Favona Water Quality Annual Monitoring Report 2020

July 2020

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Approvals

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Reviewed by: GWS Ltd

1. INTRODUCTION

OceanaGold New Zealand Limited (OGNZL) owns and operates open pit and underground mines in Waihi, New Zealand. This report provides a summary of water quality monitoring associated with OceanaGold's underground projects (specifically around the Favona stockpile and collection ponds), dewatering, backfill water quality model and waste rock monitoring.

This report is prepared to comply with Schedule Two – General Conditions of Favona consents (109742 to 109746 inclusive), condition 4. Condition 4 requires that 'the consent holder provide to the Regional Council (with a copy provided to the Hauraki District Council), an annual Settlement, De-watering and Water Quality Monitoring Report'. A separate report on Dewatering and Settlement Monitoring was submitted to the Councils in May 2020 and covered the Martha, Favona, Trio and Correnso mining operations during the 2019 calendar year.

This report includes the remaining information required by the consent, as follows:

Condition 2

c) [effects of] leachate from stockpiles containing potentially acid forming material on shallow groundwater quality

d) [effects of] the discharge of degraded-quality water from the backfilled and flooded workings on groundwater quality

Condition 4

b) the data from monitoring undertaken during the previous year

c) an interpretation and analysis of the monitoring data, in particular any change in the groundwater profile over the previous year; predictions of future impacts that may arise as a result of any trends that have been identified including review of the predicted post closure effects based on actual monitoring data; and what contingency actions, if any, the consent holder proposes to take in response to those predictions. This analysis shall be undertaken by a party appropriately experienced and qualified to assess the information,

d) any contingency actions that may have been taken during the year,

e) comment on compliance with all conditions of this consent including any reasons for non-compliance or difficulties in achieving conformance with the conditions of this consent.

The volume of groundwater abstracted (Condition 4a) is reported in the annual Dewatering and Settlement Monitoring Report.

All underground water is currently dewatered via the Favona mine and as a result the combined water quality is reported in this document. Additional water quality results from sumps at the lowest points of the Favona and Correnso underground mines are included.

Additionally, this report includes data to characterise underground mining material to meet the requirements of condition 6 to 8 of Project Martha consent AUTH139551.04.01:

Characterisation of Underground Mining Material

6. The consent holder shall devise a monitoring programme that characterises the overburden and ore from Project Martha to confirm (or otherwise) that this material is chemically similar to previous material mined from the Martha Pit. The monitoring programme shall as a minimum, be based on the recommendations contained in the report entitled Project Martha Geochemical Assessment, 24 May 2018 by AECOM and shall be submitted by the consent holder to the Waikato Regional Council for certification at least 10 working days prior to the first exercise of this consent. Any subsequent updates to the

monitoring programme shall be submitted to the Waikato Regional Council for approval acting in a certification capacity.

7. The results of the monitoring programme referred within Condition 6 shall, as a minimum, be reported to the Waikato Regional Council on an annual basis.

8. Should the monitoring programme referred to in Condition 6 demonstrate that the material significantly varies from the Martha Pit rock and ore samples, then the reporting of results required by Condition 7 shall also identify appropriate contingency and/or remedial measures to address any effects on pit lake water quality to ensure compliance with the conditions of resource consents AUTH139551.05 and AUTH139551.08 (Pit Lake Formation and Discharge Consents).

2. OVERVIEW

In this report, water quality in relation to the Martha/Favona/Trio/Correnso/SUPA/Project Martha underground mining operations is covered in the following sections:

- 4.1 Stockpile subsoil underdrainage
- 4.2 Polishing pond subsoil underdrainage
- 4.3 Stockpile runoff to collection ponds
- 4.4 Shallow groundwater surrounding the stockpiles
- 5.1 Backfill monitoring
- 5.2 Underground water

The Favona Stockpile Collection Pond (FSPCP) captures runoff from the stockpile pad located north of the Water Treatment Plant (WTP). The stockpile has received both underground and open pit ore in the past.

In 2009, the footprint of the polishing pond stockpile was increased by about 1.7 hectares. Included with this work was the construction of a second collection pond that, together with the original FSPCP, provides the design runoff capacity for the increased catchment.

In 2011, the stockpile stopped receiving material and was empty until early 2020 when the stockpile began to store waste rock from the Martha Underground.

The two ponds (known as the FSPCP and FSPCP2) operate together, with FSPCP2 operating as an overflow facility. Runoff from the stockpile first reports to FSPCP, from where it drains to the FSPCP manhole (FSPCPMH) and is pumped either to treatment or to the Tailings Storage Facility 1A (TSF1A). During periods of heavy rainfall, before water levels reach full capacity of the original FSPCP, water overflows into FSPCP2. After the rainfall, the water stored in FSPCP2 is pumped back into FSPCP which relays it to treatment or to TSF1A.

