Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL023B (UMB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/18/16[T]		Q2 2017 05/10/17[T]	
Field						
D.O.[1]	ppm	--	**0.2**		**0.3**	
ORP	mV	--	**-33**		**-232**	
pH	SU	7.8-8.8	**7.0**		**6.9**	
Specific Conductance	µS/cm @ 25°C	--	**120**		**121**	
Temperature	°C	--	**7.7**		**8.3**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1415.28**		**1415.02**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.5	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	159	**72**		**66**	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	67	**66**		**59**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	<1.0		<1.0	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	e
Sulfate	mg/L	8.0	**3.5**		**3.6**	
Major Cations						
Calcium	mg/L	16	**12**	e	**13**	
Magnesium	mg/L	3.7	**3.0**		**3.3**	
Potassium	mg/L	2.0	<0.50		**0.70**	e
Sodium	mg/L	11	**10**		**9.4**	e
General						
Hardness	mg/L	55	**42**		**46**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL024A (UMB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**11**		**11**	
ORP	mV	--	**196**		**17**	
pH	SU	6.1-7.1	**6.5**		**6.5**	
Specific Conductance	µS/cm @ 25°C	--	**421**		**325**	
Temperature	°C	--	**7.6**		**8.4**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1417.64**		**1417.07**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	86	**51**		**36**	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		**21**	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	105	<20		**120**	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	**0.585**		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**84**		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	24	**37**		**42**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**110**		**68**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	**1.9**		**1.1**	e
Sulfate	mg/L	8.0	**7.6**		**6.3**	
Major Cations						
Calcium	mg/L	48	**30**	e	**20**	
Magnesium	mg/L	8.1	**5.8**		**3.3**	
Potassium	mg/L	3.7	**2.5**		**2.3**	e
Sodium	mg/L	2.0	**45**		**37**	e
General						
Hardness	mg/L	153	**99**		**64**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL025A (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**12**		**11**	
ORP	mV	--	**106**		**240**	
pH	SU	6.4-7.4	**6.6**		**6.6**	
Specific Conductance	µS/cm @ 25°C	--	**53**		**58**	
Temperature	°C	--	**7.5**		**7.5**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1416.02**		**1415.78**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	126	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	25	**29**		**27**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**1.1**		**1.2**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	1.1	**0.92**		**0.48**	e
Sulfate	mg/L	8.0	<2.0		<2.0	
Major Cations						
Calcium	mg/L	8.5	**7.3**	e	**7.7**	
Magnesium	mg/L	2.0	**1.5**		**1.7**	
Potassium	mg/L	2.0	**0.80**		**0.92**	e
Sodium	mg/L	2.0	**1.0**		**1.0**	e,s
General						
Hardness	mg/L	28	**24**		**26**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL025B (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**12**		**11**	
ORP	mV	--	**81**		**204**	
pH	SU	8.5-9.5	**8.8**		**8.4**	
Specific Conductance	µS/cm @ 25°C	--	**62**		**63**	
Temperature	°C	--	**7.0**		**7.1**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1415.91**		**1415.69**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	56	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	**1.1**		**1.1**	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	36	**27**		**31**	
Alkalinity, Carbonate	mg/L	12	**9.1**		**35**	
Chloride	mg/L	4.0	<1.0		1.0	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	**0.12**		**0.10**	e
Sulfate	mg/L	8.0	<2.0		<2.0	
Major Cations						
Calcium	mg/L	10	**9.4**	e	**8.5**	
Magnesium	mg/L	2.0	**1.7**		**1.7**	
Potassium	mg/L	2.0	<0.50		<0.50	e
Sodium	mg/L	4.5	**1.9**		**1.3**	e
General						
Hardness	mg/L	33	**30**		**28**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL025D (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/09/16[T]		Q2 2017 05/01/17[T]	
Field						
D.O.[1]	ppm	--	**6.1**		**5.4**	
ORP	mV	--	**62**		**212**	
pH	SU	8.2-9.2	**8.5**		**8.3**	
Specific Conductance	µS/cm @ 25°C	--	**86**		**94**	
Temperature	°C	--	**7.3**		**7.1**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1411.53**		**1411.54**	
Metals						
Aluminum	ug/L	200	**110**		**77**	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.5	**3.1**		**2.9**	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	137	**70**		**35**	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	**4.3**		**4.0**	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	52	**43**		**42**	
Alkalinity, Carbonate	mg/L	14	**2.0**		**4.1**	
Chloride	mg/L	4.0	<1.0		**1.2**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	**0.17**		**0.16**	e
Sulfate	mg/L	8.0	**4.7**		**5.0**	
Major Cations						
Calcium	mg/L	12	**11**	e	**11**	
Magnesium	mg/L	2.7	**2.7**		**2.8**	
Potassium	mg/L	2.0	**0.61**		**0.67**	e
Sodium	mg/L	12	**4.4**		**3.5**	e
General						
Hardness	mg/L	42	**39**		**39**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL026A (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/09/16[T]	Q2 2017 05/01/17[T]
Field				
D.O.[1]	ppm	--	i	i
ORP	mV	--	i	i
pH	SU	6.2-7.2	i	i
Specific Conductance	µS/cm @ 25°C	--	i	i
Temperature	°C	--	i	i
Turbidity	NTU	--	i	i
Water Elevation	ft MSL	--	<1415.5 BP	<1415.4 BP
Metals				
Aluminum	ug/L	236	i	i
Antimony	ug/L	5.5	i	i
Arsenic	ug/L	6.0	i	i
Barium	ug/L	80	i	i
Beryllium	ug/L	2.5	i	i
Boron	ug/L	400	i	i
Cadmium	ug/L	2.0	i	i
Chromium	ug/L	20	i	i
Cobalt	ug/L	40	i	i
Copper	ug/L	20	i	i
Iron	ug/L	368	i	i
Lead	ug/L	4.0	i	i
Lithium	ug/L	32	i	i
Manganese	ug/L	80	i	i
Mercury	ng/L	2.00	i	i
Molybdenum	ug/L	40	i	i
Nickel	ug/L	100	i	i
Selenium	ug/L	4.0	i	i
Silver	ug/L	0.80	i	i
Strontium	ug/L	200	i	i
Thallium	ug/L	2.0	i	i
Vanadium	ug/L	4.0	i	i
Zinc	ug/L	40	i	i
Major Anions				
Alkalinity, Bicarbonate	mg/L	114	i	i
Alkalinity, Carbonate	mg/L	8.0	i	i
Chloride	mg/L	4.0	i	i
Fluoride	mg/L	0.40	i	i
Nitrogen, Nitrate	mg/L	0.73	i	i
Sulfate	mg/L	8.0	i	i
Major Cations				
Calcium	mg/L	40.0	i	i
Magnesium	mg/L	5.9	i	i
Potassium	mg/L	2.0	i	i
Sodium	mg/L	2.4	i	i
General				
Hardness	mg/L	124	i	i

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL026D (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/09/16[T]		Q2 2017 05/01/17[T]	
Field						
D.O.[1]	ppm	--	**12**		**11**	
ORP	mV	--	**65**		**242**	
pH	SU	8.4-9.4	**8.4**		**8.3**	
Specific Conductance	µS/cm @ 25°C	--	**60**		**63**	
Temperature	°C	--	**7.4**		**7.0**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1408.33**		**1408.54**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	31	**30**		**31**	
Alkalinity, Carbonate	mg/L	8.0	**4.0**		**2.0**	
Chloride	mg/L	4.0	<1.0		**1.0**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	**0.10**		**0.09**	e
Sulfate	mg/L	8.0	<2.0		**2.1**	
Major Cations						
Calcium	mg/L	13	**9.6**	e	**10**	
Magnesium	mg/L	2.4	**1.5**		**1.5**	
Potassium	mg/L	2.0	**0.50**		<0.50	e
Sodium	mg/L	2.0	**0.73**		**0.70**	e,s
General						
Hardness	mg/L	43	**30**		**31**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL026E (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**1.0**		**0.2**	
ORP	mV	--	**-1**		**-35**	
pH	SU	8.1-9.1	**8.4**		**8.4**	
Specific Conductance	µS/cm @ 25°C	--	**112**		**119**	
Temperature	°C	--	**7.1**		**7.2**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1403.74**		**1408.04**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	7.8	**7.1**		**7.3**	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**61**		**58**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	91	**59**		**58**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		**60**	
Chloride	mg/L	4.0	<1.0		**1.0**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	e
Sulfate	mg/L	8.6	**7.3**		**7.2**	
Major Cations						
Calcium	mg/L	17	**16**	e	**15**	
Magnesium	mg/L	4.3	**4.2**		**4.2**	
Potassium	mg/L	2.0	**1.9**		**1.9**	e
Sodium	mg/L	2.0	**1.7**		**1.7**	e
General						
Hardness	mg/L	60	**57**		**55**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL044B (UMB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/18/16[T]		Q2 2017 05/09/17[T]	
