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TRITTON OPERATIONS

Tritton and Girilambone Operations

Monthly Environmental Monitoring Report

October 2016

Environmental Protection License 11254

TRITTON COPPER MINE

YARRANDALE ROAD, HERMIDALE, NSW, 2831

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TRITTON COPPER MINE

BOORAMUGGA ROAD, GIRILAMBONE, NSW, 2831

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OCTOBER 2016 – GROUNDWATER MONITORING REPORT
TRITTON OPERATIONS LICENCE NO.11254

Licensee: TRITTON RESOURCES LIMITED					
EPL No. 11254					
Sample Point	Monitoring Frequency	Date	Parameter	Measurement	Unit
EPA ID No. 25 - PZH017	Quarterly	Sampled: 7/10/16	Arsenic	<0.001	mg/L
			Barium	0.038	mg/L
			Beryllium	<0.001	mg/L
		Obtained: 18/10/16	Cadmium	<0.0001	mg/L
			Chloride	3030	mg/L
			Chromium	<0.001	mg/L
		Published: 11/11/2016	Cobalt	<0.001	mg/L
			Conductivity (EC)	11600	µS/cm
			Copper	0.003	mg/L
			Iron	2.69	mg/L
			Lead	<0.001	mg/L
			Manganese	0.122	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.001	mg/L
			pH	7.33	pH Unit
			Sulfate	801	mg/L
			Vanadium	<0.01	mg/L
Zinc	0.008	mg/L			
SWL	48.12	m			
EPA ID No. 26 - PZH018	Quarterly	Sampled: 7/10/16	Arsenic	<0.010	mg/L
			Barium	<0.010	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 18/10/16	Cadmium	<0.0010	mg/L
			Chloride	7780	mg/L
			Chromium	<0.010	mg/L
		Published: 11/11/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	25500	µS/cm
			Copper	<0.010	mg/L
			Iron	<0.50	mg/L
			Lead	<0.010	mg/L
			Manganese	0.01	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	6.58	pH Unit
			Sulfate	2630	mg/L
			Vanadium	<0.10	mg/L
Zinc	<0.050	mg/L			
SWL	22.37	m			

EPA ID No. 27 - PZH019	Quarterly	Sampled: 4/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.004 0.025 <0.001 <0.0001 2790 <0.001 0.002 9880 0.003 0.48 <0.001 0.049 <0.0001 0.011 6.92 783 <0.01 0.013 101.09	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 28 - PZH020	Quarterly	Sampled: 7/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 0.022 <0.001 0.0004 3330 <0.001 <0.001 11900 0.026 0.09 <0.001 0.055 <0.0001 0.005 7.31 1080 <0.01 0.107 71.81	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 29 - PZH021	Quarterly	Sampled: 7/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC)	<0.001 0.078 <0.001 <0.0001 4160 <0.001 <0.001 14100	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm

			Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.002 3.55 <0.001 1.63 <0.0001 <0.001 7.17 1330 <0.01 0.018 58.37	mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 30 - PZH022	Quarterly	Sampled: 7/10/16 Obtained: 7/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	DRY	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 31 - PZH023	Quarterly	Sampled: 7/10/16 Obtained: 7/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate	DRY	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L

			Vanadium Zinc SWL		mg/L mg/L m
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**OCTOBER 2016 – GROUNDWATER MONITORING REPORT
GIRILAMBONE OPERATIONS LICENCE NO.4501**

Licensee: TRITTON RESOURCES LIMITED					
EPL No. 4501					
Sample Point	Monitoring Frequency	Date	Parameter	Measurement	Unit
EPA ID No. 2 - GIP224	Monthly	Sampled: 11/10/16	Arsenic	<0.010	mg/L
			Barium	0.024	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 21/10/16	Cadmium	<0.0010	mg/L
			Chloride	8820	mg/L
			Chromium	0.018	mg/L
		Published: 11/11/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	31000	µS/cm
			Copper	0.077	mg/L
			Iron	<0.10	mg/L
			Lead	<0.010	mg/L
			Manganese	0.085	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.031	mg/L
			pH	7.22	pH Unit
			Sulfate	3660	mg/L
			Vanadium	<0.10	mg/L
Zinc	0.066	mg/L			
SWL	4.76	m			
EPA ID No. 3 - GIP225	Monthly	Sampled: 13/10/16	Arsenic	<0.010	mg/L
			Barium	0.048	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 21/10/16	Cadmium	0.0011	mg/L
			Chloride	6010	mg/L
			Chromium	<0.010	mg/L
		Published: 11/11/2016	Cobalt	0.034	mg/L
			Conductivity (EC)	32300	µS/cm
			Copper	0.054	mg/L
			Iron	1.39	mg/L
			Lead	<0.010	mg/L
			Manganese	1.26	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.02	mg/L
			pH	7.08	pH Unit
			Sulfate	13800	mg/L
			Vanadium	<0.10	mg/L
Zinc	<0.050	mg/L			
SWL	10.89	m			

