

ANALYTICAL REPORT

Petroglyph Operating Co., Inc.

Raton Basin (Colorado)

Lot #: D8D080299

Tom Melland

Petroglyph
P.O. Box 979
124 N Main St
LaVeta, CO 81055

TestAmerica Laboratories, Inc



Danielle Fougere
Project Manager

April 14, 2008

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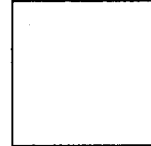
Standard Deliverables

Report Contents

Total Number of Pages

Standard Deliverables

*(The **Report Cover** page is considered an integral part of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.)*



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Case Narrative

Lot #: D8D080299

The following report contains the analytical results for one water sample submitted to TestAmerica Laboratories, Inc's Denver Laboratory by Petroglyph Operating Company. The samples were received on April 08, 2008 according to documented sample acceptance procedures.

This report may include data with reporting limits (RLs) less than TestAmerica Laboratories, Inc's standard reporting limit. These data and reporting limits are being used specifically to meet the needs of this project. Note that, data are not customarily reported to these levels without qualifiers, because they are inherently less reliable and potentially less defensible than the latest industry standards require.

TestAmerica Laboratories, Inc's Denver Laboratory utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameters listed on the methods summary page in accordance with the methods indicated. A summary of QC data for these analyses is included.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. The results relate only to the samples in this report. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Arrival and Receipt

The sample containers were received in acceptable condition. The temperature of the cooler upon receipt was 1.1°C.

No anomalies were observed.

Dissolved Methane and Dissolved Ethane– Method RSK SOP-175

The method required MS/MSD could not be performed for batch 8099496, due to insufficient sample volume submitted. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No other anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

D8D080299

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
NO DETECTABLE PARAMETERS				

METHODS SUMMARY

D8D080299

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Dissolved Gases in Water	RSK SOP-175	RSK RSKSOP-175

References:

RSK Sample Prep and Calculations for Dissolved Gas Analysis
 in Water Samples Using a GC Headspace Equilibration
 Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

METHOD / ANALYST SUMMARY

D8D080299

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
RSK SOP-175	Adam Pavlakovich	003128

References:

RSK Sample Prep and Calculations for Dissolved Gas Analysis
 in Water Samples Using a GC Headspace Equilibration
 Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SAMPLE SUMMARY

D8D080299

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KKW73	001	RECOVERY 2 REISS	04/04/08	12:00

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Petroglyph

Client Sample ID: RECOVERY 2 REISS

GC Volatiles

Lot-Sample #....: D8D080299-001 Work Order #....: KKW731AA Matrix.....: WATER
Date Sampled....: 04/04/08 12:00 Date Received...: 04/08/08
Prep Date.....: 04/08/08 Analysis Date...: 04/08/08
Prep Batch #....: 8099496 Analysis Time...: 17:17
Dilution Factor: 1
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Methane	ND	5.0	ug/L	0.22
Ethane	ND	5.0	ug/L	0.24

QC DATA ASSOCIATION SUMMARY

D8D080299

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	RSK SOP-175		8099496	

METHOD BLANK REPORT

GC Volatiles

Client Lot #....: D8D080299
MB Lot-Sample #: D8D080000-496

Work Order #....: KKXHW1AA

Matrix.....: WATER

Analysis Date...: 04/08/08

Prep Date.....: 04/08/08

Analysis Time...: 10:48

Dilution Factor: 1

Prep Batch #....: 8099496

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	5.0	ug/L	RSK SOP-175
Ethane	ND	5.0	ug/L	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #....: D8D080299 Work Order #....: KKXHW1AC Matrix.....: WATER
LCS Lot-Sample#: D8D080000-496
Prep Date.....: 04/08/08 Analysis Date...: 04/08/08
Prep Batch #....: 8099496 Analysis Time...: 10:38
Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Ethene	94	(75 - 125)	RSK SOP-175
Methane	98	(75 - 125)	RSK SOP-175
Acetylene	90	(75 - 125)	RSK SOP-175
Ethane	98	(75 - 125)	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #....: D8D080299 Work Order #....: KXHW1AC Matrix.....: WATER
 LCS Lot-Sample#: D8D080000-496
 Prep Date.....: 04/08/08 Analysis Date...: 04/08/08
 Prep Batch #....: 8099496 Analysis Time...: 10:38
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
Ethene	127	120	ug/L	94	RSK SOP-175
Methane	73.0	71.8	ug/L	98	RSK SOP-175
Acetylene	118	106	ug/L	90	RSK SOP-175
Ethane	137	134	ug/L	98	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Chain of Custody Record

1.1°C 102
Jan 4/18/08

SEVERN
TRENT
STL
Severn Trent Laboratories, Inc.

STL Denver
4955 Yarrow Street
Arvada, CO 80002

STL-4124 (0901)

Client

Petroglyph Operating

Project Manager

T. Mellard

Date

4-4-08

Chain of Custody Number

314428

Address

P.O. Box 979 124th, Main

Telephone Number (Area Code)/Fax Number

719-742-5570

Lab Number

Page 1 of 1

City

La Veta

State

CO

Zip Code

81055

Site Contact

T. Mellard

Lab Contact

D. Fougere

Project Name and Location (State)

Raton Basin CC

Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description
(Containers for each sample may be combined on one line)

Date

Time

Air

Aqueous

Sed.

Soil

Unpres.

H2SO4

HNO3

HCl

NaOH

ZnAc/
NaOH

Matrix

Containers &
Preservatives

RSK-SOP175
Dissolved Gases

Analysis (Attach list if
more space is needed)

Special Instructions/
Conditions of Receipt

Recovery 2 Reiss

4-4-08 12:00

X

X

X

Methane, Ethane

Possible Hazard Identification

☒ Non-Hazard

☐ Flammable

☐ Skin Irritant

☐ Poison B

☐ Unknown

Sample Disposal

☒ Return To Client

☒ Disposal By Lab

☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours

☐ 48 Hours

☐ 7 Days

☐ 14 Days

☐ 21 Days

☐ Other

STD

1. Relinquished By

Thomas E. Mullen

Date

4-7-08 12:00

Time

1. Received By

Tom Mullen

Date

4/8/08

Time

1600

2. Relinquished By

Date

Time

2. Received By

Date

Time

3. Relinquished By

Date

Time

3. Received By

Date

Time

Comments

Sample was grabbed at a drilling. Sample was air listed in open hole from 810'

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy