

Analytical Report

Sample data report



New Mexico Bureau of Geology
and Mineral Resources

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Socorro, NM 87801
(575) 835-5160
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Customer: National Cave and Karst Research Institute (NCKRI)
Contact: Lewis Land
Phone: 575-689-6517

Order Number: 200201
Receive Date: 2/11/2020 9:02:04 AM
Project: San Solomon Springs
Matrix: Water

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	4080	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	7.8	ph Units	1		3/6/2020

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	237	mg/L	10	0.05 (0.5)	3/9/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/9/2020
Magnesium	87.7	mg/L	10	0.05 (0.5)	3/9/2020
Potassium	23.3	mg/L	10	0.05 (0.5)	3/9/2020
Silicon	14.7	mg/L	10	0.01 (0.1)	3/9/2020
Sodium	565	mg/L	10	0.05 (0.5)	3/9/2020
Strontium	4.24	mg/L	10	0.0005 (0.005)	3/9/2020

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	0.0050	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.017	mg/L	10	0.001 (0.01)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
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		Matrix:	Water

Beryllium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Boron 11	0.461	mg/L	10	0.005	(0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Copper 65	0.0063	mg/L	10	0.0005	(0.005)	3/10/2020
Iron	ND	mg/L	10	0.01	(0.1)	3/10/2020
Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.196	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.011	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	0.0072	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	16.0	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	4.34	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0116	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	0.0060	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0117	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-01	ESS1	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/27/2020
Chloride	808	mg/L	10	1 (10)	2/27/2020
Fluoride	1.97	mg/L	5	0.1 (0.5)	2/27/2020
Nitrate	2.75	mg NO3/L	5	0.1 (0.5)	2/27/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/27/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/27/2020
Sulfate	834	mg/L	10	1 (10)	2/27/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: Alkalinity	Method: EPA 310.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	283	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	345	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	45.99	meq/L	1		
Cations total	44.25	meq/L	1		
Percent difference	-1.93	%	1		
SiO2	34.2	mg/L	1	0.05	
TDS calc	2770	mg/L	1		

Laboratory sample ID: 200201-01	Customer sample ID: ESS1	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	954	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-02	Customer sample ID: GS1	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3260	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-02	Customer sample ID: GS1	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.5	ph Units	1		3/6/2020

Laboratory sample ID: 200201-02	Customer sample ID: GS1	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	174	mg/L	10	0.05 (0.5)	3/9/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/9/2020
Magnesium	79.6	mg/L	10	0.05 (0.5)	3/9/2020
Potassium	18.9	mg/L	10	0.05 (0.5)	3/9/2020
Silicon	8.89	mg/L	10	0.01 (0.1)	3/9/2020
Sodium	436	mg/L	10	0.05 (0.5)	3/9/2020
Strontium	3.45	mg/L	10	0.0005 (0.005)	3/9/2020

Laboratory sample ID: 200201-02	Customer sample ID: GS1	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.019	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.375	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

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		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.156	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	9.51	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.41	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0054	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0143	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-02	GS1	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/27/2020
Chloride	632	mg/L	10	1 (10)	2/27/2020
Fluoride	1.58	mg/L	5	0.1 (0.5)	2/27/2020
Nitrate	0.71	mg NO3/L	5	0.1 (0.5)	2/27/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/27/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/27/2020
Sulfate	659	mg/L	10	1 (10)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-02	GS1	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	225	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	266	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

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	Matrix: Water

Laboratory sample ID: 200201-02	Customer sample ID: GS1	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.17	meq/L	1		
Cations total	34.70	meq/L	1		
Percent difference	-2.07	%	1		
SiO2	20.3	mg/L	1	0.05	
TDS calc	2160	mg/L	1		

Laboratory sample ID: 200201-02	Customer sample ID: GS1	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	763	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-03	Customer sample ID: GS2	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3260	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-03	Customer sample ID: GS2	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.3	ph Units	1		3/6/2020

Laboratory sample ID: 200201-03	Customer sample ID: GS2	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	178	mg/L	10	0.05 (0.5)	3/9/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/9/2020
Magnesium	80.9	mg/L	10	0.05 (0.5)	3/9/2020
Potassium	19.3	mg/L	10	0.05 (0.5)	3/9/2020
Silicon	8.76	mg/L	10	0.01 (0.1)	3/9/2020
Sodium	440	mg/L	10	0.05 (0.5)	3/9/2020
Strontium	3.48	mg/L	10	0.0005 (0.005)	3/9/2020