EPA ID No. 4 - GIP234	Quarterly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 0.029 <0.001 0.0048 6280 <0.001 0.03 22100 0.132 <0.05 0.032 0.342 <0.0001 0.055 6.71 1700 <0.01 0.422 24.44	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 5 - GIP273	Quarterly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.010 0.022 <0.010 <0.0010 9580 <0.010 <0.010 33700 0.353 <0.10 0.015 0.182 <0.0001 <0.010 6.72 2780 <0.10 0.238 16.72	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 7 - GIP274	Monthly	Sampled: 6/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC)	<0.010 0.01 <0.010 0.001 9240 <0.010 0.019 32000	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm

			Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.097 0.28 <0.010 0.183 <0.0001 <0.010 6.66 2690 <0.10 0.1 17.41	mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 6 - GIP276	Quarterly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.010 0.02 <0.010 <0.0010 7290 <0.010 0.01 25500 0.036 <0.50 0.07 0.141 <0.0001 0.014 7.02 2230 <0.10 0.164 20.51	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 8 - GIP277	Quarterly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate	<0.001 0.008 <0.001 <0.0001 943 <0.001 <0.001 5410 0.024 0.11 0.004 0.015 <0.0001 0.001 7.52 356	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L

			Vanadium	<0.01	mg/L
			Zinc	0.045	mg/L
			SWL	17.03	m
EPA ID No. 9 - GIP278	Quarterly	Sampled: 11/10/16	Arsenic	<0.010	mg/L
			Barium	0.02	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 21/10/16	Cadmium	<0.0010	mg/L
			Chloride	8110	mg/L
			Chromium	<0.010	mg/L
		Published: 11/11/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	26900	µS/cm
			Copper	0.032	mg/L
			Iron	<0.10	mg/L
			Lead	<0.010	mg/L
			Manganese	<0.010	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.016	mg/L
			pH	6.77	pH Unit
			Sulfate	2330	mg/L
			Vanadium	<0.10	mg/L
Zinc	<0.050	mg/L			
SWL	25.11	m			
EPA ID No. 10 - GIP279A	Quarterly	Sampled: 11/10/16	Arsenic	<0.010	mg/L
			Barium	0.029	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 21/10/16	Cadmium	<0.0010	mg/L
			Chloride	8770	mg/L
			Chromium	<0.010	mg/L
		Published: 11/11/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	28300	µS/cm
			Copper	0.064	mg/L
			Iron	<0.10	mg/L
			Lead	<0.010	mg/L
			Manganese	0.024	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	6.73	pH Unit
			Sulfate	2480	mg/L
			Vanadium	<0.10	mg/L
Zinc	<0.050	mg/L			
SWL	24.09	m			
EPA ID No. 11 - GIP280A	Quarterly	Sampled: 27/10/16	Arsenic	<0.001	mg/L
			Barium	0.035	mg/L
		Obtained: 8/11/16	Beryllium	<0.001	mg/L
			Cadmium	0.0005	mg/L
			Chloride	4730	mg/L

		Published: 11/11/2016	Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 <0.001 16400 0.019 <0.05 <0.001 0.01 <0.0001 0.004 7.13 1130 <0.01 0.206 21.97	mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 12 - GIP290	Monthly	Sampled: 11/10/16 Obtained: 21/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 0.018 <0.001 0.0301 3520 <0.001 0.109 16800 0.117 0.06 0.029 11.2 <0.0001 0.021 6.75 3880 <0.01 0.457 14.98	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 13 - GIP291	Monthly	Sampled: 13/10/16 Obtained: 21/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury	<0.010 0.024 <0.010 0.0014 7650 <0.010 <0.010 25800 0.074 0.23 <0.010 0.119 <0.0001	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L

			Nickel pH Sulfate Vanadium Zinc SWL	<0.010 6.89 2530 <0.10 0.154 9.26	mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 14 - GIP292A	Monthly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.059 <0.010 0.088 3.06 2410 0.456 50 33200 233 74.7 <0.010 531 <0.0001 15.6 3.84 36500 <0.10 200 4.19	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 16 - GIP292AS	Monthly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.272 <0.010 0.487 6.94 1380 0.152 99 32000 824 1480 <0.010 671 0.0001 28.2 3.47 47900 1.25 478 3.58	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 17 -	Monthly	Sampled: 6/10/16	Arsenic Barium	0.067 <0.010	mg/L mg/L

