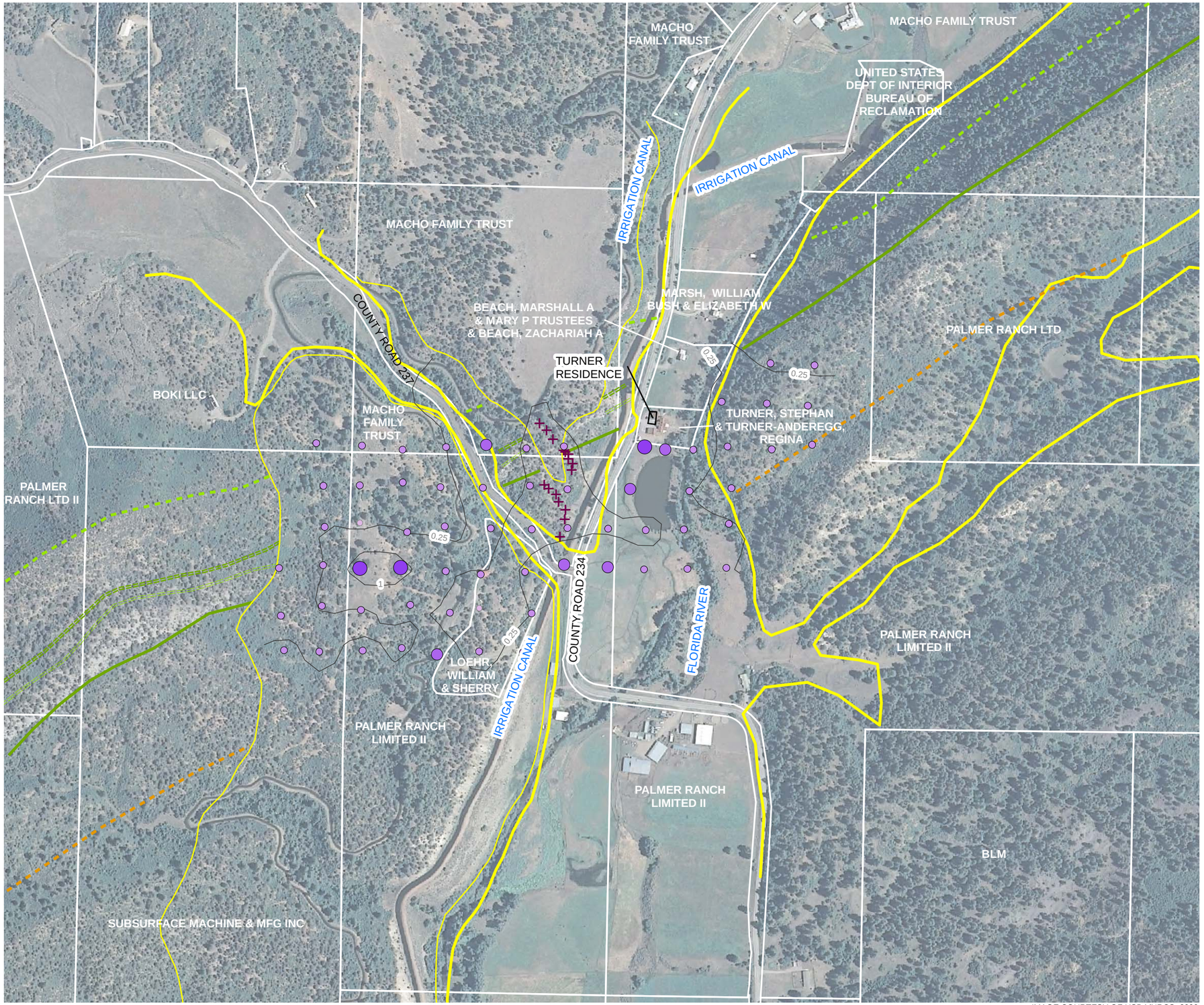

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 500 1,000
Feet

N

FIGURE 9
CARBON DIOXIDE FLUX CONTOURS
FLORIDA RIVER
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

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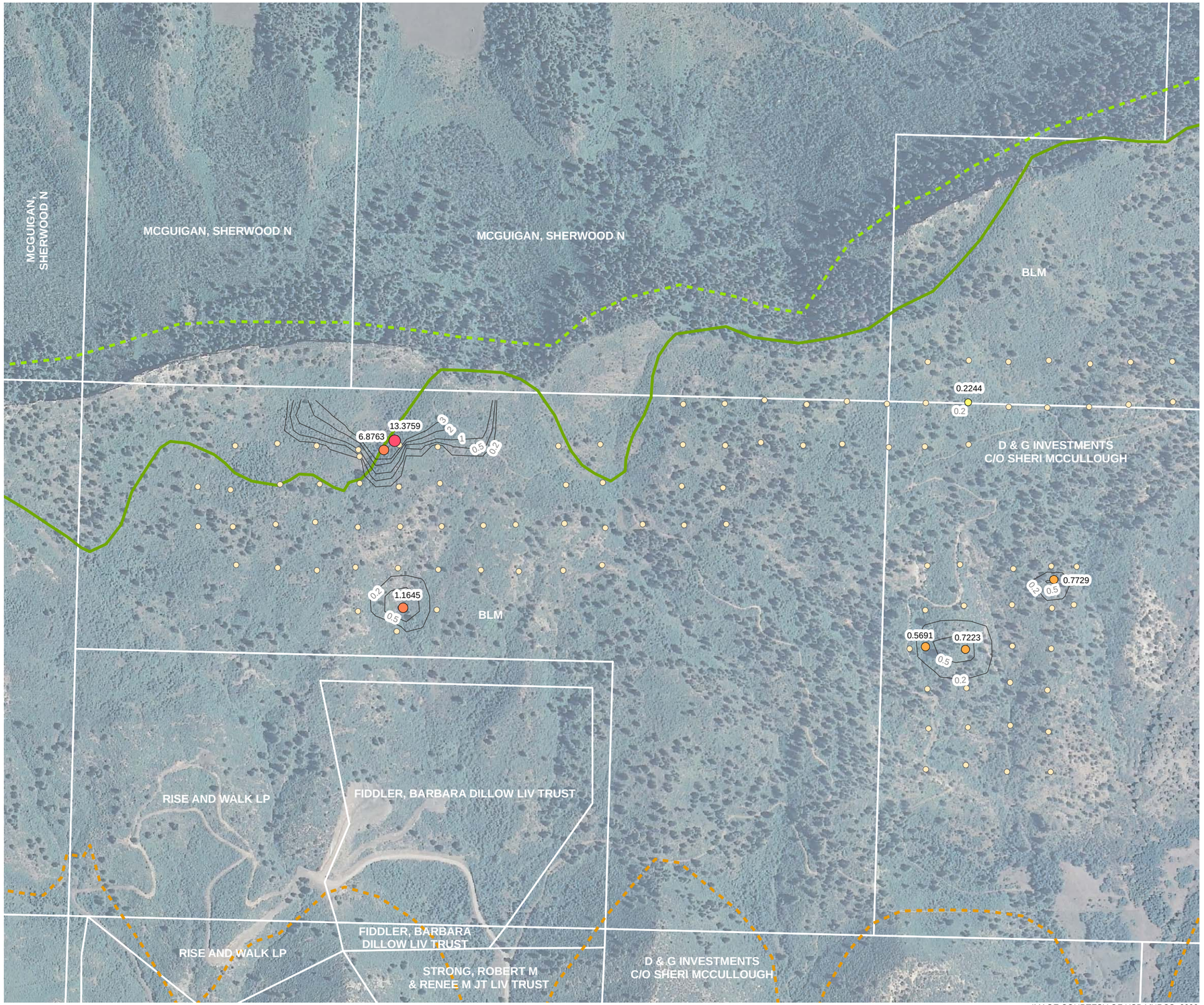

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000
- METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

0 500 1,000
Feet

N

FIGURE 10
METHANE FLUX CONTOURS
VOSBURG PIKE
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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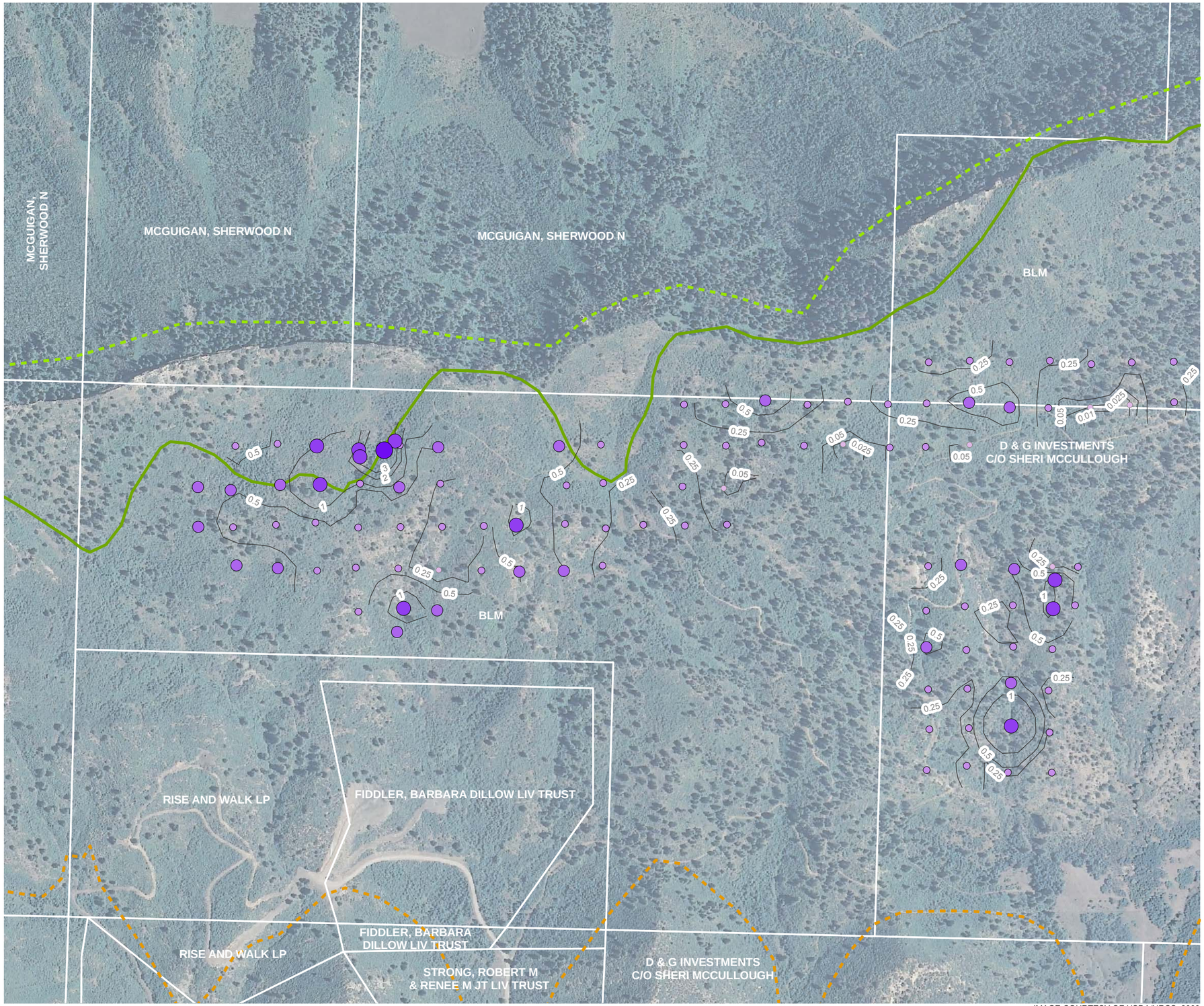


LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

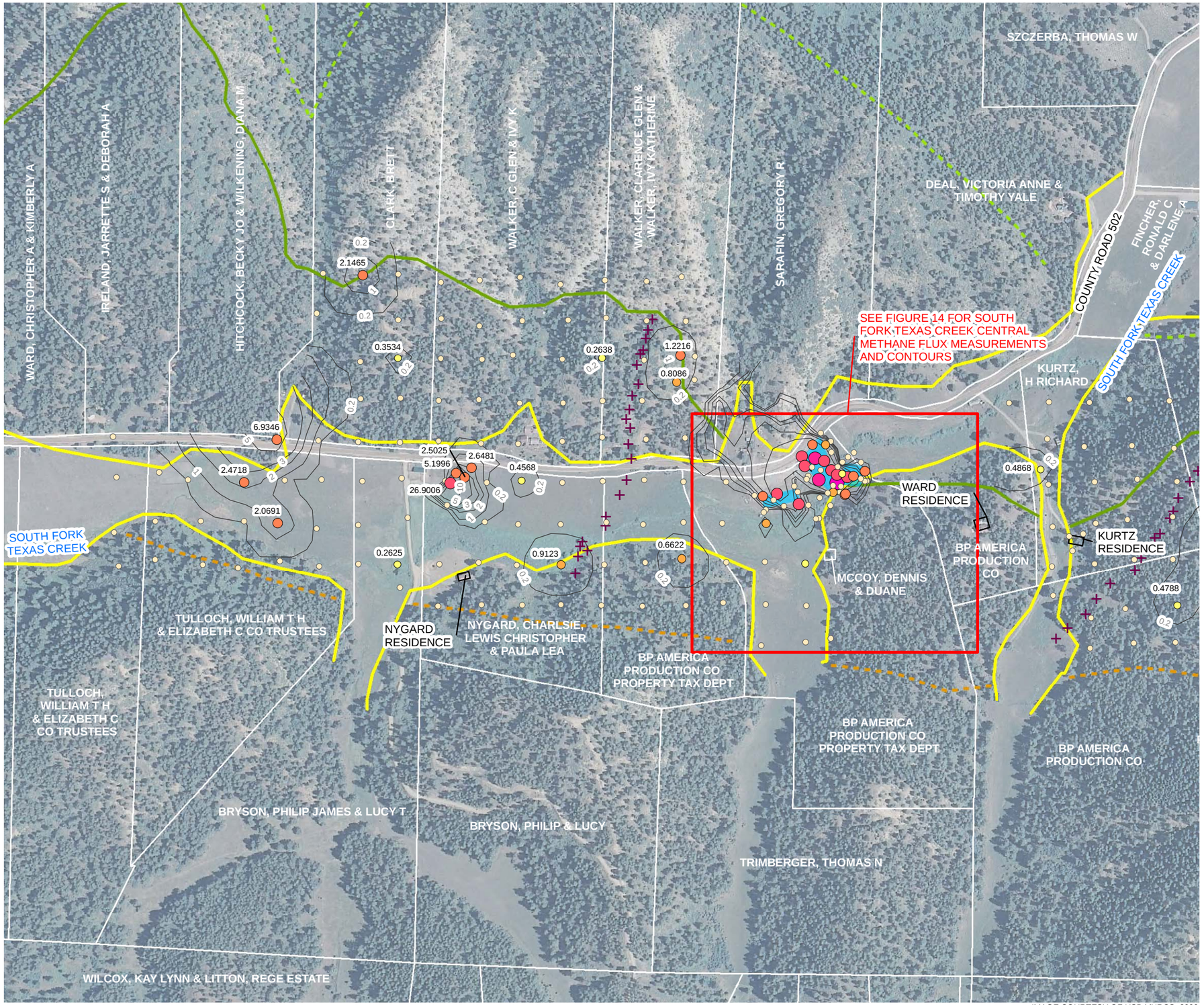
mol/m^2 • day: MOLES PER SQUARE METER PER DAY

0 500 1,000
Feet

N

FIGURE 11
CARBON DIOXIDE FLUX CONTOURS
VOSBURG PIKE
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd



LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)
- REMEDIATION SYSTEM
- SOUTH FORK TEXAS CREEK CENTRAL (FIGURE 14)

METHANE FLUX MEASUREMENT (mol/m^2 • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

- METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

0 500 1,000
Feet

N

FIGURE 12
METHANE FLUX CONTOURS
SOUTH FORK TEXAS CREEK WEST
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

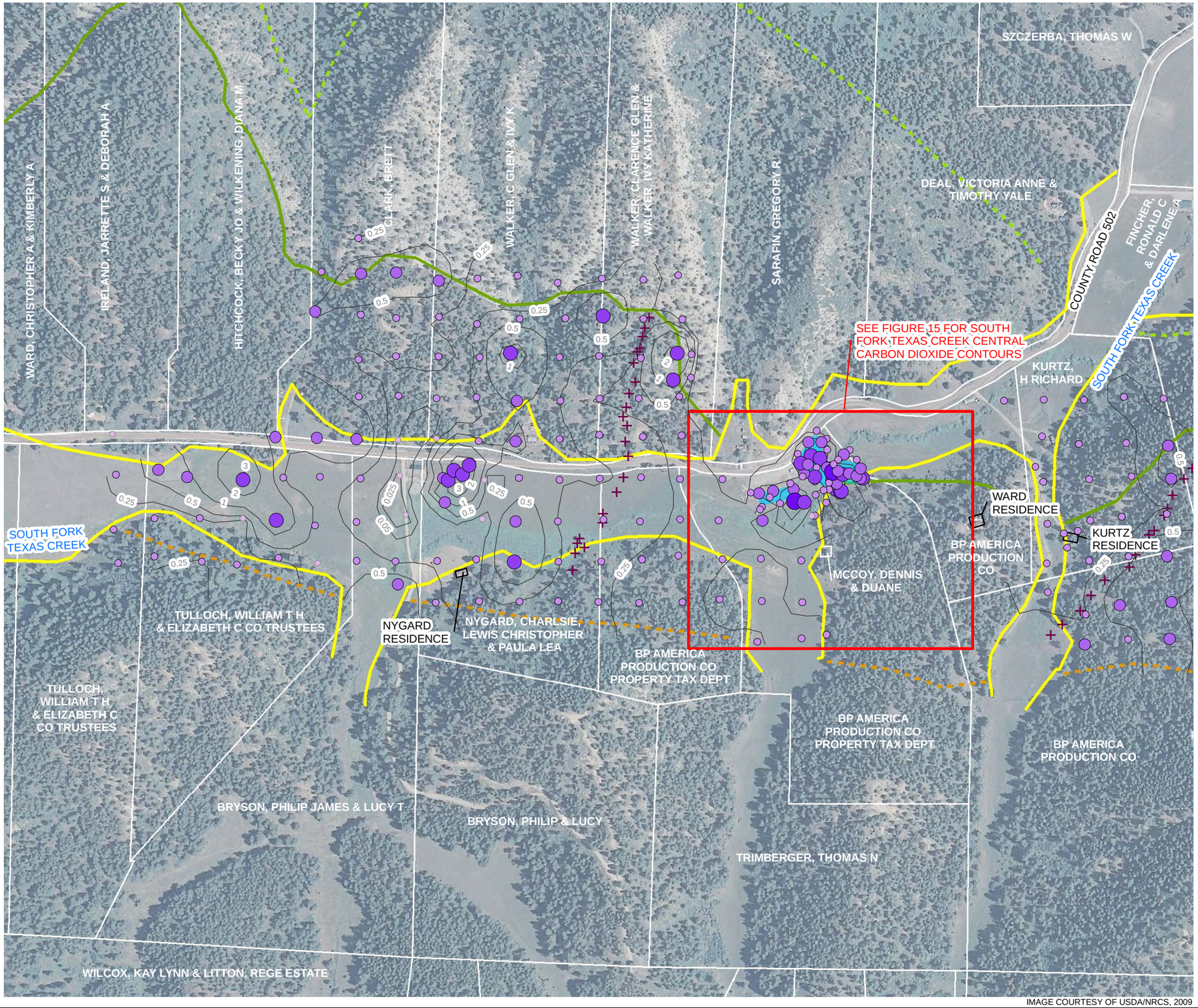


IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)
- REMEDIATION SYSTEM
- SOUTH FORK TEXAS CREEK CENTRAL (FIGURE 15)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 500 1,000
Feet

N

FIGURE 13
CARBON DIOXIDE FLUX CONTOURS SOUTH FORK TEXAS CREEK WEST 2011 FRUITLAND OUTCROP MONITORING LA PLATA COUNTY, COLORADO

THE GROUP

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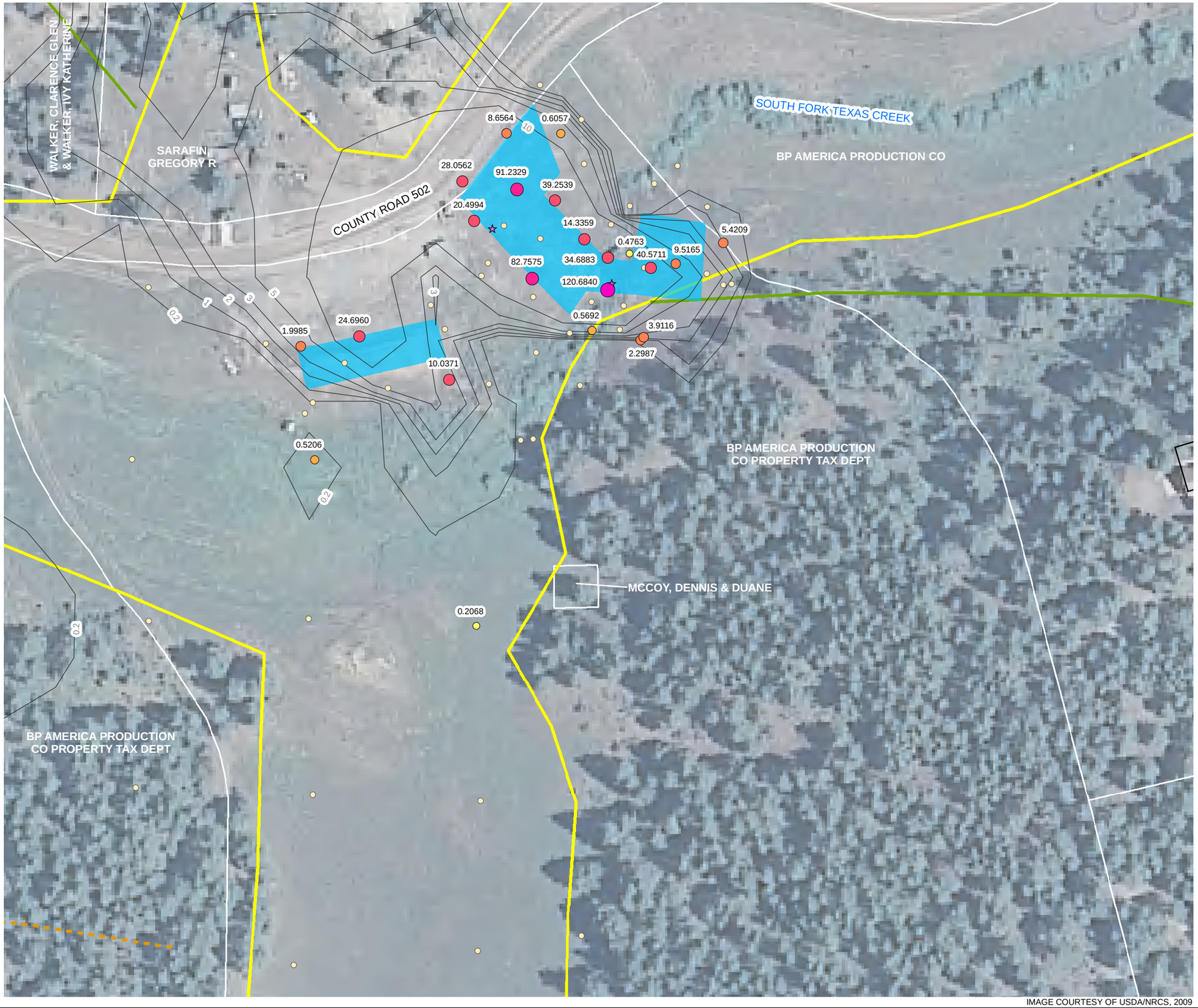


LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)
- REMEDIATION SYSTEM

METHANE FLUX MEASUREMENT (mol/m^2 • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

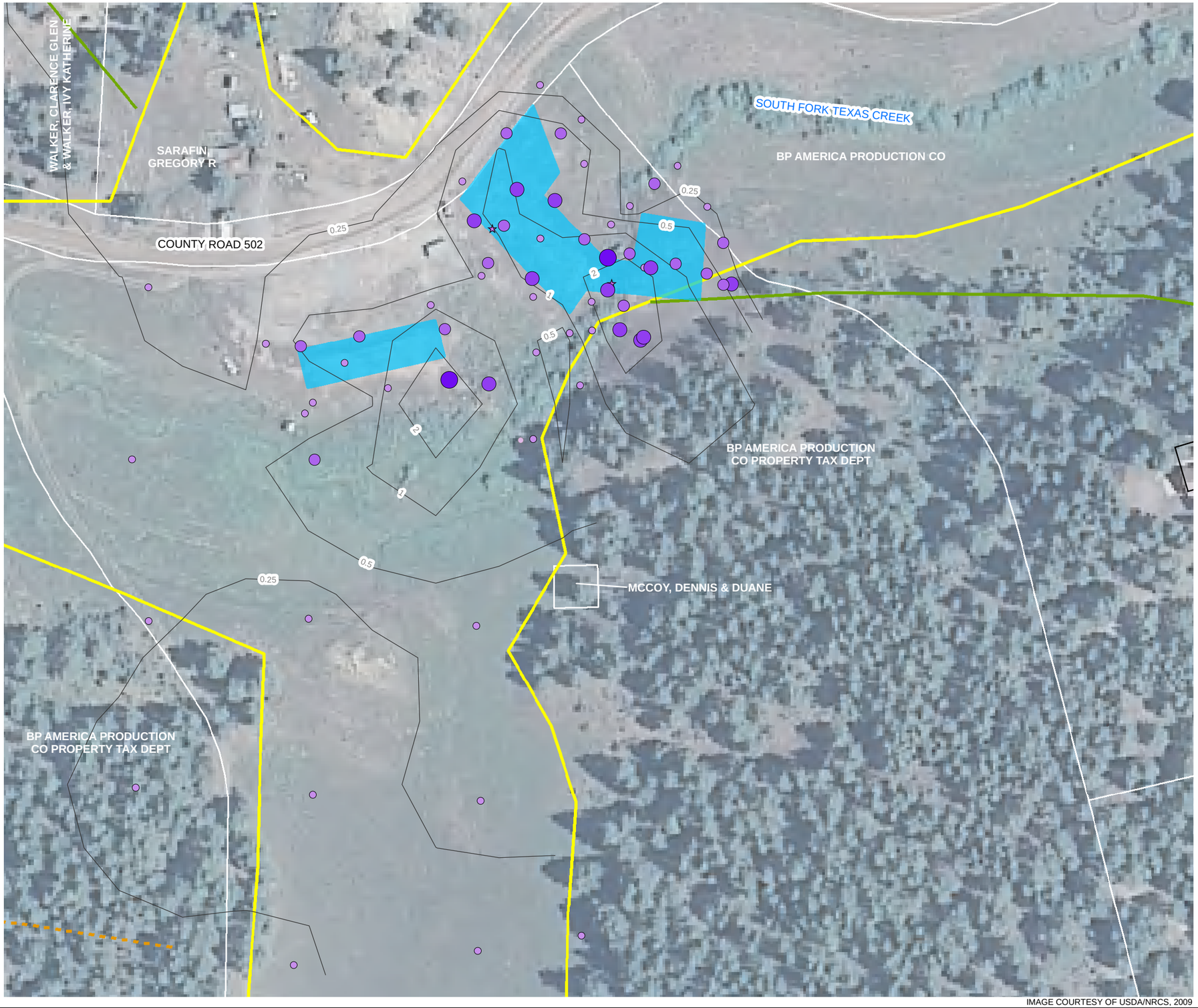
0 120 240
Feet

N

FIGURE 14
METHANE FLUX CONTOURS
SOUTH FORK TEXAS CREEK CENTRAL
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd



LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)
- REMEDIATION SYSTEM

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

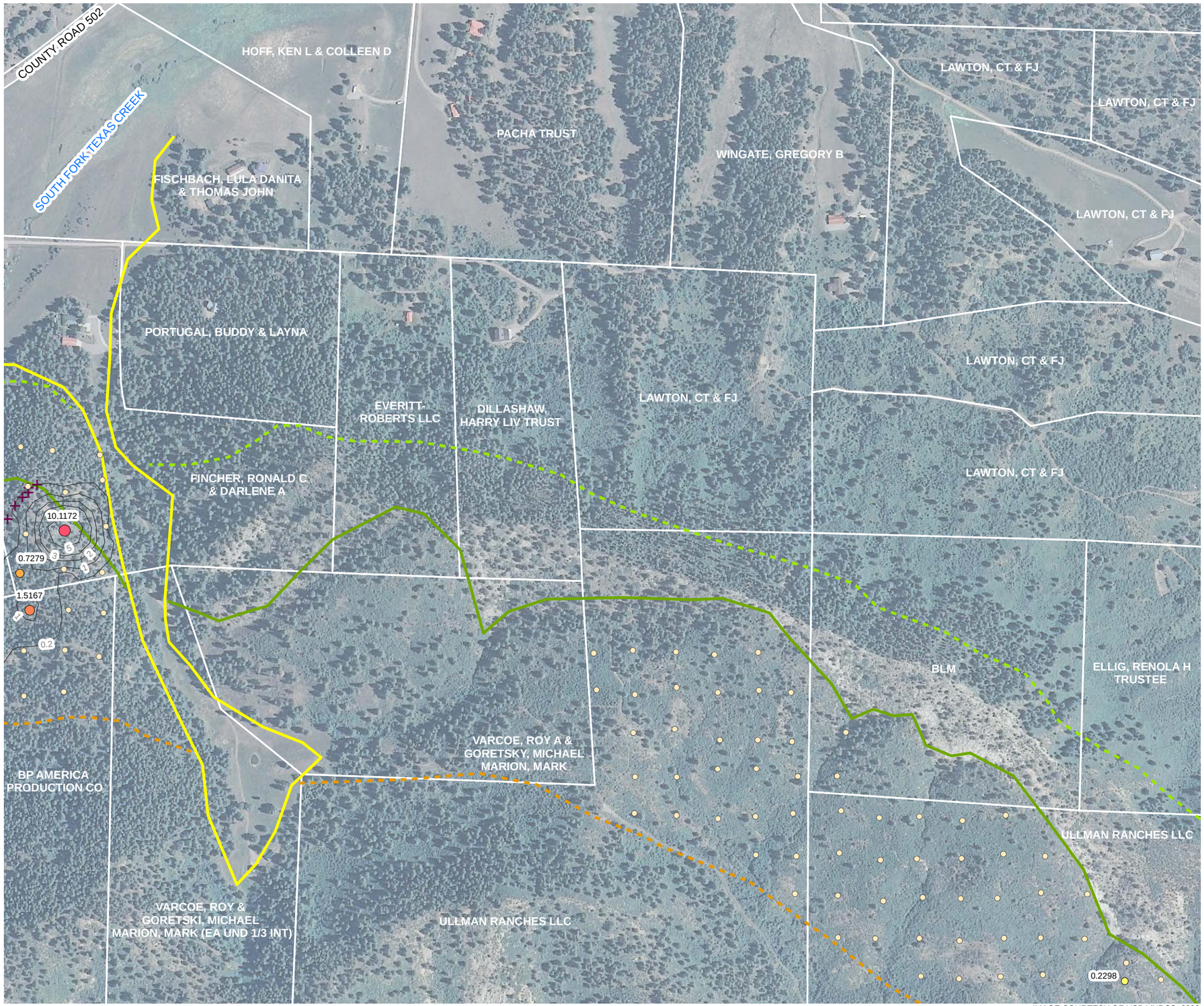
mol/m^2 • day: MOLES PER SQUARE METER PER DAY

0 120 240
Feet

N

FIGURE 15
CARBON DIOXIDE FLUX CONTOURS
SOUTH FORK TEXAS CREEK CENTRAL
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd



LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m^2 • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000
- METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

0 500 1,000
Feet

N

FIGURE 16
METHANE FLUX CONTOURS
SOUTH FORK TEXAS CREEK EAST
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

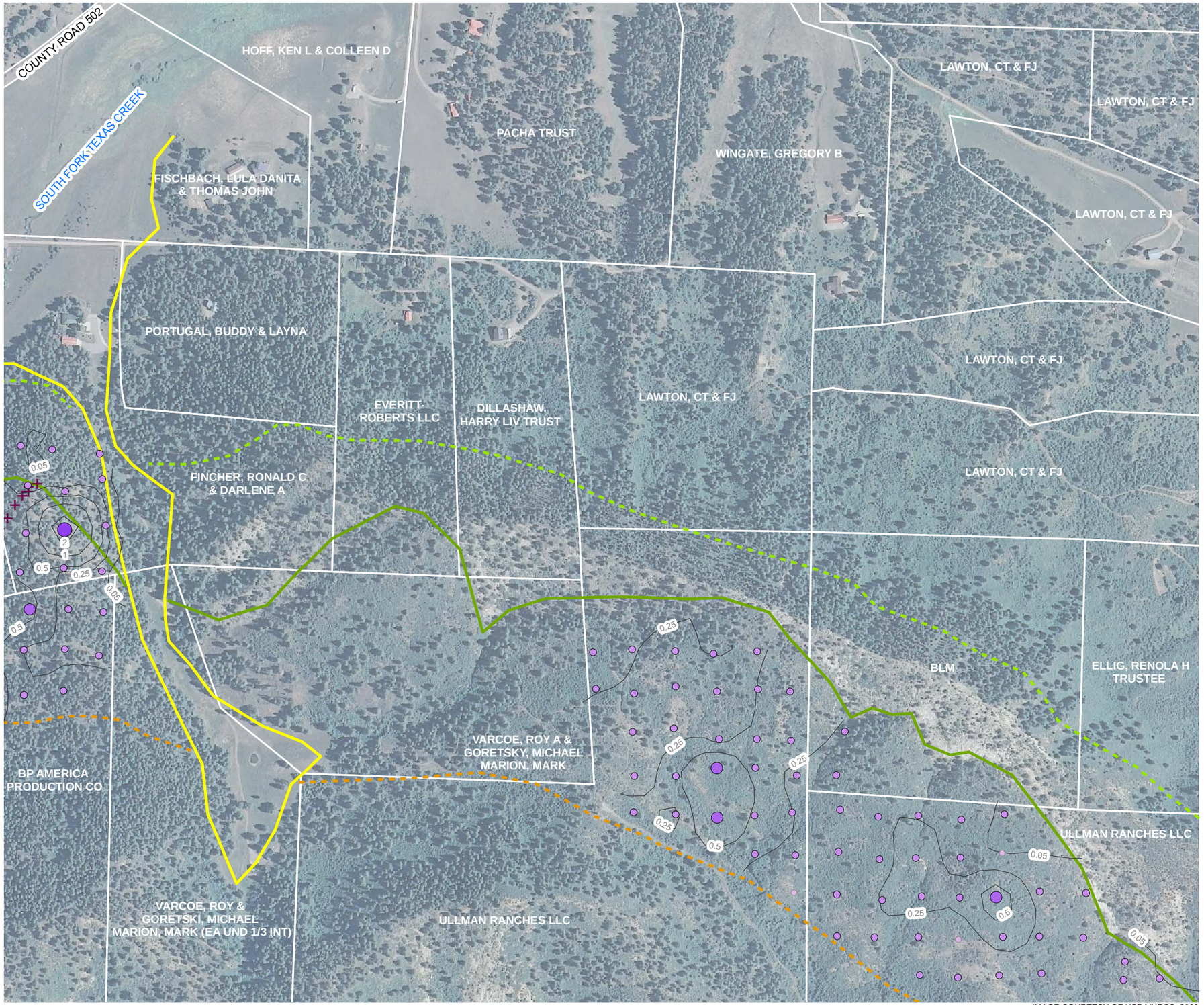


IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 500 1,000
Feet

N

FIGURE 17
CARBON DIOXIDE FLUX CONTOURS SOUTH FORK TEXAS CREEK EAST 2011 FRUITLAND OUTCROP MONITORING LA PLATA COUNTY, COLORADO

THE GROUP

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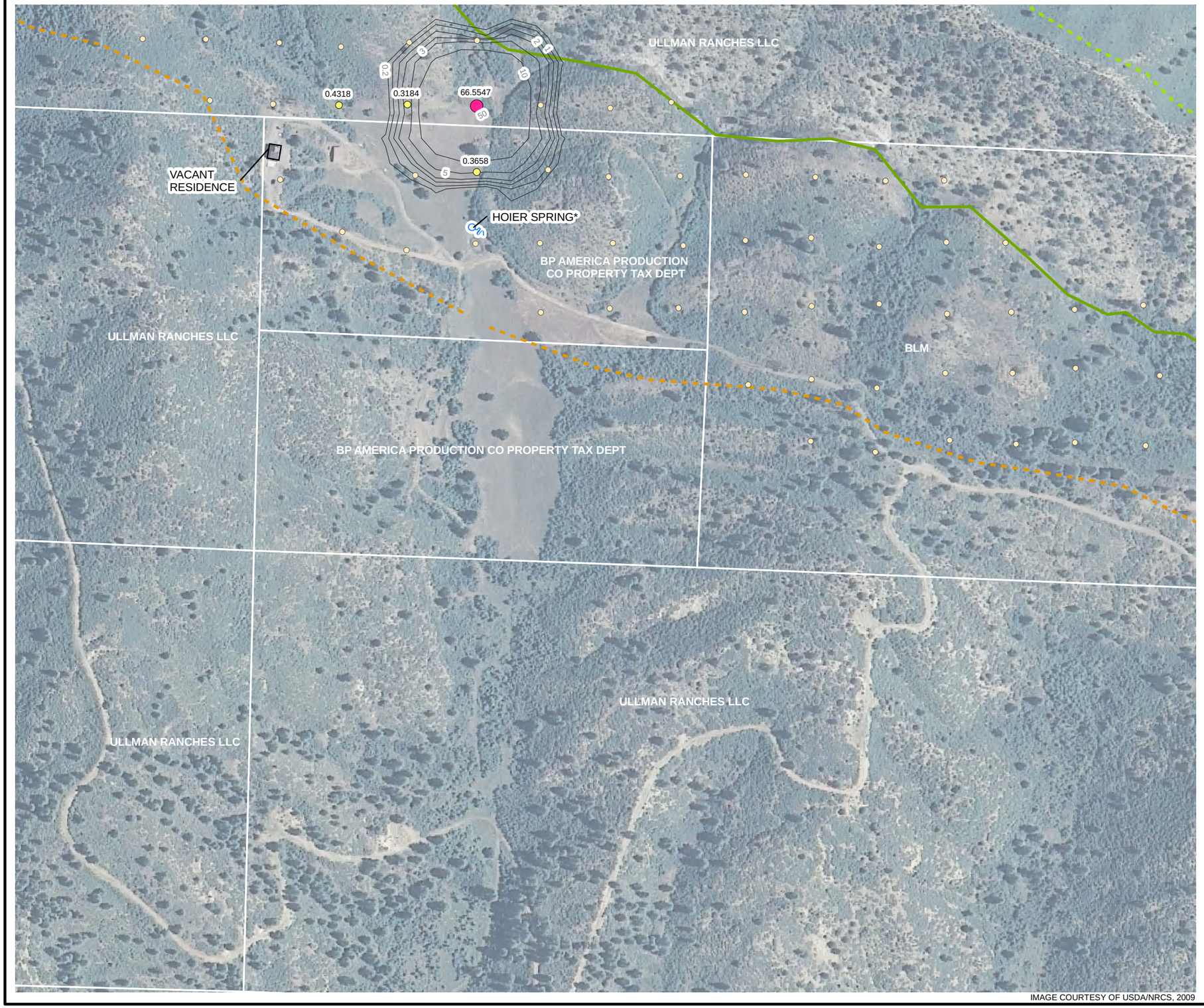


LEGEND

- SPRING
- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000
- METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

*SUBSURFACE METHANE MEASUREMENTS WERE COLLECTED FROM TEMPORARY SOIL PROBES ADVANCED WITH A SLIDE HAMMER AT EACH SAMPLED SPRING LOCATION. THE CONCENTRATION OF SUBSURFACE METHANE WAS 0 PARTS PER MILLION FOR ALL MEASUREMENTS TAKEN.

0 300 600
Feet

N

FIGURE 18
METHANE FLUX CONTOURS
BP HIGHLANDS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

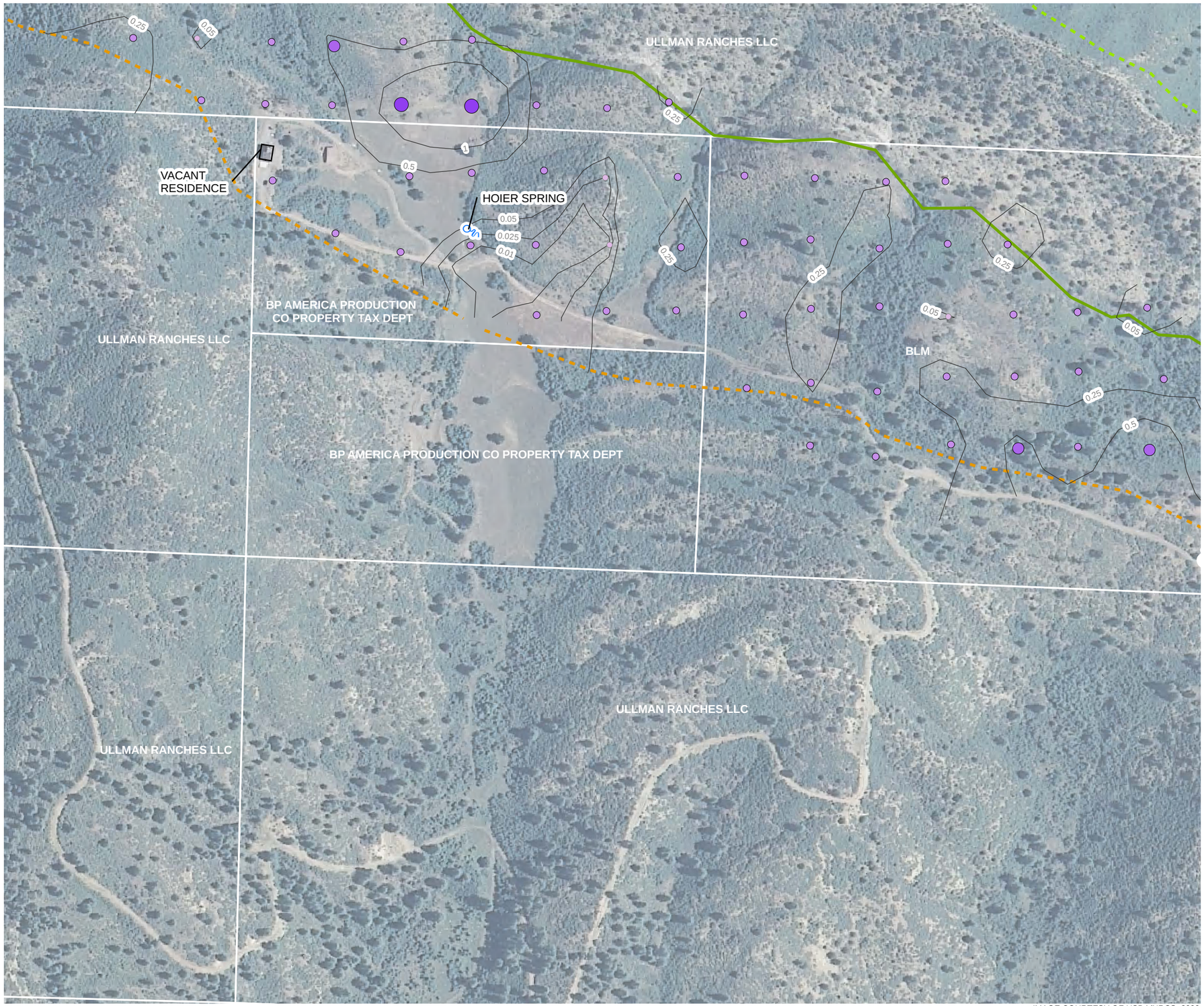


IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- SPRING
- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 300 600
Feet

N

FIGURE 19
CARBON DIOXIDE FLUX CONTOURS
BP HIGHLANDS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)
- REMEDIATION SYSTEM

METHANE FLUX MEASUREMENT (mol/m^2 • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

METHANE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

FLUX POINTS NOT LABELED ARE LESS THAN 0.2000 mol/m^2 • day METHANE

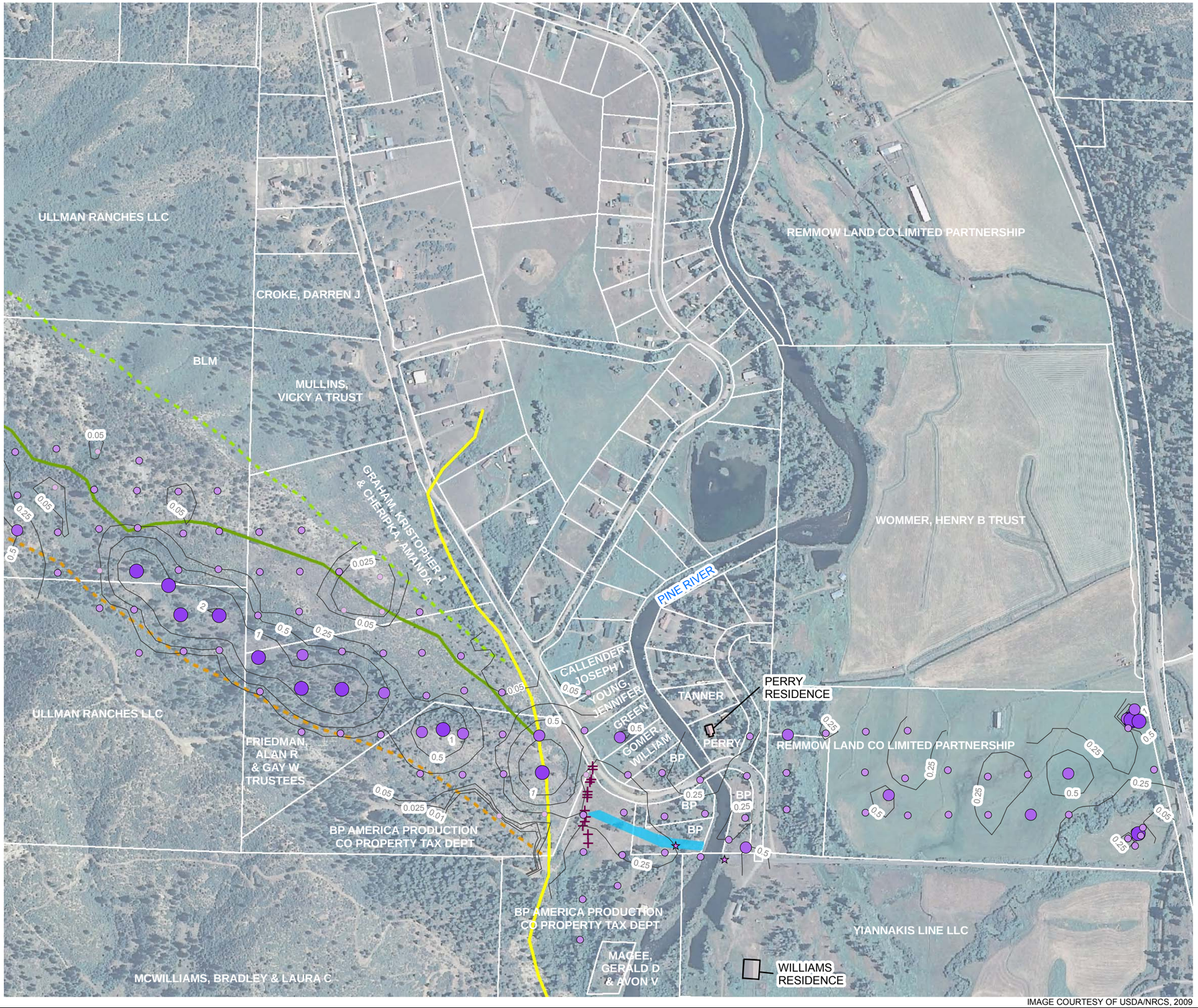
0 500 1,000
Feet

N

FIGURE 20
METHANE FLUX CONTOURS
PINE RIVER
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd



LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)
- REMEDIATION SYSTEM

CARBON DIOXIDE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.0100
- 0.0101 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 5.0000
- 5.0001 - 15.0000
- CARBON DIOXIDE FLUX CONTOUR IN mol/m^2 • day (INTERVAL VARIES)