Laboratory sample ID: 200201-03	Customer sample ID: GS2	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.019	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.370	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

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		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.156	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.011	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	9.51	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.42	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0054	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0150	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-03	GS2	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/28/2020
Chloride	625	mg/L	10	1 (10)	2/28/2020
Fluoride	1.59	mg/L	5	0.1 (0.5)	2/28/2020
Nitrate	0.89	mg NO3/L	5	0.1 (0.5)	2/28/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/28/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/28/2020
Sulfate	655	mg/L	10	1 (10)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-03	GS2	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	227	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	274	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
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	Matrix: Water

Laboratory sample ID: 200201-03	Customer sample ID: GS2	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	35.90	meq/L	1		
Cations total	35.16	meq/L	1		
Percent difference	-1.03	%	1		
SiO2	20.3	mg/L	1	0.05	
TDS calc	2160	mg/L	1		

Laboratory sample ID: 200201-03	Customer sample ID: GS2	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	778	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
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Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-04	Customer sample ID: GS3	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3280	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-04	Customer sample ID: GS3	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.2	ph Units	1		3/6/2020

Laboratory sample ID: 200201-04	Customer sample ID: GS3	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	174	mg/L	10	0.05 (0.5)	3/9/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/9/2020
Magnesium	78.8	mg/L	10	0.05 (0.5)	3/9/2020
Potassium	18.7	mg/L	10	0.05 (0.5)	3/9/2020
Silicon	8.79	mg/L	10	0.01 (0.1)	3/9/2020
Sodium	429	mg/L	10	0.05 (0.5)	3/9/2020
Strontium	3.39	mg/L	10	0.0005 (0.005)	3/9/2020

Laboratory sample ID: 200201-04	Customer sample ID: GS3	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.020	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.368	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

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		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.160	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	9.54	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.56	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0055	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0118	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-04	GS3	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/27/2020
Chloride	626	mg/L	10	1 (10)	2/27/2020
Fluoride	1.58	mg/L	5	0.1 (0.5)	2/27/2020
Nitrate	1.03	mg NO3/L	5	0.1 (0.5)	2/27/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/27/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/27/2020
Sulfate	651	mg/L	10	1 (10)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-04	GS3	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	227	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	277	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
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	Matrix: Water

Laboratory sample ID: 200201-04	Customer sample ID: GS3	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	35.90	meq/L	1		
Cations total	34.30	meq/L	1		
Percent difference	-2.28	%	1		
SiO2	20.4	mg/L	1	0.05	
TDS calc	2140	mg/L	1		

Laboratory sample ID: 200201-04	Customer sample ID: GS3	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	760	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-05	Customer sample ID: GS4	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3220	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-05	Customer sample ID: GS4	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.1	ph Units	1		3/6/2020

Laboratory sample ID: 200201-05	Customer sample ID: GS4	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	174	mg/L	10	0.05 (0.5)	3/9/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/9/2020
Magnesium	79.0	mg/L	10	0.05 (0.5)	3/9/2020
Potassium	18.8	mg/L	10	0.05 (0.5)	3/9/2020
Silicon	8.70	mg/L	10	0.01 (0.1)	3/9/2020
Sodium	430	mg/L	10	0.05 (0.5)	3/9/2020
Strontium	3.40	mg/L	10	0.0005 (0.005)	3/9/2020

Laboratory sample ID: 200201-05	Customer sample ID: GS4	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.019	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.359	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.157	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	9.46	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.44	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0053	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0157	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-05	GS4	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/27/2020
Chloride	629	mg/L	10	1 (10)	2/27/2020
Fluoride	1.60	mg/L	5	0.1 (0.5)	2/27/2020
Nitrate	0.72	mg NO3/L	5	0.1 (0.5)	2/27/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/27/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/27/2020
Sulfate	657	mg/L	10	1 (10)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-05	GS4	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	228	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	278	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-05	Customer sample ID: GS4	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.13	meq/L	1		
Cations total	34.37	meq/L	1		
Percent difference	-2.49	%	1		
SiO2	20.2	mg/L	1	0.05	
TDS calc	2160	mg/L	1		

Laboratory sample ID: 200201-05	Customer sample ID: GS4	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	760	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-06	Customer sample ID: GS5	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3220	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-06	Customer sample ID: GS5	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.1	ph Units	1		3/6/2020

