

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 02, 2022

Vince DeCianne
Whiting Oil & Gas
retail
Denver, CO 80215

RE: McLaughlin 94 Closure

Work Order #2204265

Enclosed are the results of analyses for samples received by Summit Scientific on 04/18/22 10:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
20220414_McLaughlin94_AOC@3ft	2204265-01	Soil	04/14/22 10:45	04/18/22 10:40
20220414_McLaughlin94_TP_Comp	2204265-02	Soil	04/14/22 10:55	04/18/22 10:40
20220414_McLaughlin94_TP_Dis	2204265-03	Soil	04/14/22 11:00	04/18/22 10:40

Summit Scientific

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

Summit Scientific

2204265

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Client: Whiting Oil & Gas

Project Manager: Vince DeCianne

Address: 707 17th Street, Suite 3000

E-Mail: jveith@kleinfelder.com

City/State/Zip: Denver, CO 80202

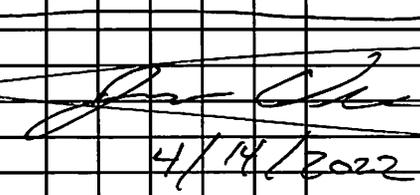
kyle.waggoner@whiting.com

Phone: 970-309-6553

Project Name: McLaughlin 94 Closure

Sampler Name: Jordan Veith

Project Number: 20221740.001A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	COGCC Table 915-1	Arsenic, EC, pH, SAR	EC	SAR	pH	Arsenic	COGCC Table 915-1	MINUS PAHs				
1	20220414_McLughlin 94_AOC@3ft	4/14/2022	10:45	3			X			X			X											
2	20220414_McLughlin 94_TP_COMP	4/14/2022	10:55	3			X			X			X											
3	20220414_McLughlin 94_TP_DIS	4/14/2022	11:00	3			X			X			X											
4																								
5																								
6																								
7																								
8																								
9																								
10																								
Relinquished by: 		Date/Time:		Received by:		Date/Time:		Turn Around Time (Check)				Same				Notes:								
Relinquished by:		Date/Time:		Received by: 		Date/Time: 4/15/22 1040		Day <u>Standard</u> 72 hours 24 hours				48 hours				Sample Integrity: Temperature Upon Receipt: 0.7 Samples								
Relinquished by:		Date/Time:		Received by:		Date/Time:		Intact: <input checked="" type="radio"/> Yes No																

S₂

Sample Receipt Checklist

S2 Work Order# 2204265Client: Whiting Client Project ID: McLaughlin 94 Closure

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air Soil/Solid Water Other Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6 °C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
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 due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<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⁾ ? Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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.JB

Custodian Printed Name

4/18/22

Date/Time



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

20220414_McLaughlin94_AOC@3ft
2204265-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0445	04/21/22	04/22/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0448	04/21/22	04/22/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		78.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

20220414_McLaughlin94_AOC@3ft
2204265-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0400	04/20/22	04/22/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.324	0.0100	mg/L	1	BFD0523	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/14/22 10:45**

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

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_AOC@3ft
2204265-01 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.81	0.230	mg/kg dry	1	BFD0468	04/21/22	04/30/22	EPA 6020B	
Barium	101	0.460	"	"	"	"	"	"	
Cadmium	ND	0.230	"	"	"	"	"	"	
Copper	11.4	0.460	"	"	"	"	"	"	
Lead	15.0	0.230	"	"	"	"	"	"	
Nickel	14.3	0.460	"	"	"	"	"	"	
Selenium	1.22	0.299	"	"	"	"	"	"	
Silver	0.0822	0.0230	"	"	"	"	"	"	
Zinc	74.8	0.460	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFD0624	04/28/22	04/28/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.5	0.0575	mg/L dry	1	BFD0562	04/26/22	05/02/22	EPA 6020B	
Magnesium	18.3	0.0575	"	"	"	"	"	"	
Sodium	148	0.0575	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.95	0.00100	units	1	BFE0018	05/02/22	05/02/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/22 10:45**