Field						
D.O.[1]	ppm	--	**1.0**		**0.2**	
ORP	mV	--	**-103**		**-311**	
pH	SU	8.3-9.3	**9.3**		**9.6**	
Specific Conductance	µS/cm @ 25°C	--	**63**		**82**	
Temperature	°C	--	**7.9**		**8.0**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1414.23**		**1413.94**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	**31**		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		**99**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	64	**21**		**17**	
Alkalinity, Carbonate	mg/L	8.0	**10**		**38**	
Chloride	mg/L	4.0	**1.2**		**1.2**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	e
Sulfate	mg/L	24	**8.1**		**7.0**	
Major Cations						
Calcium	mg/L	17	**8.3**	e	**10**	
Magnesium	mg/L	4.0	**1.8**		**1.2**	
Potassium	mg/L	2.0	**0.52**		**1.2**	e
Sodium	mg/L	2.6	**2.5**		**2.2**	e
General						
Hardness	mg/L	58	**28**		**30**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL060A (TDRSA-CWB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**11**		**11**	
ORP	mV	--	**124**		**-28**	
pH	SU	8.1-9.1	**8.8**		**8.8**	
Specific Conductance	µS/cm @ 25°C	--	**72**		**75**	
Temperature	°C	--	**7.3**		**8.0**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1403.86**		**1403.89**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	7.2	**5.9**		**5.3**	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	**1.3**		**1.2**	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	62	**34**		**36**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		**4.1**	
Chloride	mg/L	4.0	<1.0		<1.0	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	**0.15**		**0.18**	e
Sulfate	mg/L	8.0	<2.0		<2.0	
Major Cations						
Calcium	mg/L	17	**10**	e	**10**	
Magnesium	mg/L	4.2	**2.5**		**2.4**	
Potassium	mg/L	2.0	**0.69**		**0.85**	e
Sodium	mg/L	2.1	**0.78**		**0.77**	e,s
General						
Hardness	mg/L	61	**35**		**35**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL061A (TDRSA-CWB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**11**		**11**	
ORP	mV	--	**131**		**-24**	
pH	SU	8.1-9.1	**8.8**		**8.8**	
Specific Conductance	µS/cm @ 25°C	--	**74**		**94**	
Temperature	°C	--	**7.2**		**7.4**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1406.21**		**1405.19**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	40	**38**		**48**	
Alkalinity, Carbonate	mg/L	8.0	**2.0**		**2.0**	
Chloride	mg/L	4.0	<1.0		**1.4**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.27	**0.29**		**0.30**	e
Sulfate	mg/L	8.0	<2.0		<2.0	
Major Cations						
Calcium	mg/L	15	**11**	e	**15**	
Magnesium	mg/L	2.2	**2.0**		**2.8**	
Potassium	mg/L	2.0	<0.50		**0.77**	e
Sodium	mg/L	2.0	**0.63**		**0.92**	e,s
General						
Hardness	mg/L	37	**36**		**49**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL062A (TDRSA-CWB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**10**		**9.2**	
ORP	mV	--	**116**		**-19**	
pH	SU	8.3-9.3	**7.9**		**7.9**	
Specific Conductance	µS/cm @ 25°C	--	**338**		**397**	
Temperature	°C	--	**7.2**		**7.5**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1406.54**		**1406.50**	
Metals						
Aluminum	ug/L	200	<50		**57**	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	**20**		**22**	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**63**		**64**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	48	**110**		**140**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**43**		**46**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.41	**0.40**		**0.57**	e
Sulfate	mg/L	8.0	<2.0		**2.1**	
Major Cations						
Calcium	mg/L	12	**45**	e	**49**	
Magnesium	mg/L	2.2	**9.1**		**9.7**	
Potassium	mg/L	2.0	**1.6**		**2.1**	e
Sodium	mg/L	2.0	**9.2**		**17**	e
General						
Hardness	mg/L	40	**150**		**162**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL063A (TDRSA-CWB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**10**		**9.3**	
ORP	mV	--	**121**		**-26**	
pH	SU	8.1-9.1	**8.4**		**7.9**	
Specific Conductance	µS/cm @ 25°C	--	**188**		**353**	
Temperature	°C	--	**7.9**		**8.2**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1400.31**		**1400.59**	
Metals						
