

WEIDENKELLER 1-1

EXCAVATION REPORT

October 8, 2015



Image: Google

PREPARED ON BEHALF OF

Noble Energy, Inc.
1600 Broadway
Denver, CO 80202



PREPARED BY

Tasman Geosciences, Inc.
6899 Pecos Street, Unit C
Denver, CO 80221



October 8, 2015

Mr. Jacob Evans
Noble Energy Inc.
1600 Broadway
Denver, CO 80202

Subject: **Excavation Report**
 Weidenkeller 1-1
 Location ID # 319217, Spill/Release Point ID # 439479
 Weld County, Colorado

Dear Mr. Evans:

Below please find a copy of the above referenced Excavation Report for the Weidenkeller 1-1 Site (Site) in Weld County, Colorado. The text below describes environmental sampling and remediation activities conducted between October 23, 2014 and July 15, 2015.

On October 23, 2014, a release near the separator was discovered during construction activities, as described in the Initial Form 19 submitted to the Colorado Oil and Gas Conservation Commission (COGCC) on October 27, 2014 (Doc# 400717483). The COGCC issued Spill/Release Point ID 439479 to the incident. A Form 27 was previously submitted to the COGCC on 04/27/15, and has not been included in this document.

Introduction

The purpose of this document is to describe the assessment of impacted soil and groundwater, removal of impacted soil, treatment of impacted groundwater, and subsequent confirmation sampling activities at the Site. The activities described below were performed in response to a historic release discovered near the separator, and later, the produced water tank.

Facility Background

The Site is located approximately 3.6 miles southwest of the town of Kersey in Weld County, Colorado, as illustrated on Figure 1. Surrounded by agricultural land, the facility legal description is the SW ¼ of the NW ¼ of Section 1, Township 4N, Range 65W, and the approximate release point has coordinates of 40.342862, -104.620073. The approximate release location is 420 feet (ft.) west of the Weidenkeller 1-1 wellhead, and 220 ft. east of Country Road 47. According to Colorado Division of Water Resources data, the nearest water well is 1281 ft. southeast, and an occupied building is 150 ft. northwest.

Field Activities

Following the discovery of the release, production equipment was shut-in and the produced water vault was evacuated, demolished, and removed from the Site. On October 23, 2014, preliminary soil

samples were collected from the excavated area near the separator. Soil samples were field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID) and standard headspace sampling techniques. The soil sample collected from the excavation sidewall which exhibited the highest PID reading (SS04@2') as well as the soil sample collected from the base of the excavation (SS01@3') were submitted to Summit Scientific Laboratories (Summit) in Golden, Colorado for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), naphthalene, and total petroleum hydrocarbons (TPH) – gasoline range organics (GRO) by United States Environmental Protection Agency (USEPA) Method 8260B, and TPH – diesel range organics (DRO) by USEPA Method 8015. Subsequent to site assessment, excavated soil was replaced into the tested pit.

Site assessment activities were continued on April 24, 2015. Samples SS08@5' and SS10@4' were collected from the excavation created for the removal of the produced water sump, and SS13@4' was collected from a trench between the separator and produced water vault; all three samples were analyzed for BTEX, TPH-GRO, TPH-DRO, and naphthalene at Summit. Additionally, soil sample SS10@4' was submitted for analysis of sodium adsorption ratio (SAR) by USEPA Method 6020/United States Department of Agriculture (USDA) Method 606(2,3A), and specific conductance (EC) and pH by American Public Health Association (APHA)/American Society for Testing and Materials (ASTM)/USEPA methods. Native soil was again replaced into excavated pits.

Site remediation activities began on June 29, 2015 and continued through July 15, 2015, during which approximately 1650 cubic yards of impacted material were removed and transported to the Buffalo Ridge Landfill in Keenesburg, Colorado for disposal. Thirty-two (32) confirmation soil samples were collected and submitted for laboratory analyses from the sidewalls of the final excavation extent. Five exploratory borehole samples were also collected and submitted. Confirmation samples were collected at approximately 2-5 feet below ground surface (bgs), based on variances in surface elevation. Soil samples were field screened for VOC concentrations using a PID and were submitted to Summit for laboratory analysis of BTEX, naphthalene, TPH – GRO and TPH – DRO. SS34@5' was also submitted for EC analysis at Summit. Soil at SS25 was presumed to be impacted due to visual and olfactory indicators, and a very high field VOC measurement, however, due to surface and buried infrastructure the impacted soil could not be removed.

Groundwater was encountered in the excavation area at approximately 5-6 ft. bgs. Four groundwater samples were collected and were submitted to Summit for analysis of BTEX by USEPA Method 8260. Groundwater in the excavation was treated with approximately 506 pounds of granular activated carbon (GAC). The GAC was mixed into the groundwater with clean permeable pea gravel prior to backfilling and re-grading of the excavation area.

Results

Laboratory analytical results indicated that BTEX, naphthalene, TPH – GRO and TPH – DRO concentrations were below applicable COGCC Table 910-1 standards in the soil samples collected from the final extent of the excavation. Soil analytical data is presented in Table 1.

Laboratory analytical results indicated benzene concentrations were in exceedance of applicable COGCC Table 910-1 standards in groundwater samples GW03 and GW04. BTEX concentrations

were below regulatory standards in groundwater samples GW01 and GW02. Groundwater analytical data is presented in Table 2.

The excavation extent and soil and groundwater analytical data are illustrated on Figure 2.

Conclusions

Based on laboratory analytical data, hydrocarbon impacted soil above applicable COGCC standards was successfully removed during excavation activities. Due to remaining infrastructure, there is residual impacted soil at SS25 at approximately 5 ft. bgs. Confining test pit samples were collected at SS36 and SS37 to the south which confirm that impacted soil does not continue south of the infrastructure.

Dissolved phase petroleum hydrocarbon impacts remain within the former excavation area. Monitoring wells will be installed to delineate the lateral extent of groundwater impacts on Site. Remedial options will be evaluated once assessment activities are complete.

Remarks

The discussion and conclusions contained in this report represent the professional opinions of Tasman Geosciences, Inc. These opinions are based on currently available information and are arrived at in accordance with currently accepted geologic and engineering practices.

Please contact me at (303) 487-1228 if you require additional information.

Sincerely,
Tasman Geosciences, Inc.



Brandon Bruns, PE
Project Manager

Attached:

Table 1 – Soil Analytical Data

Table 2 – Groundwater Analytical Data

Figure 1 – Site Location Map

Figure 2 – Excavation Extent & Sample Location Map

Appendix – Laboratory Analytical Reports

Tables

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - WEIDENKELLER 1-1

Soil Sample ID	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Naphthalene (mg/kg)
COGCC Standard		0.17	85	100	175	500		23
SS01@3'	10/23/14	0.60	<0.0050	0.52	15	1,000	130	0.16
SS04@2'	10/23/14	1.7	<0.0050	3.7	84	1,900	92	0.32
SS08@5'	04/24/15	<0.0020	<0.0050	0.0072	0.11	<50	76	<0.010
SS10@4'	04/24/15	0.020	0.0093	4.8	91	3,300	970	0.078
SS13@4'	04/24/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS16@4'	06/29/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
BH01@4'	06/29/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
BH02@4'	06/29/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS17@5'	06/30/15	0.30	<0.0050	6.1	99	1,600	450	0.51
SS18@5'	06/30/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS19@5'	06/30/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS20@5'	07/01/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS21@5'	07/01/15	0.0037	<0.0050	0.057	<0.010	<50	<50	0.013
SS23@4'	07/02/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS24@5'	07/02/15	0.0066	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS26@5'	07/02/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS27@5'	07/06/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS28@5'	07/06/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS30@5'	07/06/15	<0.0020	<0.0050	<0.0050	14	830	170	0.31
SS31@5'	07/07/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS32@5'	07/07/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS33@5'	07/07/15	0.030	<0.0050	<0.0050	16	240	<50	0.14
SS34@5'	07/08/15	0.22	<0.0050	0.18	110	3,400	1,000	0.44
SS35@5'	07/09/15	0.016	<0.0050	0.016	<0.010	190	470	0.28
SS36@5'	07/09/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS37@5'	07/09/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS38@5'	07/10/15	0.037	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS39@5'	07/10/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS40@5'	07/10/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
BH03@2'	07/10/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
BH04@2'	07/10/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
BH05@2'	07/10/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS41@2'	07/14/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS42@2'	07/14/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS43@2'	07/14/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS44@1.5'	07/15/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
SS45@1.5'	07/15/15	<0.0020	<0.0050	<0.0050	<0.010	<50	<50	<0.010
Soil Sample ID	Date	EC (mmhos/cm)	pH (units)	SAR (units)				
		4 or 2x BG	6-9	<12				
SS10@4'	04/24/15	4.60	7.48	0.420				
SS34@5'	07/08/15	0.583	Not Analyzed	Not Analyzed				

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - WEIDENKELLER 1-1

COGCC = Colorado Oil and Gas Conservation Commission

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

mg/kg = Milligrams per kilogram

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

EC = Specific conductance

mmhos/cm = Millimhos per centimeter

BG = Background

SAR = Sodium adsorption ratio

Soil standards referenced from COGCC Table 910-1

Highlighted results exceed the COGCC Table 910-1 standard

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - WEIDENKELLER 1-1

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Standard		5	560	700	1,400
GW01	06/29/15	1.0	9.3	<1.0	10
GW02	06/30/15	<1.0	<1.0	<1.0	3.4
GW03	07/01/15	84	230	160	3,100
GW04	07/02/15	9.2	<1.0	18	350