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

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_AOC@3ft
2204265-01 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.0	%	1	BFD0527	04/25/22	04/27/22	Calculation
----------	------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.04	0.0100	mmhos/cm	1	BFD0591	04/27/22	04/27/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/14/22 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BFD0589	04/27/22	04/27/22	EPA 9045D	

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

20220414_McLaughlin94_TP_Comp
2204265-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0445	04/21/22	04/22/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0448	04/21/22	04/22/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		72.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

20220414_McLaughlin94_TP_Comp
2204265-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0400	04/20/22	04/26/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.243	0.0100	mg/L	1	BFD0523	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/14/22 10:55**

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

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_TP_Comp
2204265-02 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.56	0.220	mg/kg dry	1	BFD0468	04/21/22	04/30/22	EPA 6020B	
Barium	96.6	0.441	"	"	"	"	"	"	
Cadmium	0.230	0.220	"	"	"	"	"	"	
Copper	8.50	0.441	"	"	"	"	"	"	
Lead	8.88	0.220	"	"	"	"	"	"	
Nickel	10.8	0.441	"	"	"	"	"	"	
Selenium	0.883	0.286	"	"	"	"	"	"	
Silver	0.0532	0.0220	"	"	"	"	"	"	
Zinc	43.9	0.441	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFD0624	04/28/22	04/28/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	235	0.0551	mg/L dry	1	BFD0562	04/26/22	05/02/22	EPA 6020B	
Magnesium	96.1	0.0551	"	"	"	"	"	"	
Sodium	218	0.0551	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.03	0.00100	units	1	BFE0018	05/02/22	05/02/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/22 10:55**

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

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_TP_Comp
2204265-02 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	90.8	%	1	BFD0527	04/25/22	04/27/22	Calculation
-----------------	-------------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.02	0.0100	mmhos/cm	1	BFD0591	04/27/22	04/27/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/14/22 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.73		pH Units	1	BFD0589	04/27/22	04/27/22	EPA 9045D	

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_TP_Dis
2204265-03 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0445	04/21/22	04/22/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0448	04/21/22	04/22/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		63.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

20220414_McLaughlin94_TP_Dis
2204265-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0400	04/20/22	04/26/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		53.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.318	0.0100	mg/L	1	BFD0523	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/14/22 11:00**

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

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_TP_Dis
2204265-03 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.68	0.222	mg/kg dry	1	BFD0468	04/21/22	04/30/22	EPA 6020B	
Barium	117	0.445	"	"	"	"	"	"	
Cadmium	0.315	0.222	"	"	"	"	"	"	
Copper	12.0	0.445	"	"	"	"	"	"	
Lead	11.7	0.222	"	"	"	"	"	"	
Nickel	13.8	0.445	"	"	"	"	"	"	
Selenium	1.05	0.289	"	"	"	"	"	"	
Silver	0.0722	0.0222	"	"	"	"	"	"	
Zinc	53.9	0.445	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 04/14/22 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFD0624	04/28/22	04/28/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 04/14/22 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	296	0.0556	mg/L dry	1	BFD0562	04/26/22	05/02/22	EPA 6020B	
Magnesium	117	0.0556	"	"	"	"	"	"	
Sodium	307	0.0556	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 04/14/22 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.82	0.00100	units	1	BFE0018	05/02/22	05/02/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 04/14/22 11:00

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

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

**20220414_McLaughlin94_TP_Dis
2204265-03 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	89.9	%	1	BFD0527	04/25/22	04/27/22	Calculation
----------	------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.16	0.0100	mmhos/cm	1	BFD0591	04/27/22	04/27/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/14/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BFD0589	04/27/22	04/27/22	EPA 9045D	

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

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 BFD0445 - EPA 5030 Soil MS

Blank (BFD0445-BLK1)