Aluminum	ug/L	200	<50		**52**	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		**67**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	42	**94**		**140**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**7.5**		**31**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.29	**0.39**		**0.56**	e
Sulfate	mg/L	8.0	<2.0		**2.1**	
Major Cations						
Calcium	mg/L	12	**32**	e	**55**	
Magnesium	mg/L	2.0	**5.6**		**10**	
Potassium	mg/L	2.0	**1.1**		**1.6**	e
Sodium	mg/L	2.0	**1.2**		**2.6**	e
General						
Hardness	mg/L	40	**103**		**179**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL064D (UMB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/09/17[T]	
Field						
D.O.[1]	ppm	--	<0.1		**0.2**	
ORP	mV	--	**-169**		**-327**	
pH	SU	8.0-9.0	**8.4**		**8.5**	
Specific Conductance	µS/cm @ 25°C	--	**140**		**145**	
Temperature	°C	--	**6.7**		**6.9**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1415.80**		**1415.60**	
Metals						
Aluminum	ug/L	200	<50		**51**	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	**36**		**35**	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**110**		**97**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	82	**79**		**78**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		**60**	
Chloride	mg/L	4.2	**2.3**		**2.6**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	e
Sulfate	mg/L	8.0	**2.6**		<2.0	
Major Cations						
Calcium	mg/L	22	**20**	e	**19**	
Magnesium	mg/L	3.3	**4.2**		**4.1**	
Potassium	mg/L	2.0	**1.3**		**1.2**	e
Sodium	mg/L	6.9	**4.3**		**3.9**	e
General						
Hardness	mg/L	51	**67**		**64**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL065D (UMB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/18/16[T]		Q2 2017 05/10/17[T]	
Field						
D.O.[1]	ppm	--	**0.2**		**0.2**	
ORP	mV	--	**-176**		**-274**	
pH	SU	7.9-8.9	**8.5**		**8.6**	
Specific Conductance	µS/cm @ 25°C	--	**143**		**146**	
Temperature	°C	--	**6.7**		**7.3**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1416.26**		**1416.37**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.6	**3.3**		**3.5**	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	**61**		**53**	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**210**		**190**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	86	**79**		**76**	
Alkalinity, Carbonate	mg/L	8.7	**2.0**		**80**	
Chloride	mg/L	4.0	<1.0		<1.0	e
Fluoride	mg/L	0.40	**0.15**		**0.13**	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	e
Sulfate	mg/L	8.0	<2.0		<2.0	
Major Cations						
Calcium	mg/L	14	**13**	e	**12**	
Magnesium	mg/L	4.8	**4.4**		**4.2**	
Potassium	mg/L	3.0	**2.6**		**2.8**	e
Sodium	mg/L	12	**11**		**11**	e
General						
Hardness	mg/L	53	**51**		**47**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL066D (UMB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/18/16[D]		Q2 2017 05/10/17[D]	
Field						
D.O.[1]	ppm	--	**1.1**		**2.8**	
ORP	mV	--	**12**		**116**	
pH	SU	8.7-9.7	**9.1**		**8.8**	
Specific Conductance	µS/cm @ 25°C	--	**125**		**137**	
Temperature	°C	--	**8.6**		**8.6**	
Turbidity	NTU	--	**272**		**110**	
Water Elevation	ft MSL	--	**1415.09**		**1415.10**	
Metals						
Aluminum	ug/L	557	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	8.9	**9.3**		**8.2**	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	288	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	**0.679**		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	367	<50		**51**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	**1.8**		**1.3**	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	61	**60**		**66**	
Alkalinity, Carbonate	mg/L	52	**6.1**		**68**	
Chloride	mg/L	4.0	**1.1**		**1.3**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		**0.057**	e
Sulfate	mg/L	11	**15**		**11**	
Major Cations						
Calcium	mg/L	58	**10**	e	**13**	
Magnesium	mg/L	2.9	**1.7**		**2.1**	
Potassium	mg/L	2.6	**1.1**		**1.3**	e
Sodium	mg/L	8.0	**16**		**15**	e
General						
Hardness	mg/L	146	**32**		**41**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL067A (TDRSA-CWB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**8.9**		**8.8**	
ORP	mV	--	**262**		**9**	
pH	SU	5.6-6.6	**6.1**		**6.2**	
