COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003
T 303.433.9788 / F 303.433.1432

February 18, 2009

Ms. Debbie Baldwin
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

RE: February 3, 2009 Methane Seep Survey and Other Activities
Bondad, Colorado

Dear Ms. Baldwin:

LT Environmental, Inc. (LTE) is pleased to provide the Colorado Oil and Gas Conservation Commission (COGCC) with this letter summarizing the results of the 18th methane seep survey conducted on February 3, 2009 at the Bondad Gas Seep Site (Site) located in Bondad, Colorado. This is the tenth survey since drilling and re-completion activities were conducted at the Bryce 1-X (API #05-067-09087) well between late July 2006 and early August 2006.

BACKGROUND

At the request of the COGCC, LTE conducted an initial methane gas seep survey of the Site in response to an explosion of a residence located at 4034 US Highway 550 (the former Yoakum residence). The results of the initial soil gas survey are presented in the *Methane Seep Survey Report* (March 2005). Additional soil gas surveys were performed on the following dates:

- April 19, 2005;
- June 10, 2005;
- November 1, 2005;
- December 2, 2005;
- January 30, 2006;
- April 6, 2006;
- June 28, 2006;
- August 28, 2006;
- September 21, 2006;
- December 13, 2006;
- April 20, 2007;
- July 20, 2007;
- September 24, 2007;
- January 22, 2008;
- May 13, 2008; and
- October 14, 2008.

All project reports are available on the COGCC website at www.oil-gas.state.co.us.

LTE conducted a geophysical survey of the seep area in April 2005 which identified several areas suspected of containing buried structures with the potential to act as conduits for methane gas. Exploratory excavation activities were conducted in these suspect areas in August 2005 and

the abandoned Bryce 1-X well was uncovered in the main gas seep area. In November, 2005, LTE provided oversight during the excavation, inspection, and initial remediation of the Bryce 1-X well and sandstone bedrock surface. Reports summarizing the geophysical survey, exploratory excavation activities, and the Bryce 1-X well remediation activities are also available on the COGCC website.

SITE DESCRIPTION

The Site is located in Bondad, Colorado, approximately 20 miles south of Durango, Colorado (Figure 1). The Site, located approximately 0.25 miles north of the confluence of the Animas River and the Florida River, consists of several tracts of land covering more than 100 acres. The surrounding land use consists of several residential properties, agricultural properties, a fire station, U.S. Highway 550, the Animas River to the west, and the Florida River to the east. The majority of land in the area is privately owned.

METHANE GAS SEEP SURVEY

Methodology

On February 3, 2009, LTE was on site to conduct the 18th methane gas seep survey of the Site. The scope of the survey was similar to the previous surveys conducted at the Site. During the soil gas survey, tubing was lowered into each borehole and gas measurements were collected directly from the shallow surface soil approximately one foot below ground surface (bgs). LTE measured the concentration of methane, carbon monoxide, hydrogen sulfide, and oxygen at each sampling location.

LTE created a sampling grid to cover the mapping area systematically and to provide a means to delineate the extent of the gas seepage. LTE collected a soil gas measurement at the corners of each square in the grid. Each sample location was recorded using a Trimble GeoXT® global positioning system (GPS) instrument.

LTE measured the methane concentration in the soil around the exterior of the three houses in the mapping area, and near the water wells associated with each of the structures. LTE also measured for methane outside the fire station.

Soil Gas Survey Results

LTE personnel advanced a total of 54 subsurface probes across the project area. Results of this survey indicate that methane gas was not detected at any of the measurement locations. To ensure that equipment was working properly, the gas meter was tested two times during the survey with a known concentration of methane calibration gas. The gas meter was functioning properly at the time of the soil gas survey.

Methane was not detected around the Bandy, Buddhue, or Meschke residences or near the water wells associated with these structures. Methane was not detected outside the fire station. Figure 1 shows all methane survey locations monitored during the February 3, 2009 methane seep survey.

Methane Seep Survey Comparison

LTE prepared a map illustrating the historical areal extent of methane seepage identified during previous gas survey events on a semi-annual basis (Figure 2). Comparison of the February 3, 2009 data to the historical information indicates that methane is no longer present in the shallow soil of the primary seep area, the abandoned Bryce 1-X well.

The table below presents the number of points reporting detectable concentrations of methane, the average methane concentrations, and the estimated size of the primary seep area during each of the soil gas survey events.