In general, dewatering of the underground workings will cease once mining ends and backfilling has been completed. Rehabilitation of the polishing pond stockpile area and associated ponds will occur after completion of any associated underground projects.

On May 4th 2015, dewatering from Martha Pit ceased due to complications in the dewatering bore wells. Since May 18th 2015 all dewatering has been carried out from the Correnso underground. The water pumped from underground includes a mixture of Martha/Favona/Trio/Correnso/SUPA groundwater; sediment and sulphide oxidation by-products from the workings; and treated service water. This water is directed to the Water Treatment Plant.

The management objective for underground water is to ensure that the dewatering water does not have any adverse effects on receiving waters. Water quality data is collected that, in conjunction with waste rock stockpile runoff water quality, enables refinement of the groundwater geochemistry and hydrogeology modelling prior to the completion of mining.

3. MONITORING PROGRAMME

3.1. Methods

In terms of water quality, Condition 2 of Schedule Two – General Conditions states that the "monitoring regime shall be designed to assess the effects of:

(a) Leachate from stockpiles containing potentially acid-forming material on shallow groundwater quality, and

(b) The discharge of degraded-quality water from the backfilled and flooded workings on groundwater quality."

Shallow groundwater monitoring locations were installed prior to waste rock placement at locations agreed with the Waikato Regional Council (Figure 1).

The volume of water abstracted from the mine is monitored continuously and is reported to the Council on a quarterly basis (Refer 109742 condition 3) and in the annual *Dewatering and Settlement Monitoring Report.* Continuous 15-minute values are also submitted to the Waikato Regional Council daily via telemetry, as required by Project Martha consents AUTH139551.01.01, Condition 6.

FSPCPMH water is sampled quarterly using the same monitoring suite as defined in the Martha Mine Extended Project consent conditions (Section 9.0 Collection Ponds, condition 12) and analysed for the parameters listed below;

- pH, EC, suspended solids, cyanide (WAD), total ammonia.
- Metals (iron, manganese, copper, nickel, zinc, silver, antimony, arsenic, selenium, cadmium, chromium (VI), lead, mercury).

If a FSPCP pond overflow event were to occur, samples would be taken from the FSPCP discharge and from river sites upstream and downstream of the pond discharge to assess any potential effects on the receiving water. Analytical suites would be for the same parameters listed above for the FSPCPMH water.

Metals in the discharge are to be analysed as 'acid-soluble' concentrations determined on unfiltered samples (Refer consent conditions Section 9.0 Collection Ponds, condition 12.), while the 'soluble' fraction of the metals is to be analysed in the receiving waters samples.

Stockpile seepage water is sampled from a manhole in a sub-soil drain (ZASS), underlying the Zone A clay liner.

The underground dewatering water is sampled from the inflow at the Water Treatment Plant (Underground Dewatering) (Figure 1). Samples are collected monthly and quarterly and tested for a wide range of parameters including those listed in Table 1 (see also Appendices). Underground water quality samples are also taken quarterly from sumps at the lowest parts of the underground mine.

Groundwater samples are taken from the shallow piezometer network (Figure 1) in accordance with the monitoring frequencies and related parameters set out in Table 1.

When bores contain little volume of water and high suspended solids, a representative sample is difficult to obtain. Accordingly, and further to recommendation by GWS Ltd (see Appendix 8.5), only pH and EC will be sampled when able, to demonstrate that conditions remain stable. During the winter 2019 sampling round, wells with sufficient volume of water were sampled with a peristaltic pump, rather than a bailer, to reduce disturbance of sediment at the bottom of wells and to allow sampling of wells with shallow water levels.

All water quality sampling and analysis is undertaken using Standard Methods for the Examination of Water and Wastewater (19th Edition 1995, or updates), APHA, AWWA and WEF. Analyses are undertaken at an appropriately qualified laboratory (refer consent conditions Section 9.0 Collection Ponds 971312, condition 15) including RJ Hill Laboratories in Hamilton and SGS Laboratories in Waihi.

Well water quality data is forwarded to WRC quarterly (refer Martha Mine Extended Project consent conditions Section 9.0 971312 Collection Ponds, condition 14). Monitoring is in accordance with WAI-200-PRO-018 Collection and Silt Pond Management Standard Operating Procedure.

