

DATE: 09/21/2018

DESIGNED BY: DA

DRAWN BY: GB

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

Noble Energy – DJ Basin Bierig 1-26
SWNE, Section 26, Township 5 North, Range 66 West
Weld County, Colorado

Site Assessment Analytical Figure

FIGURE

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 06, 2018

Brandon Bruns
Tasman Geosciences
6899 Pecos St, Unit C
Denver, CO 80221
RE: Noble - Bierig 1-26

Enclosed are the results of analyses for samples received by Summit Scientific on 07/25/18 18:17. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TP01@5'	1807314-01	Soil	07/25/18 08:50	07/25/18 18:17
TP01@10'	1807314-02	Soil	07/25/18 08:55	07/25/18 18:17
TP02@5'	1807314-03	Soil	07/25/18 09:20	07/25/18 18:17
TP02@11'	1807314-04	Soil	07/25/18 09:25	07/25/18 18:17
TP03@11'	1807314-05	Soil	07/25/18 09:40	07/25/18 18:17
TP04@10'	1807314-06	Soil	07/25/18 09:55	07/25/18 18:17
TP05@10'	1807314-07	Soil	07/25/18 10:15	07/25/18 18:17
TP06@10'	1807314-08	Soil	07/25/18 11:12	07/25/18 18:17
TP07@8'	1807314-09	Soil	07/25/18 11:38	07/25/18 18:17
TP07@12'	1807314-10	Soil	07/25/18 11:45	07/25/18 18:17
TP08@5'	1807314-11	Soil	07/25/18 14:10	07/25/18 18:17
TP08@10'	1807314-12	Soil	07/25/18 14:15	07/25/18 18:17
TP09@5'	1807314-13	Soil	07/25/18 14:20	07/25/18 18:17
TP09@10'	1807314-14	Soil	07/25/18 14:25	07/25/18 18:17
TP10@10'	1807314-15	Soil	07/25/18 14:35	07/25/18 18:17
TP12@7'	1807314-16	Soil	07/25/18 14:55	07/25/18 18:17

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

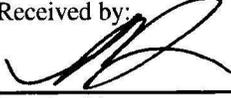
741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

1807314.1

Page 1 of 2

Client: Noble/Tasman
Address: -
City/State/Zip: -
Phone: 979-255-4235 Fax: -
Sampler Name: Max Garza

Project Manager: Brandon Bruns, Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Ber:91-26
Project Number: N/A

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:					Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR			
TP01@5'	7/25/18	0850	1			X			X				X	X				
TP01@10'		0855																
TP02@5'		0920																
TP02@11'		0925																
TP03@11'		0940																
TP04@10'		0955																
TP05@10'		1015																
TP06@10'		1112																
TP07@8'		1138																
TP07@12'		1145																
Relinquished by: 		Date/Time: 7.25.18 1220		Received by: 		Date/Time: 7.25.18 1820		Turn Around Time (Check)			Notes:							
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day <input checked="" type="checkbox"/>			72 Hours <input type="checkbox"/>							
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		24 Hours <input type="checkbox"/>			Standard <input type="checkbox"/>							
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		48 Hours <input type="checkbox"/>			Sample Integrity:							
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		Temperature Upon Receipt: 9.7			Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							

Summit Scientific

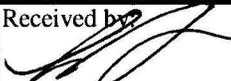
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303-277-9310 ♦ 303-374-5933 Fax

1807314.2

Page 2 of 2

Client: Noble/Tasman
Address: -
City/State/Zip: -
Phone: 979-255-4235 Fax: -
Sampler Name: Max Garza

Project Manager: Brandon Bruns, Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Beig, 1-26
Project Number: N/A

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO		pH, EC, SAR	
TP08@5'	7/25/18	1410	1			X			X				X	X			
TP08@10'		1415															
TP09@5'		1420															
TP09@10'		1425															
TP10@10'		1435															
TP12@7'		1435															
Relinquished by: 				Date/Time: 7.25.18 1820	Received by: 				Date/Time: 7.25.18 1820	Turn Around Time (Check)				Notes:			
Relinquished by:				Date/Time:	Received by:				Date/Time:	Same Day <input checked="" type="checkbox"/>	72 Hours <input type="checkbox"/>						
Relinquished by:				Date/Time:	Received in Lab by:				Date/Time:	24 Hours <input type="checkbox"/>	Standard <input type="checkbox"/>						
Relinquished by:				Date/Time:	Received in Lab by:				Date/Time:	Sample Integrity:							
Relinquished by:				Date/Time:	Received in Lab by:				Date/Time:	Temperature Upon Receipt: 9.4							
Relinquished by:				Date/Time:	Received in Lab by:				Date/Time:	Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							