COGCC = Colorado Oil and Gas Conservation Commission

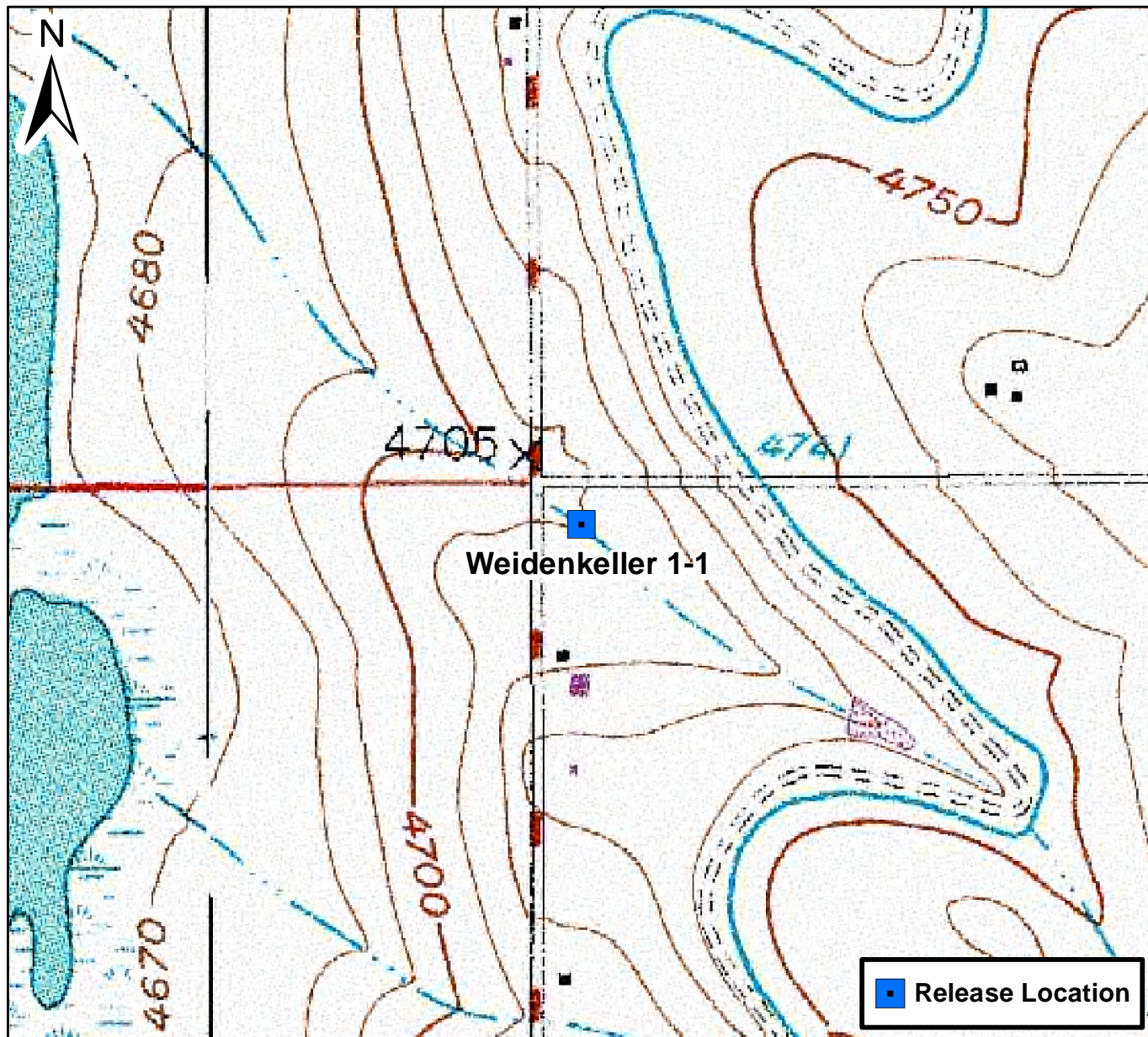
µg/L = Micrograms per liter

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

Groundwater standards referenced from COGCC Table 910-1

Highlighted results exceed the COGCC Table 910-1 standard

Figures

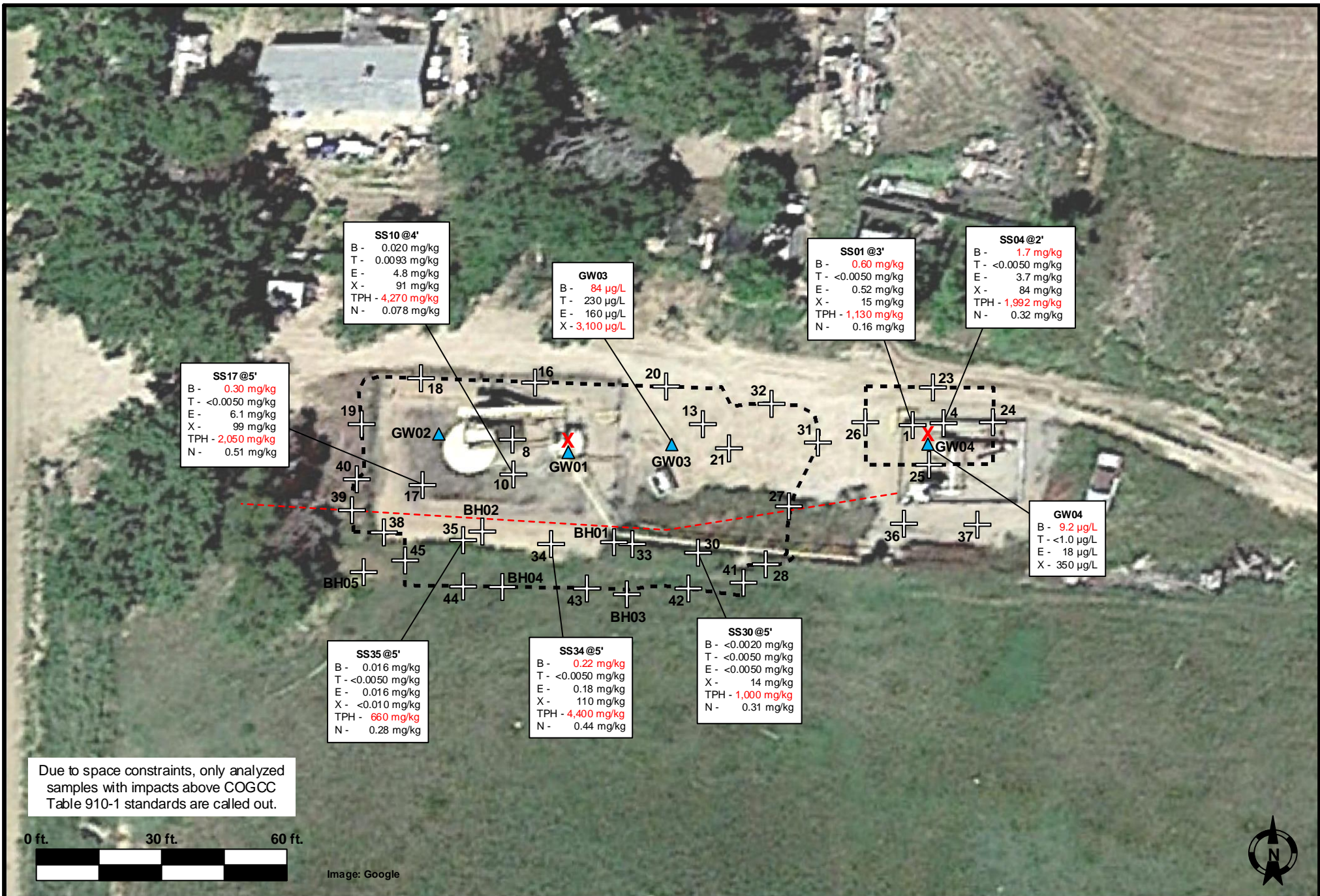


0 750 1,500 Feet

Figure 1

Site Location Map
Weidenkeller 1-1
SWNW S1 T4N R65W
Weld County, Colorado





PROJECT NO:

DRAWN BY: BAM

DATE: 10/02/15



Facility

Weidenkeller 1-1
Weld County, CO

LEGEND:

- - - Excavation Extent (Surveyed Via Trimble Unit)
- + Excavation Soil Sample
- ▲ Groundwater Sample

mg/kg Milligrams per kilogram

µg/L Micrograms per liter

X Approximate Release Location

- - - DCP Midstream Line

B - Benzene
T - Toluene
E - Ethylbenzene
X - Total Xylenes
TPH - Total Petroleum Hydrocarbons
N - Naphthalene

Excavation Extent &
Sample Locations

Figure 2

Appendix

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 24, 2014

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Wiedenkiller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 10/23/14 19:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkiller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@3'	1410203-01	Soil	10/23/14 16:40	10/23/14 19:10
SS04@2'	1410203-02	Soil	10/23/14 16:45	10/23/14 19:10

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

Summit Scientific 1410203

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Noble Energy/Tasman

Address: 6899 Pecos St Unit C

City/State/Zip: Denver, CO

Phone: 303 487 1228 Fax:



Sampler Name: Andrew T Fisher

Project Manager: Dan Wade

E-Mail: dwade@tasman-geo.com

Project Name: ~~Bossett 11-30-14~~ WILDEN KEEPER 1-1

Project Number:

Preservative				Matrix		Analyze For:		Special Instructions							
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)		Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO
550103'	10/23/04	1640	1												
550402'	10/23/04	1645	1												
Requisitioned by: 	Date/Time: 10/25/11 1645	Received by:		Date/Time:	Turn Around Time (Check)		Notes:								
Requisitioned by: 	Date/Time:	Received by:		Date/Time:	<input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours		72 Hours Standard								
Requisitioned by:	Date/Time:	Received in Lab by:		Date/Time:	Sample Integrity:		Temperature Upon Receipt: 2.0								
		Received by:			Intact:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								

www.s2scientific.com

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

SS01@3'
1410203-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/23/14 16:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	130	50	mg/kg	1	1410257	10/23/14	10/23/14	8015M	

Date Sampled: 10/23/14 16:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/23/14 16:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.16	0.010	mg/kg	1	1410258	10/23/14	10/23/14	EPA 8260B	
Benzene	0.60	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.52	0.0050	"	"	"	"	"	"	
Xylenes (total)	15	1.0	"	100	"	"	10/23/14	"	
Gasoline Range Hydrocarbons	1000	50	"	"	"	"	"	"	

Date Sampled: 10/23/14 16:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	10/23/14	"	
Surrogate: Toluene-d8		89.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

SS04@2'
1410203-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/23/14 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	92	50	mg/kg	1	1410257	10/23/14	10/23/14	8015M	

Date Sampled: 10/23/14 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/23/14 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.32	0.010	mg/kg	1	1410258	10/23/14	10/23/14	EPA 8260B	
Benzene	1.7	0.20	"	100	"	"	10/23/14	"	
Toluene	ND	0.0050	"	1	"	"	10/23/14	"	
Ethylbenzene	3.7	0.50	"	100	"	"	10/23/14	"	
Xylenes (total)	84	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1900	50	"	"	"	"	"	"	

Date Sampled: 10/23/14 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	10/23/14	"	
Surrogate: Toluene-d8		91.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.7 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1410257 - EPA 3550A

Blank (1410257-BLK1)

Prepared & Analyzed: 10/23/14

C10-C28 (DRO) ND 50 mg/kg

LCS (1410257-BS1)

Prepared & Analyzed: 10/23/14

C10-C28 (DRO) 559 50 mg/kg 501 112 73-134

Matrix Spike (1410257-MS1)

Source: 1410200-01

Prepared & Analyzed: 10/23/14

C10-C28 (DRO) 581 50 mg/kg 486 ND 119 50-148

Matrix Spike Dup (1410257-MSD1)

Source: 1410200-01

Prepared & Analyzed: 10/23/14

C10-C28 (DRO) 547 50 mg/kg 498 ND 110 50-148 5.96 13

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1410258 - EPA 5030 Soil MS

Blank (1410258-BLK1)

Prepared & Analyzed: 10/23/14

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0320		"	0.0396	80.8	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400	96.4	21-167				

LCS (1410258-BS1)

Prepared & Analyzed: 10/23/14

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.118	0.0020	"	0.100	118	58-130				
Toluene	0.129	0.0050	"	0.100	129	61-134				
Ethylbenzene	0.128	0.0050	"	0.0992	129	74-139				
m,p-Xylene	0.256	0.010	"	0.200	128	73-137				
o-Xylene	0.126	0.0050	"	0.0984	128	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0324		"	0.0396	81.7	23-173				
Surrogate: Toluene-d8	0.0409		"	0.0400	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400	95.7	21-167				

Matrix Spike (1410258-MS1)

Source: 1410200-01

Prepared & Analyzed: 10/23/14

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.110	0.0020	"	0.0931	ND	119	30-131			
Toluene	0.118	0.0050	"	0.0931	ND	127	30-134			
Ethylbenzene	0.119	0.0050	"	0.0924	ND	128	22-153			
m,p-Xylene	0.237	0.010	"	0.186	ND	127	10-159			
o-Xylene	0.117	0.0050	"	0.0916	ND	127	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0303		"	0.0369	82.3	23-173				
Surrogate: Toluene-d8	0.0376		"	0.0372	101	20-170				
Surrogate: 4-Bromofluorobenzene	0.0357		"	0.0372	95.8	21-167				

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1410258 - EPA 5030 Soil MS

Matrix Spike Dup (1410258-MSD1)		Source: 1410200-01			Prepared & Analyzed: 10/23/14					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.111	0.0020	"	0.0929	ND	120	30-131	0.946	34	
Toluene	0.119	0.0050	"	0.0929	ND	128	30-134	0.521	30	
Ethylbenzene	0.119	0.0050	"	0.0922	ND	130	22-153	0.752	24	
m,p-Xylene	0.236	0.010	"	0.186	ND	127	10-159	0.0916	68	
o-Xylene	0.119	0.0050	"	0.0914	ND	130	31-151	1.64	38	
Surrogate: 1,2-Dichloroethane-d4		0.0302	"	0.0368		82.0	23-173			
Surrogate: Toluene-d8		0.0377	"	0.0372		101	20-170			
Surrogate: 4-Bromofluorobenzene		0.0355	"	0.0372		95.5	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkiller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
10/24/14 06:39

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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.

A handwritten signature in black ink, appearing to be 'MSW'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 26, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Wiedenkiller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 04/24/15 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Wiedenkiller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS08@5'	1504242-01	Soil	04/24/15 11:00	04/24/15 15:50
SS10@4'	1504242-02	Soil	04/24/15 11:08	04/24/15 15:50
SS13@4'	1504242-03	Soil	04/24/15 12:00	04/24/15 15:50

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Summit Scientific

1504242

741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Client: Noble/Tasman

Address: 6899 Pecos St Unit C

City/State/Zip: Denver, Co 80221

Phone: 303 487 1225 Fax:

Sampler Name: Andrew T. Felt

Project Manager: Dan Wade, Invoice:

E-Mail:

Project Name: Weidenkeller 1-1

Project Number:

Page 1 of 1

[illegible]

www.s2scientific.com

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

SS08@5'
1504242-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 04/24/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	76	50	mg/kg	1	1504263	04/24/15	04/24/15	8015M	

Date Sampled: 04/24/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		114 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 04/24/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504262	04/24/15	04/24/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0072	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.11	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 04/24/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		212 %	21-167		"	"	"	"	S-02

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

SS10@4'
1504242-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/24/15 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	970	50	mg/kg	1	1504263	04/24/15	04/24/15	8015M	

Date Sampled: **04/24/15 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		118 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/24/15 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.078	0.010	mg/kg	1	1504262	04/24/15	04/25/15	EPA 8260B	
Benzene	0.020	0.0020	"	"	"	"	"	"	
Toluene	0.0093	0.0050	"	"	"	"	"	"	
Ethylbenzene	4.8	0.50	"	100	"	"	04/24/15	"	
Xylenes (total)	91	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3300	50	"	"	"	"	"	"	

Date Sampled: **04/24/15 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		373 %	23-173		"	"	04/25/15	"	S-02
<i>Surrogate: Toluene-d8</i>		4750 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		265 %	21-167		"	"	"	"	S-02

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **04/24/15 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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
Denver CO, 80221

Project: Wiedenkiller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

SS10@4'
1504242-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Analyte	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	828	11.8 mg/kg dry	1	1504251	04/24/15	04/24/15	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	190	5.88	"	"	"	"	"	
Sodium	51.6	5.88	"	"	"	"	"	

