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Automated Report

Technical Report for

Verdad Oil and Gas Corporation

VRDR Homestead 050118

SGS Job Number: DA4842

Sampling Date: 05/01/18

Report to:

Verdad Oil and Gas Corporation
1401 17th Street Suite 925
Denver, CO
mcugnetti@verdadoil.com

ATTN: Mike Cugnetti

Total number of pages in report: 42



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read 'Scott Heideman'.

Scott Heideman
Laboratory Director

Client Service contact: Jen Jorschumb 303-425-6021

Certifications: CO (CO00049), ID (CO00049), NE (NE-OS-06-04), ND (R-027), NJ (CO007), OK (D9942)
UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

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Test results relate only to samples analyzed.

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Sample Summary

Verdad Oil and Gas Corporation

Job No: DA4842

VRDR Homestead 050118

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
DA4842-1	05/01/18	12:01 MC	05/01/18	SO	Soil	#1
DA4842-2	05/01/18	12:08 MC	05/01/18	SO	Soil	#2
DA4842-3	05/01/18	12:13 MC	05/01/18	SO	Soil	#3
DA4842-4	05/01/18	12:18 MC	05/01/18	SO	Soil	#4 BKG

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: DA4842
Account: Verdad Oil and Gas Corporation
Project: VRDR Homestead 050118
Collected: 05/01/18

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
DA4842-1	#1					
TPH-DRO (C10-C28)		15.0	10	9.4	mg/kg	SW846-8015B
Specific Conductivity		246	1.0		umhos/cm	SM 2510B-2011 MOD
pH ^a		9.44			su	SW846 9045D
DA4842-2	#2					
Specific Conductivity		122	1.0		umhos/cm	SM 2510B-2011 MOD
pH ^a		6.46			su	SW846 9045D
DA4842-3	#3					
Specific Conductivity		509	1.0		umhos/cm	SM 2510B-2011 MOD
pH ^a		8.71			su	SW846 9045D
DA4842-4	#4 BKG					
Specific Conductivity		133	1.0		umhos/cm	SM 2510B-2011 MOD
pH ^a		6.47			su	SW846 9045D

(a) Analysis performed past recommended hold time.

Sample Results

Report of Analysis

Report of Analysis

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Client Sample ID: #1 Lab Sample ID: DA4842-1 Matrix: SO - Soil Method: SW846 8260B Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 95.3
--	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V4141.D	1	05/04/18 17:47	MB	n/a	n/a	V6V1811
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.52	ug/kg	
108-88-3	Toluene	ND	2.1	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	2.1	0.52	ug/kg	
1330-20-7	Xylene (total)	ND	2.3	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-131%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%
17060-07-0	1,2-Dichloroethane-D4	100%		70-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #1		
Lab Sample ID: DA4842-1		Date Sampled: 05/01/18
Matrix: SO - Soil		Date Received: 05/01/18
Method: SW846 8015B		Percent Solids: 95.3
Project: VRDR Homestead 050118		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA43428.D	1	05/09/18 21:37	CH	n/a	n/a	GGA2055
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%		

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: #1 Lab Sample ID: DA4842-1 Matrix: SO - Soil Method: SW846-8015B SW846 3546 Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 95.3
---	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH040761.D	1	05/08/18 13:47	RB	05/04/18	OP16267	GFH1755
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	15.0	10	9.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	87%		41-134%		

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #1		Date Sampled: 05/01/18
Lab Sample ID: DA4842-1		Date Received: 05/01/18
Matrix: SO - Soil		Percent Solids: 95.3
Project: VRDR Homestead 050118		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	95.3		%	1	05/02/18	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	246	1.0	umhos/cm	1	05/11/18	JD	SM 2510B-2011 MOD
pH ^a	9.44		su	1	05/09/18 13:50	JD	SW846 9045D

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

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Client Sample ID: #2 Lab Sample ID: DA4842-2 Matrix: SO - Soil Method: SW846 8260B Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 92.8
--	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V4142.D	1	05/04/18 18:11	MB	n/a	n/a	V6V1811
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.09 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.1	0.53	ug/kg	
108-88-3	Toluene	ND	2.1	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	2.1	0.53	ug/kg	
1330-20-7	Xylene (total)	ND	2.3	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-131%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%
17060-07-0	1,2-Dichloroethane-D4	98%		70-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