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

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

0 500 1,000
Feet

N

FIGURE 21
CARBON DIOXIDE FLUX CONTOURS
PINE RIVER
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

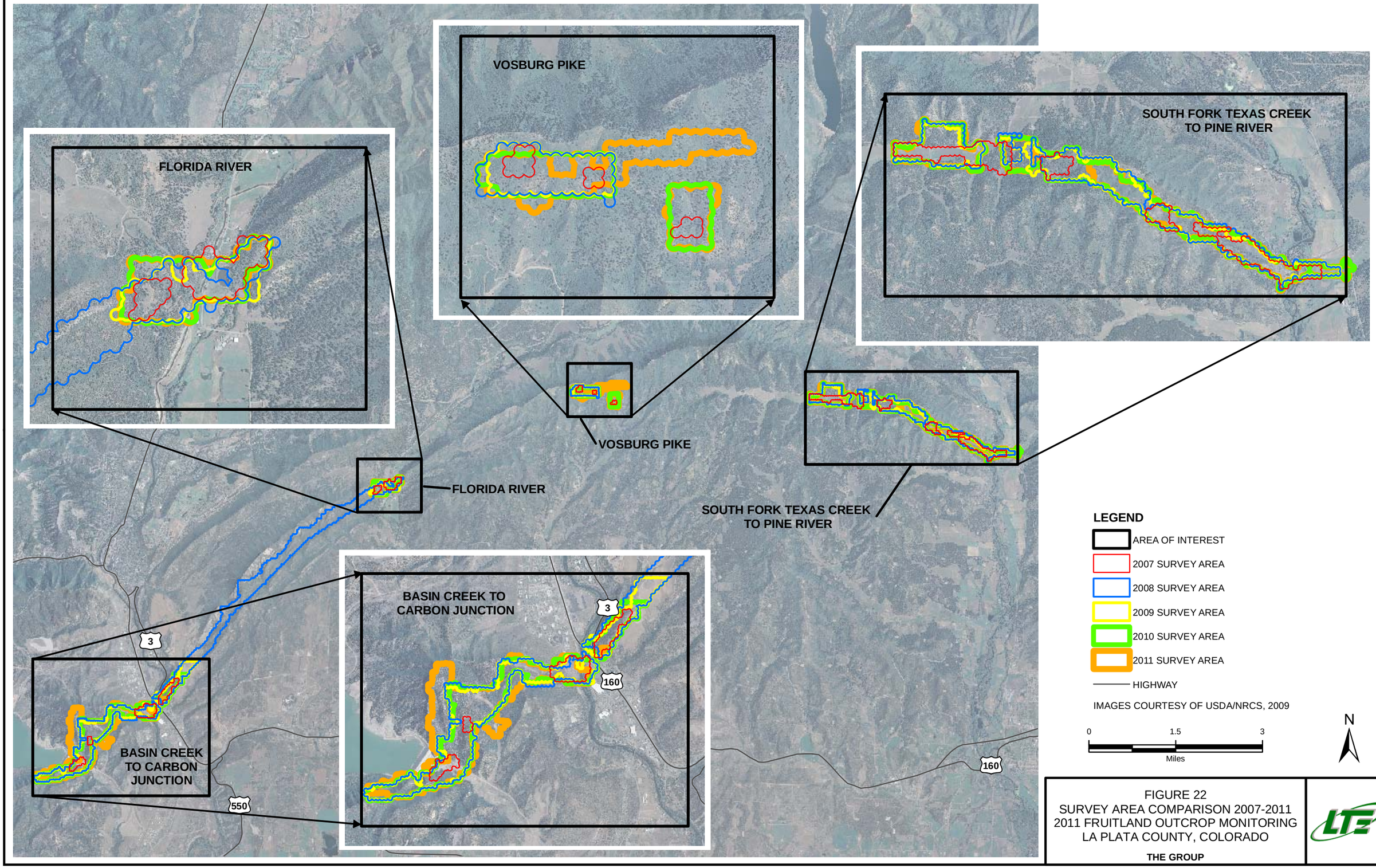
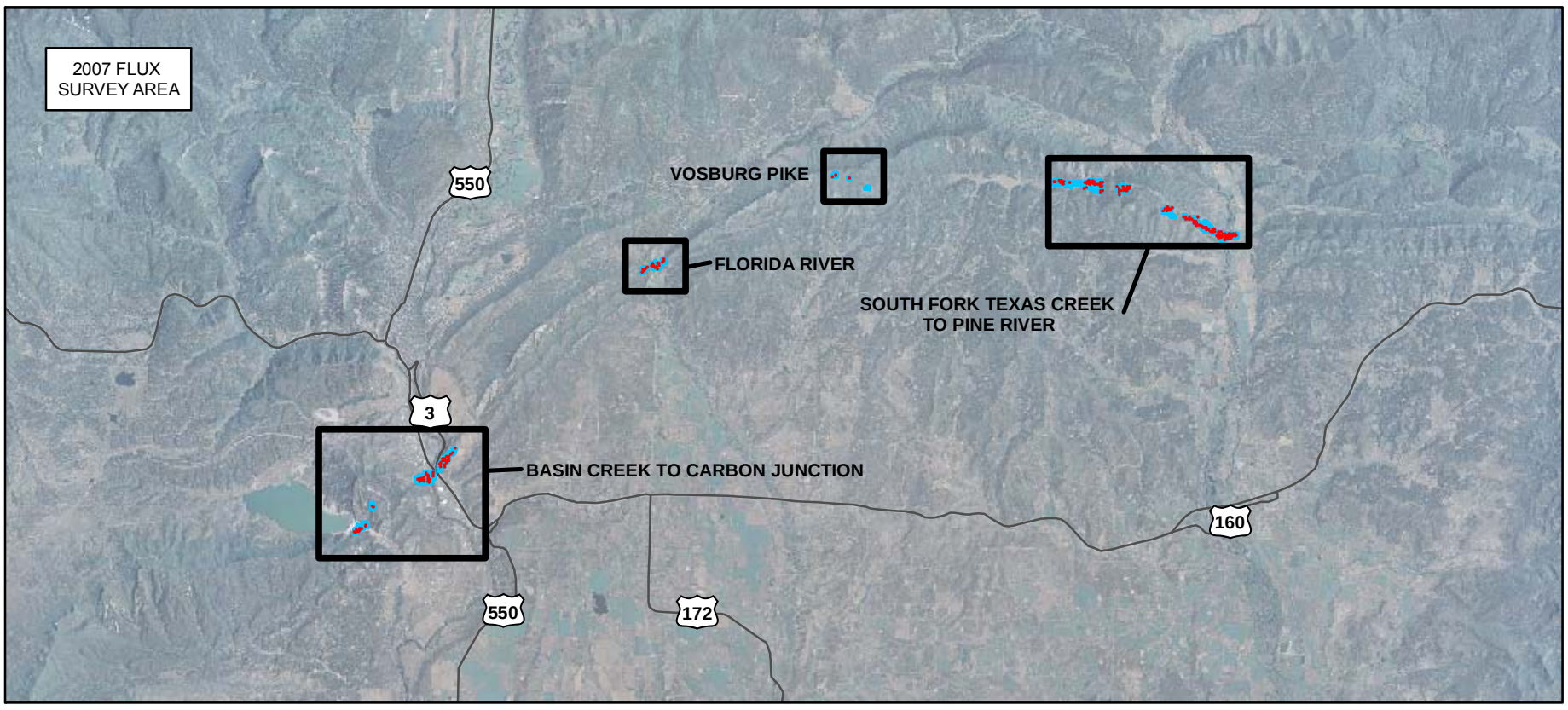
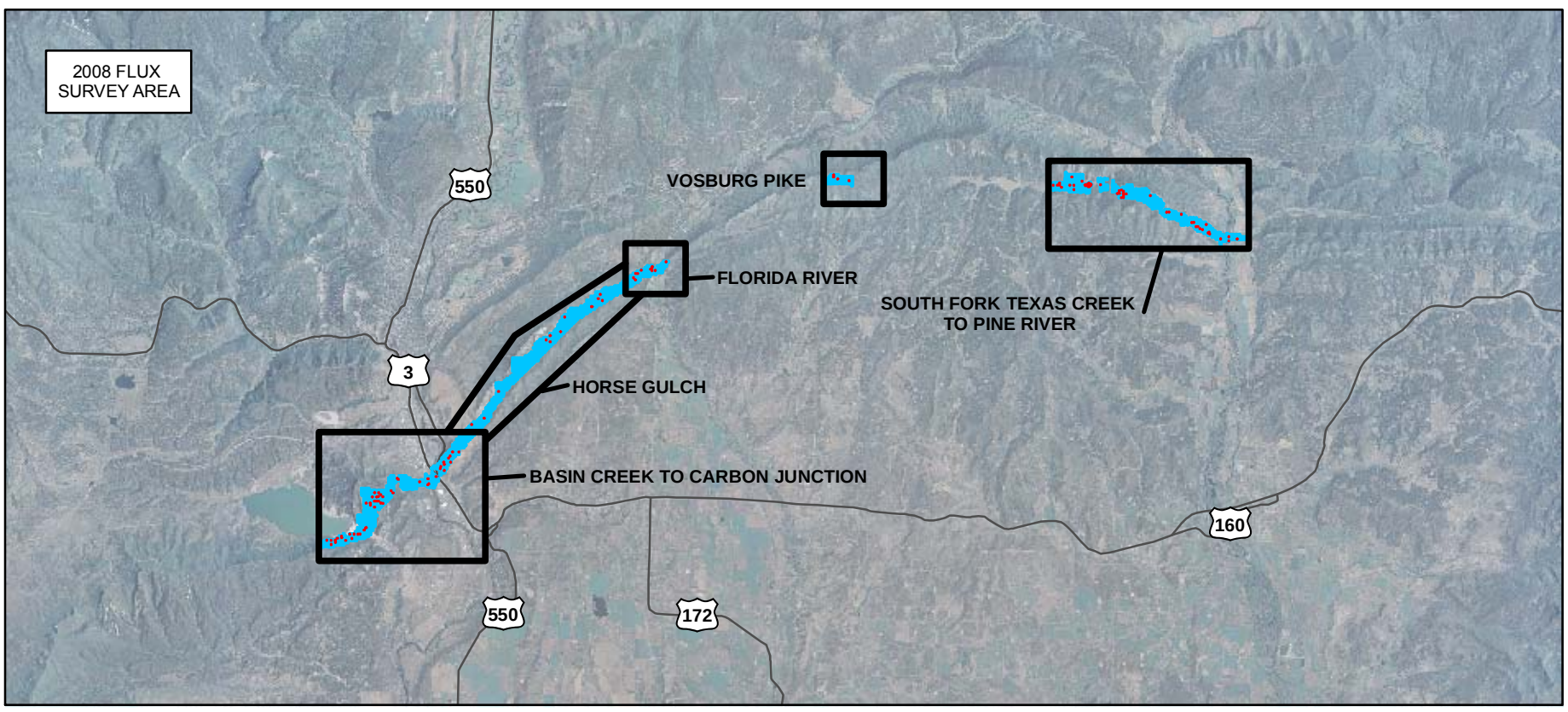


FIGURE 22
SURVEY AREA COMPARISON 2007-2011
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 22 SURVEY AREA 2007-2011.mxd





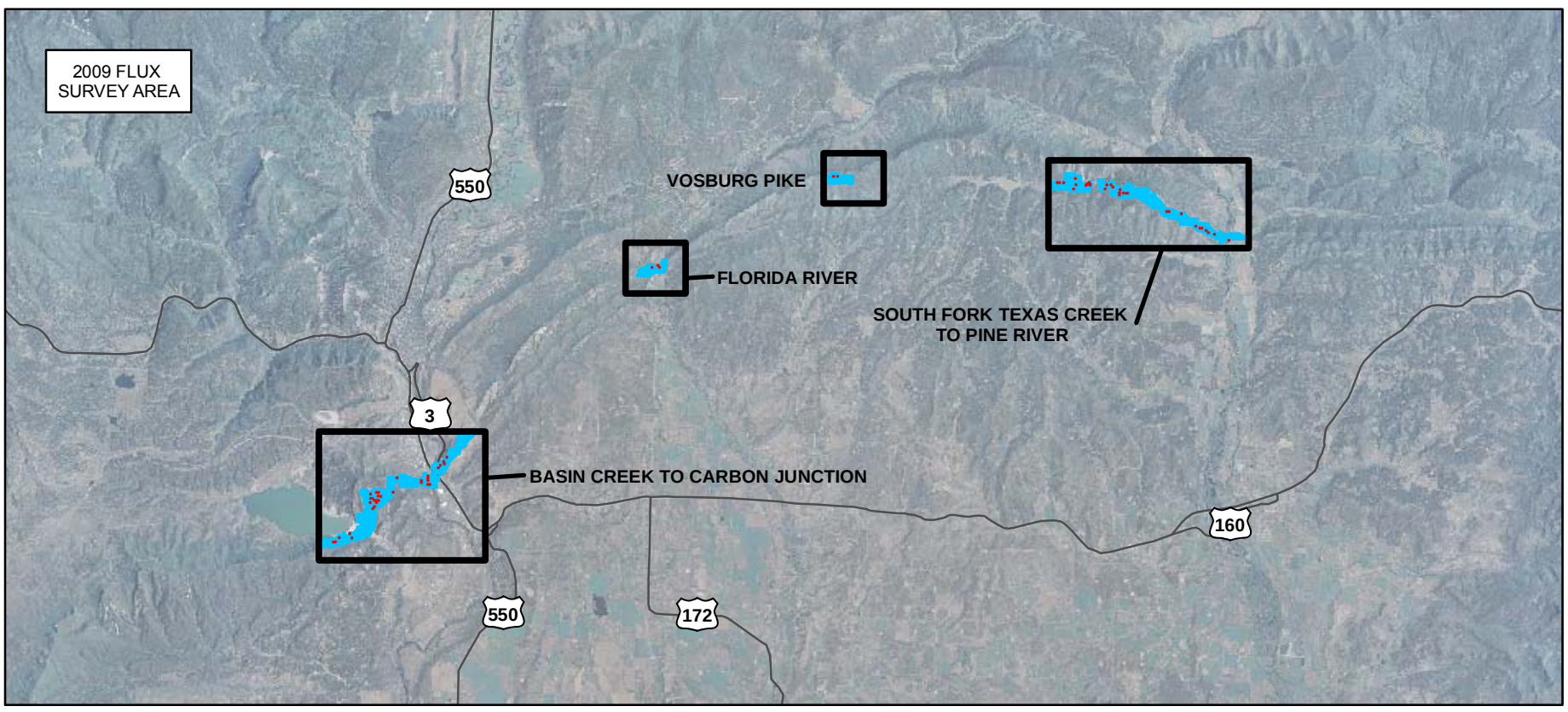


IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

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

SEE FIGURE 24 FOR 2010 & 2011 METHANE FLUX COMPARISON

0 3 6
Miles

N

FIGURE 23
METHANE FLUX COMPARISON 2007-2009
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 23 CH4 COMP 2007-2009.mxd

2010 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

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

IMAGES COURTESY OF USDA/NRCS, 2009

LEGEND

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

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

SURVEY BOUNDARY

AREA OF INTEREST

HIGHWAY

SEE FIGURE 23 FOR 2007, 2008, & 2009 METHANE FLUX COMPARISON

0 1.75 3.5

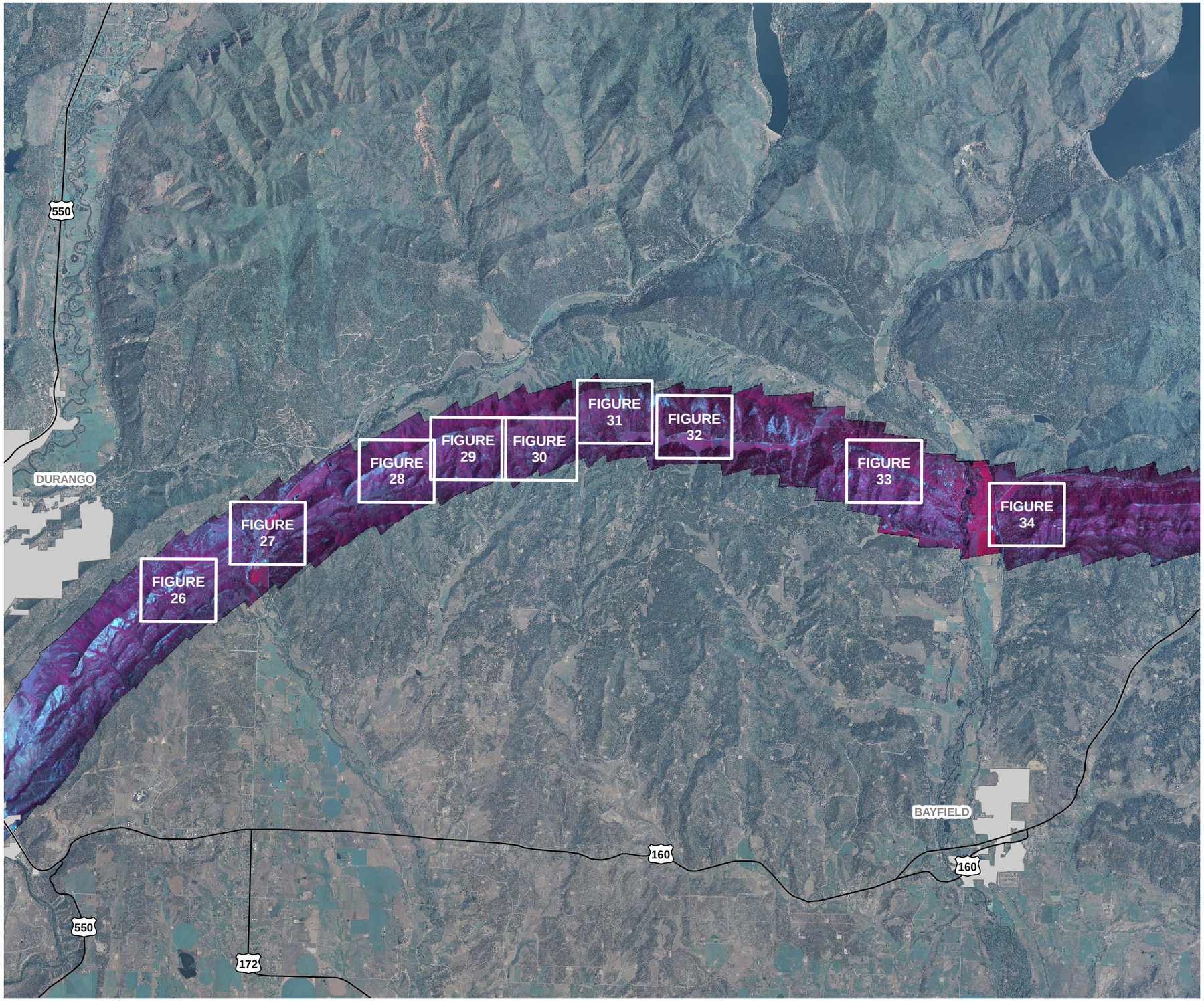
Miles

N

FIGURE 24
METHANE FLUX COMPARISON 2010-2011
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 24 CH4 COMP 2010-2011.mxd



LEGEND

- DETAILED SUSPECT AREA FIGURE LAYOUT (WHITE)
- HIGHWAY
- CITY

IMAGE COURTESY OF USDA/NRCS, 2009 AND
COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

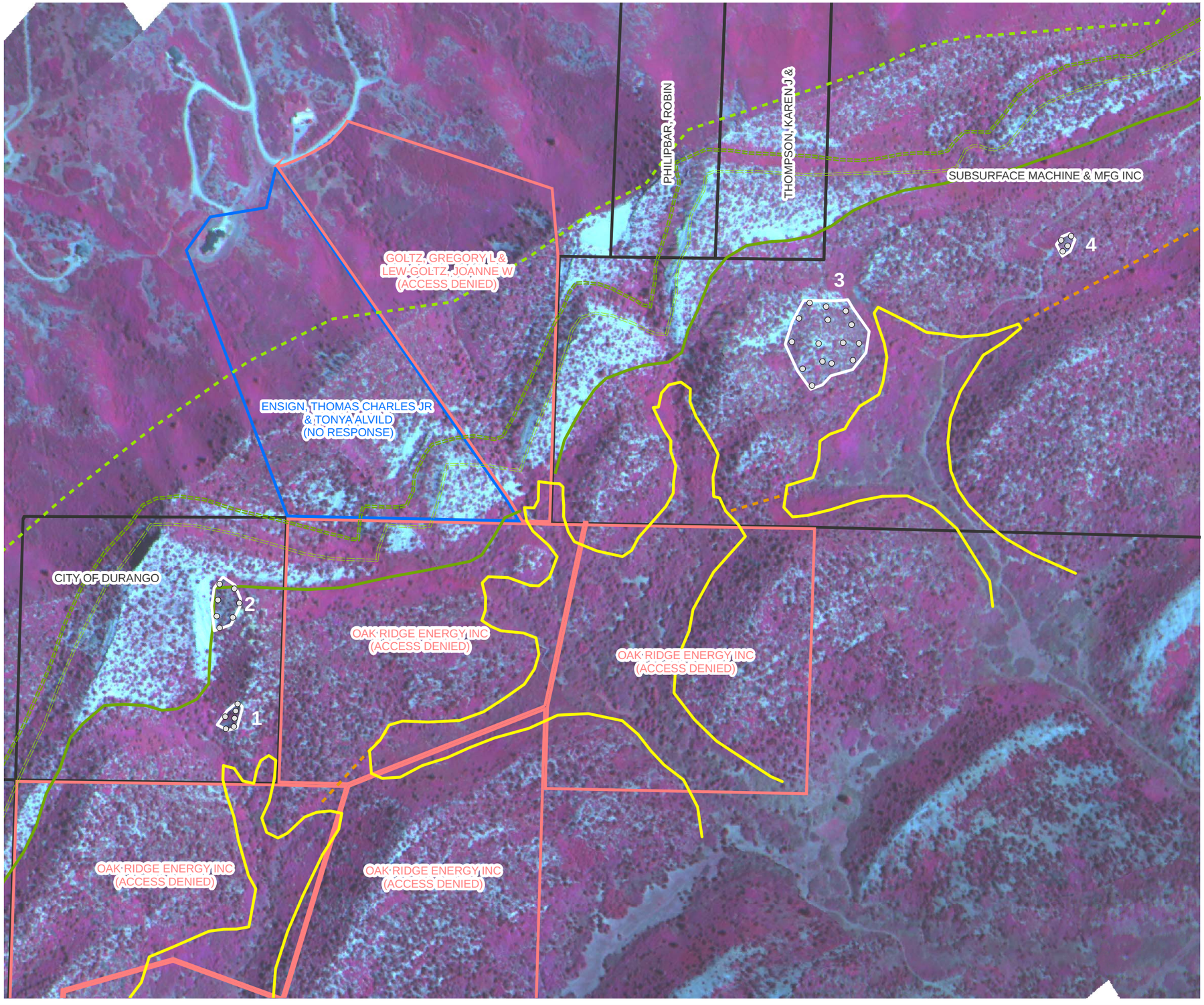
0 1.5 3
Miles

N

FIGURE 25
SUSPECT AREA LOCATION MAP
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_25_CIR_LAYOUT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

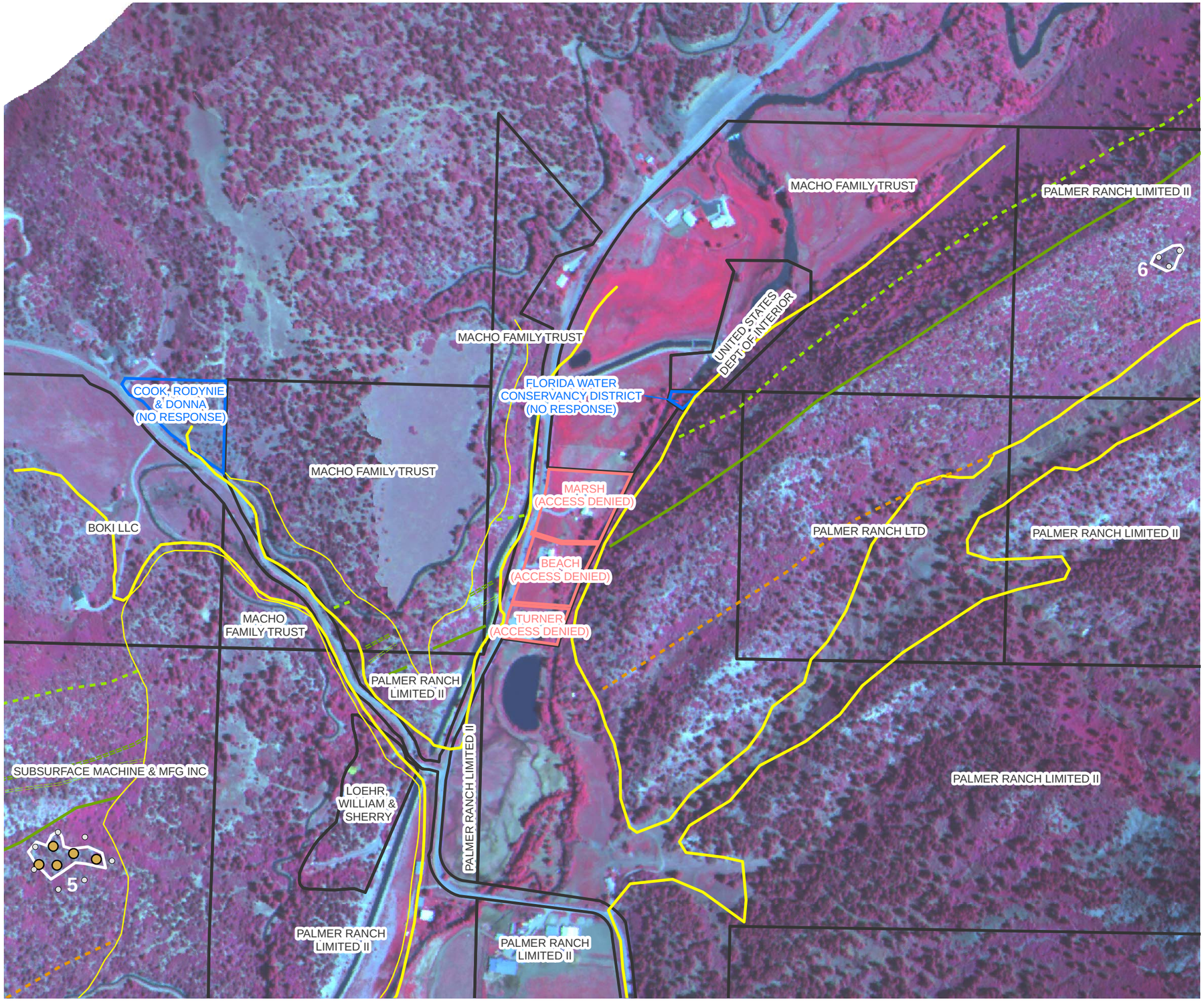
0 500 1,000

Feet

N

FIGURE 26
DETAILED SUSPECT AREA MAP
AREAS 1-4
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

0 500 1,000

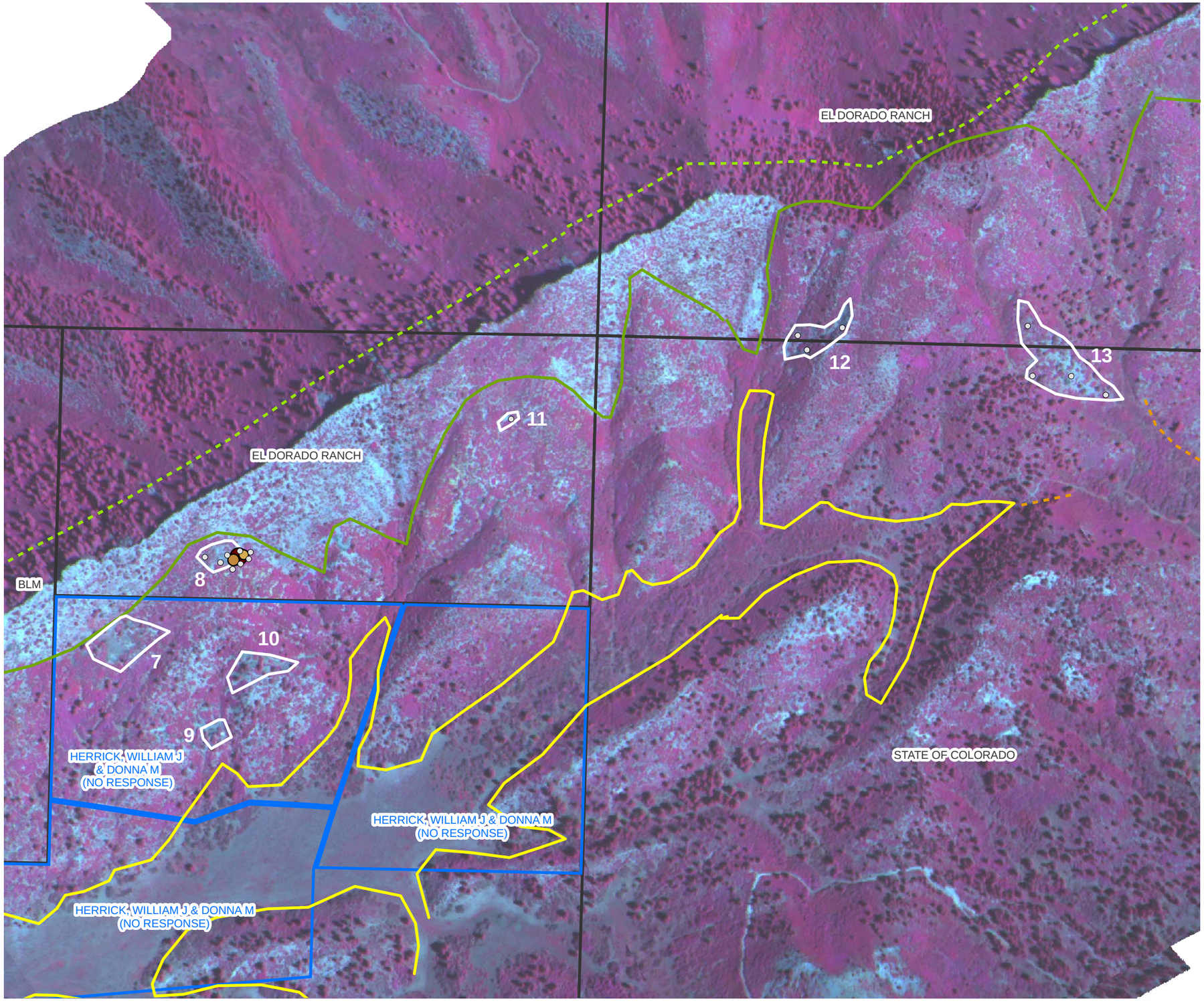
Feet

N

FIGURE 27
DETAILED SUSPECT AREA MAP
AREAS 5-6
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

0 500 1,000

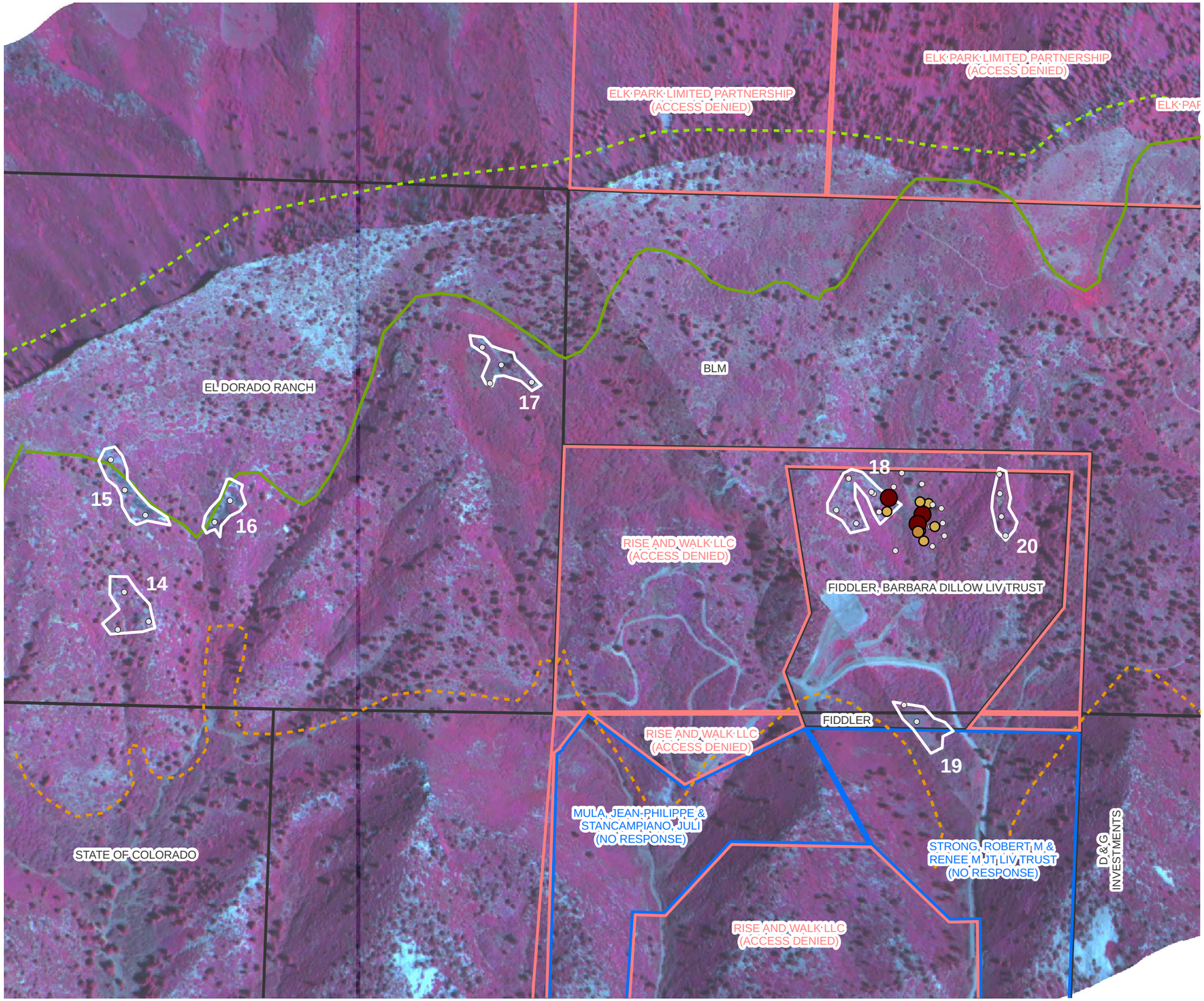
Feet

N

FIGURE 28
DETAILED SUSPECT AREA MAP
AREAS 7-13
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

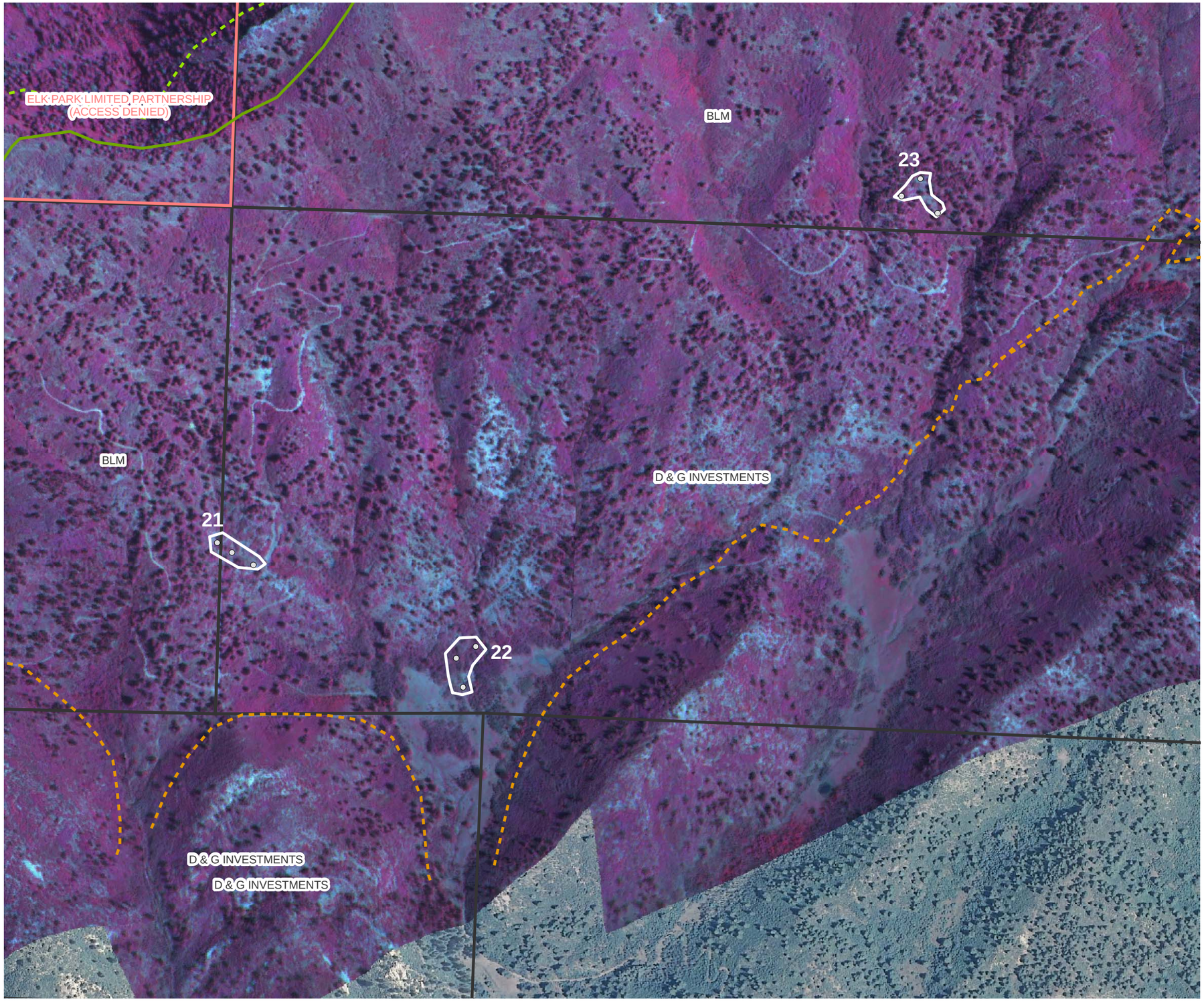
0 500 1,000

Feet

N

FIGURE 29
DETAILED SUSPECT AREA MAP
AREAS 14-20
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

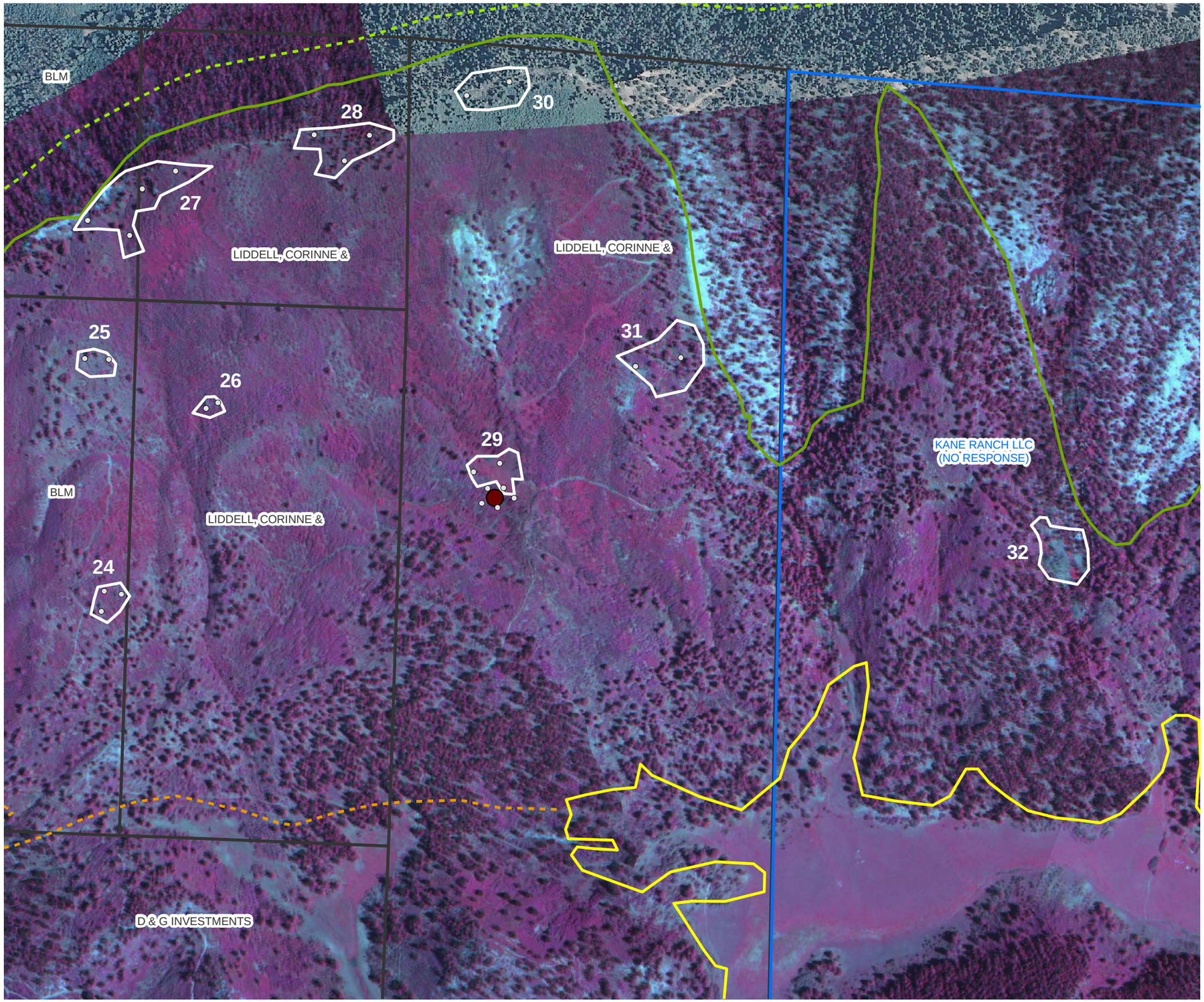
0 500 1,000

Feet

N

FIGURE 30
DETAILED SUSPECT AREA MAP
AREAS 21-23
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

0 500 1,000

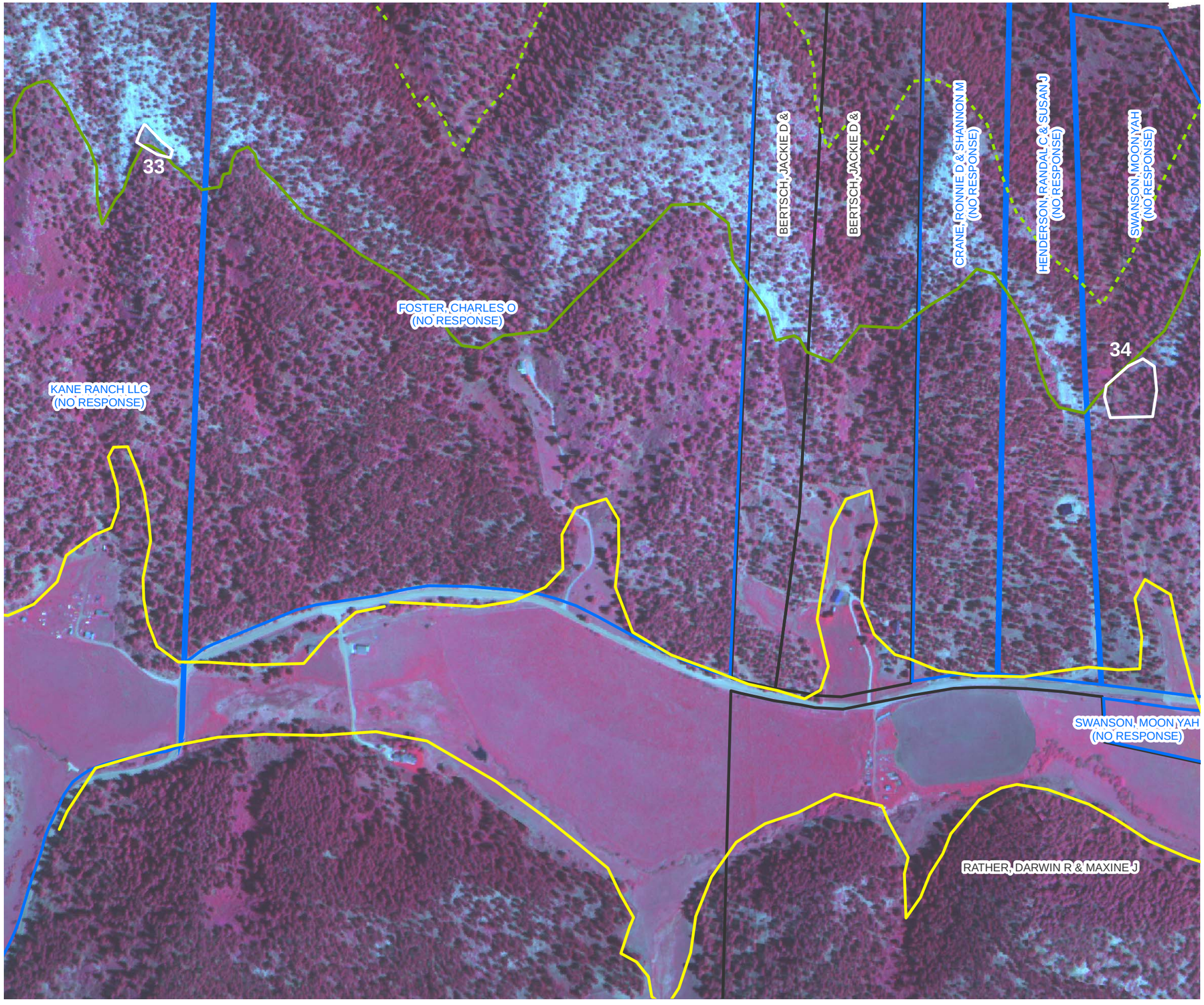
Feet

N

FIGURE 31
DETAILED SUSPECT AREA MAP
AREAS 24-32
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

0 500 1,000

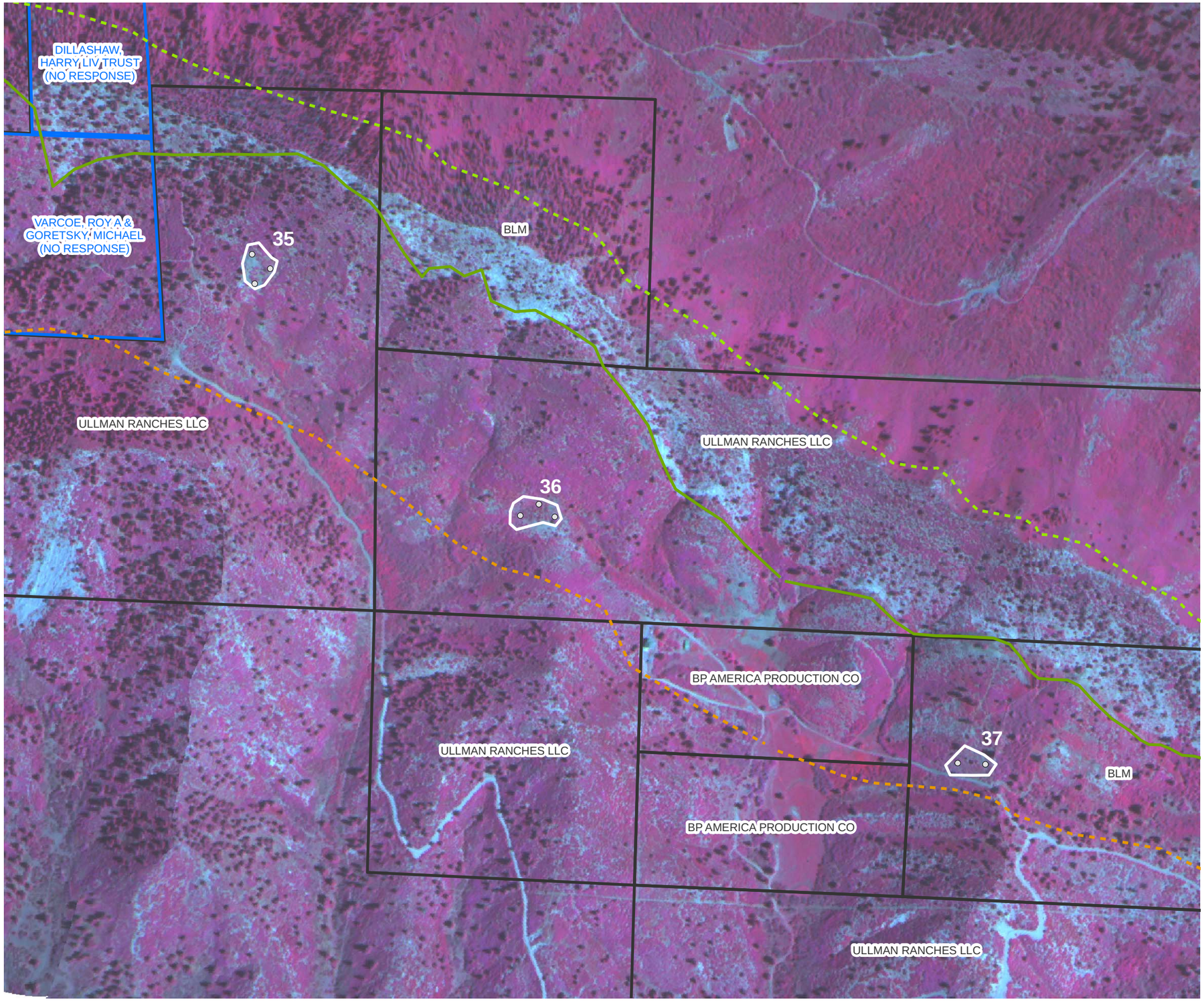
Feet

N

FIGURE 32
DETAILED SUSPECT AREA MAP
AREAS 33-34
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

0 500 1,000

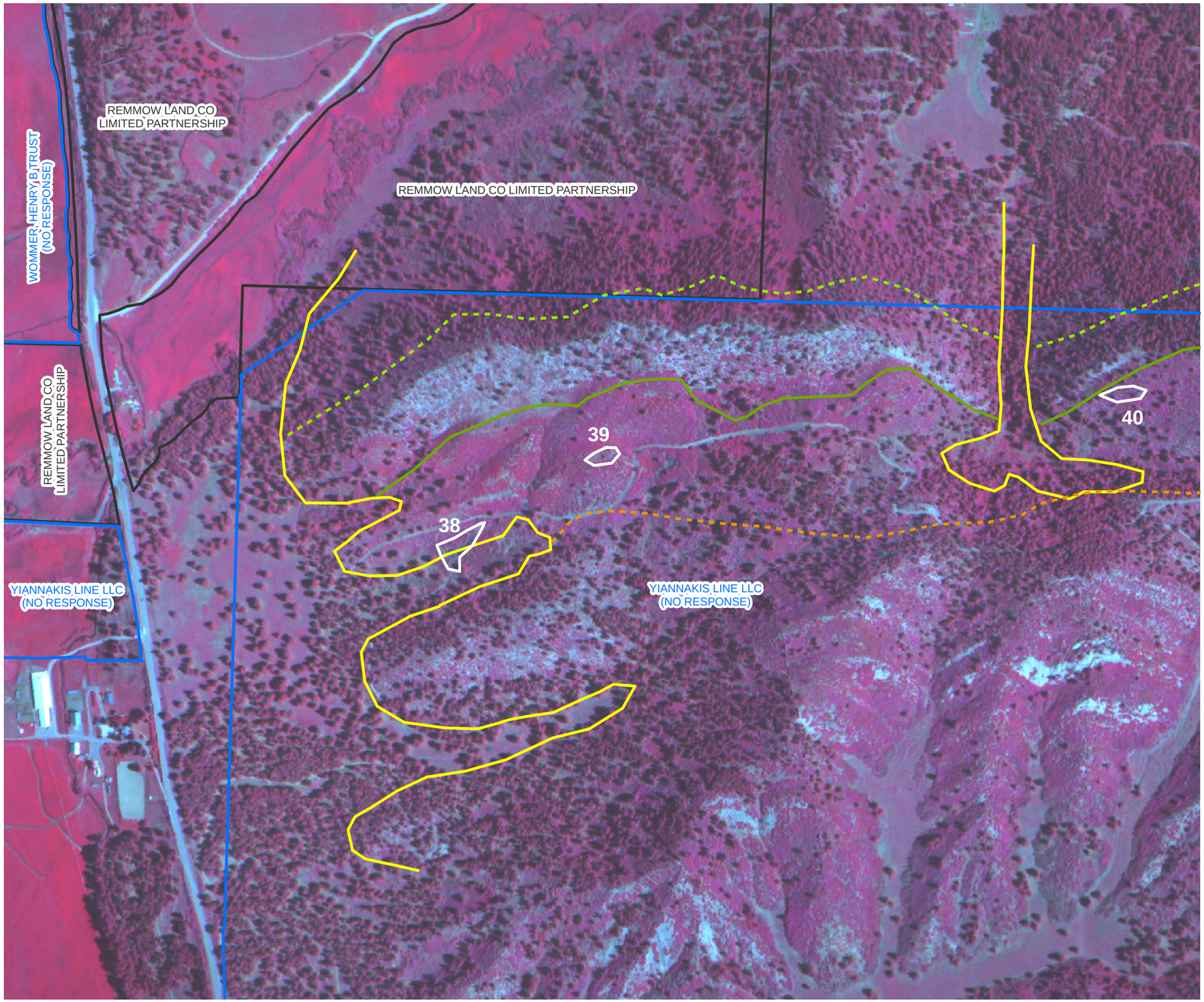
Feet

N

FIGURE 33
DETAILED SUSPECT AREA MAP
AREAS 35-37
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd



LEGEND

2011 SUSPECTED METHANE SEEP (WHITE)

COUNTY BOUNDARY

2011 PROPERTY ACCESS STATUS

ACCESS APPROVED

NO RESPONSE

ACCESS DENIED

SUBSURFACE METHANE MEASUREMENT

0 ppm

1 ppm - 500 ppm

501 ppm - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

76% - 100%

ppm: PARTS PER MILLION

%: PERCENT

GEOLOGY

FRUITLAND FORMATION (Kf)

FRUITLAND FORMATION TONGUE (Kft)

KIRTLAND FORMATION (Kk)

PICTURED CLIFFS FORMATION (Kpc)

PICTURED CLIFFS FORMATION TONGUE (Kpct)

QUATERNARY ALLUVIUM (Qa)

QUATERNARY GRAVEL (Qg)

COLOR INFRARED IMAGE COURTESY OF AGRO ENGINEERING, 2011

0 500 1,000

Feet

N

FIGURE 34
DETAILED SUSPECT AREA MAP
AREAS 38-40
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG_26_CIR_SUSPECT.mxd

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

NATURAL SPRING

- SAMPLED
- FIELD PARAMETERS ONLY
- DRY
- NOT LOCATED
- NO ACCESS

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

*SUBSURFACE METHANE MEASUREMENTS WERE COLLECTED FROM TEMPORARY SOIL PROBES ADVANCED WITH A SLIDE HAMMER AT EACH SAMPLED SPRING LOCATION. THE CONCENTRATION OF SUBSURFACE METHANE WAS 0 PARTS PER MILLION FOR ALL MEASUREMENTS TAKEN.

