

May 21, 2009

Nelly Morgan
26731 WCR 18
Keensburg, Colorado 80643

RE: Water Quality Analytical Results for Your Water Well (Permit #251847)
Section 21 – Township 2 North – Range 64 West
Weld County, Colorado; Complaint No. 200210835

Dear Ms. Morgan:

On March 31, 2009 LT Environmental, Inc. (LTE), under direction of Noble Energy, sampled your water well and submitted these samples for laboratory analysis. The purpose of this water sampling was to determine if natural gas drilling and production activities in your area might have impacted your well water. The Colorado Oil & Gas Conservation Commission (COGCC) has received the final set of water quality sample results for your water well. These samples were submitted to Evergreen Analytical Laboratory (Evergreen), in Wheat Ridge, Colorado for analysis of inorganic chemical constituents, organic compounds associated with petroleum hydrocarbons, methane gas, and pH. A copy of the Evergreen laboratory analytical report is enclosed. Additionally, a sample of gas from your water well was also collected for compositional analysis and submitted to Isotech Laboratories, Inc. (Isotech) in Champaign, Illinois. A copy of the gas data is also included.

The Water Quality Control Commission (WQCC) of the Colorado Department of Public Health and Environment (CDPHE) has established drinking water standards for the protection of human health. The analytical results from the water samples from your well have been compared to applicable ground water and/or drinking water standards and are summarized below. Please keep in mind that these water standards were established for public drinking water supplies. Often people use and consume ground water from private wells that can exceed these standards.

COMPARISON OF INORGANIC ANALYTICAL RESULTS TO STANDARDS

- **Total Dissolved Solids (TDS):** CDPHE has established a TDS standard for human drinking water of 500 milligrams per liter (mg/l). The standard is called the secondary maximum contaminant level (SMCL) and is based on the aesthetic quality of the water (such as taste and odor) and is intended as a guideline for public water supply systems and is not an enforceable standard. Although CDPHE does not have an agricultural standard for TDS, other agencies recommend concentrations below 2,000 mg/l for irrigation, and below 5,000 mg/l for most livestock watering. TDS concentrations are related to the presence of naturally occurring elements and chemical compounds such as chloride, sodium, potassium, calcium, magnesium,

and sulfate.

TDS was detected in the water sample from your well at concentration of 760 mg/l, which is above the CDPHE SMCL, less than the recommended maximum concentration for irrigation, and less than the recommended maximum concentration for most livestock watering.

- **Sodium (Na):** Although CDPHE does not have a standard for sodium, people on salt restricted diets should be aware of the Na concentration in the water they drink. A concentration of drinking water with a concentration of sodium less than 20 mg/l is recommended by some for people on salt restricted diets or for people suffering from hypertension or heart disease. Sodium occurs naturally in the ground water in many areas at concentrations that exceed the recommended level.

Sodium was detected in the water sample from your well at a concentration of 300 mg/l, which is greater than the recommended level for people of salt restricted diets.

- **Fluoride (F):** CDPHE has established a fluoride (F) standard for human drinking water is 4.0 mg/l. Where fluoride concentrations are in the range of 0.7 mg/l to 1.2 mg/l, health benefits such as reduced dental decay have been observed. Consumption of fluoride at concentrations of greater than 2.0 mg/l can result in mottling of teeth. Consumption of fluoride at concentrations greater than 4.0 mg/l can increase the risk of skeletal fluorosis or other adverse health effects.

Fluoride was detected in the water sample from your water well at a concentration of 5.2 mg/l, which is greater than the maximum human health drinking water standard.

Chloride (Cl): The CDPHE chloride standard (SMCL) for drinking water is 250 mg/l. Chloride concentrations in excess of 250 mg/l usually produce a noticeable taste in drinking water.

Chloride was detected in the water sample from your well at a concentration of 30.1 mg/l, which is less than the CDPHE SMCL.

- **Sulfate (SO₄):** The CDPHE sulfate standard for drinking water is 250 mg/l (SMCL). Although CDPHE does not have an agricultural standard for sulfate, other agencies recommend a concentration below 1,500 mg/l for livestock watering. Waters containing high concentrations of sulfate, typically caused by the leaching of natural deposits of magnesium sulfate (Epsom salts) or sodium sulfate (Glauber's salt), may be undesirable because of their laxative effects. Sulfate occurs naturally in the ground water in many areas in Colorado at concentrations that exceed the drinking water standard.

Sulfate was detected in the water sample from your well at a concentration of 4 mg/l, which is less than the CDPHE SMCL.

- **Total Nitrate (NO₃) + Nitrite (NO₂) as Nitrogen (N)**: The CDPHE total nitrate (NO₃) + nitrite (NO₂) as nitrogen (N) for standard for human drinking water is 10 mg/l. Nitrate and nitrite are common contaminants in ground water from agricultural sources, such as fertilizer and animal, including human, wastes. They are known to cause infant cyanosis or “blue baby disease” in humans and, at concentrations greater than 100 mg/l as nitrogen (N), may be dangerous to livestock. High concentrations of nitrate and nitrite in ground water are known to occur in agricultural areas in Colorado.

