

ANALYTICAL REPORT

Petroglyph Operating Co., Inc.

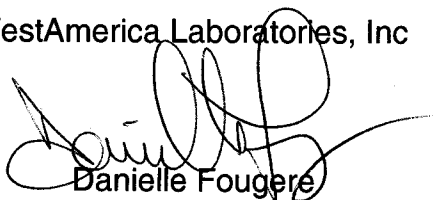
Raton Basin (Colorado)

Lot #: D8C120286

Tom Melland

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

TestAmerica Laboratories, Inc



Danielle Fougere
Project Manager

March 24, 2008

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Standard Deliverables

Report Contents

Total Number of Pages

Standard Deliverables

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Case Narrative

Lot #: D8C120286

The following report contains the analytical results for two water samples submitted to TestAmerica Laboratories, Inc's Denver Laboratory by Petroglyph Operating Company. The samples were received on March 12, 2008, according to documented sample acceptance procedures.

This report may include data with reporting limits (RLs) less than TestAmerica'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 2.9°C.

No anomalies were observed.

Dissolved Methane – Method RSK SOP-175

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to analytes present above the linear calibration curve, sample Sample, M.WW had to be analyzed at a dilution. The reporting limits have been adjusted relative to the dilution required.

The method required MS/MSD could not be performed for QC batch 8080307, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No other anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

D8C120286

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
SAMPLE, M.WW 03/10/08 13:00 001				
Methane	19000	500	ug/L	RSK SOP-175
WOLAHAN, WW 03/10/08 16:43 002				
Methane	75	5.0	ug/L	RSK SOP-175

METHODS SUMMARY

D8C120286

<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

D8C120286

<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

D8C120286

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KJF1R	001	SAMPLE, M. WW	03/10/08	13:00
KJF1T	002	WOLAHAN, WW	03/10/08	16:43

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: SAMPLE,M.WW

GC Volatiles

Lot-Sample #...: D8C120286-001 Work Order #...: KJF1R1AA Matrix.....: WATER
Date Sampled...: 03/10/08 13:00 Date Received...: 03/12/08
Prep Date.....: 03/19/08 Analysis Date...: 03/19/08
Prep Batch #...: 8080307 Analysis Time...: 15:01
Dilution Factor: 100
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Methane	19000	500	ug/L	22

Petroglyph

Client Sample ID: WOLAHAN, WW

GC Volatiles

Lot-Sample #...: D8C120286-002 Work Order #...: KJF1T1AA Matrix.....: WATER
Date Sampled...: 03/10/08 16:43 Date Received...: 03/12/08
Prep Date.....: 03/19/08 Analysis Date...: 03/19/08
Prep Batch #...: 8080307 Analysis Time...: 14:06
Dilution Factor: 1
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Methane	75	5.0	ug/L	0.22

QC DATA ASSOCIATION SUMMARY

D8C120286

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		8080307	
002	WATER	RSK SOP-175		8080307	

METHOD BLANK REPORT

GC Volatiles

Client Lot #... D8C120286
MB Lot-Sample #: D8C200000-307

Work Order #... KJXTT1AA

Matrix.....: WATER

Analysis Date... 03/19/08
Dilution Factor: 1

Prep Date.....: 03/19/08

Analysis Time...: 13:27

Prep Batch #... 8080307

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Methane	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 #...: D8C120286 Work Order #...: KJXTT1AC Matrix.....: WATER
 LCS Lot-Sample#: D8C200000-307
 Prep Date.....: 03/19/08 Analysis Date...: 03/19/08
 Prep Batch #...: 8080307 Analysis Time...: 13:17
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Ethane	94	(75 - 125)	RSK SOP-175
Ethene	91	(75 - 125)	RSK SOP-175
Methane	94	(75 - 125)	RSK SOP-175
Acetylene	100	(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 #...: D8C120286 Work Order #...: KJXTT1AC Matrix.....: WATER
 LCS Lot-Sample#: D8C200000-307
 Prep Date.....: 03/19/08 Analysis Date...: 03/19/08
 Prep Batch #...: 8080307 Analysis Time...: 13:17
 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>
Ethane	137	129	ug/L	94	RSK SOP-175
Ethene	127	116	ug/L	91	RSK SOP-175
Methane	73.0	68.4	ug/L	94	RSK SOP-175
Acetylene	118	118	ug/L	100	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

Temperature on Receipt 2.9°C
Drinking Water? Yes ☒ No ☐

3/12/08 IR2
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4124 (09/07)

Client

Project Manager

Date

Chain of Custody Number

Address

Telephone Number (Area Code)/Fax Number

Lab Number

Page 1 of 1

Petroleum Operating, Inc.
P.O. Box 979 124 N. Main
719-742-5570

3-11-08

407743

City

State

Zip Code

Site Contact

Lab Contact

Analysis (Attach list if more space is needed)

La Veta
81055
White Bear
Michelle Johnson

White Bear
Carroll/Mayhill Number

La Veta
81055
White Bear
Michelle Johnson

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

Containers & Preservatives

Matrix

Special Instructions/Conditions of Receipt

Sample, H.W.

3-10-08 13:00

X

3

RSK-175

Dis Gas

3-10-08 16:43

X

3

X

3

X

3

X

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Sample, H.W.

3-10-08 13:00

X

3

RSK-175

Dis Gas

3-10-08 16:43

X

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X

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Sample, H.W.

3-10-08 13:00

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RSK-175

Dis Gas

3-10-08 16:43

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Sample, H.W.

3-10-08 13:00

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RSK-175

Dis Gas

3-10-08 16:43

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Sample, H.W.

3-10-08 13:00

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RSK-175

Dis Gas

3-10-08 16:43

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Sample, H.W.

3-10-08 13:00

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RSK-175

Dis Gas

3-10-08 16:43

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