0 250 500
Feet

N

FIGURE 35
DETAILED NATURAL SPRINGS MAP
EDGEMONT RANCH
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

NATURAL SPRING

- SAMPLED
- FIELD PARAMETERS ONLY
- DRY
- NOT LOCATED
- NO ACCESS

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

*SUBSURFACE METHANE MEASUREMENTS WERE COLLECTED FROM TEMPORARY SOIL PROBES ADVANCED WITH A SLIDE HAMMER AT EACH SAMPLED SPRING LOCATION. THE CONCENTRATION OF SUBSURFACE METHANE WAS 0 PARTS PER MILLION FOR ALL MEASUREMENTS TAKEN.

0 250 500
Feet

N

FIGURE 36
DETAILED NATURAL SPRINGS MAP
SOUTH FORK TEXAS CREEK
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

- GAS MONITORING PROBE
- GAS FLUX CHAMBER
- PARCEL OWNER & BOUNDARY (WHITE)

NATURAL SPRING

- SAMPLED
- FIELD PARAMETERS ONLY
- DRY
- NOT LOCATED
- NO ACCESS

GEOLOGY

- FRUITLAND FORMATION (Kf)
- FRUITLAND FORMATION TONGUE (Kft)
- KIRTLAND FORMATION (Kk)
- PICTURED CLIFFS FORMATION (Kpc)
- PICTURED CLIFFS FORMATION TONGUE (Kpct)
- QUATERNARY ALLUVIUM (Qa)
- QUATERNARY GRAVEL (Qg)

*SUBSURFACE METHANE MEASUREMENTS WERE COLLECTED FROM TEMPORARY SOIL PROBES ADVANCED WITH A SLIDE HAMMER AT EACH SAMPLED SPRING LOCATION. THE CONCENTRATION OF SUBSURFACE METHANE WAS 0 PARTS PER MILLION FOR ALL MEASUREMENTS TAKEN.

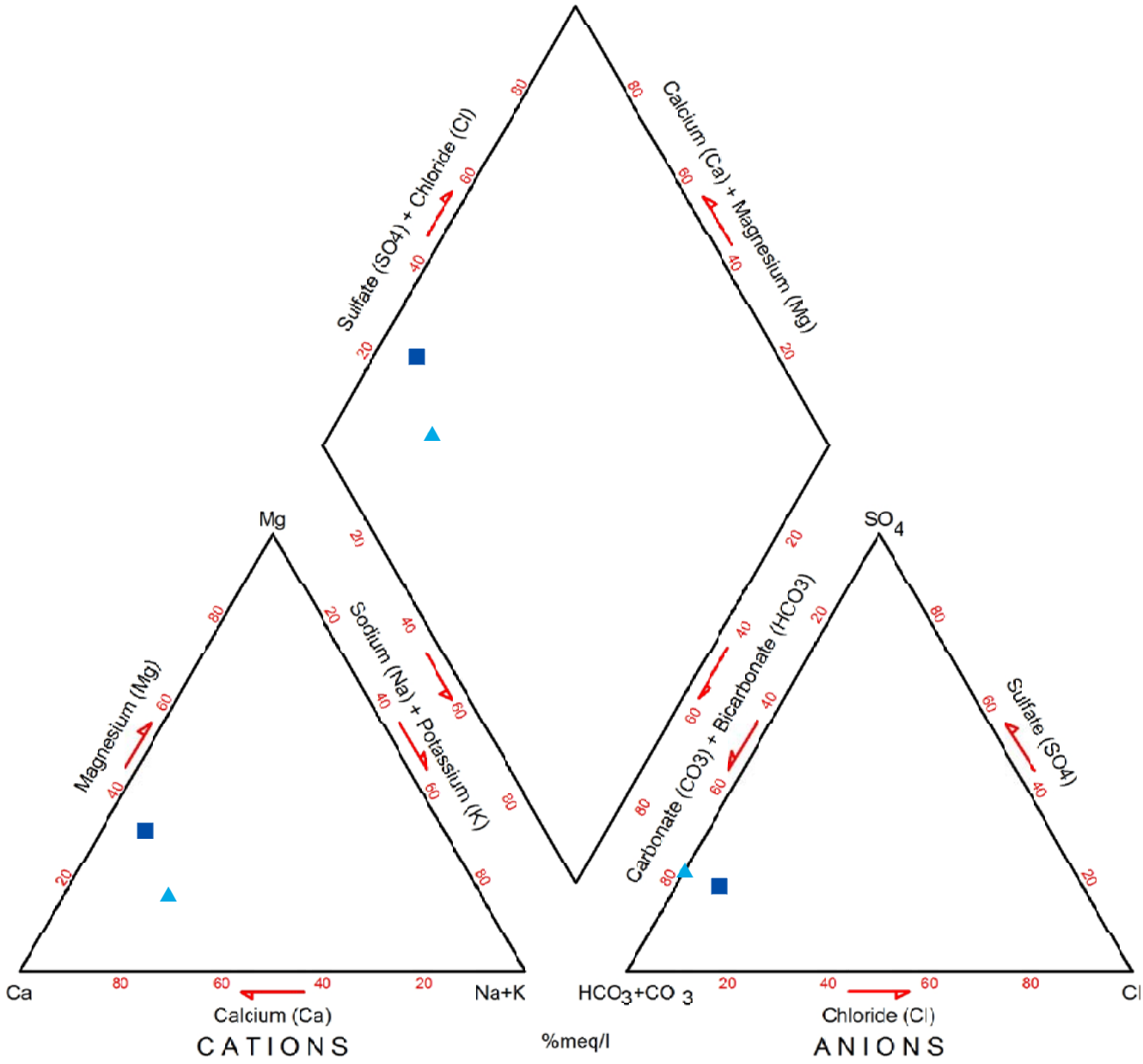
0 250 500
Feet

N

FIGURE 37
DETAILED NATURAL SPRING MAP
BP HIGHLANDS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 02 CH4 FLUX CONTOURS.mxd



LEGEND

- DARWIN RATHER #1
- DARWIN RATHER #2

FIGURE 38
TRI-LINEAR DIAGRAM OF NATURAL SPRING WATERS
MAY 4, 2011
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 38 TRI-LINEAR.mxd

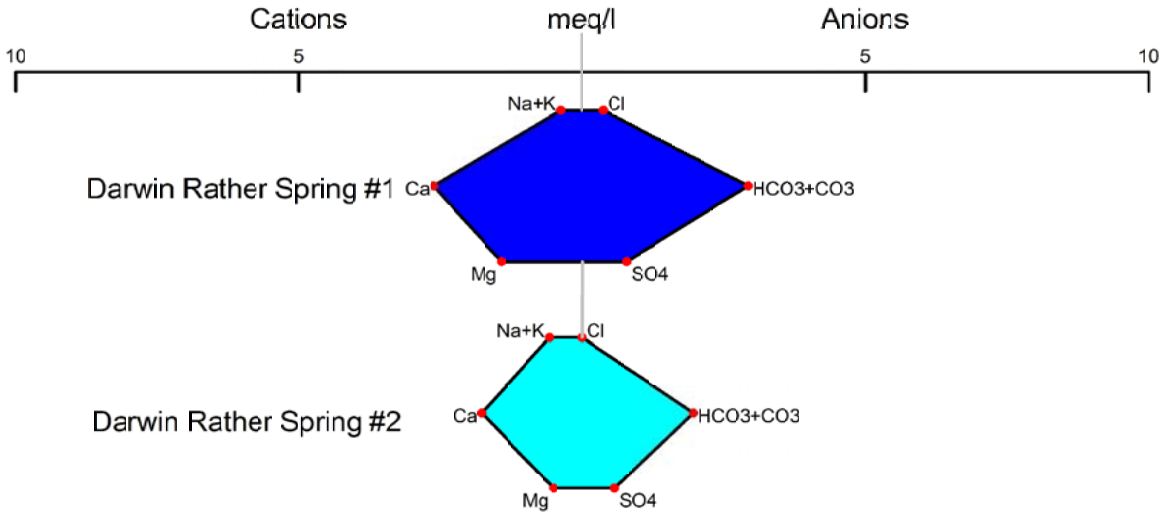


FIGURE 39
STIFF DIAGRAMS
MAY 4, 2011
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 39 STIFF.mxd

IMAGE COURTESY OF USDA/NRCS, 2009

LEGEND

SHUT-IN WELL

API: AMERICAN PETROLEUM INSTITUTE

2011 PROPERTY ACCESS STATUS

- ACCESS APPROVED
- NO RESPONSE
- ACCESS DENIED

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

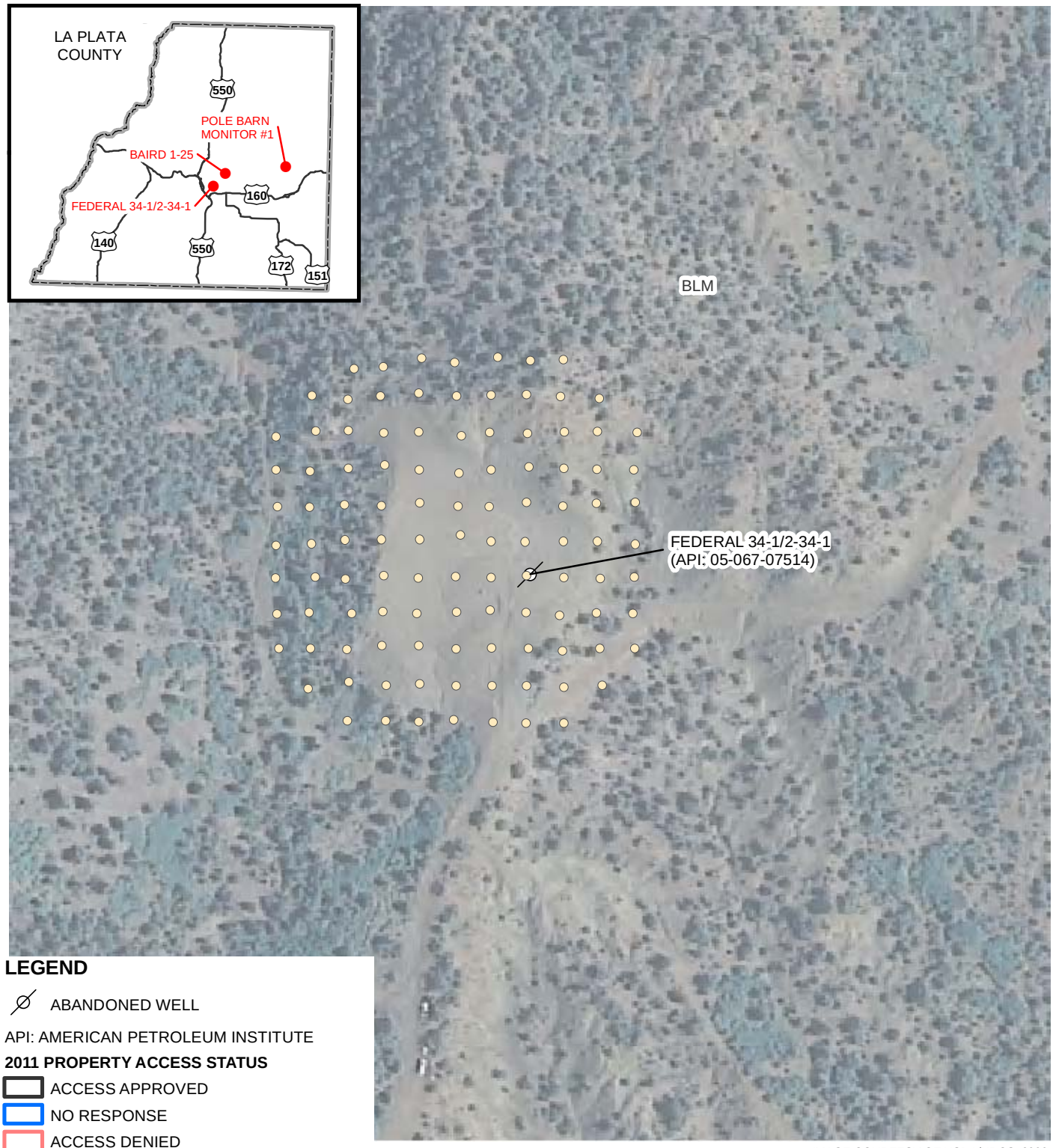
mol/m^2 • day: MOLES PER SQUARE METER PER DAY
FLUX POINTS NOT LABELED ARE LESS THAN
0.2000 mol/m^2 • day METHANE

0 200 400
Feet

N

FIGURE 40
METHANE FLUX MEASUREMENTS
POLE BARN MONITOR WELL #1
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 40 ABANDONED_WELL.mxd



LEGEND

ABANDONED WELL

API: AMERICAN PETROLEUM INSTITUTE

2011 PROPERTY ACCESS STATUS

- ACCESS APPROVED
- NO RESPONSE
- ACCESS DENIED

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

mol/m^2 • day: MOLES PER SQUARE METER PER DAY
FLUX POINTS NOT LABELED ARE LESS THAN
0.2000 mol/m^2 • day METHANE

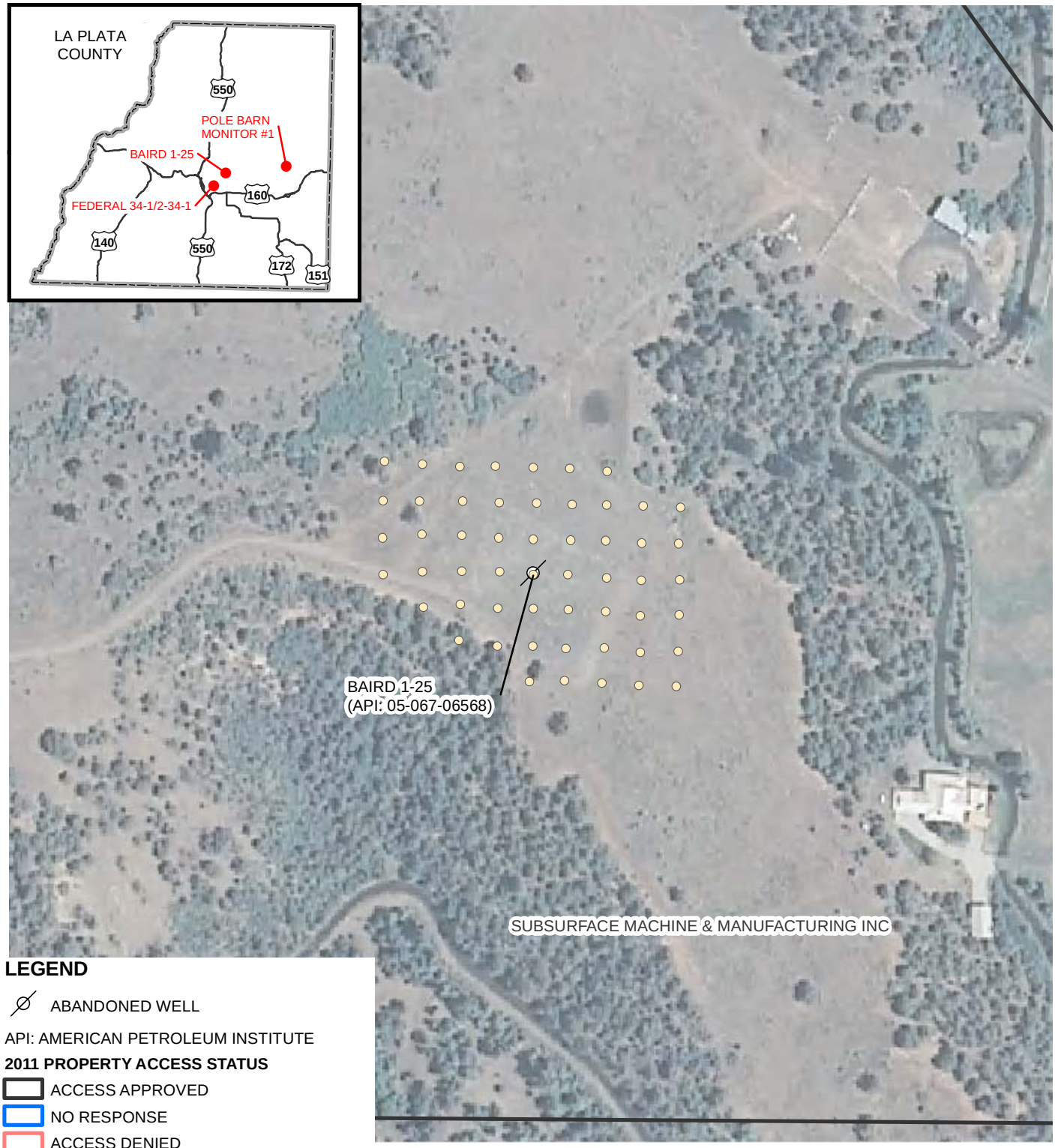
IMAGE COURTESY OF USDA/NRCS, 2009

0 200 400
Feet

N

FIGURE 41
METHANE FLUX MEASUREMENTS
FEDERAL 34-1/2-34-1
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 40 ABANDONED_WELL.mxd



LEGEND

ABANDONED WELL

API: AMERICAN PETROLEUM INSTITUTE

2011 PROPERTY ACCESS STATUS

- ACCESS APPROVED
- NO RESPONSE
- ACCESS DENIED

METHANE FLUX MEASUREMENT (mol/m ^{2} • day)

- 0.0000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 1000.0000

mol/m^2 • day: MOLES PER SQUARE METER PER DAY
FLUX POINTS NOT LABELED ARE LESS THAN
0.2000 mol/m^2 • day METHANE

IMAGE COURTESY OF USDA/NRCS, 2009

0 200 400
Feet

N

FIGURE 42
METHANE FLUX MEASUREMENTS
BAIRD 1-25
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO
THE GROUP

P:\San Juan Basin GIS\LaPlata\Fruitland_OMR\MXDs\Subgas_Flux\2011\2011_FIG 40 ABANDONED_WELL.mxd

TABLES

TABLE 1
PROPERTY ACCESS STATUS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

Parcel Number	Access Granted	Access Date	Property Owner	Mailing City, State, Zip Code
566731100023, 566905300033, 566907100035, 567116300303	YES	4/20/2011	STATE OF COLORADO DEPT OF NAT RESOURCES	DENVER, CO 80216
567507100319, 567507100320	YES	4/13/2011	BERTSCH, JACKIE D & BRO, NEAL E	SCOTTSDALE, AZ 85255
566734400007, 566904100020, 567108400012, 567111200305, 567118400192, 567510300070, 567515100018	YES	4/12/2011	BLM	DURANGO, CO 81301
566524100808	YES	4/20/2011	BOKI LLC	INDIANAPOLIS, IN 48208
566905100028	YES	4/7/2011	CARLENO, DONALD L &	DURANGO, CO 81301
566904200021, 566905105015, 566905400803, 566526200033, 566527300105	YES	4/8/2011	CITY OF DURANGO	DURANGO, CO 81301
567111300824	YES	4/11/2011	D & G INVESTMENTS	TEMPE, AZ 85283
567109300185	YES	4/20/2011	EL DORADO RANCH	DURANGO, CO 81301
567509100178	YES	4/11/2011	EVERITT-ROBERTS LLC	LAKE JACKSON, TX 77566
567110300889	YES	4/13/2011	FIDDLER, BARBARA DILLOW LIV TRUST	DURANGO, CO 81301
567509200375	YES	4/8/2011	FINCHER, RONALD C & DARLENE A	BAYFIELD, CO 81122
567514201018	YES	4/15/2011	GREEN, BRYAN F & JULIE A	ALBUQUERQUE, NM 87114
566904200033, 566905100007, 566905100001, 566905100002, 566905100018	YES	4/7/2011	JRLT LLC	DURANGO, CO 81301
566905200031, 566905400034	YES	4/6/2011	LA PLATA COUNTY, BOARD OF COUNTY COMMISSIONERS	DURANGO, CO 81301
567514201021	YES	4/7/2011	LEROY, PATRICIA M	BAYFIELD, CO 81122
567101300802, 567102400804, 567111100803	YES	4/26/2011	LIDDELL, CORINNE & ANTHONY J	DURANGO, CO 81301
566524100054	YES	4/17/2011	LOEHR, WILLIAM & SHERRY	OJAI, CA 93023
566524100806, 567118300800	YES	4/10/2011	MACHO FAMILY TRUST	DURANGO, CO 81301
567514300016	YES	4/11/2011	MAGEE GERALD & AVON REV TRUST	BERNALILLO, NM 87004
567514201042, 567514201043	YES	4/12/2011	NEW AGE CORPORATION	BAYFIELD, CO 81122
567508400192	YES	4/11/2011	NYGARD, CHARLSIE, LEWIS CHRISTOPHER & PAULA LEA	BAY CITY, TX 77414
566524400831, 567118400806, 567119100897, 567119200898, 567119200229	YES	4/8/2011	PALMER RANCH LIMITED II	DURANGO, CO 81301
567514201015	YES	4/14/2011	PERRY, OSCAR D & BETTY	BAYFIELD, CO 81122
566523101019	YES	4/25/2011	PHILIPBAR, ROBIN	GREENVILLE, DE 19807
567507400270	YES	4/20/2011	RATHER, DARWIN R & MAXINE J	BASALT, CO 81621
567512300003, 567513200345, 567514100002, 567514100015	YES	4/18/2011	REMMOW LAND CO LIMITED PARTNERSHIP	BAYFIELD, CO 81122
566525100135, 566524300812, 566524400813	YES	4/11/2011	SUBSURFACE MACHINE & MANUFACTURING INC	DURANGO, CO 81301
566523101017	YES	4/8/2011	THOMPSON, KAREN J & EADS, LARRY D	DURANGO, CO 81301
567508300308, 567508300309	YES	4/8/2011	TULLOCH, WILLIAM T H & ELIZABETH C	RAMONA, CA 92065
567508100113, 567508100165	YES	4/13/2011	WALKER, CLARENCE GLEN & IVY KATHERINE	BAYFIELD, CO 81122
567514201019	YES	4/9/2011	YOUNG, JENNIFER SUE	PLACENTIA, CA 92870
567509400065, 567510400009	YES	4/21/2011	ULLMAN RANCHES LLC	VALENCIA, CA 81355
567508400193, 567508400263, 567514201004, 567514201006, 567514201007, 567514201008, 567514201016, 567514300017, 567515200183, 567515200184	YES	4/8/2011	BP AMERICA PRODUCTION CO	HOUSTON, TX 77253-3092
567514201020	YES	5/8/2011	CALLENDER, JOSEPH I & HELEN B	METAIRIE, LA 70002
567508200326	YES	5/15/2011	CLARK, BRETT	PATASKALA, OH 43062
567514201001	YES	5/16/2011	MULLINS, VICKY A TRUST	BAYFIELD, CO 81122
566301200180, 567118300194	YES	5/5/2011	UNITED STATES DEPT OF INTERIOR	DURANGO, CO 81302
566905100003	YES	4/25/2011	STATE OF COLORADO	DENVER, CO 80222
567508400169, 567509300144	YES	4/1/2011	BP AMERICA PRODUCTION CO	HOUSTON, TX 77079
567119200267	NO	4/7/2011	BEACH, MARSHALL A & MARY P TRUSTEES & BEACH, ZACHARIAH A	SANTA FE, NM 87508
567110100820, 567110200805	NO	4/7/2011	ELK PARK LIMITED PARTNERSHIP	DURANGO, CO 81301
566523400115	NO	4/18/2011	GOLTZ, GREGORY L & LEW-GOLTZ, JOANNE W	DURANGO, CO 81302
567117201011	NO	4/11/2011	GORTON FAMILY LIMITED PARTNERSHIP LLLP	DURANGO, CO 81301
567117301007, 567117301008	NO	4/8/2011	GORTON FAMILY PARTNERSHIP LLLP	DURANGO, CO 81301
567508200327	NO	4/7/2011	HITCHCOCK, BECKY JO & WILKENING, DIANA M	BAYFIELD, CO 81122
567119200266	NO	4/7/2011	MARSH, WILLIAM BUSH & ELIZABETH W	DURANGO, CO 81301
567508400264	NO	4/10/2011	MCCOY, DENNIS & DUANE	DURANGO, CO 81301
567110300811	NO	4/13/2011	RISE AND WALK LLC	LOPEZ ISLAND, WA 98261
567508100168	NO	4/29/2011	SARAFIN, GREGORY R	DURANGO, CO 81302-2754
567119200197	NO	4/10/2011	TURNER, STEPHAN & TURNER-ANDEREGG, REGINA	DURANGO, CO 81301
567916100070	NO	4/14/2011	UNITED STATES OF AMERICA	WASHINGTON, DC 20200
594721100030	NO	4/14/2011	UNITED STATES OF AMERICA IN	IGNACIO, CO 81137
567508200329	NO	4/12/2011	WARD, CHRISTOPHER A & KIMBERLY A	BAYFIELD, CO 81122
566526100190, 566526100191, 566526100192, 566526200189, 566526300185, 566526300187, 566526300188, 566527400181, 566527400183, 566527400186, 566533100170, 566533100172, 566533100856, 566533400174, 566533400196, 566534100180, 566534100182, 566534100184, 566534200173, 566534200177, 566534200178, 566534200179, 566534300175, 566534300176, 566733100097, 566733100098, 566733100106, 566733300093, 566733300813, 566733300815, 566733400096, 566733400814, 566733400816, 566904100807, 566904200067, 566904200068, 566904200069, 566904200808, 566904200809, 566904300810	NO	6/10/2011	OAK RIDGE ENERGY INC	WICHITA FALLS, TX 76302
566904300065, 566904300804, 566905400806	NO RESPONSE	NO DATE	ACME REALTY-DURANGO LTD	MESQUITE, TX 75187
567514201009	NO RESPONSE	NO DATE	BRAME, JOEL L	WILDWOOD, MO 63005
567508300307	NO RESPONSE	NO DATE	BRYSON, PHILIP JAMES & LUCY T	BAYFIELD, CO 81122
567507100332	NO RESPONSE	NO DATE	BUSCAGLIA, TOM	DURANGO, CO 81303
567514201013	NO RESPONSE	NO DATE	CASSELLA, JOSEPH A	SIMI VALLEY, CA 93065
566524100851	NO RESPONSE	NO DATE	COOK, RODYNIE & DONNA	DURANGO, CO 81301
567507100321	NO RESPONSE	NO DATE	CRANE, RONNIE D & SHANNON M	GILBERT, AZ 85296-4412
567508100265	NO RESPONSE	NO DATE	DEAL, VICTORIA ANNE & TIMOTHY YALE	CHERRY HILL, NJ 08034
567509100179	NO RESPONSE	NO DATE	DILLASHAW, HARRY LIV TRUST	HOUSTON, TX 77001
566905400032	NO RESPONSE	NO DATE	DURANGO CROSSING II LLC	MESQUITE, TX 75187
566523403009	NO RESPONSE	NO DATE	ENSIGN, THOMAS CHARLES JR & TONYA ALVILD	DURANGO, CO 81301
567119200285	NO RESPONSE	NO DATE	FLORIDA WATER CONSERVANCY DISTRICT	DURANGO, CO 81302
567507200277	NO RESPONSE	NO DATE	FOSTER, CHARLES O	DURANGO, CO 81301
567514201003	NO RESPONSE	NO DATE	FRIEDMAN, ALAN R & GAY W TRUSTEES	TUCSON, AZ 85705
567514201017	NO RESPONSE	NO DATE	GOMER, WILLIAM EARL	HERRIMAM, UT 84065
567514201002	NO RESPONSE	NO DATE	GRAHAM, KRISTOPHER J & CHERIPKA, AMANDA	BAYFIELD, CO 81122
566733300021	NO RESPONSE	NO DATE	HELMERICKS, CLARENCE J & SHARON F	DURANGO, CO 81301
567507100316	NO RESPONSE	NO DATE	HENDERSON, RANDAL C & SUSAN J	BAYFIELD, CO 81122
567117101001, 567117101002, 567117401003	NO RESPONSE	NO DATE	HERRICK, WILLIAM J & DONNA M	CARLSBAD, CA 92009
567508200328	NO RESPONSE	NO DATE	IRELAND, JARRETTE S & DEBORAH A	BAYFIELD, CO 81122
567112100261	NO RESPONSE	NO DATE	KANE RANCH LLC	BAYFIELD, CO 81122
567509200167	NO RESPONSE	NO DATE	KURTZ, H RICHARD	BAYFIELD, CO 81122
566905400024	NO RESPONSE	NO DATE	LA PLATA COUNTY HUMANE SOCIETY	DURANGO, CO 81301
567514300014	NO RESPONSE	NO DATE	MCWILLIAMS, BRADLEY & LAURA C	HOUSTON, TX 77024
566524200126	NO RESPONSE	NO DATE	ORSINI, THOMAS T & MARY M	DURANGO, CO 81301
567514300009	NO RESPONSE	NO DATE	SCHUTZ, HERMAN	DURANGO, CO 81302
567116300303	NO RESPONSE	NO DATE	STATE OF COLORADO	DENVER, CO 80203
567507100333	NO RESPONSE	NO DATE	SWANSON, MOON YAH	NECHES, TX 75779
567514201014	NO RESPONSE	NO DATE	TANNER, CARLA RENEE NEAL & DOUGLAS ALAN	BAYFIELD, CO 81122
590710200083	NO RESPONSE	NO DATE	USA ACTING THROUGH	SALT LAKE CITY, UT 84138
567509300188, 567509400231	NO RESPONSE	NO DATE	VARCOE, ROY A & GORETSKY, MICHAEL	COMMERCE TOWNSHIP, MI 48390-1360
567117301006	NO RESPONSE	NO DATE	VILLELLI, THOMAS R	SAND POINT, ID 83864
566904300802, 566905400801, 566905400802	NO RESPONSE	NO DATE	WAL MART STORES INC	BENTONVILLE, AR 72712
566904300003	NO RESPONSE	NO DATE	WILLMETT, EMERY ETALS	DURANGO, CO 81301
567514100004	NO RESPONSE	NO DATE	WOMMER, HENRY B TRUST	BAYFIELD, CO 81122
567513300805, 567514400008	NO RESPONSE	NO DATE	YIANNAKIS LINE LLC	NAPERVILLE, IL 60563

TABLE 2
FLUX MEASUREMENTS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

Mapping Area	Total Number of Sample Points	Methane Flux			Carbon Dioxide Flux	
		Number of all Sample Points w/ CH_4	Number of Sample Points w/ CH_4 [1]	Maximum flux value[2]	Number of Sample Points w/ CO_2	Maximum flux value[2]
Basin Creek to Carbon Junction	567	136	83	43.1	541	12.05
Florida River	65	8	5	2.5	63	1.53
Vosburg Pike	107	15	7	13.3	100	7.81
Texas Creek to Pine River	472	96	61	873.0	454	7.33
Total	**1,211**	**255**	**156**		**1,158**	

Notes:

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

-- - Indicates value not applicable due to no value greater than 0.2 $mol/m^2 \cdot day$

TABLE 3
HISTORICAL METHANE AND CARBON DIOXIDE FLUX COMPARISON
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

	Methane														
	2007			2008			2009			2010			2011		
Mapping Area	Seepage Area (acres)	Total Volumetric Flux (MCFD)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Total Volumetric Flux (MCFD)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Total Volumetric Flux (MCFD)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Total Volumetric Flux (MCFD)	Reportable Volumetric Flux* (MCFD)	Seepage Area (acres)	Total Volumetric Flux (MCFD)	Reportable Volumetric Flux* (MCFD)
Basin Creek to Carbon Junction	94	654	641	406	1,048	967	312	798	760	110	310	293	179	888	860
Florida River	30	135	131	52	44	27	39	626	622	26	156	154	12	49	45
Vosburg Pike	14	6	2	43	22	11	34	19	15	23	10	1	21	122	115
Texas Creek to Pine River	162	5,325	5,325	359	4,056	4,006	259	2,707	2,702	160	1,300	1,300	106	1,880	1,880
TOTAL	**300**	**6,120**	**6,099**	**860**	**5,170**	**5,011**	**644**	**4,150**	**4,099**	**319**	**1,776**	**1,748**	**318**	**2,939**	**2,900**

	Carbon Dioxide									
	2007		2008		2009		2010		2011	
Mapping Area	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)
Basin Creek to Carbon Junction	137	231	582	740	506	747	415	458	515	976
Florida River	48	68	61	73	55	119	61	90	67	126
Vosburg Pike	28	44	55	52	41	56	74	132	106	193
Texas Creek to Pine River	173	715	537	1,161	452	580	441	546	404	649
TOTAL	**386**	**1,058**	**1,235**	**2,026**	**1,054**	**1,502**	**991**	**1,226**	**1,092**	**1,944**

Notes:

MCFD - thousand cubic feet per day

* Reportable methane flux volumes calculated using points greater than 0.2 moles per squared meter per day

TABLE 3
HISTORICAL METHANE AND CARBON DIOXIDE FLUX COMPARISON
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

2007
2008
2009

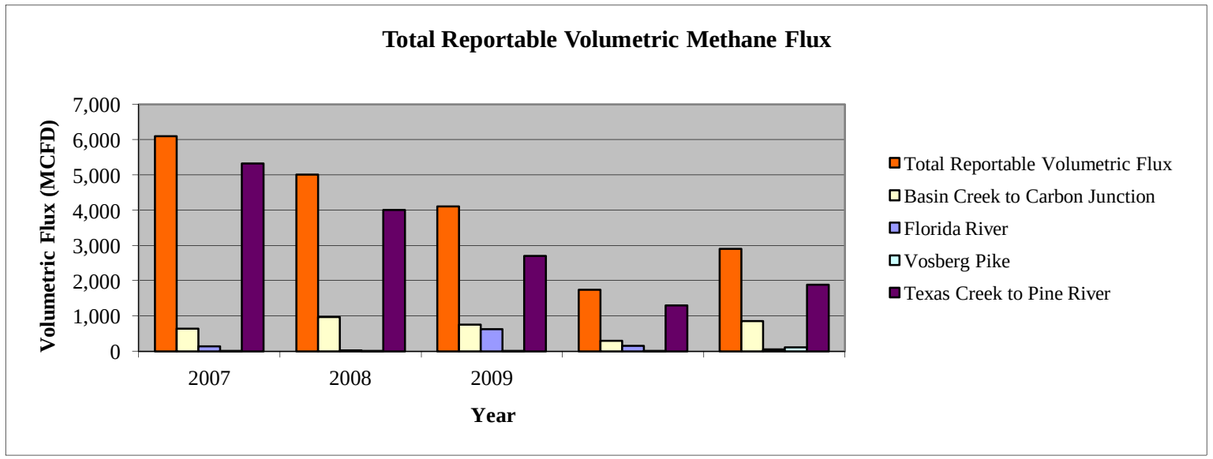


TABLE 4
NATURAL SPRINGS SAMPLING STATUS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

Natural Spring	2005	2006	2007	2008		2009		2010	2011
				June	November	May	October		
Rancho Durango North Spring	NS	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	NS
Rancho Durango East Spring	NS	NS	Sampled	NS	Sampled	Dry	Dry	NS	NS
Rancho Durango LTD Spring	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	NS
Darwin Rather Spring #1	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
Darwin Rather Spring #2	Sampled	Sampled	NS	Sampled	Sampled	Sampled	Dry	Sampled	Sampled
Wilbourn Spring #1	NS	NS	NS	NS	NS	No Access	No Access	No Access	No Access
Wilbourn Spring #2	NS	NS	NS	NS	NS	No Access	No Access	No Access	No Access
Wilbourn Spring #6	NS	NS	NS	NS	NS	No Access	No Access	No Access	No Access
Hoier Spring	NS	Sampled	Sampled	Sampled	Sampled	Sampled	Dry	NS	NS

Note:
NS - Not Sampled

TABLE 5
NATURAL SPRINGS FIELD MEASUREMENTS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

Natural Spring	Date	Temperature (°C)	pH	Electrical Conductivity (µS/cm)	TDS (mg/L)	ORP (mV)	Flow (GPM)	Subsurface Methane (ppm)
Rancho Durango North Spring	5/24/2006	13.4	7.67	533.2	360.7	87	2.0	NM
	10/8/2007	19.2	7.28	514.8	263.9	43	<0.5	NM
	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	NM	NM	2.82	0
	10/6/2009	12.1	7.25	651	NM	NM	0.6	0
	6/29/2010	13.7	7.03	586	NM	NM	0.6	0
	5/4/2011	No Access - 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						0
	10/6/2009	Dry - Not Measured						0
	6/29/2010	Not Measured						NM
	5/4/2011	No Access - Not Measured						NM
Rancho Durango LTD Spring	9/14/2005	14.6	8.05	494.1	338.0	66	>1	NM
	5/24/2006	19.3	7.38	524.5	345.9	77	1.5	NM
	10/8/2007	19.0	7.29	499.7	245.8	529	<0.25	NM
	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	NM	NM	1.47	0
	10/6/2009	7.1	7.25	635	NM	NM	0.4	0
	6/29/2010	13.9	7.05	574	NM	NM	0.49	0
	5/4/2011	No Access - Not Measured						NM
Darwin Rather Spring #1	9/17/2005	10.6	7.20	479.9	329.2	59	0.50	NM
	5/24/2006	12.3	7.76	425.9	288.4	52	1.0	NM
	10/8/2007	15.2	8.05	399.5	210.6	55	1.0	NM
	6/23/2008	12.6	7.34	432.0	308.9	81	NM	0
	10/15/2008	Dry - Not Measured						0
	5/12/2009	7.9	7.16	437.0	NM	NM	0.23	0
	10/6/2009	8.4	7.18	475	NM	NM	NM	0
	6/29/2010	11.6	6.72	476	NM	NM	NM	0
	5/4/2011	11.1	6.59	429	216	77.4	NM	0
Darwin Rather Spring #2	9/17/2005	14.4	7.50	271.4	178.3	45	<0.25	NM
	5/24/2006	13.0	7.69	344	222.9	-62	<1.0	NM
	10/8/2007	Dry - Not Measured						NM
	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	NM	NM	1.80	0
	10/6/2009	Dry - Not Measured						0
	6/29/2010	21.1	7.58	252	NM	NM	NM	0
	5/4/2011	14.8	7.5	282	142	49.8	NM	0
Hoier Spring	5/24/2006	17.5	7.24	670.5	453.9	35	NM	NM
	10/8/2007	21.0	8.23	221.6	111.9	20	<0.25	NM
	6/23/2008	20.8	8.2	257.0	173.0	52.0	0.042	NM
	10/15/2008	12.33	7.78	254	165	90.4	0.031	0
	5/14/2009	18.1	6.9	380.0	NM	NM	0.050	0
	10/6/2009	Dry - Not Measured						0
	6/29/2010	Spring pipe cut during monitoring well installation; not enough water to sample						NM
	5/4/2011	Dry - Not Measured						NM

Notes:

°C - degrees Celcius
GPM - gallons per minute
mg/L - milligrams per liter
mV - millivolts
NM - Not measured
ORP - oxidation reduction potential
ppm - parts per million
TDS - total dissolved solids
µS/cm - microSiemens per centimeter
< - less than
> - greater than

TABLE 6
NATURAL SPRINGS LABORATORY METHANE CONCENTRATIONS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

	DISSOLVED METHANE (mg/L)								
	2005	2006	2007	2008		2009		2010	2011
Natural Spring	September	May	October	June	October	May	October	June	May
Rancho Durango North Spring	Not Sampled	<0.0010	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	Not Sampled
Rancho Durango East Spring	Not Sampled				<0.02	Not Sampled		Not Sampled	Not Sampled
Rancho Durango LTD Spring	<0.0005	0.0016	<0.02	<0.02	<0.02	<0.02	<0.02	0.1	Not Sampled
Darwin Rather Spring #1	<0.0005	<0.0010	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Darwin Rather Spring #2	0.002	0.0017	Not Sampled	<0.02	<0.02	<0.02	Not Sampled	<0.02	<0.02
Hoier Spring	Not Sampled	0.0017	<0.02	<0.02	<0.02	<0.02	Not Sampled	Not Sampled	Not Sampled

Notes:

mg/L - milligrams per liter

< - less than the stated laboratory method detection limit

TABLE 7
NATURAL SPRINGS MAJOR IONS CONCENTRATIONS
2011 FRUITLAND OUTCROP MONITORING
LA PLATA COUNTY, COLORADO

THE GROUP

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)	
Darwin Rather Spring #1	6/23/2008	65.0	21.4	9.0	1.3	<10	212	39	<10	230
	10/15/2008	56.7	18.6	7.5	0.9	<10	208	34	11	230
	5/12/2009	54.7	17.6	7.8	1.1	<10	200	33	10	205
	6/29/2010	59.9	19.6	8.4	1.3	<10	204	44	<10	245
	5/4/2011	52.4	17.3	7.4	2.1	<10	178	38	13	255
Darwin Rather Spring #2	6/23/2008	39.3	6.1	13.6	<0.5	<10	138	19	<10	130
	10/15/2008	33.7	6.6	10.9	0.5	<10	133	16	<10	170
	5/12/2009	35.3	6.7	11.3	0.8	<10	123	22	<10	150
	6/29/2010	37.9	6.5	11.8	1.3	<10	119	12	<10	140
	5/4/2011	35.4	6.1	13	0.7	<10	120	28	<10	185
Rancho Durango LTD Spring	6/23/2008	79.5	20.1	16.7	0.9	<10	252	69	<10	305
	10/15/2008	69.7	17.5	14.9	1.0	<10	252	71	<10	300
	5/12/2009	79.8	19.1	16.4	1.2	<10	258	80	<10	305
	6/29/2010	80.3	18.7	16.9	1.4	<10	250	69	<10	350
	5/4/2011	Not Sampled				Not Sampled				Not Sampled
Rancho Durango North Spring	6/23/2008	108	31.9	14.5	2.0	<10	332	122	<10	460
	10/15/2008	77.1	22.0	13.7	1.1	<10	276	79	<10	355
	5/12/2009	80.1	19.3	15.5	1.1	<10	262	71	<10	335
	6/29/2010	83.4	19.8	16.8	1.1	<10	252	80	<10	340
	5/4/2011	Not Sampled				Not Sampled				Not Sampled
Rancho Durango East Spring	10/15/2008	60.5	12.9	14.8	0.7	<10	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
Hoier Spring	6/23/2008	25.8	12.4	13.9	1.3	<10	144	<10	<10	105
	10/15/2008	23.7	11.8	13.7	1.4	<10	138	<10	<10	135
	5/14/2009	24.0	11.2	11.9	1.2	<10	133	<10	<10	100
	6/29/2010	Not Sampled				Not Sampled				Not Sampled
	5/4/2011	Not Sampled				Not Sampled				Not Sampled

Notes:

mg/L - milligrams per liter

TDS - total dissolved solids

< - less than laboratory reporting limit

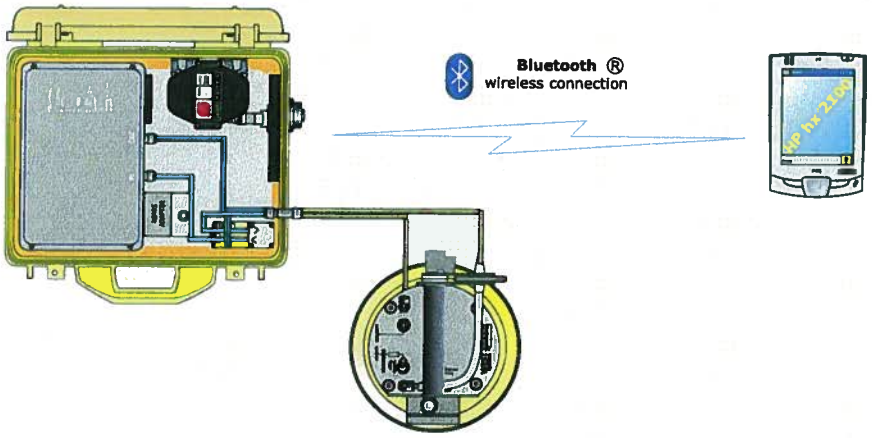
APPENDIX A

EQUIPMENT SPECIFICATIONS

WEST Systems portable soil flux meter

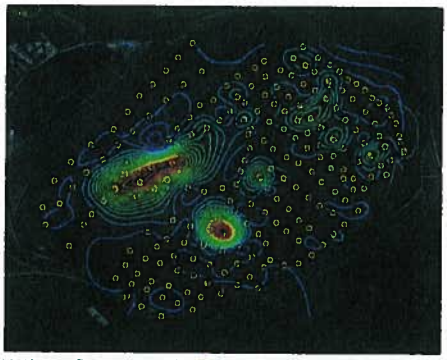
for Carbon dioxide, Methane and Hydrogen sulfide fluxes

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

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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

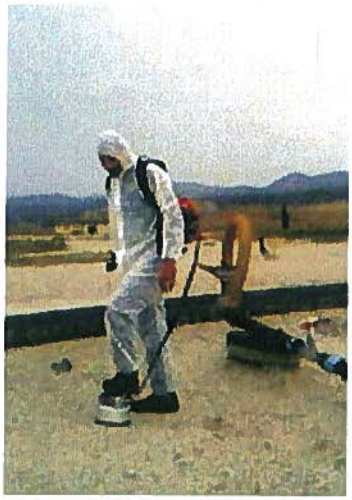
Palm top computer: PocketPC Color Display based on Windows Mobile operating system.
- PalmTop with cables, 0.3 Kg/0.7 lbs.
- Size 125mm (4.8") x 82mm (3.2") * 25 mm (1").

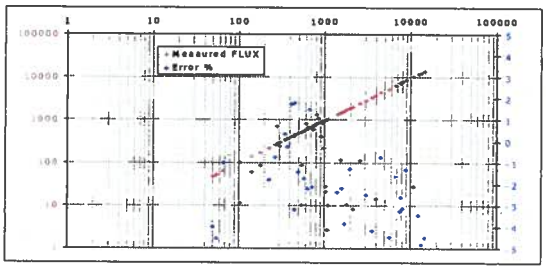
Software The instrument is supplied with a custom software, FluxManager, which allows recording and visualization of the increase in concentration of the target gas in the accumulation chamber, and then the flux calculations. The obtained measurements can be saved on the palmtop computer and then transferred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

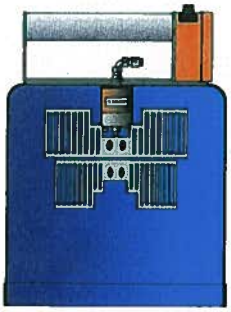
Finally we improved the connection between the instrument and the palmtop that now is based on BlueTooth wireless embedded device.





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

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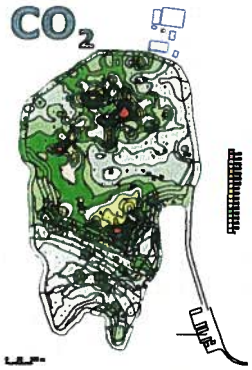


CO_2 - LI820

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.

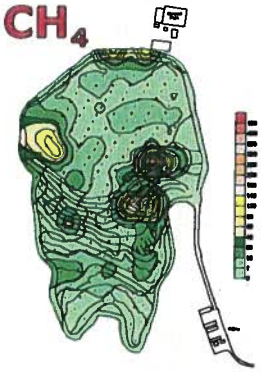
The precision depends on the measured flux:

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%)



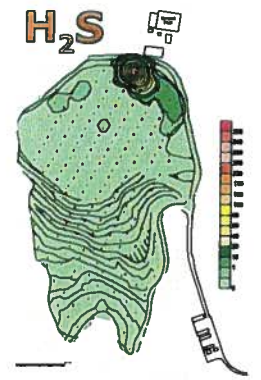
WS-HC CH^4

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.

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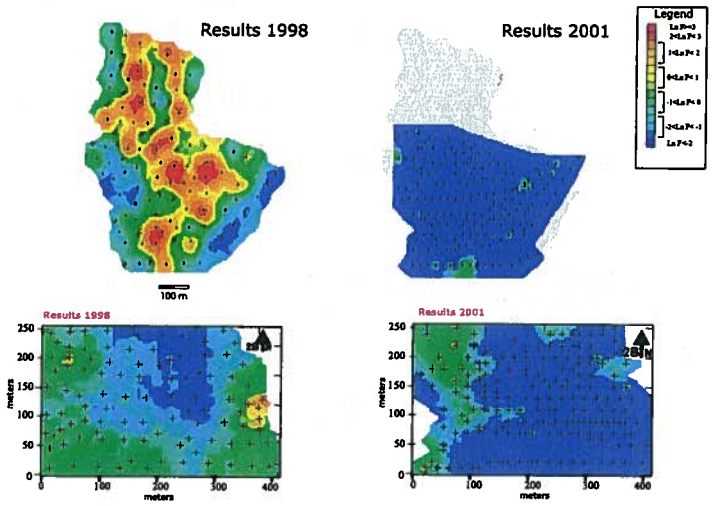
Application on a landfill: mapping the biogas non controlled emissions.

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.

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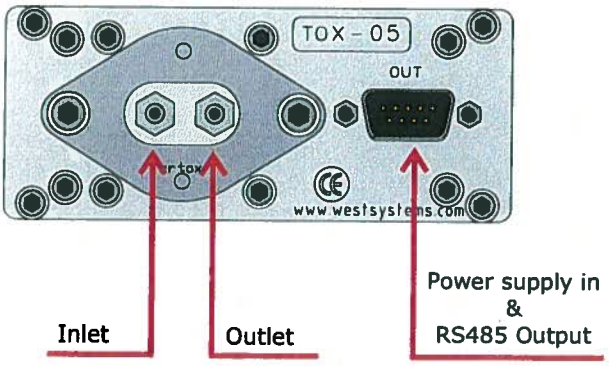
Hydrogen Sulfide Detector



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)

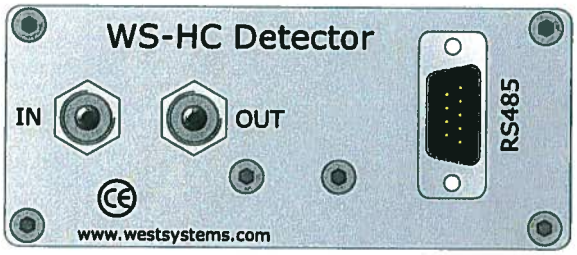
Full scale range is 50000 ppm of methane.

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

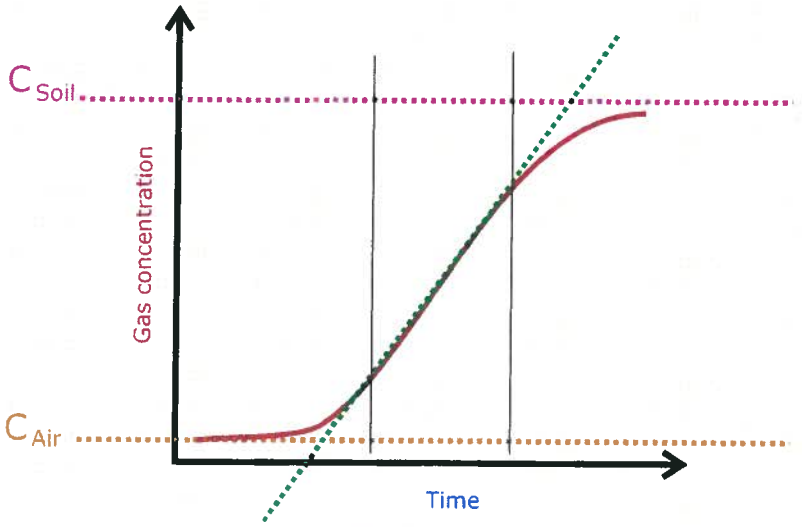
Relative Humidity Range: 0 to 95% RH, Non-Condensing

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:

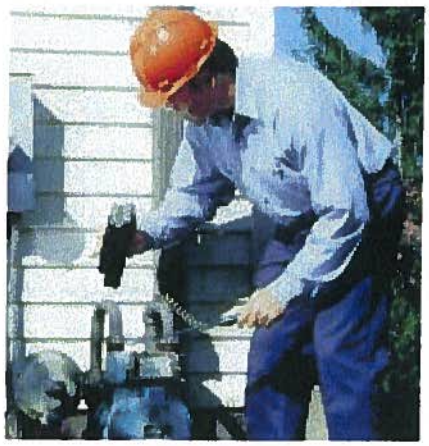
You're using the accumulation chamber B, the slope of the flux curve is 2.5 ppm/sec, the barometric pressure is 1008 mBar (HPa) and the air temperature is 22 °C.
From the table B get the value that correspond to the barometric pressure and temperature. In this case I get the value computed for 25°C and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

ID 08-04-27-MC / May 2000

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Pittsburgh, PA 15230 USA
Phone (412) 967-3000
www.MSAnet.com

U.S. Customer Service Center
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MSA International
Phone (412) 967-3354
FAX (412) 967-3451

Offices and representatives worldwide
For further information:

MSA

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.

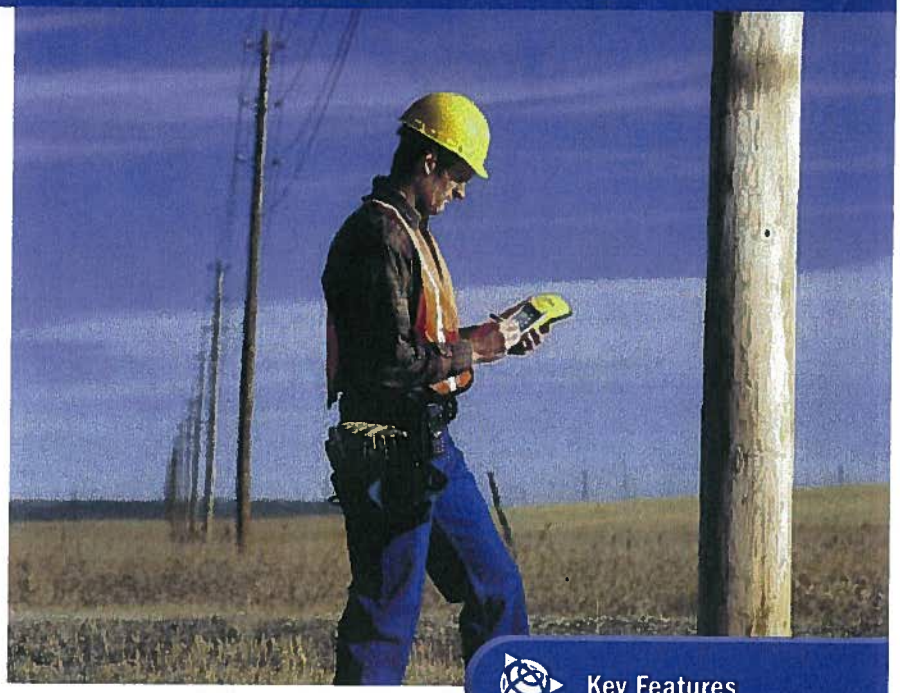
Windows Mobile includes familiar Microsoft productivity tools, including Pocket Word, Pocket Excel, and Pocket Outlook®. Pocket Outlook lets you synchronize e-mails, contacts, appointments, and data with your office computer, so whether you're in the office or in the field, you're always up to date.

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

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ULTRAMETER II™

OVER 50 YEARS

MYRON L COMPANY

Water Quality Instrumentation

Accuracy • Reliability • Simplicity

ULTRAMETER II™

Advanced Design • Superior Performance

MADE IN USA

OVER 50 YEARS

pH/ORP Sensor protective cap

Four-digit display for full 9999 readings, with autoranging capability up to 200 mS/200 ppt

Powerful microprocessor based surface-mount circuitry

Display prompts for simple pH calibration

Memory for 100 readings with Date & Time Stamp

Real Time Clock

Factory calibrations stored in microprocessor

Conductivity

Resistivity

TDS

Temperature

pH

ORP

CE

ULTRA-FAST
ULTRA-EASY
ULTRA-POWERFUL

Since 1957, the Myron L Company has designed and manufactured highly reliable analytical instruments for a wide variety of applications. Thousands of professionals around the world rely every day on the performance of our instruments. Demanding uses range from boiler water testing to ultrapure water control to medical instruments for artificial kidney machines.

We are proud of the trust our handheld instruments and monitor/controllers have earned in the past. Our product line has evolved to a new level of outstanding performance and value in analytical instruments: the Ultrameter II series. While priced like affordable single-parameter instruments, the Ultrameter II does the job of three, four or even six instruments.

Accuracy You Can Trust

Both Ultrameter II models deliver performance of ±1% of reading (not merely full scale). This high level of accuracy has been achieved through advanced four-electrode conductivity cell technology, a unique pH/ORP sensor and powerful microprocessor-based circuitry. With displayed values of up to 9999, the full four-digit LCD ensures resolution levels never before possible in such affordable instruments. Factory calibrated with NIST traceable solutions, each Ultrameter II may be supplied with both certification of traceability and NIST traceable solutions for definitive calibration.

Fast and accurate in the laboratory, both Ultrameter II models are rugged enough for daily in-line controller checks in hostile process applications.

Innovative Engineering

The Ultrameter II is a prime example of how high-tech engineering can greatly simplify and streamline a task. Whether in the lab, industrial plant, or in a remote field location, merely:

1. Fill the cell cup
2. Push a parameter key
3. Take the reading

Temperature compensation and range selection are both rapid and automatic. The Ultrameter II is a true one-hand operation instrument.

Easy to Calibrate

All calibrations are quickly accomplished by pressing the ☒ or ☒ keys to agree with our NIST traceable Standard Solution. When calibration is necessary, display prompts simplify pH calibration and make sure the correct buffer is being used. Plus, all parameters (excluding factory-set temperature) have an internal electronic setting that can be used for field calibration and as a check on pH/ORP sensor life.

Advanced Features

- Fully automatic temperature compensation
- User adjustable temperature compensation (up to 9.99%/°C) which also allows TC to be disabled for applications requiring non-compensated readings.
- User adjustable conductivity/TDS conversion ratio for greater accuracy when measuring solutions not contained in the microprocessor.
- Auto-shutoff maximizes the life of the single 9V battery to more than 100 hours/5000 tests.
- Non-volatile microprocessor provides data back-up, even when the battery is changed. This assures all calibrations and memory data will be retained.
- Extended life pH/ORP sensor is user replaceable in the field.

High Performance at a Low Cost

Beyond their affordable purchase price, Ultra-Fast, Ultra-Easy, Ultra-Powerful Ultrameter II's save both time and money. Measure for measure, Ultrameter II's give you a better return on your investment than any other handheld instrument. To see for yourself, contact your distributor or the Myron L Company today.

Multiple Applications

Irrigation Water

Hydroponics

Laboratories

Homeland Security

Reverse Osmosis

Deionization

Wastewater

Cooling Towers

Environmental

Desalination

Fountain Solutions

BENEFITS DESIGNED TO SAVE YOU TIME & MONEY

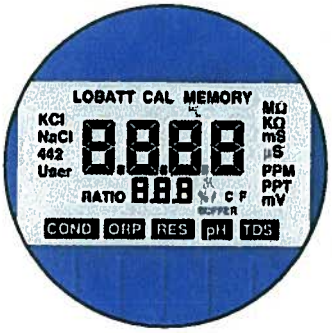
Built-in IR Port allows you to conveniently download your data to a computer. **(Requires Myron L uDock™ Accessory Package)**

Ample memory provides increased flexibility to record and store 100 separate readings.

Real Time Clock with Date & Time Stamp allows you to maintain the integrity of each individual reading.

The advanced four-electrode cell for conductivity/resistivity/TDS eliminates polarization, allowing greater accuracy and stability with minimal maintenance.

The pH/ORP sensor chamber provides protection to a unique porous liquid-junction.



The large capacity KCl reservoir guarantees extended life.

A custom LCD helps simplify calibration and operation by using annunciators and prompts to indicate various conditions.

IP67/NEMA 6 rated Ultrameter II's are waterproof and buoyant and can be fully immersed to 3 feet/1 meter.

Features

Ultrameter II™ Models	4PII Conductivity TDS, Resistivity Temperature	6PII Conductivity, TDS Resistivity, pH ORP, Temperature
Autoranging	•	•
Adjustable Temp. Compensation	•	•
Adjustable Cond/TDS ratio	•	•
Memory (100 readings)	•	•
Date & Time Stamp	•	•
pH Calibration Prompts		•
Low battery indicator	•	•
Auto-off	•	•

Specifications

Display	4 Digit Liquid Crystal Display
Dimensions LxWxH	196 x 68 x 64 mm/ 7.7 x 2.7 x 2.5 inches
Weight	352 g/12.4 oz.
Case/conductivity cell material	VALOX*
Cell capacities	pH/ORP: 1,2 ml/0.04 oz. Cond/TDS/Res: 5 ml/0.2 oz.
Power	9V alkaline battery
Battery life	>100 hours (5000 readings)
Operating/storage temperature	0 – 55°C/32 – 132°F
Protection ratings	IP67/NEMA 6 Waterproof to 1 meter/3 feet

*™GENERAL ELECTRIC

Parameters

	Conductivity	TDS	Resistivity	pH	ORP	Temperature
Ranges	0–9999 µS/cm 10–200 mS/cm in 5 autoranges	0–9999 ppm 10–200 ppt in 5 autoranges	10 KΩ–30 MΩ	0–14 pH	±999 mV	0–71°C 32–160°F
Resolution	0.01(<100 µS) 0.1(<1000 µS) 1.0(<10 mS) 0.01(<100 mS) 0.1(<200 mS)	0.01(<100 ppm) 0.1(<1000 ppm) 1.0(<10 ppt) 0.01(<100 ppt) 0.1(<200 ppt)	0.01(<100 KΩ) 0.1(<1000 KΩ) 0.1(>1 MΩ)	±0.01 pH	±1 mV	0.1°C/F
Accuracy	±1% of reading	±1% of reading	±1% of reading	±0.01 pH	±1 mV	±0.1°C
Auto Temperature Compensation	0–71°C 32–160°F	0–71°C 32–160°F	0–71°C 32–160°F	0–71°C 32–160°F	—	—
Adjustable Temperature Compensation to 25°C	0–9.99%/°C	0–9.99%/°C	0–9.99%/°C	—	—	—
Conductivity/TDS Ratios Preprogrammed	KCl, 442*, NaCl	KCl, 442*, NaCl	—	—	—	—
Adjustable Conductivity/TDS Ratio Factor	0.20–7.99	0.20–7.99	—	—	—	—

*442 Natural Water Standard ™ Myron L Company

Accessories

uDock™ Accessory Package includes uDock™, USB cable and Macintosh/PC application software for downloading data. MODEL: U2CIP

Certificates confirming the NIST traceability of an Ultrameter II are available (must be specified when placing instrument order). MODEL: MC

Conductivity Standard Solutions are necessary to maintain accuracy and for periodic calibration of conductivity/TDS parameters. All Standard Solutions are NIST traceable for your complete confidence. RECOMMENDED VALUES: KCl-7000 (7 mS), 442-3000 (TDS), or NaCl-14.0 (mS) available in 2 oz/59 ml, 1 qt/1 L, and 1 gal/3,8 L.

pH Buffers are necessary to maintain accuracy and for periodic calibration of pH and ORP parameters. Calibration with pH 7 Buffer is especially important. All pH 4, 7, and 10 Buffers are NIST traceable and are available in 2 oz/59 ml, 1 qt/1 L, and 1 gal/3,8 L.

pH Sensor Storage Solution
Available in 2 oz/59 ml, 1 qt/1 L, and 1 gal/3,8 L.
MODEL: SS20Z, SSQ and SSG

Certificate of NIST traceability for pH Buffer or Conductivity Standard Solutions are available (must be specified when placing solution order). MODEL: SC

Hard protective case (small)
MODEL: UPP

Hard protective case (kit) with three buffers (pH 4, 7, and 10), one pH/ORP storage solution, and two standard solutions, (KCl-7000 and 442-3000). All bottles are 2 oz/59 ml.
MODEL: PKU

Soft protective case is constructed of padded Nylon and features a belt clip for hands-free mobility.
MODEL: UCC (Blue)
UCCDT (Desert Tan)

Replacement pH/ORP sensor user-replaceable, features a unique/porous liquid-junction.
MODEL: RPR

Built on Trust

Founded in 1957, Myron L Company is one of the world's leading manufacturers of water quality instruments. Because of our policy of continuous product improvement, changes in design and the specifications in this brochure are possible. You have our assurance any changes will be guided by our product philosophy: Accuracy, Reliability, Simplicity.

Limited Warranty

All Myron L Ultrameter II's have a Two (2) Year Limited Warranty. The pH/ORP sensors have a Six (6) Month Limited Warranty. Warranty is limited to the repair or replacement of the Ultrameter II only, at our discretion. Myron L Company assumes no other responsibility or liability.

MYRON L COMPANY
Water Quality Instrumentation
Accuracy • Reliability • Simplicity

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UMIIB 03-08

APPENDIX B

FLUX METER DATA

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FLUX METER DATA

AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
baird	Baird062711_01	2330746.568	1230692.683	0	0.032619223	0	6/27/2011
baird	Baird062711_02	2330794.413	1230692.558	0	0.134008244	0	6/27/2011
baird	Baird062711_03	2330798.817	1230740.089	0	0.098192587	0	6/27/2011
baird	Baird062711_04	2330746.875	1230741.124	0	0.270689845	0.000238493	6/27/2011
baird	Baird062711_05	2330698.698	1230743.489	0	0.152864546	0	6/27/2011
baird	Baird062711_06	2330699.634	1230696.195	0	0.059913456	0	6/27/2011
baird	Baird062711_07	2330697.518	1230645.757	0	0.228690416	0	6/27/2011
baird	Baird062711_08	2330746.774	1230645.476	0	0.034816697	0	6/27/2011
baird	Baird062711_09	2330795.081	1230644.098	0	0.202205077	0	6/27/2011
baird	Baird062711_10	2330847.263	1230641.489	0	0.192497328	0	6/27/2011
baird	Baird062711_11	2330848.562	1230688.012	0	0.229992449	0	6/27/2011
baird	Baird062711_12	2330847.496	1230738.931	0	0.74733609	0	6/27/2011
baird	Baird062711_13	2330848.88	1230788.602	0	0.298100114	0	6/27/2011
baird	Baird062711_14	2330800.504	1230788.978	0	0.059272923	0	6/27/2011
baird	Baird062711_15	2330750.945	1230791.397	0	0.169423684	0	6/27/2011
baird	Baird062711_16	2330699.145	1230791.761	0	0.054916069	0	6/27/2011
baird	Baird062711_17	2330648.447	1230794.153	0	0.000703289	0.000703289	6/27/2011
baird	Baird062711_18	2330647.044	1230746.727	0	0.164359719	0	6/27/2011
baird	Baird062711_19	2330647.086	1230697.393	0	0.126543686	0	6/27/2011
baird	Baird062711_20	2330645.21	1230651.172	0	0.320044965	0	6/27/2011
baird	Baird062711_21	2330643.398	1230601.093	0	0.043865543	0	6/27/2011
baird	Baird062711_22	2330696.213	1230592.965	0	0.082053021	0.000233105	6/27/2011
baird	Baird062711_23	2330745.67	1230593.231	0	0.138099864	0	6/27/2011
baird	Baird062711_24	2330792.147	1230589.888	0	0.226917416	0.001163679	6/27/2011
baird	Baird062711_25	2330845.134	1230590.201	0	0.147926211	0	6/27/2011
baird	Baird062711_26	2330895.01	1230584.809	0	0.015590394	0	6/27/2011
baird	Baird062711_27	2330895.312	1230634.994	0.000232589	0.074428536	0	6/27/2011
baird	Baird062711_28	2330896.652	1230684.638	0	0.118320309	0.000232456	6/27/2011
baird	Baird062711_29	2330896.961	1230735.815	0	0.115328133	0	6/27/2011
baird	Baird062711_30	2330899.233	1230786.922	0	0	0	6/27/2011
baird	Baird062711_31	2330951.259	1230785.078	0	0.154852435	0	6/27/2011
baird	Baird062711_32	2330948.327	1230735.121	0	0.077537537	0	6/27/2011
baird	Baird062711_33	2330949.7	1230685.414	0	0.132713124	0	6/27/2011
baird	Baird062711_34	2330949.115	1230636.358	0	0.017627643	0	6/27/2011
baird	Baird062711_35	2330947.949	1230585.542	0	0.102744326	0	6/27/2011
baird	Baird062711_36	2330945.511	1230536.976	0	0.102744326	0	6/27/2011
baird	Baird062711_37	2330893.266	1230538.441	0	0.096653178	0.000231782	6/27/2011
baird	Baird062711_38	2330841.91	1230541.638	0	0.036151227	0	6/27/2011
baird	Baird062711_39	2330789.642	1230544.951	0	0.091461323	0	6/27/2011
baird	Baird062711_40	2330741.246	1230543.882	0	0.078897953	0	6/27/2011
baird	Baird062711_41	2330593.937	1230647.084	0.000231227	0.065668359	0	6/27/2011
baird	Baird062711_42	2330592.774	1230696.204	0	0.19016695	0	6/27/2011
baird	Baird062711_43	2330591.69	1230747.62	0	0.111583762	0.000231022	6/27/2011
baird	Baird062711_44	2330588.206	1230794.195	0.00023092	0.052418888	0	6/27/2011
baird	Baird062711_45	2330592.282	1230845.211	0	0.119809903	0	6/27/2011
baird	Baird062711_46	2330644.611	1230841.719	0	0.059119575	0	6/27/2011
baird	Baird062711_47	2330693.736	1230842.292	0	0.205699146	0.000230863	6/27/2011
baird	Baird062711_48	2330746.236	1230840.69	0.000230863	0.103195868	0	6/27/2011

APPENDIX B
FLUX METER DATA

AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
baird	Baird062711_49	2330796.976	1230838.993	0	0.16902484	0	6/27/2011
baird	Baird062711_50	2330849.209	1230835.205	0	0.266631126	0	6/27/2011
baird	Baird062711_51	2330539.679	1230849.138	0.000461699	0.133661851	0	6/27/2011
baird	Baird062711_52	2330537.832	1230794.729	0	0.067356557	0	6/27/2011
baird	Baird062711_53	2330537.362	1230743.236	0	0.060420964	0	6/27/2011
baird	Baird062711_54	2330537.731	1230692.326	0	0.129638299	0.000461346	6/27/2011
bc2cj	bc062011(1)_01	2304564.701	1209959.757	0	0	0	6/20/2011
bc2cj	bc062011(1)_02	2304367.481	1209957.622	0	0.559868038	0	6/20/2011
bc2cj	bc062011(1)_03	2304351.845	1210145.75	0	0.130787551	0	6/20/2011
bc2cj	bc062011(1)_04	2304166.91	1210157.539	0.00024696	0	0	6/20/2011
bc2cj	bc062011(1)_05	2303976.352	1210368.116	0	0.107277945	0	6/20/2011
bc2cj	bc062011(1)_06	2303766.144	1210564.352	0	0.057846345	0.002684851	6/20/2011
bc2cj	bc062011(1)_07	2303560.109	1210743.036	0	0.1953637	0	6/20/2011
bc2cj	bc062011(1)_08	2303366.059	1210746.617	0.000242885	0	0.00048577	6/20/2011
bc2cj	bc062011(1)_09	2303163.68	1210941.129	0	0.033459503	0.00024246	6/20/2011
bc2cj	bc062011(1)_10	2303161.262	1211139.635	0	0.080360211	0	6/20/2011
bc2cj	bc062011(1)_11	2303168.581	1211357.669	0	0.134576082	0.000723527	6/20/2011
bc2cj	bc062011(1)_12	2303162.619	1211537.403	0	0.046896055	0.000721478	6/20/2011
bc2cj	bc062011(1)_13	2303158.821	1211738.319	0.00023992	0.132435933	0	6/20/2011
bc2cj	bc062011(1)_14	2303158.196	1211937.963	0.00023916	0.005739835	0	6/20/2011
bc2cj	bc062011(1)_15	2302958.114	1211942.825	0	0.077703148	0	6/20/2011
bc2cj	bc062011(1)_16	2302970.248	1212134.101	0	0.122349635	0	6/20/2011
bc2cj	bc062011(1)_17	2302974.859	1212352.268	0	0.117872618	0	6/20/2011
bc2cj	bc062011(1)_18	2303149.982	1212147.209	0	0.157043323	0	6/20/2011
bc2cj	bc062011(1)_19	2303366.063	1211936.558	0	0.006124838	0.000235571	6/20/2011
bc2cj	bc062011(1)_20	2303366.271	1211748.616	0	0.146953255	0	6/20/2011
bc2cj	bc062011(1)_21	2303368.356	1211550.835	0	0.098959401	0	6/20/2011
bc2cj	bc062011(1)_22	2303367.506	1211354.801	0	0.240959719	0	6/20/2011
bc2cj	bc062011(1)_23	2303371.135	1211156.911	0	0.141773656	0.004467163	6/20/2011
bc2cj	bc062011(1)_24	2303369.619	1210947.344	0.000235126	0	0.004467394	6/20/2011
bc2cj	bc062011(1)_25	2303565.437	1210946.727	0	0.036054365	0.000235649	6/20/2011
bc2cj	bc062011(1)_26	2303760.665	1210936.959	0	0.089340448	0.000235106	6/20/2011
bc2cj	bc062011(1)_27	2303777.784	1210756.164	0	0.279581964	0	6/20/2011
bc2cj	bc062011(1)_28	2303967.509	1210750.566	0	0.175991341	0	6/20/2011
bc2cj	bc062011(1)_29	2303977.826	1210956.126	0	0.139255852	0.000234833	6/20/2011
bc2cj	bc062011(1)_30	2304160.362	1210955.442	0	0.137689114	0.003753026	6/20/2011
bc2cj	bc062011(1)_31	2304157.912	1210738.536	0	0.062373113	0.00023537	6/20/2011
bc2cj	bc062011(1)_32	2304176.56	1210559.443	0	0.031039257	0.003292043	6/20/2011
bc2cj	bc062011(1)_33	2303961.28	1210544.137	0	0.2037334	0.000235803	6/20/2011
bc2cj	bc062011(1)_34	2304168.22	1210355.054	0	0.118421271	0.00023543	6/20/2011
bc2cj	bc062011(1)_35	2304358.355	1210352.488	0	0.057100333	0	6/20/2011
bc2cj	bc062011(1)_36	2304770.626	1209961.905	0	0.057264131	0	6/21/2011
bc2cj	bc062011(1)_37	2304961.4	1209949.51	0	0.103550829	0	6/21/2011
bc2cj	bc062011(1)_38	2305158.023	1209957.861	0	0.127756178	0.000505965	6/21/2011
bc2cj	bc062011(1)_39	2305345.911	1209962.62	0	0.192038149	0	6/21/2011
bc2cj	bc062011(1)_40	2305553.237	1209946.89	0.000746203	0.061686136	0.000248734	6/21/2011
bc2cj	bc062011(1)_41	2305714.062	1209946.33	0.001240606	0.188075826	0.00223309	6/21/2011
bc2cj	bc062011(1)_42	2305764.879	1210162.832	0	0.392569542	0.001484195	6/21/2011

APPENDIX B
FLUX METER DATA

AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062011(1)_43	2305759.882	1210364.159	0	0.042626653	0.003695952	6/21/2011
bc2cj	bc062011(1)_44	2305763.269	1210559.521	0.003682716	0.059660003	0.007610946	6/21/2011
bc2cj	bc062011(1)_45	2305958.152	1210564.237	0	0.099196561	0.013682285	6/21/2011
bc2cj	bc062011(1)_46	2305962.644	1210754.162	0	0.031700071	0.008290789	6/21/2011
bc2cj	bc062011(1)_47	2305948.842	1210943.241	0	0.376221418	0.006091668	6/21/2011
bc2cj	bc062011(1)_48	2305735.004	1210927.402	0	0.118180096	0.006322392	6/21/2011
bc2cj	bc062011(1)_49	2305573.851	1210757.736	0	0.246675685	0.004306656	6/21/2011
bc2cj	bc062011(1)_50	2305546.996	1210933.886	0	0.102242135	0.004788859	6/21/2011
bc2cj	bc062011(1)_51	2305375.023	1210943.903	0	0.066892609	0.005733653	6/21/2011
bc2cj	bc062011(1)_52	2305176.562	1210950.195	0	0.119947731	0.006425771	6/21/2011
bc2cj	bc062011(1)_53	2304958.704	1210972.804	0	0.240940318	0.017803473	6/21/2011
bc2cj	bc062011(1)_54	2304773.205	1210931.223	0	0.269773453	0.011636354	6/21/2011
bc2cj	bc062011(1)_55	2304560.129	1210936.526	0.138213053	0.216921017	0.002844866	6/21/2011
bc2cj	bc062011(1)_56	2304380.415	1210926.704	0	0.155800581	0.010434133	6/21/2011
bc2cj	bc062011(1)_57	2304369.931	1210738.547	0	0.999890089	0.020376908	6/21/2011
bc2cj	bc062011(1)_58	2304568.179	1210750.63	0.147849649	0.425362974	0.008502536	6/21/2011
bc2cj	bc062011(1)_59	2304748.653	1210743.559	0	0.256975055	0.010146857	6/21/2011
bc2cj	bc062011(1)_60	2304961.871	1210769.165	0	0.046026684	0.005192754	6/21/2011
bc2cj	bc062011(1)_61	2305156.298	1210765.695	0.004237906	0.065687545	0.010123887	6/21/2011
bc2cj	bc062011(1)_62	2305372.993	1210753.066	0	0.13267228	0.01631798	6/21/2011
bc2cj	bc062011(1)_63	2305393.269	1210561.876	0	0.083466314	0.009221491	6/21/2011
bc2cj	bc062011(1)_64	2305553.188	1210551.863	0	0.152500167	0.007093031	6/21/2011
bc2cj	bc062011(1)_65	2305557.631	1210351.931	0	0.084333025	0.016254131	6/21/2011
bc2cj	bc062011(1)_66	2305567.821	1210150.651	0	0.115979642	0.009429239	6/21/2011
bc2cj	bc062011(1)_67	2305388.741	1210145.214	0	0.028557729	0.008496515	6/21/2011
bc2cj	bc062011(1)_68	2305344.962	1210329.933	0.000236507	0.070478953	0.012298341	6/21/2011
bc2cj	bc062011(1)_69	2305173.557	1210335.182	0	0.11895486	0.013006993	6/21/2011
bc2cj	bc062011(1)_70	2305172.526	1210146.835	0	0.074663296	0.007584843	6/21/2011
bc2cj	bc062011(1)_71	2304978.438	1210129.416	0	0.153890595	0.007837021	6/21/2011
bc2cj	bc062011(1)_72	2304784.557	1210151.303	0	0.099224098	0.004736234	6/21/2011
bc2cj	bc062011(1)_73	2304577.92	1210163.563	0.005681582	0.151272118	0.00733871	6/21/2011
bc2cj	bc062011_01	2304567.13	1209750.109	0	0	0.000203798	6/20/2011
bc2cj	bc062011_10	2304954.597	1209138.221	0	0.121625803	0.00147128	6/20/2011
bc2cj	bc062011_11	2304963.358	1209356.662	0	0.113205068	0.001183328	6/20/2011
bc2cj	bc062011_12	2305159.541	1209330.783	0	0.054945044	0.000972479	6/20/2011
bc2cj	bc062011_13	2304756.14	1209350.492	0.126305208	0.193602979	0.002194492	6/20/2011
bc2cj	bc062011_14	2304764.905	1209543.191	0.012163044	0.125036091	0.00267587	6/20/2011
bc2cj	bc062011_15	2304553.685	1209517.038	0	0.051889207	0.001206726	6/20/2011
bc2cj	bc062011_16	2304555.171	1209331.727	0	0.127569944	0.000240245	6/20/2011
bc2cj	bc062011_17	2304358.425	1209353.097	0	0.173983812	0.000965236	6/20/2011
bc2cj	bc062011_18	2304154.703	1209350.052	0	0.111474603	0.000963064	6/20/2011
bc2cj	bc062011_19	2303954.29	1209337.717	0	0.161491945	0.001441892	6/20/2011
bc2cj	bc062011_2	2304774.794	1209746.187				6/20/2011
bc2cj	bc062011_20	2303791.423	1209340.572	0	0.32529977	0.000958173	6/20/2011
bc2cj	bc062011_21	2303771.575	1209545.408	0	0.151385427	0.00143267	6/20/2011
bc2cj	bc062011_22	2303547.338	1209548.192	0.369305879	0.190312445	0.001726625	6/20/2011
bc2cj	bc062011_23	2303360.434	1209542.96	0.835366368	1.007339597	0.000237861	6/20/2011
bc2cj	bc062011_24	2303340.172	1209736.878	0.006099772	0.804935336	0.00070382	6/20/2011

