

## **ANALYTICAL TABLES**

**TABLE 1**  
**PLATTEVILLE 63N66W/19SWSW**  
**SOIL SAMPLE RESULTS SUMMARY TABLE**  
**KERR-McGEE OIL AND GAS ONSHORE LP**

Sample ID	Date Sampled	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TVPH - GRO (mg/kg)	TEPH - DRO + ORO (mg/kg)	Electrical Conductivity (EC) (mmhos/cm)	pH (units)
<b>COGCC standards for soil (mg/kg) <sup>(1)</sup></b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>500</b>		<b>4</b>	<b>6 - 9</b>
NE01@5	7/1/2015	5	<0.050	<0.050	<0.050	<0.050	25.0	<200	0.0219	8.40
NW01@5	7/1/2015	5	<0.050	<0.050	<0.050	<0.050	32.4	<200	0.0369	7.83
SE01@5	7/1/2015	5	<0.002	<0.002	<0.002	<0.002	<0.200	<200	0.0128	7.98
SW01@5	7/1/2015	5	0.016	<0.002	0.003	0.004	3.72	<200	0.0215	7.71
E01@5	7/1/2015	5	<0.002	<0.002	<0.002	<0.002	<0.200	<200	0.00960	7.45
W01@5	7/1/2015	5	0.012	0.015	0.009	0.122	2.69	<200	0.0416	7.87

**Notes:**

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

TVPH - GRO = Total volatile petroleum hydrocarbons - gasoline range organics

TEPH - DRO = Total extractable petroleum hydrocarbons - diesel range organics

TEPH - ORO = Total extractable petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram.

bgs = Below ground surface.

mmhos/cm = Millimhos per centimeter

**BOLD=** Analytical result is in exceedance of COGCC Table 910-1 soil standards.

**TABLE 2**  
**PLATTEVILLE 63N66W/19SWSW**  
**GROUNDWATER SAMPLE RESULTS SUMMARY TABLE**  
**KERR-McGEE OIL AND GAS ONSHORE LP**

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft bgs)
<b>COGCC Table 910-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	
GW01	7/1/2015	<b>4710</b>	<b>711</b>	58.0	411	~6

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft bgs = Feet below ground surface

**BOLD**= Analytical result is in exceedance of COGCC groundwater standards.

## **LABORATORY ANALYTICAL REPORTS**



July 02, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - KMG - Platteville 1-19

Project Number - [none]

Attached are your analytical results for KMG - Platteville 1-19 received by Origins Laboratory, Inc. July 01, 2015. This project is associated with Origins project number X507028-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NE01 @ 5'	X507028-01	Soil	July 1, 2015 13:53	07/01/2015 16:30
NW01 @ 5'	X507028-02	Soil	July 1, 2015 13:55	07/01/2015 16:30
SE01 @ 5'	X507028-03	Soil	July 1, 2015 13:57	07/01/2015 16:30
SW01 @ 5'	X507028-04	Soil	July 1, 2015 14:01	07/01/2015 16:30
E01 @ 5'	X507028-05	Soil	July 1, 2015 14:03	07/01/2015 16:30
W01 @ 5'	X507028-06	Soil	July 1, 2015 14:05	07/01/2015 16:30
GW01	X507028-07	Water	July 1, 2015 14:10	07/01/2015 16:30

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Noelle Doyle Mathis, President

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

**ORIGINS**  
LABORATORY, INC

Client: Tasman Geosciences  
Address: 6899 Pecos St  
Telephone Number: 912 230 2827  
Email Address: [chris@tasman-geo.com](mailto:chris@tasman-geo.com)

Project Manager: Christine Wasko  
Project Name: Platteville 1-19  
Project Number: [blank]  
Samples Collected By: Brock Nelson

www.originslaboratory.com

page 1 of 1

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summ #		
NE01@5'	7/1/15	1353	2	X				X				GBTEX 8200 TTH 20160815 EC, pH
NW01@5'	7/1/15	1355	2	X				X				
SE01@5'	7/1/15	1357	2	X				X				
SW01@5'	7/1/15	1401	2	X				X				
E01@5'	7/1/15	1403	2	X				X				
W01@5'	7/1/15	1405	2	X				X				
GW01	7/1/15	1410	3	X				X			BTX 8260	
<p>Requisitioned By: [Signature] Date: 7/1/15 Time: [blank]</p> <p>Requisitioned By: [Signature] Date: 7/1/15 Time: [blank]</p>												

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

Date Results Needed: 7/1/15 1630

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: XS07028

Client: Tasman

Client Project ID: Platteville 1-19

Checklist Completed by: Jeff Smith

Shipped Via: Pick up  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 7/1/15

