



Tritton and Girilambone Operations

Monthly Environmental Monitoring
Report

September 2015



SEPTEMBER 2015 – GROUNDWATER MONITORING REPORT
TRITTON OPERATIONS LICENCE NO.11254

Licensee: TRITTON RESOURCES LIMITED					
EPL No. 11254					
Sample Point	Monitoring Frequency	Sampled	Parameter	Measurement	Unit
EPA ID No. 12 - PZH001	Quarterly	04/09/2015	Arsenic	0.004	mg/L
			Barium	0.024	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	<0.0001	mg/L
			Chloride	4000	mg/L
			Chromium	<0.001	mg/L
			Cobalt	0.001	mg/L
			Conductivity (EC)	15700	µS/cm
			Copper	0.02	mg/L
			Iron	0.98	mg/L
			Lead	<0.001	mg/L
			Manganese	0.142	mg/L
			Mercury	0.0001	mg/L
			Nickel	0.005	mg/L
			pH	7.4	pH Unit
			Sulfate	2020	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.024	mg/L
SWL	16.77	m			
EPA ID No. 13 - PZH002	Quarterly	04/09/2015	Arsenic	<0.001	mg/L
			Barium	0.016	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	<0.0001	mg/L
			Chloride	3210	mg/L
			Chromium	<0.001	mg/L
			Cobalt	<0.001	mg/L
			Conductivity (EC)	13000	µS/cm
			Copper	<0.001	mg/L
			Iron	<0.05	mg/L
			Lead	<0.001	mg/L
			Manganese	0.165	mg/L
			Mercury	0.0002	mg/L
			Nickel	<0.001	mg/L
			pH	7.55	pH Unit
			Sulfate	1600	mg/L
			Vandium	<0.01	mg/L
			Zinc	<0.005	mg/L

			SWL	33.79	m
EPA ID No. 14 - PZH003	Quarterly	03/09/2015	Arsenic	0.001	mg/L
			Barium	0.021	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	<0.0001	mg/L
			Chloride	4780	mg/L
			Chromium	<0.001	mg/L
			Cobalt	<0.001	mg/L
			Conductivity (EC)	17900	µS/cm
			Copper	0.006	mg/L
			Iron	2.28	mg/L
			Lead	<0.001	mg/L
			Manganese	0.175	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.001	mg/L
			pH	6.9	pH Unit
			Sulfate	2290	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.008	mg/L
			SWL	70.09	m
EPA ID No. 16 - PZH005	Quarterly	04/09/2015	Arsenic	0.002	mg/L
			Barium	0.021	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	0.0008	mg/L
			Chloride	4870	mg/L
			Chromium	0.001	mg/L
			Cobalt	0.003	mg/L
			Conductivity (EC)	17100	µS/cm
			Copper	0.015	mg/L
			Iron	0.06	mg/L
			Lead	0.001	mg/L
			Manganese	0.191	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.045	mg/L
			pH	7.24	pH Unit
			Sulfate	1400	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.112	mg/L
			SWL	16.91	m
EPA ID No. 17 - PZH006	Quarterly	04/09/2015	Arsenic	0.001	mg/L
			Barium	0.04	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	0.0004	mg/L
			Chloride	3510	mg/L
			Chromium	<0.001	mg/L

			Cobalt	0.005	mg/L
			Conductivity (EC)	13100	µS/cm
			Copper	0.017	mg/L
			Iron	0.07	mg/L
			Lead	0.006	mg/L
			Manganese	0.103	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.012	mg/L
			pH	7.49	pH Unit
			Sulfate	1590	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.046	mg/L
			SWL	38.89	m
EPA ID No. 18 - PZH007	Quarterly	03/09/2015	Arsenic	0.002	mg/L
			Barium	0.137	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	0.0008	mg/L
			Chloride	2390	mg/L
			Chromium	0.002	mg/L
			Cobalt	0.021	mg/L
			Conductivity (EC)	10000	µS/cm
			Copper	0.105	mg/L
			Iron	0.28	mg/L
			Lead	0.011	mg/L
			Manganese	0.672	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.039	mg/L
			pH	7.14	pH Unit
			Sulfate	1270	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.13	mg/L
			SWL	40.06	m