APPENDIX B
FLUX METER DATA

AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062011_25	2303553.001	1209755.506	0	0.324904203	0.000943118	6/20/2011
bc2cj	bc062011_26	2303751.994	1209745.959	0	0.148701847	0.000942643	6/20/2011
bc2cj	bc062011_27	2303937.653	1209542.683	0.001886608	0.242664978	0.000943304	6/20/2011
bc2cj	bc062011_28	2304185.163	1209520.559	0	0.256652504	0.001652776	6/20/2011
bc2cj	bc062011_29	2304355.182	1209552.1	0.002366049	0.223828241	0.00094642	6/20/2011
bc2cj	bc062011_3	2304965.74	1209580.217	0	0.029791914	0.000248266	6/20/2011
bc2cj	bc062011_30	2304308.677	1209753.706	0.01022391	0.017594635	0.000475531	6/20/2011
bc2cj	bc062011_31	2304167.893	1209773.691	0.005230646	0.07869745	0.00285308	6/20/2011
bc2cj	bc062011_32	2303962.906	1209774.398	0	0.049595647	0.000238441	6/20/2011
bc2cj	bc062011_33	2303836.809	1209950.662	0.000192267	0.058833718	0.000576801	6/20/2011
bc2cj	bc062011_34	2303564.713	1209969.995	0	0.128007114	0.000953498	6/20/2011
bc2cj	bc062011_35	2303365.768	1209978.416	0	0.021201694	0.000476443	6/20/2011
bc2cj	bc062011_36	2303161.275	1209976.613	0.011907919	0.040248767	0.000714475	6/20/2011
bc2cj	bc062011_37	2302963.105	1209961.849	0	0.084856309	0.000237029	6/20/2011
bc2cj	bc062011_38	2302768.463	1209951.907	0	0.041806445	0.000237537	6/20/2011
bc2cj	bc062011_39	2302976.465	1210145.923	0	0.008998966	0	6/20/2011
bc2cj	bc062011_4	2305162.017	1209543.253	0	0.009974856	0.000249371	6/20/2011
bc2cj	bc062011_40	2303169.7	1210148.264	0	0.015647447	0.000237083	6/20/2011
bc2cj	bc062011_41	2303368.741	1210140.344	0.001420687	0.210261643	0.003078155	6/20/2011
bc2cj	bc062011_42	2303566.206	1210158.037	0	0.021182064	0.000572488	6/20/2011
bc2cj	bc062011_43	2303773.213	1210152.581	0.004013042	0.084509932	0.004249102	6/20/2011
bc2cj	bc062011_44	2303967.314	1210146.578	0	0.103401013	0	6/20/2011
bc2cj	bc062011_45	2303965.831	1209955.343	0	0.165547118	0.000709488	6/20/2011
bc2cj	bc062011_46	2304165.282	1209957.826	0.016108174	0.073908091	0.001421309	6/20/2011
bc2cj	bc062011_47	2304373.261	1209940.234	0.007335519	0.919542789	0.001419778	6/20/2011
bc2cj	bc062011_48	2304558.913	1209143.049	0	0.139096797	0	6/21/2011
bc2cj	bc062011_49	2304771.29	1209151.356	0	0.26755178	0.001253757	6/21/2011
bc2cj	bc062011_5	2305363.575	1209366.214	0	0.038910132	0.000498848	6/20/2011
bc2cj	bc062011_50	2304746.629	1208956.547	0	0.10513816	0	6/21/2011
bc2cj	bc062011_51	2304772.652	1208774.764	0	0.115034029	0.000247385	6/21/2011
bc2cj	bc062011_52	2304567.439	1208743.835	0	0.140877828	0.000246721	6/21/2011
bc2cj	bc062011_53	2304556.38	1208955.837	0	0.162629977	0.001228323	6/21/2011
bc2cj	bc062011_54	2304352.523	1208954.397	0	0.151854366	0.001956256	6/21/2011
bc2cj	bc062011_55	2304349.582	1208731.237	0	0.093676567	0.002919789	6/21/2011
bc2cj	bc062011_56	2304342.123	1208537.725	0	0.082197577	0.00311536	6/21/2011
bc2cj	bc062011_57	2304171.02	1208541.701	0	0.085063286	0.000955767	6/21/2011
bc2cj	bc062011_58	2303968.456	1208551.082	0	0.148894519	0	6/21/2011
bc2cj	bc062011_59	2303959.645	1208346.098	0	0.200075313	0.000239611	6/21/2011
bc2cj	bc062011_6	2305367.541	1209147.768	0.000248901	0.11449457	0	6/20/2011
bc2cj	bc062011_60	2303769.239	1208343.024	0	0.089122623	0.000238296	6/21/2011
bc2cj	bc062011_61	2303575.204	1208342.264	0	0.123178989	0	6/21/2011
bc2cj	bc062011_62	2303351.462	1208330.823	0	0.103809677	0	6/21/2011
bc2cj	bc062011_63	2303368.722	1208160.162	0	0.125292182	0.000234191	6/21/2011
bc2cj	bc062011_64	2303165.936	1208136.91	0	0.130610496	0	6/21/2011
bc2cj	bc062011_65	2302954.167	1208147.966	0	0.096712969	0	6/21/2011
bc2cj	bc062011_66	2302965.321	1208332.741	0	0.200669467	0	6/21/2011
bc2cj	bc062011_67	2303157.085	1208346.182	0	0.230938658	0	6/21/2011
bc2cj	bc062011_68	2303169.927	1208527.752	0	0	0	6/21/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062011_69	2303362.387	1208542.736	0	0.106914036	0	6/21/2011
bc2cj	bc062011_7	2305167.41	1209150.915	0	0.145925626	0.001985383	6/20/2011
bc2cj	bc062011_70	2303561.319	1208544.982	0	0.125461742	0	6/21/2011
bc2cj	bc062011_71	2303755.197	1208542.039	0	0.190445334	0	6/21/2011
bc2cj	bc062011_72	2303767.829	1208749.234	0	0.068386883	0	6/21/2011
bc2cj	bc062011_73	2303979.217	1208739.513	0	0.071721025	0	6/21/2011
bc2cj	bc062011_74	2303974.021	1208948.859	0	0.105907202	0.001405848	6/21/2011
bc2cj	bc062011_75	2304162.07	1208765.074	0	0.03086002	0	6/21/2011
bc2cj	bc062011_76	2304175.912	1208953.567	0	0.038777743	0	6/21/2011
bc2cj	bc062011_77	2303995.773	1209158.361	0	0.100655928	0	6/21/2011
bc2cj	bc062011_78	2304161.672	1209135.68	0	0.180016994	0	6/21/2011
bc2cj	bc062011_79	2304367.136	1209141.238	0	0.141272947	0	6/21/2011
bc2cj	bc062011_8	2305167.356	1208962.545	0	0.254926622	0.001237508	6/20/2011
bc2cj	bc062011_9	2304965.987	1208940.749	0.000246352	0.218021631	0.001724465	6/20/2011
bc2cj	bc062211_01	2304963.942	1210341.718	0	0.177260667	0.000724499	6/22/2011
bc2cj	bc062211_02	2304758.669	1210328.559	0.002392636	0.138055101	0.001435582	6/22/2011
bc2cj	bc062211_03	2304567.997	1210347.692	0	0.250000447	0.001189345	6/22/2011
bc2cj	bc062211_04	2304375.697	1210539.662	0	0.257993549	0.000710074	6/22/2011
bc2cj	bc062211_05	2304561.811	1210555.935	0	0.061627656	0.00070566	6/22/2011
bc2cj	bc062211_06	2304778.112	1210532.101	0	0.110495813	0.00094039	6/22/2011
bc2cj	bc062211_07	2304963.761	1210547.333	0.257217258	0.149632335	0.001174508	6/22/2011
bc2cj	bc062211_10	2305360.2	1211344.592	0	0	0	6/22/2011
bc2cj	bc062211_11	2305162.483	1211355.974	0	0	0	6/22/2011
bc2cj	bc062211_12	2305170.719	1211155.444	0	0	0	6/22/2011
bc2cj	bc062211_13	2304972.419	1211159.365	0	0.00277289	0	6/22/2011
bc2cj	bc062211_14	2304764.666	1211144.706	0.007845738	0	0	6/22/2011
bc2cj	bc062211_15	2304784.772	1211344.239	0.119022228	0.166492179	0	6/22/2011
bc2cj	bc062211_16	2304974.029	1211344.466	0	0.038960919	0	6/22/2011
bc2cj	bc062211_17	2304961.882	1211539.344	0	0.010574593	0	6/22/2011
bc2cj	bc062211_18	2304969.829	1211749.129	0.575600564	0.106652685	0	6/22/2011
bc2cj	bc062211_19	2305154.545	1211751.115	0	0.181575924	0.002480546	6/23/2011
bc2cj	bc062211_20	2305155.833	1211538.995	0	0.087226808	0.000488666	6/23/2011
bc2cj	bc062211_21	2305364.763	1211540.861	0	0.231043682	0.001462302	6/23/2011
bc2cj	bc062211_22	2305380.886	1211743.879	0	0.080710664	0.001938995	6/23/2011
bc2cj	bc062211_23	2305573.952	1211744.297	0	0.131588131	0.003595304	6/23/2011
bc2cj	bc062211_24	2305572.95	1211545.749	0	0.095474832	0	6/23/2011
bc2cj	bc062211_25	2305573.29	1211349.448	0	0.397495985	0	6/23/2011
bc2cj	bc062211_26	2305567.143	1211148.68	0	0.047331009	0	6/23/2011
bc2cj	bc062211_27	2305755.616	1211148.922	0	0.125267401	0	6/23/2011
bc2cj	bc062211_28	2305966.738	1211146.823	0	0.155541718	0	6/23/2011
bc2cj	bc062211_29	2304572.341	1211137.319	0	0.150320217	0	6/23/2011
bc2cj	bc062211_30	2304581.981	1211337.07	7.216462612	0.969924569	0.000232819	6/23/2011
bc2cj	bc062211_31	2304552.364	1211550.605	0.208673254	0.107799128	0	6/23/2011
bc2cj	bc062211_32	2304758.506	1211554.427	3.77379775	0.365488708	0	6/23/2011
bc2cj	bc062211_33	2304772.763	1211763.175	0.456920624	0.320440799	0	6/23/2011
bc2cj	bc062211_34	2304548.836	1211732.9	0.013953211	1.683763623	0	6/23/2011
bc2cj	bc062211_35	2304531.337	1211961.984	0	0.141642407	0	6/23/2011
bc2cj	bc062211_36	2304742.972	1211942.189	0	0.503419518	0	6/24/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062211_37	2304946.939	1211961.612	0	0	0.000244098	6/24/2011
bc2cj	bc062211_38	2304949.811	1211948.805	0	0.190439671	0	6/24/2011
bc2cj	bc062211_39	2304921.25	1211953.285	0	0.218066767	0.000726082	6/24/2011
bc2cj	bc062211_40	2304904.295	1211986.077	0	0.243422568	0.000240536	6/24/2011
bc2cj	bc062211_41	2304949.519	1212015.804	0	0.134765953	0.000240225	6/24/2011
bc2cj	bc062211_42	2304986.421	1211937.691	0	0.084476948	0.000239991	6/24/2011
bc2cj	bc062211_43	2305147.225	1211933.501	0	0.067176722	0.000478126	6/24/2011
bc2cj	bc062211_44	2305375.604	1211942.493	0	0.054244123	0	6/24/2011
bc2cj	bc062211_45	2305546.078	1211944.088	0	0.034646362	0	6/24/2011
bc2cj	bc062211_46	2305751.551	1211969.388	0	0.263093859	0.001417023	6/24/2011
bc2cj	bc062211_47	2305778.868	1211750.918	0	0.225226209	0.000470692	6/24/2011
bc2cj	bc062211_48	2305784.01	1211547.602	0	0.033825438	0.000939596	6/24/2011
bc2cj	bc062211_49	2305764.096	1211358.851	0	0.462927371	0.000704251	6/24/2011
bc2cj	bc062211_50	2305964.008	1211358.176	0	0.087741032	0.000703805	6/24/2011
bc2cj	bc062211_51	2305970.943	1211548.017	0	0.208128795	0.000703138	6/24/2011
bc2cj	bc062211_52	2305957.786	1211754.89	0	0.220531821	0.000233862	6/24/2011
bc2cj	bc062211_53	2305975.432	1211947.413	0.683651686	0.484652311	0.001401404	6/24/2011
bc2cj	bc062211_54	2306157.708	1211961.733	0	0.366107613	0.000465786	6/24/2011
bc2cj	bc062211_55	2306369.59	1211954.963	0	0.206033081	0.000231238	6/24/2011
bc2cj	bc062211_56	2306556.234	1211955.775	0.433306664	0.318053156	0.001164177	6/24/2011
bc2cj	bc062211_57	2306350.269	1211752.032	0.351180077	0.041507337	0.000699562	6/24/2011
bc2cj	bc062211_58	2306170.664	1211736.171	0.493653387	0.09903077	0.000750233	6/24/2011
bc2cj	bc062211_59	2306166.612	1211551.924	0	0.072453097	0.000931873	6/24/2011
bc2cj	bc062211_60	2306365.476	1211560.703	0	0.058320813	0	6/24/2011
bc2cj	bc062211_61	2306181.73	1211361.525	0	0.034664232	0.00092438	6/24/2011
bc2cj	bc062211_8	2305163.159	1210551.152	0	0.189270496	0	6/22/2011
bc2cj	bc062211_9	2305364.353	1211153.617	0.062020369	0.063403726	0	6/22/2011
bc2cj	bc062711(1)_01	2304958.328	1212139.284	0	0.192148641	0.000994301	6/27/2011
bc2cj	bc062711(1)_03	2304553.467	1212141.195	0.997547925	0.41611439	0.000979669	6/27/2011
bc2cj	bc062711(1)_04	2304363.791	1212148.293	0	0.739403367	0.000970983	6/27/2011
bc2cj	bc062711(1)_05	2304162.117	1212146.49	0	0.099107072	0.00122053	6/27/2011
bc2cj	bc062711(1)_06	2303969.796	1212129.101	0	0.222277299	0.001455965	6/27/2011
bc2cj	bc062711(1)_07	2303948.171	1212341.806	0	0.066871867	0.001931317	6/27/2011
bc2cj	bc062711(1)_08	2303776.515	1212337.576	0	0.149580926	0.001202419	6/27/2011
bc2cj	bc062711(1)_09	2303774.385	1212145.696	0	0.134566754	0.001429027	6/27/2011
bc2cj	bc062711(1)_10	2303537.506	1212157.53	0	0.241576761	0.001907813	6/27/2011
bc2cj	bc062711(1)_100	2303160.37	1213345.341	0	0.20311977	0	6/30/2011
bc2cj	bc062711(1)_101	2303144.462	1213537.072	0	0	0	6/30/2011
bc2cj	bc062711(1)_102	2303151.905	1213745.461	0	0.036550596	0	6/30/2011
bc2cj	bc062711(1)_103	2302975.757	1213749.238	0	0	0	6/30/2011
bc2cj	bc062711(1)_104	2302967.378	1213939.353	0	0.014385441	0	6/30/2011
bc2cj	bc062711(1)_105	2303141.492	1213947.511	0	0.040622171	0	6/30/2011
bc2cj	bc062711(1)_106	2303165.38	1214141.437	0	0.027142914	0	6/30/2011
bc2cj	bc062711(1)_107	2303174.008	1214337.822	0	0.038659122	0	6/30/2011
bc2cj	bc062711(1)_108	2303167.787	1214556.362	0	0.038265709	0	6/30/2011
bc2cj	bc062711(1)_109	2303379.508	1214761.64	0	0	0	6/30/2011
bc2cj	bc062711(1)_11	2303372.244	1212158.026	0	0.084342435	0.000476511	6/27/2011
bc2cj	bc062711(1)_110	2303359.822	1214942.937	0	0.008805165	0	6/30/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062711(1)_111	2303561.077	1214943	0	0.040337373	0	6/30/2011
bc2cj	bc062711(1)_112	2303586.84	1214761.381	0	0.185739115	0	6/30/2011
bc2cj	bc062711(1)_113	2303574.523	1214558.344	0	0.030192584	0	6/30/2011
bc2cj	bc062711(1)_114	2303376.877	1214543.578	0	0.029567244	0	6/30/2011
bc2cj	bc062711(1)_115	2303386.157	1214349.774	0	0.062753774	0	6/30/2011
bc2cj	bc062711(1)_116	2303390.118	1214154.831	0	0.046936318	0	6/30/2011
bc2cj	bc062711(1)_117	2303352.909	1213949.477	0	0.015907699	0	6/30/2011
bc2cj	bc062711(1)_118	2303376.63	1213757.202	0	0.03434632	0.00251873	6/30/2011
bc2cj	bc062711(1)_119	2303376.138	1213549.796	0	0.075753279	0	6/30/2011
bc2cj	bc062711(1)_12	2303567.038	1211959.93	0.258195311	0.115333565	0.000474624	6/27/2011
bc2cj	bc062711(1)_120	2303362.313	1213367.29	0	0.034406185	0	6/30/2011
bc2cj	bc062711(1)_121	2303568.296	1213343.874	0	2.239258289	0.006922686	6/30/2011
bc2cj	bc062711(1)_122	2303750.093	1213355.31	0	0.046587538	0.011190144	6/30/2011
bc2cj	bc062711(1)_123	2303760.249	1213145.925	0	0.198526263	0.0075826	6/30/2011
bc2cj	bc062711(1)_13	2303755.384	1211947.601	0.102478892	0.094357021	0.000955514	6/27/2011
bc2cj	bc062711(1)_14	2303958.352	1211962.112	0.000707158	0.129881293	0.000471438	6/27/2011
bc2cj	bc062711(1)_15	2304170.578	1211956.395	0.237696514	0.055446923	0.00070186	6/27/2011
bc2cj	bc062711(1)_16	2304153.346	1211747.096	0.323376328	0.139096767	0.001419355	6/27/2011
bc2cj	bc062711(1)_17	2303937.797	1211750.458	0	0.069394268	0.000947362	6/27/2011
bc2cj	bc062711(1)_18	2303746.948	1211733.916		0.460258305	0	6/27/2011
bc2cj	bc062711(1)_19	2303588.91	1211732.4	0	0.150667891	0.000235787	6/27/2011
bc2cj	bc062711(1)_2	2304755.28	1212149.015	0	0.232304767	0.000990639	6/27/2011
bc2cj	bc062711(1)_20	2303566.152	1211528.318	0	0.17143935	0.000929211	6/27/2011
bc2cj	bc062711(1)_21	2303574.054	1211357.179	0.336347669	0.034075197	0.00115902	6/27/2011
bc2cj	bc062711(1)_22	2303551.658	1211144.05	0.291798979	0.36649397	0.001163473	6/27/2011
bc2cj	bc062711(1)_23	2303771.204	1211141.561	0	0.096444055	0.002544088	6/27/2011
bc2cj	bc062711(1)_24	2303753.605	1211374.368	0.321431011	0.514799118	0.004863149	6/27/2011
bc2cj	bc062711(1)_25	2303777.404	1211541.552	0	0.100841753	0.000460465	6/27/2011
bc2cj	bc062711(1)_26	2303952.4	1211541.954	0	0.256184667	0.00138979	6/27/2011
bc2cj	bc062711(1)_27	2304152.173	1211560.243	0	0.045732919	0	6/27/2011
bc2cj	bc062711(1)_28	2304187.594	1211367.027	0	0.090305515	0.000696444	6/27/2011
bc2cj	bc062711(1)_29	2303946.077	1211356.506	0.559525549	0.25426659	0.003708537	6/27/2011
bc2cj	bc062711(1)_30	2304004.47	1211155.926	0.411329061	0.099421859	0.001387282	6/27/2011
bc2cj	bc062711(1)_31	2304167.918	1211151.848	0.315654755	0.087013334	0.002545603	6/27/2011
bc2cj	bc062711(1)_32	2304365.261	1211164.246	0	0.086180434	0	6/27/2011
bc2cj	bc062711(1)_33	2304372.089	1211361.157	0.577993989	0.077035107	0.001614508	6/27/2011
bc2cj	bc062711(1)_34	2304375.899	1211559.94	0.494389355	0.351643115	0.002088969	6/27/2011
bc2cj	bc062711(1)_35	2304360.39	1211742.253	0.521354914	0.185442209	0.001150386	6/27/2011
bc2cj	bc062711(1)_36	2304370.383	1211966.961	0.165887341	0.18797496	0	6/27/2011
bc2cj	bc062711(1)_37	2305146.876	1212150.103	0	0.043831084	0	6/28/2011
bc2cj	bc062711(1)_38	2305158.327	1212337.355	0	0.217349231	0	6/28/2011
bc2cj	bc062711(1)_39	2304970.507	1212349.355	1.042396307	0.692011058	0	6/28/2011
bc2cj	bc062711(1)_40	2304772.417	1212346.587	10.02320671	2.109553814	0.000240624	6/28/2011
bc2cj	bc062711(1)_41	2304570.235	1212342.634	0	1.481961012	0	6/28/2011
bc2cj	bc062711(1)_42	2304367.969	1212350.129	0	2.4725945	0	6/28/2011
bc2cj	bc062711(1)_43	2304161.893	1212356.046	0	0.179083362	0	6/28/2011
bc2cj	bc062711(1)_44	2304188.336	1212550.548	0	0.485590488	0	6/28/2011
bc2cj	bc062711(1)_45	2303963.82	1212553.079	0	0.127981901	0	6/28/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062711(1)_46	2303768.789	1212545.461	0	0.151154399	0	6/28/2011
bc2cj	bc062711(1)_47	2303574.699	1212549.299	0.002445737	0.0750653	0	6/28/2011
bc2cj	bc062711(1)_48	2303367.065	1212545.267	0	0.229016587	0	6/28/2011
bc2cj	bc062711(1)_49	2303181.693	1212568.422	0	0.13644582	0	6/28/2011
bc2cj	bc062711(1)_50	2303187.399	1212359.925	0	0.192139134	0	6/28/2011
bc2cj	bc062711(1)_51	2303398.643	1212350.313	0	0.135578796	0	6/28/2011
bc2cj	bc062711(1)_52	2303576.126	1212337.87	0	0	0	6/28/2011
bc2cj	bc062711(1)_53	2304365.688	1212558.277	0	2.446517229	0.00139668	6/28/2011
bc2cj	bc062711(1)_54	2304559.288	1212555.603	4.859274387	4.743087769	0.002078883	6/28/2011
bc2cj	bc062711(1)_55	2304776.747	1212555.114	0	0.313801169	0.002541835	6/28/2011
bc2cj	bc062711(1)_56	2304966.086	1212559.293	0	0.162832469	0.00163299	6/28/2011
bc2cj	bc062711(1)_57	2305119.754	1212612.968	0.208362326	0.919096649	0.002302346	6/28/2011
bc2cj	bc062711(1)_58	2305157.16	1212536.053	1.058619618	0.211770371	0.001625431	6/28/2011
bc2cj	bc062711(1)_59	2305350.234	1212550.305	0.333639234	0.201113552	0.003255017	6/28/2011
bc2cj	bc062711(1)_60	2305554.301	1212547.404	0	0.172871351	0.001624295	6/28/2011
bc2cj	bc062711(1)_61	2305769.914	1212556.49	0.415718943	1.570958018	0.005570773	6/28/2011
bc2cj	bc062711(1)_62	2305811.401	1212444.899	0.142080158	0.440261543	0.003505267	6/28/2011
bc2cj	bc062711(1)_63	2305762.471	1212347.435	0.29378888	0.215320617	0.003269511	6/28/2011
bc2cj	bc062711(1)_64	2305761.74	1212139.915	0.300175637	0.061855782	0.003267853	6/28/2011
bc2cj	bc062711(1)_65	2305560.809	1212155.639	0	0.084709264	0.001866871	6/28/2011
bc2cj	bc062711(1)_66	2305563.902	1212359.964	0.27066192	0.090065092	0.004433256	6/28/2011
bc2cj	bc062711(1)_67	2305359.74	1212342.584	0.437565684	0.235522881	0.003255005	6/28/2011
bc2cj	bc062711(1)_68	2305363.233	1212149.65	0.15082632	0.254723698	0.001167386	6/28/2011
bc2cj	bc062711(1)_69	2305949.408	1212158.409	0	0.162248388	0	6/29/2011
bc2cj	bc062711(1)_70	2305963.612	1212365.219	0.917097867	0.5650931	0.003224851	6/29/2011
bc2cj	bc062711(1)_71	2305965.64	1212548.8	0	0	0.000247529	6/29/2011
bc2cj	bc062711(1)_72	2305965.337	1212769.165	0	0.107464008	0	6/29/2011
bc2cj	bc062711(1)_73	2305774.23	1212780.246	0	0.212715372	0.000480713	6/29/2011
bc2cj	bc062711(1)_74	2305572.276	1212761.975	1.847498655	0.39994666	0	6/29/2011
bc2cj	bc062711(1)_75	2305522.552	1212781.62	1.005043149	0.691953719	0	6/29/2011
bc2cj	bc062711(1)_76	2305376.141	1212763.53	26.29114723	0.354372084	0.000239765	6/29/2011
bc2cj	bc062711(1)_77	2305330.893	1212788.862	5.701595306	1.447609305	0	6/29/2011
bc2cj	bc062711(1)_78	2305177.19	1212744.631	1.25411725	1.991235852	0	6/29/2011
bc2cj	bc062711(1)_79	2304971.554	1212736.222	0	0.156798199	0	6/29/2011
bc2cj	bc062711(1)_80	2304777.562	1212753.817	0	0.230441719	0.001390996	6/29/2011
bc2cj	bc062711(1)_81	2304564.982	1212745.242	0	0.349167466	0	6/29/2011
bc2cj	bc062711(1)_82	2304365.475	1212740.82	0	0.83292371	0.001858168	6/29/2011
bc2cj	bc062711(1)_83	2304176.341	1212754.669	0	0.511123478	0.005543137	6/29/2011
bc2cj	bc062711(1)_84	2303979.715	1212750.05	0	0.07646998	0.002747424	6/29/2011
bc2cj	bc062711(1)_85	2303765.518	1212769.689	0	0.174233899	0.004852668	6/29/2011
bc2cj	bc062711(1)_86	2304562.241	1212950.932	0.968125165	0.653398097	0.001974758	6/30/2011
bc2cj	bc062711(1)_87	2304353.724	1212963.189	0	0.265606612	0.007350737	6/30/2011
bc2cj	bc062711(1)_88	2304151.993	1212937.968	0	0.570325851	0.015512477	6/30/2011
bc2cj	bc062711(1)_89	2303968.493	1212943.678	0	0.1881769	0.010132602	6/30/2011
bc2cj	bc062711(1)_90	2303755.551	1212965.036	0	0.106033184	0.006506582	6/30/2011
bc2cj	bc062711(1)_91	2303573.216	1212935.448	0	0.153323084	0.001913549	6/30/2011
bc2cj	bc062711(1)_92	2303365.469	1212934.812	0	0.150161907	0.002383522	6/30/2011
bc2cj	bc062711(1)_93	2303174.112	1212946.301	0	0.11389894	0.003796631	6/30/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062711(1)_94	2303174.898	1212762.483	0	0.102849871	0.005189673	6/30/2011
bc2cj	bc062711(1)_95	2303365.077	1212733.159	0	0.235229865	0.002854154	6/30/2011
bc2cj	bc062711(1)_96	2303582.682	1212742.359	0	0.248165235	0.004060451	6/30/2011
bc2cj	bc062711(1)_97	2303551.874	1213135.623	0	0.019321412	0	6/30/2011
bc2cj	bc062711(1)_98	2303360.397	1213155.474	0	0.173225209	0	6/30/2011
bc2cj	bc062711(1)_99	2303146.746	1213134.306	0	0.010309223	0	6/30/2011
bc2cj	bc062811_01	2302146.934	1209540.488	0	0.074167445	0.004188859	6/28/2011
bc2cj	bc062811_02	2302156.608	1209354.315	0.56850642	0.568261802	0.005137106	6/28/2011
bc2cj	bc062811_03	2302354.381	1209353.553	0	0.285871625	0.031088842	6/28/2011
bc2cj	bc062811_04	2302354.717	1209160.878	0	0.250567079	0.005827142	6/28/2011
bc2cj	bc062811_05	2301975.252	1209155.859	0	0.213967264	0.026775792	6/28/2011
bc2cj	bc062811_06	2301963.298	1208956.66	0	0.224674836	0.007998896	6/28/2011
bc2cj	bc062811_07	2301956.049	1208761.725	0.000939844	0.092339672	0.009633401	6/28/2011
bc2cj	bc062811_08	2301967.24	1208560.913	0	0.138776958	0.01474359	6/28/2011
bc2cj	bc062811_09	2301984.916	1208356.174	0	0.111191817	0.009790475	6/28/2011
bc2cj	bc062811_10	2301971.138	1208157.986	0	0.375100195	0.001396155	6/28/2011
bc2cj	bc062811_11	2301981.107	1207927.894	0	0	0.002546433	6/28/2011
bc2cj	bc062811_12	2301968.053	1207751.704	0	0.159153774	0.000692977	6/28/2011
bc2cj	bc062811_13	2301769.005	1207767.801	0	0	0.001616959	6/28/2011
bc2cj	bc062811_14	2301763.496	1207953.394	0	0.233126163	0.001151809	6/28/2011
bc2cj	bc062811_15	2301772.387	1208141.331	0	0.238968626	0.001839989	6/28/2011
bc2cj	bc062811_16	2301767.689	1208359.455	0	0	0.003917106	6/28/2011
bc2cj	bc062811_17	2301758.792	1208559.182	0.006925897	0.01708388	0.000923453	6/28/2011
bc2cj	bc062811_18	2301758.177	1208749.588	0	0.099810638	0.006700251	6/28/2011
bc2cj	bc062811_19	2301775.285	1208948.433	0	0	0.000463174	6/28/2011
bc2cj	bc062811_20	2301770.611	1209158.303	0	0.021067673	0.004630258	6/28/2011
bc2cj	bc062811_21	2301758.285	1209348.376	1.48412776	0.847113371	0.003706266	6/28/2011
bc2cj	bc062811_22	2301970.227	1209367.42	2.987070799	1.748711228	0.001165186	6/28/2011
bc2cj	bc062811_23	2301959.819	1209538.356	0	0	0.004664271	6/28/2011
bc2cj	bc062811_24	2301771.812	1209527.701	0	0.197511151	0	6/29/2011
bc2cj	bc062811_25	2301584.784	1209548.861	0	0.231780812	0	6/29/2011
bc2cj	bc062811_26	2301368.413	1209498.05	0	0.064435817	0	6/29/2011
bc2cj	bc062811_27	2301367.176	1209330.501	0	0.017787531	0	6/29/2011
bc2cj	bc062811_28	2301381.938	1209130.683	0	0.157515317	0.000718155	6/29/2011
bc2cj	bc062811_29	2301316.443	1209075.109	11.03919888	1.083441138	0.002150633	6/29/2011
bc2cj	bc062811_30	2301352.514	1208913.822	0.950616121	0.282415569	0.000477457	6/29/2011
bc2cj	bc062811_31	2301354.459	1208762.439	0	0.122396976	0	6/29/2011
bc2cj	bc062811_32	2301394.16	1208542.068	0	0	0	6/29/2011
bc2cj	bc062811_33	2301368.854	1208361.924	0	0.36176461	0.001643318	6/29/2011
bc2cj	bc062811_34	2301378.085	1208165.33	0	0.105692312	0.00093533	6/29/2011
bc2cj	bc062811_35	2301359.009	1207939.255	0	0.060773943	0.005567079	6/29/2011
bc2cj	bc062811_36	2301348.327	1207755.617	0	0.04358295	0.005995538	6/29/2011
bc2cj	bc062811_37	2301578.298	1207759.259	0	0.051864903	0.008067874	6/29/2011
bc2cj	bc062811_38	2301567.419	1207942.97	0	0.160897925	0.011986664	6/29/2011
bc2cj	bc062811_39	2301571.057	1208163.189	0	0.193677127	0.006448228	6/29/2011
bc2cj	bc062811_40	2301573.709	1208352.101	0	0.255905092	0.006935098	6/29/2011
bc2cj	bc062811_41	2301560.63	1208556.99	0	0.104590833	0.009950013	6/29/2011
bc2cj	bc062811_42	2301554.609	1208756.965	0	0.172777489	0.005790131	6/29/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc062811_43	2301557.045	1208962.485	0	0.0770666	0.012960149	6/29/2011
bc2cj	bc062811_44	2301561.127	1209156.042	0.437454492	0.703349173	0.014103977	6/29/2011
bc2cj	bc062811_45	2301560.029	1209354.94	0	0.303414315	0.014106915	6/29/2011
bc2cj	bc062811_46	2301150.401	1209182.014	0	0.192362666	0	6/30/2011
bc2cj	bc062811_47	2300976.147	1209120.826	0	0.034817122	0	6/30/2011
bc2cj	bc062811_48	2300948.803	1208962.03	0	0.055933725	0.000240059	6/30/2011
bc2cj	bc062811_49	2300959.961	1208709.319	0.890041649	0.410917312	0	6/30/2011
bc2cj	bc062811_50	2300970.028	1208578.537	0	0	0	6/30/2011
bc2cj	bc062811_51	2301167.52	1208575.486	0	0.029855805	0	6/30/2011
bc2cj	bc062811_52	2301153.816	1208742.762	0	0.028817045	0	6/30/2011
bc2cj	bc062811_53	2301162.47	1208929.654	0	0.136278495	0	6/30/2011
bc2cj	bc062811_54	2301146.652	1208970.69	24.03430557	1.425220013	0.002376951	6/30/2011
bc2cj	bc062811_55	2300966.472	1209340.598	0	0.049522188	0	6/30/2011
bc2cj	bc062811_56	2300947.205	1209448.667	0	0	0.000954522	6/30/2011
bc2cj	bc070111_01	2300742.502	1209480.325	0	0.237806633	0.002021736	7/1/2011
bc2cj	bc070111_02	2300555.381	1209476.542	0	0.373315156	0.005508339	7/1/2011
bc2cj	bc070111_03	2300361.207	1209455.806	0.127604693	0.156402633	0.002979098	7/1/2011
bc2cj	bc070111_04	2300165.233	1209412.592	0	0.196977362	0.004191008	7/1/2011
bc2cj	bc070111_05	2299962.338	1209354.637	0	0.202239648	0.000737204	7/1/2011
bc2cj	bc070111_06	2299771.081	1209332.254	0	0.172209188	0	7/1/2011
bc2cj	bc070111_07	2299560.122	1209290.349	0	0.27656278	0.003423412	7/1/2011
bc2cj	bc070111_08	2299360.441	1209245.215	0	0.226221949	0.001221501	7/1/2011
bc2cj	bc070111_09	2299146.839	1209216.205	0	0.257400572	0.009280096	7/1/2011
bc2cj	bc070111_10	2298959.043	1209141.768	0	0.00463186	0.000975128	7/1/2011
bc2cj	bc070111_100	2308958.459	1215914.764	0	0.057219118	0.000489052	7/7/2011
bc2cj	bc070111_101	2308763.885	1215956.505	0.000488322	0.104500927	0.000244161	7/7/2011
bc2cj	bc070111_102	2308564.021	1215946.905	0	0.173769295	0.000486749	7/7/2011
bc2cj	bc070111_103	2308372.234	1216143.756	0	0.112417519	0.000241758	7/7/2011
bc2cj	bc070111_104	2308168.048	1216145.475	0	0.105903588	0.000241238	7/7/2011
bc2cj	bc070111_105	2307962.739	1216154.273	0	0.145405069	0	7/7/2011
bc2cj	bc070111_106	2307964.349	1216350.315	0	0.10358797	0	7/7/2011
bc2cj	bc070111_107	2307770.51	1216351.88	0	0.19755879	0.000240339	7/7/2011
bc2cj	bc070111_108	2307565.898	1216358.004	0	0.196428761	0.00023984	7/7/2011
bc2cj	bc070111_109	2307368.16	1216353.258	0	0.046860173	0	7/7/2011
bc2cj	bc070111_11	2298753.482	1209052.837	0	0.027733823	0.000486558	7/1/2011
bc2cj	bc070111_110	2307166.718	1216344.723	0	0.11548809	0.00023812	7/7/2011
bc2cj	bc070111_111	2306964.485	1216350.545	0	0.057925209	0.000237398	7/7/2011
bc2cj	bc070111_112	2306764.626	1216344.259	0	0.082385205	0.000236739	7/7/2011
bc2cj	bc070111_113	2306559.565	1216351.586	0	0.140181601	0.000236394	7/7/2011
bc2cj	bc070111_114	2306558.215	1216148.025	0	0.096907146	0	7/7/2011
bc2cj	bc070111_115	2306364.802	1216149.507	0	0.088644654	0.000470263	7/7/2011
bc2cj	bc070111_116	2306169.466	1216150.232	0	0.021359263	0.000469434	7/7/2011
bc2cj	bc070111_117	2306170.16	1215954.314	0	0.327859938	0	7/7/2011
bc2cj	bc070111_118	2305975.606	1215946.812	0	0.098845609	0	7/7/2011
bc2cj	bc070111_119	2305770.761	1215754.715	0	0.198506162	0.000698146	7/7/2011
bc2cj	bc070111_12	2298765.784	1208949.101	0	0.042484015	0	7/1/2011
bc2cj	bc070111_120	2305956.359	1215757.682	0	0.151424348	0.000696738	7/7/2011
bc2cj	bc070111_121	2306158.577	1215742.713	0	0.259604394	0.000927987	7/7/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc070111_122	2306361.232	1215742.405	0	0.19102484	0.00068714	7/7/2011
bc2cj	bc070111_123	2306560.224	1215745.592	0	0.193913504	0	7/7/2011
bc2cj	bc070111_124	2306764.775	1215756.44	0	0.084817857	0.000464755	7/7/2011
bc2cj	bc070111_125	2306967.401	1215743.9	0	0.182415783	0.000464754	7/7/2011
bc2cj	bc070111_126	2306955.194	1215941.595	0	0.204439402	0.000931387	7/7/2011
bc2cj	bc070111_127	2306769.595	1215951.008	0	0.017072992	0	7/7/2011
bc2cj	bc070111_128	2306563.217	1215953.814	0	0.078707278	0.000934211	7/7/2011
bc2cj	bc070111_129	2306362.392	1215961.497	0	0.169666171	0	7/7/2011
bc2cj	bc070111_13	2298767.878	1208740.857	0	0.118198775	0	7/1/2011
bc2cj	bc070111_130	2306760.655	1216140.642	0	0.120317601	0	7/7/2011
bc2cj	bc070111_131	2306965.181	1216151.605	0	0.173977926	0.000936624	7/7/2011
bc2cj	bc070111_132	2307162.778	1216148.313	0	0.111059539	0.001874423	7/7/2011
bc2cj	bc070111_133	2307358.097	1216158.961	0	0.114169799	0.00093774	7/7/2011
bc2cj	bc070111_134	2307562.804	1216164.489	0	0.2830607	0.000704715	7/7/2011
bc2cj	bc070111_135	2307760.179	1216152.804	0	0.057327524	0.000939795	7/7/2011
bc2cj	bc070111_136	2307771.818	1215948.154	0	0.483591974	0.003056245	7/7/2011
bc2cj	bc070111_137	2307958.416	1215964.395	0	0.115786344	0.000469721	7/7/2011
bc2cj	bc070111_138	2308169.569	1215950.442	0	0.728932142	0.002586534	7/7/2011
bc2cj	bc070111_139	2308360.01	1215943.38	0	0.204457924	0.001413304	7/7/2011
bc2cj	bc070111_14	2298958.601	1208746.465	0	0.036678042	0.004826058	7/1/2011
bc2cj	bc070111_15	2298967.113	1208937.296	0.00048183	0.166472152	0.002650063	7/1/2011
bc2cj	bc070111_16	2299161.413	1209138.355	0	0.107251391	0.002898686	7/1/2011
bc2cj	bc070111_17	2299163.325	1208949.353	0	0.107251391	0.002898686	7/1/2011
bc2cj	bc070111_18	2299163.547	1208772.021	0	0.023824684	0	7/1/2011
bc2cj	bc070111_19	2299347.493	1208746.73	0	0.237126648	0.000718566	7/1/2011
bc2cj	bc070111_20	2299357.951	1208940.411	0	0.127372265	0	7/1/2011
bc2cj	bc070111_21	2299364.181	1209136.59	0	0.052955724	0	7/1/2011
bc2cj	bc070111_22	2299563.995	1209144.668	0	0.203866526	0.002881506	7/1/2011
bc2cj	bc070111_23	2299569.424	1208961.623	0	0.350085765	0	7/1/2011
bc2cj	bc070111_24	2299566.548	1208756.274	0	0	0	7/1/2011
bc2cj	bc070111_25	2299757.03	1208751.46	0	0	0	7/1/2011
bc2cj	bc070111_26	2299767.245	1208946.81	0	0.073830798	0	7/1/2011
bc2cj	bc070111_27	2299776.521	1209146.799	0	0.111047022	0.006406559	7/1/2011
bc2cj	bc070111_28	2299949.108	1209176.324	0	0.245614097	0.003322316	7/1/2011
bc2cj	bc070111_29	2300161.459	1209142.053	0	0.079048373	0.002130046	7/1/2011
bc2cj	bc070111_30	2300369.792	1209153.136	0	0.070722856	0.0049506	7/1/2011
bc2cj	bc070111_31	2300566.001	1209344.664	0	0	0.00352784	7/1/2011
bc2cj	bc070111_32	2300766.716	1209356.549	0	0.204499066	0.003069848	7/1/2011
bc2cj	bc070111_33	2306170.817	1212151.538	0	0.265670151	0	7/4/2011
bc2cj	bc070111_34	2306171.419	1212348.034	0	0	0	7/4/2011
bc2cj	bc070111_35	2306173.666	1212544.981	0	0.062390044	0	7/4/2011
bc2cj	bc070111_36	2306165.819	1212751.295	0	0.178860098	0	7/4/2011
bc2cj	bc070111_37	2306174.065	1212950.004	0	0.142108202	0	7/4/2011
bc2cj	bc070111_38	2306350.172	1212949.218	0	0.180158541	0	7/4/2011
bc2cj	bc070111_39	2306364.645	1212756.956	0	0.124816447	0	7/4/2011
bc2cj	bc070111_40	2306376.479	1212551.16	0	0.082309	0	7/4/2011
bc2cj	bc070111_41	2306373.539	1212360.941	0	0.21352917	0	7/4/2011
bc2cj	bc070111_42	2306377.404	1212159.094	0	0.714647591	0	7/4/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc070111_43	2306577.168	1212144.196	0	0.0861651	0	7/4/2011
bc2cj	bc070111_44	2306755.067	1212132.639	0	0.156193182	0	7/4/2011
bc2cj	bc070111_45	2306958.906	1212339.153	0	0.462513357	0	7/4/2011
bc2cj	bc070111_46	2306775.753	1212345.417	0	0.058722589	0	7/4/2011
bc2cj	bc070111_47	2306573.731	1212353.929	0	0.743699431	0	7/4/2011
bc2cj	bc070111_48	2306558.582	1212543.128	0	0	0	7/4/2011
bc2cj	bc070111_49	2306559.828	1212747.032	0	0.127279326	0	7/4/2011
bc2cj	bc070111_50	2306565.674	1212941.692	0	0.125405848	0	7/4/2011
bc2cj	bc070111_51	2306766.566	1212935.214	0	0.096337609	0	7/4/2011
bc2cj	bc070111_52	2306768.799	1212748.677	0	0.07760635	0	7/4/2011
bc2cj	bc070111_53	2306779.605	1212546.954	0	0.098121062	0	7/4/2011
bc2cj	bc070111_54	2306977.297	1212544.638	0	0.106557503	0	7/4/2011
bc2cj	bc070111_55	2306961.626	1212735.954	0	0.105374768	0.000240034	7/4/2011
bc2cj	bc070111_56	2306972.258	1212952.199	0	0.141262576	0	7/4/2011
bc2cj	bc070111_57	2307167.439	1212945.606	0	0.138349727	0	7/4/2011
bc2cj	bc070111_58	2307174.497	1212747.308	0	0.051056661	0	7/4/2011
bc2cj	bc070111_59	2307160.456	1212546.603	0	0.072018579	0	7/4/2011
bc2cj	bc070111_60	2307362.885	1212744.637	0	0.047908012	0	7/4/2011
bc2cj	bc070111_61	2307368.872	1212927.663	0	0	0	7/4/2011
bc2cj	bc070111_62	2307384.672	1213138.564	0	0.060454786	0	7/4/2011
bc2cj	bc070111_63	2307165.849	1213145.392	0	0.159264743	0	7/4/2011
bc2cj	bc070111_64	2306974.779	1213156.745	0	0.41841647	0	7/4/2011
bc2cj	bc070111_65	2306776.821	1213156.079	0	0.142627478	0.000476219	7/4/2011
bc2cj	bc070111_66	2306571.688	1213151.835	0	0.037882417	0	7/4/2011
bc2cj	bc070111_67	2306376.512	1213152.951	0	0.093440518	0	7/4/2011
bc2cj	bc070111_68	2306160.488	1213151.614	0	0.04160849	0	7/4/2011
bc2cj	bc070111_69	2305942.375	1213144.654	0	0.058022615	0	7/4/2011
bc2cj	bc070111_70	2305966.592	1212955.144	0	0.38850528	0	7/4/2011
bc2cj	bc070111_71	2305780.218	1212942.621	0	0.161297679	0	7/4/2011
bc2cj	bc070111_72	2305572.415	1212941.328	0	0.202167287	0	7/4/2011
bc2cj	bc070111_73	2305373.199	1212936.379	0	0.129265159	0	7/4/2011
bc2cj	bc070111_74	2305164.498	1212940.672	0	0.165852234	0	7/4/2011
bc2cj	bc070111_75	2304958.486	1212949.304	9.800013542	0.644931197	0.000233417	7/4/2011
bc2cj	bc070111_76	2304843.732	1212917.639	4.709451675	2.833474159	0	7/4/2011
bc2cj	bc070111_77	2304759.63	1212940.343	0	1.180565953	0	7/4/2011
bc2cj	bc070111_78	2304560.726	1213149.025	0	0.236423641	0	7/4/2011
bc2cj	bc070111_79	2304765.004	1213136.809	1.339206696	0.793765962	0	7/4/2011
bc2cj	bc070111_80	2304947.975	1213150.479	0.000691601	0.183504775	0	7/4/2011
bc2cj	bc070111_81	2305159.83	1213160.675	0	0.460505724	0.000230714	7/4/2011
bc2cj	bc070111_82	2305351.559	1213144.514	0	5.089100361	0	7/4/2011
bc2cj	bc070111_83	2305561.254	1213130.242	0	2.018494129	0	7/4/2011
bc2cj	bc070111_84	2305757.653	1213144.264	0	0.520079732	0	7/4/2011
bc2cj	bc070111_85	2309965.416	1215358.225	0.001514784	0.116133414	0	7/7/2011
bc2cj	bc070111_86	2309771.626	1215353.99	0	0.116751462	0	7/7/2011
bc2cj	bc070111_87	2309765.908	1215541.765	0.01526141	0.240930125	0	7/7/2011
bc2cj	bc070111_88	2309967.281	1215555.373	0	0.0192437	0.000249918	7/7/2011
bc2cj	bc070111_89	2310162.266	1215543.375	0	0.091852263	0.000249599	7/7/2011
bc2cj	bc070111_90	2310169.835	1215749.981	0	0.06509155	0	7/7/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc070111_91	2309967.207	1215746.163	0	0.033638954	0.000249177	7/7/2011
bc2cj	bc070111_92	2309969.663	1215952.85	0	0.115352213	0.000248604	7/7/2011
bc2cj	bc070111_93	2309972.306	1216149.467	0	0.21031706	0	7/7/2011
bc2cj	bc070111_94	2309563.674	1215352.389	0	0.140946046	0.000247708	7/7/2011
bc2cj	bc070111_95	2309561.108	1215528.275	0.104599573	0.085357197	0.000246697	7/7/2011
bc2cj	bc070111_96	2309372.918	1215553.752	0	0.085357197	0.000246697	7/7/2011
bc2cj	bc070111_97	2309164.5	1215558.846	0	0.09592443	0.00024596	7/7/2011
bc2cj	bc070111_98	2309164.544	1215777.19	0	0.037779387	0.000245321	7/7/2011
bc2cj	bc070111_99	2308967.309	1215751.706	0	0.105355941	0.000490028	7/7/2011
bc2cj	bc070611_01	2302350.23	1208957.776	0	0.352149695	0	7/8/2011
bc2cj	bc070611_02	2302373.918	1208770.06	0	0.101902589	0.000984566	7/8/2011
bc2cj	bc070611_03	2302563.277	1208751.705	0	0.07899411	0.000975236	7/8/2011
bc2cj	bc070611_04	2302558.341	1208564.897	0	0.005361583	0	7/8/2011
bc2cj	bc070611_05	2302365.704	1208541.947	0	0.079884574	0	7/8/2011
bc2cj	bc070611_06	2302178.034	1208554.836	0.000722929	0.254471153	0	7/8/2011
bc2cj	bc070611_07	2302159.5	1208749.665	0	0.109006688	0.000480206	7/8/2011
bc2cj	bc070611_08	2302160.448	1208943.592	0	0.068377085	0.000239081	7/8/2011
bc2cj	bc070611_09	2302151.819	1209149.116	0	0.663374066	0	7/8/2011
bc2cj	bc070611_10	2300762.737	1208767.05	0	0.45687601	0.001638387	7/8/2011
bc2cj	bc070611_100	2305956.305	1213571.336	0	0.206090897	0	7/13/2011
bc2cj	bc070611_101	2306165.755	1213564.676	0	0.127141386	0	7/13/2011
bc2cj	bc070611_102	2306348.204	1213543.075	0	0.308157444	0.000747955	7/13/2011
bc2cj	bc070611_103	2306561.329	1213531.21	0	0.357302696	0.000249687	7/13/2011
bc2cj	bc070611_104	2306763.547	1213539.842	0.665440559	0.566644788	0.001493135	7/13/2011
bc2cj	bc070611_105	2306756.495	1213740.261	0	0.074929424	0	7/13/2011
bc2cj	bc070611_106	2306571.66	1213749.171	0	0.029309385	0	7/13/2011
bc2cj	bc070611_107	2306574.09	1213958.884	0	0.09972135	0.000740505	7/13/2011
bc2cj	bc070611_108	2306767.758	1213947.094	0	0.041252352	0.000736649	7/13/2011
bc2cj	bc070611_109	2306963.365	1213954.187	0	0.570024371	0.000492888	7/13/2011
bc2cj	bc070611_11	2300556.285	1208757.015	0	0.27623257	0	7/8/2011
bc2cj	bc070611_110	2307162.62	1214139.685	0.013596396	0	0.000485586	7/13/2011
bc2cj	bc070611_111	2306968.418	1214159.589	0	0.17577672	0.000979258	7/13/2011
bc2cj	bc070611_112	2306763.054	1214146.439	0.000730931	0.26776436	0	7/13/2011
bc2cj	bc070611_113	2306935.258	1214557.76	0	0.692828	0.000729805	7/13/2011
bc2cj	bc070611_114	2306773.651	1214747.379	0.225125805	0.588562906	0.00138114	7/13/2011
bc2cj	bc070611_12	2300379.435	1208742.25	0	0.051882409	0	7/8/2011
bc2cj	bc070611_13	2300164.19	1208731.267	0	0.08020062	0	7/8/2011
bc2cj	bc070611_14	2299979.126	1208724.829	0	0.207929984	0	7/8/2011
bc2cj	bc070611_15	2299961.701	1208928.04	0.000228795	0.16221562	0	7/8/2011
bc2cj	bc070611_16	2300153.908	1208940.268	0	0.180430964	0	7/8/2011
bc2cj	bc070611_17	2300355.442	1208958.853	0	0.220592856	0	7/8/2011
bc2cj	bc070611_18	2300566.284	1208933.415	0	0.180256322	0	7/8/2011
bc2cj	bc070611_19	2300777.014	1208942.177	0.153441995	0.160594925	0	7/8/2011
bc2cj	bc070611_20	2300774.906	1208982.755	0.653361678	2.793412209	0.000187856	7/8/2011
bc2cj	bc070611_21	2300764.824	1209146.408	0	0.043470297	0	7/8/2011
bc2cj	bc070611_22	2300670.024	1209187.11	0	0.031003475	0	7/8/2011
bc2cj	bc070611_23	2305822.544	1213231.369	5.06685257	12.04585361	0	7/11/2011
bc2cj	bc070611_24	2305745.863	1213351.707	0	0.289681047	0	7/11/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc070611_25	2305700.238	1213408.29	0.875414193	1.731642485	0	7/11/2011
bc2cj	bc070611_26	2305551.398	1213550.638	0	0.289292336	0	7/11/2011
bc2cj	bc070611_27	2305561.183	1213742.675	0	0.267216772	0	7/11/2011
bc2cj	bc070611_28	2305372.812	1213735.662	0	0.274354041	0	7/11/2011
bc2cj	bc070611_29	2305169.041	1213746.923	0	0.064467669	0	7/11/2011
bc2cj	bc070611_30	2304967.027	1213752.361	0	0.198236331	0	7/11/2011
bc2cj	bc070611_31	2304767.94	1213751.132	0	0.122532129	0	7/11/2011
bc2cj	bc070611_32	2304564.459	1213744.792	0	0.013608088	0	7/11/2011
bc2cj	bc070611_33	2304359.115	1213741.529	0.228528768	0.031315137	0	7/11/2011
bc2cj	bc070611_34	2304154.646	1213762.386	0	0.38343361	0	7/11/2011
bc2cj	bc070611_35	2303971.243	1213737.734	0	0.232143164	0	7/11/2011
bc2cj	bc070611_36	2303760.843	1213758.223	0	0.158135474	0.000234622	7/11/2011
bc2cj	bc070611_37	2303570.656	1213752.693	0	0.246804893	0	7/11/2011
bc2cj	bc070611_38	2303569.185	1213948.802	0	0.124140568	0	7/11/2011
bc2cj	bc070611_39	2303583.586	1214155.786	0	0.021800321	0.000463837	7/11/2011
bc2cj	bc070611_40	2303557.933	1214355.414	0.164741695	0.216557473	0	7/11/2011
bc2cj	bc070611_41	2303745.78	1214351.75	0	0.264872998	0	7/11/2011
bc2cj	bc070611_42	2303756.296	1214553.993	0	0.195531145	0.000231398	7/11/2011
bc2cj	bc070611_43	2303779.021	1214757.841	0.000230034	0.192308217	0.000230034	7/11/2011
bc2cj	bc070611_44	2303755.737	1214968.684	0.327429652	0.263884723	0.000462145	7/11/2011
bc2cj	bc070611_45	2303959.535	1214941.445	0	0.582759202	0.007540759	7/11/2011
bc2cj	bc070611_46	2303972.624	1214753.344	0	0.405171871	0.005402292	7/11/2011
bc2cj	bc070611_47	2303973.82	1214545.208	0.262122333	0.311182648	0.004205171	7/11/2011
bc2cj	bc070611_48	2303955.31	1214352.406	0	0.391100913	0.005610533	7/11/2011
bc2cj	bc070611_49	2303973.879	1214140.279	0	0.829214573	0.004857324	7/11/2011
bc2cj	bc070611_50	2303753.947	1214140.561	0	0.265165538	0.013651629	7/11/2011
bc2cj	bc070611_51	2303756.711	1213942.189	0	0.304777056	0.00580749	7/11/2011
bc2cj	bc070611_52	2303561.082	1213546.058	0	0.253491491	0.008995603	7/11/2011
bc2cj	bc070611_53	2303765.338	1213569.067	0	0.105944514	0.007386111	7/11/2011
bc2cj	bc070611_54	2303958.305	1213552.185	0	0.284794599	0.005525522	7/11/2011
bc2cj	bc070611_55	2303973.787	1213345.006	0	0.290625483	0.004145213	7/11/2011
bc2cj	bc070611_56	2303951.983	1213140.281	0	0.380882949	0.011737179	7/11/2011
bc2cj	bc070611_57	2304169.451	1213142.068	0	0.33762756	0.009243739	7/11/2011
bc2cj	bc070611_58	2304155.138	1213365.196	0	0.168855324	0.001845413	7/11/2011
bc2cj	bc070611_59	2304145.223	1213540.553	0	0.266347796	0.010395188	7/11/2011
bc2cj	bc070611_60	2304361.432	1213555.263	0	0.280987144	0.011544254	7/11/2011
bc2cj	bc070611_61	2304367.581	1213372.826	0	0.299720794	0.00805701	7/11/2011
bc2cj	bc070611_62	2304350.789	1213159.23	0	0.123825409	0.005534097	7/11/2011
bc2cj	bc070611_63	2304554.998	1213345.395	0	0.664412856	0	7/11/2011
bc2cj	bc070611_64	2304573.511	1213546.752	0	0.254263699	0	7/11/2011
bc2cj	bc070611_65	2304765.322	1213547.32	0	0.154377654	0.000462902	7/11/2011
bc2cj	bc070611_66	2304771.562	1213368.6	0	0.267339379	0	7/11/2011
bc2cj	bc070611_67	2304946.692	1213353.07	0.396363407	0.39242065	0.000695781	7/11/2011
bc2cj	bc070611_68	2304976.255	1213557.644	0	0.446345031	0	7/11/2011
bc2cj	bc070611_69	2305158.778	1213545.293				7/11/2011
bc2cj	bc070611_70	2305159.572	1213362.549	0.600299776	0.114936285	0.000692387	7/11/2011
bc2cj	bc070611_71	2305336.121	1213348.187	8.876960754	4.205781937	0	7/11/2011
bc2cj	bc070611_72	2305369.84	1213553.281	0	1.534595847	0	7/11/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc070611_73	2305564.498	1213369.282	8.786828995	5.564650536	0	7/11/2011
bc2cj	bc070611_74	2305970.373	1213344.416	0	1.192236543	0	7/12/2011
bc2cj	bc070611_75	2306149.461	1213346.77	0	0.254578948	0	7/12/2011
bc2cj	bc070611_76	2306357.323	1213330.206	0	0.831221044	0.000245923	7/12/2011
bc2cj	bc070611_77	2306549.467	1213353.013	0	0.298505872	0.001223385	7/12/2011
bc2cj	bc070611_78	2306766.461	1213351.764	0	0.334853798	0.000245674	7/12/2011
bc2cj	bc070611_79	2306956.913	1213354.166	0	0.345136017	0.00048817	7/12/2011
bc2cj	bc070611_80	2306978.669	1213532.107	0	0.875497222	0.001956418	7/12/2011
bc2cj	bc070611_81	2306969.521	1213742.184	0	0.297178268	0	7/12/2011
bc2cj	bc070611_82	2307156.239	1213750.164	0	1.534446955	0.001939882	7/12/2011
bc2cj	bc070611_83	2307174.064	1213953.583	0	0.360973626	0	7/12/2011
bc2cj	bc070611_84	2307363.101	1213949.821	0	0.443793327	0.001689262	7/12/2011
bc2cj	bc070611_85	2307362.742	1214157.644	0	0.34674868	0.001198993	7/12/2011
bc2cj	bc070611_86	2307450.752	1214154.756	0.143827736	0.416811824	0	7/12/2011
bc2cj	bc070611_87	2307370.672	1214350.436	0.143827736	0.416811824	0	7/12/2011
bc2cj	bc070611_88	2307160.589	1214357.739	0	0.745335281	0	7/12/2011
bc2cj	bc070611_89	2306968.662	1214342.605	0	0.656917393	0	7/12/2011
bc2cj	bc070611_90	2306763.262	1214352.397	0	0	0	7/12/2011
bc2cj	bc070611_91	2306569.288	1214357.077	0.036835987	0.286370099	0	7/12/2011
bc2cj	bc070611_92	2306577.828	1214150.042	0.570604324	3.608169556	0	7/12/2011
bc2cj	bc070611_93	2306369.728	1214154.11	0	0	0	7/12/2011
bc2cj	bc070611_94	2306367.753	1213970.498	0	0.439647704	0	7/12/2011
bc2cj	bc070611_95	2306328.422	1213755.563	0	0	0	7/12/2011
bc2cj	bc070611_96	2306165.73	1213719.165	0.237173021	1.317178607	0	7/12/2011
bc2cj	bc070611_97	2305951.183	1213719.237	0	0.27323702	0	7/12/2011
bc2cj	bc070611_98	2305713.984	1213751.821	0	0.364195228	0	7/12/2011
bc2cj	bc070611_99	2305759.289	1213558.146	0	0.467069119	0	7/13/2011
bc2cj	bc070811_01	2304347.575	1213115.551	0		0	7/8/2011
bc2cj	bc070811_02	2304149.037	1213124.511	0	0.003131954	0	7/8/2011
bc2cj	bc070811_03	2303937.026	1213153.903	0.141737223	0	0	7/8/2011
bc2cj	bc070811_04	2303963.433	1213348.228	0.000474129	0	0	7/8/2011
bc2cj	bc070811_05	2304176.78	1213366.407	0	0.05024346	0	7/8/2011
bc2cj	bc070811_06	2304347.34	1213348.239	0	0.154237539	0	7/8/2011
bc2cj	bc070811_07	2304553.033	1213352.921	0	0.096896604	0	7/8/2011
bc2cj	bc070811_08	2304570.006	1213541.062	0	0	0	7/8/2011
bc2cj	bc070811_09	2304370.623	1213536.387	0	0.269145906	0	7/8/2011
bc2cj	bc070811_10	2304185.769	1213536.239	0	0.006060915	0.000233112	7/8/2011
bc2cj	bc070811_11	2303981.704	1213533.159	0	0.091424584	0	7/8/2011
bc2cj	bc070811_12	2303777.926	1213546.862	0.119085021	0.010001281	0	7/8/2011
bc2cj	bc070811_13	2303548.9	1213522.202	0.16083762	0	0	7/8/2011
bc2cj	bc070811_14	2303573.076	1213736.647	0.03571067	0.096001409	0	7/8/2011
bc2cj	bc070811_15	2303551.382	1213945.712	0.02959956	0.11747326	0	7/8/2011
bc2cj	bc070811_16	2303751.484	1213928.948	0.176909059	0.233187824	0.000461301	7/8/2011
bc2cj	bc070811_17	2303756.619	1213743.594	0	0.140393391	0	7/8/2011
bc2cj	bc071211_01	2306164.934	1213942.413	0	0.45921585	0	7/13/2011
bc2cj	bc071211_02	2306779.291	1214556.231	2.43690896	3.059683084	0	7/13/2011
bc2cj	bc071211_03	2306573.464	1214527.123	0	0.176525801	0	7/13/2011
bc2cj	bc071211_04	2306559.532	1214741.811	0	0.349763036	0.000495064	7/13/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc071211_05	2306583.54	1214950.275	0	0.252712548	0	7/13/2011
bc2cj	bc071211_06	2306778.671	1215142.469	0	0.60016042	0	7/13/2011
bc2cj	bc071211_07	2306982.406	1215150.133	0	0.292113006	0.000245267	7/13/2011
bc2cj	bc071211_08	2307149.962	1214923.452	4.223854065	3.604893684	0	7/13/2011
bc2cj	bc071211_09	2307224.437	1214900.157	4.926933289	4.71881485	0	7/13/2011
bc2cj	bc071211_10	2307359.876	1214932.383	0	0.397719264	0	7/13/2011
bc2cj	bc071211_11	2307570.592	1214753.797	0	0.685090482	0	7/13/2011
bc2cj	bc071211_12	2307371.489	1214744.465	0	1.031878352	0	7/13/2011
bc2cj	bc071211_13	2307161.007	1214756.623	0	6.015129566	0.000242116	7/13/2011
bc2cj	bc071211_14	2306970.53	1214740.484	1.073335171	3.822461367	0	7/13/2011
bc2cj	bc071211_15	2306957.2	1214934.735	0	0.695759237	0.000962323	7/13/2011
bc2cj	bc071211_16	2306764.297	1214922.372	0	1.103066087	0.000720331	7/13/2011
bc2cj	bc071811A_01	2310170.026	1215353.036	0	0.20408912	0	7/18/2011
bc2cj	bc071811A_02	2310174.94	1215160.14	0	0.528487027	0	7/18/2011
bc2cj	bc071811A_03	2309969.339	1215146.718	0	0.320038944	0	7/18/2011
bc2cj	bc071811A_04	2309770.723	1215140.267	0	0.284545034	0.000251365	7/18/2011
bc2cj	bc071811A_05	2309562.056	1215154.524	0	0	0	7/18/2011
bc2cj	bc071811A_06	2309363.655	1215155.178	0	0.579551399	0.000501342	7/18/2011
bc2cj	bc071811A_07	2309178.183	1215142.352	0	0.145918518	0.000250289	7/18/2011
bc2cj	bc071811A_08	2309173.827	1214943.862	0	0.203148231	0	7/18/2011
bc2cj	bc071811A_09	2309170.801	1214747.482	0	0.267854035	0	7/18/2011
bc2cj	bc071811A_10	2308970.715	1214748.659	0	0.281307817	0	7/18/2011
bc2cj	bc071811A_11	2308760.386	1214738.708	0	0.289675444	0.000495172	7/18/2011
bc2cj	bc071811A_12	2308565.412	1214742.88	0	0.003700723	0	7/18/2011
bc2cj	bc071811A_13	2308369.338	1214757.849	0	0.045286439	0	7/18/2011
bc2cj	bc071811A_14	2308369.643	1214944.422	0	0.276362717	0.000245438	7/18/2011
bc2cj	bc071811A_15	2308166.518	1214956.096	0	0.134834409	0.000490307	7/18/2011
bc2cj	bc071811A_16	2307968.028	1214943.974	0	0.178277582	0.000733653	7/18/2011
bc2cj	bc071811A_17	2307755.932	1214957.156	0	0.050775748	0.000244114	7/18/2011
bc2cj	bc071811A_18	2307762.958	1215156.498	0	0.115210444	0.000730722	7/18/2011
bc2cj	bc071811A_19	2307573.541	1215138.755	0	0.299060047	0.000729415	7/18/2011
bc2cj	bc071811A_20	2307378.755	1215153.321	0	0.7101596	0.000484916	7/18/2011
bc2cj	bc071811A_21	2307178.126	1215168.436	2.863138437	1.720149279	0.000723258	7/18/2011
bc2cj	bc071811A_22	2306985.365	1215368.36	0	3.945491076	0.001196619	7/18/2011
bc2cj	bc071811A_23	2307145.15	1215349.523	0	0.127154797	0.000478026	7/18/2011
bc2cj	bc071811A_24	2307369.37	1215347.296	0	0.185956627	0.000957306	7/18/2011
bc2cj	bc071811A_25	2307550.964	1214935.038	0	0.012919778	0.001196276	7/18/2011
bc2cj	bc071811A_26	2307747.034	1214729.244	0	0.042779684	0	7/18/2011
bc2cj	bc071811A_27	2307554.222	1214550.913	0	0.159802914	0.001194342	7/18/2011
bc2cj	bc071811A_28	2307766.394	1214554.044	0	0.220317572	0	7/18/2011
bc2cj	bc071811A_29	2307774.209	1214357.563	0	0.153295666	0.000238778	7/18/2011
bc2cj	bc071811A_30	2307747.065	1214161.25	0	0.019078743	0	7/18/2011
bc2cj	bc071811A_31	2307939.477	1214134.75	0	0.224696681	0	7/18/2011
bc2cj	bc071811A_32	2307962.89	1214362.182	0	0.194866538	0	7/18/2011
bc2cj	bc071811A_33	2308003.306	1214552.359	0.117581561	0.489329308	0	7/18/2011
bc2cj	bc071811A_34	2307991.149	1214737.273	0	0.043389667	0.000237102	7/18/2011
bc2cj	bc071811A_35	2308138.499	1214751.661	0	0.234268412	0.001185569	7/18/2011
bc2cj	bc071811A_36	2308169.244	1214567.141	0	0.083419353	0.001901296	7/18/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc071811A_37	2308179.099	1214351.16	0	0.189092994	0.001184793	7/18/2011
bc2cj	bc071811A_38	2308182.853	1214163.212	0	0.388190269	0.000711406	7/18/2011
bc2cj	bc071811A_39	2310766.008	1214143.321	0	0.031521503	0	7/18/2011
bc2cj	bc071811A_40	2310602.694	1214150.421	0	6.124881268	0.001729355	7/18/2011
bc2cj	bc071811A_41	2310557.303	1214344.483	0	0.517555237	0.003945157	7/18/2011
bc2cj	bc071811A_42	2310530.567	1214513.488	0	0.824371576	0.002705276	7/18/2011
bc2cj	bc071811A_43	2310556.779	1214656.676	0	0.364514977	0	7/18/2011
bc2cj	bc071811A_44	2310760.612	1214665.653	0	5.553255081	0.000489058	7/18/2011
bc2cj	bc071811A_45	2310766.92	1214554.115	0	0.088007368	0.000975151	7/18/2011
bc2cj	bc071811A_46	2310764.674	1214359.609	0.000243337	0.181286067	0.001216685	7/18/2011
bc2cj	bc071811A_47	2311446.462	1215716.308	0	0.332432747	0	7/18/2011
bc2cj	bc071811A_48	2311547.035	1215736.859	0	0.121893987	0.000242334	7/18/2011
bc2cj	bc071811A_49	2311730.833	1215736.331	0	0.078167818	0.002412587	7/18/2011
bc2cj	bc071811A_50	2311756.853	1215661.716	0	0.206117138	0.002645611	7/18/2011
bc2cj	bc071811A_51	2311559.16	1215624.806	0	0.023985425	0.000479709	7/18/2011
bc2cj	bc071811B_01	2310133.321	1214971.33	0	1.019693255	0.000508195	7/18/2011
bc2cj	bc071811B_02	2309961.816	1214948.687	0	0.062889919	0	7/18/2011
bc2cj	bc071811B_03	2309964.769	1214741.005	0	0.104819186	0	7/18/2011
bc2cj	bc071811B_04	2309969.208	1214540.846	0	0.812114239	0.000999525	7/18/2011
bc2cj	bc071811B_05	2309969.833	1214344.588	0	0.127409339	0.002006446	7/18/2011
bc2cj	bc071811B_06	2309967.94	1214149.757	0	0.127001807	0	7/18/2011
bc2cj	bc071811B_07	2309770.716	1214160.913	0	0.496796936	0.001759908	7/18/2011
bc2cj	bc071811B_08	2309765.462	1214340.049	0	0.226926535	0.00325612	7/18/2011
bc2cj	bc071811B_09	2309727.939	1214527.324	0.626307547	2.064846039	0.00249227	7/18/2011
bc2cj	bc071811B_10	2309765.204	1214743.888	0	0.942963719	0.001751326	7/18/2011
bc2cj	bc071811B_11	2309758.978	1214940.5	0	0.282346994	0.002509751	7/18/2011
bc2cj	bc071811B_12	2309561.524	1214947.663	0	0.041036014	0.005004392	7/18/2011
bc2cj	bc071811B_13	2309561.837	1214748.196	0	0.594447196	0.00249558	7/18/2011
bc2cj	bc071811B_14	2309564.146	1214545.941	0	0.247612819	0.000501241	7/18/2011
bc2cj	bc071811B_15	2309563.835	1214353.081	0	0.233570352	0.003452994	7/18/2011
bc2cj	bc071811B_16	2309351.661	1214352.049	0	0.018106513	0.000496069	7/18/2011
bc2cj	bc071811B_17	2309359.601	1214546.581	0	0.568074286	0.000990539	7/18/2011
bc2cj	bc071811B_18	2309363.636	1214660.623	8.111970901	2.054294825	0.001234849	7/18/2011
bc2cj	bc071811B_19	2309377.895	1214750.647	0	0.182719678	0.001485526	7/18/2011
bc2cj	bc071811B_20	2309363.35	1214961.284	0	0.091769502	0.000986769	7/18/2011
bc2cj	bc071811B_21	2309258.911	1214662.764	43.1326828	2.101372719	0.001214807	7/18/2011
bc2cj	bc071811B_22	2309169.796	1214554.481	0	0.158009887	0.000241605	7/18/2011
bc2cj	bc071811B_23	2309124.378	1214355.84	0.000242309	0.300948083	0.001211546	7/18/2011
bc2cj	bc071811B_24	2308963.568	1214348.459	0	0.280740678	0.000483619	7/18/2011
bc2cj	bc071811B_25	2308954.164	1214657.082	0	0.083504848	0.000962592	7/18/2011
bc2cj	bc071811B_26	2308823.294	1214631.887	0	0.250298858	0.000954428	7/18/2011
bc2cj	bc071811B_27	2308601.32	1214594.127	0	0.169834331	0.002866402	7/18/2011
bc2cj	bc071811B_28	2308370.972	1214589.086	0	0.018242756	0.000473838	7/18/2011
bc2cj	bc071811B_29	2308349.782	1214368.757	0	0.063018858	0.000710739	7/18/2011
bc2cj	bc071811B_30	2308603.868	1214389.525	0.003314868	0.778283536	0.001420657	7/18/2011
bc2cj	bc071811B_31	2308795.737	1214357.812	0	0.279506475	0.001181346	7/18/2011
bc2cj	bc071811B_32	2310158.123	1214745.271	0	0.737098157	0.00261551	7/18/2011
bc2cj	bc071811B_33	2310138.518	1214551.853	0.593679845	0.904757559	0.004785811	7/18/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
bc2cj	bc071811B_34	2310159.638	1214374.123	40.36356735	5.433746815	0.004810541	7/18/2011
bc2cj	bc071811B_35	2310170.669	1214173.526	0.319228292	0.090968058	0.003360298	7/18/2011
bc2cj	bc071811B_36	2310350.329	1214151.354	0	0.543149412	0.001201658	7/18/2011
bc2cj	bc071811B_37	2310339.276	1214390.334	0.761407733	1.143681288	0.003863788	7/18/2011
bc2cj	bc071811B_38	2310353.224	1214538.075	0.797651589	0.514396012	0.002895287	7/18/2011
bc2cj	bc071811B_39	2310291.31	1214749.243	0	0.136203825	0.000711867	7/18/2011
bc2cj	bc071811B_40	2310293.07	1215181.298	0.806429863	0.839413643	0.002868156	7/18/2011
bc2cj	bc072211A_01	2302992.28	1209563.468	0	0.648584247	0	7/22/2011
bc2cj	bc072211A_02	2302770.732	1209546.522	0	0.007744142	0	7/22/2011
bc2cj	bc072211A_03	2302585.166	1209550.112	0	0.148353487	0.000246844	7/22/2011
bc2cj	bc072211A_04	2302596.24	1209346.764	0	1.099629164	0.000491674	7/22/2011
bc2cj	bc072211A_05	2302731.949	1209357.695	0	0.049130704	0	7/22/2011
bc2cj	bc072211A_06	2302948.453	1209329.626	0	0.123593077	0	7/22/2011
bc2cj	bc072211A_07	2302986.063	1209150.298	0	0.175607651	0	7/22/2011
bc2cj	bc072211A_08	2302771.69	1209134.977	0	0.095403045	0	7/22/2011
bc2cj	bc072211A_09	2302561.323	1209130.366	0	0.515121281	0.001206373	7/22/2011
bc2cj	bc072211A_10	2302551.131	1208975.383	0	0.219454885	0	7/22/2011
bc2cj	bc072211A_11	2302736.931	1208957.689	0	0.235213324	0	7/22/2011
bc2cj	bc072211A_12	2302935.625	1208975.208	0	0.213386059	0.000720088	7/22/2011
bc2cj	bc072211B_01	2303144.74	1209751.885	0	0.317694068	0.001262695	7/22/2011
bc2cj	bc072211B_02	2303147.192	1209569.048	0.708849907	0.405774534	0.001004392	7/22/2011
bc2cj	bc072211B_03	2303154.102	1209338.209	0	0.270207644	0.000745743	7/22/2011
bc2cj	bc072211B_04	2303152.122	1209145.576	0	0.295901775	0.002222968	7/22/2011
bc2cj	bc072211B_05	2303163.707	1208949.966	0	0.359801084	0.001970164	7/22/2011
bc2cj	bc072211B_06	2303375.595	1209134.795	0	0.192322746	0.000734991	7/22/2011
bc2cj	bc072211B_07	2303558.181	1209141.206	0	0.141229883	0.003923053	7/22/2011
bc2cj	bc072211B_08	2303745.076	1209146.589	0	0.389162749	0.001955592	7/22/2011
bc2cj	bc072211B_09	2303574.948	1209338.424	0	0.075099602	0.000733872	7/22/2011
bc2cj	bc072211B_10	2303385.689	1209357.274	0	0.204385549	0.000977921	7/22/2011
Fed	federal070611_01	2319945.541	1219884.747	0	0.021265354	0	7/6/2011
Fed	federal070611_02	2319942.582	1219925.328	0	1.228687644	0.000249277	7/6/2011
Fed	federal070611_03	2319943.949	1219970.771	0	0.254447341	0.000248484	7/6/2011
Fed	federal070611_04	2319946.952	1220023.393	0	0.040382866	0.000247748	7/6/2011
Fed	federal070611_05	2319940.546	1220078.24	0	0.157617465	0	7/6/2011
Fed	federal070611_06	2319937.556	1220125.092	0	0.073012292	0	7/6/2011
Fed	federal070611_07	2319891.486	1220131.129	0	0.135888517	0	7/6/2011
Fed	federal070611_08	2319838.55	1220119.17	0	0.154611468	0.000244638	7/6/2011
Fed	federal070611_09	2319797.371	1220116.501	0	0.10916476	0.000244216	7/6/2011
Fed	federal070611_10	2319788.683	1220073.695	0.000487975	0.062704764	0.000243987	7/6/2011