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☒ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 2.8 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>			
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

07-01-15 1746  
Date/Time Reviewed

Origins Laboratory, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

NE01 @ 5'  
7/1/2015 1:53:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-01 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5G01014	07/01/2015	07/01/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl 80.1 % 59-131 " " "

## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	25.0	5.00	mg/kg	25	5G01013	07/01/2015	07/01/2015
Benzene	ND	0.050	"	"	"	"	"
Toluene	ND	0.050	"	"	"	"	"
Ethylbenzene	ND	0.050	"	"	"	"	"
Xylenes, total	ND	0.050	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "  
Surrogate: Toluene-d8 98.0 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 95.8 % 70-130 " " "

## pH in Soil by EPA 9045D

pH	8.40		pH Units	1	5G01005	07/01/2015	07/01/2015
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0219		mmhos/cm	"	5G01006	07/01/2015	07/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

NW01 @ 5'  
7/1/2015 1:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-02 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5G01014	07/01/2015	07/01/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl 67.0 % 59-131 " " "

## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	32.4	5.00	mg/kg	25	5G01013	07/01/2015	07/01/2015
Benzene	ND	0.050	"	"	"	"	"
Toluene	ND	0.050	"	"	"	"	"
Ethylbenzene	ND	0.050	"	"	"	"	"
Xylenes, total	ND	0.050	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 107 % 70-130 " " "  
Surrogate: Toluene-d8 97.1 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.8 % 70-130 " " "

## pH in Soil by EPA 9045D

pH	7.83		pH Units	1	5G01005	07/01/2015	07/01/2015
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0369		mmhos/cm	"	5G01006	07/01/2015	07/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

SE01 @ 5'  
7/1/2015 1:57:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-03 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5G01014	07/01/2015	07/01/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl 65.4 % 59-131 " " "

## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5G01013	07/01/2015	07/01/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 117 % 70-130 " " "  
Surrogate: Toluene-d8 111 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 109 % 70-130 " " "

## pH in Soil by EPA 9045D

pH	7.98		pH Units	1	5G01005	07/01/2015	07/01/2015
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0128		mmhos/cm	"	5G01006	07/01/2015	07/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

SW01 @ 5'  
7/1/2015 2:01:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-04 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5G01014	07/01/2015	07/01/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

<i>Surrogate: o-Terphenyl</i>	74.6 %	59-131			"	"	"
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## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	3.72	0.200	mg/kg	1	5G01013	07/01/2015	07/01/2015
Benzene	0.016	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	0.003	0.002	"	"	"	"	"
Xylenes, total	0.004	0.002	"	"	"	"	"

<i>Surrogate: 1,2-Dichloroethane-d4</i>	116 %	70-130			"	"	"
<i>Surrogate: Toluene-d8</i>	113 %	70-130			"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>	114 %	70-130			"	"	"

## pH in Soil by EPA 9045D

pH	7.71		pH Units	1	5G01005	07/01/2015	07/01/2015
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0215		mmhos/cm	"	5G01006	07/01/2015	07/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

E01 @ 5'  
7/1/2015 2:03:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-05 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5G01014	07/01/2015	07/01/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl 75.6 % 59-131 " " "

## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5G01013	07/01/2015	07/02/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 113 % 70-130 " " "  
Surrogate: Toluene-d8 110 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

## pH in Soil by EPA 9045D

pH	7.45		pH Units	1	5G01005	07/01/2015	07/01/2015
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.00960		mmhos/cm	"	5G01006	07/01/2015	07/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

W01 @ 5'  
7/1/2015 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-06 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5G01014	07/01/2015	07/01/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	71.8 %	59-131	"	"	"	"
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## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	2.69	0.200	mg/kg	1	5G01013	07/01/2015	07/02/2015
Benzene	0.012	0.002	"	"	"	"	"
Toluene	0.015	0.002	"	"	"	"	"
Ethylbenzene	0.009	0.002	"	"	"	"	"
Xylenes, total	0.122	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130	"	"	"	"
Surrogate: Toluene-d8	112 %	70-130	"	"	"	"
Surrogate: 4-Bromofluorobenzene	108 %	70-130	"	"	"	"

## pH in Soil by EPA 9045D

pH	7.87	pH Units	1	5G01005	07/01/2015	07/01/2015
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0416	mmhos/cm	"	5G01006	07/01/2015	07/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

GW01  
7/1/2015 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X507028-07 (Water)

