



# Tritton and Girilambone Operations

## Monthly Environmental Monitoring Report

[September] [2022]

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### **Environmental Protection License 11254**

TRITTON COPPER MINE

YARRANDALE ROAD, HERMIDALE, NSW, 2831

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### **Environmental Protection License 4501**

TRITTON COPPER MINE

BOORAMUGGA ROAD, GIRILAMBONE, NSW, 2831

*<http://www.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=4501&id=4501&option=licence&searchrange=licence&range=POEO licence&prp=no&status=Issued>*

**[SEPTEMBER] [2022] – 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:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		mg/L <sup>1</sup> mg/L mg/L mg/L mg/L mg/L mg/L μS/cm <sup>2</sup> mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m <sup>3</sup>
EPA ID No. 13 - PZH002	Quarterly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH		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 pH Unit

<sup>1</sup> Milligrams per litre

<sup>2</sup> Microsiemens per centimetre

<sup>3</sup> Metres

			Sulfate Vanadium Zinc SWL		mg/L mg/L mg/L m
EPA ID No. 14 - PZH003	Quarterly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 15 - PZH004	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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 - PZH005	Quarterly	Sampled:  Obtained:	Arsenic Barium Beryllium Cadmium		mg/L mg/L mg/L mg/L

		Published: 26/10/2022	Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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 - PZH006	Quarterly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 18 - PZH007	Quarterly	Sampled: 19/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese	0.004 0.033 0.001 0.0013 4320 0.001 0.008 17200 0.306 0.27 0.001 0.064	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	0.0001	mg/L
			Nickel	0.011	mg/L
			pH	8.05	pH Unit
			Sulfate	2140	mg/L
			Vanadium	0.01	mg/L
			Zinc	0.133	mg/L
			SWL	40.71	m
EPA ID No. 19 - PZH008	Quarterly	Sampled: 19/9/22	Arsenic	0.009	mg/L
			Barium	0.018	mg/L
			Beryllium	0.001	mg/L
		Obtained: 6/10/22	Cadmium	0.0001	mg/L
			Chloride	3680	mg/L
			Chromium	0.001	mg/L
		Published: 26/10/2022	Cobalt	0.001	mg/L
			Conductivity (EC)	14700	µS/cm
			Copper	0.009	mg/L
			Iron	0.17	mg/L
			Lead	0.001	mg/L
			Manganese	0.051	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.001	mg/L
			pH	7.65	pH Unit
			Sulfate	1890	mg/L
			Vanadium	0.01	mg/L
			Zinc	0.016	mg/L
			SWL	15.28	m
EPA ID No. 20 - PZH009	Quarterly	Sampled: 19/9/22	Arsenic	0.001	mg/L
			Barium	0.044	mg/L
			Beryllium	0.001	mg/L
		Obtained: 6/10/22	Cadmium	0.0008	mg/L
			Chloride	4940	mg/L
			Chromium	0.001	mg/L
		Published: 26/10/2022	Cobalt	0.001	mg/L
			Conductivity (EC)	19000	µS/cm
			Copper	0.064	mg/L
			Iron	0.08	mg/L
			Lead	0.001	mg/L
			Manganese	0.013	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.015	mg/L
			pH	7.88	pH Unit
			Sulfate	2810	mg/L
			Vanadium	0.01	mg/L
			Zinc	0.105	mg/L
			SWL	11.21	m
EPA ID	Quarterly	Sampled:	Arsenic		mg/L

No. 22 - PZH013		19/9/22  Obtained: DRY  Published: 26/10/2022	Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 23 - PZH014	Quarterly	Sampled: 19/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.001 0.003 0.001 0.0002 4070 0.001 0.001 16100 0.007 0.05 0.001 0.019 0.0001 0.002 7.59 2100 0.01 0.014 42.94	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 - PZH015	Quarterly	Sampled: 19/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper	0.002 0.012 0.001 0.0007 4400 0.001 0.003 16800 0.107	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm mg/L

			Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.07 0.001 0.038 0.0001 0.005 7.86 1930 0.01 0.056 48.91	mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 25 - PZH017	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 26 - PZH018	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium		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

			Zinc SWL		mg/L m
EPA ID No. 27 - PZH019	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 28 - PZH020	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 29 - PZH021	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y	Arsenic Barium Beryllium Cadmium Chloride Chromium		mg/L mg/L mg/L mg/L mg/L mg/L



		Published: 26/10/2022	Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 30 - PZH022	Quarterly	Sampled: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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: D/M/Y  Obtained: D/M/Y  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel		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