Sample Receipt Checklist

S2 Work Order 1807314

Client: Noble/Tosman Client Project ID: Berig 1-26

Shipped Via: Pickup Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	9.4
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	✓			
<small>NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.</small>				
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			✓	
<small>Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect</small>				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			✓	
<small>Record the pH in Comments.</small>				
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):			✓	
<p>⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.</p>				

UP
 Custodian Printed Name or Initials

[Signature]
 Signature of Custodian

7.25.18 1820
 Date/Time



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP01@5'
1807314-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.21	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	3.8	0.050	"	10	"	"	"	"	
Xylenes (total)	31	1.0	"	100	"	"	08/03/18	"	
Naphthalene	1.6	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	1500	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173	"	"	"	"	"	
Surrogate: Toluene-d8		94.6 %	20-170	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		171 %	21-167	"	"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	910	50	mg/kg	1	1807310	07/25/18	07/25/18	EPA 8015M	

Date Sampled: **07/25/18 08:50**

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

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP01@10'
1807314-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.16	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	6.9	0.050	"	10	"	"	"	"	
Xylenes (total)	15	1.0	"	100	"	"	08/03/18	"	
Naphthalene	1.5	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	970	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173	"	"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		149 %	21-167	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	420	50	mg/kg	1	1807310	07/25/18	07/25/18	EPA 8015M	

Date Sampled: **07/25/18 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP02@5'
1807314-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/25/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.096	0.0050	"	"	"	"	"	"	
Xylenes (total)	2.2	0.010	"	"	"	"	"	"	
Naphthalene	0.15	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	110	50	"	"	"	"	"	"	

Date Sampled: **07/25/18 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		166 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	360	50	mg/kg	1	1807310	07/25/18	07/25/18	EPA 8015M	

Date Sampled: **07/25/18 09:20**

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

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP02@11'
1807314-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.65	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	6.5	0.50	"	100	"	"	08/03/18	"	
Xylenes (total)	110	1.0	"	"	"	"	"	"	
Naphthalene	7.0	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	2900	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		115 %	23-173	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.1 %	20-170	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		164 %	21-167	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	600	50	mg/kg	1	1807310	07/25/18	07/25/18	EPA 8015M	

Date Sampled: **07/25/18 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		116 %	30-150	"	"	"	"	"	

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP03@11'
1807314-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	1.7	0.050	"	10	"	"	"	"	
Xylenes (total)	3.7	1.0	"	100	"	"	08/03/18	"	
Naphthalene	0.78	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	520	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		118 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		143 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	350	50	mg/kg	1	1807310	07/25/18	07/25/18	EPA 8015M	

Date Sampled: **07/25/18 09:40**

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

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP04@10'
1807314-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	4.8	0.050	"	10	"	"	"	"	
Xylenes (total)	15	1.0	"	100	"	"	08/03/18	"	
Naphthalene	1.3	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	790	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		141 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	680	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP05@10'
1807314-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/25/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.015	0.010	"	"	"	"	"	"	
Naphthalene	0.022	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/25/18 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 10:15**

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

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP06@10'
1807314-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.22	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.15	0.010	"	"	"	"	"	"	
Naphthalene	0.19	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	220	50	"	10	"	"	"	"	

Date Sampled: **07/25/18 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		144 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		108 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP07@8'
1807314-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.069	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.063	0.010	"	"	"	"	"	"	
Naphthalene	0.11	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	30	5.0	"	"	"	"	"	"	

Date Sampled: **07/25/18 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	120	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 11:38**

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

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP07@12'
1807314-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0053	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.34	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	0.12	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	23	5.0	"	10	"	"	"	"	

Date Sampled: **07/25/18 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		135 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		153 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	110	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.6 %	30-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP08@5'
1807314-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.071	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	4.5	0.050	"	10	"	"	"	"	
Xylenes (total)	16	1.0	"	100	"	"	08/03/18	"	
Naphthalene	1.9	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	1600	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		115 %	23-173	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.6 %	20-170	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		160 %	21-167	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	600	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		113 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP08@10'
1807314-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.031	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	3.4	0.050	"	10	"	"	"	"	
Xylenes (total)	24	1.0	"	100	"	"	08/03/18	"	
Naphthalene	0.87	0.10	"	10	"	"	07/26/18	"	
Gasoline Range Hydrocarbons	850	50	"	100	"	"	08/03/18	"	