Date Sampled: 04/24/15 11:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.420		units	"	1504266	04/26/15	04/26/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 04/24/15 11:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.60	0.0100	mmhos/cm	1	1504248	04/24/15	04/24/15	SM 2510B	

Date Sampled: 04/24/15 11:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.48	0.100	pH Units	"	1504250	04/24/15	04/24/15	EPA 9045	

Date Sampled: 04/24/15 11:08

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	"	1504255	04/24/15	04/26/15	% calculation	

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkiller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

SS13@4'
1504242-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/24/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504263	04/24/15	04/24/15	8015M	

Date Sampled: **04/24/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		119 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/24/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1504262	04/24/15	04/24/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **04/24/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504263 - EPA 3550A

Blank (1504263-BLK1)

Prepared & Analyzed: 04/24/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	14.4		"	12.2		118	30-150			

LCS (1504263-BS1)

Prepared & Analyzed: 04/24/15

C10-C28 (DRO)	535	50	mg/kg	501		107	73-134			
Surrogate: o-Terphenyl	13.8		"	12.2		113	30-150			

Matrix Spike (1504263-MS1)

Source: 1504243-01

Prepared & Analyzed: 04/24/15

C10-C28 (DRO)	506	50	mg/kg	474	36.2	99.3	50-148			
Surrogate: o-Terphenyl	12.6		"	11.5		110	30-150			

Matrix Spike Dup (1504263-MSD1)

Source: 1504243-01

Prepared & Analyzed: 04/24/15

C10-C28 (DRO)	530	50	mg/kg	473	36.2	105	50-148	4.61	13	
Surrogate: o-Terphenyl	12.7		"	11.5		110	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504262 - EPA 5030 Soil MS

Blank (1504262-BLK1)

Prepared & Analyzed: 04/24/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0396	103	23-173				
Surrogate: Toluene-d8	0.0412		"	0.0400	103	20-170				
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400	105	21-167				

LCS (1504262-BS1)

Prepared & Analyzed: 04/24/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0721	0.0020	"	0.100	72.1	58-130				
Toluene	0.0914	0.0050	"	0.100	91.4	61-134				
Ethylbenzene	0.0937	0.0050	"	0.0992	94.4	74-139				
m,p-Xylene	0.192	0.010	"	0.200	96.3	73-137				
o-Xylene	0.0996	0.0050	"	0.0984	101	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0396	102	23-173				
Surrogate: Toluene-d8	0.0398		"	0.0400	99.4	20-170				
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400	100	21-167				

Matrix Spike (1504262-MS1)

Source: 1504243-01

Prepared & Analyzed: 04/24/15

Naphthalene	0.00977	0.010	mg/kg		0.0183		10-158			
Benzene	0.0681	0.0020	"	0.0938	ND	72.6	30-131			
Toluene	0.0859	0.0050	"	0.0938	ND	91.5	30-134			
Ethylbenzene	0.106	0.0050	"	0.0931	0.0179	95.2	22-153			
m,p-Xylene	0.263	0.010	"	0.187	0.110	81.8	10-159			
o-Xylene	0.104	0.0050	"	0.0923	ND	113	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0326		"	0.0371		87.7	23-173			
Surrogate: Toluene-d8	0.0495		"	0.0375		132	20-170			
Surrogate: 4-Bromofluorobenzene	0.0536		"	0.0375		143	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504262 - EPA 5030 Soil MS

Matrix Spike Dup (1504262-MSD1)			Source: 1504243-01		Prepared & Analyzed: 04/24/15					
Naphthalene	0.0171	0.010	mg/kg		0.0183		10-158	54.4	42	
Benzene	0.0729	0.0020	"	0.0986	ND	73.9	30-131	6.76	34	
Toluene	0.0875	0.0050	"	0.0986	ND	88.7	30-134	1.87	30	
Ethylbenzene	0.114	0.0050	"	0.0978	0.0179	98.4	22-153	7.01	24	
m,p-Xylene	0.310	0.010	"	0.197	0.110	102	10-159	16.5	68	
o-Xylene	0.107	0.0050	"	0.0970	ND	111	31-151	2.82	38	
Surrogate: 1,2-Dichloroethane-d4	0.0293		"	0.0391		75.1	23-173			
Surrogate: Toluene-d8	0.0539		"	0.0394		137	20-170			
Surrogate: 4-Bromofluorobenzene	0.0580		"	0.0394		147	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504251 - General Preparation

Blank (1504251-BLK1)

Prepared & Analyzed: 04/24/15

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1504251-BS1)

Prepared & Analyzed: 04/24/15

Calcium	506	10.0	mg/kg wet	500	101	82.9-118
Magnesium	431	5.00	"	500	86.2	77.1-123
Sodium	432	5.00	"	500	86.4	71-129

Duplicate (1504251-DUP1)

Source: 1504219-01

Prepared & Analyzed: 04/24/15

Calcium	9540	8.65	mg/kg wet	9560	0.252	200
Magnesium	267	4.33	"	297	10.8	200
Sodium	15100	4.33	"	15000	0.758	200

Matrix Spike (1504251-MS1)

Source: 1504219-01

Prepared & Analyzed: 04/24/15

Calcium	9330	10.0	mg/kg wet	459	9560	NR	75-125	QM-07
Magnesium	675	5.00	"	459	297	82.3	75-125	
Sodium	15200	5.00	"	459	15000	44.6	75-125	QM-07

Matrix Spike Dup (1504251-MSD1)

Source: 1504219-01

Prepared & Analyzed: 04/24/15

Calcium	10300	8.18	mg/kg wet	409	9560	189	75-125	10.2	25	QM-07
Magnesium	636	4.09	"	409	297	82.8	75-125	5.91	25	
Sodium	16100	4.09	"	409	15000	270	75-125	5.74	25	QM-07

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504248 - General Preparation

Blank (1504248-BLK1)

Prepared & Analyzed: 04/24/15

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1504248-BS1)

Prepared & Analyzed: 04/24/15

Specific Conductance (EC) 4.77 0.0100 mmhos/cm 5.00 95.4 90-110

Duplicate (1504248-DUP1)

Source: 1504219-01

Prepared & Analyzed: 04/24/15

Specific Conductance (EC) 121 0.0100 mmhos/cm 125 3.09 20

Batch 1504250 - General Preparation

LCS (1504250-BS1)

Prepared & Analyzed: 04/24/15

pH 7.90 0.100 pH Units 8.00 98.8 90-110

Duplicate (1504250-DUP1)

Source: 1504219-01

Prepared & Analyzed: 04/24/15

pH 7.77 0.100 pH Units 7.78 0.129 20

Summit Scientific

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
Denver CO, 80221

Project: Wiedenkiller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
04/26/15 17:30

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 30, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 06/29/15 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS16@4'	1506278-01	Soil	06/29/15 10:00	06/29/15 17:45
BH01@4'	1506278-02	Soil	06/29/15 13:22	06/29/15 17:45
BH02@4'	1506278-03	Soil	06/29/15 13:30	06/29/15 17:45
GW01	1506278-04	Water	06/29/15 11:20	06/29/15 17:45

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

C. M. C. 1506278

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman

Address:

City/State/Zip:

Phone: _____

Sample	λ	θ	I	M
1	0.0	0.0	0.0	0.0
2	0.1	0.1	0.1	0.1
3	0.2	0.2	0.2	0.2
4	0.3	0.3	0.3	0.3
5	0.4	0.4	0.4	0.4
6	0.5	0.5	0.5	0.5
7	0.6	0.6	0.6	0.6
8	0.7	0.7	0.7	0.7
9	0.8	0.8	0.8	0.8
10	0.9	0.9	0.9	0.9
11	1.0	1.0	1.0	1.0
12	1.1	1.1	1.1	1.1
13	1.2	1.2	1.2	1.2
14	1.3	1.3	1.3	1.3
15	1.4	1.4	1.4	1.4
16	1.5	1.5	1.5	1.5
17	1.6	1.6	1.6	1.6
18	1.7	1.7	1.7	1.7
19	1.8	1.8	1.8	1.8
20	1.9	1.9	1.9	1.9
21	2.0	2.0	2.0	2.0
22	2.1	2.1	2.1	2.1
23	2.2	2.2	2.2	2.2
24	2.3	2.3	2.3	2.3
25	2.4	2.4	2.4	2.4
26	2.5	2.5	2.5	2.5
27	2.6	2.6	2.6	2.6
28	2.7	2.7	2.7	2.7
29	2.8	2.8	2.8	2.8
30	2.9	2.9	2.9	2.9
31	3.0	3.0	3.0	3.0
32	3.1	3.1	3.1	3.1
33	3.2	3.2	3.2	3.2
34	3.3	3.3	3.3	3.3
35	3.4	3.4	3.4	3.4
36	3.5	3.5	3.5	3.5
37	3.6	3.6	3.6	3.6
38	3.7	3.7	3.7	3.7
39	3.8	3.8	3.8	3.8
40	3.9	3.9	3.9	3.9
41	4.0	4.0	4.0	4.0
42	4.1	4.1	4.1	4.1
43	4.2	4.2	4.2	4.2
44	4.3	4.3	4.3	4.3
45	4.4	4.4	4.4	4.4
46	4.5	4.5	4.5	4.5
47	4.6	4.6	4.6	4.6
48	4.7	4.7	4.7	4.7
49	4.8	4.8	4.8	4.8
50	4.9	4.9	4.9	4.9
51	5.0	5.0	5.0	5.0
52	5.1	5.1	5.1	5.1
53	5.2	5.2	5.2	5.2
54	5.3	5.3	5.3	5.3
55	5.4	5.4	5.4	5.4
56	5.5	5.5	5.5	5.5
57	5.6	5.6	5.6	5.6
58	5.7	5.7	5.7	5.7
59	5.8	5.8	5.8	5.8
60	5.9	5.9	5.9	5.9
61	6.0	6.0	6.0	6.0
62	6.1	6.1	6.1	6.1
63	6.2	6.2	6.2	6.2
64	6.3	6.3	6.3	6.3
65	6.4	6.4	6.4	6.4
66	6.5	6.5	6.5	6.5
67	6.6	6.6	6.6	6.6
68	6.7	6.7	6.7	6.7
69	6.8	6.8	6.8	6.8
70	6.9	6.9	6.9	6.9
71	7.0	7.0	7.0	7.0
72	7.1	7.1	7.1	7.1
73	7.2	7.2	7.2	7.2
74	7.3	7.3	7.3	7.3
75	7.4	7.4	7.4	7.4
76	7.5	7.5	7.5	7.5
77	7.6	7.6	7.6	7.6
78	7.7	7.7	7.7	7.7
79	7.8	7.8	7.8	7.8

Sampler Name: Bred Margaret

Project Manager: Dan Wade, Invoice:

E-Mail:

Project Name: Weidenkeller 1-1

Project Number:

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

SS16@4'
1506278-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 06/29/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506354	06/29/15	06/29/15	8015M	

Date Sampled: 06/29/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 06/29/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1506355	06/29/15	06/29/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 06/29/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

BH01@4'
1506278-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 06/29/15 13:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506354	06/29/15	06/29/15	8015M	

Date Sampled: 06/29/15 13:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 06/29/15 13:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1506355	06/29/15	06/29/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 06/29/15 13:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.1 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

BH02@4'
1506278-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/29/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506354	06/29/15	06/29/15	8015M	

Date Sampled: **06/29/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/29/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1506355	06/29/15	06/29/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **06/29/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

GW01
1506278-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/29/15 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1.0	1.0		ug/l	1	1506359	06/29/15	06/29/15	EPA 8260B	
Toluene	9.3	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	10	1.0		"	"	"	"	"	"	

Date Sampled: **06/29/15 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		117 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		98.6 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %		45-146		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506354 - EPA 3550A

Blank (1506354-BLK1)

Prepared & Analyzed: 06/29/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.5		"	12.2		94.6	30-150			

LCS (1506354-BS1)

Prepared & Analyzed: 06/29/15

C10-C28 (DRO)	578	50	mg/kg	501		115	73-134			
Surrogate: o-Terphenyl	12.1		"	12.2		99.5	30-150			

Matrix Spike (1506354-MS1)

Source: 1506268-01

Prepared & Analyzed: 06/29/15

C10-C28 (DRO)	502	50	mg/kg	485	22.9	98.9	50-148			
Surrogate: o-Terphenyl	11.4		"	11.8		96.8	30-150			

Matrix Spike Dup (1506354-MSD1)

Source: 1506268-01

Prepared & Analyzed: 06/29/15

C10-C28 (DRO)	519	50	mg/kg	493	22.9	101	50-148	3.29	13	
Surrogate: o-Terphenyl	11.7		"	12.0		97.1	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506355 - EPA 5030 Soil MS

Blank (1506355-BLK1)

Prepared & Analyzed: 06/29/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0433</i>		<i>"</i>	<i>0.0396</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.8</i>	<i>21-167</i>			

LCS (1506355-BS1)

Prepared & Analyzed: 06/29/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.109	0.0020	"	0.100		109	58-130			
Toluene	0.109	0.0050	"	0.100		109	61-134			
Ethylbenzene	0.108	0.0050	"	0.0992		108	74-139			
m,p-Xylene	0.213	0.010	"	0.200		107	73-137			
o-Xylene	0.113	0.0050	"	0.0984		115	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0445</i>		<i>"</i>	<i>0.0396</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0383</i>		<i>"</i>	<i>0.0400</i>		<i>95.7</i>	<i>21-167</i>			

Matrix Spike (1506355-MS1)

Source: 1506268-01

Prepared & Analyzed: 06/29/15

Naphthalene	ND	0.010	mg/kg				10-158			
Benzene	0.103	0.0020	"	0.0958		108	30-131			
Toluene	0.0993	0.0050	"	0.0958		104	30-134			
Ethylbenzene	0.0987	0.0050	"	0.0950		104	22-153			
m,p-Xylene	0.196	0.010	"	0.191		103	10-159			
o-Xylene	0.106	0.0050	"	0.0943		113	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0431</i>		<i>"</i>	<i>0.0379</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0383</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0376</i>		<i>"</i>	<i>0.0383</i>		<i>98.2</i>	<i>21-167</i>			

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506355 - EPA 5030 Soil MS

Matrix Spike Dup (1506355-MSD1)

Source: 1506268-01

Prepared & Analyzed: 06/29/15

Naphthalene	ND	0.010	mg/kg				10-158		42	
Benzene	0.100	0.0020	"	0.0994	101	30-131	3.34		34	
Toluene	0.0931	0.0050	"	0.0994	93.6	30-134	6.49		30	
Ethylbenzene	0.0937	0.0050	"	0.0986	95.0	22-153	5.18		24	
m,p-Xylene	0.185	0.010	"	0.198	93.3	10-159	5.96		68	
o-Xylene	0.102	0.0050	"	0.0978	104	31-151	4.24		38	
Surrogate: 1,2-Dichloroethane-d4	0.0458		"	0.0394	116	23-173				
Surrogate: Toluene-d8	0.0405		"	0.0398	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0398	102	21-167				

Batch 1506359 - EPA 5030 Water MS

Blank (1506359-BLK1)

Prepared & Analyzed: 06/29/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.5		"	13.2	117	37-154				
Surrogate: Toluene-d8	13.7		"	13.3	103	45-149				
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3	106	45-146				

LCS (1506359-BS1)

Prepared & Analyzed: 06/29/15

Benzene	31.2	1.0	ug/l	33.3	93.5	51-132				
Toluene	34.9	1.0	"	33.3	105	51-138				
Ethylbenzene	35.0	1.0	"	33.1	106	58-146				
m,p-Xylene	68.3	2.0	"	66.5	103	57-144				
o-Xylene	35.7	1.0	"	32.8	109	53-146				
Surrogate: 1,2-Dichloroethane-d4	14.9		"	13.2	113	37-154				
Surrogate: Toluene-d8	14.8		"	13.3	111	45-149				
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3	100	45-146				

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506359 - EPA 5030 Water MS

Matrix Spike (1506359-MS1)		Source: 1506272-01			Prepared & Analyzed: 06/29/15					
Benzene	56.2	1.0	ug/l	33.3	25.2	93.0	34-141			
Toluene	37.2	1.0	"	33.3	ND	112	27-151			
Ethylbenzene	41.3	1.0	"	33.1	ND	125	29-160			
m,p-Xylene	80.0	2.0	"	66.5	1.60	118	20-166			
o-Xylene	40.9	1.0	"	32.8	ND	125	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.5		"	13.2		117	37-154			
Surrogate: Toluene-d8	13.9		"	13.3		105	45-149			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	45-146			

Matrix Spike Dup (1506359-MSD1)		Source: 1506272-01			Prepared & Analyzed: 06/29/15					
Benzene	60.2	1.0	ug/l	33.3	25.2	105	34-141	6.81	32	
Toluene	39.0	1.0	"	33.3	ND	117	27-151	4.78	25	
Ethylbenzene	44.1	1.0	"	33.1	ND	133	29-160	6.53	50	
m,p-Xylene	85.4	2.0	"	66.5	1.60	126	20-166	6.48	36	
o-Xylene	44.6	1.0	"	32.8	ND	136	33-159	8.56	26	
Surrogate: 1,2-Dichloroethane-d4	16.3		"	13.2		124	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	45-146			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
06/30/15 06:34

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 01, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 06/30/15 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS17@5'	1506291-01	Soil	06/30/15 11:02	06/30/15 17:40
SS18@5'	1506291-02	Soil	06/30/15 11:04	06/30/15 17:40
SS19@5'	1506291-03	Soil	06/30/15 11:06	06/30/15 17:40
GW02	1506291-04	Water	06/30/15 11:10	06/30/15 17:40

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

C. r. r. c. 1506281

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman

Address:

City/State/Zip: _____

Phone:

Fax:

Sampler Name: Brad Margwaft

Project Manager: Dan Wade, Invoice: Raul Sanchez

E-Mail:

Project Name: Weiden Keller 1-1

Project Number:

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

SS17@5'
1506291-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 06/30/15 11:02

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	450	50	mg/kg	1	1506375	06/30/15	06/30/15	8015M	

Date Sampled: 06/30/15 11:02

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 06/30/15 11:02

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.51	0.010	mg/kg	1	1506374	06/30/15	06/30/15	EPA 8260B	
Benzene	0.30	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	6.1	0.50	"	100	"	"	"	"	
Xylenes (total)	99	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1600	50	"	"	"	"	"	"	

Date Sampled: 06/30/15 11:02

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		85.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		124 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

SS18@5'
1506291-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/30/15 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506375	06/30/15	06/30/15	8015M	

Date Sampled: **06/30/15 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/30/15 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1506374	06/30/15	06/30/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **06/30/15 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.5 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

SS19@5'
1506291-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/30/15 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1506375	06/30/15	06/30/15	8015M	

Date Sampled: **06/30/15 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/30/15 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1506374	06/30/15	06/30/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **06/30/15 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

GW02
1506291-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/30/15 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1506372	06/30/15	06/30/15	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	3.4	1.0		"	"	"	"	"	"	

Date Sampled: **06/30/15 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		125 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		94.7 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %		45-146		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506375 - EPA 3550A

Blank (1506375-BLK1)

Prepared & Analyzed: 06/30/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.2		"	12.2		99.6	30-150			

LCS (1506375-BS1)

Prepared & Analyzed: 06/30/15

C10-C28 (DRO)	512	50	mg/kg	501		102	73-134			
Surrogate: o-Terphenyl	13.1		"	12.2		107	30-150			

Matrix Spike (1506375-MS1)

Source: 1506291-02

Prepared & Analyzed: 06/30/15

C10-C28 (DRO)	482	50	mg/kg	501	35.7	89.0	50-148			
Surrogate: o-Terphenyl	12.0		"	12.2		98.4	30-150			

Matrix Spike Dup (1506375-MSD1)

Source: 1506291-02

Prepared & Analyzed: 06/30/15

C10-C28 (DRO)	489	50	mg/kg	501	35.7	90.4	50-148	1.43	13	
Surrogate: o-Terphenyl	12.1		"	12.2		99.5	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506372 - EPA 5030 Water MS

Blank (1506372-BLK1)

Prepared & Analyzed: 06/30/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	16.2		"	13.2		122	37-154			
Surrogate: Toluene-d8	12.6		"	13.3		94.3	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	45-146			

LCS (1506372-BS1)

Prepared & Analyzed: 06/30/15

Benzene	29.9	1.0	ug/l	33.3		89.8	51-132			
Toluene	32.9	1.0	"	33.3		98.7	51-138			
Ethylbenzene	43.3	1.0	"	33.1		131	58-146			
m,p-Xylene	83.7	2.0	"	66.5		126	57-144			
o-Xylene	43.9	1.0	"	32.8		134	53-146			
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.2		121	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	45-146			

Matrix Spike (1506372-MS1)

Source: 1506287-04

Prepared & Analyzed: 06/30/15

Benzene	31.5	1.0	ug/l	33.3	ND	94.4	34-141			
Toluene	35.1	1.0	"	33.3	ND	105	27-151			
Ethylbenzene	45.3	1.0	"	33.1	ND	137	29-160			
m,p-Xylene	88.7	2.0	"	66.5	ND	133	20-166			
o-Xylene	45.8	1.0	"	32.8	ND	140	33-159			
Surrogate: 1,2-Dichloroethane-d4	16.6		"	13.2		126	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		97.0	45-146			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506372 - EPA 5030 Water MS

Matrix Spike Dup (1506372-MSD1)				Source: 1506287-04		Prepared & Analyzed: 06/30/15				
Benzene	30.8	1.0	ug/l	33.3	ND	92.3	34-141	2.35	32	
Toluene	35.0	1.0	"	33.3	ND	105	27-151	0.400	25	
Ethylbenzene	44.3	1.0	"	33.1	ND	134	29-160	2.23	50	
m,p-Xylene	87.7	2.0	"	66.5	ND	132	20-166	1.17	36	
o-Xylene	45.2	1.0	"	32.8	ND	138	33-159	1.32	26	
Surrogate: 1,2-Dichloroethane-d4	16.6		"	13.2		126	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.1	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.1	45-146			

Batch 1506374 - EPA 5030 Soil MS

Blank (1506374-BLK1)				Prepared & Analyzed: 06/30/15						
Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0396		102	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.2	21-167			

LCS (1506374-BS1)				Prepared & Analyzed: 06/30/15						
Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.110	0.0020	"	0.100		110	58-130			
Toluene	0.110	0.0050	"	0.100		110	61-134			
Ethylbenzene	0.121	0.0050	"	0.0992		122	74-139			
m,p-Xylene	0.236	0.010	"	0.200		118	73-137			
o-Xylene	0.118	0.0050	"	0.0984		119	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0396		101	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0400		92.8	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506374 - EPA 5030 Soil MS

Matrix Spike (1506374-MS1)

Source: 1506291-02

Prepared & Analyzed: 06/30/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.115	0.0020	"	0.100	ND	115	30-131			
Toluene	0.113	0.0050	"	0.100	ND	113	30-134			
Ethylbenzene	0.119	0.0050	"	0.0992	ND	120	22-153			
m,p-Xylene	0.246	0.010	"	0.200	0.0263	110	10-159			
o-Xylene	0.116	0.0050	"	0.0984	ND	118	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0396		104	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	21-167			

Matrix Spike Dup (1506374-MSD1)

Source: 1506291-02

Prepared & Analyzed: 06/30/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.115	0.0020	"	0.100	ND	115	30-131	0.757	34	
Toluene	0.112	0.0050	"	0.100	ND	112	30-134	1.55	30	
Ethylbenzene	0.121	0.0050	"	0.0992	ND	122	22-153	1.60	24	
m,p-Xylene	0.250	0.010	"	0.200	0.0263	112	10-159	1.39	68	
o-Xylene	0.118	0.0050	"	0.0984	ND	120	31-151	1.92	38	
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0396		102	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.2	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/01/15 06:50

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 02, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/01/15 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS20@5'	1507002-01	Soil	07/01/15 12:20	07/01/15 17:15
SS21@5'	1507002-02	Soil	07/01/15 12:24	07/01/15 17:15
GW03	1507002-03	Water	07/01/15 13:00	07/01/15 17:15

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

C. M. C. 1507002

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman

Address:

City/State/Zip: _____

Phone:

Fax:

Sampler Name: Brad Marg, ex. 7

Project Manager: Dan Wade, Invoice: Raul Sanchez

E-Mail:

Project Name: Walden Keller + Walden Keller - 1

Project Number:

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

SS20@5'
1507002-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/01/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507008	07/01/15	07/01/15	8015M	

Date Sampled: 07/01/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/01/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507009	07/01/15	07/01/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/01/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

SS21@5'
1507002-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/01/15 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507008	07/01/15	07/01/15	8015M	

Date Sampled: **07/01/15 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/01/15 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.013	0.010	mg/kg	1	1507009	07/01/15	07/02/15	EPA 8260B	
Benzene	0.0037	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.057	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/01/15 12:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		122 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

GW03
1507002-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/01/15 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	84	1.0	ug/l	1	1506368	07/01/15	07/01/15	EPA 8260B	
Toluene	230	1.0	"	"	"	"	"	"	
Ethylbenzene	160	1.0	"	"	"	"	"	"	
Xylenes (total)	3100	100	"	100	"	"	07/01/15	"	

Date Sampled: 07/01/15 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		132 %	37-154		"	"	07/01/15	"	
<i>Surrogate: Toluene-d8</i>		114 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93.9 %	45-146		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507008 - EPA 3550A

Blank (1507008-BLK1)

Prepared & Analyzed: 07/01/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.1		"	12.2		98.9	30-150			

LCS (1507008-BS1)

Prepared & Analyzed: 07/01/15

C10-C28 (DRO)	483	50	mg/kg	501		96.4	73-134			
Surrogate: o-Terphenyl	12.4		"	12.2		102	30-150			

