



Aeris
TRITTON OPERATIONS

Tritton and Girilambone Operations

Monthly Environmental Monitoring Report

November 2016

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TRITTON COPPER MINE

YARRANDALE ROAD, HERMIDALE, NSW, 2831

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TRITTON COPPER MINE

BOORAMUGGA ROAD, GIRILAMBONE, NSW, 2831

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NOVEMBER 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. 12 - PZH001	Quarterly	Sampled: 22/11/16	Arsenic	0.004	mg/L ¹
			Barium	0.036	mg/L
			Beryllium	<0.001	mg/L
		Obtained: 1/12/16	Cadmium	0.0009	mg/L
			Chloride	4120	mg/L
			Chromium	0.004	mg/L
		Published: 15/12/2016	Cobalt	0.01	mg/L
			Conductivity (EC)	14300	µS/cm ²
			Copper	0.005	mg/L
			Iron	0.54	mg/L
			Lead	<0.001	mg/L
			Manganese	0.199	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.015	mg/L
			pH	7.02	pH Unit
			Sulfate	1820	mg/L
			Vanadium	<0.01	mg/L
Zinc	0.008	mg/L			
SWL	11.39	m ³			
EPA ID No. 13 - PZH002	Quarterly	Sampled: 22/11/16	Arsenic	0.009	mg/L
			Barium	0.02	mg/L
			Beryllium	<0.001	mg/L
		Obtained: 1/12/16	Cadmium	<0.0001	mg/L
			Chloride	3410	mg/L
			Chromium	<0.001	mg/L
		Published: 15/12/2016	Cobalt	<0.001	mg/L
			Conductivity (EC)	12100	µS/cm
			Copper	0.03	mg/L
			Iron	8.3	mg/L
			Lead	<0.001	mg/L
			Manganese	0.191	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.002	mg/L
pH	6.96	pH Unit			

¹ Milligrams per litre

² Microsiemens per centimetre

³ Metres

			Sulfate Vanadium Zinc SWL	1620 <0.01 0.014 26.95	mg/L mg/L mg/L m
EPA ID No. 14 - PZH003	Quarterly	Sampled: 22/11/16 Obtained: 1/12/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 0.016 <0.001 0.0005 4970 0.001 <0.001 16600 0.017 0.13 0.001 0.015 <0.0001 0.008 6.84 2160 <0.01 0.067 66.49	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. 15 - PZH004	Quarterly	Sampled: 22/11/16 Obtained: 22/11/16 Published: 15/12/2016	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 mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 16 - PZH005	Quarterly	Sampled: 22/11/16 Obtained:	Arsenic Barium Beryllium Cadmium	0.001 0.019 <0.001 0.0007	mg/L mg/L mg/L mg/L

		1/12/16 Published: 15/12/2016	Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	4800 0.002 0.029 15200 0.028 0.08 0.002 0.447 <0.0001 0.048 6.67 1200 <0.01 0.07 9.56	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. 17 - PZH006	Quarterly	Sampled: 22/11/16 Obtained: 1/12/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.001 0.032 <0.001 0.0006 3010 0.003 0.009 10800 0.104 0.17 0.009 0.118 <0.0001 0.015 6.48 1720 <0.01 0.053 30.79	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. 22 - PZH013	Quarterly	Sampled: 22/11/16 Obtained: 1/12/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese	0.106 0.083 <0.001 0.0018 4830 0.003 0.009 15600 0.255 1.52 0.016 0.618	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L

			Mercury	0.0007	mg/L
			Nickel	0.017	mg/L
			pH	6.63	pH Unit
			Sulfate	1760	mg/L
			Vanadium	<0.01	mg/L
			Zinc	0.147	mg/L
			SWL	38.63	m

**NOVEMBER 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: 13/11/16	Arsenic	<0.010	mg/L
			Barium	0.027	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 1/12/16	Cadmium	<0.0010	mg/L
			Chloride	8460	mg/L
			Chromium	<0.010	mg/L
		Published: 15/12/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	29400	µS/cm
			Copper	0.041	mg/L
			Iron	<0.10	mg/L
			Lead	<0.010	mg/L
			Manganese	0.079	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.026	mg/L
			pH	7.03	pH Unit
			Sulfate	3880	mg/L
			Vanadium	<0.10	mg/L
Zinc	0.062	mg/L			
SWL	3.27	m			
EPA ID No. 3 - GIP225	Monthly	Sampled: 23/11/16	Arsenic	<0.010	mg/L
			Barium	0.048	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 1/12/16	Cadmium	<0.0010	mg/L
			Chloride	5680	mg/L
			Chromium	<0.010	mg/L
		Published: 15/12/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	29900	µS/cm
			Copper	0.014	mg/L
			Iron	1.64	mg/L
			Lead	0.014	mg/L
			Manganese	1.11	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.014	mg/L
			pH	6.96	pH Unit
			Sulfate	11900	mg/L
			Vanadium	<0.10	mg/L
Zinc	0.072	mg/L			
SWL	10.15	m			