Laboratory sample ID: 200201-06	Customer sample ID: GS5	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	177	mg/L	10	0.05 (0.5)	3/9/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/9/2020
Magnesium	79.7	mg/L	10	0.05 (0.5)	3/9/2020
Potassium	18.9	mg/L	10	0.05 (0.5)	3/9/2020
Silicon	8.73	mg/L	10	0.01 (0.1)	3/9/2020
Sodium	438	mg/L	10	0.05 (0.5)	3/9/2020
Strontium	3.46	mg/L	10	0.0005 (0.005)	3/9/2020

Laboratory sample ID: 200201-06	Customer sample ID: GS5	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	0.0091	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.020	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.365	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.164	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	9.48	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.54	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0055	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0196	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-06	GS5	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/27/2020
Chloride	631	mg/L	10	1 (10)	2/27/2020
Fluoride	1.64	mg/L	5	0.1 (0.5)	2/27/2020
Nitrate	0.85	mg NO3/L	5	0.1 (0.5)	2/27/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/27/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/27/2020
Sulfate	658	mg/L	10	1 (10)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-06	GS5	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	226	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	276	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-06	Customer sample ID: GS5	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.15	meq/L	1		
Cations total	34.90	meq/L	1		
Percent difference	-1.76	%	1		
SiO2	20.3	mg/L	1	0.05	
TDS calc	2170	mg/L	1		

Laboratory sample ID: 200201-06	Customer sample ID: GS5	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	769	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-07	SS1	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	1680	uS/cm	1		2/25/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-07	SS1	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.4	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-07	SS1	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	96.8	mg/L	5	0.05 (0.25)	3/9/2020
Iron	ND	mg/L	5	0.02 (0.1)	3/9/2020
Magnesium	34.1	mg/L	5	0.05 (0.25)	3/9/2020
Potassium	12.5	mg/L	5	0.05 (0.25)	3/9/2020
Silicon	12.3	mg/L	5	0.01 (0.05)	3/9/2020
Sodium	219	mg/L	5	0.05 (0.25)	3/9/2020
Strontium	1.66	mg/L	5	0.0005 (0.0025)	3/9/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-07	SS1	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Antimony 123	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Arsenic	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Barium	0.041	mg/L	5	0.001 (0.005)	3/10/2020
Beryllium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Boron 11	0.195	mg/L	5	0.005 (0.025)	3/10/2020
Cadmium 111	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Chromium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Cobalt	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Copper 65	0.0043	mg/L	5	0.0005 (0.0025)	3/10/2020
Iron	ND	mg/L	5	0.01 (0.05)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Lithium	0.081	mg/L	5	0.001	(0.005)	3/10/2020
Manganese	ND	mg/L	5	0.001	(0.005)	3/10/2020
Molybdenum 95	0.014	mg/L	5	0.001	(0.005)	3/10/2020
Nickel	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Selenium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Silicon	12.8	mg/L	5	0.02	(0.1)	3/10/2020
Silver 107	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Strontium	1.71	mg/L	5	0.001	(0.005)	3/10/2020
Thallium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Thorium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Tin	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Titanium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Uranium	0.0032	mg/L	5	0.0005	(0.0025)	3/10/2020
Vanadium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Zinc 66	0.0066	mg/L	5	0.0005	(0.0025)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-07	SS1	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	0.15	mg/L	1	0.1	2/27/2020
Chloride	221	mg/L	5	1 (5)	2/27/2020
Fluoride	1.63	mg/L	1	0.1	2/27/2020
Nitrate	0.13	mg NO3/L	1	0.1	2/27/2020
Nitrite	ND	mg NO2/L	1	0.1	2/27/2020
Ortho Phosphate	ND	mg/L	1	0.5	2/27/2020
Sulfate	279	mg/L	5	1 (5)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-07	SS1	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	287	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	338	mg/L	1	5	3/6/2020
Carbonate (CO3)	6	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-07	Customer sample ID: SS1	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	17.88	meq/L	1		
Cations total	17.48	meq/L	1		
Percent difference	-1.13	%	1		
SiO2	27.4	mg/L	1	0.05	
TDS calc	1070	mg/L	1		