Date Sampled: **07/25/18 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		118 %	23-173	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.4 %	20-170	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		134 %	21-167	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	300	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		105 %	30-150	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP09@5'
1807314-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.1	0.20	mg/kg	100	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	1	"	"	"	"	
Ethylbenzene	12	0.50	"	100	"	"	"	"	
Xylenes (total)	110	1.0	"	"	"	"	"	"	
Naphthalene	1.9	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3100	50	"	"	"	"	"	"	

Date Sampled: **07/25/18 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		210 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	370	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP09@10'
1807314-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0094	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.081	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.77	0.010	"	"	"	"	"	"	
Naphthalene	0.044	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/25/18 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		134 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	50	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 14:25**

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

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP10@10'
1807314-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.013	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	2.5	0.50	"	100	"	"	"	"	
Xylenes (total)	35	1.0	"	"	"	"	"	"	
Naphthalene	0.17	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	870	50	"	100	"	"	"	"	

Date Sampled: **07/25/18 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		167 %	23-173	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %	20-170	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		123 %	21-167	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

TP12@7'
1807314-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807309	07/25/18	07/26/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0051	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.050	0.010	"	"	"	"	"	"	
Naphthalene	0.012	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/25/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/25/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	93	50	mg/kg	1	1807310	07/25/18	07/26/18	EPA 8015M	

Date Sampled: **07/25/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1807309 - EPA 5030 Soil MS

Blank (1807309-BLK1)

Prepared: 07/25/18 Analyzed: 07/26/18

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
Naphthalene	ND	0.010	"								
Gasoline Range Hydrocarbons	ND	50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0396		97.7	23-173				
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	20-170				
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	21-167				

LCS (1807309-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

Benzene	0.0942	0.0020	mg/kg	0.100		94.2	70-130				
Toluene	0.106	0.0050	"	0.100		106	70-130				
Ethylbenzene	0.120	0.0050	"	0.100		120	70-130				
m,p-Xylene	0.235	0.010	"	0.200		117	70-130				
o-Xylene	0.112	0.0050	"	0.100		112	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0383		"	0.0396		96.8	23-173				
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	20-170				
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	21-167				

Matrix Spike (1807309-MS1)

Source: 1807313-01

Prepared: 07/25/18 Analyzed: 07/26/18

Benzene	0.0937	0.0020	mg/kg	0.100	ND	93.7	70-130				
Toluene	0.104	0.0050	"	0.100	ND	104	70-130				
Ethylbenzene	0.119	0.0050	"	0.100	ND	119	70-130				
m,p-Xylene	0.232	0.010	"	0.200	ND	116	70-130				
o-Xylene	0.110	0.0050	"	0.100	ND	110	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0383		"	0.0396		96.8	23-173				
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

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

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

Batch 1807309 - EPA 5030 Soil MS

Matrix Spike Dup (1807309-MSD1)	Source: 1807313-01			Prepared: 07/25/18		Analyzed: 07/26/18				
Benzene	0.0968	0.0020	mg/kg	0.100	ND	96.8	70-130	3.18	30	
Toluene	0.108	0.0050	"	0.100	ND	108	70-130	3.20	30	
Ethylbenzene	0.119	0.0050	"	0.100	ND	119	70-130	0.404	30	
m,p-Xylene	0.232	0.010	"	0.200	ND	116	70-130	0.0647	30	
o-Xylene	0.110	0.0050	"	0.100	ND	110	70-130	0.410	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0388</i>		<i>"</i>	<i>0.0396</i>		<i>98.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
08/06/18 10:21

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1807310 - EPA 3550A

Blank (1807310-BLK1)

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1807310-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) 473 50 mg/kg 500 94.6 70-130

Matrix Spike (1807310-MS1)

Source: 1807313-01

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) 520 50 mg/kg 500 25.8 98.8 70-130

Matrix Spike Dup (1807310-MSD1)

Source: 1807313-01

Prepared: 07/25/18 Analyzed: 07/26/18

C10-C28 (DRO) 506 50 mg/kg 500 25.8 96.1 70-130 2.62 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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
08/06/18 10:21