Matrix Spike (1507008-MS1)

Source: 1506285-01

Prepared & Analyzed: 07/01/15

C10-C28 (DRO)	463	50	mg/kg	474	28.7	91.5	50-148			
Surrogate: o-Terphenyl	11.8		"	11.6		103	30-150			

Matrix Spike Dup (1507008-MSD1)

Source: 1506285-01

Prepared & Analyzed: 07/01/15

C10-C28 (DRO)	449	50	mg/kg	474	28.7	88.5	50-148	3.11	13	
Surrogate: o-Terphenyl	11.7		"	11.6		102	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1506368 - EPA 5030 Water MS

LCS (1506368-BS1)

Prepared: 06/30/15 Analyzed: 07/01/15

Benzene	29.9	1.0	ug/l	33.3		89.8	51-132			
Toluene	33.7	1.0	"	33.3		101	51-138			
Ethylbenzene	44.0	1.0	"	33.1		133	58-146			
m,p-Xylene	86.0	2.0	"	66.5		129	57-144			
o-Xylene	45.5	1.0	"	32.8		139	53-146			
Surrogate: 1,2-Dichloroethane-d4	15.9		"	13.2		121	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.3	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	45-146			

Matrix Spike (1506368-MS1)

Source: 1506277-01

Prepared: 06/30/15 Analyzed: 07/01/15

Benzene	31.9	1.0	ug/l	33.3	ND	95.7	34-141			
Toluene	34.5	1.0	"	33.3	ND	103	27-151			
Ethylbenzene	44.6	1.0	"	33.1	ND	135	29-160			
m,p-Xylene	87.7	2.0	"	66.5	ND	132	20-166			
o-Xylene	45.7	1.0	"	32.8	ND	139	33-159			
Surrogate: 1,2-Dichloroethane-d4	16.5		"	13.2		125	37-154			
Surrogate: Toluene-d8	12.7		"	13.3		95.3	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.6	45-146			

Matrix Spike Dup (1506368-MSD1)

Source: 1506277-01

Prepared: 06/30/15 Analyzed: 07/01/15

Benzene	32.0	1.0	ug/l	33.3	ND	96.1	34-141	0.438	32	
Toluene	34.2	1.0	"	33.3	ND	103	27-151	0.874	25	
Ethylbenzene	45.8	1.0	"	33.1	ND	139	29-160	2.63	50	
m,p-Xylene	89.3	2.0	"	66.5	ND	134	20-166	1.83	36	
o-Xylene	46.3	1.0	"	32.8	ND	141	33-159	1.15	26	
Surrogate: 1,2-Dichloroethane-d4	16.5		"	13.2		125	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		95.8	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.8	45-146			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507009 - EPA 5030 Soil MS

Blank (1507009-BLK1)

Prepared & Analyzed: 07/01/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0453		"	0.0396	114	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400	101	21-167				

LCS (1507009-BS1)

Prepared & Analyzed: 07/01/15

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.103	0.0020	"	0.100	103	58-130				
Toluene	0.102	0.0050	"	0.100	102	61-134				
Ethylbenzene	0.105	0.0050	"	0.0992	106	74-139				
m,p-Xylene	0.211	0.010	"	0.200	106	73-137				
o-Xylene	0.110	0.0050	"	0.0984	112	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0396	111	23-173				
Surrogate: Toluene-d8	0.0400		"	0.0400	99.9	20-170				
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400	96.8	21-167				

Matrix Spike (1507009-MS1)

Source: 1506285-01

Prepared & Analyzed: 07/01/15

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0865	0.0020	"	0.0986	ND	87.8	30-131			
Toluene	0.0694	0.0050	"	0.0986	ND	70.4	30-134			
Ethylbenzene	0.0714	0.0050	"	0.0978	ND	72.9	22-153			
m,p-Xylene	0.147	0.010	"	0.197	ND	74.7	10-159			
o-Xylene	0.0854	0.0050	"	0.0970	ND	88.0	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0391	116	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0394	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0372		"	0.0394	94.4	21-167				

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507009 - EPA 5030 Soil MS

Matrix Spike Dup (1507009-MSD1)		Source: 1506285-01			Prepared & Analyzed: 07/01/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0984	0.0020	"	0.0984	ND	100	30-131	12.8	34	
Toluene	0.0803	0.0050	"	0.0984	ND	81.5	30-134	14.5	30	
Ethylbenzene	0.0853	0.0050	"	0.0976	ND	87.4	22-153	17.8	24	
m,p-Xylene	0.174	0.010	"	0.196	ND	88.6	10-159	16.8	68	
o-Xylene	0.0994	0.0050	"	0.0969	ND	103	31-151	15.1	38	
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0390		101	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0394		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0394		96.3	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/02/15 07:05

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 03, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/02/15 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS23@4'	1507054-01	Soil	07/02/15 09:50	07/02/15 18:10
SS24@5'	1507054-02	Soil	07/02/15 10:00	07/02/15 18:10
SS26@5'	1507054-03	Soil	07/02/15 10:22	07/02/15 18:10
GW04	1507054-04	Water	07/02/15 09:45	07/02/15 18:10

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

Comp. # 1507054

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman

Address:

City/State/Zip: _____

Phone:

Fax: _____

Sampler Name: Brad Marquart

Project Manager: Dan Wade, Invoice: Raul Sanchez

E-Mail:

Project Name: Weidenkeller 1-1

Project Number:

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

SS23@4'
1507054-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/02/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507037	07/02/15	07/02/15	8015M	

Date Sampled: 07/02/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507036	07/02/15	07/02/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/02/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

SS24@5'
1507054-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/02/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507037	07/02/15	07/02/15	8015M	

Date Sampled: **07/02/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/02/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507036	07/02/15	07/02/15	EPA 8260B	
Benzene	0.0066	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/02/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

SS26@5'
1507054-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/02/15 10:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507037	07/02/15	07/02/15	8015M	

Date Sampled: 07/02/15 10:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/15 10:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507036	07/02/15	07/02/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/02/15 10:22

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		127 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

GW04
1507054-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/02/15 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	9.2	1.0	ug/l	1	1507035	07/02/15	07/02/15	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	18	1.0	"	"	"	"	"	"	
Xylenes (total)	350	1.0	"	"	"	"	"	"	

Date Sampled: 07/02/15 09:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		105 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507037 - EPA 3550A

Blank (1507037-BLK1)

Prepared & Analyzed: 07/02/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.2		"	12.2		99.9	30-150			

LCS (1507037-BS1)

Prepared & Analyzed: 07/02/15

C10-C28 (DRO)	458	50	mg/kg	501		91.5	73-134			
Surrogate: o-Terphenyl	12.6		"	12.2		103	30-150			

Matrix Spike (1507037-MS1)

Source: 1507054-01

Prepared & Analyzed: 07/02/15

C10-C28 (DRO)	430	50	mg/kg	486	10.6	86.2	50-148			
Surrogate: o-Terphenyl	12.0		"	11.8		101	30-150			

Matrix Spike Dup (1507037-MSD1)

Source: 1507054-01

Prepared & Analyzed: 07/02/15

C10-C28 (DRO)	421	50	mg/kg	466	10.6	88.2	50-148	1.98	13	
Surrogate: o-Terphenyl	11.7		"	11.3		103	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507035 - EPA 5030 Water MS

Blank (1507035-BLK1)

Prepared & Analyzed: 07/02/15

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.2		"	13.2		115	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.3	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.8	45-146			

LCS (1507035-BS1)

Prepared & Analyzed: 07/02/15

Benzene	33.0	1.0	ug/l	33.3		98.9	51-132			
Toluene	32.9	1.0	"	33.3		98.8	51-138			
Ethylbenzene	36.2	1.0	"	33.1		109	58-146			
m,p-Xylene	72.7	2.0	"	66.5		109	57-144			
o-Xylene	36.8	1.0	"	32.8		112	53-146			
Surrogate: 1,2-Dichloroethane-d4	15.5		"	13.2		118	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	45-146			

Matrix Spike (1507035-MS1)

Source: 1507013-01

Prepared & Analyzed: 07/02/15

Benzene	33.4	1.0	ug/l	33.3	ND	100	34-141			
Toluene	33.4	1.0	"	33.3	ND	100	27-151			
Ethylbenzene	35.7	1.0	"	33.1	ND	108	29-160			
m,p-Xylene	71.7	2.0	"	66.5	ND	108	20-166			
o-Xylene	36.1	1.0	"	32.8	ND	110	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.8		"	13.2		120	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.9	45-146			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507035 - EPA 5030 Water MS

Matrix Spike Dup (1507035-MSD1)				Source: 1507013-01		Prepared & Analyzed: 07/02/15				
Benzene	33.7	1.0	ug/l	33.3	ND	101	34-141	0.835	32	
Toluene	33.5	1.0	"	33.3	ND	101	27-151	0.329	25	
Ethylbenzene	36.5	1.0	"	33.1	ND	110	29-160	2.35	50	
m,p-Xylene	73.0	2.0	"	66.5	ND	110	20-166	1.91	36	
o-Xylene	36.8	1.0	"	32.8	ND	112	33-159	1.84	26	
Surrogate: 1,2-Dichloroethane-d4	17.3		"	13.2		131	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		102	45-146			

Batch 1507036 - EPA 5030 Soil MS

Blank (1507036-BLK1)				Prepared & Analyzed: 07/02/15						
Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0482		"	0.0396		122	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.5	21-167			

LCS (1507036-BS1)				Prepared & Analyzed: 07/02/15						
Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0929	0.0020	"	0.100		92.9	58-130			
Toluene	0.0905	0.0050	"	0.100		90.5	61-134			
Ethylbenzene	0.113	0.0050	"	0.0992		114	74-139			
m,p-Xylene	0.223	0.010	"	0.200		112	73-137			
o-Xylene	0.115	0.0050	"	0.0984		117	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0472		"	0.0396		119	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.7	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507036 - EPA 5030 Soil MS

Matrix Spike (1507036-MS1)

Source: 1507054-01

Prepared & Analyzed: 07/02/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0865	0.0020	"	0.0947	ND	91.3	30-131			
Toluene	0.0838	0.0050	"	0.0947	ND	88.4	30-134			
Ethylbenzene	0.101	0.0050	"	0.0939	ND	108	22-153			
m,p-Xylene	0.200	0.010	"	0.189	ND	106	10-159			
o-Xylene	0.102	0.0050	"	0.0932	ND	109	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0458		"	0.0375		122	23-173			
Surrogate: Toluene-d8	0.0373		"	0.0379		98.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0379		96.7	21-167			

Matrix Spike Dup (1507036-MSD1)

Source: 1507054-01

Prepared & Analyzed: 07/02/15

Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0898	0.0020	"	0.0986	ND	91.1	30-131	3.79	34	
Toluene	0.0852	0.0050	"	0.0986	ND	86.4	30-134	1.72	30	
Ethylbenzene	0.108	0.0050	"	0.0978	ND	111	22-153	6.97	24	
m,p-Xylene	0.211	0.010	"	0.197	ND	107	10-159	5.30	68	
o-Xylene	0.109	0.0050	"	0.0970	ND	113	31-151	7.13	38	
Surrogate: 1,2-Dichloroethane-d4	0.0474		"	0.0391		121	23-173			
Surrogate: Toluene-d8	0.0372		"	0.0394		94.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0394		97.4	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/03/15 06:32

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 07, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/06/15 17:42. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS27@5'	1507063-01	Soil	07/06/15 11:45	07/06/15 17:42
SS28@5'	1507063-02	Soil	07/06/15 12:00	07/06/15 17:42
SS30@5'	1507063-03	Soil	07/06/15 12:55	07/06/15 17:42

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

Comp. C. - 1507063

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: _____ Noble/Tasman
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: Brad Marquardt

Project Manager: Dan Wade, Invoice: Raul Sanchez
E-Mail: _____
Project Name: Weiden Keller 1-1
Project Number: _____

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

SS27@5'
1507063-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/06/15 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507051	07/06/15	07/06/15	8015M	

Date Sampled: 07/06/15 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/06/15 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507050	07/06/15	07/06/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/06/15 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

SS28@5'
1507063-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/06/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507051	07/06/15	07/06/15	8015M	

Date Sampled: 07/06/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/06/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507050	07/06/15	07/06/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/06/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

SS30@5'
1507063-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/06/15 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	170	50	mg/kg	1	1507051	07/06/15	07/06/15	8015M	

Date Sampled: 07/06/15 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/06/15 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.31	0.010	mg/kg	1	1507050	07/06/15	07/06/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	14	1.0	"	100	"	"	"	"	
Gasoline Range Hydrocarbons	830	50	"	"	"	"	"	"	

Date Sampled: 07/06/15 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507051 - EPA 3550A

Blank (1507051-BLK1)

Prepared & Analyzed: 07/06/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.7 " 12.2 104 30-150

LCS (1507051-BS1)