Prepared: 04/21/22 Analyzed: 04/22/22

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0414		"	0.0400		103	50-150				
<i>Surrogate: Toluene-d8</i>	0.0409		"	0.0400		102	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0383		"	0.0400		95.7	50-150				

LCS (BFD0445-BS1)

Prepared: 04/21/22 Analyzed: 04/22/22

Benzene	0.0583	0.0020	mg/kg	0.0750		77.7	70-130				
Toluene	0.0611	0.0050	"	0.0750		81.4	70-130				
Ethylbenzene	0.0586	0.0050	"	0.0750		78.2	70-130				
m,p-Xylene	0.123	0.010	"	0.150		81.8	70-130				
o-Xylene	0.0702	0.0050	"	0.0750		93.6	70-130				
1,2,4-Trimethylbenzene	0.0666	0.0050	"	0.0750		88.8	70-130				
1,3,5-Trimethylbenzene	0.0626	0.0050	"	0.0750		83.4	70-130				
Naphthalene	0.0867	0.0038	"	0.0750		116	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0399		"	0.0400		99.8	50-150				
<i>Surrogate: Toluene-d8</i>	0.0404		"	0.0400		101	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0405		"	0.0400		101	50-150				

Matrix Spike (BFD0445-MS1)

Source: 2204254-01

Prepared: 04/21/22 Analyzed: 04/22/22

Benzene	0.0589	0.0020	mg/kg	0.0750	ND	78.5	70-130				
Toluene	0.0619	0.0050	"	0.0750	ND	82.5	70-130				
Ethylbenzene	0.0568	0.0050	"	0.0750	ND	75.8	70-130				
m,p-Xylene	0.121	0.010	"	0.150	ND	80.4	70-130				
o-Xylene	0.0681	0.0050	"	0.0750	ND	90.8	70-130				
1,2,4-Trimethylbenzene	0.0656	0.0050	"	0.0750	ND	87.5	70-130				
1,3,5-Trimethylbenzene	0.0600	0.0050	"	0.0750	ND	80.0	70-130				
Naphthalene	0.0891	0.0038	"	0.0750	ND	119	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0426		"	0.0400		106	50-150				
<i>Surrogate: Toluene-d8</i>	0.0417		"	0.0400		104	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0402		"	0.0400		101	50-150				

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

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 BFD0445 - EPA 5030 Soil MS

Matrix Spike Dup (BFD0445-MSD1)	Source: 2204254-01			Prepared: 04/21/22 Analyzed: 04/22/22						
Benzene	0.0571	0.0020	mg/kg	0.0750	ND	76.1	70-130	3.16	30	
Toluene	0.0613	0.0050	"	0.0750	ND	81.8	70-130	0.877	30	
Ethylbenzene	0.0576	0.0050	"	0.0750	ND	76.8	70-130	1.31	30	
m,p-Xylene	0.123	0.010	"	0.150	ND	81.8	70-130	1.75	30	
o-Xylene	0.0700	0.0050	"	0.0750	ND	93.4	70-130	2.78	30	
1,2,4-Trimethylbenzene	0.0655	0.0050	"	0.0750	ND	87.4	70-130	0.137	30	
1,3,5-Trimethylbenzene	0.0618	0.0050	"	0.0750	ND	82.4	70-130	2.96	30	
Naphthalene	0.0937	0.0038	"	0.0750	ND	125	70-130	5.09	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>50-150</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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

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 BFD0448 - EPA 3550A

Blank (BFD0448-BLK1)

Prepared: 04/21/22 Analyzed: 04/22/22

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							

LCS (BFD0448-BS1)

Prepared: 04/21/22 Analyzed: 04/22/22

C10-C28 (DRO)	450	50	mg/kg	500	90.0	70-130				
---------------	-----	----	-------	-----	------	--------	--	--	--	--

Matrix Spike (BFD0448-MS1)