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

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 17, 2018

Brandon Bruns

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

RE: Noble - Bierig 1-26

Enclosed are the results of analyses for samples received by Summit Scientific on 08/01/18 18:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury

Laboratory Manager



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
08/17/18 10:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HA SS01@5'	1808011-01	Soil	08/01/18 11:20	08/01/18 18:30
HA SS02@10'	1808011-02	Soil	08/01/18 11:35	08/01/18 18:30
HA SS03@5'	1808011-03	Soil	08/01/18 11:58	08/01/18 18:30
HA SS04@9'	1808011-04	Soil	08/01/18 12:19	08/01/18 18:30
HA SS05@5'	1808011-05	Soil	08/01/18 12:47	08/01/18 18:30
HA SS06@6'	1808011-06	Soil	08/01/18 12:55	08/01/18 18:30
HA SS07@2'	1808011-07	Soil	08/01/18 13:22	08/01/18 18:30
HA SS08@4'	1808011-08	Soil	08/01/18 13:25	08/01/18 18:30
HA SS09@5'	1808011-09	Soil	08/01/18 13:30	08/01/18 18:30
HA SS10@3'	1808011-10	Soil	08/01/18 13:37	08/01/18 18:30
HA SS11@4'	1808011-11	Soil	08/01/18 14:00	08/01/18 18:30
HA SS12@4'	1808011-12	Soil	08/01/18 14:09	08/01/18 18:30
HA SS013@3'	1808011-13	Soil	08/01/18 14:20	08/01/18 18:30
HA SS14@5'	1808011-14	Soil	08/01/18 14:25	08/01/18 18:30
HA SS15@4'	1808011-15	Soil	08/01/18 14:31	08/01/18 18:30
HA SS16@4'	1808011-16	Soil	08/01/18 14:38	08/01/18 18:30

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

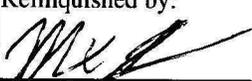
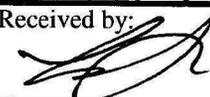
1808011.1

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

Page 1 of 2

Client: Noble/Tasman
Address: -
City/State/Zip: -
Phone: 979-255-4235 Fax: -
Sampler Name: Max Garza

Project Manager: Brandon Bruns, Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Bicrly 1-26
Project Number: N/A

Sample Description	Date	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO	
HA SS01@5'	8/1/18	1120	2		X			X				X	X		Hold: HA SS01@5' HA SS02@5' HA SS05@5' HA SS07@2' HA SS13@3'
HA SS02@10'		1135													
HA SS03@5'		1158													
HA SS04@9'		1219													
HA SS05@5'		1247													
HA SS06@6'		1255													
HA SS07@2'		1322													
HA SS08@4'		1325													
HA SS09@5'		1330													
HA SS10@3'		1337													
Relinquished by: 		Date/Time: 8/1/18 1030		Received by: 		Date/Time: 8.1.18 1050		Turn Around Time (Check)				Notes:			
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>							
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		Sample Integrity:							
								Temperature Upon Receipt: <u>9.3</u> Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							

Revisions by L. Spry O'Rourke
8/17/2018

Summit Scientific

1808011.2

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

Page 2 of 2

Client: Noble/Tasman
Address: -
City/State/Zip: -
Phone: 979-255-4235 Fax: -
Sampler Name: Max Garza

Project Manager: Brandon Bruns, Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Berry 1-26
Project Number: N/A

Sample Description	Date Sam	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO		pH, EC, SAR
HA SS 11 @ 4'	8/1/18	1400	1			X			X							
HA SS 12 @ 4'		1409														
HA SS 13 @ 3'		1420														
HA SS 14 @ 5'		1425														
HA SS 15 @ 4'		1431														
HA SS 16 @ 4'		1438														

Revisions by L. Spry O'Rourke
8/17/2018

Hold:
HA SS 01 @ 5'
HA SS 03 @ 5'
HA SS 05 @ 5'
HA SS 07 @ 2'
HA SS 13 @ 3'

Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/1/18</u>	Received by:	Date/Time:	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		
				Sample Integrity: Temperature Upon Receipt: _____ Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>	

Sample Receipt Checklist

S2 Work Order 1808011

Client: Noble/Tasman Client Project ID: Bierig 1-26

Shipped Via: Pickup Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	<u>9.3</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

UP
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

8.1.18 1835
Date/Time



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS01@5'
1808011-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	1808028	08/02/18	08/03/18	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
Naphthalene	ND	0.010		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50		"	"	"	"	"	"	