Specific Conductance	µS/cm @ 25°C	--	**2314**		**1275**	
Temperature	°C	--	**7.9**		**8.2**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1413.65**		**1413.57**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	**220**		**76**	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	**2.38**		**1.59**	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**180**		**76**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	51	**48**		**50**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**730**		**350**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.25	**2.1**		**2.1**	e
Sulfate	mg/L	8.4	**16**		**20**	
Major Cations						
Calcium	mg/L	8.2	**32**	e	**12**	
Magnesium	mg/L	2.0	**18**		**6.5**	
Potassium	mg/L	2.0	**4.6**		**3.2**	e
Sodium	mg/L	2.0	**440**		**230**	e
General						
Hardness	mg/L	26	**154**		**57**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL068A (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**12**		**11**	
ORP	mV	--	**109**		**208**	
pH	SU	6.2-7.2	**6.4**		**6.5**	
Specific Conductance	µS/cm @ 25°C	--	**42**		**37**	
Temperature	°C	--	**7.4**		**7.8**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1420.57**		**1420.76**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	35	**25**		**20**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	<1.0		<1.0	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	e
Sulfate	mg/L	8.0	<2.0		<2.0	
Major Cations						
Calcium	mg/L	6.7	**6.3**	e	**4.9**	
Magnesium	mg/L	2.0	**1.2**		**1.0**	
Potassium	mg/L	2.0	**1.1**		**0.96**	e
Sodium	mg/L	2.0	**0.76**		**0.69**	e,s
General						
Hardness	mg/L	21	**21**		**16**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL068B (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**12**		**11**	
ORP	mV	--	**72**		**148**	
pH	SU	8.4-9.4	**8.8**		**8.7**	
Specific Conductance	µS/cm @ 25°C	--	**57**		**61**	
Temperature	°C	--	**7.2**		**7.6**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1412.39**		**1412.20**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	184	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	**1.1**		**1.1**	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	30	**31**		**25**	
Alkalinity, Carbonate	mg/L	9.9	**2.0**		**31**	
Chloride	mg/L	4.0	<1.0		**1.1**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.20	**0.064**		**0.052**	e
Sulfate	mg/L	8.0	**2.0**		**2.2**	
Major Cations						
Calcium	mg/L	9.4	**8.9**	e	**8.4**	
Magnesium	mg/L	2.0	**1.8**		**1.9**	
Potassium	mg/L	2.0	**0.62**		**0.63**	e
Sodium	mg/L	2.0	**0.98**		**0.91**	e,s
General						
Hardness	mg/L	31	**30**		**29**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL068D (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/16/16[T]		Q2 2017 05/08/17[T]	
Field						
D.O.[1]	ppm	--	**4.5**		**1.0**	
ORP	mV	--	**5**		**52**	
pH	SU	8.0-9.0	**8.3**		**8.5**	
Specific Conductance	µS/cm @ 25°C	--	**111**		**116**	
Temperature	°C	--	**7.3**		**8.6**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1412.52**		**1412.43**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	7.2	**4.8**		**4.4**	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	119	<20		32	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.12	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	<50		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	**2.5**		**2.5**	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	67	**59**		**59**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		**60**	
Chloride	mg/L	4.0	**1.1**		**1.1**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.21	<0.050		<0.050	e
Sulfate	mg/L	10	**5.6**		**4.9**	
Major Cations						
Calcium	mg/L	16	**14**	e	**14**	
Magnesium	mg/L	3.9	**3.9**		**4.1**	
Potassium	mg/L	2.0	**1.2**		**1.3**	e
Sodium	mg/L	6.1	**4.6**		**4.2**	e
General						
Hardness	mg/L	52	**51**		**52**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL069A (Background)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/09/17[T]	
Field						
D.O.[1]	ppm	--	**8.1**		**5.8**	
ORP	mV	--	**166**		**136**	
pH	SU	7.8-8.8	**7.1**		**7.0**	
Specific Conductance	µS/cm @ 25°C	--	**376**		**411**	