			<p>pH</p> <p>Sulfate</p> <p>Vanadium</p> <p>Zinc</p> <p>SWL</p>		<p>pH Unit</p> <p>mg/L</p> <p>mg/L</p> <p>mg/L</p> <p>m</p>
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**[SEPTEMBER] [2022] – 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: 27/9/22 Obtained:  Published: 26/10/2022	Arsenic	8.65	mg/L
			Barium		mg/L
			Beryllium		mg/L
			Cadmium		mg/L
			Chloride		mg/L
			Chromium		mg/L
			Cobalt		mg/L
			Conductivity (EC)		µS/cm
			Copper		mg/L
			Iron		mg/L
			Lead		mg/L
			Manganese		mg/L
			Mercury		mg/L
			Nickel		mg/L
			pH		pH Unit
			Sulfate		mg/L
			Vanadium		mg/L
Zinc	mg/L				
SWL	m				
EPA ID No. 3 - GIP225	Monthly	Sampled: 27/9/22 Obtained:  Published: 26/10/2022	Arsenic	13.52	mg/L
			Barium		mg/L
			Beryllium		mg/L
			Cadmium		mg/L
			Chloride		mg/L
			Chromium		mg/L
			Cobalt		mg/L
			Conductivity (EC)		µS/cm
			Copper		mg/L
			Iron		mg/L
			Lead		mg/L
			Manganese		mg/L
			Mercury		mg/L
			Nickel		mg/L
			pH		pH Unit
			Sulfate		mg/L
			Vanadium		mg/L
Zinc	mg/L				
SWL	m				





			Vanadium Zinc SWL	17.65	mg/L mg/L m
EPA ID No. 9 - GIP278	Quarterly	Sampled: 27/9/22  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	25.73	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. 10 - GIP279A	Quarterly	Sampled: 27/9/22  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	24.91	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. 11 - GIP280A	Quarterly	Sampled: 27/9/22  Obtained:	Arsenic Barium Beryllium Cadmium Chloride		mg/L mg/L mg/L mg/L mg/L

		Published: 26/10/2022	Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	22.81	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: 16/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.001 0.014 0.001 0.0269 3680 0.001 0.134 17800 0.163 0.05 0.001 7.87 0.0002 0.028 7.16 4240 0.01 0.47 15.61	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. 13 - GIP291	Monthly	Sampled: 27/9/22  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury		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	10.35	mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 14 - GIP292A	Monthly	Sampled: 12/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.055 0.01 0.117 4.32 1900 0.166 66.5 35100 337 96.3 0.01 582 0.0001 20.9 3.55 39500 0.13 378 6.01	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 pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 16 - GIP292AS	Monthly	Sampled: 12/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.182 0.01 0.337 5.69 1540 0.059 84.6 33300 516 705 0.01 560 0.0001 22.9 3.27 38800 0.69 447 6.04	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. 17 -	Monthly	Sampled: 13/9/22	Arsenic Barium	0.052 0.01	mg/L mg/L



GIP293		Obtained: 6/10/22  Published: 26/10/2022	Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.034 3.01 4010 0.01 41.6 42700 105 0.27 0.019 556 0.001 14.3 3.84 36200 0.1 199 13.82	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 mg/L m
EPA ID No. 18 - GIP294	Monthly	Sampled: 13/9/22  Obtained: 6/10/22 Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.01 0.01 0.01 0.343 2310 0.01 3.83 31300 9.14 0.1 0.01 29.4 0.0001 1.41 6.74 15200 0.1 20.1 12.85	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. 19 - GIP295	Monthly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron		mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L

			Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 20 - GIP296	Monthly	Sampled: 13/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.001 0.008 0.001 0.0024 711 0.001 0.04 13200 0.165 0.17 0.001 0.283 0.0001 0.018 7.59 6260 0.01 0.204 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 pH Unit mg/L mg/L mg/L m
EPA ID No. 21 - GIP297	Monthly	Sampled: 13/9/22  Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc	0.006 0.002 0.001 0.0004 112 0.001 0.005 1210 0.059 0.2 0.001 0.084 0.0001 0.003 7.67 237 0.01 0.081	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

			SWL	26.88	m
EPA ID No. 22 - GIP298	Monthly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 23 - GIP299	Monthly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 24 - GIP300	Monthly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt		mg/L mg/L mg/L mg/L mg/L mg/L mg/L

			Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 25 - GIP301	Monthly	Sampled:  Obtained:  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 26 - GIP302	Monthly	Sampled: 13/2/22 Obtained: 6/10/22  Published: 26/10/2022	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH	0.01 0.01 0.01 0.0064 8700 0.027 0.049 32700 0.287 0.24 0.01 1.3 0.0001 0.12 7.27	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 pH Unit

			Sulfate	5730	mg/L
			Vanadium	0.1	mg/L
			Zinc	0.259	mg/L
			SWL	16.19	m