EPA ID No. 4 - GIP234	Quarterly	Sampled: 15/11/16 Obtained: 15/11/16 Published: 15/12/2016	SWL	24.24	m
EPA ID No. 5 - GIP273	Quarterly	Sampled: 15/11/16 Obtained: 15/11/16 Published: 15/12/2016	SWL	21.91	m
EPA ID No. 7 - GIP274	Monthly	Sampled: 1/11/16 Obtained: 14/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.010 0.013 <0.010 <0.0010 9220 <0.010 0.014 32400 0.039 0.11 <0.010 0.09 <0.0001 <0.010 6.63 2930 <0.10 <0.050 17.51	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 6 - GIP276	Quarterly	Sampled: 15/11/16 Obtained: 15/11/16 Published: 15/12/2016	SWL	16.75	m
EPA ID No. 8 - GIP277	Quarterly	Sampled: 15/11/16	SWL	16.46	m

		<p>Obtained: 15/11/16</p> <p>Published: 15/12/2016</p>			
EPA ID No. 9 - GIP278	Quarterly	<p>Sampled: 15/11/16</p> <p>Obtained: 15/11/16</p> <p>Published: 15/12/2016</p>	SWL	25.07	m
EPA ID No. 10 - GIP279A	Quarterly	<p>Sampled: 15/11/16</p> <p>Obtained: 15/11/16</p> <p>Published: 15/12/2016</p>	SWL	24.06	m
EPA ID No. 11 - GIP280A	Quarterly	<p>Sampled: 15/11/16</p> <p>Obtained: 15/11/16</p> <p>Published: 15/12/2016</p>	SWL	21.92	m
EPA ID No. 12 - GIP290	Monthly	<p>Sampled: 2/11/16</p> <p>Obtained: 14/11/16</p> <p>Published: 15/12/2016</p>	<p>Arsenic</p> <p>Barium</p> <p>Beryllium</p> <p>Cadmium</p> <p>Chloride</p> <p>Chromium</p> <p>Cobalt</p> <p>Conductivity (EC)</p> <p>Copper</p> <p>Iron</p> <p>Lead</p> <p>Manganese</p> <p>Mercury</p> <p>Nickel</p> <p>pH</p> <p>Sulfate</p> <p>Vanadium</p>	<p><0.001</p> <p>0.014</p> <p><0.001</p> <p>0.0342</p> <p>3330</p> <p><0.001</p> <p>0.158</p> <p>16700</p> <p>0.078</p> <p>0.08</p> <p>0.011</p> <p>13.1</p> <p><0.0001</p> <p>0.019</p> <p>6.46</p> <p>4270</p> <p><0.01</p>	<p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>μS/cm</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>pH Unit</p> <p>mg/L</p> <p>mg/L</p>

			Zinc SWL	0.389 14.91	mg/L m
EPA ID No. 13 - GIP291	Monthly	Sampled: 16/11/16 Obtained: 24/11/16 Published: 15/12/2016	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 7440 <0.010 <0.010 27700 0.032 0.12 <0.010 0.096 <0.0001 <0.010 6.19 2700 <0.10 0.069 9.02	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. 14 - GIP292A	Monthly	Sampled: 1/11/16 Obtained: 14/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.047 <0.010 0.08 3.04 2480 0.426 46.2 33100 203 54.1 <0.010 505 <0.0001 16 3.84 40400 <0.10 200 3.61	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. 16 - GIP292AS	Monthly	Sampled: 1/11/16 Obtained: 14/11/16	Arsenic Barium Beryllium Cadmium Chloride Chromium	0.197 <0.010 0.443 6.55 1370 0.152	mg/L mg/L mg/L mg/L mg/L mg/L