Table 1. Primary Seep Area Size Comparison

Survey Date	Number of Survey Points With Methane	Estimated Seep Area (acres)	Average Subsurface Methane Concentration (%)
Feb-05	112	10.3	23
Apr-05	45	10.6	33
Jun-05	37	8.1	21
Nov-05	45	8.8	32
Dec-05	25	5.7	21
Jan-06	31	7.3	10
Apr-06	32	7.7	29
Jun-06	23	5.7	25
Aug-06	13	2.7	2
Sep-06	13	2.4	3
Dec-06	10	2.2	0.63
Apr-07	14	3.1	0.96
Jul-07	1	0.08	1
Sep-07	0	0.0	0
Jan-08	0	0.0	0.0
May-08	0	0.0	0.0
Oct-08	0	0.0	0.0
Feb-09	0	0.0	0.0

LTE has also noted vegetation growth in the vicinity of the Bryce 1-X well since plugging activities were performed. Photos taken at the time initial survey show little to no vegetation present. Recent photos show vegetative growth around the well site. See photos below.

February 2005, view east.

February 3, 2000, view northwest.

CONCLUSIONS AND RECOMMENDATIONS

The results of the February 3, 2009 survey indicate that the methane seepage at the ground surface is no longer present. Continued monitoring of the seepage at the site is recommended to determine if the decrease in seepage is related to seasonal changes or if the gas trapped beneath the sandstone layer at the site has been vented.

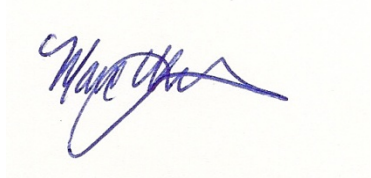
The primary methane seep appears to have been caused by gas migrating from the Fruitland Formation up the well bore of the Bryce 1-X well. The gas moved vertically upward along the well bore and then migrated laterally into permeable layers and aquifers of the Nacimiento

Formation where well casing was absent and/or structurally compromised. It appears that the plugging of the Bryce 1-X well has eliminated the gas seepage at the ground surface. LTE recommends continued monitoring of the methane seep at the Site as a safety precaution for the residents in the area and to monitor the effectiveness of the plugging activities. The next soil gas survey event is scheduled for May 2009.

LTE appreciates the opportunity to provide environmental services to the COGCC. If you have any questions regarding this report or would like additional information, please contact us at (970) 884-5215.

Sincerely,

LT ENVIRONMENTAL, INC.