SEPTEMBER 2015 – GROUNDWATER MONITORING REPORT
GIRILAMBONE OPERATIONS LICENCE NO.4501

Licensee: TRITTON RESOURCES LIMITED					
EPL No. 4501					
Sample Point	Monitoring Frequency	Sampled	Parameter	Measurement	Unit
EPA ID No. 2 - GIP224	Monthly	07/09/2015	Arsenic	0.01	mg/L
			Barium	0.026	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	0.0011	mg/L
			Chloride	8020	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	31400	µS/cm
			Copper	0.075	mg/L
			Iron	0.12	mg/L
			Lead	<0.010	mg/L
			Manganese	0.11	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	7.81	pH Unit
			Sulfate	3840	mg/L
			Vandium	<0.10	mg/L
			Zinc	0.091	mg/L
SWL	4.86	m			
EPA ID No. 3 - GIP225	Monthly	07/09/2015	Arsenic	<0.010	mg/L
			Barium	0.016	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	5560	mg/L
			Chromium	<0.010	mg/L
			Cobalt	0.012	mg/L
			Conductivity (EC)	32600	µS/cm
			Copper	0.052	mg/L
			Iron	0.37	mg/L
			Lead	0.023	mg/L
			Manganese	0.405	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.016	mg/L
			pH	8.17	pH Unit
			Sulfate	14000	mg/L
			Vandium	<0.10	mg/L
			Zinc	0.399	mg/L

			SWL	11.02	m
GIP234	Quarterly	29/09/2015	Arsenic	<0.010	mg/L
			Barium	<0.010	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	7560	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	27000	µS/cm
			Copper	<0.010	mg/L
			Iron	<0.50	mg/L
			Lead	<0.010	mg/L
			Manganese	<0.010	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	7.18	pH Unit
			Sulfate	2510	mg/L
			Vandium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	25.01	m
GIP273	Quarterly	28/09/2015	Arsenic	<0.010	mg/L
			Barium	0.026	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	9670	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	33900	µS/cm
			Copper	0.026	mg/L
			Iron	<0.50	mg/L
			Lead	<0.010	mg/L
			Manganese	0.182	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	7.47	pH Unit
			Sulfate	3200	mg/L
			Vandium	<0.10	mg/L
			Zinc	0.55	mg/L
			SWL	17.05	m
EPA ID No. 7 - GIP274	Monthly	16/09/2015	Arsenic	<0.010	mg/L
			Barium	0.014	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	9210	mg/L
			Chromium	<0.010	mg/L

			Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	<0.010 32600 <0.010 <0.10 <0.010 0.048 <0.0001 0.012 7.5 3060 <0.10 <0.050 17.56	mg/L µS/cm mg/L mg/L mg/L mg/L mg/L pH Unit mg/L mg/L mg/L m
GIP276	Quarterly	28/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	<0.010 0.018 <0.010 0.0023 8050 <0.010 0.014 27800 0.111 <0.50 0.028 0.222 <0.0001 0.017 7.48 2580 <0.10 0.153 21.05	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
GIP277	Quarterly	29/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury	0.001 0.006 <0.001 <0.0001 941 <0.001 <0.001 5150 0.004 0.05 0.002 0.02 <0.0001	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	0.001	mg/L
			pH	7.7	pH Unit
			Sulfate	435	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.007	mg/L
			SWL	17.38	m
GIP278	Quarterly	29/09/2015	Arsenic	<0.010	mg/L
			Barium	0.018	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	7460	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	26400	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	0.02	mg/L
			pH	7.04	pH Unit
			Sulfate	2410	mg/L
			Vandium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	25.17	m
GIP279A	Quarterly	28/09/2015	Arsenic	<0.010	mg/L
			Barium	0.033	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	<0.0010	mg/L
			Chloride	8180	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	27800	µS/cm
			Copper	0.03	mg/L
			Iron	<0.50	mg/L
			Lead	<0.010	mg/L
			Manganese	0.016	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	6.9	pH Unit
			Sulfate	2500	mg/L
			Vandium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	24.24	m
GIP280A	Quarterly	29/09/2015	Arsenic	0.001	mg/L