Total nitrate/nitrite, as N was not detected in the water sample from your well.

- **Iron (Fe)**: The CDPHE standard for human drinking water for iron is 0.3 mg/l (SMCL). Small amounts of iron are common in ground water. Iron may produce a brownish-red color in laundered clothing, can leave reddish stains on fixtures, and impart a metallic taste to beverages and food made with it. After a period of time iron deposits can build up in pressure tanks, water heaters, and pipelines, reducing the effective flow rate and efficiency of the water supply.

Iron was not detected in the water sample from your well.

- **Selenium (Se)**: The CDPHE selenium standard for human drinking water is 0.05 mg/l and the agricultural standard is 0.02 mg/l. Excessive selenium (Se) (concentrations greater than 0.05 mg/l) can cause loss of hair and/or fingernails as well as adverse effects on the central nervous system. Selenium (Se) occurs naturally in the ground water in many areas of Colorado at concentrations that exceed the drinking water standard.

Selenium was not detected in the sample from your water well.

- Calcium (Ca), Potassium (K), and Magnesium (Mg) were also tested for in your water. There are no standards from CDPHE for these parameters. In addition, the COGCC also collected samples for metals and the Table 1 (attached) presents the analytical laboratory results. Please note that Primary standard (P) is the CDPHE Human Health Standard and the Secondary standard (S) is the CDPHE secondary maximum contaminant level (SMCL).

Table 1
MORGAN WATER WELL

METAL/INORGANIC	March 31, 2009 Sample Concentration (in Milligrams per liter [mg/l])	CDPHE Water Quality Standard (P – Primary S-Secondary) (in Milligrams per liter [mg/l])
Arsenic (As)	ND	0.05 (P)
Barium (Ba)	0.057	2.0 (P)
Calcium (Ca)	3	NS
Cadmium (Cd)	ND	0.005 (P)
Chromium (Cr)	ND	0.1 (P)
Potassium (K)	1.8	NS
Manganese (Mn)	0.0058	0.05 (S)
Magnesium (Mg)	0.81	NS
Lead (Pb)	ND	0.05 (P)
pH	8.55	NS

NS – no standard
ND – not detected in the sample

ORGANIC COMPOUNDS ASSOCIATED WITH PETROLEUM HYDROCARBONS

- Benzene: CDPHE's basic ground water standard for benzene is 5 micrograms per liter ($\mu\text{g/l}$). **Benzene was not detected in the sample from your water well.**
- Toluene: CDPHE's basic ground water standard for toluene is 1,000 $\mu\text{g/l}$. **Toluene was not detected in the sample from your water well.**
- Ethylbenzene: CDPHE's basic ground water standard for ethylbenzene is 680 $\mu\text{g/l}$. **Ethylbenzene was not detected in the sample from your water well.**
- Total Xylenes (sum of m,p, and o-xylene): CDPHE's basic ground water standard for total xylenes is 10,000 $\mu\text{g/l}$. **Total xylenes were not detected in the sample from your water well**

METHANE GAS CONCENTRATION

- **Methane was detected in the sample from your water well at a concentration of 14 mg/l.**

Methane gas alone is physiologically inert and non-toxic to humans. Normal breath exhalation contains 1 to 99 ppm of methane (parts per million [ppm] is the same units as mg/l). The presence

of methane in drinking water does not present a known health hazard to humans or other animals via ingestion; however, methane in domestic water supplies can be associated with undesirable and potentially serious side effects. Methane gas dissolved in water “exsolves” when exposed to the atmosphere and dissipates rapidly because it is lighter than air. This is often responsible for the “fizzing” observed in water wells that may contain methane gas. If the methane occurs at a high enough concentration and if it is allowed to accumulate in a confined space, such as a well pit, crawl space, closet, etc., an explosion hazard can be established. In addition, if methane concentrations in well water are high, then pockets of free gas form within the water and cause the well pump to cavitate and no longer bring water to the surface.

Methane gas is common in water wells in Colorado. It occurs naturally and the source of the methane is commonly from one or more of the sources listed below.

1. Methane is commonly found as a gas in coal or black shale seams in the subsurface.
2. Methane is commonly found as a byproduct of the decay of organic matter and the presence of bacteria in water wells can provide the conditions favorable for the production of methane either from the activity or decay of bacteria.

As the result of extensive testing for methane gas in water wells throughout Colorado, concentrations of methane gas below 1 mg/l are considered harmless, with concern for possible hazards from the methane increasing at concentration levels in well water at 7 mg/l and higher. You should be aware that the methane gas in your water well is at a high enough concentration that precautions should be taken to adequately vent your water system to avoid potential gas accumulations. I have included some information on the mitigation of nuisance methane gas in water wells.