Prepared & Analyzed: 07/06/15

C10-C28 (DRO) 460 50 mg/kg 501 91.7 73-134

Surrogate: o-Terphenyl 12.5 " 12.2 102 30-150

Matrix Spike (1507051-MS1)

Source: 1507065-01

Prepared & Analyzed: 07/06/15

C10-C28 (DRO) 439 50 mg/kg 481 11.0 89.0 50-148

Surrogate: o-Terphenyl 12.1 " 11.7 103 30-150

Matrix Spike Dup (1507051-MSD1)

Source: 1507065-01

Prepared & Analyzed: 07/06/15

C10-C28 (DRO) 451 50 mg/kg 481 11.0 91.6 50-148 2.77 13

Surrogate: o-Terphenyl 12.2 " 11.7 104 30-150

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507050 - EPA 5030 Soil MS

Blank (1507050-BLK1)

Prepared & Analyzed: 07/06/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0468		"	0.0396	118	23-173				
Surrogate: Toluene-d8	0.0394		"	0.0400	98.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400	99.8	21-167				

LCS (1507050-BS1)

Prepared & Analyzed: 07/06/15

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0856	0.0020	"	0.100	85.6	58-130				
Toluene	0.0908	0.0050	"	0.100	90.8	61-134				
Ethylbenzene	0.118	0.0050	"	0.0992	119	74-139				
m,p-Xylene	0.231	0.010	"	0.200	116	73-137				
o-Xylene	0.118	0.0050	"	0.0984	120	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0461		"	0.0396	117	23-173				
Surrogate: Toluene-d8	0.0407		"	0.0400	102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400	98.6	21-167				

Matrix Spike (1507050-MS1)

Source: 1507065-01

Prepared & Analyzed: 07/06/15

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0894	0.0020	"	0.0938	ND	95.2	30-131			
Toluene	0.0966	0.0050	"	0.0938	ND	103	30-134			
Ethylbenzene	0.125	0.0050	"	0.0931	ND	134	22-153			
m,p-Xylene	0.246	0.010	"	0.187	ND	131	10-159			
o-Xylene	0.126	0.0050	"	0.0923	ND	136	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0449		"	0.0371	121	23-173				
Surrogate: Toluene-d8	0.0376		"	0.0375	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0375	100	21-167				

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507050 - EPA 5030 Soil MS

Matrix Spike Dup (1507050-MSD1)		Source: 1507065-01			Prepared & Analyzed: 07/06/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0878	0.0020	"	0.0929	ND	94.5	30-131	1.72	34	
Toluene	0.0953	0.0050	"	0.0929	ND	103	30-134	1.31	30	
Ethylbenzene	0.128	0.0050	"	0.0922	ND	139	22-153	2.19	24	
m,p-Xylene	0.249	0.010	"	0.186	ND	134	10-159	1.44	68	
o-Xylene	0.129	0.0050	"	0.0914	ND	141	31-151	2.91	38	
Surrogate: 1,2-Dichloroethane-d4		0.0468	"	0.0368		127	23-173			
Surrogate: Toluene-d8		0.0361	"	0.0372		97.2	20-170			
Surrogate: 4-Bromofluorobenzene		0.0367	"	0.0372		98.7	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/07/15 06:23

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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.

A handwritten signature in black ink, appearing to be 'MSW'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 08, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/07/15 18:29. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS31@5'	1507077-01	Soil	07/07/15 10:40	07/07/15 18:29
SS32@5'	1507077-02	Soil	07/07/15 10:42	07/07/15 18:29
SS33@5'	1507077-03	Soil	07/07/15 12:00	07/07/15 18:29

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

Comp. No. 1507077

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman

Address:

City/State/Zip: _____

Phone:

Fax:

Sampler Name: Brad Marguast

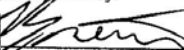
Project Manager: Dan Wade, Invoice: Raul Sanchez

E-Mail:

Project Name: Weidenkeller 1-1

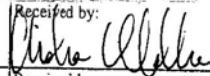
Project Number:

Sample Description			Time Date Sampled	Date Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions		
						HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	A1 - Canister Serial #	Other (Specify)	8260 BTEX	8260B GTEXN		8015 DRO	
SS31@5'			1040	7/7/15	1			X			X					X		
SS32@5'			1042	7/7/15	1			X			X					X		
SS33@5'			1200	7/7/15	1			X			X					X		

Relinquished by:  Date/Time: 7/7/15

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Received by:  Date/Time: 7/7/15

Received by: _____ Date/Time: _____

Received in Lab by: _____ Date/Time: _____

Zero Around Time (Check)

Same Day ☒ 72 Hours ☐

24 Hours ☐ Standard ☐

48 Hours ☐

Sample Integrity: _____

Temperature Upon Receipt: 3.2

Intact: Yes ☒ No ☐

Notes:

N. data: no
need for that
EC analysis
mentioned.
on ice

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

SS31@5'
1507077-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/07/15 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507070	07/07/15	07/07/15	8015M	

Date Sampled: 07/07/15 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/07/15 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507069	07/07/15	07/07/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/07/15 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

SS32@5'
1507077-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/07/15 10:42

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507070	07/07/15	07/07/15	8015M	

Date Sampled: 07/07/15 10:42

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/07/15 10:42

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507069	07/07/15	07/07/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/07/15 10:42

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

SS33@5'
1507077-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/07/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507070	07/07/15	07/07/15	8015M	

Date Sampled: 07/07/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/07/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.14	0.010	mg/kg	1	1507069	07/07/15	07/07/15	EPA 8260B	
Benzene	0.030	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	16	0.10	"	10	"	"	"	"	
Gasoline Range Hydrocarbons	240	50	"	"	"	"	"	"	

Date Sampled: 07/07/15 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		127 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		125 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		142 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507070 - EPA 3550A

Blank (1507070-BLK1)

Prepared & Analyzed: 07/07/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.7 " 12.2 104 30-150

LCS (1507070-BS1)

Prepared & Analyzed: 07/07/15

C10-C28 (DRO) 540 50 mg/kg 501 108 73-134

Surrogate: o-Terphenyl 12.7 " 12.2 104 30-150

Matrix Spike (1507070-MS1)

Source: 1507078-01

Prepared & Analyzed: 07/07/15

C10-C28 (DRO) 510 50 mg/kg 478 14.8 104 50-148

Surrogate: o-Terphenyl 13.3 " 11.6 114 30-150

Matrix Spike Dup (1507070-MSD1)

Source: 1507078-01

Prepared & Analyzed: 07/07/15

C10-C28 (DRO) 498 50 mg/kg 482 14.8 100 50-148 2.55 13

Surrogate: o-Terphenyl 12.9 " 11.7 110 30-150

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507069 - EPA 5030 Soil MS

Blank (1507069-BLK1)

Prepared & Analyzed: 07/07/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0483</i>		<i>"</i>	<i>0.0396</i>		<i>122</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.1</i>	<i>21-167</i>			

LCS (1507069-BS1)

Prepared & Analyzed: 07/07/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0879	0.0020	"	0.100		87.9	58-130			
Toluene	0.0957	0.0050	"	0.100		95.7	61-134			
Ethylbenzene	0.122	0.0050	"	0.0992		123	74-139			
m,p-Xylene	0.236	0.010	"	0.200		118	73-137			
o-Xylene	0.122	0.0050	"	0.0984		124	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0463</i>		<i>"</i>	<i>0.0396</i>		<i>117</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0415</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>21-167</i>			

Matrix Spike (1507069-MS1)

Source: 1507078-01

Prepared & Analyzed: 07/07/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0867	0.0020	"	0.0929	ND	93.3	30-131			
Toluene	0.0936	0.0050	"	0.0929	ND	101	30-134			
Ethylbenzene	0.123	0.0050	"	0.0922	ND	133	22-153			
m,p-Xylene	0.240	0.010	"	0.186	ND	129	10-159			
o-Xylene	0.124	0.0050	"	0.0914	ND	135	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0439</i>		<i>"</i>	<i>0.0368</i>		<i>119</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0366</i>		<i>"</i>	<i>0.0372</i>		<i>98.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0367</i>		<i>"</i>	<i>0.0372</i>		<i>98.8</i>	<i>21-167</i>			

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507069 - EPA 5030 Soil MS

Matrix Spike Dup (1507069-MSD1)		Source: 1507078-01			Prepared & Analyzed: 07/07/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0913	0.0020	"	0.0929	ND	98.3	30-131	5.23	34	
Toluene	0.0987	0.0050	"	0.0929	ND	106	30-134	5.31	30	
Ethylbenzene	0.128	0.0050	"	0.0922	ND	139	22-153	3.76	24	
m,p-Xylene	0.247	0.010	"	0.186	ND	133	10-159	2.98	68	
o-Xylene	0.129	0.0050	"	0.0914	ND	141	31-151	4.34	38	
Surrogate: 1,2-Dichloroethane-d4	0.0468		"	0.0368		127	23-173			
Surrogate: Toluene-d8	0.0372		"	0.0372		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0365		"	0.0372		98.2	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/08/15 06:32

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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.

A handwritten signature in black ink, appearing to be 'MSW'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 09, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/08/15 18:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS34@5'	1507095-01	Soil	07/08/15 10:20	07/08/15 18:30

Comm. E. - 1507095

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: _____ Noble/Tasman
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: Brad Marquardt

Project Manager: Dan Wade, Invoice: Raul Sanchez
E-Mail: _____
Project Name: Weidenkeller 1-1
Project Number: _____

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

SS34@5'
1507095-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1000	50	mg/kg	1	1507085	07/08/15	07/09/15	8015M	

Date Sampled: 07/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.44	0.010	mg/kg	1	1507083	07/08/15	07/08/15	EPA 8260B	
Benzene	0.22	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.18	0.0050	"	"	"	"	"	"	
Xylenes (total)	110	1.0	"	100	"	"	"	"	
Gasoline Range Hydrocarbons	3400	50	"	"	"	"	"	"	

Date Sampled: 07/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		74.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		164 %	21-167		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/08/15 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.583	0.0100	mmhos/cm	1	1507087	07/08/15	07/08/15	SM 2510B	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

SS34@5'
1507095-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507085 - EPA 3550A

Blank (1507085-BLK1)

Prepared & Analyzed: 07/08/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.0 " 12.2 98.6 30-150

LCS (1507085-BS1)

Prepared & Analyzed: 07/08/15

C10-C28 (DRO) 503 50 mg/kg 501 100 73-134

Surrogate: o-Terphenyl 13.2 " 12.2 109 30-150

Matrix Spike (1507085-MS1)

Source: 1507084-01

Prepared & Analyzed: 07/08/15

C10-C28 (DRO) 7020 50 mg/kg 483 7640 NR 50-148 QM-4X

Surrogate: o-Terphenyl 13.0 " 11.8 110 30-150

Matrix Spike Dup (1507085-MSD1)

Source: 1507084-01

Prepared & Analyzed: 07/08/15

C10-C28 (DRO) 8100 50 mg/kg 500 7640 90.4 50-148 14.2 13 QM-4X

Surrogate: o-Terphenyl 13.4 " 12.2 110 30-150

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507083 - EPA 5030 Soil MS

Blank (1507083-BLK1)

Prepared & Analyzed: 07/08/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0464		"	0.0396	117	23-173				
Surrogate: Toluene-d8	0.0377		"	0.0400	94.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400	97.4	21-167				

LCS (1507083-BS1)

Prepared & Analyzed: 07/08/15

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0898	0.0020	"	0.100	89.8	58-130				
Toluene	0.0970	0.0050	"	0.100	97.0	61-134				
Ethylbenzene	0.129	0.0050	"	0.0992	130	74-139				
m,p-Xylene	0.250	0.010	"	0.200	125	73-137				
o-Xylene	0.128	0.0050	"	0.0984	130	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0465		"	0.0396	117	23-173				
Surrogate: Toluene-d8	0.0383		"	0.0400	95.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400	95.5	21-167				

Matrix Spike (1507083-MS1)

Source: 1507084-05

Prepared & Analyzed: 07/08/15

Naphthalene	0.0115	0.010	mg/kg		ND	10-158				
Benzene	0.0937	0.0020	"	0.0998	ND	30-131				
Toluene	0.0955	0.0050	"	0.0998	ND	30-134				
Ethylbenzene	0.124	0.0050	"	0.0990	ND	22-153				
m,p-Xylene	0.233	0.010	"	0.199	ND	10-159				
o-Xylene	0.118	0.0050	"	0.0982	ND	31-151				
Surrogate: 1,2-Dichloroethane-d4	0.0474		"	0.0395	120	23-173				
Surrogate: Toluene-d8	0.0365		"	0.0399	91.4	20-170				
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0399	107	21-167				

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507083 - EPA 5030 Soil MS

Matrix Spike Dup (1507083-MSD1)		Source: 1507084-05			Prepared & Analyzed: 07/08/15					
Naphthalene	0.0118	0.010	mg/kg		ND		10-158	2.55	42	
Benzene	0.0914	0.0020	"	0.0954	ND	95.8	30-131	2.40	34	
Toluene	0.0913	0.0050	"	0.0954	ND	95.6	30-134	4.55	30	
Ethylbenzene	0.118	0.0050	"	0.0947	ND	124	22-153	5.29	24	
m,p-Xylene	0.222	0.010	"	0.190	ND	117	10-159	4.86	68	
o-Xylene	0.111	0.0050	"	0.0939	ND	118	31-151	5.97	38	
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0378		117	23-173			
Surrogate: Toluene-d8	0.0347		"	0.0382		91.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0320		"	0.0382		83.8	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507087 - General Preparation