Temperature	°C	--	**7.9**		**10**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1381.68**		**1381.89**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	<20		**30**	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	**2.25**		**14.2**	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**69**		<50	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	138	**210**		**190**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**4.1**		**22**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.57	**0.98**		**1.0**	e
Sulfate	mg/L	8.0	**7.5**		**8.7**	
Major Cations						
Calcium	mg/L	35	**50**	e	**41**	
Magnesium	mg/L	18	**21**		**16**	
Potassium	mg/L	2.0	**1.9**		**1.6**	e
Sodium	mg/L	2.0	**6.6**		**23**	e
General						
Hardness	mg/L	162	**211**		**168**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL070A (NCWIB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/09/17[T]	
Field						
D.O.[1]	ppm	--	**10**		**10**	
ORP	mV	--	**55**		**182**	
pH	SU	8.3-9.3	**8.5**		**8.2**	
Specific Conductance	µS/cm @ 25°C	--	**440**		**524**	
Temperature	°C	--	**9.0**		**8.2**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1369.67**		**1371.21**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	**24**		**28**	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	80	**75**		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	**0.535**		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**77**		**74**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	42	**45**		**56**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**120**		**120**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.22	**1.0**		**1.2**	e
Sulfate	mg/L	8.0	**4.3**		**6.7**	
Major Cations						
Calcium	mg/L	11	**51**	e	**47**	
Magnesium	mg/L	3.0	**9.7**		**9.9**	
Potassium	mg/L	2.0	**1.8**		**2.0**	e
Sodium	mg/L	2.0	**19**		**40**	e
General						
Hardness	mg/L	40	**167**		**158**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL071A (TDRSA-CWB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/09/17[T]	
Field						
D.O.[1]	ppm	--	**11**		**11**	
ORP	mV	--	**62**		**-15**	
pH	SU	8.1-9.1	**7.8**		**7.8**	
Specific Conductance	µS/cm @ 25°C	--	**418**		**622**	
Temperature	°C	--	**8.0**		**8.1**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1404.82**		**1405.33**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	**25**		**39**	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	**e**
Iron	ug/L	178	<20		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**73**		**100**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	44	**140**		**130**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	4.0	**36**		**27**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.31	**14**		**38**	e
Sulfate	mg/L	8.0	**7.0**		**5.7**	
Major Cations						
Calcium	mg/L	12	**67**	e	**84**	
Magnesium	mg/L	2.0	**10**		**15**	
Potassium	mg/L	2.0	**1.3**		**1.7**	e
Sodium	mg/L	2.0	**8.2**		**19**	e
General						
Hardness	mg/L	38	**209**		**272**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL073A (NCWIB)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]		Q2 2017 05/09/17[T]	
Field						
D.O.[1]	ppm	--	**11**		**10**	
ORP	mV	--	**102**		**210**	
pH	SU	6.1-7.1	**6.7**		**6.5**	
Specific Conductance	µS/cm @ 25°C	--	**207**		**217**	
Temperature	°C	--	**10**		**8.1**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1381.68**		**1381.91**	
Metals						
Aluminum	ug/L	200	<50		<50	
Antimony	ug/L	5.5	<5.0		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	<20		<20	
Beryllium	ug/L	2.5	<1.0		<1.0	
Boron	ug/L	400	<100		<100	e
Cadmium	ug/L	2.0	<0.50		<0.50	
Chromium	ug/L	20	<5.0		<5.0	
Cobalt	ug/L	40	<10		<10	
Copper	ug/L	20	<5.0		<5.0	e
Iron	ug/L	132	**74**		<20	
Lead	ug/L	4.0	<1.0		<1.0	
Lithium	ug/L	32	<8.0		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	**0.632**		<0.500	
Molybdenum	ug/L	40	<10		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0	e	<1.0	
Silver	ug/L	0.80	<0.20		<0.20	
Strontium	ug/L	200	**98**		**90**	
Thallium	ug/L	2.0	<2.0		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	e
Major Anions						
Alkalinity, Bicarbonate	mg/L	44	**100**		**100**	