GAS COMPOSITION

The gas produced from the oil/gas wells around your home is “thermogenic” methane. Thermogenic methane gas is formed by the thermal breakdown of organic material in rocks resulting from high temperatures created by deep burial. With the methane are other higher carbon number compounds (“heaver”) such as propane (C3), iso-butane (iC4), normal butane (nC4), iso-pentane (iC5), normal pentane (nC5), and hexane (C6). Biogenic methane gas occurs in most near-surface environments and is a principal product of the decomposition of buried organic material. In Weld County many of the coal zones in the Laramie/Fox Hills aquifer, in which your water well is completed, contain biogenic methane gas.

Laboratory results of the gas sample collected from your water well show that methane (71.20 percent) and ethane (0.0443 percent) were detected along with nitrogen (26.54 percent), oxygen (1.51 percent), carbon dioxide (0.21 percent), argon (0.406 percent), and helium (0.089 percent). The nitrogen, oxygen, argon, carbon dioxide, and helium are components of air and the presence of methane (C1) with ethane (C2) is typical of the naturally occurring biogenic gas in the Laramie/Fox Hills aquifer. No “heaver” carbon compounds (those C3 through C6 gasses discussed above) are present that would indicate the presence of thermogenic gas.

Isotopic Analysis of Methane

- The deuterium/hydrogen isotope ratio for the methane in the water sample from your water well is -276.6 parts per mil (‰).
- The carbon-13/carbon-12 isotope ratio for the methane in the water sample from your water well is -73.10 ‰.

Isotopic Cross-Plot

I have included a cross-plot of the stable methane isotopes for your water well sample to help discuss the sample results for your well. On the cross-plot you will notice the area near the top right corner as defined a "Thermogenic Gas". This is the area of the cross-plot that the natural gas produced by the gas wells in the Denver Basin and where the production gas sample plot. Your well plots in the area to the left defined as "Sub-surface/ Near Surface Microbial Gas" which is methane gas of a biogenic origin.

CONCLUSION

Because your water exceeded the CDPHE drinking water (SMCL) standard for total dissolved solids (TDS), and the health advisory for sodium (Na), and because you or your livestock and/or pets drink your water, you may wish to discuss the possible health effects of continued consumption with your physician and/or veterinarian. There are no indications of any oil & gas related impacts to your water well. The methane gas in your water well is from natural biological activity (biogenic gas). I have included some information on the mitigation of nuisance methane gas in water wells.

The Colorado Oil & Gas Conservation Commission has participated in the publication of a general information pamphlet on water supply wells. Although the pamphlet was written for water well owners in Southwest Colorado, much of the information presented is applicable to any water well within the state. I have enclosed a copy of this publication.

If you have any questions or would like to discuss these matters further, please contact me at the COGCC in Denver via e-mail (robert.chesson@state.co.us) or by phone at 303-894-2100, extension 5112.

Respectfully,



Robert H. Chesson, C.P.G., P.G.
Environmental Protection Specialist

cc: Dave Neslin – COGCC
Debbie Baldwin – COGCC
Mikel Cox – Noble Energy Paul Schneider – Anadarko/KerrMcGee

Lab #: 159672 Job #: 11238
 Sample Name: Nelly Morgan Co. Lab#:
 Company: LT Environmental
 Date Sampled: 3/31/2009
 Container: Dissolved Gas Bottle
 Field/Site Name: Rule 318A
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 4/02/2009 Date Reported: 5/01/2009