Source: 2204254-01

Prepared: 04/21/22 Analyzed: 04/22/22

C10-C28 (DRO)	405	50	mg/kg	500	9.41	79.1	70-130			
---------------	-----	----	-------	-----	------	------	--------	--	--	--

Matrix Spike Dup (BFD0448-MSD1)

Source: 2204254-01

Prepared: 04/21/22 Analyzed: 04/22/22

C10-C28 (DRO)	388	50	mg/kg	500	9.41	75.8	70-130	4.17	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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFD0400 - EPA 5030 Soil MS

Blank (BFD0400-BLK1)

Prepared: 04/20/22 Analyzed: 04/21/22

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0264</i>		"	<i>0.0333</i>		<i>79.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0310</i>		"	<i>0.0333</i>		<i>92.9</i>	<i>40-150</i>			

LCS (BFD0400-BS1)

Prepared: 04/20/22 Analyzed: 04/21/22

Acenaphthene	0.0299	0.00500	mg/kg	0.0333		89.6	31-137			
Anthracene	0.0292	0.00500	"	0.0333		87.5	30-120			
Benzo (a) anthracene	0.0299	0.00500	"	0.0333		89.7	30-120			
Benzo (a) pyrene	0.0285	0.00500	"	0.0333		85.5	30-120			
Benzo (b) fluoranthene	0.0309	0.00500	"	0.0333		92.6	30-120			
Benzo (k) fluoranthene	0.0331	0.00500	"	0.0333		99.2	30-120			
Chrysene	0.0304	0.00500	"	0.0333		91.3	30-120			
Dibenz (a,h) anthracene	0.0174	0.00500	"	0.0333		52.1	30-120			
Fluoranthene	0.0307	0.00500	"	0.0333		92.0	30-120			
Fluorene	0.0300	0.00500	"	0.0333		90.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0112	0.00500	"	0.0333		33.7	30-120			
Pyrene	0.0316	0.00500	"	0.0333		94.7	35-142			
1-Methylnaphthalene	0.0310	0.00500	"	0.0333		92.9	35-142			
2-Methylnaphthalene	0.0257	0.00500	"	0.0333		77.2	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0304</i>		"	<i>0.0333</i>		<i>91.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0324</i>		"	<i>0.0333</i>		<i>97.3</i>	<i>40-150</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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFD0400 - EPA 5030 Soil MS

Matrix Spike (BFD0400-MS1)	Source: 2204123-02			Prepared: 04/20/22 Analyzed: 04/21/22						
Acenaphthene	0.0151	0.00500	mg/kg	0.0333	ND	45.3	31-137			
Anthracene	0.0161	0.00500	"	0.0333	ND	48.4	30-120			
Benzo (a) anthracene	0.0156	0.00500	"	0.0333	ND	46.9	30-120			
Benzo (a) pyrene	0.0140	0.00500	"	0.0333	ND	41.9	30-120			
Benzo (b) fluoranthene	0.0150	0.00500	"	0.0333	ND	44.9	30-120			
Benzo (k) fluoranthene	0.0152	0.00500	"	0.0333	ND	45.5	30-120			
Chrysene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333	ND	55.0	30-120			
Fluoranthene	0.0173	0.00500	"	0.0333	ND	51.8	30-120			
Fluorene	0.0157	0.00500	"	0.0333	ND	47.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0191	0.00500	"	0.0333	ND	57.4	30-120			
Pyrene	0.0163	0.00500	"	0.0333	ND	49.0	35-142			
1-Methylnaphthalene	0.0149	0.00500	"	0.0333	ND	44.8	15-130			
2-Methylnaphthalene	0.0133	0.00500	"	0.0333	ND	40.0	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0143</i>		<i>"</i>	<i>0.0333</i>		<i>43.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0178</i>		<i>"</i>	<i>0.0333</i>		<i>53.5</i>	<i>40-150</i>			