## BTEX by EPA 8260C

Benzene	4710	50.0	ug/L	50	5F30013	07/01/2015	07/01/2015
Toluene	711	50.0	"	"	"	"	"
Ethylbenzene	58.0	50.0	"	"	"	"	"
Xylenes, total	411	50.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4  
Surrogate: Toluene-d8  
Surrogate: 4-Bromofluorobenzene

90.9 %  
99.5 %  
105 %

87.3-113  
90.9-108  
88.6-111

"  
"  
"

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5F30013 - EPA 5030B (Water)

Blank (5F30013-BLK1)

Prepared: 07/01/2015 Analyzed: 07/01/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5	90.4		87.3-113			
Surrogate: Toluene-d8	62		"	62.5	99.4		90.9-108			
Surrogate: 4-Bromofluorobenzene	68		"	62.5	109		88.6-111			

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Noelle Doyle Mathis, President



Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5F30013 - EPA 5030B (Water)

LCS (5F30013-BS1)

Prepared: 07/01/2015 Analyzed: 07/01/2015

Benzene	54.3	1.0	ug/L	50.0	109	75-126
Toluene	55.5	1.0	"	50.0	111	78.7-126
Ethylbenzene	54.9	1.0	"	50.0	110	80-130
m,p-Xylene	110	2.0	"	100	110	77.2-133
o-Xylene	54.8	1.0	"	50.0	110	77.9-126
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5	96.4	87.3-113
Surrogate: Toluene-d8	63		"	62.5	101	90.9-108
Surrogate: 4-Bromofluorobenzene	67		"	62.5	107	88.6-111

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Noelle Doyle Mathis, President

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - Platteville 1-19

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5F30013 - EPA 5030B (Water)

Matrix Spike (5F30013-MS1)		Source: X506355-01			Prepared: 07/01/2015 Analyzed: 07/01/2015					
Benzene	48.6	1.0	ug/L	50.0	ND	97.3	74-130			
Toluene	49.3	1.0	"	50.0	ND	98.6	73-131			
Ethylbenzene	49.8	1.0	"	50.0	ND	99.6	76-132			
m,p-Xylene	99.2	2.0	"	100	ND	99.2	69-139			
o-Xylene	48.7	1.0	"	50.0	ND	97.3	74-131			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		93.0	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		100	90.9-108			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	88.6-111			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5F30013 - EPA 5030B (Water)

Matrix Spike Dup (5F30013-MSD1)		Source: X506355-01			Prepared: 07/01/2015 Analyzed: 07/01/2015					
Benzene	53.3	1.0	ug/L	50.0	ND	107	74-130	9.16	20	
Toluene	53.8	1.0	"	50.0	ND	108	73-131	8.73	20	
Ethylbenzene	52.9	1.0	"	50.0	ND	106	76-132	5.98	20	
m,p-Xylene	106	2.0	"	100	ND	106	69-139	6.74	20	
o-Xylene	52.4	1.0	"	50.0	ND	105	74-131	7.40	20	
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.8	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	88.6-111			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5G01013 - EPA 5030 (soil)

Blank (5G01013-BLK1)

Prepared: 07/01/2015 Analyzed: 07/01/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	74.0		ug/kg	62.5		118	70-130			
Surrogate: Toluene-d8	69.5		"	62.5		111	70-130			
Surrogate: 4-Bromofluorobenzene	67.1		"	62.5		107	70-130			

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Project: KMG - Platteville 1-19

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G01013 - EPA 5030 (soil)										
LCS (5G01013-BS1)					Prepared: 07/01/2015 Analyzed: 07/01/2015					
Benzene	0.103	0.002	mg/kg	0.100		103	77.1-124			
Toluene	0.103	0.002	"	0.100		103	74.5-128			
Ethylbenzene	0.098	0.002	"	0.100		97.7	66.4-127			
m,p-Xylene	0.193	0.004	"	0.200		96.6	76.6-124			
o-Xylene	0.099	0.002	"	0.100		98.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	72.1		ug/kg	62.5		115	70-130			
Surrogate: Toluene-d8	65.7		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	67.5		"	62.5		108	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5G01013 - EPA 5030 (soil)

Matrix Spike (5G01013-MS1)		Source: X507027-01			Prepared: 07/01/2015 Analyzed: 07/01/2015					
Benzene	0.117	0.002	mg/kg	0.100	ND	117	71.8-126			
Toluene	0.113	0.002	"	0.100	ND	113	65.1-130			
Ethylbenzene	0.102	0.002	"	0.100	ND	102	62.2-130			
m,p-Xylene	0.206	0.004	"	0.200	ND	103	46.5-137			
o-Xylene	0.100	0.002	"	0.100	ND	99.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	75.1		ug/kg	62.5		120	70-130			
Surrogate: Toluene-d8	69.9		"	62.5		112	70-130			
Surrogate: 4-Bromofluorobenzene	65.5		"	62.5		105	70-130			