Alkalinity, Carbonate	mg/L	8.0	<2.0		<2.0	
Chloride	mg/L	20	**5.6**		**3.6**	e
Fluoride	mg/L	0.40	<0.10		<0.10	
Nitrogen, Nitrate	mg/L	0.60	**1.6**		**1.5**	e
Sulfate	mg/L	8.0	**9.4**		**9.2**	
Major Cations						
Calcium	mg/L	9.2	**34**	e	**32**	
Magnesium	mg/L	2.5	**7.5**		**7.1**	
Potassium	mg/L	2.0	**1.3**		**1.4**	e
Sodium	mg/L	2.0	**2.8**		**3.0**	e
General						
Hardness	mg/L	33	**116**		**109**	

Table 1
Mine Permit Groundwater Quality Monitoring Data
QAL074A (Septic & WWTP)
Eagle Mine

Parameter	Unit	Benchmark	Q2 2016 05/17/16[T]	Q2 2017 05/09/17[T]
Field				
D.O.[1]	ppm	--	**11**	**10**
ORP	mV	--	**59**	**146**
pH	SU	8.4-9.4	**8.6**	**8.5**
Specific Conductance	µS/cm @ 25°C	--	**245**	**263**
Temperature	°C	--	**10**	**9.0**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1403.77**	**1404.52**
Metals				
Aluminum	ug/L	200	<50	**60**
Antimony	ug/L	5.5	<5.0	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	<20	<20
Beryllium	ug/L	2.5	<1.0	<1.0
Boron	ug/L	400	<100	<100 e
Cadmium	ug/L	2.0	<0.50	<0.50
Chromium	ug/L	20	<5.0	<5.0
Cobalt	ug/L	40	<10	<10
Copper	ug/L	20	<5.0	<5.0 e
Iron	ug/L	212	**31**	**72**
Lead	ug/L	4.0	<1.0	<1.0
Lithium	ug/L	32	<8.0	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	**0.817**	**0.888**
Molybdenum	ug/L	40	<10	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0 e	<1.0
Silver	ug/L	0.80	<0.20	<0.20
Strontium	ug/L	200	<50	<50
Thallium	ug/L	2.0	<2.0	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
Major Anions				
Alkalinity, Bicarbonate	mg/L	39	**49**	**57**
Alkalinity, Carbonate	mg/L	8.0	<2.0	**60**
Chloride	mg/L	4.0	**53**	**51** e
Fluoride	mg/L	0.40	<0.10	<0.10
Nitrogen, Nitrate	mg/L	0.43	**1.3**	**1.1** e
Sulfate	mg/L	8.0	**6.9**	**6.8**
Major Cations				
Calcium	mg/L	31	**32** e	**31**
Magnesium	mg/L	5.9	**6.4**	**6.4**
Potassium	mg/L	2.0	**1.1**	**1.2** e
Sodium	mg/L	3.5	**9.1**	**12** e
General				
Hardness	mg/L	103	**106**	**104**

Table 1
Groundwater Quality Data
Mine Permit Monitoring
Explanation of Abbreviations and Data Qualifiers
Eagle Project

Abbreviation or Data Qualifier	Explanation
[1]	Many D.O. values are elevated due to well screen configuration and aquifer characteristics and the low-flow sampling method. Super-saturated DO values are rejected (see R data qualifier) as not being representative of true conditions.
a	Estimated value. Duplicate precision for this parameter exceeded quality control limit.
b	Estimated value. Sample received after EPA established hold time expired.
BP	Below pump. Maximum water elevation is shown.
CWB	Contact Water Basin
D	Sample for metal and major cation parameters was filtered and values are dissolved concentrations.
e	Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
f	Value should be considered an estimate because field stabilization was not achieved of at least one parameter.
i	Insufficient water for collection of field parameters and/or sample.
NM	Not measured.
p	Pending. Some parameters/locations require additional baseline data to calculate a benchmark.
Q	Quarter.
R	Measured value was rejected based on quality control procedures.
RL	Laboratory reporting limit.
s	Potential false positive value. Compound present in blank sample.
t	Trending. Benchmarks are not proposed for baseline datasets that appear to be trending (using samples collected through Q4 2012) because the data do not represent a random distribution about the baseline mean. Trend analysis is recommended in place of benchmark screening for parameters that appear to be trending.
T	Sample was not filtered and all values are total concentrations.
TDRSA	Temporary Development Rock Storage Area
UMB	Underground Mine Boundary
	Value is equal to or above site-specific benchmark at a compliance monitoring location. An exceedance occurs if there are 2 consecutive sampling events with a value equal to or greater than the benchmark. Color also indicates compliance monitoring location when applied to column headers.
	Value is equal to or above site-specific benchmark at a background monitoring location. Color also indicates background monitoring location when applied to column headers.