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TRITTON OPERATIONS

Tritton and Girilambone Operations

Monthly Environmental Monitoring Report

[September] [2019]

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[SEPTEMBER] [2019] – 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: D/M/Y	Arsenic		mg/L ¹
			Barium		mg/L
		Obtained: D/M/Y	Beryllium		mg/L
			Cadmium		mg/L
			Chloride		mg/L
			Chromium		mg/L
		Published: 4/11/2019	Cobalt		mg/L
			Conductivity (EC)		µS/cm ²
			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 ³				
EPA ID No. 13 - PZH002	Quarterly	Sampled: D/M/Y	Arsenic		mg/L
			Barium		mg/L
		Obtained: D/M/Y	Beryllium		mg/L
			Cadmium		mg/L
			Chloride		mg/L
			Chromium		mg/L
		Published: 4/11/2019	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		

¹ Milligrams per litre

² Microsiemens per centimetre

³ Metres

			Sulfate Vanadium Zinc SWL		mg/L mg/L mg/L m
EPA ID No. 14 - PZH003	Quarterly	Sampled: D/M/Y Obtained: D/M/Y Published: 4/11/2019	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 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: 4/11/2019	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 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: D/M/Y Obtained:	Arsenic Barium Beryllium Cadmium		mg/L mg/L mg/L mg/L

		D/M/Y Published: 4/11/2019	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 mg/L pH Unit mg/L mg/L mg/L mg/L m
EPA ID No. 17 - PZH006	Quarterly	Sampled: D/M/Y Obtained: D/M/Y Published: 4/11/2019	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. 18 - PZH007	Quarterly	Sampled: 24/9/19 Obtained: 10/10/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese	0.004 0.097 0.001 0.0008 3820 0.003 0.023 15200 0.087 1.23 0.006 0.213	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	0.083	mg/L
			pH	7.79	pH Unit
			Sulfate	2560	mg/L
			Vanadium	0.01	mg/L
			Zinc	0.189	mg/L
			SWL	45.96	m
EPA ID No. 19 - PZH008	Quarterly	Sampled: 9/9/19	Arsenic	0.01	mg/L
			Barium	0.019	mg/L
		Obtained: 26/9/19	Beryllium	0.001	mg/L
			Cadmium	0.0001	mg/L
		Published: 4/11/2019	Chloride	4160	mg/L
			Chromium	0.001	mg/L
			Cobalt	0.001	mg/L
			Conductivity (EC)	14300	µS/cm
			Copper	0.01	mg/L
			Iron	0.09	mg/L
			Lead	0.001	mg/L
			Manganese	0.053	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.001	mg/L
		pH	7.46	pH Unit	
		Sulfate	1740	mg/L	
Vanadium	0.01	mg/L			
Zinc	0.024	mg/L			
SWL	19.59	m			
EPA ID No. 20 - PZH009	Quarterly	Sampled: 9/9/19	Arsenic	0.001	mg/L
			Barium	0.058	mg/L
		Obtained: 26/9/19	Beryllium	0.001	mg/L
			Cadmium	0.001	mg/L
		Published: 4/11/2019	Chloride	5550	mg/L
			Chromium	0.001	mg/L
			Cobalt	0.009	mg/L
			Conductivity (EC)	18300	µS/cm
			Copper	0.035	mg/L
			Iron	0.21	mg/L
			Lead	0.001	mg/L
			Manganese	0.265	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.02	mg/L
		pH	7.53	pH Unit	
		Sulfate	2100	mg/L	
Vanadium	0.01	mg/L			
Zinc	0.106	mg/L			
SWL	16.06	m			

EPA ID No. 22 - PZH013	Quarterly	Sampled: 9/9/19 Obtained: DRY Published: 4/11/2019	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 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: 9/9/19 Obtained: 26/9/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.001 0.006 0.001 0.0002 4830 0.001 0.001 0.001 15700 0.002 0.06 0.001 0.001 0.0001 0.003 7.4 1600 0.01 0.007 47.27	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. 24 - PZH015	Quarterly	Sampled: 9/9/19 Obtained: 26/9/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC)	0.001 0.014 0.001 0.0003 5520 0.007 0.001 18600	mg/L mg/L mg/L mg/L mg/L mg/L mg/L μS/cm