Date Sampled: **08/01/18 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		97.4 %		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS02@10'
1808011-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/03/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.6 %	30-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS03@5'
1808011-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/03/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 11:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.2 %	30-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS04@9'
1808011-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 12:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/03/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 12:19**

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

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 12:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 12:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		94.7 %	30-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS05@5'
1808011-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 12:47**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/03/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 12:47**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 12:47**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 12:47**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		100 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS06@6'
1808011-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		98.7 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS07@2'
1808011-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		97.8 %	30-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS08@4'
1808011-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		97.2 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS09@5'
1808011-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	4.5	0.20	mg/kg	100	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	1	"	"	"	"	
Ethylbenzene	10	0.50	"	100	"	"	"	"	
Xylenes (total)	200	10	"	1000	"	"	"	"	
Naphthalene	0.37	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	5200	5000	"	100	"	"	"	"	

Date Sampled: **08/01/18 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		212 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	290	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS10@3'
1808011-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 13:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.11	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.032	0.0050	"	"	"	"	"	"	
Xylenes (total)	13	1.0	"	100	"	"	"	"	
Naphthalene	0.042	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	150	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 13:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		372 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 13:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	150	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 13:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS11@4'
1808011-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.6	0.20	mg/kg	100	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	1	"	"	"	"	
Ethylbenzene	7.4	0.50	"	100	"	"	"	"	
Xylenes (total)	110	1.0	"	"	"	"	"	"	
Naphthalene	0.23	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	3000	500	"	10	"	"	"	"	

Date Sampled: **08/01/18 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		166 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.5 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS12@4'
1808011-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		97.3 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS013@3'
1808011-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS14@5'
1808011-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		92.1 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS15@4'
1808011-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 14:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **08/01/18 14:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		127 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 14:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 14:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		88.6 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

HA SS16@4'
1808011-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/01/18 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.42	0.0020	mg/kg	1	1808028	08/02/18	08/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	2.9	0.50	"	100	"	"	"	"	
Xylenes (total)	94	1.0	"	"	"	"	"	"	
Naphthalene	1.1	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3400	500	"	10	"	"	"	"	

Date Sampled: **08/01/18 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173	"	"	"	"	"	
Surrogate: Toluene-d8		96.6 %	20-170	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		182 %	21-167	"	"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/01/18 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	360	50	mg/kg	1	1808026	08/02/18	08/03/18	EPA 8015M	

Date Sampled: **08/01/18 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
08/17/18 10:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1808028 - EPA 5030 Soil MS

Blank (1808028-BLK1)

Prepared: 08/02/18 Analyzed: 08/03/18

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
Naphthalene	ND	0.010	"								
Gasoline Range Hydrocarbons	ND	50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0385		"	0.0396		97.2	23-173				
Surrogate: Toluene-d8	0.0399		"	0.0400		99.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167				

LCS (1808028-BS1)

Prepared: 08/02/18 Analyzed: 08/03/18

Benzene	0.0921	0.0020	mg/kg	0.100		92.1	70-130				
Toluene	0.0981	0.0050	"	0.100		98.1	70-130				
Ethylbenzene	0.104	0.0050	"	0.100		104	70-130				
m,p-Xylene	0.194	0.010	"	0.200		97.1	70-130				
o-Xylene	0.0923	0.0050	"	0.100		92.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0396		104	23-173				
Surrogate: Toluene-d8	0.0404		"	0.0400		101	20-170				
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167				

Matrix Spike (1808028-MS1)

Source: 1808011-01

Prepared: 08/02/18 Analyzed: 08/03/18

Benzene	0.0940	0.0020	mg/kg	0.100	ND	94.0	70-130				
Toluene	0.0998	0.0050	"	0.100	ND	99.8	70-130				
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130				
m,p-Xylene	0.201	0.010	"	0.200	ND	100	70-130				
o-Xylene	0.0944	0.0050	"	0.100	ND	94.4	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0396		103	23-173				
Surrogate: Toluene-d8	0.0409		"	0.0400		102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

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

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

Batch 1808028 - EPA 5030 Soil MS

Matrix Spike Dup (1808028-MSD1)