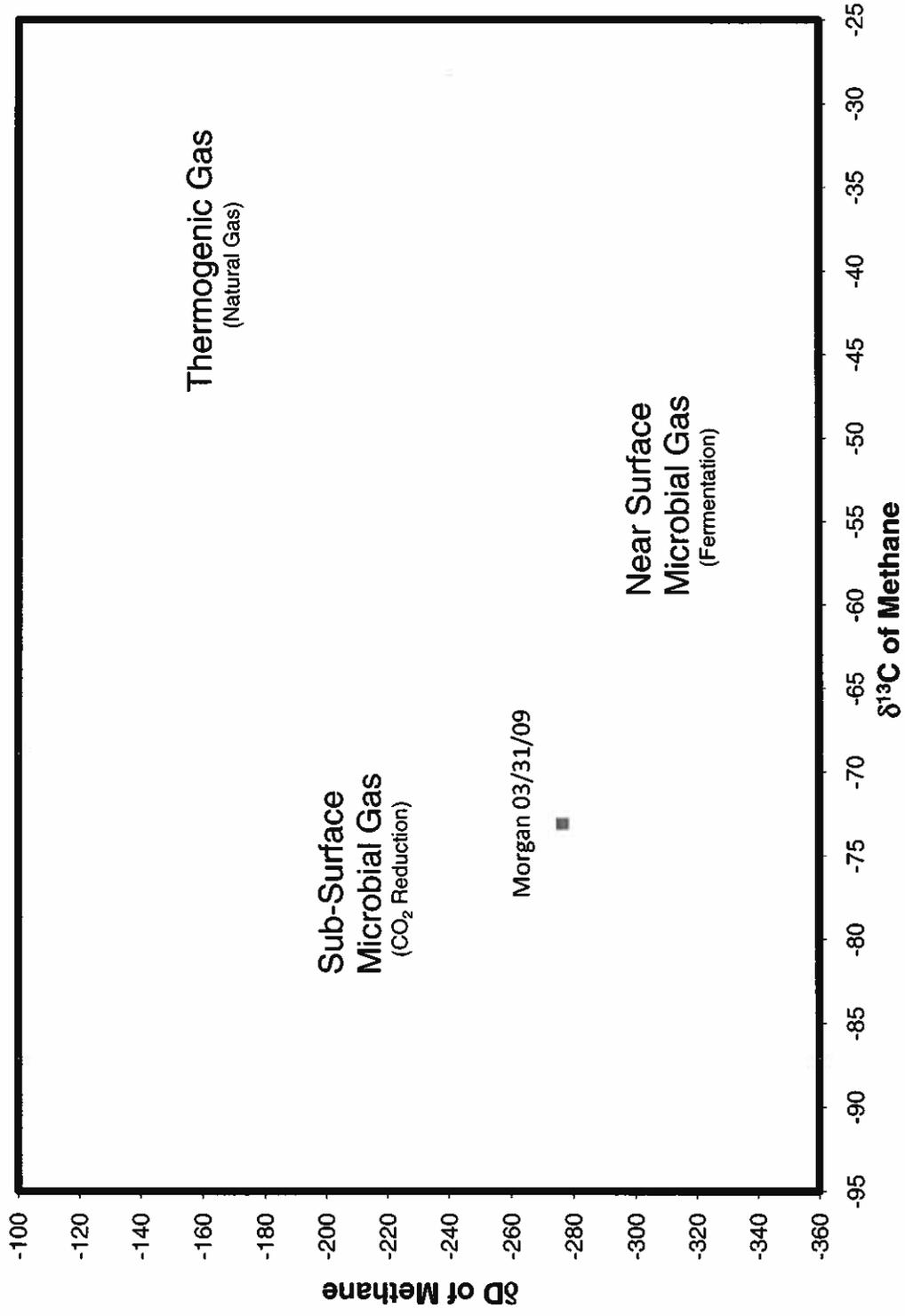
Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	0.0890			
Hydrogen -----	nd			
Argon -----	0.406			
Oxygen -----	1.51			
Nitrogen -----	26.54			
Carbon Dioxide -----	0.21			
Methane -----	71.20	-73.10	-276.6	
Ethane -----	0.0443	-47.56		
Ethylene -----	nd			
Propane -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 722
 Specific gravity, calculated: 0.677

Remarks: Report revised on 5/21/09 to include carbon isotope data for ethane, which was generated using online GC-C-IRMS method.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%

Typical Compositional Ranges of Methane - Morgan Water Well



WORK ORDER Summary**Evergreen Analytical, Inc.****09-2122**

Rpt To: Brian Dodek

Email To: bdodek@lenv.com

4/3/2009 10:17:18 AM

L.T Environmental

4600 W 60th Ave

Arvada, CO 80003

(303) 433-9788

Client Project ID: Ellsworth Sampling

QC Level: LEVEL 1

Comments:

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Test Code	Test Name	Hold MS	Date Due	Hold Time
09-2122-01A	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	8021_W *	8021: BTEX, MBE	<input type="checkbox"/>	4/03/09	4/14/09
09-2122-01B	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	MEEP_W *	RSK175M: Methane	<input type="checkbox"/>	4/03/09	4/14/09
09-2122-01C	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	6010_D *	6010: Dissolved Metals	<input type="checkbox"/>	4/14/09	9/27/09
09-2122-01C	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	6020_D *	6020: Dissolved Metals	<input type="checkbox"/>	4/14/09	9/27/09
09-2122-01D	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	CARB/BICARB_W	Carbonate and Bicarbonate	<input type="checkbox"/>	4/14/09	4/14/09
09-2122-01D	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	COND_W	Specific Conductance @ 25°C	<input type="checkbox"/>	4/14/09	4/28/09
09-2122-01D	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	F_W	Fluoride	<input type="checkbox"/>	4/14/09	4/28/09
09-2122-01D	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	PH_DW	E150.1 pH	<input type="checkbox"/>	4/14/09	4/01/09
09-2122-01D	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	TDS_W	Total Dissolved Solids (TDS)	<input type="checkbox"/>	4/14/09	4/07/09
09-2122-01E	Nelly Morgan	Groundwater	3/31/09 1040	3/31/09	ANIONS_NonDW *	300.0: Anions by IC	<input type="checkbox"/>	4/14/09	4/02/09

Definitions: * - Test Code has a Select List

Evergreen Analytical, Inc.

Date: 10-Apr-09

Lab Order: 09-2122

Client Project ID Ellsworth Sampling

CASE NARRATIVE

SAMPLE RECEIVING

Custody seals were not present.

The temperature of the sample(s) upon arrival was 3.5°C.

Sample(s) were received in good condition, in the proper container, and within holding times.

VOC sample(s) were marked as preserved on the bottle labels.