Matrix Spike Dup (BFD0400-MSD1)	Source: 2204123-02			Prepared: 04/20/22 Analyzed: 04/21/22						
Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.4	31-137	8.64	30	
Anthracene	0.0178	0.00500	"	0.0333	ND	53.4	30-120	9.78	30	
Benzo (a) anthracene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	14.6	30	
Benzo (a) pyrene	0.0162	0.00500	"	0.0333	ND	48.6	30-120	15.0	30	
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	12.5	30	
Benzo (k) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120	11.5	30	
Chrysene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	16.3	30	
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	60.1	30-120	8.73	30	
Fluoranthene	0.0195	0.00500	"	0.0333	ND	58.5	30-120	12.1	30	
Fluorene	0.0176	0.00500	"	0.0333	ND	52.9	30-120	11.3	30	
Indeno (1,2,3-cd) pyrene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	12.1	30	
Pyrene	0.0183	0.00500	"	0.0333	ND	54.8	35-142	11.2	30	
1-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.4	15-130	15.8	50	
2-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.9	15-130	13.8	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0211</i>		<i>"</i>	<i>0.0333</i>		<i>63.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0199</i>		<i>"</i>	<i>0.0333</i>		<i>59.7</i>	<i>40-150</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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BFD0523 - EPA 3050B

Blank (BFD0523-BLK1)

Prepared: 04/25/22 Analyzed: 04/30/22

Boron ND 0.0100 mg/L

LCS (BFD0523-BS1)

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 4.54 0.0100 mg/L 5.00 90.8 80-120

Duplicate (BFD0523-DUP1)

Source: 2204253-01

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 0.675 0.0100 mg/L 0.709 4.81 20

Matrix Spike (BFD0523-MS1)

Source: 2204253-01

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 5.48 0.0100 mg/L 5.00 0.709 95.5 75-125

Matrix Spike Dup (BFD0523-MSD1)

Source: 2204253-01

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 5.39 0.0100 mg/L 5.00 0.709 93.6 75-125 1.68 25

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFD0468 - EPA 3050B

Blank (BFD0468-BLK1)

Prepared: 04/21/22 Analyzed: 04/29/22

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Selenium	ND	0.260	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							

LCS (BFD0468-BS1)

Prepared: 04/21/22 Analyzed: 04/29/22

Arsenic	35.0	0.200	mg/kg wet	40.0	87.4	80-120
Barium	33.4	0.400	"	40.0	83.6	80-120
Cadmium	1.90	0.200	"	2.00	95.2	80-120
Copper	33.8	0.400	"	40.0	84.5	80-120
Lead	19.5	0.200	"	20.0	97.3	80-120
Nickel	33.7	0.400	"	40.0	84.2	80-120
Selenium	3.48	0.260	"	4.00	87.0	80-120
Silver	1.87	0.0200	"	2.00	93.7	80-120
Zinc	34.8	0.400	"	40.0	87.1	80-120

Duplicate (BFD0468-DUP1)

Source: 2204241-21

Prepared: 04/21/22 Analyzed: 04/29/22

Arsenic	2.71	0.233	mg/kg dry	2.97	9.24	20
Barium	40.7	0.465	"	40.7	0.150	20
Cadmium	0.101	0.233	"	0.145	35.4	20
Copper	6.54	0.465	"	7.37	11.9	20
Lead	5.64	0.233	"	6.88	19.8	20
Nickel	6.72	0.465	"	7.51	11.1	20
Selenium	0.681	0.302	"	0.718	5.32	20
Silver	0.0325	0.0233	"	0.0387	17.5	20
Zinc	26.2	0.465	"	28.6	9.02	20

QR-01

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFD0468 - EPA 3050B

Matrix Spike (BFD0468-MS1)