Source: 1808011-01

Prepared: 08/02/18 Analyzed: 08/03/18

Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130	13.1	30
Toluene	0.113	0.0050	"	0.100	ND	113	70-130	12.8	30
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130	14.5	30
m,p-Xylene	0.231	0.010	"	0.200	ND	116	70-130	14.1	30
o-Xylene	0.112	0.0050	"	0.100	ND	112	70-130	16.7	30
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0396		108	23-173		
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170		
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
08/17/18 10:48

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1808026 - EPA 3550A

Blank (1808026-BLK1)

Prepared: 08/02/18 Analyzed: 08/03/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1808026-BS1)

Prepared: 08/02/18 Analyzed: 08/03/18

C10-C28 (DRO) 472 50 mg/kg 500 94.5 70-130

Matrix Spike (1808026-MS1)

Source: 1808011-01

Prepared: 08/02/18 Analyzed: 08/03/18

C10-C28 (DRO) 487 50 mg/kg 500 27.1 92.1 70-130

Matrix Spike Dup (1808026-MSD1)

Source: 1808011-01

Prepared: 08/02/18 Analyzed: 08/03/18

C10-C28 (DRO) 547 50 mg/kg 500 27.1 104 70-130 11.5 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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
08/17/18 10:48

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

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 04, 2018

Brandon Bruns

Tasman Geosciences

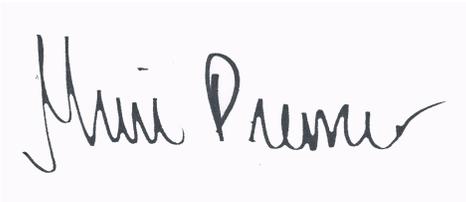
6899 Pecos St, Unit C

Denver, CO 80221

RE: Noble - Bierig 1-26

Enclosed are the results of analyses for samples received by Summit Scientific on 10/01/18 18:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Ben Shrewsbury

Laboratory Manager



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/04/18 16:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	1810009-01	Water	10/01/18 12:45	10/01/18 18:15
BH02	1810009-02	Water	10/01/18 12:50	10/01/18 18:15
BH03	1810009-03	Water	10/01/18 12:55	10/01/18 18:15
BH04	1810009-04	Water	10/01/18 13:00	10/01/18 18:15
BH05	1810009-05	Water	10/01/18 13:10	10/01/18 18:15
BH06	1810009-06	Water	10/01/18 13:05	10/01/18 18:15
BH07	1810009-07	Water	10/01/18 13:15	10/01/18 18:15
BH08	1810009-08	Water	10/01/18 13:20	10/01/18 18:15

Summit Scientific

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1810 009

Summit Scientific

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: 979-255-4235 Fax: -
Sampler Name: Max Garza

Project Manager: Brandon Bruns, Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Berig 1-26
Project Number: N/A

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:					Special Instructions							
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR								
BH01	10/1/18	12:45	3			X		X				X											
BH02		12:50				X		X				X											
BH03		12:55				X		X				X											
BH04		13:00				X		X				X											
BH05		13:10				X		X				X											
BH06		13:05				X		X				X											
BH07		13:15				X		X				X											
BH08		13:20				X		X				X											
Relinquished by: <u>Max G</u>				Date/Time: <u>10/1/18 1515</u>				Received by: <u>[Signature]</u>				Date/Time: <u>10.1.18 1515</u>				Turn Around Time (Check)							
Relinquished by:				Date/Time:				Received by:				Date/Time:				Same Day <input type="checkbox"/>				72 Hours <input checked="" type="checkbox"/>			
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				48 Hours <input type="checkbox"/>				Standard <input type="checkbox"/>			
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity:							
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Temperature Upon Receipt: <u>3.7</u>							
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							

Sample Receipt Checklist

S2 Work Order: 1810 009

Client: Noble/Tasman Client Project ID: Bierig 1-26

Shipped Via: Pickup Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	3.7
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
<small>NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.</small>				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
<small>Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect</small>				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
<small>Record the pH in Comments.</small>				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

UP
Custodian Printed Name or Initials

[Signature]
Signature or Initials of Custodian

10.1.18 1815
Date/Time



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/04/18 16:42

BH01
1810009-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **10/01/18 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/04/18 16:42

BH02
1810009-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	3.2	1.0	ug/l	1	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	480	100	"	100	"	"	"	"	
Xylenes (total)	5200	200	"	"	"	"	"	"	

Date Sampled: **10/01/18 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.9 %	21-167		"	"	"	"	

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Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
10/04/18 16:42