			Barium	0.039	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	0.0002	mg/L
			Chloride	5440	mg/L
			Chromium	<0.001	mg/L
			Cobalt	0.002	mg/L
			Conductivity (EC)	19100	µS/cm
			Copper	0.014	mg/L
			Iron	<0.05	mg/L
			Lead	<0.001	mg/L
			Manganese	0.019	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.003	mg/L
			pH	7.99	pH Unit
			Sulfate	1660	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.096	mg/L
			SWL	21.87	m
EPA ID No. 12 - GIP290	Monthly	18/09/2015	Arsenic	<0.001	mg/L
			Barium	0.016	mg/L
			Beryllium	<0.001	mg/L
			Cadmium	0.019	mg/L
			Chloride	3310	mg/L
			Chromium	<0.001	mg/L
			Cobalt	0.055	mg/L
			Conductivity (EC)	15900	µS/cm
			Copper	0.048	mg/L
			Iron	0.08	mg/L
			Lead	0.004	mg/L
			Manganese	6.64	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.008	mg/L
			pH	7.55	pH Unit
			Sulfate	3460	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.286	mg/L
			SWL	15.19	m
EPA ID No. 13 - GIP291	Monthly	18/09/2015	Arsenic	<0.010	mg/L
			Barium	0.024	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	0.0015	mg/L
			Chloride	7540	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	27000	µS/cm

			Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	0.064 <0.50 <0.010 0.123 <0.0001 <0.010 7.55 2880 <0.10 0.114 9.72	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. 14 - GIP292A	Monthly	18/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	0.041 <0.010 0.08 3.04 2440 0.049 42.4 33000 198 113 <0.010 467 <0.0001 14 3.89 36300 <0.10 206 5.17	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	18/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH	0.264 <0.010 0.463 6.36 1370 0.132 74.1 31200 730 1010 <0.010 552 <0.0001 22.6 3.42	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

			Sulfate	46200	mg/L
			Vandium	1.04	mg/L
			Zinc	405	mg/L
			SWL	5.08	m
EPA ID No. 17 - GIP293	Monthly	10/09/2015	Arsenic	0.02	mg/L
			Barium	<0.010	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	1.87	mg/L
			Chloride	3890	mg/L
			Chromium	<0.010	mg/L
			Cobalt	21.1	mg/L
			Conductivity (EC)	42300	µS/cm
			Copper	29.4	mg/L
			Iron	0.36	mg/L
			Lead	<0.010	mg/L
			Manganese	414	mg/L
			Mercury	0.0016	mg/L
			Nickel	7.79	mg/L
			pH	6.05	pH Unit
			Sulfate	36400	mg/L
			Vandium	<0.10	mg/L
			Zinc	82	mg/L
			SWL	12.62	m
EPA ID No. 18 - GIP294	Monthly	10/09/2015	Arsenic	<0.010	mg/L
			Barium	<0.010	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	2.92	mg/L
			Chloride	1750	mg/L
			Chromium	<0.010	mg/L
			Cobalt	31.5	mg/L
			Conductivity (EC)	50800	µS/cm
			Copper	131	mg/L
			Iron	0.19	mg/L
			Lead	0.01	mg/L
			Manganese	246	mg/L
			Mercury	0.0028	mg/L
			Nickel	10.8	mg/L
			pH	6.02	pH Unit
			Sulfate	50300	mg/L
			Vandium	<0.10	mg/L
			Zinc	186	mg/L
			SWL	12.56	m
EPA ID No. 19 - GIP295	Monthly	16/09/2015	Arsenic	<0.010	mg/L
			Barium	0.057	mg/L
			Beryllium	<0.010	mg/L

			Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	<0.0010 8390 <0.010 <0.010 30600 <0.010 0.15 <0.010 0.66 <0.0001 0.017 8.07 2620 <0.10 0.051 18.34	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. 20 - GIP296	Monthly	10/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	0.013 0.019 <0.010 <0.0010 5570 <0.010 <0.010 26600 0.036 <0.10 <0.010 0.073 0.0002 0.012 7.99 7540 <0.10 0.081 7.45	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. 21 - GIP297	Monthly	16/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron	0.008 <0.001 <0.001 <0.0001 76 <0.001 <0.001 997 0.006 <0.05	mg/L mg/L mg/L mg/L mg/L mg/L mg/L µS/cm mg/L mg/L

			Lead	<0.001	mg/L
			Manganese	0.005	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.001	mg/L
			pH	6.8	pH Unit
			Sulfate	170	mg/L
			Vandium	<0.01	mg/L
			Zinc	0.01	mg/L
			SWL	25.43	m
EPA ID No. 22 - GIP298	Monthly	10/09/2015	Arsenic	<0.010	mg/L
			Barium	<0.010	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	0.0011	mg/L
			Chloride	8580	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	31900	µS/cm
			Copper	0.058	mg/L
			Iron	0.57	mg/L
			Lead	<0.010	mg/L
			Manganese	0.102	mg/L
			Mercury	0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	7.55	pH Unit
			Sulfate	2840	mg/L
			Vandium	<0.10	mg/L
			Zinc	<0.050	mg/L
			SWL	21.07	m
EPA ID No. 23 - GIP299	Monthly	16/09/2015	Arsenic	<0.010	mg/L
			Barium	0.014	mg/L
			Beryllium	<0.010	mg/L
			Cadmium	0.0024	mg/L
			Chloride	5790	mg/L
			Chromium	<0.010	mg/L
			Cobalt	<0.010	mg/L
			Conductivity (EC)	27000	µS/cm
			Copper	0.022	mg/L
			Iron	0.12	mg/L
			Lead	<0.010	mg/L
			Manganese	0.027	mg/L
			Mercury	<0.0001	mg/L
			Nickel	<0.010	mg/L
			pH	7.42	pH Unit
			Sulfate	6660	mg/L
			Vandium	<0.10	mg/L

			Zinc SWL	0.096 27.23	mg/L m
EPA ID No. 24 - GIP300	Monthly	16/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	<0.010 0.039 <0.010 <0.0010 8450 <0.010 0.015 33900 0.046 0.39 <0.010 1.03 <0.0001 0.021 7.38 6120 <0.10 0.102 19.27	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 pH Unit mg/L mg/L mg/L m
EPA ID No. 25 - GIP301	Monthly	16/09/2015	Arsenic Barium Beryllium Cadmium Chloride Chromium Cobalt Conductivity (EC) Copper Iron Lead Manganese Mercury Nickel pH Sulfate Vandium Zinc SWL	0.01 0.033 <0.001 0.0006 4090 <0.001 0.014 16300 0.036 <0.05 <0.001 0.589 <0.0001 0.009 8.14 1750 <0.01 0.085 14.81	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. 26 - GIP302	Monthly	18/09/2015	Arsenic Barium Beryllium Cadmium Chloride	<0.010 0.024 <0.010 0.0135 7970	mg/L mg/L mg/L mg/L mg/L

			Chromium	<0.010	mg/L
			Cobalt	0.121	mg/L
			Conductivity (EC)	31700	µS/cm
			Copper	0.341	mg/L
			Iron	<0.50	mg/L
			Lead	<0.010	mg/L
			Manganese	2.82	mg/L
			Mercury	<0.0001	mg/L
			Nickel	0.071	mg/L
			pH	6.35	pH Unit
			Sulfate	7280	mg/L
			Vandium	<0.10	mg/L
			Zinc	0.839	mg/L
			SWL	15.12	m