Laboratory sample ID: 200201-07	Customer sample ID: SS1	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	382	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-08	SS2	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	1660	uS/cm	1		2/25/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-08	SS2	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.4	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-08	SS2	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	97.4	mg/L	5	0.05 (0.25)	3/9/2020
Iron	ND	mg/L	5	0.02 (0.1)	3/9/2020
Magnesium	34.6	mg/L	5	0.05 (0.25)	3/9/2020
Potassium	12.8	mg/L	5	0.05 (0.25)	3/9/2020
Silicon	12.3	mg/L	5	0.01 (0.05)	3/9/2020
Sodium	226	mg/L	5	0.05 (0.25)	3/9/2020
Strontium	1.68	mg/L	5	0.0005 (0.0025)	3/9/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-08	SS2	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	0.0029	mg/L	5	0.0005 (0.0025)	3/10/2020
Antimony 123	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Arsenic	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Barium	0.039	mg/L	5	0.001 (0.005)	3/10/2020
Beryllium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Boron 11	0.195	mg/L	5	0.005 (0.025)	3/10/2020
Cadmium 111	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Chromium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Cobalt	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Copper 65	0.0031	mg/L	5	0.0005 (0.0025)	3/10/2020
Iron	ND	mg/L	5	0.01 (0.05)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Lithium	0.081	mg/L	5	0.001	(0.005)	3/10/2020
Manganese	ND	mg/L	5	0.001	(0.005)	3/10/2020
Molybdenum 95	0.014	mg/L	5	0.001	(0.005)	3/10/2020
Nickel	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Selenium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Silicon	12.9	mg/L	5	0.02	(0.1)	3/10/2020
Silver 107	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Strontium	1.72	mg/L	5	0.001	(0.005)	3/10/2020
Thallium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Thorium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Tin	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Titanium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Uranium	0.0034	mg/L	5	0.0005	(0.0025)	3/10/2020
Vanadium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Zinc 66	0.0054	mg/L	5	0.0005	(0.0025)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-08	SS2	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	0.16	mg/L	1	0.1	2/27/2020
Chloride	218	mg/L	5	1 (5)	2/27/2020
Fluoride	1.69	mg/L	1	0.1	2/27/2020
Nitrate	0.11	mg NO3/L	1	0.1	2/27/2020
Nitrite	ND	mg NO2/L	1	0.1	2/27/2020
Ortho Phosphate	ND	mg/L	1	0.5	2/27/2020
Sulfate	278	mg/L	5	1 (5)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-08	SS2	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	288	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	345	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-08	Customer sample ID: SS2	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	17.80	meq/L	1		
Cations total	17.86	meq/L	1		
Percent difference	0.19	%	1		
SiO2	27.7	mg/L	1	0.05	
TDS calc	1070	mg/L	1		

Laboratory sample ID: 200201-08	Customer sample ID: SS2	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	386	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-09	SS3	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	1630	uS/cm	1		2/25/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-09	SS3	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.4	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-09	SS3	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	92.8	mg/L	5	0.05 (0.25)	3/9/2020
Iron	ND	mg/L	5	0.02 (0.1)	3/9/2020
Magnesium	32.8	mg/L	5	0.05 (0.25)	3/9/2020
Potassium	12.4	mg/L	5	0.05 (0.25)	3/9/2020
Silicon	12.0	mg/L	5	0.01 (0.05)	3/9/2020
Sodium	218	mg/L	5	0.05 (0.25)	3/9/2020
Strontium	1.61	mg/L	5	0.0005 (0.0025)	3/9/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-09	SS3	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Antimony 123	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Arsenic	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Barium	0.036	mg/L	5	0.001 (0.005)	3/10/2020
Beryllium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Boron 11	0.194	mg/L	5	0.005 (0.025)	3/10/2020
Cadmium 111	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Chromium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Cobalt	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Copper 65	0.0066	mg/L	5	0.0005 (0.0025)	3/10/2020
Iron	ND	mg/L	5	0.01 (0.05)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Lithium	0.081	mg/L	5	0.001	(0.005)	3/10/2020
Manganese	ND	mg/L	5	0.001	(0.005)	3/10/2020
Molybdenum 95	0.014	mg/L	5	0.001	(0.005)	3/10/2020
Nickel	0.0049	mg/L	5	0.0005	(0.0025)	3/10/2020
Selenium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Silicon	12.6	mg/L	5	0.02	(0.1)	3/10/2020
Silver 107	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Strontium	1.67	mg/L	5	0.001	(0.005)	3/10/2020
Thallium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Thorium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Tin	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Titanium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Uranium	0.0034	mg/L	5	0.0005	(0.0025)	3/10/2020
Vanadium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Zinc 66	0.0112	mg/L	5	0.0005	(0.0025)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-09	SS3	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	0.15	mg/L	1	0.1	2/27/2020
Chloride	213	mg/L	5	1 (5)	2/27/2020
Fluoride	1.66	mg/L	1	0.1	2/27/2020
Nitrate	0.10	mg NO3/L	1	0.1	2/27/2020
Nitrite	ND	mg NO2/L	1	0.1	2/27/2020
Ortho Phosphate	ND	mg/L	1	0.5	2/27/2020
Sulfate	270	mg/L	5	1 (5)	2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-09	SS3	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	285	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	341	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-09	Customer sample ID: SS3	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	17.42	meq/L	1		
Cations total	17.13	meq/L	1		
Percent difference	-0.86	%	1		
SiO2	26.9	mg/L	1	0.05	
TDS calc	1040	mg/L	1		