GIP293		<p>Obtained: 18/10/16</p> <p>Published: 11/11/2016</p>	<p>Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL</p>	<p>0.027 3.14 3740 <0.010 47.8 41800 119 0.54 0.016 664 0.0004 15.3 3.91 42100 <0.10 182 12.53</p>	<p>mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m</p>
EPA ID No. 18 - GIP294	Monthly	<p>Sampled: 6/10/16</p> <p>Obtained: 18/10/16</p> <p>Published: 11/11/2016</p>	<p>Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL</p>	<p>0.013 <0.010 <0.010 3.65 1850 <0.010 45.8 46900 222 0.49 <0.010 294 0.0005 13.8 5.01 47000 <0.10 244 10.87</p>	<p>mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m</p>
EPA ID No. 19 - GIP295	Monthly	<p>Sampled: 5/10/16</p> <p>Obtained: 18/10/16</p> <p>Published: 11/11/2016</p>	<p>Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron</p>	<p><0.010 0.051 <0.010 <0.0010 8540 <0.010 0.022 29400 0.026 <0.10</p>	<p>mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L</p>

			Lead	<0.010	mg/L
			Manganese	0.502	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	6.75	pH Unit
			Sulfate	2410	mg/L
			Vanadium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	18.18	m
EPA ID No. 20 - GIP296	Monthly	Sampled: 6/10/16 Obtained: 21/10/16 Published: 11/11/2016	Arsenic	<0.010	mg/L
			Barium	0.015	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	5370	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	25800	µS/cm
			Copper	<0.010	mg/L
			Iron	<0.10	mg/L
			Lead	<0.010	mg/L
			Manganese	0.01	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.011	mg/L
			pH	6.42	pH Unit
			Sulfate	8540	mg/L
			Vanadium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	5.96	m
EPA ID No. 21 - GIP297	Monthly	Sampled: 5/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic	0.007	mg/L
			Barium	<0.001	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	<0.0001	mg/L
			Chloride	59	mg/L
			Chromium	<0.001	mg/L
			Cobalt	<0.001	mg/L
			Conductivity (EC)	1140	µS/cm
			Copper	0.006	mg/L
			Iron	0.1	mg/L
			Lead	<0.001	mg/L
			Manganese	0.004	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.001	mg/L
			pH	8.19	pH Unit
			Sulfate	171	mg/L
			Vanadium	<0.01	mg/L
			Zinc	0.009	mg/L

EPA ID No. 22 - GIP298	Monthly	Sampled: 12/10/16 Obtained: 21/10/16 Published: 11/11/2016	SWL Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	25.21 <0.010 <0.010 <0.010 0.0018 10000 <0.010 <0.010 31700 0.066 <0.10 <0.010 0.233 <0.0001 0.012 6.81 2310 <0.10 0.073 20.97	m mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 23 - GIP299	Monthly	Sampled: 6/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.010 <0.010 <0.010 0.0027 6900 <0.010 <0.010 31400 <0.010 <0.10 <0.010 <0.010 <0.0001 <0.010 6.41 9740 <0.10 <0.050 27.78	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 24 - GIP300	Monthly	Sampled: 12/10/16 Obtained: 21/10/16 Published:	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt	<0.010 0.034 <0.010 0.0044 9560 <0.010 0.01	mg/L mg/L mg/L mg/L mg/L mg/L mg/L

		11/11/2016	Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	34100 0.081 <0.10 <0.010 0.624 <0.0001 0.038 6.82 4460 <0.10 0.08 19.41	µS/cm mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 25 - GIP301	Monthly	Sampled: 12/10/16 Obtained: 21/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 0.026 <0.001 0.0001 4910 <0.001 0.008 17600 0.013 <0.05 <0.001 0.784 0.0009 0.012 6.78 1670 <0.01 0.036 14.15	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L m
EPA ID No. 26 - GIP302	Monthly	Sampled: 6/10/16 Obtained: 18/10/16 Published: 11/11/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH	<0.010 0.017 <0.010 0.0032 5900 <0.010 0.107 29900 0.025 0.47 <0.010 17.7 <0.0001 0.116 6.11	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L pH Unit

			Sulfate	11300	mg/L
			Vanadium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	15.36	m