Fed	federal070611_100	2320087.894	1219724.315	0	0.045073539	0	7/6/2011
Fed	federal070611_101	2320083.785	1219773.827	0	0.076154105	0	7/6/2011
Fed	federal070611_102	2320089.635	1219826.494	0	0.137216702	0	7/6/2011
Fed	federal070611_103	2320140.289	1219825.221	0	0	0	7/6/2011
Fed	federal070611_104	2320134.93	1219776.788	0	0.116553441	0.000232178	7/6/2011
Fed	federal070611_105	2320139.757	1219727.491	0	0.045266282	0	7/6/2011
Fed	federal070611_106	2320143.062	1219675.984	0	0.114217781	0	7/6/2011
Fed	federal070611_107	2320188.464	1219727.364	0	0.071229786	0	7/6/2011
Fed	federal070611_108	2320185.757	1219776.012	0	0.054517552	0	7/6/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
Fed	federal070611_109	2320187.628	1219827.185	0	0.011130615	0	7/6/2011
Fed	federal070611_11	2319738.954	1220079.247	0	0.063869722	0	7/6/2011
Fed	federal070611_12	2319744.196	1220029.434	0	0.108163275	0	7/6/2011
Fed	federal070611_13	2319688.715	1220021.444	0	0.07278084	0	7/6/2011
Fed	federal070611_14	2319689.093	1219975.549	0	0.242913514	0	7/6/2011
Fed	federal070611_15	2319690.839	1219924.665	0	0.100082248	0.000242918	7/6/2011
Fed	federal070611_16	2319689.173	1219870.687	0	0.537186027	0.000728223	7/6/2011
Fed	federal070611_17	2319688.044	1219825.457	0	0.117652543	0.000485165	7/6/2011
Fed	federal070611_18	2319690.337	1219775.89	0	0.142741293	0.000242345	7/6/2011
Fed	federal070611_19	2319692.821	1219727.491	0	0.05643671	0	7/6/2011
Fed	federal070611_20	2319733.888	1219671.679	0	0.081785321	0.000241968	7/6/2011
Fed	federal070611_21	2319736.863	1219727.72	0	0.214942768	0.00024178	7/6/2011
Fed	federal070611_22	2319735.038	1219777.622	0	0.108233504	0.000483185	7/6/2011
Fed	federal070611_23	2319743.341	1219827.196	0	0.057220221	0.000241436	7/6/2011
Fed	federal070611_24	2319738.064	1219873.275	0	0.13246198	0.000723836	7/6/2011
Fed	federal070611_25	2319735.87	1219923.802	0	0.197478861	0.000482244	7/6/2011
Fed	federal070611_26	2319736.021	1219973.915	0	0.17689091	0	7/6/2011
Fed	federal070611_27	2319789.654	1220030.407	0	0.063088611	0	7/6/2011
Fed	federal070611_28	2319789.716	1219977.959	0	0.045246039	0.00024067	7/6/2011
Fed	federal070611_29	2319784.056	1219926.906	0	0.245644867	0.000240592	7/6/2011
Fed	federal070611_30	2319784.831	1219878.128	0	0.046873316	0	7/6/2011
Fed	federal070611_31	2319785.702	1219824.163	0	0.057150837	0.00024013	7/6/2011
Fed	federal070611_32	2319794.52	1219776.013	0	0.041744985	0.000239914	7/6/2011
Fed	federal070611_33	2319787.727	1219726.583	0	0.130527362	0.00095976	7/6/2011
Fed	federal070611_34	2319790.025	1219680.592	0	1.232720733	0	7/6/2011
Fed	federal070611_35	2319788.132	1219626.569	0	0.179093927	0.000239751	7/6/2011
Fed	federal070611_36	2319841.506	1219626.622	0	0.023001239	0	7/6/2011
Fed	federal070611_37	2319887.569	1219625.392	0	0.208115757	0.000478978	7/6/2011
Fed	federal070611_38	2319889.114	1219678.123	0	0.107420534	0.000478488	7/6/2011
Fed	federal070611_39	2319842.043	1219676.506	0	0.215728521	0.000956668	7/6/2011
Fed	federal070611_40	2319836.533	1219731.309	0	0.039661132	0.000477845	7/6/2011
Fed	federal070611_41	2319887.645	1219731.659	0	0.160015374	0.000955316	7/6/2011
Fed	federal070611_42	2319885.167	1219776.51	0	0.135090217	0.000716026	7/6/2011
Fed	federal070611_43	2319837.333	1219778.964	0	0.196179822	0.000953486	7/6/2011
Fed	federal070611_44	2319838.716	1219829.223	0	0.091556646	0.001192144	7/6/2011
Fed	federal070611_45	2319835.737	1219879.315	0	0.03806866	0.000713787	7/6/2011
Fed	federal070611_46	2319835.792	1219925.957	0	0.136483744	0.00071333	7/6/2011
Fed	federal070611_47	2319840.448	1219982.562	0	0.07486105	0.000475308	7/6/2011
Fed	federal070611_48	2319838.814	1220027.152	0	0.13895613	0.000475064	7/6/2011
Fed	federal070611_49	2319834.478	1220078.344	0	0.024916904	0.000237304	7/6/2011
Fed	federal070611_50	2319887.507	1220082.614	0.000236957	0.065400049	0.000473913	7/6/2011
Fed	federal070611_51	2319887.906	1220028.086	0	0.104431152	0.000710416	7/6/2011
Fed	federal070611_52	2319888.073	1219975.771	0	0.083597213	0.000947277	7/6/2011
Fed	federal070611_53	2319889.166	1219929.539	0	0.069343776	0.001183341	7/6/2011
Fed	federal070611_54	2319889.245	1219879.331	0	0.079268537	0.000709868	7/6/2011
Fed	federal070611_55	2319886.843	1219825.594	0	0.03381544	0.000472943	7/6/2011
Fed	federal070611_56	2319938.778	1219827.974	0.000472491	0.115051627	0.000236246	7/6/2011
Fed	federal070611_57	2319940.002	1219778.552	0	0.075309403	0.000472159	7/6/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
Fed	federal070611_58	2319939.398	1219726.759	0	0.07408186	0.00023593	7/6/2011
Fed	federal070611_59	2319939.694	1219675.557	0	0.222674698	0.000471768	7/6/2011
Fed	federal070611_60	2319936.224	1219628.426	0	0.171465278	0.000235853	7/6/2011
Fed	federal070611_61	2319990.886	1219624.879	0	0.156281605	0.000235719	7/6/2011
Fed	federal070611_62	2319989.491	1219675.713	0	0.118764594	0.000235644	7/6/2011
Fed	federal070611_63	2319988.738	1219728.107	0	0.059341002	0	7/6/2011
Fed	federal070611_64	2319987.274	1219780.792	0	0.090608247	0	7/6/2011
Fed	federal070611_65	2319988.589	1219826.429	0	0.162081584	0	7/6/2011
Fed	federal070611_66	2319988.305	1219876.148	0	0.069844648	0.000235167	7/6/2011
Fed	federal070611_67	2319985.783	1219924.191	0	0.039500538	0.000235122	7/6/2011
Fed	federal070611_68	2319988.144	1219976.01	0	0.100308292	0	7/6/2011
Fed	federal070611_69	2319986.627	1220027.686	0	0.031691354	0	7/6/2011
Fed	federal070611_70	2319988.294	1220079.477	0	0.062349059	0	7/6/2011
Fed	federal070611_71	2319997.57	1220132.353	0	0.102801874	0	7/6/2011
Fed	federal070611_72	2320042.899	1220127.589	0	0.07090053	0.000233995	7/6/2011
Fed	federal070611_73	2320089.269	1220129.355	0	0.04184014	0	7/6/2011
Fed	federal070611_74	2320085.188	1220077.505	0	0.004909861	0	7/6/2011
Fed	federal070611_75	2320038.021	1220080.411	0	0.038579922	0	7/6/2011
Fed	federal070611_76	2320039.112	1220026.313	0	0.033231493	0	7/6/2011
Fed	federal070611_77	2320090.173	1220028.557	0	0.184329838	0	7/6/2011
Fed	federal070611_78	2320138.917	1220075.202	0	0.015202952	0	7/6/2011
Fed	federal070611_79	2320136.453	1220029.173	0	0.009358616	0	7/6/2011
Fed	federal070611_80	2320191.811	1220027.447	0	0.025034297	0	7/6/2011
Fed	federal070611_81	2320187.323	1219975.949	0	0.009598028	0	7/6/2011
Fed	federal070611_82	2320135.683	1219976.469	0	0.048920359	0	7/6/2011
Fed	federal070611_83	2320089.536	1219977.862	0	0.297023475	0	7/6/2011
Fed	federal070611_84	2320041.249	1219979.492	0	0.062413577	0	7/6/2011
Fed	federal070611_85	2320037.537	1219930.059	0	0.09471409	0.000233862	7/6/2011
Fed	federal070611_86	2320088.22	1219924.949	0.000233597	0.094840251	0.000233597	7/6/2011
Fed	federal070611_87	2320135.327	1219928.928	0	0.057676591	0	7/6/2011
Fed	federal070611_88	2320189.059	1219930.371	0	0.029423935	0.000467047	7/6/2011
Fed	federal070611_89	2320188.856	1219872.608	0	0.136109874	0.000233465	7/6/2011
Fed	federal070611_90	2320136.461	1219876.56	0.000233215	0.004897509	0	7/6/2011
Fed	federal070611_91	2320088.906	1219876.034	0	0.09158989	0	7/6/2011
Fed	federal070611_92	2320035.566	1219875.859	0	0.096913636	0.000232965	7/6/2011
Fed	federal070611_93	2320037.588	1219828.685	0	0.057757288	0	7/6/2011
Fed	federal070611_94	2320037.164	1219777.373	0	0.048408058	0	7/6/2011
Fed	federal070611_95	2320040.595	1219727.297	0	0.133985847	0.000232614	7/6/2011
Fed	federal070611_96	2320037.779	1219675.378	0	0.1528375	0	7/6/2011
Fed	federal070611_97	2320036.982	1219623.802	0	0.080484815	0	7/6/2011
Fed	federal070611_98	2320089.715	1219623.65	0	0.119324215	0.000232601	7/6/2011
Fed	federal070611_99	2320089.727	1219673.502	0	0.012556506	0	7/6/2011
FR	palmer07221_01	2331956.448	1234970.703	0	0.641622066	0.00335426	7/22/2011
FR	palmer07221_02	2331972.961	1235149.412	0	0.075859621	0.00214697	7/22/2011
FR	palmer07221_03	2331972.476	1235340.292	0	0.133907765	0.003792079	7/22/2011
FR	palmer07221_04	2331955.4	1235550.144	0.247633472	0.103062697	0.002122573	7/22/2011
FR	palmer07221_05	2332171.039	1234957.919	0.001642781	0.559014797	0.011030098	7/22/2011
FR	palmer07221_06	2332172.639	1235145.925	0	0.196380615	0.001644335	7/22/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
FR	palmer07221_07	2332358.124	1235139.765	0.448025852	0.12797384	0.001878515	7/22/2011
FR	palmer072211_08	2332544.896	1235143.013	0	0.375767887	0.002814741	7/22/2011
FR	palmer072211_09	2332572.462	1235330.911	0	0.232821003	0.002802259	7/22/2011
FR	palmer072211_10	2332591.811	1235534.575	0	0.469950825	0.009562274	7/22/2011
FR	palmer072211_11	2332760.202	1235549.506	0	0.175517365	0.003952047	7/22/2011
FR	palmer072211_12	2332976.943	1235535.727	0	0.207634374	0.005341824	7/22/2011
FR	palmer072211_13	2333175.947	1235558.653	0	0.196388111	0.006947693	7/22/2011
FR	palmer072211_14	2333154.57	1235749.346	0	0.104719192	0.005328631	7/22/2011
FR	palmer072211_15	2333187.963	1235947.825	0	0.298032045	0.001617228	7/22/2011
FR	palmer072211_16	2332971.088	1235957.488	0	0.286637276	0.002534574	7/22/2011
FR	palmer072211_17	2332730.844	1235768.535	0	0.121932194	0.004618644	7/22/2011
FR	palmer072211_18	2332953.588	1235760.396	0	0.131694034	0.002777379	7/22/2011
FR	palmer072211_19	2332779.615	1235345.439	0	0.133087054	0.008534178	7/22/2011
FR	palmer072211_20	2332766.992	1235170.549	0	0.266453922	0.004865681	7/22/2011
FR	palmer072211_21	2332754.333	1234954.53	0.002317874	0.254502535	0.005794684	7/22/2011
FR	palmer072211_22	2332562.441	1234949.097	0	0.333015949	0.000926976	7/22/2011
FR	palmer072211_23	2332349.343	1234946.889	0	0.391391665	0.013672059	7/22/2011
FR	palmer072211_24	2332453.19	1235535.256	0.381856948	0.730831087	0.003705101	7/22/2011
FR	palmer072211_25	2332351.568	1235547.633	2.522478819	1.034762263	0.001156676	7/22/2011
FR	palmer072211_26	2332281.419	1235341.534	0	0.539503098	0.001618741	7/22/2011
FR	palmer072211A_01	2331796.718	1235144.03	0	0.07155522	0	7/22/2011
FR	palmer072211A_02	2331788.128	1235357.988	0	0.237122297	0.000971813	7/22/2011
FR	palmer072211A_03	2331771.015	1235541.096	0	0.117272668	0.001199107	7/22/2011
FR	palmer072211A_04	2331573.304	1235558.207	0	0.780459285	0.000956445	7/22/2011
FR	palmer072211A_05	2331375.695	1235547.302	0	0.206364542	0.000708345	7/22/2011
FR	palmer072211A_06	2331162.441	1235534.832	0	0.067299888	0.000475618	7/22/2011
FR	palmer072211A_07	2330962.378	1235554.738	0	0.123645097	0.000942058	7/22/2011
FR	palmer072211A_08	2330737.334	1235566.495	0	0.161525488	0.000948755	7/22/2011
FR	palmer072211A_09	2330773.263	1235357.092	0	0.068611138	0.000471554	7/22/2011
FR	palmer072211A_10	2330779.055	1235154.912	0.002351707	0.28878963	0.000470341	7/22/2011
FR	palmer072211A_11	2330771.732	1234968.192	0	0.144993171	0.000936951	7/22/2011
FR	palmer072211A_12	2330563.215	1234720.679	0	0.073105246	0.001640182	7/22/2011
FR	palmer072211A_13	2330554.529	1234953.84	0	0.100596197	0.001164308	7/22/2011
FR	palmer072211A_14	2330766.057	1234767.407	0	0.294809371	0.001160667	7/22/2011
FR	palmer072211A_15	2330579.532	1234550.256	0	0.339669794	0	7/22/2011
FR	palmer072211A_16	2330753.107	1234543.786	0	0.159432068	0	7/22/2011
FR	palmer072211A_17	2330966.07	1234548.486	0	0.396269053	0	7/22/2011
FR	palmer072211A_18	2330957.434	1234748.038	0	0.067215122	0.000188278	7/22/2011
FR	palmer072211A_19	2330952.842	1234951.854	0	1.526445508	0.000927789	7/22/2011
FR	palmer072211A_20	2330953.102	1235175.672	0	0	0	7/22/2011
FR	palmer072211A_21	2330951.55	1235359.746	0	0.102207989	0	7/22/2011
FR	palmer072211A_22	2331163.57	1235373.227	0	0.176923454	0	7/22/2011
FR	palmer072211A_23	2331348.595	1235349.957	0	0.09794119	0	7/22/2011
FR	palmer072211A_24	2331369.228	1235158.109	0	0.172399223	0.000696094	7/22/2011
FR	palmer072211A_25	2331185.276	1235129.601	0	0.120321676	0.000929843	7/22/2011
FR	palmer072211A_26	2331152.392	1234956.549	1.035322785	1.407142878	0.000692833	7/22/2011
FR	palmer072211A_27	2331200.305	1234773.096	0	0.304789156	0.000692178	7/22/2011
FR	palmer072211A_28	2331158.858	1234561.194	0	0.161516026	0	7/22/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
FR	palmer072211A_29	2331331.693	1234529.156	0	0.527497053	0.001837969	7/22/2011
FR	palmer072211A_30	2331395.501	1234734.669	0	0.172583476	0.001378829	7/22/2011
FR	palmer072211A_31	2331374.501	1234938.793	0	0.304112852	0.000558005	7/22/2011
FR	palmer072211A_32	2331546.273	1234922.399	0	0.263962865	0.000460668	7/22/2011
FR	palmer072211A_33	2331539.313	1234756.729	0	0	0	7/22/2011
FR	palmer072211A_34	2331538.83	1234544.529	0	0.068257205	0.000691796	7/22/2011
FR	palmer072211A_35	2331754.14	1234540.019	0	0.46202448	0.001386767	7/22/2011
FR	palmer072211A_36	2331796.373	1234730.878	0	0.248537987	0.000229279	7/22/2011
FR	palmer072211A_37	2331764.297	1234934.395	0	0.261500806	0.001151986	7/22/2011
FR	palmer072211A_38	2331596.417	1235148.032	0	0.298171252	0.000230783	7/22/2011
FR	palmer072211A_39	2331556.812	1235346.798	0	0.4561418	0	7/22/2011
tc2pr	bph071911A_01	2386569.947	1238149.922	0	0	0	7/19/2011
tc2pr	bph071911A_02	2386558.767	1238355.525	0	2.624302387	0	7/19/2011
tc2pr	bph071911A_03	2386367.431	1238348.321	0	0.148261875	0	7/19/2011
tc2pr	bph071911A_04	2386164.714	1238345.051	0	0.134571299	0	7/19/2011
tc2pr	bph071911A_05	2386167.091	1238548.479	0	0.569741011	0	7/19/2011
tc2pr	bph071911A_06	2386069.415	1238568.457	4.362985134	1.204256415	0	7/19/2011
tc2pr	bph071911A_07	2385964.038	1238555.606	0	0.687424302	0	7/19/2011
tc2pr	bph071911A_08	2385956.111	1238349.791	0	0.181592599	0	7/19/2011
tc2pr	bph071911A_09	2385761.895	1238542.697	0	0.148368999	0	7/19/2011
tc2pr	bph071911A_10	2385986.668	1238734.456	0	0.081864737	0	7/19/2011
tc2pr	bph071911A_11	2385778.355	1238748.599	0	0.543908596	0	7/19/2011
tc2pr	bph071911A_12	2385773.041	1238944.359	0	0.157640725	0.00023994	7/19/2011
tc2pr	bph071911A_13	2385570.084	1238953.234	0	0.415750712	0.0004787	7/19/2011
tc2pr	bph071911A_14	2385578.732	1239156.685	0	0.008832281	0.000477421	7/19/2011
tc2pr	bph071911A_15	2385358.225	1239149.626	0	0.144684017	0.000475153	7/19/2011
tc2pr	bph071911A_16	2385153.8	1239130.651	0	0.17601411	0	7/19/2011
tc2pr	bph071911A_17	2385163.5	1239344.896	0	0.124026768	0	7/19/2011
tc2pr	bph071911A_18	2384958.277	1239358.425	0	0.104001895	0.00019224	7/19/2011
tc2pr	bph071911A_19	2384761.857	1239353.769	0	0.379486531	0.000473175	7/19/2011
tc2pr	bph071911A_20	2384553.721	1239348.679	48.65791702	2.3757689	0.00023616	7/19/2011
tc2pr	bph071911A_21	2384372.876	1239351.383	0	0	0.000473104	7/19/2011
tc2pr	bph071911A_22	2384164.583	1239340.454	0	0.210306227	0.000944136	7/19/2011
tc2pr	bph071911A_23	2384165.981	1239540.459	0	0.036759537	0.000706914	7/19/2011
tc2pr	bph071911A_24	2383964.891	1239551.021	0	0.523618579	0.002119913	7/19/2011
tc2pr	bph071911A_25	2383966.19	1239723.587	0	0.056965172	0.000941573	7/19/2011
tc2pr	bph071911A_26	2383764.261	1239743.848	0	0.905691743	0.000703906	7/19/2011
tc2pr	bph071911A_27	2383552.98	1239753.686	0	0.254722744	0.00070236	7/19/2011
tc2pr	bph071911A_28	2383554.925	1239974.388	0	0.172130957	0.00046334	7/19/2011
tc2pr	bph071911A_29	2383366.36	1239959.819	0	0.100515187	0	7/19/2011
tc2pr	bph071911A_30	2383166.049	1239959.883	0	0.362253278	0.000701135	7/19/2011
tc2pr	bph071911A_31	2383171.024	1240136.556	0	0.006288623	0.000465824	7/19/2011
tc2pr	bph071911A_32	2382968.255	1240165.928	0	0.161666229	0.000696837	7/19/2011
tc2pr	bph071911A_33	2382968.141	1240336.574	0	0.284933269	0.000466339	7/19/2011
tc2pr	bph071911A_34	2382765.24	1240363.003	0	0.215931684	0	7/19/2011
tc2pr	bph071911A_35	2382569.282	1240355.192	0	0.08881817	0	7/19/2011
tc2pr	bph071911A_36	2382383.617	1240339.88	0	0.379951715	0.000188655	7/19/2011
tc2pr	bph071911A_37	2382173.217	1240347.081	0	0	0	7/19/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	bph071911A_38	2382160.288	1240544.861	0	0	0.000699649	7/19/2011
tc2pr	bph071911A_39	2381979.814	1240565.477	0	0.18692857	0.000464419	7/19/2011
tc2pr	bph071911A_40	2381766.886	1240559.198	0.365793198	0.254906833	0	7/19/2011
tc2pr	bph071911A_41	2381583.263	1240548.88	0	0.305538714	0.000700777	7/19/2011
tc2pr	bph071911A_42	2381559.528	1240760.068	0.318410307	1.518859029	0.000699291	7/19/2011
tc2pr	bph071911A_43	2381355.582	1240757.852	0.431800187	0.234066457	0.001397412	7/19/2011
tc2pr	bph071911A_44	2381361.545	1240932.029	0	0.598059714	0.000930108	7/19/2011
tc2pr	bph071911A_45	2384151.474	1239762.088	0	0	0	7/19/2011
tc2pr	bph071911A_46	2384344.909	1239751.528	0	0.244408071	0.000473201	7/19/2011
tc2pr	bph071911A_47	2384368.84	1239557.269	0	0.180373937	0.000765919	7/19/2011
tc2pr	bph071911A_48	2384559.587	1239562.164	0	0.160013571	0	7/19/2011
tc2pr	bph071911A_49	2384785.043	1239535.25	0	0.060660351	0.000472065	7/19/2011
tc2pr	bph071911A_50	2384712.541	1239277.789	24.16571045	1.184754729	0.000703815	7/19/2011
tc2pr	bph071911A_51	2384772.205	1239133.881	81.90828705	2.129218817	0.000235481	7/19/2011
tc2pr	bph071911A_52	2384962.258	1239130.146	0	2.346636295	0.001170976	7/19/2011
tc2pr	bph071911A_53	2384963.014	1238959.343	0	0.236571178	0	7/19/2011
tc2pr	bph071911A_54	2385156.461	1238923.287	86.58479309	2.137599945	0.000705479	7/19/2011
tc2pr	bph071911A_55	2385375.077	1238935.981	0	0.588453889	0.000936656	7/19/2011
tc2pr	bph071911A_56	2386346.903	1238141.495	0	0	0	7/20/2011
tc2pr	bph071911A_57	2385562.102	1238549.165	0	0.250504583	0	7/20/2011
tc2pr	bph071911A_58	2385568.948	1238766.441	5.982773304	2.17550993	0	7/20/2011
tc2pr	bph071911A_59	2385369.466	1238770.62	0	1.2911762	0	7/20/2011
tc2pr	bph071911A_60	2385370.022	1238555.595	0	0.08347214	0.000241249	7/20/2011
tc2pr	bph071911A_61	2385164.516	1238754.875	0	0.13433674	0.000240316	7/20/2011
tc2pr	bph071911A_62	2384787.041	1238952.826	0	0.185927093	0	7/20/2011
tc2pr	bph071911A_63	2384566.387	1238945.867	0	0.127875164	0	7/20/2011
tc2pr	bph071911A_64	2384542.678	1239159.093	0	0.185495868	0.000236904	7/20/2011
tc2pr	bph071911A_65	2384371.75	1239166.48	0	0.103143521	0	7/20/2011
tc2pr	bph071911A_66	2381174.808	1241344.859	0	0.095872208	0	7/20/2011
tc2pr	bph071911A_67	2381188.837	1241564.301	0	0.122955032	0	7/20/2011
tc2pr	bph071911A_68	2380961.108	1241572.04	0	0.123696789	0.000933561	7/20/2011
tc2pr	bph071911A_69	2380981.403	1241750.441	0	0.051028382	0.000231947	7/20/2011
tc2pr	bph071911A_70	2380776.157	1241760.444	0	0	0	7/20/2011
tc2pr	bph071911A_71	2380787.557	1241951.803	0	0.021523731	0.000925752	7/20/2011
tc2pr	bph071911A_72	2380575.074	1241924.959	0	0.205570549	0.000690607	7/20/2011
tc2pr	bph071911A_73	2380363.891	1241944.713	0	0.237673253	0.000692252	7/20/2011
tc2pr	bph071911A_74	2380166.971	1241938.836	0	0.250260502	0	7/20/2011
tc2pr	bph071911A_75	2379978.896	1241972.958	0	0.108393915	0.000461251	7/20/2011
tc2pr	bph071911A_76	2379960.138	1242143.239	0	0.115391284	0.000231709	7/20/2011
tc2pr	bph071911A_77	2380002.326	1242357.19	0	0.211837128	0.000231516	7/20/2011
tc2pr	bph071911A_78	2379971.147	1241766.258	0	0.217949763	0.000916718	7/20/2011
tc2pr	bph071911A_79	2380172.993	1241731.835	0	0.099801697	0.000696291	7/20/2011
tc2pr	bph071911A_80	2380351.297	1241737.568	0	0.43836683	0.000925801	7/20/2011
tc2pr	bph071911A_81	2380570.932	1241738.924	0	0.079937868	0	7/20/2011
tc2pr	bph071911A_82	2380746.855	1241544.281	0	0.741315722	0	7/20/2011
tc2pr	bph071911A_83	2380566.972	1241542.868	0	0.290961504	0.00114823	7/20/2011
tc2pr	bph071911A_84	2380379.733	1241548.096	0	0.397124052	0	7/20/2011
tc2pr	bph071911A_85	2380185.716	1241530.987	0	0.283466846	0.000449591	7/20/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	bph071911A_86	2380561.157	1241336.819	0	0	0.000458526	7/20/2011
tc2pr	bph071911A_87	2380779.635	1241349.158	0	0.416280329	0.000687309	7/20/2011
tc2pr	bph071911A_88	2380959.073	1241351.035	0	0.180270612	0	7/20/2011
tc2pr	bph071911A_89	2380969.752	1241169.013	0	0.194678843	0.000228765	7/20/2011
tc2pr	bph071911B_01	2386363.198	1238543.844	0	0.086839139	0.00073801	7/19/2011
tc2pr	bph071911B_02	2386360.204	1238750.343	0	0.033980165	0.000244462	7/19/2011
tc2pr	bph071911B_03	2386173.09	1238759.491	0	0.145847112	0.001217422	7/19/2011
tc2pr	bph071911B_04	2386157.831	1238930.315	0	0.083268508	0.000968239	7/19/2011
tc2pr	bph071911B_05	2385964.65	1238946.765	0	0.089323781	0.00048153	7/19/2011
tc2pr	bph071911B_06	2385953.129	1239147.059	0.000239932	0.126204342	0.000719797	7/19/2011
tc2pr	bph071911B_07	2385767.113	1239149.289	0	0.00764982	0	7/19/2011
tc2pr	bph071911B_08	2385757.516	1239321.057	0	0.006668081	0.000238146	7/19/2011
tc2pr	bph071911B_09	2385556.215	1239345.67	0.003083101	0.027510751	0.000474323	7/19/2011
tc2pr	bph071911B_10	2385361.972	1239346.567	0	0.126503661	0.000710695	7/19/2011
tc2pr	bph071911B_11	2385369.809	1239550.742	0.000709223	0.146809101	0.00094563	7/19/2011
tc2pr	bph071911B_12	2385160.115	1239541.447	0	0.1445757	0.000941861	7/19/2011
tc2pr	bph071911B_13	2384962.516	1239545.446	0	0.174186766	0.00047014	7/19/2011
tc2pr	bph071911B_14	2384954.227	1239745.102	0	0.07477989	0.000937679	7/19/2011
tc2pr	bph071911B_15	2384760.839	1239741.819	0	0.041847967	0.001402725	7/19/2011
tc2pr	bph071911B_16	2384557.044	1239746.838	0	0.063090235	0.001402005	7/19/2011
tc2pr	bph071911B_17	2384567.694	1239893.63	0	0.189815834	0.004896969	7/19/2011
tc2pr	bph071911B_18	2384362.884	1239938.072	0	0.002556368	0.000697191	7/19/2011
tc2pr	bph071911B_19	2384158.1	1239952.713	0	0.145621225	0.000697865	7/19/2011
tc2pr	bph071911B_20	2383955.276	1239936.103	0	0.254456371	0.001395556	7/19/2011
tc2pr	bph071911B_21	2383806.121	1239952.351	0	0.098311253	0.001162071	7/19/2011
tc2pr	bph071911B_22	2383756.947	1240161.782	0	0.014160946	0.00139288	7/19/2011
tc2pr	bph071911B_23	2383551.969	1240149.274	0	0.085243806	0.002779689	7/19/2011
tc2pr	bph071911B_24	2383362.853	1240141.949	0	0.099100009	0.002541026	7/19/2011
tc2pr	bph071911B_25	2383345.682	1240348.146	0	0.366333991	0.00553305	7/19/2011
tc2pr	bph071911B_26	2383169.26	1240349.982	0	0.148424253	0.002527348	7/19/2011
tc2pr	bph071911B_27	2383162.557	1240533.868	0	0.053027481	0.002066005	7/19/2011
tc2pr	bph071911B_28	2382987.847	1240532.514	0	0.270509988	0.00022944	7/19/2011
tc2pr	bph071911B_29	2382778.254	1240543.419	0	0.153448582	0.000916111	7/19/2011
tc2pr	bph071911B_30	2382570.872	1240550.47	0	0.108602732	0.002749436	7/19/2011
tc2pr	bph071911B_31	2382373.878	1240546.797	0	0.246156484	0.00321473	7/19/2011
tc2pr	bph071911B_32	2382347.744	1240767.145	0	0.278555244	0.003677297	7/19/2011
tc2pr	bph071911B_33	2382165.841	1240749.56	0	0.130504027	0.004128423	7/19/2011
tc2pr	bph071911B_34	2381957.858	1240758.13	0	0.299045026	0.00367208	7/19/2011
tc2pr	bph071911B_35	2381766.484	1240755.481	66.55467224	2.297809839	0.00229804	7/19/2011
tc2pr	bph071911B_36	2381767.623	1240950.228	0.006441214	0.371059924	0.002300433	7/19/2011
tc2pr	bph071911B_37	2381565.533	1240945.06	0	0.250810981	0.005048345	7/19/2011
tc2pr	bph071911B_38	2381550.492	1241144.974	0	0.042160213	0.002520448	7/19/2011
tc2pr	bph071911B_39	2381372.868	1241138.608	0.22974968	0.205541447	0.003654071	7/19/2011
tc2pr	bph071911B_40	2381380.061	1241227.384	0	0.099534757	0.002511198	7/19/2011
tc2pr	bph071911B_41	2381177.034	1240944.011	0	0.243846059	0.003424804	7/19/2011
tc2pr	bph071911B_42	2381157.98	1240761.226	0	0.101099186	0.002063249	7/19/2011
tc2pr	bph071911B_43	2381180.271	1240536.295	0	0.087063819	0.001374692	7/19/2011
tc2pr	bph071911B_44	2381365.753	1240380.794	0.000230708	0.116507754	0.001384251	7/19/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	bph071911B_45	2381557.193	1240326.138	0	0.121963762	0.000692976	7/19/2011
tc2pr	bph071911B_46	2381763.086	1240345.699	0	0.012028596	0.000693957	7/19/2011
tc2pr	bph071911B_47	2381955.664	1240346.781	0	0.022210998	0.001156823	7/19/2011
tc2pr	bph071911B_48	2381958.115	1240140.5	0	0.014330829	0.001617997	7/19/2011
tc2pr	bph071911B_49	2382163.651	1240152.59	0	0.066856228	0.001156682	7/19/2011
tc2pr	bph071911B_50	2382369.096	1240154.083	0.176282957	0.085715562	0.003696628	7/19/2011
tc2pr	bph071911B_51	2382566.726	1240141.715	0	0.177055329	0	7/19/2011
tc2pr	bph071911B_52	2383377.061	1239748.594	0	0.612491727	0.000959267	7/20/2011
tc2pr	bph071911B_53	2383178.65	1239760.064	0	0.148478657	0	7/20/2011
tc2pr	bph071911B_54	2382957.013	1239724.624	0	0.112879433	0	7/20/2011
tc2pr	bph071911B_55	2382763.47	1239757.178	0.000237219	0.206142902	0	7/20/2011
tc2pr	bph071911B_56	2382961.541	1239915.701	0	0.192465365	0.000709332	7/20/2011
tc2pr	bph071911B_57	2382766.062	1239941.442	0	0.264187962	0.000708912	7/20/2011
tc2pr	bph071911B_58	2382577.269	1239925.255	0	0.195767105	0.001180742	7/20/2011
tc2pr	bph071911B_59	2382766.848	1240158.811	0	0.29652229	0.001416508	7/20/2011
tc2pr	bph071911B_60	2380969.985	1240772.235	0	0.180822447	0.001873808	7/20/2011
tc2pr	bph071911B_61	2380957.429	1240954.661	0	0	0.000700591	7/20/2011
tc2pr	bph071911B_62	2380769	1240955.339	0	0.371025234	0.001633444	7/20/2011
tc2pr	bph071911B_63	2380762.074	1241160.38	0	0.038898773	0.001630488	7/20/2011
tc2pr	bph071911B_64	2380558.634	1241150.172	0	0.107056201	0.001163654	7/20/2011
tc2pr	bph071911B_65	2380370.58	1241161.628	0	0.22238858	0.002328676	7/20/2011
tc2pr	bph071911B_66	2380363.75	1241348.042	0	0.064712234	0.001629445	7/20/2011
tc2pr	bph071911B_67	2380147.796	1241346.526	0	0.206384897	0.000695679	7/20/2011
tc2pr	bph071911B_68	2379964.556	1241352.168	0	0.127492338	0.002781651	7/20/2011
tc2pr	bph071911B_69	2379963.126	1241557.692	0	0.058669593	0.001391374	7/20/2011
tc2pr	bph071911B_70	2379752.333	1241565.666	0	0	0.0034717	7/20/2011
tc2pr	bph071911B_71	2379758.942	1241751.18	0	0.225618929	0.003933868	7/20/2011
tc2pr	bph071911B_72	2379560.72	1241756.806	0	0.265323877	0.002307164	7/20/2011
tc2pr	bph071911B_73	2379559.631	1241945.721	0	0.437725991	0.003924759	7/20/2011
tc2pr	bph071911B_74	2379375.343	1241935.132	0	0.933940887	0.002994877	7/20/2011
tc2pr	bph071911B_75	2379171.032	1241950.584	0.006911321	0.13707453	0.002534151	7/20/2011
tc2pr	bph071911B_76	2378964.613	1241960.543	0	0.418357819	0.002756889	7/20/2011
tc2pr	bph071911B_77	2378968.049	1242138.905	0	0.068378597	0.003671334	7/20/2011
tc2pr	bph071911B_78	2378959.288	1242355.73	0	0.115132213	0.002975584	7/20/2011
tc2pr	bph071911B_79	2378966.919	1242543.695	0	0.213693678	0.005713735	7/20/2011
tc2pr	bph071911B_80	2378778.393	1242567.047	0	0.258125871	0.00274116	7/20/2011
tc2pr	bph071911B_81	2378764.664	1242745.736	0	0.446235567	0.002283703	7/20/2011
tc2pr	bph071911B_82	2378956.418	1242759.925	0	0.261058897	0.001823992	7/20/2011
tc2pr	bph071911B_83	2379168.298	1242751.673	0	0.16390416	0.002758555	7/20/2011
tc2pr	bph071911B_84	2379170.752	1242578.036	0.000687511	0.155377522	0.004812578	7/20/2011
tc2pr	bph071911B_85	2379162.223	1242373.253	0	0.14741002	0.004821823	7/20/2011
tc2pr	bph071911B_86	2379171.663	1242138.726	0	0.466682494	0.003910105	7/20/2011
tc2pr	bph071911B_87	2379373.465	1242177.422	0.000230235	0.94027853	0.002302347	7/20/2011
tc2pr	bph071911B_88	2379384.546	1242320.313	0	0.15838556	0.003448162	7/20/2011
tc2pr	bph071911B_89	2379374.587	1242553.529	0	0.034145039	0.003666581	7/20/2011
tc2pr	bph071911B_90	2379357.834	1242738.725	0	0.295889437	0.002965739	7/20/2011
tc2pr	bph071911B_91	2379571.543	1242750.129	0	0.21059078	0.004548397	7/20/2011
tc2pr	bph071911B_92	2379575.79	1242564.095	0	0.25964573	0.001815704	7/20/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	bph071911B_93	2379733.724	1242553.735	0	0.426438749	0.003864317	7/20/2011
tc2pr	bph071911B_94	2379738.659	1242312.469	0	0.441952497	0.001816865	7/20/2011
tc2pr	bph071911B_95	2379569.811	1242320.191	0	0.298919946	0.00887881	7/20/2011
tc2pr	bph071911B_96	2379563.362	1242178.795	0	0.388246983	0.003189823	7/20/2011
tc2pr	bph071911B_97	2379766.848	1242141.615	0	0.153450847	0.000912041	7/20/2011
tc2pr	bph071911B_98	2379743.679	1241960.142	0.020062601	0.261497766	0.001367905	7/20/2011
tc2pr	pr072111B_01	2386761.834	1238146.491	0.015304253	0.228576437	0	7/21/2011
tc2pr	pr072111B_02	2386762.643	1237964.021		0.466023833	0.001477096	7/21/2011
tc2pr	pr072111B_03	2386758.306	1237730.689	0	0.276462376	0.000736578	7/21/2011
tc2pr	pr072111B_04	2386746.206	1237530.796	0	0.304027081	0.000489971	7/21/2011
tc2pr	pr072111B_05	2386931.448	1237797.487	0	0.496085674	0.00097799	7/21/2011
tc2pr	pr072111B_06	2386954.927	1237949.029	0	0.188085139	0.000244266	7/21/2011
tc2pr	pr072111B_07	2386962.747	1238157.783	0	0.156603575	0.000243931	7/21/2011
tc2pr	pr072111B_08	2387163.484	1238138.646	0	0.342399746	0.00097411	7/21/2011
tc2pr	pr072111B_09	2387165.074	1237960.489	0	0.168840647	0.000729859	7/21/2011
tc2pr	pr072111B_10	2387341.919	1237939.71	0	0.360312164	0.000729377	7/21/2011
tc2pr	pr072111B_11	2387363.547	1238152.427	0	0.430359781	0.000971467	7/21/2011
tc2pr	pr072111B_12	2387561.731	1238131.882	0	0.177992299	0.000242166	7/21/2011
tc2pr	pr072111B_13	2387565.141	1237986.079	16.71305656	0.602653444	0.000483476	7/21/2011
tc2pr	pr072111B_14	2387480.399	1238024.232	0	0.160175771	0.001207962	7/21/2011
tc2pr	pr072111B_15	2387766.905	1238173.289	0	0.219887853	0.000723315	7/21/2011
tc2pr	pr072111B_16	2388155.756	1238157.108	0.000240475	0.42227459	0.001683327	7/21/2011
tc2pr	pr072111B_17	2388270.876	1238244.404	8.731132507	0.696126938	0.000480419	7/21/2011
tc2pr	pr072111B_18	2388365.381	1238143.926	0	0.369347423	0.002159926	7/21/2011
tc2pr	pr072111B_19	2388566.368	1238147.639	0	0.492861867	0.00263819	7/21/2011
tc2pr	pr072111B_20	2388762.431	1238146.657	0	0.131104574	0.000479359	7/21/2011
tc2pr	pr072111B_21	2388973.665	1238147.108	0	0.531434774	0.001436957	7/21/2011
tc2pr	pr072111B_22	2389160.912	1238147.494	0	0.169515297	0.001675999	7/21/2011
tc2pr	pr072111B_23	2389490.236	1238034.286	2.042631149	0.343030035	0.000239212	7/21/2011
tc2pr	pr072111B_24	2389486.214	1238063.22	0	0.257159591	0.000955984	7/21/2011
tc2pr	pr072111B_25	2389504.454	1238053.827	17.90191078	2.551169872	0.000238918	7/21/2011
tc2pr	pr072111B_26	2389526.393	1238083.09	0	0.113420539	0.001671461	7/21/2011
tc2pr	pr072111B_27	2389516.8	1238044.121	0	0.403032452	0.00214887	7/21/2011
tc2pr	pr072111B_28	2389488.029	1237994.118	0	0.279866159	0.002387936	7/21/2011
tc2pr	pr072111B_29	2389453.474	1238030.148	0	0.331534684	0.002625545	7/21/2011
tc2pr	pr072111B_30	2389581.537	1238369.844	0	0.395502448	0.001432115	7/21/2011
tc2pr	pr072111B_31	2389468.532	1238615.356	872.9915771	5.389372826	0.001669718	7/21/2011
tc2pr	pr082111A_01	2386982.139	1238343.904	0	0.258913189	0	7/21/2011
tc2pr	pr082111A_02	2386775.901	1238344.806	0	0	0	7/21/2011
tc2pr	pr082111A_03	2386544.422	1238538.463	0	0.859669745	0	7/21/2011
tc2pr	pr082111A_04	2386786.2	1238749.461	0	0	0	7/21/2011
tc2pr	pr082111A_05	2386767.416	1238563.373	0	0.328099728	0	7/21/2011
tc2pr	pr082111A_06	2386942.972	1238530.24	0	0.615256071	0	7/21/2011
tc2pr	pr082111A_07	2387151.843	1238353.918	0	0.272501618	0	7/21/2011
tc2pr	pr082111A_08	2387339.074	1238319.259	0	0.071789533	0	7/21/2011
tc2pr	pr082111A_09	2387570.068	1238339.181	0	0.464895904	0	7/21/2011
tc2pr	pr082111A_10	2387765.833	1238353.833	0	0.47379145	0	7/21/2011
tc2pr	pr082111A_11	2387772.744	1238542.752	0	0.522216856	0	7/21/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	pr082111A_12	2387959.646	1238548.95	0	0.192528874	0	7/21/2011
tc2pr	pr082111A_13	2388157.498	1238557.662	0	0.363165468	0	7/21/2011
tc2pr	pr082111A_14	2388153.717	1238356.598	0	0.371674657	0	7/21/2011
tc2pr	pr082111A_15	2388351.523	1238327.658	0	0.017762337	0	7/21/2011
tc2pr	pr082111A_16	2388364.354	1238562.185	0	0.226162076	0	7/21/2011
tc2pr	pr082111A_17	2388563.586	1238367.354	0	0.405717075	0.000473139	7/21/2011
tc2pr	pr082111A_18	2388760.76	1238335.616	0	0.204870909	0	7/21/2011
tc2pr	pr082111A_19	2388958.669	1238345.553	0	0.107119955	0	7/21/2011
tc2pr	pr082111A_20	2389158.518	1238350.622	0.168994978	0.98249042	0	7/21/2011
tc2pr	pr082111A_21	2389447.104	1238620.94	0	0.98249042	0	7/21/2011
tc2pr	pr082111A_22	2389467.397	1238615.94	46.96053314	3.105190277	0.000956105	7/21/2011
tc2pr	pr082111A_23	2389507.217	1238608.116	1.770973444	1.074149966	0	7/21/2011
tc2pr	pr082111A_24	2389485.522	1238666.76	0	0.564321697	0	7/21/2011
tc2pr	pr082111A_25	2389453.848	1238574.627	0	0.139203697	0	7/21/2011
tc2pr	pr082111A_26	2387585.055	1238533.681	0	0.139203697	0	7/21/2011
tc2pr	sftc071411(1)_01	2371963.603	1243544.622	0	0.009100886	0.00024597	7/14/2011
tc2pr	sftc071411(1)_02	2372153.497	1243551.257	0	0.006833145	0.000732123	7/14/2011
tc2pr	sftc071411(1)_03	2372361.777	1243538.409	0	0.263575643	0.001465666	7/14/2011
tc2pr	sftc071411(1)_04	2372544.266	1243537.168	0	0.615303874	0.000967839	7/14/2011
tc2pr	sftc071411(1)_05	2372762.055	1243549.547	0	0.280123532	0.000722589	7/14/2011
tc2pr	sftc071411(1)_06	2372957.582	1243568.142	0	0.193381175	0.000953791	7/14/2011
tc2pr	sftc071411(1)_07	2373173.702	1243559.726	0	0.127614588	0.000477064	7/14/2011
tc2pr	sftc071411(1)_08	2373365.111	1243565.633	0	0.364613235	0.000720105	7/14/2011
tc2pr	sftc071411(1)_09	2373354.186	1243757.646	0	0.432733506	0.001675406	7/14/2011
tc2pr	sftc071411(1)_10	2373153.834	1243748.468	0	0.388684601	0.000479266	7/14/2011
tc2pr	sftc071411(1)_11	2372959.504	1243747.579	0	0.280042112	0.001433663	7/14/2011
tc2pr	sftc071411(1)_12	2372766.06	1243737.079	0	0.211459249	0.000955748	7/14/2011
tc2pr	sftc071411(1)_13	2372552.27	1243735.886	0	0.536752403	0.000237922	7/14/2011
tc2pr	sftc071411(1)_14	2372352.354	1243753.728	0	0.24264735	0.000236729	7/14/2011
tc2pr	sftc071411(1)_15	2372154.277	1243749.367	0.001733944	0.104614645	0.000577981	7/14/2011
tc2pr	sftc071411(1)_16	2371966.429	1243760.748	0	0.183912173	0.000235785	7/14/2011
tc2pr	sftc071411(1)_17	2371953.443	1243956.433	0.353361785	0.285425752	0.001415334	7/14/2011
tc2pr	sftc071411(1)_18	2372164.571	1243955.208	0	0.357156187	0.000235902	7/14/2011
tc2pr	sftc071411(1)_19	2372367.225	1243950.654	0	0.227452189	0.000707839	7/14/2011
tc2pr	sftc071411(1)_20	2372519.86	1243971.997	0	1.490819931	0.000929584	7/14/2011
tc2pr	sftc071411(1)_21	2372761.93	1243951.719	0	0.267560869	0.000705345	7/14/2011
tc2pr	sftc071411(1)_22	2372957.422	1243957.837	0.263822496	0.21194993	0.00093887	7/14/2011
tc2pr	sftc071411(1)_23	2373163.785	1243947.898	0	0.180226237	0.000935026	7/14/2011
tc2pr	sftc071411(1)_24	2373342.981	1243970.756	1.221623302	3.115023375	0.001854457	7/14/2011
tc2pr	sftc071411(1)_25	2373414.515	1243966.015	0	0.263312966	0.002313822	7/14/2011
tc2pr	sftc071411(1)_26	2373323.555	1243839.32	0.808645606	1.300773621	0.002794858	7/14/2011
tc2pr	sftc071411(1)_27	2373412.008	1243850.604	0	0.1156912	0.001712534	7/14/2011
tc2pr	sftc071411(2)_01	2371358.087	1243557.479	6.934551239	0.681054473	0	7/14/2011
tc2pr	sftc071411(2)_02	2371563.108	1243553.609	0	0.717658579	0	7/14/2011
tc2pr	sftc071411(2)_03	2371758.414	1243546.504	0	0.972080588	0.000486162	7/14/2011
tc2pr	sftc071411(2)_04	2371770.419	1243757.757	0	0.394192308	0	7/14/2011
tc2pr	sftc071411(2)_05	2371768.329	1243940.415	0	0.190602541	0	7/14/2011
tc2pr	sftc071411(2)_06	2371780.262	1244161.773	0	0.437109888	0	7/14/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	sftc071411(2)_07	2371781.051	1244363.512	2.146452904	0.7341429	0	7/14/2011
tc2pr	sftc071411(2)_08	2371585.833	1244372.315	0	0.363287091	0	7/14/2011
tc2pr	sftc071411(2)_09	2371554.628	1244177.116	0	0.529609323	0.000238886	7/14/2011
tc2pr	sftc071411(2)_10	2371767.855	1244538.726	0	0.180714503	0	7/14/2011
tc2pr	sftc071411(2)_11	2371955.091	1244368.495	0	0.57546705	0.000237502	7/14/2011
tc2pr	sftc071411(2)_12	2372165.07	1244328.209	0	0.744736969	0	7/14/2011
tc2pr	sftc071411(2)_13	2372356.424	1244339.11	0	0.079974234	0.000474625	7/14/2011
tc2pr	sftc071411(2)_14	2372554.684	1244353.712	0	0.211109027	0	7/14/2011
tc2pr	sftc071411(2)_15	2372752.91	1244318.525	0	0.078739107	0.000474332	7/14/2011
tc2pr	sftc071411(2)_16	2372971.569	1244339.722	0	0.138125077	0.000236516	7/14/2011
tc2pr	sftc071411(2)_17	2373176.008	1244333.672	0	0.465676278	0	7/14/2011
tc2pr	sftc071411(2)_18	2373348.782	1244356.172	0	0.112503752	0.001409233	7/14/2011
tc2pr	sftc071411(2)_19	2373369.477	1244138.731	0	0.031637441	0.000703054	7/14/2011
tc2pr	sftc071411(2)_20	2373176.131	1244140.984	0	0.137635171	0.000234472	7/14/2011
tc2pr	sftc071411(2)_21	2372977.086	1244154.499	0	1.192146778	0.000702365	7/14/2011
tc2pr	sftc071411(2)_22	2372790.633	1244144.334	0	0.326729178	0.000233378	7/14/2011
tc2pr	sftc071411(2)_23	2372565.687	1244141.29	0	0.271864086	0.00023356	7/14/2011
tc2pr	sftc071411(2)_24	2372354.935	1244115.401	0	0.24260442	0.00069982	7/14/2011
tc2pr	sftc071411(2)_25	2372167.322	1244150.755	0	0.193701029	0.000465069	7/14/2011
tc2pr	sftc071411(2)_26	2371954.986	1244144.8	0	0.348343909	0.000697153	7/14/2011
tc2pr	sftc071511(1)_01	2373764.724	1243146.176	0.520626307	0.737432361	0.001701393	7/15/2011
tc2pr	sftc071511(1)_02	2373757.524	1242957.91	0	0.044614438	0.001446955	7/15/2011
tc2pr	sftc071511(1)_03	2373762.376	1242749.535	0	0.18550314	0.001199891	7/15/2011
tc2pr	sftc071511(1)_04	2373739.875	1242547.925	0	0.283332109	0.001670872	7/15/2011
tc2pr	sftc071511(1)_05	2373552.502	1242757.933	0	0.208454877	0.000957313	7/15/2011
tc2pr	sftc071511(1)_06	2373369.354	1242743.582	0	0.286450028	0.001659893	7/15/2011
tc2pr	sftc071511(1)_07	2373154.989	1242740.27	0	0.366817147	0.000944796	7/15/2011
tc2pr	sftc071511(1)_08	2372953.916	1242744.283	0	0.197442576	0.00141367	7/15/2011
tc2pr	sftc071511(1)_09	2372755.387	1242748.676	0	0.065184355	0.001417051	7/15/2011
tc2pr	sftc071511(1)_10	2372564.359	1242745.752	0.000471977	0.219941422	0.000707966	7/15/2011
tc2pr	sftc071511(1)_11	2372364.94	1242747.779	0	0.203272089	0.000705806	7/15/2011
tc2pr	sftc071511(1)_12	2372150.041	1242741.023	0	0.274708509	0.001179006	7/15/2011
tc2pr	sftc071511(1)_13	2370580.946	1242937.135	0	0.2542018	0.000940617	7/15/2011
tc2pr	sftc071511(1)_14	2370760.668	1242969.239	0.002567485	0.230840266	0.000933631	7/15/2011
tc2pr	sftc071511(1)_15	2370994.881	1242943.631	0	0.307703733	0.001396537	7/15/2011
tc2pr	sftc071511(1)_16	2371168.144	1242928.346	0	0.215533867	0.001401087	7/15/2011
tc2pr	sftc071511(1)_17	2371373.163	1242961.797	0	0.187747389	0.002652335	7/15/2011
tc2pr	sftc071511(1)_18	2371566.861	1242936.418	0			7/15/2011
tc2pr	sftc071511(1)_19	2371759.19	1242947.98	0.001165005	0.435245782	0.002796012	7/15/2011
tc2pr	sftc071511(1)_20	2371950.823	1242944.945	0.262464583	0.12128327	0.000947526	7/15/2011
tc2pr	sftc071511(1)_21	2371963.459	1242831.982	0	0.827367842	0.001618663	7/15/2011
tc2pr	sftc071511(1)_22	2372158.245	1242946.889	0	0.230469778	0.000934969	7/15/2011
tc2pr	sftc071511(1)_23	2372350.433	1242954.35	0	0.068139188	0	7/15/2011
tc2pr	sftc071511(1)_24						7/15/2011
tc2pr	sftc071511(1)_25	2372538.098	1242941.895	0.12296319	1.033309937	0.000232885	7/15/2011
tc2pr	sftc071511(1)_26	2372756.216	1242943.105	0.912348986	0.229254529	0.003034938	7/15/2011
tc2pr	sftc071511(1)_27	2372968.071	1242944.177	0	0.205581039	0.001611497	7/15/2011
tc2pr	sftc071511(1)_28	2373169.688	1242954.054	0.011561289	0.284176499	0.004855741	7/15/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	sftc071511(1)_29	2373349.515	1242973.46	0.662164807	0.351470947	0.001158441	7/15/2011
tc2pr	sftc071511(1)_30	2373567.813	1242955.059	0.011561289	0.284176499	0.004855741	7/15/2011
tc2pr	sftc071511(1)_31	2373567.383	1243350.191	0	0.241651654	0.000677528	7/15/2011
tc2pr	sftc071511(1)_32	2373357.671	1243350.633	0.005773293	0.276887119	0.000461863	7/15/2011
tc2pr	sftc071511(1)_33	2373164.577	1243359.007	0	0.196603939	0.001843882	7/15/2011
tc2pr	sftc071511(1)_34	2372960.499	1243353.518	0	0.315912068	0.000462198	7/15/2011
tc2pr	sftc071511(1)_35	2372762.01	1243346.757	0	0.263239771	0.000689711	7/15/2011
tc2pr	sftc071511(1)_36	2372561.037	1243356.047	0.456774205	0.386003107	0.00115639	7/15/2011
tc2pr	sftc071511(2)_1	2374009.019	1243169.276	0.105719544	0	0	7/15/2011
tc2pr	sftc071511(2)_10	2372979.028	1243151.634	0	0.053095661	0	7/15/2011
tc2pr	sftc071511(2)_11	2372753.563	1243142.084	0	0.178107157	0	7/15/2011
tc2pr	sftc071511(2)_12	2372544.229	1243141.591	0.010040576	0.976504326	0.000233502	7/15/2011
tc2pr	sftc071511(2)_13	2372380.264	1243153.249	0	0	0.000233097	7/15/2011
tc2pr	sftc071511(2)_14	2372195.581	1243236.232	0	0.625343502	0.00023247	7/15/2011
tc2pr	sftc071511(2)_15	2372002.268	1243174.249	0	0	0	7/15/2011
tc2pr	sftc071511(2)_16	2371758.848	1243138.861	0	0.201821089	0.000925785	7/15/2011
tc2pr	sftc071511(2)_17	2371553.922	1243121.352	0	0.374815673	0.000231225	7/15/2011
tc2pr	sftc071511(2)_18	2371362.301	1243147.618	2.069139957	1.808302641	0.000462068	7/15/2011
tc2pr	sftc071511(2)_19	2371197.284	1243157.237	0	0	0.001384965	7/15/2011
tc2pr	sftc071511(2)_2	2373956.333	1242949.512	0.206751838	0.336544722	0.000965003	7/15/2011
tc2pr	sftc071511(2)_20	2370984.581	1243157.926	0	0.18573305	0.000230724	7/15/2011
tc2pr	sftc071511(2)_21	2370761.419	1243156.719	0	0.083667308	0.000460977	7/15/2011
tc2pr	sftc071511(2)_22	2370558.374	1243102.241	0	0.14202939	0.000230194	7/15/2011
tc2pr	sftc071511(2)_23	2370570.482	1243372.514	0	0.327944428	0.000230136	7/15/2011
tc2pr	sftc071511(2)_24	2370553.054	1243571.779	0	0	0.000460127	7/15/2011
tc2pr	sftc071511(2)_25	2370779.572	1243396.527	0	0.710258543	0.000459566	7/15/2011
tc2pr	sftc071511(2)_26	2370922.273	1243360.962	0.16321072	0.791227221	0	7/15/2011
tc2pr	sftc071511(2)_27	2371197.989	1243347.564	2.471832991	3.480101824	0.000689493	7/15/2011
tc2pr	sftc071511(2)_28	2371397.406	1243357.675	0.000459517	0.226771384	0.000459517	7/15/2011
tc2pr	sftc071511(2)_29	2371578.325	1243361.633	0.003444838	0.332082361	0.000918623	7/15/2011
tc2pr	sftc071511(2)_3	2373961.507	1242742.395	0.043971334	0.34792617	0.000240281	7/15/2011
tc2pr	sftc071511(2)_30	2371778.451	1243353.832	0.053499773	0.204584971	0.000459226	7/15/2011
tc2pr	sftc071511(2)_31	2371972.088	1243368.146	0	0.009181604	0.00091816	7/15/2011
tc2pr	sftc071511(2)_32	2372186.794	1243355.489	0	0.77209717	0.000229586	7/15/2011
tc2pr	sftc071511(2)_33	2372212.021	1243344.034	26.90060425	4.957386017	0.000459145	7/15/2011
tc2pr	sftc071511(2)_34	2372239.939	1243393.186	5.199584007	3.185553789	0.000688322	7/15/2011
tc2pr	sftc071511(2)_35	2372282.43	1243372.387	2.502542257	3.419208527	0.000688016	7/15/2011
tc2pr	sftc071511(2)_36	2372315.569	1243419.242	2.648135424	3.039772272	0.000917183	7/15/2011
tc2pr	sftc071511(2)_37	2372390.472	1243346.868	0	0	0.000916893	7/15/2011
tc2pr	sftc071511(2)_4	2373958.007	1242564.726	0	0.093468949	0.000479328	7/15/2011
tc2pr	sftc071511(2)_5	2374081.072	1242582.807	0.035613906	0.150582284	0.000478039	7/15/2011
tc2pr	sftc071511(2)_6	2373753.036	1243200.958	0.19277975	0.259337485	0.000475412	7/15/2011
tc2pr	sftc071511(2)_7	2373548.076	1243146.575	0	0.4002994	0	7/15/2011
tc2pr	sftc071511(2)_8	2373357.738	1243151.757	0.04563481	0.280192971	0.00023645	7/15/2011
tc2pr	sftc071511(2)_9	2373159.684	1243140.766	0	0.124644183	0.000471245	7/15/2011
tc2pr	tc072511_01	2373919.015	1243300.717	0	0.606668055	0	7/25/2011
tc2pr	tc072511_02	2373902.265	1243329.089	0	0.248436734	0.000243804	7/25/2011
tc2pr	tc072511_03	2373817.662	1243292.148	24.69599915	0.627866507	0.001700877	7/25/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	tc072511_04	2373800.17	1243260.683	0	0.128767014	0.000969996	7/25/2011
tc2pr	tc072511_05	2373748.114	1243280.511	1.998517156	0.69990468	0.00217888	7/25/2011
tc2pr	tc072511_06	2373706.707	1243283.645	0	0.167539418	0.001934077	7/25/2011
tc2pr	tc072511_07	2373762.525	1243213.793	0	0.278664917	0.00144761	7/25/2011
tc2pr	tc072511_08	2373851.605	1243231.031	0	0.336384982	0.003614452	7/25/2011
tc2pr	tc072511_09	2373924.153	1243240.737	10.03712177	6.769865513	0.002887757	7/25/2011
tc2pr	tc072511_10	2373971.245	1243236.008	0	1.462890506	0.002162262	7/25/2011
tc2pr	tc072511_11	2374023.905	1243170.662	0	0.457018673	0.003117126	7/25/2011
tc2pr	tc072511_12	2374079.423	1243234.054	0	0.450378448	0.001914467	7/25/2011
tc2pr	tc072511_13	2374126.418	1243300.109	0	2.786660433	0.005971756	7/25/2011
tc2pr	tc072511_14	2374151.152	1243287.664	2.298663378	3.146116495	0.003099857	7/25/2011
tc2pr	tc072511_15	2374154.596	1243291.064	3.911556959	2.061799049	0.001667737	7/25/2011
tc2pr	tc072511_16	2374111.987	1243346.968	120.6842728	4.146336555	0.003088784	7/25/2011
tc2pr	tc072511_17	2374131.011	1243328.338	0.000237197	0.931948483	0.00094879	7/25/2011
tc2pr	tc072511_18	2374093.657	1243299.184	0.569207072	0.306496084	0	7/25/2011
tc2pr	tc072511_19	2374093.113	1243333.048	0	0.402827173	0.001654806	7/25/2011
tc2pr	tc072511_20	2374067	1243296.073	0	0.209626302	0.001180328	7/25/2011
tc2pr	tc072511_21	2374027.444	1243273.07	0	0.307531953	0.001415024	7/25/2011
tc2pr	tc072511_22	2374023.906	1243338.677	0	0.342488736	0.000942197	7/25/2011
tc2pr	tc072511_23	2375253.281	1243082.607	0	0.125210479	0.001185705	7/25/2011
tc2pr	tc072511_24	2375323.155	1243095.409	0	0.071667686	0.000946108	7/25/2011
tc2pr	tc072511_25	2375270.203	1243012.139	0	0.113719173	0.002831183	7/25/2011
tc2pr	tc072511_26	2375169.138	1242935.211	0	0.125069574	0.000942144	7/25/2011
tc2pr	tc072511_27	2375175.079	1242792.808	0	0.216579542	0.001410942	7/25/2011
tc2pr	tc072511_28	2375362.095	1242683.025	0.000234855	0.175201565	0.001878837	7/25/2011
tc2pr	tc072511_29	2375357.422	1242534.451	0	0.516227782	0.001171116	7/25/2011
tc2pr	tc072511_30	2375571.549	1242559.65	0	0.269373715	0.001639666	7/25/2011
tc2pr	tc072511_31	2375775.793	1242562.787	0	0.918909252	0.000935991	7/25/2011
tc2pr	tc072511_32	2375966.678	1242535.584	0	0.26115635	0.001401555	7/25/2011
tc2pr	tc072511_33	2376162.127	1242556.994	0	0.367621213	0.00209936	7/25/2011
tc2pr	tc072511_34	2376334.756	1242729.266	0	0.221618459	0.004194671	7/25/2011
tc2pr	tc072511_35	2376357.774	1242943.299	0	0.186294973	0.002090592	7/25/2011
tc2pr	tc072511_36	2376350.806	1243142.269	0	0.077397302	0.002556667	7/25/2011
tc2pr	tc072511_37	2376162.777	1243158.486	0	0.213830665	0.001857378	7/25/2011
tc2pr	tc072511_38	2375946.73	1243137.79	0.727908373	0.454711825	0.001616548	7/25/2011
tc2pr	tc072511_39	2375994.902	1242956.496	1.516646981	0.650387347	0.002077915	7/25/2011
tc2pr	tc072511_40	2376185.072	1242957.461	0	0.132722184	0.00624303	7/25/2011
tc2pr	tc072511_41	2376167.337	1242760.865	0	0.218785778	0.003927517	7/25/2011
tc2pr	tc072511_42	2375965.778	1242757.841	0	0.175380662	0.001615348	7/25/2011
tc2pr	tc072511_43	2375785.206	1242744.483	0.478762388	0.521550357	0.006013441	7/25/2011
tc2pr	tc072511_44	2375763.619	1242970.251	0	0.958255708	0.002545475	7/25/2011
tc2pr	tc072511_45	2375762.837	1243178.502	0	0.179411441	0.002770833	7/25/2011
tc2pr	tc072511_46	2375540.055	1243165.241	0	0.064557284	0.002766741	7/25/2011
tc2pr	tc072511_47	2375573.541	1242968.958	0	0.399927795	0.002080549	7/25/2011
tc2pr	tc072511_48	2375530.014	1242728.857	0	0.827763557	0.00785486	7/25/2011
tc2pr	tc072511_49	2375378.388	1242948.418	0	0.120010898	0.0099431	7/25/2011
tc2pr	tc072511_50	2375384.868	1243147.118	0	0.059230529	0.005321492	7/25/2011
tc2pr	tc072511_51	2375172.878	1243130.426	0	0.211527124	0.002082871	7/25/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	tc072511B_01	2373939.82	1243475.515	28.05621147	0.474747926	0.000243836	7/25/2011
tc2pr	tc072511B_02	2373992.265	1243532.45	8.65639019	0.583364367	0.000969849	7/25/2011
tc2pr	tc072511B_03	2374031.798	1243589.718	0	0.222982258	0.000723186	7/25/2011
tc2pr	tc072511B_04	2374080.975	1243549.038	0	0.149767131	0.000482342	7/25/2011
tc2pr	tc072511B_05	2374056.402	1243532.343	0.605720341	0.701511979	0.000240079	7/25/2011
tc2pr	tc072511B_06	2374084.17	1243496.329	0	0.205283225	0.000480757	7/25/2011
tc2pr	tc072511B_07	2374004.622	1243466.189	91.23285675	2.814736843	0.000477398	7/25/2011
tc2pr	tc072511B_08	2374049.636	1243453.103	39.25392532	1.077335358	0.000237299	7/25/2011
tc2pr	tc072511B_09	2374084.516	1243407.24	14.33586025	0.8782143	0.000239622	7/25/2011
tc2pr	tc072511B_10	2374032.255	1243408.015	0	0.101142623	0.000717324	7/25/2011
tc2pr	tc072511B_11	2374022.695	1243360.613	82.75752258	1.598883748	0.000708411	7/25/2011
tc2pr	tc072511B_12	2373970.16	1243378.942	0	0.780172527	0.000949404	7/25/2011
tc2pr	tc072511B_13	2373953.785	1243428.898	20.49937248	1.125228763	0.00047438	7/25/2011
tc2pr	tc072511B_14	2373989.123	1243423.061	0	0.593209326	0.000947997	7/25/2011
tc2pr	tc072511B_15	2373962.508	1243363.76	0	0.329373658	0.00141261	7/25/2011
tc2pr	tc072511B_16	2374112.258	1243385.267	34.68829346	7.327331543	0.001174139	7/25/2011
tc2pr	tc072511B_17	2374155.376	1243373.605	0	0.097292669	0.000705019	7/25/2011
tc2pr	tc072511B_18	2374163.235	1243373.292	40.57112503	2.268411875	0.001642926	7/25/2011
tc2pr	tc072511B_19	2374192.826	1243378.175	9.516501427	0.691747189	0.000702757	7/25/2011
tc2pr	tc072511B_20	2374258.959	1243354.13	0	0.00744768	0.00093096	7/25/2011
tc2pr	tc072511B_20	2374258.959	1243354.13	0	1.001837254	0.001159802	7/25/2011
tc2pr	tc072511B_21	2374249.434	1243353.204	0	0.572773039	0	7/25/2011
tc2pr	tc072511B_22	2374229.648	1243366.388	0	0.823644936	0	7/25/2011
tc2pr	tc072511B_23	2374249.171	1243402.913	5.420871735	0.529891253	0.000700914	7/25/2011
tc2pr	tc072511B_24	2374230.27	1243445.596	0	0.224974155	0	7/25/2011
tc2pr	tc072511B_25	2374195.099	1243494.048	0	0.153593585	0.000699212	7/25/2011
tc2pr	tc072511B_26	2374167.329	1243472.952	0	0.865935981	0	7/25/2011
tc2pr	tc072511B_27	2374138.354	1243446.648	0	0.254628062	0.000466352	7/25/2011
tc2pr	tc072511B_28	2374138.012	1243390.15	0.476316422	0.873904765	0.000696709	7/25/2011
tc2pr	tc072511B_29	2374115.986	1243424.536	0	0.200385973	0.000230329	7/25/2011
tc2pr	tc072511B_30	2374957.905	1243736.996	0	0.059545778	0	7/25/2011
tc2pr	tc072511B_31	2375145.893	1243560.659	0	0.122971602	0.000698702	7/25/2011
tc2pr	tc072511B_32	2375154.186	1243741.65	0	0.171911031	0.000233893	7/25/2011
tc2pr	tc072511B_33	2375353.53	1243739.805	0	0.130843937	0.000695978	7/25/2011
tc2pr	tc072511B_34	2375550.23	1243755.511	0	0.352711976	0.000698901	7/25/2011
tc2pr	tc072511B_35	2375746.191	1243747.554	0	0.158265412	0.000462089	7/25/2011
tc2pr	tc072511B_36	2375951.273	1243758.438	0	0.048775531	0.000693491	7/25/2011
tc2pr	tc072511B_37	2376106.273	1243739.77	0	0.095179856	0.000694743	7/25/2011
tc2pr	tc072511B_38	2376339.445	1243718.101	0	0.168748245	0.000462324	7/25/2011
tc2pr	tc072511B_39	2376352.75	1243594.881	0	0.086181395	0.000232295	7/25/2011
tc2pr	tc072511B_40	2376369.319	1243367.788	0	0.146477446	0	7/25/2011
tc2pr	tc072511B_41	2376167.149	1243346.503	10.11716461	3.281873941	0.000231297	7/25/2011
tc2pr	tc072511B_42	2376169.739	1243534.316	0	0.154590368	0.000229023	7/25/2011
tc2pr	tc072511B_43	2375986.329	1243563.767	0	0.063993156	0	7/25/2011
tc2pr	tc072511B_44	2375975.688	1243330.184	0	0.0988032	0.000908535	7/25/2011
tc2pr	tc072511B_45	2375783.311	1243351.687	0	0.678346336	0.000450579	7/25/2011
tc2pr	tc072511B_46	2375769.415	1243515.437	0.004105677	0.581181467	0.00068428	7/25/2011
tc2pr	tc072511B_47	2375562.418	1243528.909	0	0.118357688	0.000455222	7/25/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
tc2pr	tc072511B_48	2375589.042	1243363.417	0	0.177746937	0.000455761	7/25/2011
tc2pr	tc072511B_49	2375378.459	1243349.763	0	0.145213902	0	7/25/2011
tc2pr	tc072511B_50	2375152.315	1243336.909	0	0.049605776	0	7/25/2011
tc2pr	tc072511B_51	2375113.95	1243410.797	0.48679173	0.100336365	0.001374471	7/25/2011
tc2pr	tc072511B_52	2375327.912	1243523.553	0	0.128471151	0.00022819	7/25/2011
vp	vp071111_01	2350963.368	1243755.218	0	0.063647136	0.001687613	7/11/2011
vp	vp071111_02	2351167.765	1243751.084	0	0.317074507	0.000960105	7/11/2011
vp	vp071111_03	2351155.602	1243943.292	0	0.420385867	0.000955966	7/11/2011
vp	vp071111_04	2351161.475	1244145.967	0.183767855	0.21990332	0.0014264	7/11/2011
vp	vp071111_05	2351163.436	1244344.615	0	0.173221588	0.000709925	7/11/2011
vp	vp071111_06	2351366.276	1244347.03	0	0.453128725	0	7/11/2011
vp	vp071111_07	2351562.217	1244364.299	0	0.754074097	0.000706282	7/11/2011
vp	vp071111_08	2351769.107	1244343.969	0	0.315479815	0.000705246	7/11/2011
vp	vp071111_09	2351967.193	1244359.243	0	0.154161721	0.000705008	7/11/2011
vp	vp071111_10	2352164.196	1244346.261	0	0.326947987	0.000469753	7/11/2011
vp	vp071111_100	2352754.498	1242542.565	0	0.20052053	0.001182314	7/13/2011
vp	vp071111_101	2352969.215	1242541.072	0	0.037685327	0	7/13/2011
vp	vp071111_102	2352958.722	1242738.353	0	0.11965213	0.000703836	7/13/2011
vp	vp071111_103	2352952.919	1242943.019	0	0.158342242	0	7/13/2011
vp	vp071111_104	2352972.342	1243146.716	0	0.385758996	0.004417975	7/13/2011
vp	vp071111_105	2352975.824	1243344.436	0	1.296591878	0.002779404	7/13/2011
vp	vp071111_106	2352984.855	1243484.563	0.772886753	1.230389714	0.000461425	7/13/2011
vp	vp071111_107	2352972.427	1243550.584	0	0	0.001840911	7/13/2011
vp	vp071111_108	2353097.657	1243548.996	0	0.172569633	0.001378719	7/13/2011
vp	vp071111_109	2353083.243	1243361.528	0	0.204920381	0.002986508	7/13/2011
vp	vp071111_11	2352354.608	1244350.943	0	0.353675365	0.000704065	7/11/2011
vp	vp071111_110	2352784.901	1243537.701	0	0.600547493	0.003211484	7/13/2011
vp	vp071111_111	2352778.443	1243361.657	0	0.166772574	0	7/13/2011
vp	vp071111_112	2352780.318	1243157.84	0	0.243101552	0.000228909	7/13/2011
vp	vp071111_113	2352769.232	1242980.523	0	0.572075546	0.002292888	7/13/2011
vp	vp071111_114	2352770.379	1242769.75	0	2.643245697	0.001837342	7/13/2011
vp	vp071111_12	2352365.344	1244551.785	0.089057118	0.213268369	0.001171804	7/11/2011
vp	vp071111_13	2352566.287	1244559.607	0	0.133421168	0.001869299	7/11/2011
vp	vp071111_14	2352761.525	1244553.06	0	0.348809302	0.000935146	7/11/2011
vp	vp071111_15	2352960.08	1244559.45	0	0.273061454	0.000934342	7/11/2011
vp	vp071111_16	2353162.892	1244542.912	0	0.270009995	0.001399016	7/11/2011
vp	vp071111_17	2353361.566	1244551.57	0	0.016308963	0.000931941	7/11/2011
vp	vp071111_18	2353567.612	1244554.445	0	0.27062279	0.000929975	7/11/2011
vp	vp071111_19	2353569.682	1244356.66	0.000232085	0.128806919	0.000232085	7/11/2011
vp	vp071111_20	2353751.523	1244348.274	0	0.472798496	0	7/11/2011
vp	vp071111_21	2353352.763	1244342.772	0	0	0.000693988	7/11/2011
vp	vp071111_22	2353158.595	1244331.187	0	0	0	7/11/2011
vp	vp071111_23	2352952.11	1244328.027	0	0.043620843	0.000459167	7/11/2011
vp	vp071111_24	2352762.865	1244331.729	0.000229473	0.67511034	0.000229473	7/11/2011
vp	vp071111_25	2352563.631	1244354.174	0.224375293	0.675867736	0.000228488	7/11/2011
vp	vp071111_26	2352565.688	1244146.803	0	0	0.001364272	7/11/2011
vp	vp071111_27	2352349.771	1244136.937	0.099980317	0.107478842	0.001817824	7/11/2011
vp	vp071111_28	2352173.102	1244133.724	0	0.054334529	0.000226394	7/11/2011