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3

Client Sample ID: #2							
Lab Sample ID: DA4842-2						Date Sampled: 05/01/18	
Matrix: SO - Soil						Date Received: 05/01/18	
Method: SW846 8015B						Percent Solids: 92.8	
Project: VRDR Homestead 050118							

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA43429.D	1	05/09/18 22:13	CH	n/a	n/a	GGA2055
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	106%		60-140%		

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

32
3

Client Sample ID: #2							
Lab Sample ID: DA4842-2						Date Sampled: 05/01/18	
Matrix: SO - Soil						Date Received: 05/01/18	
Method: SW846-8015B SW846 3546						Percent Solids: 92.8	
Project: VRDR Homestead 050118							

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI62248.D	1	05/07/18 22:32	RB	05/04/18	OP16267	GFI2696
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) ^a	ND	11	9.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	105%		41-134%		

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #2		Date Sampled: 05/01/18
Lab Sample ID: DA4842-2		Date Received: 05/01/18
Matrix: SO - Soil		Percent Solids: 92.8
Project: VRDR Homestead 050118		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	92.8		%	1	05/02/18	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	122	1.0	umhos/cm	1	05/11/18	JD	SM 2510B-2011 MOD
pH ^a	6.46		su	1	05/09/18 13:50	JD	SW846 9045D

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: #3 Lab Sample ID: DA4842-3 Matrix: SO - Soil Method: SW846 8260B Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 84.3
--	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V4143.D	1	05/04/18 18:35	MB	n/a	n/a	V6V1811
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.08 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.2	0.58	ug/kg	
108-88-3	Toluene	ND	2.3	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	2.3	0.58	ug/kg	
1330-20-7	Xylene (total)	ND	2.6	1.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-131%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%
17060-07-0	1,2-Dichloroethane-D4	97%		70-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #3							
Lab Sample ID: DA4842-3						Date Sampled: 05/01/18	
Matrix: SO - Soil						Date Received: 05/01/18	
Method: SW846 8015B						Percent Solids: 84.3	
Project: VRDR Homestead 050118							

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA43430.D	1	05/09/18 22:48	CH	n/a	n/a	GGA2055
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	14	6.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	101%		60-140%		

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #3 Lab Sample ID: DA4842-3 Matrix: SO - Soil Method: SW846-8015B SW846 3546 Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 84.3
---	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI62250.D	1	05/07/18 23:12	RB	05/04/18	OP16267	GF12696
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) ^a	ND	12	11	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	107%		41-134%		

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
--	--

Report of Analysis

Client Sample ID: #3		Date Sampled: 05/01/18
Lab Sample ID: DA4842-3		Date Received: 05/01/18
Matrix: SO - Soil		Percent Solids: 84.3
Project: VRDR Homestead 050118		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	84.3		%	1	05/02/18	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	509	1.0	umhos/cm	1	05/11/18	JD	SM 2510B-2011 MOD
pH ^a	8.71		su	1	05/09/18 13:50	JD	SW846 9045D

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: #4 BKG	
Lab Sample ID: DA4842-4	Date Sampled: 05/01/18
Matrix: SO - Soil	Date Received: 05/01/18
Method: SW846 8260B	Percent Solids: 94.3
Project: VRDR Homestead 050118	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V4144.D	1	05/04/18 18:59	MB	n/a	n/a	V6V1811
Run #2							

	Initial Weight	Final Volume
Run #1	5.01 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.1	0.53	ug/kg	
108-88-3	Toluene	ND	2.1	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	2.1	0.53	ug/kg	
1330-20-7	Xylene (total)	ND	2.3	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-131%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%
17060-07-0	1,2-Dichloroethane-D4	102%		70-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

3.4
3

Client Sample ID: #4 BKG Lab Sample ID: DA4842-4 Matrix: SO - Soil Method: SW846 8015B Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 94.3
--	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA43431.D	1	05/09/18 23:24	CH	n/a	n/a	GGA2055
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%		

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

3.4
3

Client Sample ID: #4 BKG Lab Sample ID: DA4842-4 Matrix: SO - Soil Method: SW846-8015B SW846 3546 Project: VRDR Homestead 050118	Date Sampled: 05/01/18 Date Received: 05/01/18 Percent Solids: 94.3
---	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI62256.D	1	05/08/18 01:13	RB	05/04/18	OP16267	GFI2696
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) ^a	ND	11	9.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	104%		41-134%		

