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MINE ENGINEERING CIVIL ENGINEERING
MINE RECLAMATION CONST. MANAGEMENT

August 26, 2020

Rob Zuber Division of Reclamation, Mining and Safety 1313 Sherman Street, Room 215 Denver, CO 80203

Re: 2018 Annual Hydrology Report

Adequacy Review #2

Bowie Resources, LLC, Bowie No. 1 Mine

Permit No. C-1981-038

Dear Mr. Zuber:

On behalf of Bowie Resources, LLC, below are the responses to DRMS' adequacy review letter dated August 26, 2020;

1. **DRMS:** Extremely high concentrations for total iron and total manganese (both from March 14, 2018 sample) warrant further discussion. Please look closer at these values and attempt to explain them. For example, maybe there were typographical errors, or laboratory QC data indicates these concentrations may not be accurate.

BRL: Values of Total Iron and Total manganese presented on the previously submitted Figure 18 were reported as high due to not converting units from ug/L to mg/L. Please see revised **Figure 18**.

Please let me know if you have any questions.

Sincerely,

Tamme Bishop

Tamme Bishop, P.E. Project Engineer

SW06 East Roatcap Creek - Downstream Elevation - 6740

						Initiated		1/1/1983	1/1/1983	1/1/1983	1/1/1983
						Activate	d	12/21/1986	12/21/1986	12/21/1986	12/21/1986
						Date		11/27/2018	8/20/2018	6/25/2018	3/14/2018
	Summary Information										
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	0.00	4.65	45.75	0.00	1.25	19.20	0.800	0.005	19.200	0.050
Water Level in Flume	Feet				0.00	0.21	1.22				
Temperature	Celsius	0.5	10.0	21.1	0.03	9.64	25.50	0.2	12.5	10.1	1.6
Conductivity	umhos/cm	60	277	691	80	596	1650	907	713	379	342
pH	su	6.5	8.3	9.2	6.9	8.4	9.0	7.98	8.46	8.29	8.56
Field Comments											
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	60	155	289	64	240	440	395	390	172	140
Carbonate	mg/L	<mdl< td=""><td>1</td><td>7.1</td><td><mdl< td=""><td>7.26</td><td>52.00</td><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	1	7.1	<mdl< td=""><td>7.26</td><td>52.00</td><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	7.26	52.00	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
Chloride	mg/L	1	5	10	<mdl< td=""><td>13.75</td><td>68.00</td><td>6.3</td><td>5.4</td><td>2.4</td><td>3.2</td></mdl<>	13.75	68.00	6.3	5.4	2.4	3.2
Conductivity	umhos/cm	110	275	670	138.0	608.5	1430.0	756	615	338	291
Hardness	mg/L	58	158	291	63.00	274.32	697.00	354	312	155	120
Acidity	mg/L				-370	-119	62	-316	-340	-150	-123
pН	su	6.8	7.9	8.4	6.50	8.08	8.60	8.26	8.22	8.34	8.17
ResidueFilterable-TDS	mg/L	40	180	380	50	418	1130	496	410	231	184
ResidueNonFilterable-TSS	mg/L	18	104	524	<mdl< td=""><td>22</td><td>138</td><td><mdl< td=""><td>50.5</td><td>10</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	22	138	<mdl< td=""><td>50.5</td><td>10</td><td><mdl< td=""></mdl<></td></mdl<>	50.5	10	<mdl< td=""></mdl<>
SAR		0.11	0.46	0.72	0.28	0.97	5.93	0.805	0.866	0.537	0.528
Sulfate	mg/L	10	32	80	4.20	88.69	410.00	111	52.8	15.3	15.8
Calcium (Dissolved)	mg/L	15	37	69	10.5	55.9	125.0	87.3	76.6	38.3	27.9
Iron (Dissolved)	mg/L				<mdl< td=""><td>0.11</td><td>0.83</td><td>0.0179</td><td><mdl< td=""><td>0.0236</td><td>0.0222</td></mdl<></td></mdl<>	0.11	0.83	0.0179	<mdl< td=""><td>0.0236</td><td>0.0222</td></mdl<>	0.0236	0.0222
Iron (Total)	mg/L				0.07	0.71	2.78	0.622	0.391	0.371	0.0799
Magnesium (Dissolved)	mg/L	4	14	29	5.5	32.8	99.2	35	33.5	14.3	12.2
Manganese (Total)	mg/L				<mdl< td=""><td>0.062</td><td>0.165</td><td>0.0885</td><td>0.105</td><td>0.0502</td><td>0.0141</td></mdl<>	0.062	0.165	0.0885	0.105	0.0502	0.0141
Sodium (Dissolved)	mg/L	2	14	28	5.10	40.16	196.00	35.2	36.1	14.8	15.4

SW06 is located on East Roatcap Creek in the NE1/4SW1/4 Sec 23, T13S, R92W of the 6th P.M. A 36" Parshall flume was also installed at this locat.

^{*} Sample taken on 3/28/16