VOC sample(s) were received with no headspace present. NJO

QUALITY ASSURANCE (QA)

Analyses performed on samples in this work order by EAL meet the requirements of the EAL Quality Assurance Program unless otherwise explained. Analyses of RCRA samples meet the requirements of NELAC and Utah Rule R444-14 unless otherwise explained. TP

CLIENT SERVICES

The samples were logged in per the quotation. Per Brian Dodek, all metals should be on a dissolved basis and ran by the respective methods on the quote. There are no other anomalies to report. AE

GENERAL CHEMISTRY

Due to high Chloride levels requiring dilutions to separate the Nitrite peak, the detection limit for Nitrite has been raised for the sample. The flagged Fluoride result only applies to drinking waters that exceed the MCL. There are no other anomalies to report. BNP/JK/MM

METALS ANALYSIS

There are no anomalies to report. MB

GAS CHROMATOGRAPHY

Method 8021_W: There are no anomalies to report. JCC

Method RSK-175: There are no anomalies to report. VM

Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862
(303) 425-6021

Client Sample ID: Nelly Morgan
Client Project ID: Ellsworth Sampling
Date Collected: 3/31/2009
Date Received: 3/31/2009

Lab Work Order: 09-2122
Lab Sample ID: 09-2122-01A
Sample Matrix: Groundwater

AROMATIC VOLATILE ORGANICS

Method: SW8021B

Prep Method: SW5030B

Date Prepared: 4/1/2009

Lab File ID: TVB40401\012R

Dilution Factor: 1

Date Analyzed: 4/1/2009

Method Blank: MB4040109

Analytes	CAS Number	Result	LQL	Units
Methyl-t-butyl ether	1634-04-4	U	5.0	µg/L
Benzene	71-43-2	U	1.0	µg/L
Toluene	108-88-3	U	2.0	µg/L
Ethylbenzene	100-41-4	U	2.0	µg/L
m,p-Xylene	1330-20-7	U	2.0	µg/L
o-Xylene	95-47-6	U	2.0	µg/L
Surr: 1,2,4-Trichlorobenzene (S)	120-82-1	74	QC Limits: 60-140	%REC