Blank (1507087-BLK1)

Prepared & Analyzed: 07/08/15

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1507087-BS1)

Prepared & Analyzed: 07/08/15

Specific Conductance (EC) 485 0.0100 mmhos/cm 500 96.9 90-110

Duplicate (1507087-DUP1)

Source: 1507095-01

Prepared & Analyzed: 07/08/15

Specific Conductance (EC) 0.560 0.0100 mmhos/cm 0.583 4.02 20

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/09/15 06:46

Notes and Definitions

QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 10, 2015

Dan Wade
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/09/15 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS35@5'	1507109-01	Soil	07/09/15 09:30	07/09/15 17:45
SS36@5'	1507109-02	Soil	07/09/15 13:10	07/09/15 17:45
SS37@5'	1507109-03	Soil	07/09/15 13:25	07/09/15 17:45

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

CONFIDENTIAL 1507109

741 Corporate Circle Suite I Golden, Colorado 80401
303-277-9310 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: Brad Marquardt

Project Manager: Dan Wade, Invoice: Raul Sanchez
E-Mail: _____
Project Name: Weidenkeller 1-1
Project Number: _____

[illegible]

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

SS35@5'
1507109-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/09/15 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	470	50	mg/kg	1	1507094	07/09/15	07/09/15	8015M	

Date Sampled: 07/09/15 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/09/15 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	0.28	0.010	mg/kg	1	1507107	07/09/15	07/09/15	EPA 8260B	
Benzene	0.016	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.016	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	190	50	"	100	"	"	"	"	

Date Sampled: 07/09/15 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		1500 %	20-170		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

SS36@5'
1507109-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/09/15 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507094	07/09/15	07/09/15	8015M	

Date Sampled: 07/09/15 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/09/15 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507107	07/09/15	07/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/09/15 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		248 %	20-170		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

SS37@5'
1507109-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/09/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507094	07/09/15	07/09/15	8015M	

Date Sampled: 07/09/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/09/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507107	07/09/15	07/09/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/09/15 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507094 - EPA 3550A

Blank (1507094-BLK1)

Prepared & Analyzed: 07/09/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.0 " 12.2 98.0 30-150

LCS (1507094-BS1)

Prepared: 07/09/15 Analyzed: 07/10/15

C10-C28 (DRO) 445 50 mg/kg 501 88.8 73-134

Surrogate: o-Terphenyl 11.8 " 12.2 96.6 30-150

Matrix Spike (1507094-MS1)

Source: 1507097-01

Prepared: 07/09/15 Analyzed: 07/10/15

C10-C28 (DRO) 448 50 mg/kg 492 8.48 89.3 50-148

Surrogate: o-Terphenyl 11.6 " 12.0 97.2 30-150

Matrix Spike Dup (1507094-MSD1)

Source: 1507097-01

Prepared: 07/09/15 Analyzed: 07/10/15

C10-C28 (DRO) 492 50 mg/kg 494 8.48 97.9 50-148 9.38 13

Surrogate: o-Terphenyl 12.7 " 12.0 105 30-150

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507107 - EPA 5030 Soil MS

Blank (1507107-BLK1)

Prepared & Analyzed: 07/09/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0454		"	0.0396	115	23-173				
Surrogate: Toluene-d8	0.0406		"	0.0400	101	20-170				
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400	95.1	21-167				

LCS (1507107-BS1)

Prepared & Analyzed: 07/09/15

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0947	0.0020	"	0.100	94.7	58-130				
Toluene	0.0999	0.0050	"	0.100	99.9	61-134				
Ethylbenzene	0.106	0.0050	"	0.0992	107	74-139				
m,p-Xylene	0.215	0.010	"	0.200	108	73-137				
o-Xylene	0.106	0.0050	"	0.0984	108	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0449		"	0.0396	113	23-173				
Surrogate: Toluene-d8	0.0400		"	0.0400	99.9	20-170				
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400	95.2	21-167				

Matrix Spike (1507107-MS1)

Source: 1507108-01

Prepared & Analyzed: 07/09/15

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0896	0.0020	"	0.0933	ND	96.0	30-131			
Toluene	0.0927	0.0050	"	0.0933	ND	99.4	30-134			
Ethylbenzene	0.102	0.0050	"	0.0925	ND	110	22-153			
m,p-Xylene	0.207	0.010	"	0.186	ND	111	10-159			
o-Xylene	0.103	0.0050	"	0.0918	ND	112	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0437		"	0.0369	118	23-173				
Surrogate: Toluene-d8	0.0370		"	0.0373	99.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0373	98.1	21-167				

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507107 - EPA 5030 Soil MS

Matrix Spike Dup (1507107-MSD1)		Source: 1507108-01			Prepared & Analyzed: 07/09/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0916	0.0020	"	0.0956	ND	95.8	30-131	2.24	34	
Toluene	0.0954	0.0050	"	0.0956	ND	99.8	30-134	2.88	30	
Ethylbenzene	0.102	0.0050	"	0.0948	ND	107	22-153	0.383	24	
m,p-Xylene	0.207	0.010	"	0.191	ND	108	10-159	0.0626	68	
o-Xylene	0.102	0.0050	"	0.0941	ND	109	31-151	0.497	38	
Surrogate: 1,2-Dichloroethane-d4	0.0478		"	0.0379		126	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0382		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0382		97.1	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Dan Wade

Reported:
07/10/15 07:08

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

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.

A handwritten signature in black ink, appearing to be 'MSW'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 12, 2015

Christine Wasko
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/10/15 19:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS38@5'	1507118-01	Soil	07/10/15 10:15	07/10/15 19:10
SS39@5'	1507118-02	Soil	07/10/15 11:20	07/10/15 19:10
SS40@5'	1507118-03	Soil	07/10/15 12:25	07/10/15 19:10

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

Summit Scientific 1507118

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Tasman/Noble Energy

Project Manager: Christine Wasko/ Invoice to Reul Sanchez

Address:

E-Mail:

City/State/Zip:

Phone:

Fax:

Project Name: Weidenkeller 1-1

Sampler Name: Eric Siegel

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	GBTEXN	DRD			
1	SS38 e5'	7/10/15	10:15	1													
2	SS39 e5'	↓	11:20	1			X			X				X	X		
3	SS40 e5'	↓	12:25	1			X			X				X	X		
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>Eric A. Siegel</u>	Date/Time: <u>7/10/15 1350</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/10/15 1350</u>	Turn Around Time (Check)	Notes: <u>From field</u> <u>on ice</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>7/10/15 1425</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/10/15 1425</u>	Same Day <u>X</u> 72 hours <u>—</u>	
				24 hours <u>—</u> Standard <u>—</u>	
				48 hours <u>—</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: <u>3.2</u>	
				Temperature Upon Receipt: <u>3.2</u>	
				Intact: <u>Yes</u> No	

www.s2scientific.com

Summit Scientific

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.

[Signature]



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

SS38@5'
1507118-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/10/15 10:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507120	07/10/15	07/11/15	8015M	

Date Sampled: 07/10/15 10:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/10/15 10:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507119	07/10/15	07/11/15	EPA 8260B	
Benzene	0.037	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/10/15 10:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

SS39@5'
1507118-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/10/15 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507120	07/10/15	07/11/15	8015M	

Date Sampled: 07/10/15 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/10/15 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507119	07/10/15	07/11/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/10/15 11:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

SS40@5'
1507118-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/10/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507120	07/10/15	07/11/15	8015M	

Date Sampled: 07/10/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/10/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507119	07/10/15	07/11/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/10/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507120 - EPA 3550A

Blank (1507120-BLK1)

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.6		"	12.2		95.5	30-150			

LCS (1507120-BS1)

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	475	50	mg/kg	501		94.8	73-134			
Surrogate: o-Terphenyl	11.9		"	12.2		97.4	30-150			

Matrix Spike (1507120-MS1)

Source: 1507117-01

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	455	50	mg/kg	476	26.1	90.1	50-148			
Surrogate: o-Terphenyl	11.2		"	11.6		96.5	30-150			

Matrix Spike Dup (1507120-MSD1)

Source: 1507117-01

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	478	50	mg/kg	472	26.1	95.9	50-148	4.94	13	
Surrogate: o-Terphenyl	11.7		"	11.5		101	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507119 - EPA 5030 Soil MS

Blank (1507119-BLK1)

Prepared & Analyzed: 07/10/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0454		"	0.0396	115	23-173				
Surrogate: Toluene-d8	0.0402		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400	95.0	21-167				

LCS (1507119-BS1)

Prepared & Analyzed: 07/10/15

Naphthalene	ND	0.010	mg/kg			66-138				
Benzene	0.0950	0.0020	"	0.100	95.0	58-130				
Toluene	0.102	0.0050	"	0.100	102	61-134				
Ethylbenzene	0.110	0.0050	"	0.0992	111	74-139				
m,p-Xylene	0.223	0.010	"	0.200	112	73-137				
o-Xylene	0.111	0.0050	"	0.0984	113	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0396	114	23-173				
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170				
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400	96.4	21-167				

Matrix Spike (1507119-MS1)

Source: 1507117-01

Prepared & Analyzed: 07/10/15

Naphthalene	ND	0.010	mg/kg		ND	10-158				
Benzene	0.0897	0.0020	"	0.0963	ND	93.1	30-131			
Toluene	0.0955	0.0050	"	0.0963	ND	99.1	30-134			
Ethylbenzene	0.103	0.0050	"	0.0956	ND	107	22-153			
m,p-Xylene	0.210	0.010	"	0.192	ND	109	10-159			
o-Xylene	0.106	0.0050	"	0.0948	ND	112	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0512		"	0.0382	134	23-173				
Surrogate: Toluene-d8	0.0384		"	0.0385	99.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0385	97.3	21-167				

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507119 - EPA 5030 Soil MS

Matrix Spike Dup (1507119-MSD1)		Source: 1507117-01			Prepared & Analyzed: 07/10/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0962	0.0020	"	0.0984	ND	97.8	30-131	7.01	34	
Toluene	0.102	0.0050	"	0.0984	ND	103	30-134	6.15	30	
Ethylbenzene	0.105	0.0050	"	0.0976	ND	108	22-153	2.37	24	
m,p-Xylene	0.213	0.010	"	0.196	ND	108	10-159	1.42	68	
o-Xylene	0.107	0.0050	"	0.0969	ND	111	31-151	0.912	38	
Surrogate: 1,2-Dichloroethane-d4		0.0529	"	0.0390		136	23-173			
Surrogate: Toluene-d8		0.0399	"	0.0394		101	20-170			
Surrogate: 4-Bromofluorobenzene		0.0393	"	0.0394		99.9	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:42

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 12, 2015

Christine Wasko
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/10/15 19:28. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH03@2'	1507119-01	Soil	07/10/15 16:45	07/10/15 19:28
BH04@2'	1507119-02	Soil	07/10/15 16:50	07/10/15 19:28
BH05@2'	1507119-03	Soil	07/10/15 16:55	07/10/15 19:28

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

Summit Scientific *1507119*

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page *1* of *1*

Client: *Notle / Tasman* Project Manager: *Christine Wasko*
Address: *6899 Pecos St Unit C* E-Mail: *cwasko@tasman-geo.com*
City/State/Zip: *Denver CO 80221*
Phone: *303 487 1228* Fax:
Project Name: *Weidenkeller 1-1*
Sampler Name: *Andrius Fish* Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)				
1	<i>BH0302'</i>	<i>7/10/15</i>	<i>1645</i>	<i>1</i>			<i>x</i>			<i>x</i>			<i>x</i>	<i>Caesium</i>		
2	<i>BH0402'</i>	<i>7/10/15</i>	<i>1650</i>	<i>1</i>			<i>x</i>			<i>x</i>			<i>x</i>	<i>Caesium</i>		
3	<i>BH0502'</i>	<i>7/10/15</i>	<i>1655</i>	<i>1</i>			<i>x</i>			<i>x</i>			<i>x</i>	<i>Caesium</i>		
4																
5																
6																
7																
8																
9																
10																

Relinquished by: <i>[Signature]</i>	Date/Time: <i>7/10/15 1800</i>	Received by: <i>[Signature]</i>	Date/Time: <i>7/10/15</i>	Turn Around Time (Check)	Notes: <i>From field on ice</i>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <i>x</i> 72 hours —	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours — Standard —	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours —	Sample Integrity:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: <i>3.0</i>	
				Intact: <i>Yes</i> No	

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Summit Scientific

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.