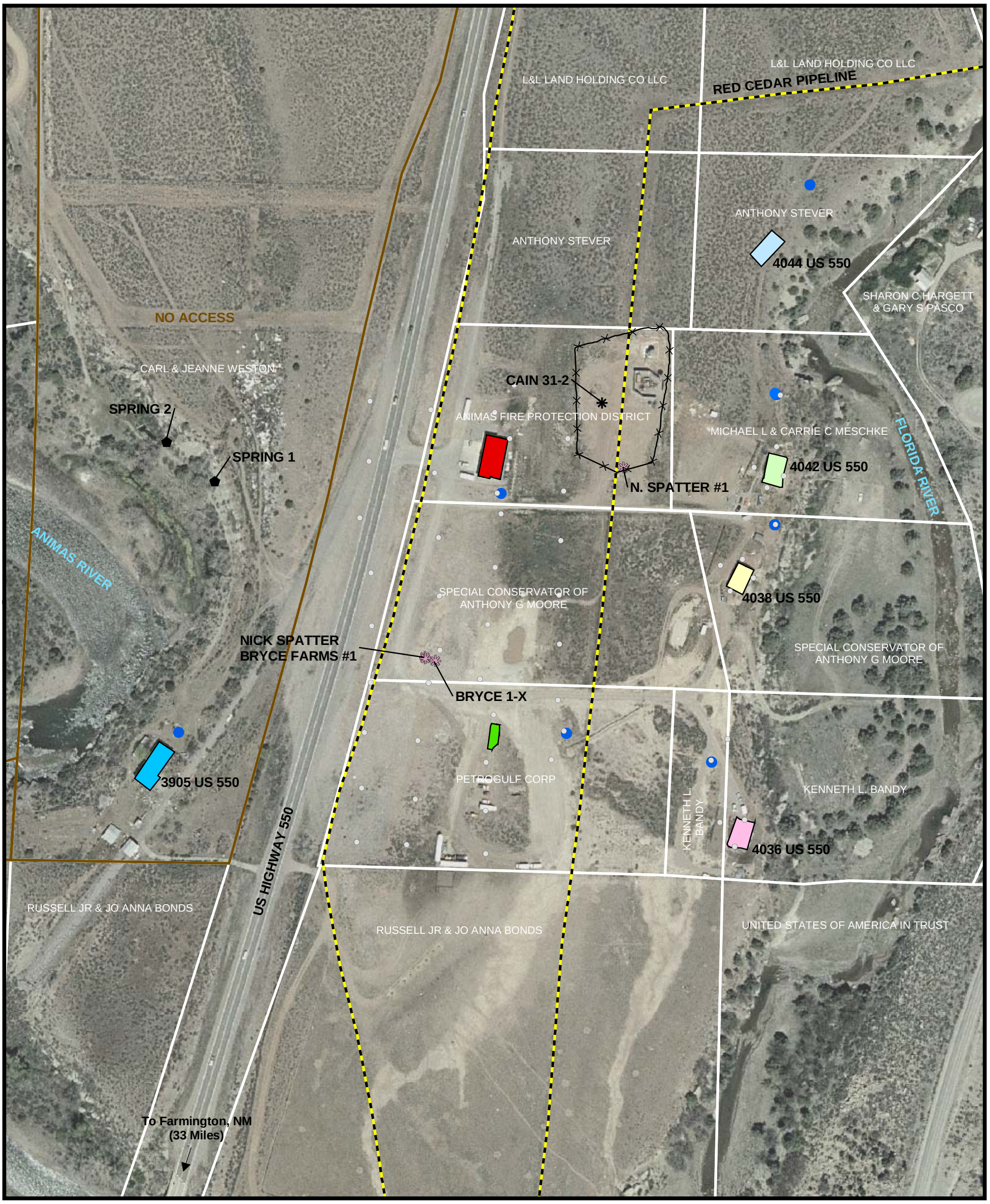


Marc Yalom, P.G., C.Hg.
Senior Hydrogeologist

Travis Laverty
Staff Geologist

Attachments

FIGURES



LEGEND

- Water Supply Well
- Springs
- Gas Well
- Former Oil and Gas Well

Utilities

- Buried Gas Pipeline
- No Access

Structures

- Williams Residence
- Fire Station
- Meschke (former Wilson) Residence
- Buddhue Residence
- Bandy (former Grant) Residence
- Former Yoakum Residence
- Weston Residence

Subsurface Methane Measurements

- 0 - 500 parts per million (ppm)
- 501 ppm - 5%
- 6% - 15%
- 16% - 25%
- 26% - 50%
- 51% - 75%
- 75% - 100%

0 180 360
Feet

N

Landowner and Property Boundaries Labeled in White

FIGURE 1
SUBSURFACE METHANE MEASUREMENTS
FEBRUARY 2009
BONDAD GAS SEEP
BONDAD, CO
COLORADO OIL AND GAS CONSERVATION COMMISSION

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L&L LAND HOLDING CO LLC

L&L LAND HOLDING CO LLC

ANTHONY STEVER

ANTHONY STEVER

4044 US 550

SHARON C HARGETT & GARY S PASCO

NO ACCESS

CARL & JEANNE WESTON

SPRING 2

SPRING 1

CAIN 31-2

ANIMAS FIRE PROTECTION DISTRICT

MICHAEL L & CARRIE C MESCHKE

4042 US 550

N. SPATTER #1

FLORIDA RIVER

ANIMAS RIVER

SPECIAL CONSERVATOR OF ANTHONY G MOORE

4038 US 550

SPECIAL CONSERVATOR OF ANTHONY G MOORE

NICK SPATTER BRYCE FARMS #1

BRYCE 1-X

3905 US 550

PETROGULF CORP

KENNETH L BANDY

KENNETH L BANDY

4036 US 550

US HIGHWAY 550

RUSSELL JR & JO ANNA BONDS

RUSSELL JR & JO ANNA BONDS

UNITED STATES OF AMERICA IN TRUST

To Farmington, NM
(33 Miles)

LEGEND

Extent of Methane Seepage

- February 2009 - No Seep Detected
- October 2008 - No Seep Detected
- May 2008 - No Seep Detected
- January 2008 - No Seep Detected
- September 2007 - No Seep Detected
- July 2007
- April 2007
- September 2006
- April 2006
- November 2005
- April 2005

Landowner and Property Boundaries Labeled in White

- No Access

Structures

- Williams Residence
- Fire Station
- Meschke (former Wilson) Residence
- Buddhue Residence
- Bandy (former Grant) Residence
- Former Yoakum Residence
- Weston Residence

- Water Supply Well
- Springs
- Gas Well
- Former Oil and Gas Well

0 180 360
Feet

N

FIGURE 2
HISTORICAL SUBSURFACE METHANE MEASUREMENTS
APRIL 2005 - FEBRUARY 2009
BONDAD GAS SEEP
BONDAD, CO
COLORADO OIL AND GAS CONSERVATION COMMISSION

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