			Vanadium Zinc SWL		mg/L mg/L m
EPA ID No. 27 - PZH019	Quarterly	Sampled: Obtained: Published: 4/11/2019	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. 28 - PZH020	Quarterly	Sampled: Obtained: Published: 4/11/2019	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. 29 - PZH021	Quarterly	Sampled: Obtained: Published:	Arsenic Barium Beryllium Cadmium Chloride		mg/L mg/L mg/L mg/L mg/L

		4/11/2019	Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL		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. 30 - PZH022	Quarterly	Sampled: D/M/Y Obtained: D/M/Y Published: 4/11/2019	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 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: 4/11/2019	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		mg/L pH Unit mg/L mg/L mg/L m
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[SEPTEMBER] [2019] – 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: 27/9/19	Arsenic	0.01	mg/L
			Barium	0.025	mg/L
			Beryllium	0.01	mg/L
		Obtained: 10/10/19	Cadmium	0.002	mg/L
			Chloride	9000	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	0.011	mg/L
			Conductivity (EC)	31000	µS/cm
			Copper	0.026	mg/L
			Iron	0.5	mg/L
			Lead	0.01	mg/L
			Manganese	0.189	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.039	mg/L
			pH	7.56	pH Unit
			Sulfate	5150	mg/L
			Vanadium	0.1	mg/L
Zinc	0.101	mg/L			
SWL	9.16	m			
EPA ID No. 3 - GIP225	Monthly	Sampled: 17/9/19	Arsenic	0.01	mg/L
			Barium	0.01	mg/L
			Beryllium	0.01	mg/L
		Obtained: 26/9/19	Cadmium	0.001	mg/L
			Chloride	6780	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	0.01	mg/L
			Conductivity (EC)	33200	µS/cm
			Copper	0.03	mg/L
			Iron	0.13	mg/L
			Lead	0.01	mg/L
			Manganese	0.206	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.01	mg/L
			pH	7.06	pH Unit
			Sulfate	11300	mg/L
			Vanadium	0.1	mg/L
Zinc	0.061	mg/L			
SWL	12.92	m			

EPA ID No. 4 - GIP234	Quarterly	Sampled: 25/9/19 Obtained: Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	24.79	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 mg/L m
EPA ID No. 5 - GIP273	Quarterly	Sampled: 25/9/19 Obtained: Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	17.21	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: 10/9/19 Obtained: 26/9/19 Published:	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt	0.01 0.01 0.01 0.001 10400 0.01 0.01	mg/L mg/L mg/L mg/L mg/L mg/L mg/L

			Sulfate Vanadium Zinc SWL	18.15	mg/L mg/L mg/L m
EPA ID No. 9 - GIP278	Quarterly	Sampled: 25/9/19 Obtained: Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	25.72	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 pH Unit mg/L mg/L mg/L m
EPA ID No. 10 - GIP279A	Quarterly	Sampled: 25/9/19 Obtained: Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	24.81	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 m
EPA ID No. 11 - GIP280A	Quarterly	Sampled: 25/9/19 Obtained:	Arsenic Barium Beryllium Cadmium		mg/L mg/L mg/L mg/L

		Published: 4/11/2019	Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	22.77	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. 12 - GIP290	Monthly	Sampled: 27/9/19 Obtained: 10/10/19 Published: 4/11/2019	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 0.0533 3420 0.001 0.253 17000 0.036 0.05 0.001 13.3 0.0001 0.029 7.12 3820 0.01 0.556 16.16	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. 13 - GIP291	Monthly	Sampled: 19/9/19 Obtained: 10/10/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese	0.002 0.026 0.001 0.004 8140 0.001 0.028 27000 0.063 0.05 0.001 0.514	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L mg/L mg/L

EPA ID No. 17 - GIP293	Monthly	Sampled: 19/9/19	Arsenic	0.03	mg/L
			Barium	0.01	mg/L
		Obtained: 10/10/19	Beryllium	0.011	mg/L
			Cadmium	1.91	mg/L
			Chloride	4270	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	24	mg/L
			Conductivity (EC)	42300	µS/cm
			Copper	33.2	mg/L
			Iron	0.54	mg/L
			Lead	0.013	mg/L
			Manganese	434	mg/L
			Mercury	0.0001	mg/L
			Nickel	9.05	mg/L
			pH	4.2	pH Unit
			Sulfate	52800	mg/L
EPA ID No. 18 - GIP294	Monthly	Sampled: 16/9/19	Arsenic	0.01	mg/L
			Barium	0.037	mg/L
		Obtained: 26/9/19	Beryllium	0.01	mg/L
			Cadmium	0.819	mg/L
			Chloride	2690	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	10.4	mg/L
			Conductivity (EC)	33200	µS/cm
			Copper	25.5	mg/L
			Iron	0.12	mg/L
			Lead	0.01	mg/L
			Manganese	77.9	mg/L
			Mercury	0.0001	mg/L
			Nickel	3.25	mg/L
			pH	6.72	pH Unit
			Sulfate	21400	mg/L
EPA ID No. 19 - GIP295	Monthly	Sampled: 16/9/19	Arsenic	0.01	mg/L
			Barium	0.041	mg/L
		Obtained: 26/9/19	Beryllium	0.01	mg/L
			Cadmium	0.001	mg/L
			Chloride	9780	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	0.01	mg/L
			Conductivity (EC)	30100	µS/cm

			Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.016 0.1 0.01 0.095 0.0001 0.01 7.56 2700 0.1 0.068 18.61	mg/L mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L mg/L
EPA ID No. 20 - GIP296	Monthly	Sampled: 16/9/19 Obtained: 26/9/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.001 0.015 0.001 0.0003 1690 0.001 0.003 15000 0.032 0.05 0.001 0.062 0.0001 0.005 7.39 5230 0.01 0.031 12.93	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. 21 - GIP297	Monthly	Sampled: 24/9/19 Obtained: 10/10/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate	0.005 0.001 0.001 0.0001 78 0.001 0.001 1140 0.009 0.05 0.001 0.009 0.0001 0.001 7.18 206	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	0.01	mg/L
			Zinc	0.01	mg/L
			SWL	27.93	m
EPA ID No. 22 - GIP298	Monthly	Sampled: 24/9/19	Arsenic	0.01	mg/L
			Barium	0.01	mg/L
			Beryllium	0.01	mg/L
		Obtained: 10/10/19	Cadmium	0.001	mg/L
			Chloride	9850	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	0.01	mg/L
			Conductivity (EC)	31500	µS/cm
			Copper	0.012	mg/L
			Iron	0.5	mg/L
			Lead	0.01	mg/L
			Manganese	0.057	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.01	mg/L
			pH	7.37	pH Unit
			Sulfate	3620	mg/L
			Vanadium	0.1	mg/L
Zinc	0.05	mg/L			
SWL	22.52	m			
EPA ID No. 23 - GIP299	Monthly	Sampled: 16/9/19	Arsenic	0.01	mg/L
			Barium	0.011	mg/L
			Beryllium	0.01	mg/L
		Obtained: 26/9/19	Cadmium	0.0036	mg/L
			Chloride	7310	mg/L
			Chromium	0.01	mg/L
		Published: 4/11/2019	Cobalt	0.015	mg/L
			Conductivity (EC)	31800	µS/cm
			Copper	0.01	mg/L
			Iron	2.2	mg/L
			Lead	0.01	mg/L
			Manganese	2.63	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.015	mg/L
			pH	7.24	pH Unit
			Sulfate	9780	mg/L
			Vanadium	0.1	mg/L
Zinc	0.05	mg/L			
SWL	32.89	m			
EPA ID No. 24 - GIP300	Monthly	Sampled: 16/9/19	Arsenic	0.01	mg/L
			Barium	0.042	mg/L
		Obtained: 26/9/19	Beryllium	0.01	mg/L
			Cadmium	0.0034	mg/L
			Chloride	10900	mg/L

		Published: 4/11/2019	Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.01 0.01 34600 0.046 0.1 0.01 0.245 0.0001 0.025 7.32 3520 0.1 0.051 22.07	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. 25 - GIP301	Monthly	Sampled: 10/9/19 Obtained: 26/9/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vanadium Zinc SWL	0.001 0.011 0.001 0.0029 1920 0.001 0.001 9650 0.033 0.07 0.001 0.215 0.0001 0.008 7.77 1600 0.01 0.103 17.09	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 mg/L pH Unit mg/L mg/L mg/L m
EPA ID No. 26 - GIP302	Monthly	Sampled: 10/9/19 Obtained: 26/9/19 Published: 4/11/2019	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury	0.01 0.01 0.01 0.196 6390 0.072 3.1 27400 26.6 0.46 0.01 27.5 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	1.88	mg/L
			pH	6.2	pH Unit
			Sulfate	8070	mg/L
			Vanadium	0.1	mg/L
			Zinc	16.8	mg/L
			SWL	20.84	m