

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,

A handwritten signature in black ink, appearing to be 'P. Shrewsbury', written in a cursive style.

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:
08/06/18 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

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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: Berg 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					
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 1200				Received by: 				Date/Time: 7.25.18 1200				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>				Notes:
Relinquished by:				Date/Time:				Received by:				Date/Time:				Sample Integrity: Temperature Upon Receipt: 9.4 Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:								

Summit Scientific


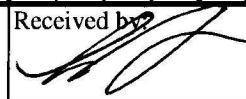
741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

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:	Beng, si-26
Project Number:	N/A

				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	pH, EC, SAR						Special Instructions	
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'		1455																				
Relinquished by: 				Date/Time: 7.25.18 1820				Received by: 				Date/Time: 7.25.18 1820				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"/>						
																48 Hours <input type="checkbox"/>						
Relinquished by:				Date/Time:				Received by:				Date/Time:				Sample Integrity:						
																Temperature Upon Receipt: 9.4						
																Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						

Sample Receipt Checklist

S2 Work Order 1807314

Client: Noble/Tsoman 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⁾ ?	<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

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 Bruns

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		"	"	"	"	

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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 Bruns

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
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.0 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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
<i>Surrogate: o-Terphenyl</i>		105 %	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 Bruns

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
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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
<i>Surrogate: o-Terphenyl</i>		104 %	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

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
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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
Surrogate: o-Terphenyl		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 Bruns

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 Bruns

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
<i>Surrogate: 1,2-Dichloroethane-d4</i>		115 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.0 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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
<i>Surrogate: o-Terphenyl</i>		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		"	"	"	"	

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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 Bruns

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 Bruns

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

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

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
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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
Surrogate: o-Terphenyl		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 Bruns

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
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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
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 Bruns

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 Bruns

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
<i>Surrogate: 1,2-Dichloroethane-d4</i>		115 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		105 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		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
<i>Surrogate: o-Terphenyl</i>		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 St, Unit C
Denver CO, 80221

Project: Noble - Bierig 1-26

Project Number: [none]
Project Manager: Brandon Bruns

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
Surrogate: 1,2-Dichloroethane-d4		167 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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
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 Bruns

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 Bruns

Reported:
08/06/18 10:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

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 Bruns

Reported:
08/06/18 10:21

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 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	
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0396		98.0	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	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 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	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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,

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

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


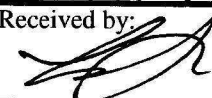
1808011.1

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: Bierly 1-26
Project Number: N/A

				Preservative				Matrix				Analyze For:								
Sample Description	Date	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR			Special Instructions		
HA SS01@5'	8/1/18	1120	2			X			X				X	X				Hold: HA SS01@5' HA SS02@5' HA SS03@5' HA SS04@5' HA SS05@5' HA SS06@6' HA SS07@2' HA SS08@4' HA SS09@5' HA SS10@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:		
Relinquished by:				Date/Time:		Received by:				Date/Time:		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

				Preservative				Matrix				Analyze For:								
Sample Description	Date Sam	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR	Special Instructions				
HA SS 11 @ 4'	8/1/18	1400	1			X			X				X	X			Hold: HA SS 01 @ 5' HA SS 03 @ 5' HA SS 05 @ 5' HA SS 07 @ 2' HA SS 13 @ 3'			
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																		
Relinquished by: <i>Me</i>				Date/Time: 8/1/18				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

1808011

S2 Work Order _____

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)	9.3
-----------	-----

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 Bruns

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		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 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		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 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		97.4 %	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 Bruns

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	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 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	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 11:58**

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 11:58**

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 11:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	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 12:19**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 12:19**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	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 12:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 12:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 13:22**

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

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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 Bruns

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 Bruns

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 14:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	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 14:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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 Bruns

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

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 Bruns

Reported:

08/17/18 10:48

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 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 Bruns

Reported:
08/17/18 10:48

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

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

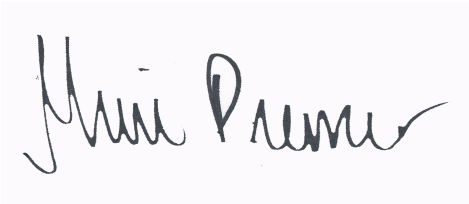
6899 Pecos St, Unit C

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, reading "Muri Premier", on a light blue background.

Muri Premier 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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Summit Scientific

1810 009

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: Bering-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 1815</u>				Received by: <u>[Signature]</u> Date/Time: <u>10.1.18 1815</u>				Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> Standard 48 Hours <input type="checkbox"/>								Notes:					
Relinquished by:				Received by:				Sample Integrity: Temperature Upon Receipt: <u>3.7</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>													
Relinquished by:				Received in Lab by:																	

Sample Receipt Checklist

S2 Work Order: 1810 009

Client: Noble/Tesman 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>3.7</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⁾ ?				
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⁾ ?	✓			
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⁾ ?			✓	
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⁾ ?			✓	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			✓	
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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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

BH02
1810009-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

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

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 Bruns

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		"	"	"	"	

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 Bruns

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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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

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		"	"	"	"	

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:

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		"	"	"	"	

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 Bruns

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		"	"	"	"	

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

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 Bruns

Reported:
10/04/18 16:42

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 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			

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 Bruns

Reported:
10/04/18 16:42

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 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			

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 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