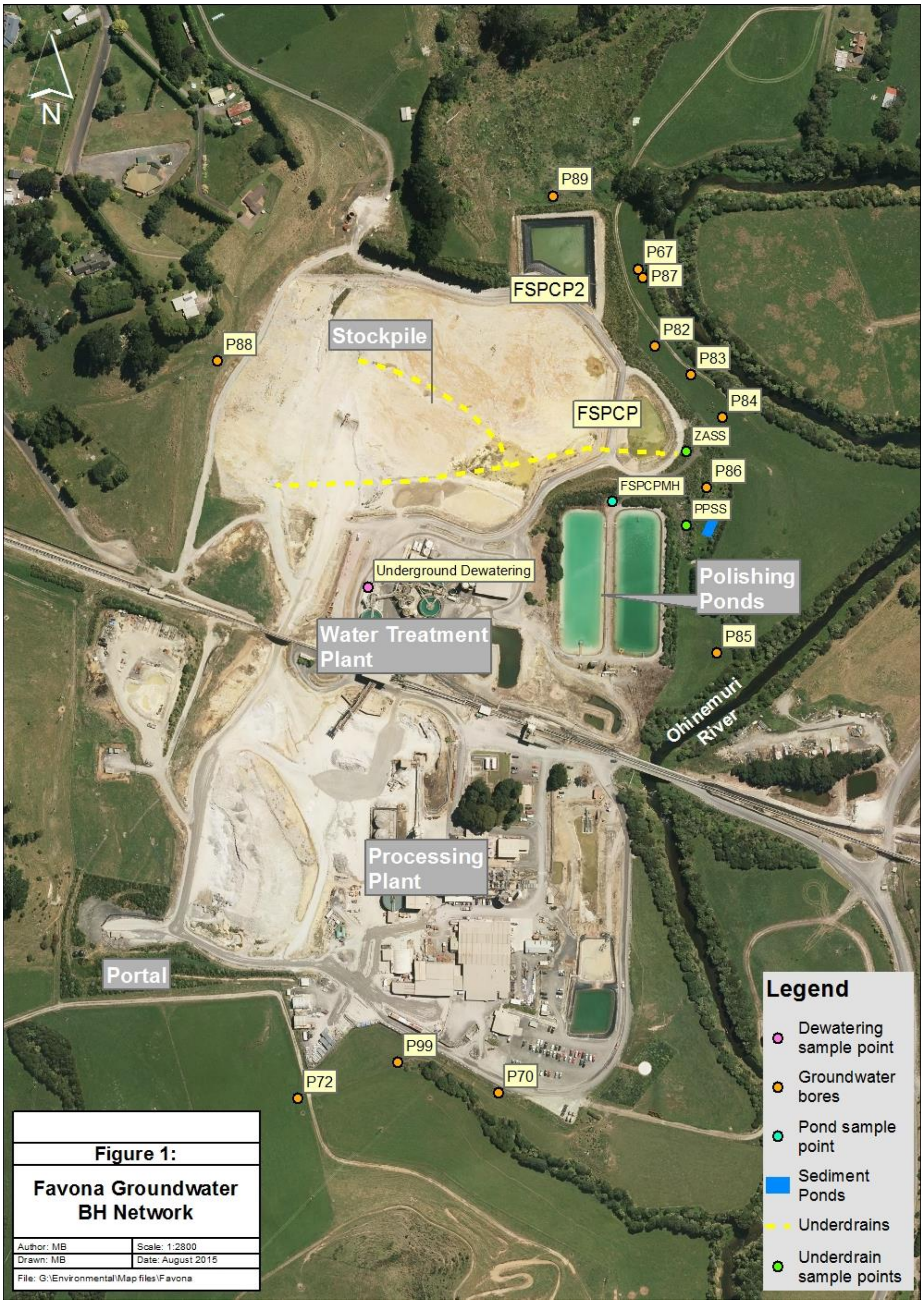


Figure 1: Favona Groundwater Monitoring Network

Table 1: Favona dewatering and stockpile seepage water quality parameters

Underground Dewatering		FSPCP/FSPCPMH, PPSS and ZASS	Groundwater bores
Monthly Code 3	**Quarterly Code 27**	**6 Monthly Code 38**	**6 Monthly Code 40**
Temp - Field*	Temp - Field	Temp - Field	Temp - Field
pH - Lab	pH - Field	pH – Field	Water Level
EC - Lab	EC - Field	EC – Field	pH - Lab
Alk	Alk	pH	pH - Field
Acidity	Acidity	Acidity	EC - Lab
Hard	Hard	Total Alk	EC - Field
SO_4	HCO_3	HCO_3	Hard
Ca	Ammonia	Hard	HCO_3
Cl	Ammonium - N	EC	Total Alk
Fe	NO_2	TSS	NO_2
K	NO_3	NTU	NO_3
Mg	$(NO_3 + NO_2)$	Al	$(NO_3 + NO_2)$
Mn	SO_4	Sb	Total Ammoniacal
Na	Al	As	SO_4
Se	Ag	Cd	Al
TRSe	Au	Ca	Ag
TSS	As	Cr (vi)	As
	Ca	Cr	Ca
	Cd	Co	Cd
	Cu	Cu	Cu
	Cl	Fe	Cl
	CN Total	Pb	CN WAD
	CN Wad	Mg	Co
	Co	Mn	Cr
	Cr	Hg	F
	Cr (VI)	Ni	Fe
	Fe	P	K
	Hg	Se	Mg
	K	Na	Mn
	Mg	SO_4	Pb
	Mn	Ti	Hg
	TKN	U	Na
	Na	Zn	Ni
	Ni	CN WAD	Sb
	P	CN TOT	Se
	Pb	Cl	SO_4
	Sb	F	Si
	Se	NO_2	Ti
	Si	NO_3	U
	Zn	$(NO_3 + NO_2)$	Zn
	COD	Total Ammoniacal	Sum anions
	TSS	TKN	Sum cations
	DRP	Si	TSS
		Sum anions	
		Sum cations	

**Field readings are denoted 'FLS' in charts and appendices*

The groundwater bores are monitored 6 monthly for field data (pH, EC, temperature, water level) and water quality. Should there be a significant change in the parameters of the well, it will be rechecked and if the result confirmed, increased monitoring frequency of the bore(s) will occur.

A new sampling regime for groundwater sampling is proposed for the current reporting period. If approved, wells will be field sampled 6-monthly and trigger limits on EC and pH will be applied. Table 2 sets out the proposed monitoring regime.

Table 2: Groundwater bore monitoring

Frequency	6 monthly
Triggers	pH <4.5, EC >100 mS/m (lab analysis)
If triggered	Reanalyse
If triggered	Full sample suite (Code 40)
Elevated chemistry	Technical advice / review

A sampling programme to characterise underground waste rock has been implemented following approval by Waikato Regional Council. Waste rock used for backfill underground is sampled monthly. This is material that has been removed from the underground and stockpiled near the portal. The waste rock is analysed for sulphur percentage and acid neutralising capacity. Based on results, Net Acid Production Potential (NAPP) in kg H_2SO_4/tonne is calculated. A trigger limit of 103kg H_2SO_4/tonne is applied to NAPP results. Should a monthly result be over the trigger limit, i.e. a NAPP result greater than 103kg H_2SO_4/tonne, an additional five samples over a 48-hour period are collected. If the mean NAPP value of the additional samples exceeds the trigger limit, limestone application at calculated rates is undertaken. The monitoring programme and contingency measures are summarised in Figure 2**.**