Laboratory sample ID: 200201-09	Customer sample ID: SS3	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	367	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-10	SS4	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	1640	uS/cm	1		2/25/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-10	SS4	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.4	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-10	SS4	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	90.3	mg/L	5	0.05 (0.25)	3/10/2020
Iron	ND	mg/L	5	0.02 (0.1)	3/10/2020
Magnesium	32.1	mg/L	5	0.05 (0.25)	3/10/2020
Potassium	12.2	mg/L	5	0.05 (0.25)	3/10/2020
Silicon	11.4	mg/L	5	0.01 (0.05)	3/10/2020
Sodium	214	mg/L	5	0.05 (0.25)	3/10/2020
Strontium	1.56	mg/L	5	0.0005 (0.0025)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-10	SS4	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Antimony 123	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Arsenic	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Barium	0.034	mg/L	5	0.001 (0.005)	3/10/2020
Beryllium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Boron 11	0.195	mg/L	5	0.005 (0.025)	3/10/2020
Cadmium 111	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Chromium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Cobalt	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Copper 65	0.0039	mg/L	5	0.0005 (0.0025)	3/10/2020
Iron	ND	mg/L	5	0.01 (0.05)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Lithium	0.083	mg/L	5	0.001	(0.005)	3/10/2020
Manganese	ND	mg/L	5	0.001	(0.005)	3/10/2020
Molybdenum 95	0.014	mg/L	5	0.001	(0.005)	3/10/2020
Nickel	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Selenium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Silicon	12.1	mg/L	5	0.02	(0.1)	3/10/2020
Silver 107	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Strontium	1.67	mg/L	5	0.001	(0.005)	3/10/2020
Thallium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Thorium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Tin	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Titanium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Uranium	0.0034	mg/L	5	0.0005	(0.0025)	3/10/2020
Vanadium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Zinc 66	0.0080	mg/L	5	0.0005	(0.0025)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-10	SS4	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	0.14	mg/L	1	0.1	2/28/2020
Chloride	215	mg/L	5	1 (5)	2/28/2020
Fluoride	1.60	mg/L	1	0.1	2/28/2020
Nitrate	0.10	mg NO3/L	1	0.1	2/28/2020
Nitrite	ND	mg NO2/L	1	0.1	2/28/2020
Ortho Phosphate	ND	mg/L	1	0.5	2/28/2020
Sulfate	275	mg/L	5	1 (5)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-10	SS4	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	281	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	334	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-10	Customer sample ID: SS4	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	17.50	meq/L	1		
Cations total	16.75	meq/L	1		
Percent difference	-2.19	%	1		
SiO2	25.9	mg/L	1	0.05	
TDS calc	1040	mg/L	1		

Laboratory sample ID: 200201-10	Customer sample ID: SS4	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	358	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-11	Customer sample ID: SS5	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	1610	uS/cm	1		2/25/2020

Laboratory sample ID: 200201-11	Customer sample ID: SS5	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.3	ph Units	1		3/6/2020