		Published: 15/12/2016	Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	85.7 32600 647 1230 <0.010 595 <0.0001 26.9 3.55 49500 1.15 411 3.54	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 - GIP293	Monthly	Sampled: 10/11/16 Obtained: 24/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.055 <0.010 0.038 3.29 3730 <0.010 47.4 44000 115 0.59 0.024 670 0.0003 16.3 4.01 34000 <0.10 192 12.22	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. 18 - GIP294	Monthly	Sampled: 10/11/16 Obtained: 24/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel	0.017 <0.010 <0.010 4.02 1900 <0.010 47 52600 238 0.47 <0.010 310 0.0004 15.7	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	4.94	pH Unit
			Sulfate	46400	mg/L
			Vanadium	<0.10	mg/L
			Zinc	269	mg/L
			SWL	10.79	m
EPA ID No. 19 - GIP295	Monthly	Sampled: 14/11/16	Arsenic	<0.010	mg/L
			Barium	0.059	mg/L
			Beryllium	<0.010	mg/L
		Obtained: 24/11/16	Cadmium	<0.0010	mg/L
			Chloride	8600	mg/L
			Chromium	<0.010	mg/L
		Published: 15/12/2016	Cobalt	<0.010	mg/L
			Conductivity (EC)	31400	µS/cm
			Copper	<0.010	mg/L
			Iron	0.18	mg/L
			Lead	<0.010	mg/L
			Manganese	0.658	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	6.67	pH Unit
Sulfate	2610	mg/L			
Vanadium	<0.10	mg/L			
Zinc	<0.050	mg/L			
SWL	18.09	m			
EPA ID No. 20 - GIP296	Monthly	Sampled: 4/11/16	Arsenic	<0.001	mg/L
			Barium	0.014	mg/L
			Beryllium	<0.001	mg/L
		Obtained: 14/11/16	Cadmium	0.0002	mg/L
			Chloride	2360	mg/L
			Chromium	0.001	mg/L
		Published: 15/12/2016	Cobalt	0.002	mg/L
			Conductivity (EC)	19100	µS/cm
			Copper	0.018	mg/L
			Iron	0.2	mg/L
			Lead	<0.001	mg/L
			Manganese	0.018	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.01	mg/L
			pH	6.74	pH Unit
Sulfate	7840	mg/L			
Vanadium	<0.01	mg/L			
Zinc	0.046	mg/L			
SWL	5.91	m			
EPA ID No. 21 - GIP297	Monthly	Sampled: 14/11/16	Arsenic	0.007	mg/L
			Barium	<0.001	mg/L
			Beryllium	<0.001	mg/L

		Obtained: 24/11/16 Published: 15/12/2016	Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.0001 57 <0.001 <0.001 841 0.006 <0.05 <0.001 0.01 <0.0001 <0.001 7.86 165 <0.01 0.009 24.61	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. 22 - GIP298	Monthly	Sampled: 14/11/16 Obtained: 24/11/16 Published: 15/12/2016	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 0.002 9140 <0.010 0.013 32400 0.047 <0.10 <0.010 0.257 <0.0001 0.111 6.94 2770 <0.10 0.069 20.31	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. 23 - GIP299	Monthly	Sampled: 14/11/16 Obtained: 24/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead	<0.010 <0.010 <0.010 0.0034 7080 <0.010 <0.010 33100 0.056 <0.10 <0.010	mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L

			Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.035 <0.0001 0.01 6.52 7360 <0.10 <0.050 27.63	mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 24 - GIP300	Monthly	Sampled: 14/11/16 Obtained: 24/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.010 0.015 <0.010 0.0026 6440 <0.010 <0.010 34300 0.021 <0.10 <0.010 0.245 <0.0001 <0.010 6.51 11600 <0.10 <0.050 19.01	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 pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 25 - GIP301	Monthly	Sampled: 10/11/16 Obtained: 24/11/16 Published: 15/12/2016	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	<0.010 0.034 <0.010 <0.0010 5240 <0.010 0.019 20400 0.019 <0.10 <0.010 0.96 <0.0001 <0.010 6.73 1950 <0.10 0.058 14.06	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 mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m

EPA ID No. 26 - GIP302	Monthly	Sampled: 10/11/16	Arsenic	<0.010	mg/L
		Obtained: 24/11/16	Barium	0.018	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	0.0041	mg/L
		Published: 15/12/2016	Chloride	5980	mg/L
			Chromium	<0.010	mg/L
			Cobalt	0.122	mg/L
			Conductivity (EC)	31600	µS/cm
			Copper	0.01	mg/L
			Iron	0.2	mg/L
			Lead	<0.010	mg/L
			Manganese	19.6	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.162	mg/L
		pH	6.23	pH Unit	
		Sulfate	10800	mg/L	
		Vanadium	<0.10	mg/L	
Zinc	0.053	mg/L			
SWL	15.21	m			