Analyst



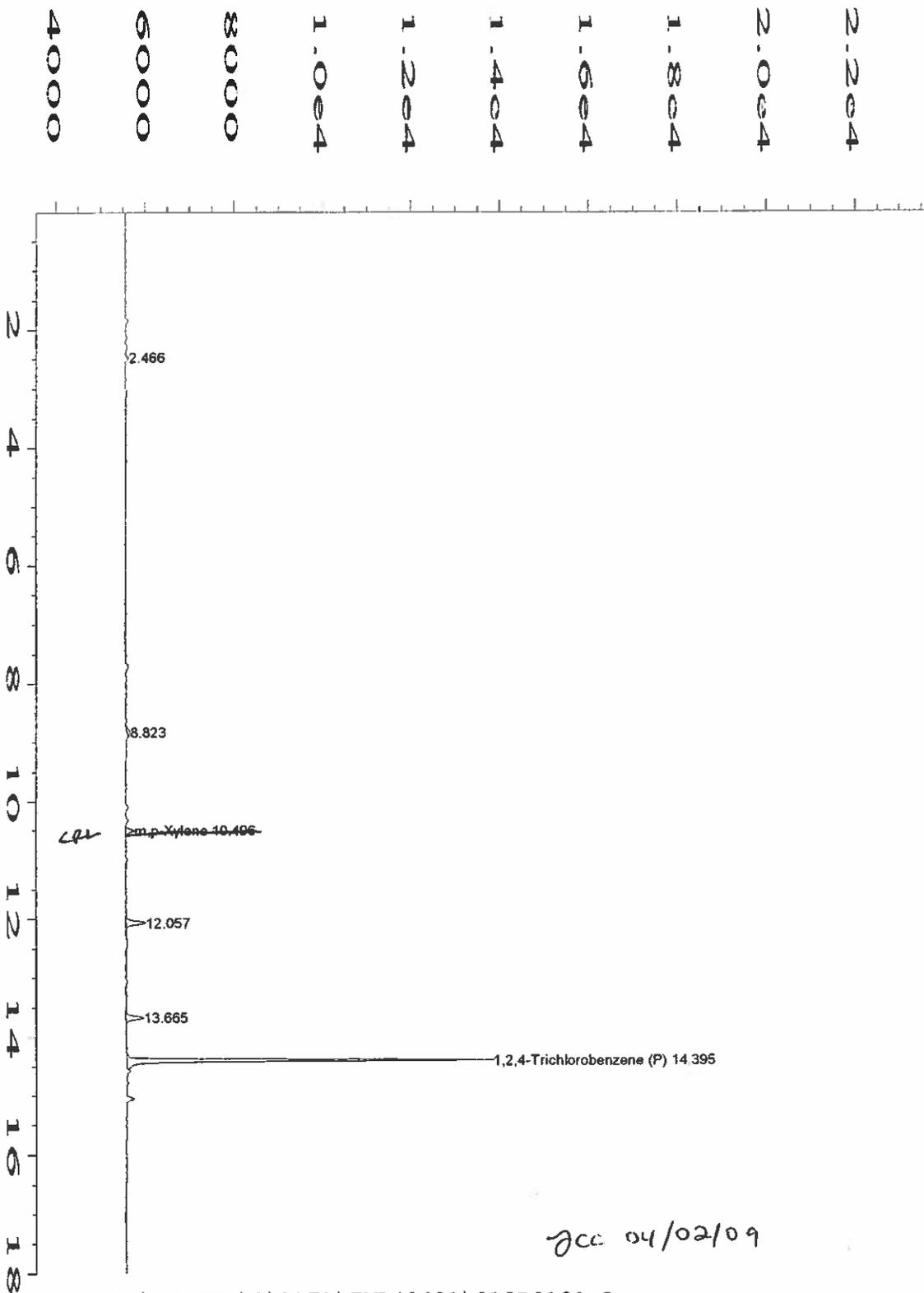
Approved

Notes: Total Xylenes consist of three isomers, two of which co-elute. The Xylene RI is for a single peak. Confirmation analysis was not performed.

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
E - Extrapolated value. Value exceeds calibration range
H - Sample analysis exceeded analytical holding time
J - Indicates an estimated value when the compound is detected, but is below the LQL
S - Spike Recovery outside accepted limits
U - Compound analyzed for but not detected
X - See case narrative
* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 4/2/2009



Data File Name	: C:\HPCHEM\1\DATA\TVB40401\012R0101.D	Page Number	: 1
Operator	: Jennifer Chapin	Vial Number	: 12
Instrument	: TVHBTEX4	Injection Number	: 1
Sample Name	: 09-2122-01A	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TS40331.MTH
Acquired on	: 01 Apr 09 05:17 PM	Analysis Method	: BS40327.MTH
Report Created on:	01 Apr 09 05:36 PM	Sample Amount	: 0
Last Recalib on	: 30 MAR 09 10:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: SAMP		
	DF=1		

Evergreen Analytical, Inc.
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862
(303) 425-6021

Client Project ID Ellsworth Sampling

Lab Order: 09-2122
Units: mg/L

RSKSOP-175M Headspace

Method: RSKSOP175M

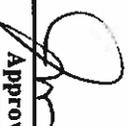
Methane

Prep Method: RSKSOP175M

Lab ID	Client ID	Matrix	Date Received	Collection Date	Date Prepared	Date Analyzed	Results	LQL	DF
09-2122-01B	Nelly Morgan	Groundwater	3/31/09	3/31/09	4/2/09	4/2/09	14	0.040	50

Comments:

VM
Analyst


Approved

Qualifiers: J - Indicates an estimated value when the compound is detected, but is below the LQL

H - Sample analysis exceeded analytical holding time

U - Compound analyzed for but not detected

X - See case narrative

* - Value exceeds Maximum Contamination Level(MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: DF - Dilution Factor

LQL - Lower Quantitation Limit

Quantitation Report (Not Reviewed)