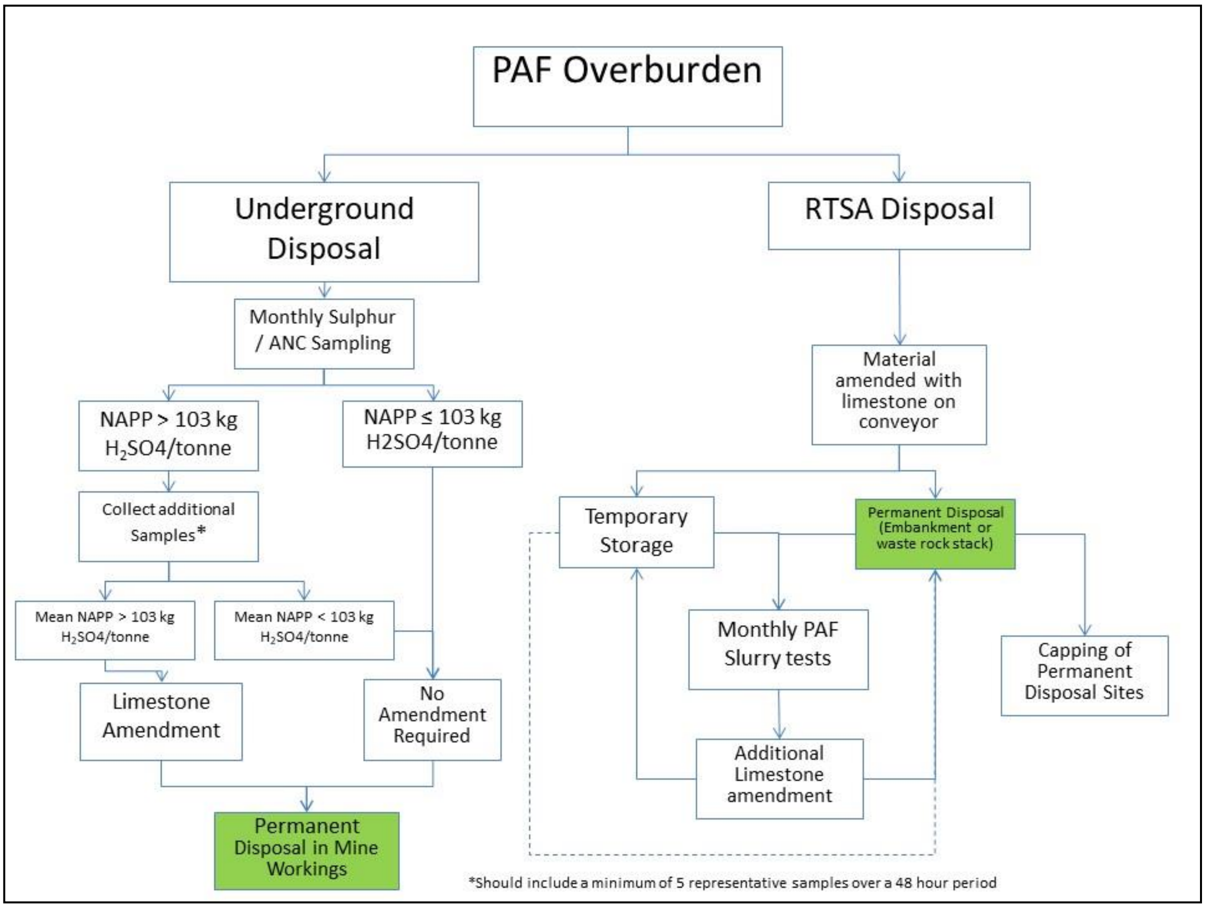


Figure 2: Waste Rock Monitoring Programme

4. MONITORING RESULTS

4.1. Stockpile subsoil underdrainage

Two locations are sampled to characterise the seepage in the Favona stockpile area: The Zone-A subsoil (ZASS) and the Polishing Pond Subsoil (PPSS).

ZASS water is sampled from a manhole sump (Figure 1). The mean pH was 4.7 units for the reporting period with a slight rising trend indicated. Historical values consistently range between 4.1 to 5 units, except for a singular measure of 6.5 units reported in 2016. Electrical conductivity is strongly correlated with SO_4 concentrations. Peak concentrations occurred in October 2010 and fluctuated for a period before decreasing in recent years, possibly due to the addition of limestone to the stockpile materials (Figure 3). Iron and manganese have typically, remained low, with a single slightly elevated iron result during the reporting period. Iron averaged 0.27g/m^3 and manganese 3.73 g/m^3 (Figure 4).

Concentrations of Ag, As, Cr, VI and Sb are all below the level of detection. Cations (K, Na, Ca and anions (Cl, HCO_3) have low concentrations and are stable (Appendix 8.1 Underdrainage Data). The ZASS water is pumped from the manhole to FSPCP (Figure 1).