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Project: KMG - Platteville 1-19

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5G01013 - EPA 5030 (soil)

Matrix Spike Dup (5G01013-MSD1)		Source: X507027-01			Prepared: 07/01/2015 Analyzed: 07/01/2015					
Benzene	0.102	0.002	mg/kg	0.100	ND	102	71.8-126	13.7	11.3	QM-07
Toluene	0.096	0.002	"	0.100	ND	95.8	65.1-130	16.3	15.4	QM-07
Ethylbenzene	0.090	0.002	"	0.100	ND	90.5	62.2-130	11.9	19.6	
m,p-Xylene	0.174	0.004	"	0.200	ND	86.8	46.5-137	17.3	19.2	
o-Xylene	0.088	0.002	"	0.100	ND	88.5	54.2-134	11.8	17.9	
Surrogate: 1,2-Dichloroethane-d4	73.2		ug/kg	62.5		117	70-130			
Surrogate: Toluene-d8	68.4		"	62.5		109	70-130			
Surrogate: 4-Bromofluorobenzene	65.4		"	62.5		105	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Extractable Petroleum Hydrocarbons by 8015C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5G01014 - EPA 3580**

**Blank (5G01014-BLK1)**

Prepared: 07/01/2015 Analyzed: 07/01/2015

Diesel (C10-C28) ND 50 mg/kg

Residual Range Organics (C28-C36) ND 200 "

*Surrogate: o-Terphenyl*

46

"

50.0

91.9

59-131

**LCS (5G01014-BS1)**

Prepared: 07/01/2015 Analyzed: 07/01/2015

Diesel (C10-C28) 930 50 mg/kg

1000

92.7

64-121

Residual Range Organics (C28-C36) 690 200 "

1000

69.2

58-124

*Surrogate: o-Terphenyl*

50

"

50.0

99.7

59-131

**Matrix Spike (5G01014-MS1)**

Source: X507027-01

Prepared: 07/01/2015 Analyzed: 07/01/2015

Diesel (C10-C28) 850 50 mg/kg

1000

19

83.4

53-125

Residual Range Organics (C28-C36) 640 200 "

1000

ND

63.5

47-133

*Surrogate: o-Terphenyl*

44

"

50.0

87.1

59-131

**Matrix Spike Dup (5G01014-MSD1)**

Source: X507027-01

Prepared: 07/01/2015 Analyzed: 07/01/2015

Diesel (C10-C28) 910 50 mg/kg

1000

19

88.8

53-125

6.11

20

Residual Range Organics (C28-C36) 690 200 "

1000

ND

69.2

47-133

8.52

20

*Surrogate: o-Terphenyl*

44

"

50.0

88.1

59-131

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Christine Wasko  
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Project: KMG - Platteville 1-19

## Classical Chemistry Parameters - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5G01005 - NO PREP</b>										
<b>Duplicate (5G01005-DUP1)</b>		<b>Source: X506374-01</b>			Prepared: 07/01/2015 Analyzed: 07/01/2015					
pH	7.44		pH Units		7.45			0.134	25	
<b>Duplicate (5G01005-DUP2)</b>		<b>Source: X507027-01</b>			Prepared: 07/01/2015 Analyzed: 07/01/2015					
pH	7.54		pH Units		7.62			1.06	25	
<b>Batch 5G01006 - NO PREP</b>										
<b>Blank (5G01006-BLK1)</b>		Prepared: 07/01/2015 Analyzed: 07/01/2015								
Specific Conductance (EC)	0.00260		mmhos/cm							
<b>Blank (5G01006-BLK2)</b>		Prepared: 07/01/2015 Analyzed: 07/01/2015								
Specific Conductance (EC)	0.00260		mmhos/cm							
<b>Duplicate (5G01006-DUP1)</b>		<b>Source: X506374-01</b>			Prepared: 07/01/2015 Analyzed: 07/01/2015					
Specific Conductance (EC)	1.71		mmhos/cm		1.66			3.26	25	
<b>Duplicate (5G01006-DUP2)</b>		<b>Source: X507027-01</b>			Prepared: 07/01/2015 Analyzed: 07/01/2015					
Specific Conductance (EC)	0.338		mmhos/cm		0.363			7.13	25	

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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Christine Wasko

Project Number: [none]

Project: KMG - Platteville 1-19

### Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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