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
--	--

Report of Analysis

Client Sample ID: #4 BKG	Date Sampled: 05/01/18
Lab Sample ID: DA4842-4	Date Received: 05/01/18
Matrix: SO - Soil	Percent Solids: 94.3
Project: VRDR Homestead 050118	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	94.3		%	1	05/02/18	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	133	1.0	umhos/cm	1	05/11/18	JD	SM 2510B-2011 MOD
pH ^a	6.47		su	1	05/09/18 13:50	JD	SW846 9045D

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6654
www.accutest.com

Bottle Order Control #
FED-EX Tracking #
SGS Quote #
SGS Job # DA4842

Client / Reporting Information
Project Information
Requested Analysis (see TEST CODE sheet)
Matrix Codes
Collection table with columns: Field ID / Point of Collection, Date, Time, Sampled by, Matrix, # of bottles, and various chemical analysis columns (NONE, HCl, NaOH, HNO3, H2SO4, DI Water, MECH, ENCORE, Neos204). Rows include samples #1, #2, #3, and #4 BKG.

Turnaround Time (Business days)
Data Deliverable Information
Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.
Relinquished by Sampler: 1, 2, 3, 4
Received By: 1, 2, 3, 4
Date/Time: 5/1/18 13:05
Custody Seal #, Intact, Not intact, Absent
Preserved where applicable, Cooler Temp. °C, Therm. ID, On Ice, Form MSQA 064-01, RV 6/19/17

4.1
4

DA4842: Chain of Custody

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SGS Accutest Sample Receipt Summary

Job Number: DA4842

Client: VERDAD

Project: CRDR

Date / Time Received: 5/1/2018 1:05:00 PM

Delivery Method: _____

Airbill #'s: HD

Cooler Temps (Initial/Adjusted): #1: (17.4/17.4):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | <u>IR Gun;</u> | |
| 3. Cooler media: | <u>Ice (Bag)</u> | |
| 4. No. Coolers: | <u>1</u> | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

4.1
4

DA4842: Chain of Custody

Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1811-MB	6V4126.D	1	05/04/18	MB	n/a	n/a	V6V1811

The QC reported here applies to the following samples:

Method: SW846 8260B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	25	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	110	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	94%	70-131%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%
17060-07-0	1,2-Dichloroethane-D4	97%	70-130%

Method Blank Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1811-MB	6V4127.D	1	05/04/18	MB	n/a	n/a	V6V1811

The QC reported here applies to the following samples:

Method: SW846 8260B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	2.2	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	97%	70-131%
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%

5.1.2
5

Blank Spike Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1811-BS	6V4124.D	1	05/04/18	MB	n/a	n/a	V6V1811

The QC reported here applies to the following samples:

Method: SW846 8260B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	42.7	85	68-130
100-41-4	Ethylbenzene	50	42.5	85	69-130
108-88-3	Toluene	50	42.3	85	65-130
1330-20-7	Xylene (total)	150	129	86	69-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	70-131%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%
17060-07-0	1,2-Dichloroethane-D4	100%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1811-BS	6V4125.D	1	05/04/18	MB	n/a	n/a	V6V1811

The QC reported here applies to the following samples:

Method: SW846 8260B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-131%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%
17060-07-0	1,2-Dichloroethane-D4	97%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA4908-1MS	6V4132.D	1	05/04/18	MB	n/a	n/a	V6V1811
DA4908-1MSD	6V4133.D	1	05/04/18	MB	n/a	n/a	V6V1811
DA4908-1	6V4131.D	1	05/04/18	MB	n/a	n/a	V6V1811

The QC reported here applies to the following samples:

Method: SW846 8260B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	DA4908-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.62	J	57.9	49.4	84	57.9	48.3	2	48-130/30
100-41-4	Ethylbenzene	1.8	J	57.9	48.8	81	57.9	47.5	3	25-144/30
108-88-3	Toluene	ND		57.9	48.2	83	57.9	46.6	3	34-130/30
1330-20-7	Xylene (total)	6.5		174	150	83	174	146	3	24-143/30

CAS No.	Surrogate Recoveries	MS	MSD	DA4908-1	Limits
1868-53-7	Dibromofluoromethane	99%	100%	96%	70-131%
2037-26-5	Toluene-D8	96%	97%	99%	70-130%
460-00-4	4-Bromofluorobenzene	98%	97%	97%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	101%	101%	70-130%

* = Outside of Control Limits.