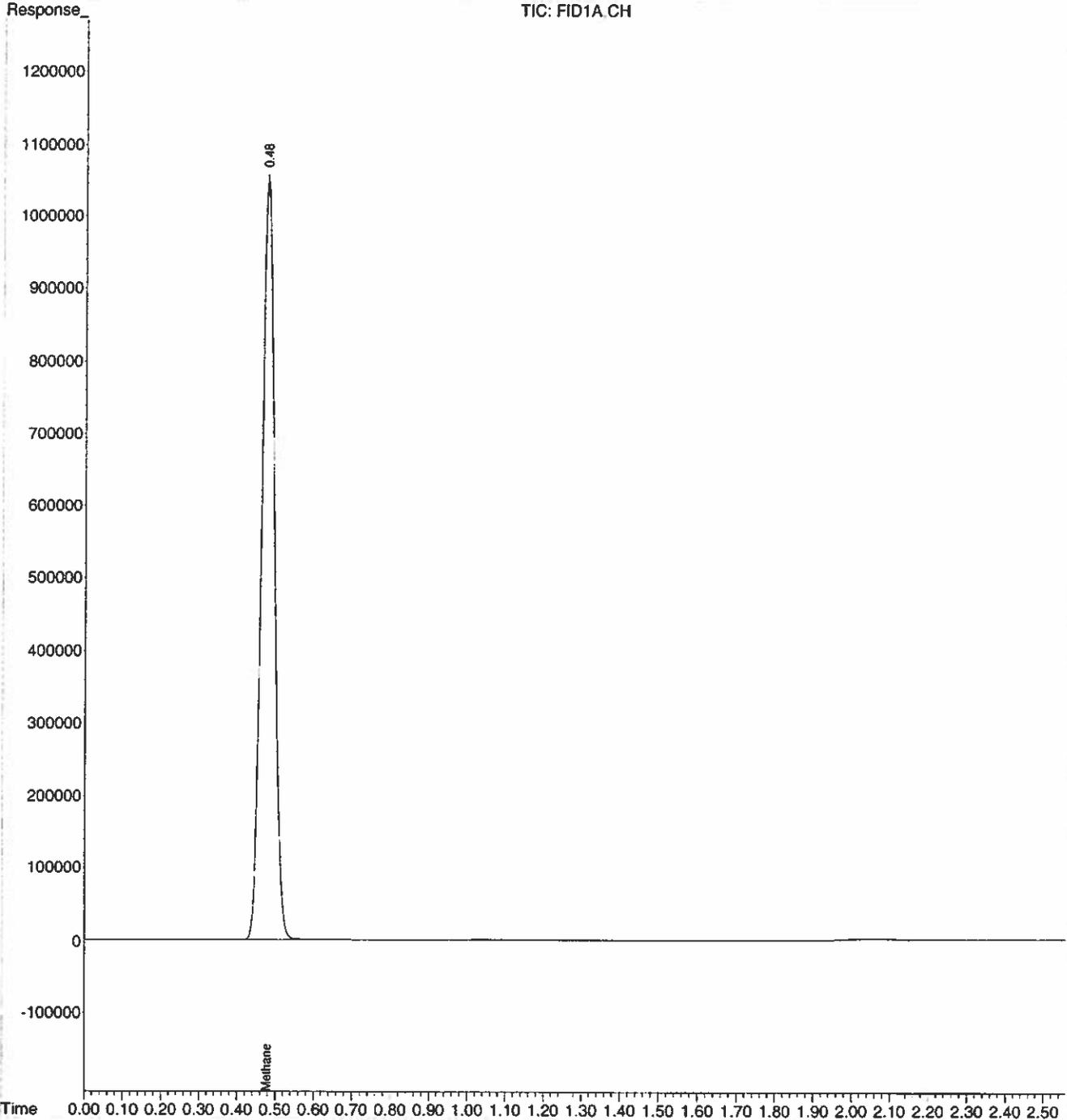
007

Data File : F:\DATA\040209\FB023.D
 Acq On : 2 Apr 2009 12:46 pm
 Sample : 09-2122-01B
 Misc : SAMP, MEEP_W, 50, 10uL
 IntFile : autoint1.e
 Quant Time: Apr 2 13:53 2009 Quant Results File: GAS0324.RES

Vial: 23
 Operator: Virginia Meyer
 Inst : FID4
 Multiplr: 1.00

Quant Method : C:\MSDCHEM\2\METHODS\GAS0324.M (Chemstation Integrator)
 Title : RSK 175 Methane, Ethene, Ethane, and Propane
 Last Update : Tue Mar 24 10:10:57 2009
 Response via : Multiple Level Calibration
 DataAcq Meth : GAS.M

Volume Inj. : 100ul
 Signal Phase : Porapak Q 80/100
 Signal Info : 1/8 in



Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862
(303) 425-6021

Client Sample ID: Nelly Morgan
Client Project ID: Ellsworth Sampling
Date Collected: 3/31/09
Date Received: 3/31/09

Lab Work Order: 09-2122
Lab Sample ID: 09-2122-01
Sample Matrix: Groundwater

DISSOLVED METALS

Method: SW6010B

Prep Method: E200.7/SW3010A

Date Prepared: 4/2/09
Date Analyzed: 4/3/09

Lab File ID: 040109PM
Method Blank: MB-18656

Dilution Factor: 1
Lab Fraction ID: 09-2122-01C

Analytes	CAS Number	Result	LQL	Units
Barium	7440-39-3	0.057	0.0010	mg/L
Calcium	7440-70-2	3.0	0.39	mg/L
Chromium	7440-47-3	U	0.010	mg/L
Iron	7439-89-6	U	0.070	mg/L
Magnesium	7439-95-4	0.81	0.15	mg/L
Manganese	7439-96-5	0.0058	0.0050	mg/L
Potassium	7440-09-7	1.8	0.34	mg/L
Sodium	7440-23-5	300	0.40	mg/L

DISSOLVED METALS

Method: SW6020

Prep Method: SW6020

Date Prepared: 4/2/09
Date Analyzed: 4/5/09

Lab File ID: 090405A.B\059SMPL.D
Method Blank: MB-18653

Dilution Factor: 1
Lab Fraction ID: 09-2122-01C

Analytes	CAS Number	Result	LQL	Units
Arsenic	7440-38-2	U	0.0020	mg/L
Cadmium	7440-43-9	U	0.0010	mg/L
Lead	7439-92-1	U	0.0050	mg/L
Selenium	7782-49-2	U	0.0050	mg/L



Analyst



Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
E - Extrapolated value. Value exceeds calibration range
H - Sample analysis exceeded analytical holding time
J - Indicates an estimated value when the compound is detected, but is below the LQL
S - Spike Recovery outside accepted limits
U - Compound analyzed for but not detected
X - See case narrative
* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
Surr - Surrogate

Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862
(303) 425-6021

Client Sample ID Nelly Morgan
Client Project ID Ellsworth Sampling
Date Collected: 3/31/09 1040
Date Received: 3/31/09