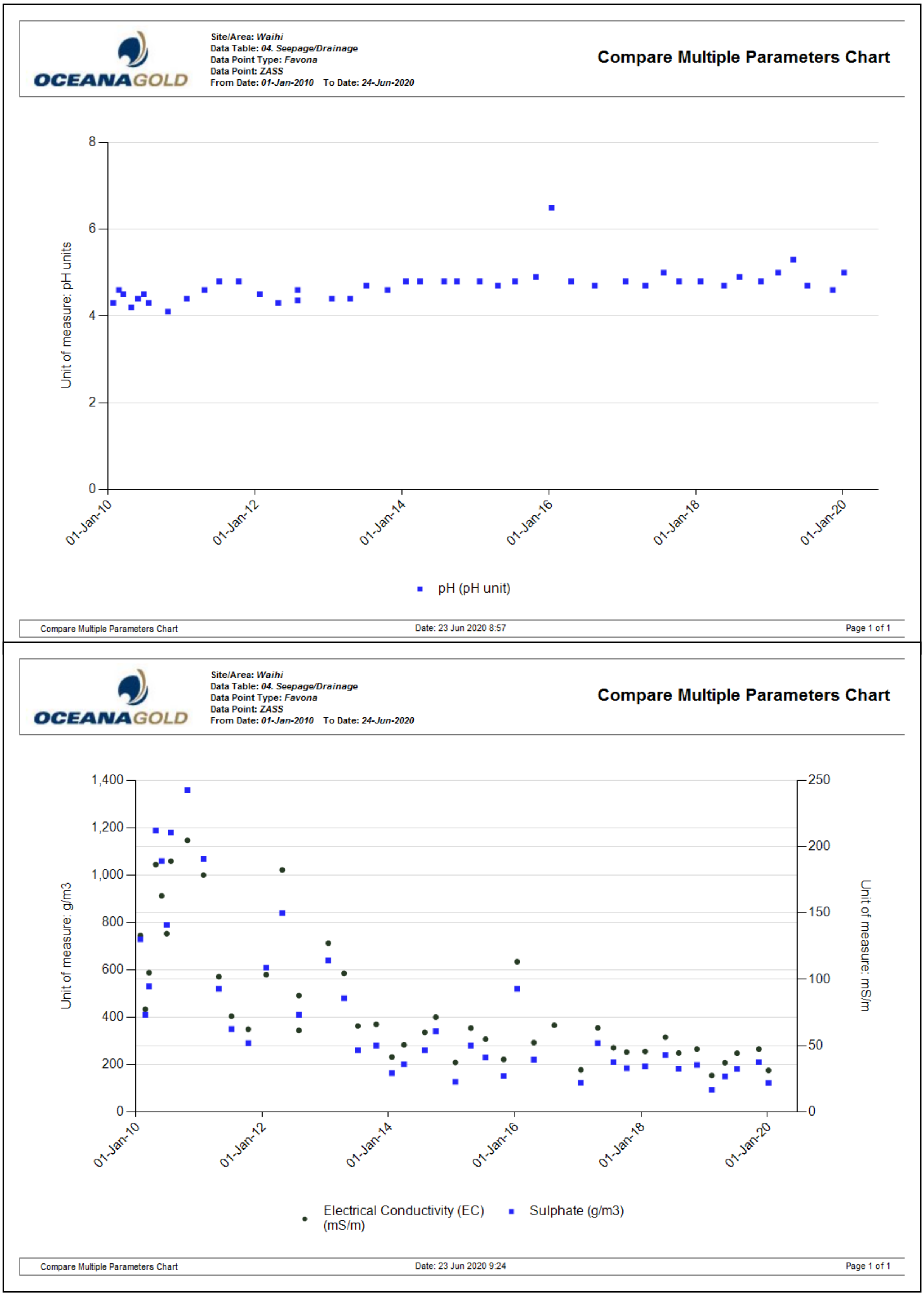
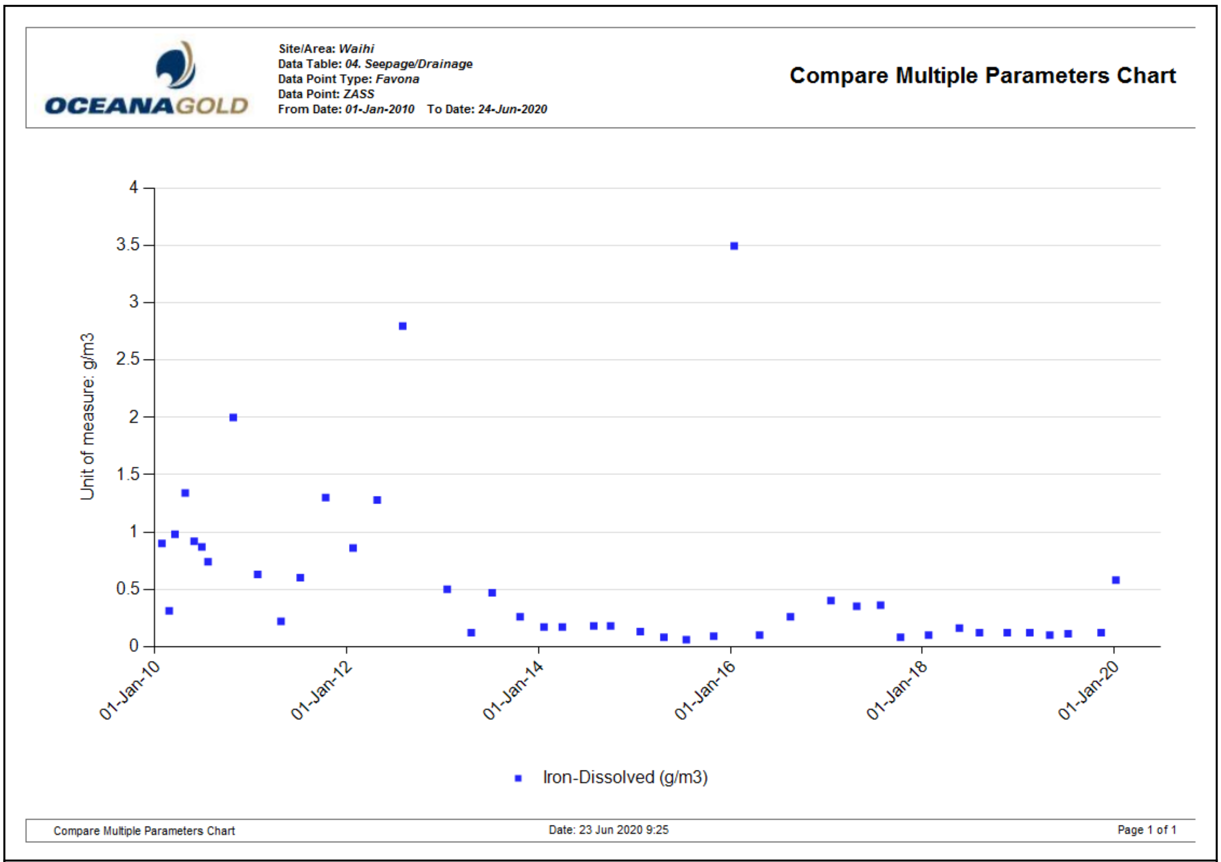