5.3.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA4908-1MS	6V4134.D	1	05/04/18	MB	n/a	n/a	V6V1811
DA4908-1MSD	6V4135.D	1	05/04/18	MB	n/a	n/a	V6V1811
DA4908-1	6V4131.D	1	05/04/18	MB	n/a	n/a	V6V1811

The QC reported here applies to the following samples:

Method: SW846 8260B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	DA4908-1 ug/kg	Spike Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
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CAS No.	Surrogate Recoveries	MS	MSD	DA4908-1	Limits
1868-53-7	Dibromofluoromethane	96%	98%	96%	70-131%
2037-26-5	Toluene-D8	99%	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	97%	96%	97%	70-130%
17060-07-0	1,2-Dichloroethane-D4	98%	101%	101%	70-130%

* = Outside of Control Limits.

5.3.2
5

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2055-MB	GA43417.D	1	05/09/18	CH	n/a	n/a	GGA2055

The QC reported here applies to the following samples:

Method: SW846 8015B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	100% 60-140%

6.1.1
6

Blank Spike Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2055-BS	GA43418.D	1	05/09/18	CH	n/a	n/a	GGA2055

The QC reported here applies to the following samples:

Method: SW846 8015B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	109	99	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	107%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA5121-1MS	GA43420.D	1	05/09/18	CH	n/a	n/a	GGA2055
DA5121-1MSD	GA43421.D	1	05/09/18	CH	n/a	n/a	GGA2055
DA5121-1	GA43419.D	1	05/09/18	CH	n/a	n/a	GGA2055

The QC reported here applies to the following samples:

Method: SW846 8015B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	DA5121-1 mg/kg	Spike Q mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	57.3	146	199	97	146	195	95	2	70-131/30

CAS No.	Surrogate Recoveries	MS	MSD	DA5121-1	Limits
120-82-1	1,2,4-Trichlorobenzene	133%	133%	128%	60-140%

* = Outside of Control Limits.

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP16267-MB	FE62237.D	1	05/07/18	RB	05/04/18	OP16267	GFE2695

The QC reported here applies to the following samples:

Method: SW846-8015B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	10	9.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	109% 41-134%

7.1.1
7

Blank Spike Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP16267-BS	FE62239.D	1	05/07/18	RB	05/04/18	OP16267	GFE2695

The QC reported here applies to the following samples:

Method: SW846-8015B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	250	205	82	35-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	106%	41-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA4842
 Account: VEROGTXD Verdad Oil and Gas Corporation
 Project: VRDR Homestead 050118

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP16267-MS	FE62241.D	1	05/07/18	RB	05/04/18	OP16267	GFE2695
OP16267-MSD	FE62243.D	1	05/07/18	RB	05/04/18	OP16267	GFE2695
DA4888-1	FE62245.D	1	05/07/18	RB	05/04/18	OP16267	GFE2695

The QC reported here applies to the following samples:

Method: SW846-8015B

DA4842-1, DA4842-2, DA4842-3, DA4842-4

CAS No.	Compound	DA4888-1 mg/kg	Spike Q	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	261	222	85	263	213	81	4	10-171/30

CAS No.	Surrogate Recoveries	MS	MSD	DA4888-1	Limits
84-15-1	o-Terphenyl	114%	114%	102%	41-134%

* = Outside of Control Limits.

7.3.1
7

General Chemistry

QC Data Summaries



Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA4842
Account: VEROGTXD - Verdad Oil and Gas Corporation
Project: VRDR Homestead 050118

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Specific Conductivity	GP22750/GN42923			umhos/cm	9991	10100	100.8	90-110%
pH	GN42897			su	8.00	8.00	100.0	99.1-100.9%

Associated Samples:

Batch GN42897: DA4842-1, DA4842-2, DA4842-3, DA4842-4

Batch GP22750: DA4842-1, DA4842-2, DA4842-3, DA4842-4

(*) Outside of QC limits

8.1

8

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA4842
Account: VEROGTXD - Verdad Oil and Gas Corporation
Project: VRDR Homestead 050118

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Percent	GN42803	DA4842-4	%	94.3	93.8	0.5	0-10%

Associated Samples:

Batch GN42803: DA4842-1, DA4842-2, DA4842-3, DA4842-4

(*) Outside of QC limits

8.2

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