Source: 2204241-21

Prepared: 04/21/22 Analyzed: 04/29/22

Arsenic	42.8	0.233	mg/kg dry	46.5	2.97	85.6	75-125			
Barium	80.7	0.465	"	46.5	40.7	86.0	75-125			
Cadmium	2.30	0.233	"	2.33	0.145	92.6	75-125			
Copper	46.5	0.465	"	46.5	7.37	84.1	75-125			
Lead	30.6	0.233	"	23.3	6.88	102	75-125			
Nickel	45.0	0.465	"	46.5	7.51	80.7	75-125			
Selenium	4.31	0.302	"	4.65	0.718	77.3	75-125			
Silver	2.00	0.0233	"	2.33	0.0387	84.3	75-125			
Zinc	67.5	0.465	"	46.5	28.6	83.5	75-125			

Matrix Spike Dup (BFD0468-MSD1)

Source: 2204241-21

Prepared: 04/21/22 Analyzed: 04/29/22

Arsenic	41.9	0.233	mg/kg dry	46.5	2.97	83.7	75-125	2.03	25
Barium	78.6	0.465	"	46.5	40.7	81.5	75-125	2.64	25
Cadmium	2.30	0.233	"	2.33	0.145	92.7	75-125	0.0493	25
Copper	42.5	0.465	"	46.5	7.37	75.4	75-125	9.07	25
Lead	29.5	0.233	"	23.3	6.88	97.1	75-125	3.70	25
Nickel	43.9	0.465	"	46.5	7.51	78.2	75-125	2.58	25
Selenium	4.37	0.302	"	4.65	0.718	78.5	75-125	1.29	25
Silver	2.09	0.0233	"	2.33	0.0387	88.1	75-125	4.33	25
Zinc	74.0	0.465	"	46.5	28.6	97.5	75-125	9.17	25

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFD0624 - 3060A Mod

Blank (BFD0624-BLK1)

Prepared & Analyzed: 04/28/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFD0624-BS1)

Prepared & Analyzed: 04/28/22

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BFD0624-DUP1)

Source: 2204261-01

Prepared & Analyzed: 04/28/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFD0624-MS1)

Source: 2204261-01

Prepared & Analyzed: 04/28/22

Chromium, Hexavalent 32.5 0.30 mg/kg dry 30.3 ND 107 75-125

Matrix Spike Dup (BFD0624-MSD1)

Source: 2204261-01

Prepared & Analyzed: 04/28/22

Chromium, Hexavalent 34.9 0.30 mg/kg dry 30.3 ND 115 75-125 7.37 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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A
Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BFD0562 - General Preparation

Blank (BFD0562-BLK1)

Prepared: 04/26/22 Analyzed: 05/02/22

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BFD0562-BS1)

Prepared: 04/26/22 Analyzed: 05/02/22

Calcium	4.99	0.0500	mg/L wet	5.00		99.7	70-130			
Magnesium	5.39	0.0500	"	5.00		108	70-130			
Sodium	5.27	0.0500	"	5.00		105	70-130			

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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:

05/02/22 12:59

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

Summit Scientific

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

Batch BFD0527 - General Preparation

Duplicate (BFD0527-DUP1)

Source: 2204265-01

Prepared: 04/25/22 Analyzed: 04/27/22

% Solids	85.7		%		87.0			1.45	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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BFD0591 - General Preparation

Blank (BFD0591-BLK1)

Prepared & Analyzed: 04/27/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFD0591-BS1)

Prepared & Analyzed: 04/27/22

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BFD0591-DUP1)

Source: 2204254-01

Prepared & Analyzed: 04/27/22

Specific Conductance (EC) 2.40 0.0100 mmhos/cm 2.43 1.24 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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BFD0589 - General Preparation

LCS (BFD0589-BS1)

Prepared & Analyzed: 04/27/22

pH 9.12 pH Units 9.18 99.3 95-105

Duplicate (BFD0589-DUP1)

Source: 2204254-01

Prepared & Analyzed: 04/27/22

pH 7.68 pH Units 7.66 0.261 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.



Whiting Oil & Gas
retail
Denver CO, 80215

Project: McLaughlin 94 Closure

Project Number: 20221740.001A

Project Manager: Vince DeCianne

Reported:
05/02/22 12:59

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
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