



INDEPENDENT TESTING LAB

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: BREITBURN OPERATING
Name:
ClientProj: MI-017-2D-0010
GTA ProjNo: 012521-11

Site Addr: WHYTE 1-33 SWD

Sampled By: GD/BBOP
Date Rec: 1/25/2021
Time Rec: 5:35 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	WHYTE 1-33	12/28/2020	3:00 PM	BRINE

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

Kirk Chase

Kirk L. Chase/Chemist
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COMPANY:	BREITBURN OPERATING	GTA PROJECT NO:	012521-11
PROJECT NO:	MI-017-2D-0010	GTA SAMPLE NO:	1
LOCATION:	WHYTE 1-33 SWD	DATE SAMPLED:	12/28/2020
		TIME SAMPLED:	3:00 PM
		DATE RECEIVED:	1/25/2021
		TIME RECEIVED:	5:35 PM
SAMPLED BY:	MI GD/BBOP	SAMPLE MATRIX:	BRINE
SAMPLE ID:	WHYTE 1-33		

METALS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Digestion Method</u>
BARIUM DISS EPA 6020A	22	0.050	mg/L (PPM)	MR	2/10/2021	EPA 3005A
CALCIUM DISS EPA 6020A	21,000	100	mg/L (PPM)	MR	2/10/2021	EPA 3005A
IRON TOTAL EPA 6020A	930	10	mg/L (PPM)	MR	2/10/2021	EPA 3020A
MAGNESIUM DISS EPA 6020A	3,800	100	mg/L (PPM)	MR	2/10/2021	EPA 3005A
POTASSIUM DISS EPA 6020A	4,300	100	mg/L (PPM)	MR	2/10/2021	EPA 3005A
SODIUM DISS EPA 6020A	9,600	100	mg/L (PPM)	MR	2/10/2021	EPA 3005A

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

DISS = DISSOLVED



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COMPANY: BREITBURN OPERATING
 PROJECT NO: MI-017-2D-0010
 LOCATION: WHYTE 1-33 SWD
 MI
 SAMPLED BY: GD/BBOP
 SAMPLE ID: WHYTE 1-33

GTA PROJECT NO: 012521-11
 GTA SAMPLE NO: 1
 DATE RECEIVED: 1/25/2021
 TIME RECEIVED: 5:35 PM
 DATE SAMPLED: 12/28/2020
 TIME SAMPLED: 3:00 PM
 SAMPLE MATRIX: BRINE

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	110	10	mg/L (PPM)	TR	2/1/2021
ALKALINITY SM 4500CO2D (CARBONATE)	ND	10	mg/L (PPM)	TR	2/1/2021
CHLORIDE EPA 300.0	42,000	2,000	mg/L (PPM)	LV	1/29/2021
CONDUCTIVITY SM2510-B	84,000	5.0	uS/cm@25C	LV	1/29/2021
pH EPA 150.1 - LAB	4.8	0.10	s.u.	TR	2/1/2021
RESISTIVITY SM 2510A	12	-	ohms x cm	LV	1/29/2021
SPECIFIC GRAVITY SM 2710F	1.031	-	-	LV	2/3/2021
SULFATE EPA 300.0	ND	50	mg/L (PPM)	LV	1/29/2021
SULFIDE SM 4500S D	ND	1.0	mg/L (PPM)	KC	1/26/2021
TOTAL DISSOLVED SOLIDS EPA 160.1	44,000	5.0	mg/L (PPM)	TR	2/2/2021

ND = NOT DETECTED, RESULT < LOD
 LOD = LIMIT OF DETECTION
 s.u. = STANDARD pH UNITS REPORTED AT 25 C
 DISS = DISSOLVED

YEAR: 2020
ENVIRONMENTAL PROTECTION AGENCY ANNUAL MONITORING REPORT
FOR CLASS II TYPE D INJECTION WELLS

012521-11

UIC PERMIT No: MI-017-2D-0010
WELL NAME: Whyte 1-33 SWD
TYPE OF WELL: Salt Water Disposal

WELL LOCATION:

STATE	COUNTY	TOWNSHIP
Michigan	Bay	15N
RANGE	SECTION	QTR/QTR
4E	33	SE/SE

NATURE OF INJECTED FLUID: Prarie du Chien Produced Brine

OPERATOR NAME: BREITBURN OPERATING, L.P.
OPERATOR ADDRESS: P.O. BOX 1256
 GAYLORD, MI 49734
PHONE NUMBER: (989) 732-0020

FREQUENCY OF MEASUREMENT: Annually

ANNUAL REQUIREMENTS:

Attached is the actual laboratory analysis of the following parameters: Sodium, Calcium, Magnesium, Barium, Total Iron, Chloride, Sulfate, Carbonate, Bicarbonate, Sulfide, Total Dissolved Solids, pH, Resistivity (ohm-meters @ 25 degrees Centigrade) and Specific Gravity.

DATE OF SAMPLING	TIME OF SAMPLING	SAMPLED BY
12-28-2020	3:00 pm	Greg Dodge
SAMPLE LOCATION		


SAMPLE METHODOLOGY AND HANDLING

Retained in 175 mL bottle and sent to lab on: _____

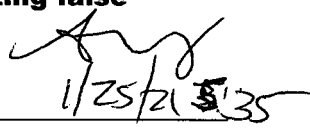
Date analysis was performed, individual who performed analysis, and analytical techniques or methods used is contained within the attached laboratory analysis.

Results of the analysis will be sent to: **U.S. Environmental Protection Agency**
Attn: UIC Section Direct Implementation (WU-16J)
Region V
77 West Jackson Blvd.
Chicago, IL 60604

I certify under the law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Signature
Name Printed

12-28-2020 

Date Signed