BH03
1810009-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	3100	100		ug/l	100	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	1.0		"	1	"	"	"	"	
Ethylbenzene	1100	100		"	100	"	"	"	"	
Xylenes (total)	20000	200		"	"	"	"	"	"	

Date Sampled: **10/01/18 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.3 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %		21-167		"	"	"	"	

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Tasman Geosciences
 6899 Pecos St, Unit C
 Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
 Project Manager: Brandon Brun

Reported:
 10/04/18 16:42

BH04
1810009-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	33	1.0		"	"	"	"	"	"	
Xylenes (total)	250	2.0		"	"	"	"	"	"	

Date Sampled: **10/01/18 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Summit Scientific



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Project Manager: Brandon Bruns

Reported:
10/04/18 16:42

BH05
1810009-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	400	100		ug/l	100	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	4.5	1.0		"	1	"	"	"	"	
Ethylbenzene	690	100		"	100	"	"	"	"	
Xylenes (total)	7700	200		"	"	"	"	"	"	

Date Sampled: **10/01/18 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		95.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.7 %		21-167		"	"	"	"	

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Project Number: [none]
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Reported:
10/04/18 16:42

BH06
1810009-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1900	100		ug/l	100	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	1.0		"	1	"	"	"	"	
Ethylbenzene	630	100		"	100	"	"	"	"	
Xylenes (total)	13000	200		"	"	"	"	"	"	

Date Sampled: **10/01/18 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		94.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %		21-167		"	"	"	"	

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Project Number: [none]
Project Manager: Brandon Brun

Reported:
10/04/18 16:42

BH07
1810009-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	760	100		ug/l	100	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	7.9	1.0		"	1	"	"	"	"	
Ethylbenzene	580	100		"	100	"	"	"	"	
Xylenes (total)	5800	200		"	"	"	"	"	"	

Date Sampled: **10/01/18 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		96.4 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %		21-167		"	"	"	"	

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Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/04/18 16:42

BH08
1810009-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/01/18 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	5200	100	ug/l	100	1810033	10/02/18	10/04/18	EPA 8260B	
Toluene	4700	100	"	"	"	"	"	"	
Ethylbenzene	710	100	"	"	"	"	"	"	
Xylenes (total)	14000	200	"	"	"	"	"	"	

Date Sampled: **10/01/18 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.7 %	21-167		"	"	"	"	

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Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brun

Reported:
10/04/18 16:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1810033 - EPA 5030 Water MS

Blank (1810033-BLK1)

Prepared: 10/02/18 Analyzed: 10/04/18

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.2		98.9	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

LCS (1810033-BS1)

Prepared: 10/02/18 Analyzed: 10/04/18

Benzene	28.9	1.0	ug/l	33.3		86.8	70-130			
Toluene	30.8	1.0	"	33.3		92.3	70-130			
Ethylbenzene	32.5	1.0	"	33.3		97.6	70-130			
m,p-Xylene	64.8	2.0	"	66.7		97.2	70-130			
o-Xylene	32.5	1.0	"	33.3		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.2		98.7	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.3	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.8	21-167			

Matrix Spike (1810033-MS1)

Source: 1810009-01

Prepared: 10/02/18 Analyzed: 10/04/18

Benzene	28.5	1.0	ug/l	33.3	ND	85.6	70-130			
Toluene	31.0	1.0	"	33.3	ND	93.0	70-130			
Ethylbenzene	32.6	1.0	"	33.3	ND	97.8	70-130			
m,p-Xylene	65.0	2.0	"	66.7	ND	97.5	70-130			
o-Xylene	32.6	1.0	"	33.3	ND	97.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2		97.0	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.1	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.4	21-167			

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Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
10/04/18 16:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1810033 - EPA 5030 Water MS

Matrix Spike Dup (1810033-MSD1)

Source: 1810009-01

Prepared: 10/02/18 Analyzed: 10/04/18

Benzene	32.3	1.0	ug/l	33.3	ND	97.0	70-130	12.5	30	
Toluene	35.3	1.0	"	33.3	ND	106	70-130	12.9	30	
Ethylbenzene	37.4	1.0	"	33.3	ND	112	70-130	13.7	30	
m,p-Xylene	74.4	2.0	"	66.7	ND	112	70-130	13.5	30	
o-Xylene	38.0	1.0	"	33.3	ND	114	70-130	15.5	30	
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.2		97.6	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		97.1	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.7	21-167			

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Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/04/18 16:42

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