Laboratory sample ID: 200201-11	Customer sample ID: SS5	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	89.7	mg/L	5	0.05 (0.25)	3/10/2020
Iron	ND	mg/L	5	0.02 (0.1)	3/10/2020
Magnesium	32.2	mg/L	5	0.05 (0.25)	3/10/2020
Potassium	12.2	mg/L	5	0.05 (0.25)	3/10/2020
Silicon	10.7	mg/L	5	0.01 (0.05)	3/10/2020
Sodium	214	mg/L	5	0.05 (0.25)	3/10/2020
Strontium	1.58	mg/L	5	0.0005 (0.0025)	3/10/2020

Laboratory sample ID: 200201-11	Customer sample ID: SS5	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Antimony 123	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Arsenic	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Barium	0.033	mg/L	5	0.001 (0.005)	3/10/2020
Beryllium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Boron 11	0.193	mg/L	5	0.005 (0.025)	3/10/2020
Cadmium 111	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Chromium	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Cobalt	ND	mg/L	5	0.0005 (0.0025)	3/10/2020
Copper 65	0.0041	mg/L	5	0.0005 (0.0025)	3/10/2020
Iron	ND	mg/L	5	0.01 (0.05)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Lithium	0.077	mg/L	5	0.001	(0.005)	3/10/2020
Manganese	0.009	mg/L	5	0.001	(0.005)	3/10/2020
Molybdenum 95	0.013	mg/L	5	0.001	(0.005)	3/10/2020
Nickel	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Selenium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Silicon	11.3	mg/L	5	0.02	(0.1)	3/10/2020
Silver 107	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Strontium	1.62	mg/L	5	0.001	(0.005)	3/10/2020
Thallium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Thorium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Tin	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Titanium	ND	mg/L	5	0.001	(0.005)	3/10/2020
Uranium	0.0032	mg/L	5	0.0005	(0.0025)	3/10/2020
Vanadium	ND	mg/L	5	0.0005	(0.0025)	3/10/2020
Zinc 66	0.0087	mg/L	5	0.0005	(0.0025)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-11	SS5	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	0.12	mg/L	1	0.1	2/28/2020
Chloride	214	mg/L	5	1 (5)	2/28/2020
Fluoride	1.58	mg/L	1	0.1	2/28/2020
Nitrate	0.10	mg NO3/L	1	0.1	2/28/2020
Nitrite	ND	mg NO2/L	1	0.1	2/28/2020
Ortho Phosphate	ND	mg/L	1	0.5	2/28/2020
Sulfate	271	mg/L	5	1 (5)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-11	SS5	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	274	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	335	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-11	Customer sample ID: SS5	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	17.26	meq/L	1		
Cations total	16.75	meq/L	1		
Percent difference	-1.49	%	1		
SiO2	24.2	mg/L	1	0.05	
TDS calc	1030	mg/L	1		

Laboratory sample ID: 200201-11	Customer sample ID: SS5	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	357	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-12	SSS1	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3350	uS/cm	1		2/25/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-12	SSS1	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.3	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-12	SSS1	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	179	mg/L	10	0.05 (0.5)	3/10/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/10/2020
Magnesium	79.7	mg/L	10	0.05 (0.5)	3/10/2020
Potassium	18.9	mg/L	10	0.05 (0.5)	3/10/2020
Silicon	10.2	mg/L	10	0.01 (0.1)	3/10/2020
Sodium	441	mg/L	10	0.05 (0.5)	3/10/2020
Strontium	3.47	mg/L	10	0.0005 (0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-12	SSS1	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.021	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.367	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.163	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	0.0058	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	10.9	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.50	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0058	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0157	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-12	SSS1	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/28/2020
Chloride	633	mg/L	10	1 (10)	2/28/2020
Fluoride	1.62	mg/L	5	0.1 (0.5)	2/28/2020
Nitrate	0.51	mg NO3/L	5	0.1 (0.5)	2/28/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/28/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/28/2020
Sulfate	662	mg/L	10	1 (10)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-12	SSS1	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	232	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	283	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-12	Customer sample ID: SSS1	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.39	meq/L	1		
Cations total	35.16	meq/L	1		
Percent difference	-1.72	%	1		
SiO2	23.3	mg/L	1	0.05	
TDS calc	2180	mg/L	1		

Laboratory sample ID: 200201-12	Customer sample ID: SSS1	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	776	mg CaCO3/ L	1		

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-13	Customer sample ID: SSS2	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3290	uS/cm	1		2/27/2020

Laboratory sample ID: 200201-13	Customer sample ID: SSS2	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.2	ph Units	1		3/6/2020