Lab Work Order 09-2122
Lab Sample ID: 09-2122-01
Sample Matrix: Groundwater

CARBONATE AND BICARBONATE

Method: SM2320 B

Prep Method:

Date Prepared: 4/2/09
Date Analyzed: 4/2/09

Lab File ID: 66
Method Blank: MBLK 04/02/09

Dilution Factor: 1
Lab Fraction ID: 09-2122-01D

Analytes	CAS Number	Result	LQL	Units
Bicarbonate		687	5.0	mg/L
Carbonate		13.7	5.0	mg/L

SPECIFIC CONDUCTANCE @ 25°C

Method: SM2510 B

Prep Method:

Date Prepared: 4/3/09
Date Analyzed: 4/3/09

Lab File ID: 69

Dilution Factor: 1
Lab Fraction ID: 09-2122-01D

Analytes	CAS Number	Result	LQL	Units
Specific Conductance		1190	1.00	µmhos/cm

FLUORIDE

Method: SM 4500-F C

Prep Method:

Date Prepared: 4/7/09
Date Analyzed: 4/7/09

Lab File ID: 7
Method Blank: MBLK 4/7/09

Dilution Factor: 1
Lab Fraction ID: 09-2122-01D

Analytes	CAS Number	Result	LQL	Units
Fluoride	16984-48-8	5.2 *	0.20	mg/L

E150.1 PH

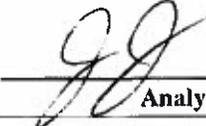
Method: E150.1

Prep Method:

Date Prepared: 4/1/09
Date Analyzed: 4/1/09 0805

Dilution Factor: 1
Lab Fraction ID: 09-2122-01D

Analytes	CAS Number	Result	LQL	Units
pH		8.55	1.00	pH Units



Analyst



Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
E - Extrapolated value Value exceeds calibration range
H - Sample analysis exceeded analytical holding time
J - Indicates an estimated value when the compound is detected, but is below the LQL
S - Spike Recovery outside accepted limits
U - Compound analyzed for but not detected
X - See case narrative
* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 4/8/2009

Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862
(303) 425-6021

Client Sample ID Nelly Morgan
Client Project ID Ellsworth Sampling
Date Collected: 3/31/09 1040
Date Received: 3/31/09

Lab Work Order 09-2122
Lab Sample ID: 09-2122-01
Sample Matrix: Groundwater

TOTAL DISSOLVED SOLIDS (TDS)

Method: SM 2540C

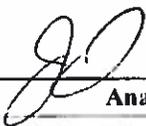
Prep Method:

Date Prepared: 4/2/09
Date Analyzed: 4/2/09

Lab File ID: 6
Method Blank: MBLK 040209

Dilution Factor: 1
Lab Fraction ID: 09-2122-01D

Analytes	CAS Number	Result	LQL	Units
Total Dissolved Solids		760	10.0	mg/L



Analyst



Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
E - Extrapolated value. Value exceeds calibration range
H - Sample analysis exceeded analytical holding time
J - Indicates an estimated value when the compound is detected, but is below the LQL
S - Spike Recovery outside accepted limits
U - Compound analyzed for but not detected
X - See case narrative
* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected. LQL exceeds MCL.

Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
Surr - Surrogate

Evergreen Analytical, Inc.
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862
(303) 425-6021

Client Sample ID: Nelly Morgan
Client Project ID: Ellsworth Sampling
Date Collected: 3/31/09 1040
Date Received: 3/31/09

Lab Work Order: 09-2122
Lab Sample ID: 09-2122-01
Sample Matrix: Groundwater

ANIONS BY IC

Method: E300.0

Prep Method:

Date Prepared: 4/1/09
Date Analyzed: 4/1/09 1044

Lab File ID: 10
Method Blank: MB 04/01/09

Dilution Factor: 1
Lab Fraction ID: 09-2122-01E

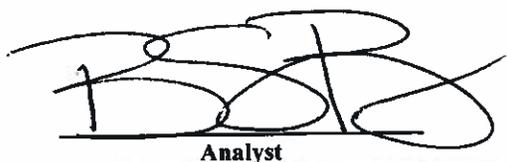
Analytes	CAS Number	Result	LQL	Units
Bromide	7647-15-6	U	0.20	mg/L
Nitrate-N		U	0.045	mg/L
Sulfate	7778-80-2	4.0	0.50	mg/L

Date Prepared: 4/1/09
Date Analyzed: 4/1/09 1243

Lab File ID: 15
Method Blank: MB 04/01/09

Dilution Factor: 5
Lab Fraction ID: 09-2122-01E

Analytes	CAS Number	Result	LQL	Units
Chloride	7647-14-5	30.1	2.5	mg/L
Nitrite-N		U	0.31	mg/L



Analyst



Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
E - Extrapolated value Value exceeds calibration range
H - Sample analysis exceeded analytical holding time
J - Indicates an estimated value when the compound is detected, but is below the LQL
S - Spike Recovery outside accepted limits
U - Compound analyzed for but not detected
X - See case narrative
* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 4/3/2009