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AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
vp	vp071111_29	2351944.308	1244149.877	0	0	0	7/11/2011
vp	vp071111_30	2351752.205	1244143.138	0	0.095047347	0.000449396	7/11/2011
vp	vp071111_31	2351544.438	1244157.719	0	0.092879742	0.000673042	7/11/2011
vp	vp071111_32	2351369.437	1244142.982	0	0.127752542	0.001568891	7/11/2011
vp	vp071111_33	2351358.481	1243934.36	0	0	0.000672685	7/11/2011
vp	vp071111_34	2351374.043	1243755.995	0	0.239274904	0.000449765	7/11/2011
vp	vp071111_35	2351372.035	1243541.489	0	0.343032241	0	7/11/2011
vp	vp071111_36	2351160.54	1243528.262	0	0.670342863	0	7/11/2011
vp	vp071111_37	2350963.062	1243526.501	0	0.160027266	0.001582191	7/11/2011
vp	vp071111_38	2350958.976	1243340.557	0	0.204926893	0.001130943	7/11/2011
vp	vp071111_39	2350982.47	1243170.715	0	0.211938724	0.000226189	7/11/2011
vp	vp071111_40	2350965.07	1242926.761	0	0.033719867	0.001131539	7/11/2011
vp	vp071111_41	2350956.626	1242743.523	0	0.18722564	0.000679996	7/11/2011
vp	vp071111_42	2350973.702	1242551.48	0	0	0.00022704	7/11/2011
vp	vp071111_43	2351165.594	1242540.526	0	0	0.001818466	7/11/2011
vp	vp071111_44	2351385.731	1242155.637	0	0.176823735	0.000682717	7/11/2011
vp	vp071111_45	2351364.338	1242352.658	0	0.083814457	0.001141886	7/11/2011
vp	vp071111_46	2351377.486	1242544.73	0	0.108559452	0.000912264	7/11/2011
vp	vp071111_47	2351371.694	1242738.208	0	0.00500443	0.000909896	7/11/2011
vp	vp071111_48	2351164.64	1242728.485	0	0.211857215	0.002265852	7/11/2011
vp	vp071111_49	2351156.88	1242932.534	0	0.475651294	0.000226501	7/11/2011
vp	vp071111_50	2351387.105	1242963.401	0.00022578	0.319703877	0.000451559	7/11/2011
vp	vp071111_51	2351369.002	1243138.139	0	0.133734867	0	7/11/2011
vp	vp071111_52	2351158.63	1243147.615	0	0	0.000225617	7/11/2011
vp	vp071111_53	2351169.118	1243335.542	0.00022516	0	0.00022516	7/11/2011
vp	vp071111_54	2351364.411	1243342.255	0	0	0.000225059	7/11/2011
vp	vp071111_55	2350766.593	1243960.714	0	0.25437209	0.006135134	7/12/2011
vp	vp071111_56	2350755.368	1244147.944	0	0.304106891	0.005170287	7/12/2011
vp	vp071111_57	2350549.317	1244140.576	0	0.715119779	0.005151485	7/12/2011
vp	vp071111_58	2350586.048	1243949.094	0	0.388216317	0.005843112	7/12/2011
vp	vp071111_59	2350578.246	1243759.907	0	0.300584763	0.00607242	7/12/2011
vp	vp071111_60	2350778.762	1243737.795	0	0.297935158	0.004199556	7/12/2011
vp	vp071111_61	2350763.238	1243555.414	0	0.139567837	0.004194025	7/12/2011
vp	vp071111_62	2350572.623	1243529.702	0	0.530034065	0.008161545	7/12/2011
vp	vp071111_63	2350354.425	1243525.257	0	0.515422642	0.006980894	7/12/2011
vp	vp071111_64	2350339.358	1243754.115	0	1.309080124	0.004171259	7/12/2011
vp	vp071111_65	2350179.668	1243749.305	0	0.12475422	0.00299226	7/12/2011
vp	vp071111_66	2349974.957	1243745.544	0	0.1780902	0.00298347	7/12/2011
vp	vp071111_67	2349966.869	1243956.897	0	0.177267402	0.004815802	7/12/2011
vp	vp071111_68	2349955.498	1244135.865	0	0.540266752	0.004566921	7/12/2011
vp	vp071111_69	2349766.318	1244145.193	0	0.325049281	0.001364798	7/12/2011
vp	vp071111_70	2349744.042	1244165.696	13.37593937	3.514193296	0.003864499	7/12/2011
vp	vp071111_71	2349690.805	1244120.154	6.876289845	7.814832687	0.002270302	7/12/2011
vp	vp071111_72	2349565.965	1244122.306	0	1.352738261	0.002044784	7/12/2011
vp	vp071111_73	2349571.534	1244088.485	0	3.640190125	0.004998076	7/12/2011
vp	vp071111_74	2349360.155	1244141.529	0	1.020477653	0.000682137	7/12/2011
vp	vp071111_75	2349166.313	1244151.872	0	0.482327729	0.000907484	7/12/2011
vp	vp071111_76	2348959.799	1244141.422	0	0.468489468	0	7/12/2011