Laboratory sample ID: 200201-13	Customer sample ID: SSS2	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	177	mg/L	10	0.05 (0.5)	3/10/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/10/2020
Magnesium	78.6	mg/L	10	0.05 (0.5)	3/10/2020
Potassium	18.7	mg/L	10	0.05 (0.5)	3/10/2020
Silicon	9.84	mg/L	10	0.01 (0.1)	3/10/2020
Sodium	433	mg/L	10	0.05 (0.5)	3/10/2020
Strontium	3.41	mg/L	10	0.0005 (0.005)	3/10/2020

Laboratory sample ID: 200201-13	Customer sample ID: SSS2	Test: Trace Metals by ICPMS	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.021	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.357	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.160	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	0.0095	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	10.7	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.48	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0058	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0169	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-13	SSS2	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/28/2020
Chloride	627	mg/L	10	1 (10)	2/28/2020
Fluoride	1.68	mg/L	5	0.1 (0.5)	2/28/2020
Nitrate	0.70	mg NO3/L	5	0.1 (0.5)	2/28/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/28/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/28/2020
Sulfate	656	mg/L	10	1 (10)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-13	SSS2	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	232	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	283	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-13	Customer sample ID: SSS2	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.10	meq/L	1		
Cations total	34.61	meq/L	1		
Percent difference	-2.10	%	1		
SiO2	22.8	mg/L	1	0.05	
TDS calc	2160	mg/L	1		

Laboratory sample ID: 200201-13	Customer sample ID: SSS2	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	765	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-14	SSS3	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3270	uS/cm	1		2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-14	SSS3	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.2	ph Units	1		3/9/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-14	SSS3	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	176	mg/L	10	0.05 (0.5)	3/10/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/10/2020
Magnesium	78.7	mg/L	10	0.05 (0.5)	3/10/2020
Potassium	18.9	mg/L	10	0.05 (0.5)	3/10/2020
Silicon	10.0	mg/L	10	0.01 (0.1)	3/10/2020
Sodium	432	mg/L	10	0.05 (0.5)	3/10/2020
Strontium	3.39	mg/L	10	0.0005 (0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-14	SSS3	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.021	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.367	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.156	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	0.0067	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	10.8	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.49	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0058	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0141	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-14	SSS3	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/28/2020
Chloride	625	mg/L	10	1 (10)	2/28/2020
Fluoride	1.51	mg/L	5	0.1 (0.5)	2/28/2020
Nitrate	ND	mg NO3/L	5	0.1 (0.5)	2/28/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/28/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/28/2020
Sulfate	649	mg/L	10	1 (10)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-14	SSS3	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bicarbonate (HCO3)	282	mg/L	1	5	3/9/2020
Carbonate (CO3)	ND	mg/L	1	5	3/9/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-14	Customer sample ID: SSS3	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	35.91	meq/L	1		
Cations total	34.53	meq/L	1		
Percent difference	-1.95	%	1		
SiO2	23.0	mg/L	1	0.05	
TDS calc	2150	mg/L	1		

Laboratory sample ID: 200201-14	Customer sample ID: SSS3	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	762	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-15	SSS4	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3260	uS/cm	1		2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-15	SSS4	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.1	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-15	SSS4	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	176	mg/L	10	0.05 (0.5)	3/10/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/10/2020
Magnesium	78.4	mg/L	10	0.05 (0.5)	3/10/2020
Potassium	18.7	mg/L	10	0.05 (0.5)	3/10/2020
Silicon	9.88	mg/L	10	0.01 (0.1)	3/10/2020
Sodium	433	mg/L	10	0.05 (0.5)	3/10/2020
Strontium	3.40	mg/L	10	0.0005 (0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-15	SSS4	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.021	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.363	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	0.0063	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	0.0051	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.155	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.011	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	0.0101	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	10.7	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.47	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0058	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0161	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-15	SSS4	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/28/2020
Chloride	625	mg/L	10	1 (10)	2/28/2020
Fluoride	1.57	mg/L	5	0.1 (0.5)	2/28/2020
Nitrate	0.58	mg NO3/L	5	0.1 (0.5)	2/28/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/28/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/28/2020
Sulfate	653	mg/L	10	1 (10)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-15	SSS4	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	232	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	283	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-15	Customer sample ID: SSS4	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	35.98	meq/L	1		
Cations total	34.53	meq/L	1		
Percent difference	-2.05	%	1		
SiO2	22.9	mg/L	1	0.05	
TDS calc	2150	mg/L	1		