[Signature]



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

BH03@2'
1507119-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/10/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507120	07/10/15	07/11/15	8015M	

Date Sampled: 07/10/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/10/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507119	07/10/15	07/11/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/10/15 16:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

BH04@2'
1507119-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/10/15 16:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507120	07/10/15	07/11/15	8015M	

Date Sampled: 07/10/15 16:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/10/15 16:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507119	07/10/15	07/11/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/10/15 16:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

BH05@2'
1507119-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/10/15 16:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507120	07/10/15	07/11/15	8015M	

Date Sampled: 07/10/15 16:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/10/15 16:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507119	07/10/15	07/11/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/10/15 16:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.1 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507120 - EPA 3550A

Blank (1507120-BLK1)

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.6		"	12.2		95.5	30-150			

LCS (1507120-BS1)

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	475	50	mg/kg	501		94.8	73-134			
Surrogate: o-Terphenyl	11.9		"	12.2		97.4	30-150			

Matrix Spike (1507120-MS1)

Source: 1507117-01

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	455	50	mg/kg	476	26.1	90.1	50-148			
Surrogate: o-Terphenyl	11.2		"	11.6		96.5	30-150			

Matrix Spike Dup (1507120-MSD1)

Source: 1507117-01

Prepared & Analyzed: 07/10/15

C10-C28 (DRO)	478	50	mg/kg	472	26.1	95.9	50-148	4.94	13	
Surrogate: o-Terphenyl	11.7		"	11.5		101	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507119 - EPA 5030 Soil MS

Blank (1507119-BLK1)

Prepared & Analyzed: 07/10/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0454</i>		<i>"</i>	<i>0.0396</i>		<i>115</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.0</i>	<i>21-167</i>			

LCS (1507119-BS1)

Prepared & Analyzed: 07/10/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0950	0.0020	"	0.100		95.0	58-130			
Toluene	0.102	0.0050	"	0.100		102	61-134			
Ethylbenzene	0.110	0.0050	"	0.0992		111	74-139			
m,p-Xylene	0.223	0.010	"	0.200		112	73-137			
o-Xylene	0.111	0.0050	"	0.0984		113	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0451</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.4</i>	<i>21-167</i>			

Matrix Spike (1507119-MS1)

Source: 1507117-01

Prepared & Analyzed: 07/10/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0897	0.0020	"	0.0963	ND	93.1	30-131			
Toluene	0.0955	0.0050	"	0.0963	ND	99.1	30-134			
Ethylbenzene	0.103	0.0050	"	0.0956	ND	107	22-153			
m,p-Xylene	0.210	0.010	"	0.192	ND	109	10-159			
o-Xylene	0.106	0.0050	"	0.0948	ND	112	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0512</i>		<i>"</i>	<i>0.0382</i>		<i>134</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0384</i>		<i>"</i>	<i>0.0385</i>		<i>99.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0385</i>		<i>97.3</i>	<i>21-167</i>			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507119 - EPA 5030 Soil MS

Matrix Spike Dup (1507119-MSD1)		Source: 1507117-01			Prepared & Analyzed: 07/10/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0962	0.0020	"	0.0984	ND	97.8	30-131	7.01	34	
Toluene	0.102	0.0050	"	0.0984	ND	103	30-134	6.15	30	
Ethylbenzene	0.105	0.0050	"	0.0976	ND	108	22-153	2.37	24	
m,p-Xylene	0.213	0.010	"	0.196	ND	108	10-159	1.42	68	
o-Xylene	0.107	0.0050	"	0.0969	ND	111	31-151	0.912	38	
Surrogate: 1,2-Dichloroethane-d4	0.0529		"	0.0390		136	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0394		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0394		99.9	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/12/15 13:48

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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.

A handwritten signature in black ink, appearing to be 'MSW'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 15, 2015

Christine Wasko
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/14/15 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS41@2'	1507148-01	Soil	07/14/15 09:00	07/14/15 17:45
SS42@2'	1507148-02	Soil	07/14/15 09:03	07/14/15 17:45
SS43@2'	1507148-03	Soil	07/14/15 10:53	07/14/15 17:45

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

Summit Scientific 1507148

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman
Address:
City/State/Zip:
Phone: Fax:
Sampler Name: *Bred marquet*

Project Manager: ~~Don Wade~~ Invoice: Raul Sanchez
E-Mail: _____
Project Name: Weiden Keller 1-1
Project Number: _____

				Preservative		Matrix		Analyze For:														
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO							Special Instructions	
SS41@Z'	7/14/15	0900	1			X			X				X	X								
SS42@Z'	7/14/15	0903	1			X			X			X	X									
SS43@Z'	7/14/15	1053	1			X			X			X	X									
Relinquished by: [Signature]				Date/Time: 7/14/15		Received by: [Signature] 7/14/15		Date/Time: 1720		Turn Around Time (Check)										Notes:		
										Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/>												
										24 Hours <input type="checkbox"/> Standard <input type="checkbox"/>												
Relinquished by: MKT 7/14/15				Date/Time: 1745		Received by: GJS 1745		Date/Time: 1745		48 Hours <input type="checkbox"/>												
Relinquished by:				Date/Time:		Received in Lab by:		Date/Time:		Sample Integrity:												
										Temperature Upon Receipt: 7.6°C												
										Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>												

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Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

SS41@2'
1507148-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/14/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507165	07/14/15	07/14/15	8015M	

Date Sampled: 07/14/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/14/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507164	07/14/15	07/14/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/14/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

SS42@2'
1507148-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/14/15 09:03

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507165	07/14/15	07/14/15	8015M	

Date Sampled: 07/14/15 09:03

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/14/15 09:03

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507164	07/14/15	07/14/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/14/15 09:03

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

SS43@2'
1507148-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/14/15 10:53

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507165	07/14/15	07/14/15	8015M	

Date Sampled: 07/14/15 10:53

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/14/15 10:53

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507164	07/14/15	07/14/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/14/15 10:53

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507165 - EPA 3550A

Blank (1507165-BLK1)

Prepared & Analyzed: 07/14/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.8		"	12.2		105	30-150			

LCS (1507165-BS1)

Prepared & Analyzed: 07/14/15

C10-C28 (DRO)	498	50	mg/kg	501		99.4	73-134			
Surrogate: o-Terphenyl	13.0		"	12.2		106	30-150			

Matrix Spike (1507165-MS1)

Source: 1507147-03

Prepared & Analyzed: 07/14/15

C10-C28 (DRO)	475	50	mg/kg	472	25.7	95.2	50-148			
Surrogate: o-Terphenyl	12.1		"	11.5		105	30-150			

Matrix Spike Dup (1507165-MSD1)

Source: 1507147-03

Prepared & Analyzed: 07/14/15

C10-C28 (DRO)	516	50	mg/kg	470	25.7	104	50-148	8.24	13	
Surrogate: o-Terphenyl	13.1		"	11.4		114	30-150			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507164 - EPA 5030 Soil MS

Blank (1507164-BLK1)

Prepared & Analyzed: 07/14/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0434</i>		<i>"</i>	<i>0.0396</i>		<i>110</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0385</i>		<i>"</i>	<i>0.0400</i>		<i>96.3</i>	<i>21-167</i>			

LCS (1507164-BS1)

Prepared & Analyzed: 07/14/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0980	0.0020	"	0.100		98.0	58-130			
Toluene	0.104	0.0050	"	0.100		104	61-134			
Ethylbenzene	0.111	0.0050	"	0.0992		112	74-139			
m,p-Xylene	0.227	0.010	"	0.200		114	73-137			
o-Xylene	0.112	0.0050	"	0.0984		114	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0450</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0377</i>		<i>"</i>	<i>0.0400</i>		<i>94.2</i>	<i>21-167</i>			

Matrix Spike (1507164-MS1)

Source: 1507147-03

Prepared & Analyzed: 07/14/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0973	0.0020	"	0.0963	ND	101	30-131			
Toluene	0.101	0.0050	"	0.0963	ND	105	30-134			
Ethylbenzene	0.108	0.0050	"	0.0956	ND	113	22-153			
m,p-Xylene	0.222	0.010	"	0.192	ND	116	10-159			
o-Xylene	0.109	0.0050	"	0.0948	ND	115	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0454</i>		<i>"</i>	<i>0.0382</i>		<i>119</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0384</i>		<i>"</i>	<i>0.0385</i>		<i>99.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0377</i>		<i>"</i>	<i>0.0385</i>		<i>97.9</i>	<i>21-167</i>			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507164 - EPA 5030 Soil MS

Matrix Spike Dup (1507164-MSD1)		Source: 1507147-03			Prepared & Analyzed: 07/14/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0986	0.0020	"	0.0977	ND	101	30-131	1.33	34	
Toluene	0.101	0.0050	"	0.0977	ND	104	30-134	0.0491	30	
Ethylbenzene	0.107	0.0050	"	0.0969	ND	110	22-153	1.51	24	
m,p-Xylene	0.222	0.010	"	0.195	ND	114	10-159	0.267	68	
o-Xylene	0.109	0.0050	"	0.0961	ND	114	31-151	0.105	38	
Surrogate: 1,2-Dichloroethane-d4	0.0489		"	0.0387		126	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0391		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0391		96.8	21-167			

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/15/15 07:03

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSW'.

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 16, 2015

Christine Wasko
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Weidenkeller 1-1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/15/15 17:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS44@1.5'	1507163-01	Soil	07/15/15 09:00	07/15/15 17:50
SS45@1.5'	1507163-02	Soil	07/15/15 09:02	07/15/15 17:50

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

Summit Scientific 1507143

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: _____ Noble/Tasman _____
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: Brad Marquart

Project Manager: Christine Wasko, Invoice: Raul Sanchez
E-Mail: _____
Project Name: Weidenkeller 1-1
Project Number: _____

[illegible]

www.s2scientific.com

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

SS44@1.5'
1507163-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/15/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507179	07/15/15	07/15/15	8015M	

Date Sampled: 07/15/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/15/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507178	07/15/15	07/15/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/15/15 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Summit Scientific

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
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

SS45@1.5'
1507163-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/15 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507179	07/15/15	07/15/15	8015M	

Date Sampled: **07/15/15 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		113 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/15 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507178	07/15/15	07/16/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/15/15 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507179 - EPA 3550A

Blank (1507179-BLK1)

Prepared & Analyzed: 07/15/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	13.6		"	12.2		112	30-150			

LCS (1507179-BS1)

Prepared & Analyzed: 07/15/15

C10-C28 (DRO)	493	50	mg/kg	501		98.3	73-134			
Surrogate: o-Terphenyl	13.1		"	12.2		108	30-150			

Matrix Spike (1507179-MS1)

Source: 1507160-01

Prepared & Analyzed: 07/15/15

C10-C28 (DRO)	436	50	mg/kg	443	20.8	93.9	50-148			
Surrogate: o-Terphenyl	11.4		"	10.8		106	30-150			

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6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507178 - EPA 5030 Soil MS

Blank (1507178-BLK1)

Prepared & Analyzed: 07/15/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0396	99.3	23-173				
Surrogate: Toluene-d8	0.0386		"	0.0400	96.4	20-170				
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400	99.1	21-167				

LCS (1507178-BS1)

Prepared & Analyzed: 07/15/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.107	0.0020	"	0.100	107	58-130				
Toluene	0.117	0.0050	"	0.100	117	61-134				
Ethylbenzene	0.141	0.0050	"	0.0992	142	74-139				
m,p-Xylene	0.288	0.010	"	0.200	144	73-137				
o-Xylene	0.142	0.0050	"	0.0984	145	73-141				
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0396	102	23-173				
Surrogate: Toluene-d8	0.0391		"	0.0400	97.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400	97.7	21-167				

Matrix Spike (1507178-MS1)

Source: 1507160-01

Prepared & Analyzed: 07/15/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.101	0.0020	"	0.0928	ND	109	30-131			
Toluene	0.112	0.0050	"	0.0928	ND	121	30-134			
Ethylbenzene	0.132	0.0050	"	0.0920	ND	143	22-153			
m,p-Xylene	0.270	0.010	"	0.185	ND	146	10-159			
o-Xylene	0.135	0.0050	"	0.0913	ND	148	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0367		105	23-173			
Surrogate: Toluene-d8	0.0363		"	0.0371		97.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0356		"	0.0371		96.1	21-167			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1
Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1507178 - EPA 5030 Soil MS

Matrix Spike Dup (1507178-MSD1)		Source: 1507160-01			Prepared & Analyzed: 07/15/15					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.108	0.0020	"	0.0988	ND	109	30-131	7.09	34	
Toluene	0.120	0.0050	"	0.0988	ND	122	30-134	7.06	30	
Ethylbenzene	0.139	0.0050	"	0.0980	ND	142	22-153	5.40	24	
m,p-Xylene	0.288	0.010	"	0.197	ND	146	10-159	6.46	68	
o-Xylene	0.141	0.0050	"	0.0972	ND	145	31-151	4.34	38	
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0391		107	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0395		99.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0395		98.9	21-167			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Weidenkeller 1-1

Project Number: [none]
Project Manager: Christine Wasko

Reported:
07/16/15 07:14

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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A handwritten signature in black ink, appearing to be 'MSW'.