APPENDIX B
FLUX METER DATA

AreaAbbrev	SitePt	Easting	Northing	CH_4 flux	CO_2 flux	H_2S flux	Date
vp	vp071111_77	2348775.969	1243940.835	0	0.580880463	0	7/12/2011
vp	vp071111_78	2348777.274	1243745.576	0	0.741802812	0.000678892	7/12/2011
vp	vp071111_79	2348964.837	1243556.721	0	0.836984813	0.000226457	7/12/2011
vp	vp071111_80	2349167.924	1243542.746	0	0.68264401	0.001133207	7/12/2011
vp	vp071111_81	2349361.789	1243530.65	0	0.286810607	0.000227267	7/12/2011
vp	vp071111_82	2349552.001	1243545.689	0	0.279183149	0.002047798	7/12/2011
vp	vp071111_83	2349760.187	1243541.179	0	0.325163454	0.003185646	7/12/2011
vp	vp071111_84	2349785.679	1243346.497	1.164484382	1.582410812	0.001598625	7/12/2011
vp	vp071111_85	2349564.495	1243330.05	0	0.303384215	0.00114226	7/12/2011
vp	vp071111_86	2349753.776	1243230.86	0	0.604464591	0.00205135	7/12/2011
vp	vp071111_87	2349950.786	1243336.762	0	0.847106934	0.001599608	7/12/2011
vp	vp071111_88	2349958.436	1243534.136	0.000684026	0	0.002508094	7/12/2011
vp	vp071111_89	2350167.906	1243531.198	0	0.365782291	0.002500687	7/12/2011
vp	vp071111_90	2349770.477	1243744.407	0	0.387980998	0.0020432	7/12/2011
vp	vp071111_91	2349764.763	1243939.916	0	0.596171677	0.001358022	7/12/2011
vp	vp071111_92	2349572.201	1243957.514	0	0.368332684	0.002709989	7/12/2011
vp	vp071111_93	2349375.464	1243952.661	0	2.129191875	0.001129425	7/12/2011
vp	vp071111_94	2349179.667	1243950.981	0	0.781970918	0.005860837	7/12/2011
vp	vp071111_95	2348936.587	1243925.497	0	0.545822322	0.010353744	7/12/2011
vp	vp071111_96	2348947.892	1243744.271	0	0.251288772	0.002924578	7/12/2011
vp	vp071111_97	2349159.18	1243755.346	0	0.278491408	0.014183475	7/12/2011
vp	vp071111_98	2349353.058	1243766.474	0	0.358157396	0.005624331	7/12/2011
vp	vp071111_99	2349563.585	1243742.408	0	0.456559509	0.012619612	7/12/2011
vp	vp071211_01	2352355.054	1242554.087	0	0.147063985	0.002837247	7/13/2011
vp	vp071211_02	2352368.394	1242753.557	0	0.05236401	0.001408897	7/13/2011
vp	vp071211_03	2352362.643	1242948.914	0	0.421147555	0.002579411	7/13/2011
vp	vp071211_04	2352353.652	1243155.927	0.569124222	0.624568939	0.002329612	7/13/2011
vp	vp071211_05	2352275.945	1243145.359	0.0004616	0.099936351	0.001615599	7/13/2011
vp	vp071211_06	2352352.685	1243334.983	0	0.427718401	0.001614902	7/13/2011
vp	vp071211_07	2352542.099	1243356.178	0	0.251620144	0.001382528	7/13/2011
vp	vp071211_08	2352549.593	1243141.905	0.722320974	0.290304244	0.00527409	7/13/2011
vp	vp071211_09	2352554.788	1242952.417	0.110002205	0.18962723	0.004142342	7/13/2011
vp	vp071211_10	2352562.69	1242759.33	0	0.220857486	0.000921199	7/13/2011
vp	vp071211_11	2352552.033	1242574.487	0	0.293959767	0.002987863	7/13/2011
vp	vp071211_12	2352523.063	1243558.742	0	0.514294684	0.00319296	7/13/2011
vp	vp071211_13	2352362.169	1243553.297	0	0.059227202	0.002733563	7/13/2011

APPENDIX C

VOLUMETRIC FLUX CALCULATIONS

Grid Volume Computations

Fri Sep 16 11:55:16 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\Baird_CH4.grd
Grid Size:	16 rows x 19 columns
X Minimum:	2330437.362
X Maximum:	2331051.259
X Spacing:	34.105388888882
Y Minimum:	1230436.976
Y Maximum:	1230949.138
Y Spacing:	34.144133333334
Z Minimum:	-5.7810934740748E-005
Z Maximum:	0.00043902893740494

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	0.83353099857022
Simpson's Rule:	0.82925900530604
Simpson's 3/8 Rule:	0.80498222281988

Cut & Fill Volumes

Positive Volume [Cut]:	0.86062739647908
Negative Volume [Fill]:	0.027096397908851
Net Volume [Cut-Fill]:	0.83353099857022

Areas

Planar Areas

Positive Planar Area [Cut]:		134201.36072069
Negative Planar Area [Fill]:		88217.937890289
Blanked Planar Area:	91995.416702969	
Total Planar Area:	314414.71531395	

Surface Areas

Positive Surface Area [Cut]:	134201.36072069
Negative Surface Area [Fill]:	88217.937890289

Grid Volume Computations

Fri Aug 05 14:04:38 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\Baird_CO2.grd
Grid Size:	32 rows x 40 columns
X Minimum:	2330507.362
X Maximum:	2330981.259
X Spacing:	12.151205128202
Y Minimum:	1230506.976
Y Maximum:	1230879.138
Y Spacing:	12.005225806452
Z Minimum:	-0.012410490680745
Z Maximum:	0.69077488724039

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	1902.5372778194
Simpson's Rule:	1902.2903148081
Simpson's 3/8 Rule:	1899.7405041354

Cut & Fill Volumes

Positive Volume [Cut]:	1903.7729196387
Negative Volume [Fill]:	1.235641819361
Net Volume [Cut-Fill]:	1902.5372778194

Areas

Planar Areas

Positive Planar Area [Cut]:		164087.05725739
Negative Planar Area [Fill]:		1703.2458561877
Blanked Planar Area:	10576.152200382	
Total Planar Area:	176366.45531396	

Surface Areas

Positive Surface Area [Cut]:	164087.06359252
Negative Surface Area [Fill]:	1703.2458594193

Grid Volume Computations

Fri Jul 29 15:36:29 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\BC2CJ_ch4.grd
Grid Size:	100 rows x 161 columns
X Minimum:	2299861.701
X Maximum:	2311856.853
X Spacing:	74.969700000001
Y Minimum:	1208442.068
Y Maximum:	1215836.859
Y Spacing:	74.694858585858
Z Minimum:	-4.242757250055
Z Maximum:	30.43738327977

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	699976.7679095
Simpson's Rule:	704115.16592416
Simpson's 3/8 Rule:	705442.78190824

Cut & Fill Volumes

Positive Volume [Cut]:	793006.03698352
Negative Volume [Fill]:	93029.269074023
Net Volume [Cut-Fill]:	699976.7679095

Areas

Planar Areas

Positive Planar Area [Cut]:		12234136.678358
Negative Planar Area [Fill]:		10383662.074988
Blanked Planar Area:	66083843.299887	
Total Planar Area:	88701642.053233	

Surface Areas

Positive Surface Area [Cut]:	12234177.662277
Negative Surface Area [Fill]:	10383662.966327

Grid Volume Computations

Fri Aug 05 12:03:38 2011

Upper Surface

Grid File Name: P:\LaPlata\2011 Detailed Seep Mapping\Surfer\BC2CJ_ch4_notail.grd
Grid Size: 100 rows x 161 columns
X Minimum: 2299861.701
X Maximum: 2311856.853
X Spacing: 74.969700000001
Y Minimum: 1208442.068
Y Maximum: 1215836.859
Y Spacing: 74.694858585858
Z Minimum: 0
Z Maximum: 30.43738327977

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor: 0.0929

Total Volumes by:

Trapezoidal Rule: 767530.49045373
Simpson's Rule: 772369.30717907
Simpson's 3/8 Rule: 772043.20321226

Cut & Fill Volumes

Positive Volume [Cut]: 767530.49045373
Negative Volume [Fill]: 0
Net Volume [Cut-Fill]: 767530.49045373

Areas

Planar Areas

Positive Planar Area [Cut]: 22617798.753347
Negative Planar Area [Fill]: 0
Blanked Planar Area: 66083843.299887
Total Planar Area: 88701642.053233

Surface Areas

Positive Surface Area [Cut]: 22617839.734428
Negative Surface Area [Fill]: 0

Grid Volume Computations

Fri Aug 05 14:07:39 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\BC2CJ_CO2.grd
Grid Size:	100 rows x 161 columns
X Minimum:	2299861.701
X Maximum:	2311856.853
X Spacing:	74.969700000001
Y Minimum:	1208442.068
Y Maximum:	1215836.859
Y Spacing:	74.694858585858
Z Minimum:	-0.59408861407166
Z Maximum:	8.4747842345579

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	876432.54258124
Simpson's Rule:	878244.17280386
Simpson's 3/8 Rule:	878938.79870319

Cut & Fill Volumes

Positive Volume [Cut]:	879301.88954059
Negative Volume [Fill]:	2869.3469593504
Net Volume [Cut-Fill]:	876432.54258124

Areas

Planar Areas

Positive Planar Area [Cut]:		22353071.869531
Negative Planar Area [Fill]:		264726.88381522
Blanked Planar Area:	66083843.299887	
Total Planar Area:	88701642.053233	

Surface Areas

Positive Surface Area [Cut]:	22353075.050865
Negative Surface Area [Fill]:	264726.88793296

Grid Volume Computations

Fri Sep 16 11:48:21 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\Fed_CH4.grd
Grid Size:	21 rows x 21 columns
X Minimum:	2319588.044
X Maximum:	2320291.811
X Spacing:	35.18835
Y Minimum:	1219523.65
Y Maximum:	1220232.353
Y Spacing:	35.435149999999
Z Minimum:	-7.4108233613203E-005
Z Maximum:	0.00031943001510159

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	0.094982890950115
Simpson's Rule:	0.085676971094622
Simpson's 3/8 Rule:	0.077835887472939

Cut & Fill Volumes

Positive Volume [Cut]:	0.39671660931018
Negative Volume [Fill]:	0.30173371836007
Net Volume [Cut-Fill]:	0.094982890950115

Areas

Planar Areas

Positive Planar Area [Cut]:		111376.91748763
Negative Planar Area [Fill]:		343743.21059576
Blanked Planar Area:	43641.656117586	
Total Planar Area:	498761.78420098	

Surface Areas

Positive Surface Area [Cut]:	111376.91748764
Negative Surface Area [Fill]:	343743.21059576

Grid Volume Computations

Fri Aug 05 14:08:29 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\Fed_CO2.grd
Grid Size:	48 rows x 49 columns
X Minimum:	2319658.044
X Maximum:	2320231.811
X Spacing:	11.953479166667
Y Minimum:	1219593.65
Y Maximum:	1220162.353
Y Spacing:	12.100063829787
Z Minimum:	-0.15006925188014
Z Maximum:	1.1750094303896

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	3333.8266631623
Simpson's Rule:	3334.4506230432
Simpson's 3/8 Rule:	3335.3676055574

Cut & Fill Volumes

Positive Volume [Cut]:	3347.4072958688
Negative Volume [Fill]:	13.580632706482
Net Volume [Cut-Fill]:	3333.8266631623

Areas

Planar Areas

Positive Planar Area [Cut]:		316850.52067001
Negative Planar Area [Fill]:		2871.4708598079
Blanked Planar Area:	6581.0226711635	
Total Planar Area:	326303.01420098	

Surface Areas

Positive Surface Area [Cut]:	316850.54970827
Negative Surface Area [Fill]:	2871.4711444751

Grid Volume Computations

Wed Aug 10 10:10:42 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\FR_CH4.grd
Grid Size:	23 rows x 39 columns
X Minimum:	2330454.529
X Maximum:	2333287.963
X Spacing:	74.564052631576
Y Minimum:	1234429.156
Y Maximum:	1236057.488
Y Spacing:	74.015090909088
Z Minimum:	-0.12342741803773
Z Maximum:	2.1944057585828

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	42858.64784601
Simpson's Rule:	43009.503251943
Simpson's 3/8 Rule:	43120.771715641

Cut & Fill Volumes

Positive Volume [Cut]:	44059.518703835
Negative Volume [Fill]:	1200.870857825
Net Volume [Cut-Fill]:	42858.64784601

Areas

Planar Areas

Positive Planar Area [Cut]:		2155155.7424551
Negative Planar Area [Fill]:		1636304.6046552
Blanked Planar Area:	822310.90497734	
Total Planar Area:	4613771.2520876	

Surface Areas

Positive Surface Area [Cut]:	2155155.8211958
Negative Surface Area [Fill]:	1636304.6052926

Grid Volume Computations

Wed Aug 10 10:06:51 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\FR_CH4notail.grd
Grid Size:	23 rows x 39 columns
X Minimum:	2330454.529
X Maximum:	2333287.963
X Spacing:	74.564052631576
Y Minimum:	1234429.156
Y Maximum:	1236057.488
Y Spacing:	74.015090909088
Z Minimum:	0
Z Maximum:	2.1944057585828

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	39758.079718191
Simpson's Rule:	39836.496869576
Simpson's 3/8 Rule:	40121.528585428

Cut & Fill Volumes

Positive Volume [Cut]:	39758.079718191
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	39758.079718191

Areas

Planar Areas

Positive Planar Area [Cut]:		3791460.3471103
Negative Planar Area [Fill]:		0
Blanked Planar Area:	822310.90497734	
Total Planar Area:	4613771.2520876	

Surface Areas

Positive Surface Area [Cut]:	3791460.4420285
Negative Surface Area [Fill]:	0

Grid Volume Computations

Wed Aug 10 10:15:25 2011

Upper Surface

Grid File Name: P:\LaPlata\2011 Detailed Seep Mapping\Surfer\FR_CO2.grd
Grid Size: 23 rows x 39 columns
X Minimum: 2330454.529
X Maximum: 2333287.963
X Spacing: 74.564052631576
Y Minimum: 1234429.156
Y Maximum: 1236057.488
Y Spacing: 74.015090909088
Z Minimum: 0.030127457606906
Z Maximum: 1.4370731142118

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor: 0.0929

Total Volumes by:

Trapezoidal Rule: 113745.92612057
Simpson's Rule: 114599.34794059
Simpson's 3/8 Rule: 114290.80803697

Cut & Fill Volumes

Positive Volume [Cut]: 113745.92612057
Negative Volume [Fill]: 0
Net Volume [Cut-Fill]: 113745.92612057

Areas

Planar Areas

Positive Planar Area [Cut]: 3791460.3471103
Negative Planar Area [Fill]: 0
Blanked Planar Area: 822310.90497734
Total Planar Area: 4613771.2520876

Surface Areas

Positive Surface Area [Cut]: 3791460.3964211
Negative Surface Area [Fill]: 0

Grid Volume Computations

Fri Jul 29 16:41:17 2011

Upper Surface

Grid File Name: P:\LaPlata\2011 Detailed Seep Mapping\Surfer\TC2PR_CH4.grd
Grid Size: 97 rows x 257 columns
X Minimum: 2370453.054
X Maximum: 2389681.537
X Spacing: 75.11126171875
Y Minimum: 1237430.796
Y Maximum: 1244638.726
Y Spacing: 75.082604166666
Z Minimum: -172.42241482532
Z Maximum: 75.530185492499

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor: 0.0929

Total Volumes by:

Trapezoidal Rule: -92527.066438606
Simpson's Rule: -144380.82153229
Simpson's 3/8 Rule: -99973.665885966

Cut & Fill Volumes

Positive Volume [Cut]: 1678958.6638617
Negative Volume [Fill]: 1771485.7303003
Net Volume [Cut-Fill]: -92527.0664386

Areas

Planar Areas

Positive Planar Area [Cut]: 8387343.9076006
Negative Planar Area [Fill]: 9986307.1647413
Blanked Planar Area: 120223908.39785
Total Planar Area: 138597559.47019

Surface Areas

Positive Surface Area [Cut]: 8387588.9102416
Negative Surface Area [Fill]: 9986565.5745698

Grid Volume Computations

Fri Aug 05 12:15:10 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\TC2PR_CH4_notail.grd
Grid Size:	97 rows x 257 columns
X Minimum:	2370453.054
X Maximum:	2389681.537
X Spacing:	75.11126171875
Y Minimum:	1237430.796
Y Maximum:	1244638.726
Y Spacing:	75.082604166666
Z Minimum:	0
Z Maximum:	75.530185492499

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	1692373.3192748
Simpson's Rule:	1700154.2549528
Simpson's 3/8 Rule:	1693643.8139923

Cut & Fill Volumes

Positive Volume [Cut]:	1692373.3192748
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	1692373.3192748

Areas

Planar Areas

Positive Planar Area [Cut]:		18373651.072342
Negative Planar Area [Fill]:		0
Blanked Planar Area:	120223908.39785	
Total Planar Area:	138597559.47019	

Surface Areas

Positive Surface Area [Cut]:	18373888.768892
Negative Surface Area [Fill]:	0

Grid Volume Computations

Fri Aug 05 14:10:01 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\TC2PR_CO2.grd
Grid Size:	97 rows x 257 columns
X Minimum:	2370453.054
X Maximum:	2389681.537
X Spacing:	75.11126171875
Y Minimum:	1237430.796
Y Maximum:	1244638.726
Y Spacing:	75.082604166666
Z Minimum:	-0.73194381201259
Z Maximum:	4.1054034158456

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	571622.85113066
Simpson's Rule:	570078.67904277
Simpson's 3/8 Rule:	571914.67651789

Cut & Fill Volumes

Positive Volume [Cut]:	584680.64074291
Negative Volume [Fill]:	13057.789612258
Net Volume [Cut-Fill]:	571622.85113066

Areas

Planar Areas

Positive Planar Area [Cut]:		17738296.992022
Negative Planar Area [Fill]:		640993.62945199
Blanked Planar Area:	120218268.84871	
Total Planar Area:	138597559.47019	

Surface Areas

Positive Surface Area [Cut]:	17738298.24601
Negative Surface Area [Fill]:	640993.6611234

Grid Volume Computations

Mon Jul 25 15:39:12 2011

Upper Surface

Grid File Name: P:\LaPlata\2011 Detailed Seep Mapping\Surfer\vp_ch4.grd
Grid Size: 36 rows x 70 columns
X Minimum: 2348675.969
X Maximum: 2353851.523
X Spacing: 75.008028985507
Y Minimum: 1242055.637
Y Maximum: 1244659.607
Y Spacing: 74.399142857142
Z Minimum: -0.51702315278415
Z Maximum: 11.212993342829

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor: 0.0929

Total Volumes by:

Trapezoidal Rule: 181218.69306942
Simpson's Rule: 184998.23946102
Simpson's 3/8 Rule: 190192.55541157

Cut & Fill Volumes

Positive Volume [Cut]: 194607.41864644
Negative Volume [Fill]: 13388.725577018
Net Volume [Cut-Fill]: 181218.69306942

Areas

Planar Areas

Positive Planar Area [Cut]: 4725007.3978845
Negative Planar Area [Fill]: 4332197.7648665
Blanked Planar Area: 4419782.1866289
Total Planar Area: 13476987.34938

Surface Areas

Positive Surface Area [Cut]: 4725009.6323651
Negative Surface Area [Fill]: 4332197.7864419

Grid Volume Computations

Mon Jul 25 16:17:53 2011

Upper Surface

Grid File Name: P:\LaPlata\2011 Detailed Seep Mapping\Surfer\vp_ch4.grd
Grid Size: 36 rows x 70 columns
X Minimum: 2348675.969
X Maximum: 2353851.523
X Spacing: 75.008028985507
Y Minimum: 1242055.637
Y Maximum: 1244659.607
Y Spacing: 74.399142857142
Z Minimum: -0.51702315278415
Z Maximum: 11.212993342829

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor: 0.0929

Total Volumes by:

Trapezoidal Rule: 95159.383116922
Simpson's Rule: 101599.07688672
Simpson's 3/8 Rule: 98279.085464427

Cut & Fill Volumes

Positive Volume [Cut]: 108548.10869394
Negative Volume [Fill]: 13388.725577018
Net Volume [Cut-Fill]: 95159.383116922

Areas

Planar Areas

Positive Planar Area [Cut]: 4558965.2027771
Negative Planar Area [Fill]: 4311292.1023324
Blanked Planar Area: 4606730.0442704
Total Planar Area: 13476987.34938

Surface Areas

Positive Surface Area [Cut]: 4558966.8143097
Negative Surface Area [Fill]: 4311292.1239078

Grid Volume Computations

Fri Aug 05 14:47:28 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\vp_ch4_notail.grd
Grid Size:	31 rows x 70 columns
X Minimum:	2348675.969
X Maximum:	2353851.523
X Spacing:	75.008028985507
Y Minimum:	1242441.072
Y Maximum:	1244659.607
Y Spacing:	73.951166666672
Z Minimum:	0
Z Maximum:	11.112979314153

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	102257.29656823
Simpson's Rule:	96011.540336589
Simpson's 3/8 Rule:	107433.35566785

Cut & Fill Volumes

Positive Volume [Cut]:	102257.29656823
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	102257.29656823

Areas

Planar Areas

Positive Planar Area [Cut]:		7077884.2786312
Negative Planar Area [Fill]:		0
Blanked Planar Area:	4404263.4147596	
Total Planar Area:	11482147.693391	

Surface Areas

Positive Surface Area [Cut]:	7077885.8990076
Negative Surface Area [Fill]:	0

Grid Volume Computations

Fri Aug 05 14:25:18 2011

Upper Surface

Grid File Name:	P:\LaPlata\2011 Detailed Seep Mapping\Surfer\vp_co2_2.grd
Grid Size:	31 rows x 70 columns
X Minimum:	2348675.969
X Maximum:	2353851.523
X Spacing:	75.008028985507
Y Minimum:	1242441.072
Y Maximum:	1244659.607
Y Spacing:	73.951166666672
Z Minimum:	-0.076350124954913
Z Maximum:	5.6078073981588

Lower Surface

Level Surface defined by Z = 0

Volumes

Z Scale Factor:	0.0929

Total Volumes by:

Trapezoidal Rule:	173555.15807195
Simpson's Rule:	172229.04605328
Simpson's 3/8 Rule:	175789.7544833

Cut & Fill Volumes

Positive Volume [Cut]:	173577.39344535
Negative Volume [Fill]:	22.235373398575
Net Volume [Cut-Fill]:	173555.15807195

Areas

Planar Areas

Positive Planar Area [Cut]:		3307367.9124211
Negative Planar Area [Fill]:		1376.5799013769
Blanked Planar Area:	8173403.2010683	
Total Planar Area:	11482147.693391	

Surface Areas

Positive Surface Area [Cut]:	3307368.4309936
Negative Surface Area [Fill]:	1376.5800117378

APPENDIX D

SUBSURFACE SOIL GAS MEASUREMENT DATA

APPENDIX D
SUBSURFACE SOIL GAS MEASUREMENT DATA

Suspect Seep Area	Sub_CH_4_Co	Sub_O_2_Con	Sub_H_2S_Co	Sub_CO_Con	GPS_Date	GPS_Time	GPS_Height	Northing	Easting
1	0	19.9	0	0	7/25/2011	09:46:09am	7737.907	1230762.740	2324064.869
1	0	19.6	0	0	7/25/2011	09:56:02am	7725.984	1230728.146	2324055.449
1	0	19.7	0	0	7/25/2011	09:59:26am	7716.757	1230691.585	2324050.100
1	0	19.8	0	0	7/25/2011	10:04:55am	7685.867	1230700.391	2324004.097
1	0	19.7	0	1	7/25/2011	10:12:40am	7697.614	1230651.293	2324046.437
1	0	19.6	0	0	7/25/2011	10:16:16am	7673.301	1230640.355	2324007.481
2	0	19.3	0	0	7/25/2011	10:32:34am	7851.914	1231136.451	2323973.353
2	0	19.5	0	0	7/25/2011	10:38:38am	7882.518	1231193.678	2323959.288
2	0	19.5	0	0	7/25/2011	10:43:34am	7905.251	1231188.281	2324038.446
2	0	19.5	0	0	7/25/2011	10:48:40am	7951.711	1231259.170	2324070.228
2	0	19.2	0	0	7/25/2011	10:53:12am	7936.731	1231273.411	2323964.469
2	0	19.4	0	0	7/25/2011	11:02:33am	7985.949	1231352.142	2323972.253
2	0	19.2	0	0	7/25/2011	11:06:16am	7976.270	1231329.905	2324045.796
3	0	19.6	0	0	7/25/2011	12:24:07pm	7552.475	1232343.580	2326888.807
3	0	19.6	0	0	7/25/2011	12:28:30pm	7592.781	1232426.506	2326841.760
3	0	19.5	0	0	7/25/2011	12:32:10pm	7591.791	1232462.373	2326939.648
3	0	19.6	0	0	7/25/2011	12:35:02pm	7572.892	1232453.454	2326984.663
3	0	19.6	0	0	7/25/2011	12:37:58pm	7542.285	1232470.130	2327089.992
3	0	19.5	0	0	7/25/2011	12:41:33pm	7551.062	1232552.631	2327119.197
3	0	19.4	0	0	7/25/2011	12:45:13pm	7589.663	1232555.494	2327041.186
3	0	19.3	0	0	7/25/2011	12:49:27pm	7642.565	1232550.633	2326920.785
3	0	19.2	0	0	7/25/2011	12:53:44pm	7662.552	1232559.510	2326788.082
3	0	19.5	0	0	7/25/2011	12:57:52pm	7724.103	1232673.859	2326823.073
3	0	19.4	0	0	7/25/2011	01:02:19pm	7731.587	1232750.051	2326875.030
3	0	19.3	0	0	7/25/2011	01:06:41pm	7679.195	1232732.188	2326956.424
3	0	19.3	0	0	7/25/2011	01:09:18pm	7664.160	1232668.014	2326964.534
3	0	19.5	0	0	7/25/2011	01:13:36pm	7616.231	1232710.972	2327053.533
3	0	19.2	0	0	7/25/2011	01:16:31pm	7597.191	1232644.947	2327082.600
4	0	19.5	0	0	7/25/2011	01:31:02pm	7508.788	1233010.601	2328121.977
4	0	19.4	0	0	7/25/2011	01:34:16pm	7510.190	1233037.851	2328145.517
4	0	19.4	0	0	7/25/2011	01:37:09pm	7520.455	1233064.724	2328113.981
4	0	19.2	0	0	7/25/2011	01:39:02pm	7508.432	1233085.840	2328162.712
5	0	19.7	0	0	8/4/2011	11:38:14am	7323.935	1234609.262	2330120.690
5	0	19.7	0	0	8/4/2011	11:42:19am	7334.880	1234536.799	2330010.181
5	0	19.6	0	0	8/4/2011	11:55:18am	7288.973	1234328.045	2330124.176
5	0	19.3	0	0	8/4/2011	12:10:40pm	7306.291	1234425.092	2330003.654
5	0	19.4	0	0	8/4/2011	12:23:59pm	7275.461	1234586.380	2330253.827
5	0	19.6	0	0	8/4/2011	12:30:54pm	7256.419	1234469.956	2330387.719
5	0	19.5	0	0	8/4/2011	12:41:29pm	7273.342	1234374.796	2330251.821
5	1500	18.8	0	0	8/4/2011	12:05:49pm	7309.296	1234449.912	2330028.149
5	2500	20.0	0	0	8/4/2011	11:16:57am	7266.619	1234477.476	2330311.030
5	2500	19.7	0	0	8/4/2011	11:32:32am	7322.424	1234540.674	2330098.462
5	4500	19.5	0	0	8/4/2011	11:47:26am	7312.040	1234447.094	2330116.644
5	5000	18.9	0	0	8/4/2011	12:16:02pm	7296.618	1234504.951	2330197.998
6	0	20.0	0	0	8/8/2011	11:56:37am	7515.161	1237466.589	2335535.185
6	0	19.9	0	0	8/8/2011	12:04:15pm	7525.225	1237500.156	2335637.038
6	0	20.0	0	0	8/8/2011	12:09:51pm	7496.146	1237421.436	2335584.731
8	0	19.4	0	0	8/19/2011	10:56:14am	7948.936	1240891.329	2341135.870
8	0	18.9	0	0	8/19/2011	11:08:42am	8002.316	1240840.495	2340987.211
8	0	18.8	0	0	8/19/2011	11:14:36am	7968.319	1240808.076	2341047.207
8	0	19.1	0	0	8/19/2011	11:18:48am	7969.362	1240833.794	2341085.946
8	0	19.1	0	0	8/19/2011	11:23:34am	7961.761	1240858.778	2341126.661
8	0	18.9	0	0	8/19/2011	11:29:14am	7982.332	1240897.283	2341082.383
8	0	18.8	0	0	8/19/2011	11:35:23am	8010.584	1240877.187	2341020.760
8	0	19.1	0	0	8/19/2011	11:39:21am	8048.571	1240866.139	2340910.220
8	4500	18.8	0	0	8/19/2011	10:53:13am	7960.241	1240878.926	2341101.502
8	80000	12.6	0	0	8/19/2011	11:01:58am	7991.473	1240853.692	2341051.845
8	1000000	5.9	1	30	8/19/2011	10:38:09am	7970.913	1240870.525	2341076.999
11	0	19.4	0	0	7/28/2011	09:33:22am	8076.769	1241553.870	2342417.276
12	0	19.4	0	0	7/28/2011	09:53:31am	8064.711	1241972.697	2343828.158
12	0	19.5	0	0	7/28/2011	10:01:31am	8059.742	1241901.952	2343873.735
12	0	19.4	0	0	7/28/2011	10:09:19am	8152.794	1242011.509	2344047.606
13	0	19.4	0	0	7/28/2011	10:31:19am	8094.929	1242024.549	2344962.269

APPENDIX D
SUBSURFACE SOIL GAS MEASUREMENT DATA

Suspect Seep Area	Sub_CH_4_Co	Sub_O_2_Con	Sub_H_2S_Co	Sub_CO_Con	GPS_Date	GPS_Time	GPS_Height	Northing	Easting
13	0	19.3	0	0	7/28/2011	10:38:07am	7967.785	1241778.909	2344986.392
13	0	19.3	0	0	7/28/2011	10:41:37am	7957.754	1241778.128	2345178.251
13	0	19.4	0	0	7/28/2011	10:46:45am	7894.437	1241686.663	2345348.571
14	0	19.2	0	0	7/28/2011	11:09:13am	8032.520	1242275.103	2346045.539
14	0	19.2	0	0	7/28/2011	11:15:09am	8058.117	1242315.682	2346196.385
14	0	19.3	0	0	7/28/2011	11:19:58am	8087.200	1242460.005	2346076.139
15	0	19.2	0	0	7/28/2011	11:27:34am	8160.312	1242838.701	2346177.920
15	0	19.1	0	0	7/28/2011	11:35:33am	8221.654	1242961.567	2346075.727
15	0	19.1	0	0	7/28/2011	11:39:58am	8277.946	1243111.112	2346006.000
16	0	19.2	0	0	7/28/2011	11:53:38am	8078.337	1242806.852	2346519.916
16	0	19.2	0	0	7/28/2011	11:58:22am	8148.938	1242912.458	2346594.968
17	0	19.1	0	0	7/28/2011	12:31:28pm	8410.509	1243673.038	2347834.698
17	0	19.1	0	0	7/28/2011	12:35:25pm	8369.001	1243587.273	2347929.610
17	0	19.2	0	0	7/28/2011	12:39:25pm	8355.838	1243496.543	2347874.623
17	0	19.2	0	0	7/28/2011	12:43:02pm	8325.175	1243503.045	2348078.919
18	0	19.4	0	0	7/27/2011	10:34:42am	8000.600	1242801.959	2350049.990
18	0	19.0	0	0	7/27/2011	10:41:27am	7988.960	1242732.757	2350017.224
18	0	19.0	0	0	7/27/2011	11:01:18am	8063.113	1242962.682	2349769.212
18	0	19.2	0	0	7/27/2011	11:08:52am	8111.329	1243037.473	2349644.820
18	0	19.2	0	0	7/27/2011	11:14:54am	8114.735	1242880.642	2349585.187
18	0	19.2	0	0	7/27/2011	11:19:17am	8076.022	1242815.980	2349683.622
18	0	18.8	0	0	8/19/2011	02:07:37pm	7963.423	1242704.530	2350059.810
18	0	18.7	0	0	8/19/2011	02:10:40pm	7984.743	1242756.974	2350118.680
18	0	19.0	0	0	8/19/2011	02:19:01pm	7999.918	1242819.849	2350110.311
18	0	19.0	0	0	8/19/2011	02:23:17pm	8014.347	1242892.064	2350103.174
18	0	19.2	0	0	8/19/2011	02:27:07pm	8024.403	1242909.247	2350059.469
18	0	19.1	0	0	8/19/2011	02:36:09pm	8069.752	1243011.260	2350005.981
18	0	19.1	0	0	8/19/2011	02:41:16pm	8078.416	1243065.453	2349906.587
18	0	19.0	0	0	8/19/2011	02:45:04pm	8064.723	1242996.967	2349868.161
18	0	18.9	0	0	8/19/2011	02:52:13pm	8055.178	1242971.431	2349757.712
18	0	19.2	0	0	8/19/2011	02:56:37pm	8048.279	1242873.489	2349795.365
18	0	19.4	0	0	8/19/2011	03:00:06pm	7976.048	1242682.939	2349878.048
18	2000	18.7	0	0	8/19/2011	02:31:23pm	8023.507	1242923.886	2349997.231
18	2500	18.3	0	0	7/27/2011	10:16:09am	8034.157	1242915.433	2350039.972
18	2500	18.3	0	0	8/19/2011	02:14:11pm	7996.872	1242802.600	2350069.982
18	4000	18.8	0	0	7/27/2011	10:51:53am	8032.069	1242874.830	2349834.631
18	11500	14.6	0	0	8/19/2011	02:03:43pm	7976.797	1242731.134	2350016.648
18	100000	16.7	0	0	8/19/2011	01:55:55pm	7983.840	1242775.200	2349989.176
18	120000	14.9	0	4	7/27/2011	10:28:34am	8000.218	1242781.942	2349996.707
18	800000	14.8	0	0	8/19/2011	02:48:40pm	8050.600	1242943.429	2349844.253
18	1000000	12.9	0	15	7/27/2011	10:21:43am	8014.550	1242861.532	2350009.805
18	1000000	4.4	0	33	8/19/2011	01:49:31pm	7989.964	1242815.319	2349986.473
19	0	19.0	0	0	7/28/2011	01:43:33pm	7822.223	1241842.056	2349986.536
19	0	19.2	0	0	7/28/2011	01:46:20pm	7831.395	1241924.133	2349924.181
20	0	19.9	0	0	7/27/2011	09:34:12am	8114.664	1243061.571	2350388.240
20	0	19.9	0	0	7/27/2011	09:42:28am	8100.810	1242967.078	2350390.670
20	0	19.4	0	5	7/27/2011	09:49:50am	8069.649	1242853.692	2350399.434
20	0	19.7	0	1	7/27/2011	09:57:28am	8032.263	1242759.785	2350419.446
21	0	19.6	0	0	7/27/2011	12:25:25pm	7909.399	1242596.434	2352287.054
21	0	19.3	0	0	7/27/2011	12:29:44pm	7930.667	1242656.806	2352180.953
21	0	19.4	0	0	7/27/2011	12:35:15pm	7962.935	1242705.274	2352107.892
22	0	19.6	0	0	7/27/2011	02:36:55pm	7732.903	1242000.724	2353324.763
22	0	19.5	0	0	7/27/2011	02:43:17pm	7765.508	1242200.428	2353385.678
22	0	19.5	0	0	7/27/2011	02:46:07pm	7750.752	1242142.670	2353289.651
23	0	19.3	0	0	7/27/2011	01:29:03pm	8252.434	1244428.968	2355473.837
23	0	18.9	0	0	7/27/2011	01:34:16pm	8234.241	1244514.145	2355567.215
23	0	19.2	0	0	7/27/2011	01:42:54pm	8169.512	1244345.885	2355652.003
24	0	19.3	0	0	8/5/2011	11:02:47am	8422.180	1245292.759	2357386.686
24	0	19.3	0	0	8/5/2011	11:12:38am	8453.646	1245392.357	2357401.044
24	0	19.2	0	0	8/5/2011	11:15:30am	8447.799	1245377.623	2357485.331
25	0	18.9	0	0	8/5/2011	12:00:11pm	8701.858	1246535.838	2357298.850
25	0	18.8	0	0	8/5/2011	12:03:42pm	8690.005	1246532.899	2357416.929
26	0	18.9	0	0	8/5/2011	11:37:57am	8624.239	1246294.387	2357898.075

APPENDIX D
SUBSURFACE SOIL GAS MEASUREMENT DATA

Suspect Seep Area	Sub_CH_4_Co	Sub_O_2_Con	Sub_H_2S_Co	Sub_CO_Con	GPS_Date	GPS_Time	GPS_Height	Northing	Easting
26	0	18.8	0	0	8/5/2011	11:44:35am	8642.721	1246322.251	2357956.182
27	0	18.5	0	0	8/5/2011	12:15:15pm	8799.227	1247215.667	2357309.232
27	0	18.6	0	0	8/5/2011	12:19:43pm	8781.819	1247143.688	2357516.913
27	0	18.6	0	0	8/5/2011	12:25:13pm	8832.330	1247373.325	2357578.078
27	0	18.5	0	0	8/5/2011	12:30:03pm	8881.190	1247461.503	2357742.289
28	0	18.6	0	0	8/5/2011	12:36:19pm	8899.106	1247643.541	2358424.242
28	0	18.6	0	0	8/5/2011	12:40:36pm	8851.594	1247515.827	2358574.893
28	0	18.7	0	0	8/5/2011	12:43:34pm	8884.603	1247642.422	2358697.288
29	0	19.3	0	0	8/5/2011	02:06:37pm	8360.154	1245910.430	2359367.123
29	0	19.4	0	0	8/5/2011	02:09:50pm	8367.032	1246031.624	2359347.611
29	0	19.0	0	0	8/5/2011	02:11:47pm	8380.091	1245988.733	2359218.714
29	0	19.3	0	0	8/5/2011	02:13:38pm	8363.718	1245907.323	2359288.929
29	0	18.8	0	0	8/5/2011	02:17:12pm	8340.328	1245813.421	2359338.618
29	0	18.9	0	0	8/5/2011	02:20:12pm	8365.573	1245833.748	2359259.636
29	0	19.0	0	0	8/5/2011	02:25:49pm	8342.847	1245860.106	2359419.569
29	1000000	5.8	0	16	8/5/2011	02:15:18pm	8354.359	1245860.555	2359324.890
30	0	18.6	0	0	8/5/2011	12:48:10pm	8880.512	1247840.511	2359175.947
30	0	18.5	0	0	8/5/2011	12:50:38pm	8904.664	1247909.354	2359385.085
31	0	18.8	0	0	8/5/2011	01:10:26pm	8442.125	1246556.396	2360238.352
31	0	19.0	0	0	8/5/2011	01:38:24pm	8472.958	1246511.646	2360014.777
35	0	19.5	0	0	7/29/2011	10:56:06am	8021.752	1242527.370	2379200.423
35	0	19.3	0	0	7/29/2011	10:59:30am	7995.239	1242457.129	2379290.247
35	0	19.3	0	0	7/29/2011	11:03:28am	7950.616	1242382.416	2379214.496
36	0	20.1	0	0	7/29/2011	09:56:30am	7806.411	1241242.343	2380699.273
36	0	19.7	0	0	7/29/2011	10:02:25am	7787.727	1241304.298	2380621.097
36	0	19.8	0	0	7/29/2011	10:05:14am	7762.430	1241247.785	2380530.036
37	0	20.3	0	0	7/29/2011	09:31:30am	7653.488	1240035.002	2382829.543
37	0	20.2	0	0	7/29/2011	09:35:27am	7640.202	1240039.724	2382692.352

APPENDIX E

LABORATORY ANALYTICAL REPORTS

GAL ID No.: **1105-041**

May 20, 2011

LT Environmental
2243 Main Ave. #3
Durango, CO 81301
Attention: Sam LaRue

Project Name: La Plata Natural Springs
Project Number:
Date Received: 05/05/11

This is to transmit the attached analytical report. The analytical data and information contained therein was generated using specified or selected methods contained in references, such as Standard Methods for the Examination of Water and Wastewater, 18th & 19th editions, and Methods for Determination of Organic Compounds in Drinking Water, EPA-600/4-79-020.

Samples were received by Green Analytical Laboratories, Inc. in good condition on 05/05/11.

If you should have any questions or comments regarding this report, please do not hesitate to call.

Sincerely,

Debbie Zufelt
Laboratory Manager

75 Suttle Street, Durango, Colorado 81303
Telephone (970) 247-4220 Fax (970) 247-4227

Green Analytical Laboratories, Inc.
75 Suttle Street
Durango, CO 81303

GAL I.D.: 1105-041-03
Date Received: 05/05/11
Date Reported: 05/20/11
QC Batches:

LT Environmental
2243 Main Ave. #3
Durango, CO 81301
Attention: Sam LaRue

PROJECT NAME: La Plata Natural Springs
PROJECT NUMBER:
SAMPLE I.D.: Darwin Rather Spring 1

Sample Date: 05/05/11
Sample Matrix: Water

Laboratory Report

RESULTS

PARAMETER	METHOD	REPORT LIMIT	RESULT	DIL	UNITS	Maximum Contamination Level
Alkalinity, Total	2320B	10	178	1	mg/L	
Alkalinity, Bicarbonate	2320B	10	178	1	mg/L	
Alkalinity, Carbonate	2320B	10	<10	1	mg/L	
Alkalinity, Hydroxide	2320B	10	<10	1	mg/L	
Calcium	200.7	0.5	52.4	1	mg/L	
Chloride	4500CL	10	13	1	mg/L	
Magnesium	200.7	0.5	17.3	1	mg/L	
Potassium	200.7	0.5	2.1	1	mg/L	
Sodium	200.7	0.5	7.4	1	mg/L	
Sulfate	4500SO4	10	38	1	mg/L	
TDS	2540C	10	255	1	mg/L	

Debbie Zufelt, Laboratory Manager

Green Analytical Laboratories, Inc.
75 Suttle Street
Durango, CO 81303

GAL I.D.: **1105-041-04**
Date Received: 05/05/11
Date Reported: 05/20/11
QC Batches:

LT Environmental
2243 Main Ave. #3
Durango, CO 81301
Attention: Sam LaRue

PROJECT NAME: La Plata Natural Springs
PROJECT NUMBER:
SAMPLE I.D.: Darwin Rather Spring 2

Sample Date: 05/05/11
Sample Matrix: Water

Laboratory Report

RESULTS

PARAMETER	METHOD	REPORT LIMIT	RESULT	DIL	UNITS	Maximum Contamination Level
Alkalinity, Total	2320B	10	120	1	mg/L	
Alkalinity, Bicarbonate	2320B	10	120	1	mg/L	
Alkalinity, Carbonate	2320B	10	<10	1	mg/L	
Alkalinity, Hydroxide	2320B	10	<10	1	mg/L	
Calcium	200.7	0.5	35.4	1	mg/L	
Chloride	4500CL	10	<10	1	mg/L	
Magnesium	200.7	0.5	6.1	1	mg/L	
Potassium	200.7	0.5	0.7	1	mg/L	
Sodium	200.7	0.5	13.0	1	mg/L	
Sulfate	4500SO4	10	28	1	mg/L	
TDS	2540C	10	185	1	mg/L	

Debbie Zufelt, Laboratory Manager

CHAIN OF CUSTODY RECORD

Page ____ of ____

Client: LT Environmental

Contact: Sam LaRue slarue@ltenv.com

Address: 2243 Main Ave. Suite #3
Durango, CO 81301

Phone Number: 918-619-0936

FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO#

Project Name: La Plata/Archuleta Springs

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) Spring Water

Samplers Signature:

FOR GAL USE ONLY
GAL JOB # 1105-041

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Gen Chem Alk, Cl, SO4, TDS	Analyses Required: Metals Ca, Mg, K, Na	Comments
															15.8°C
													>		
3. Darwin Rather Spring	5/5/11	10:04	S.L	7	2	N							X	X	No preservative
4. Darwin Rather Spring 2	5/5/11	10:39	S.L	7	2	N							X	X	No preservative
5.															
6. Please Invoice & report separately per Sam Larue 5-20-11															
7. under name "LaPlata Natural Springs															
8.															
9.															
10.															

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	5/5/11	16:02		5/5/11	1605
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Methane Analysis Report

Four Corners Geoscience,Inc.
P.O. Box 4224
Durango, CO 81302

Client
L T Environmental,Inc.
15 West Mill Street
Bayfield,CO 81122
Mark Yalom
970-884-5215

Project Name: La Plata Spring Sampling
Project Numbe MSO813
Report Date: 10/22/2008
Sampled By: Lindsay Voss

Analysis: Brant Landers

FCGeo #	Sample Date	Sample Time (Hrs)	Site ID-Location	Results: CH4 (mg/L)	Limit (mg/L)	C2
101508-LB4	10/15/2008	14:15	Darwin Rather #1	<0.02	0.02	ND
101508-LB5	10/15/2008	15:00	Darwin Rather #2	<0.02	0.02	ND

Notes:
Samples delivered to FCGeo 12:00 p.m. 10/17/08
Analyses were conducted on SRI gas chromatograph w/ FID within 24 hours of delivery.
Conducted Methane analysis per protocol and method established
by BLM San Juan Resource Area 1993 and USGS method.
Laboratory calibration quality control conducted the same day as sample runs.
Blanks and duplicated runs conducted for each sample set.
No field blanks received at FCGeo Lab
ND- Non Detected

Lynn M. Fechter, B.S. Geology