Laboratory sample ID: 200201-15	Customer sample ID: SSS4	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	762	mg CaCO3/ L	1		

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-16	SSS5	Specific Conductance	EPA 120.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	3250	uS/cm	1		2/27/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-16	SSS5	pH	EPA 150.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	8.0	ph Units	1		3/6/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-16	SSS5	Cations by ICPOES	EPA 200.7

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	176	mg/L	10	0.05 (0.5)	3/10/2020
Iron	ND	mg/L	10	0.02 (0.2)	3/10/2020
Magnesium	78.6	mg/L	10	0.05 (0.5)	3/10/2020
Potassium	18.9	mg/L	10	0.05 (0.5)	3/10/2020
Silicon	9.88	mg/L	10	0.01 (0.1)	3/10/2020
Sodium	431	mg/L	10	0.05 (0.5)	3/10/2020
Strontium	3.38	mg/L	10	0.0005 (0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-16	SSS5	Trace Metals by ICPMS	EPA 200.8

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Aluminum	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Antimony 123	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Arsenic	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Barium	0.020	mg/L	10	0.001 (0.01)	3/10/2020
Beryllium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Boron 11	0.357	mg/L	10	0.005 (0.05)	3/10/2020
Cadmium 111	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Chromium	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Cobalt	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Copper 65	ND	mg/L	10	0.0005 (0.005)	3/10/2020
Iron	ND	mg/L	10	0.01 (0.1)	3/10/2020

Customer:	National Cave and Karst Research Institute (NCKRI)	Order Number:	200201
Contact:	Lewis Land	Receive Date:	2/11/2020 9:02:04 AM
Phone:	575-689-6517	Project:	San Solomon Springs
		Matrix:	Water

Lead	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Lithium	0.157	mg/L	10	0.001	(0.01)	3/10/2020
Manganese	ND	mg/L	10	0.001	(0.01)	3/10/2020
Molybdenum 95	0.010	mg/L	10	0.001	(0.01)	3/10/2020
Nickel	0.0105	mg/L	10	0.0005	(0.005)	3/10/2020
Selenium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Silicon	10.7	mg/L	10	0.02	(0.2)	3/10/2020
Silver 107	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Strontium	3.48	mg/L	10	0.001	(0.01)	3/10/2020
Thallium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Thorium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Tin	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Titanium	ND	mg/L	10	0.001	(0.01)	3/10/2020
Uranium	0.0056	mg/L	10	0.0005	(0.005)	3/10/2020
Vanadium	ND	mg/L	10	0.0005	(0.005)	3/10/2020
Zinc 66	0.0166	mg/L	10	0.0005	(0.005)	3/10/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-16	SSS5	Anions by IC	EPA 300.0

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	2/28/2020
Chloride	627	mg/L	10	1 (10)	2/28/2020
Fluoride	1.60	mg/L	5	0.1 (0.5)	2/28/2020
Nitrate	0.51	mg NO3/L	5	0.1 (0.5)	2/28/2020
Nitrite	ND	mg NO2/L	5	0.1 (0.5)	2/28/2020
Ortho Phosphate	ND	mg/L	5	0.5 (2.5)	2/28/2020
Sulfate	657	mg/L	10	1 (10)	2/28/2020

Laboratory sample ID:	Customer sample ID:	Test:	Method:
200201-16	SSS5	Alkalinity	EPA 310.1

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	229	mg/L	1	5	3/6/2020
Bicarbonate (HCO3)	279	mg/L	1	5	3/6/2020
Carbonate (CO3)	ND	mg/L	1	5	3/6/2020

Customer: National Cave and Karst Research Institute (NCKRI)	Order Number: 200201
Contact: Lewis Land	Receive Date: 2/11/2020 9:02:04 AM
Phone: 575-689-6517	Project: San Solomon Springs
	Matrix: Water

Laboratory sample ID: 200201-16	Customer sample ID: SSS5	Test: Checking correctness	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.06	meq/L	1		
Cations total	34.50	meq/L	1		
Percent difference	-2.21	%	1		
SiO2	22.8	mg/L	1	0.05	
TDS calc	2160	mg/L	1		

Laboratory sample ID: 200201-16	Customer sample ID: SSS5	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	763	mg CaCO3/ L	1		