Figure 3: ZASS - pH, EC and SO_4



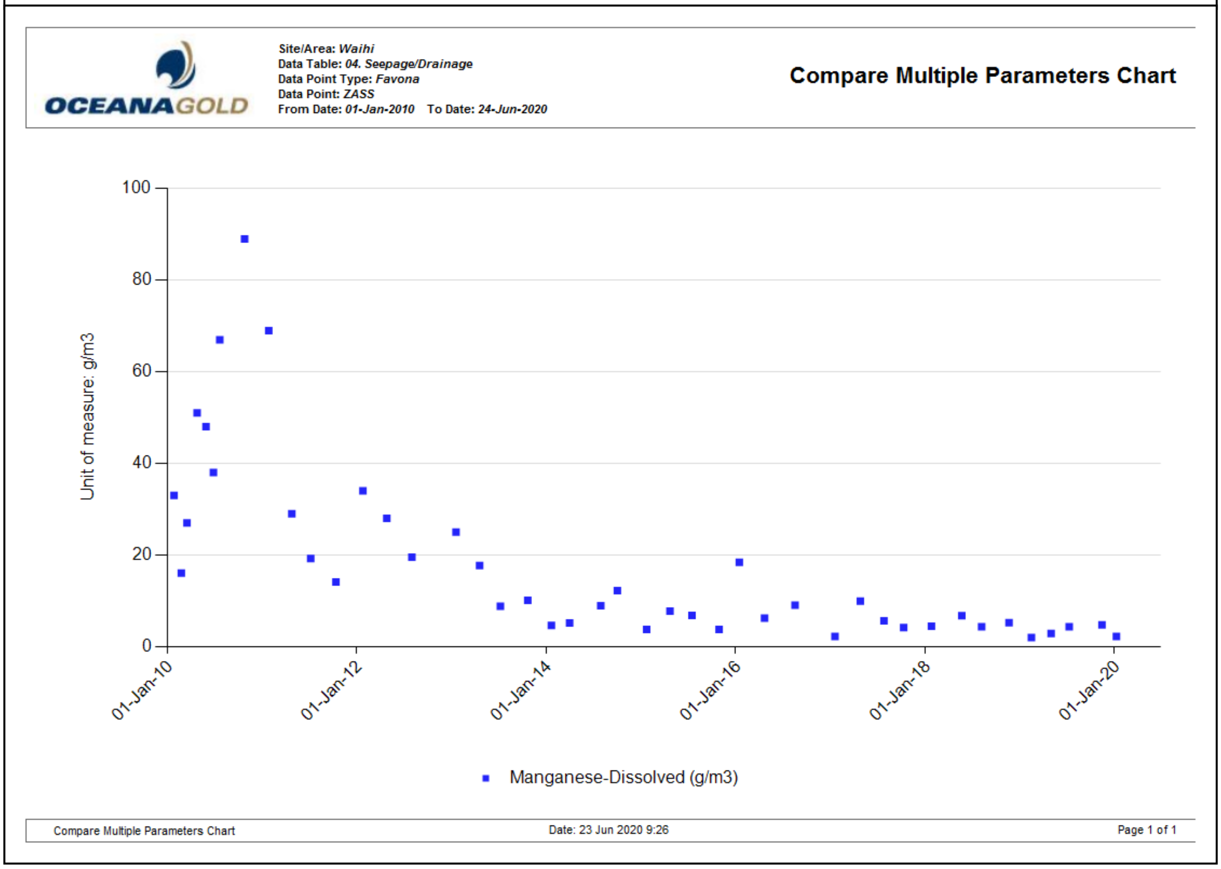
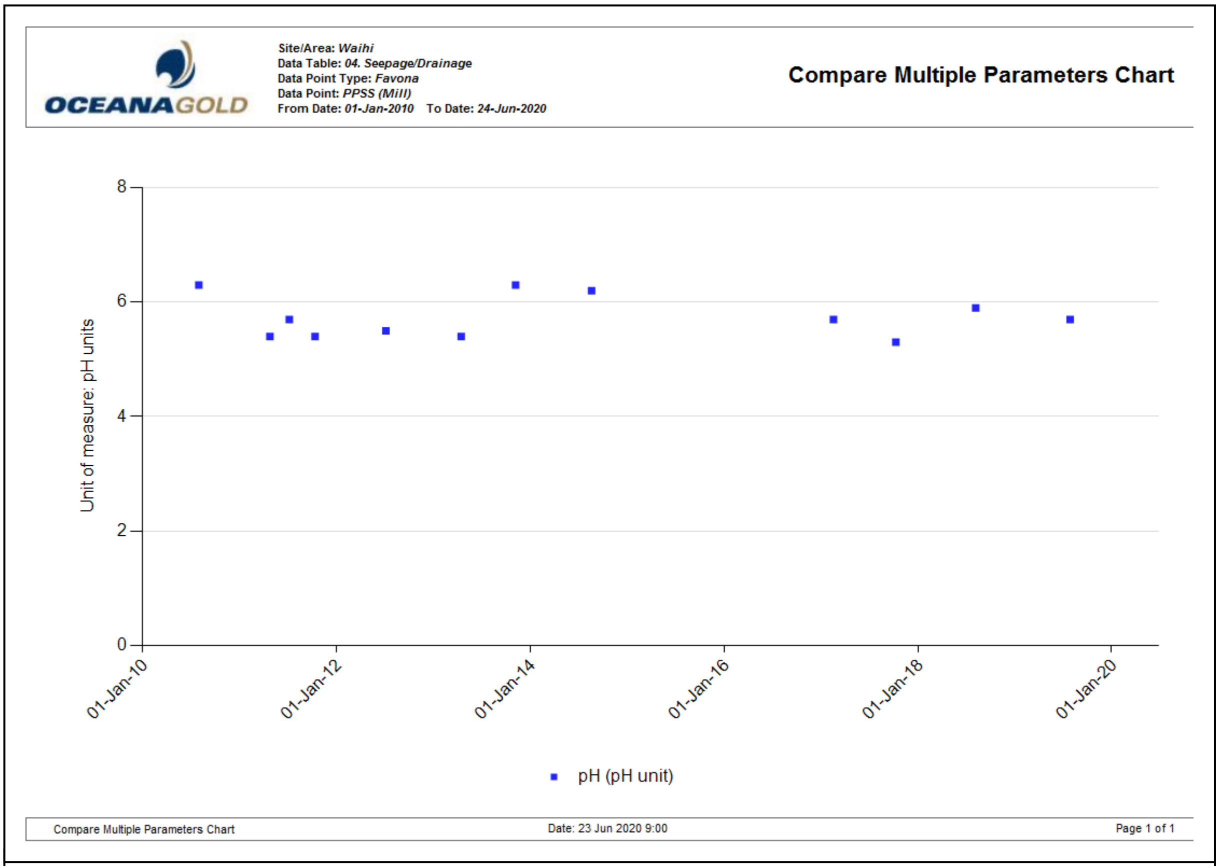


Figure 4: ZASS - Fe and Mn

4.2. Polishing Pond subsoil (PPSS)

The PPSS subsoil drain does not continually flow which prevents regular sampling, however sporadic sampling has been possible since 2017. One sample was possible during the reporting period in July of 2019. The pH of the sample was at similar levels to recent samples, at 5.7 units. Conductivity and sulphate are at levels comparable to previous samples (102 mS/m and 500 g/m^3 respectively) (Figure 5). Manganese and anions have, typically, remained low (Appendix 8.1). Resultant figures may not provide a true representation due to the low volume of water available to sample.



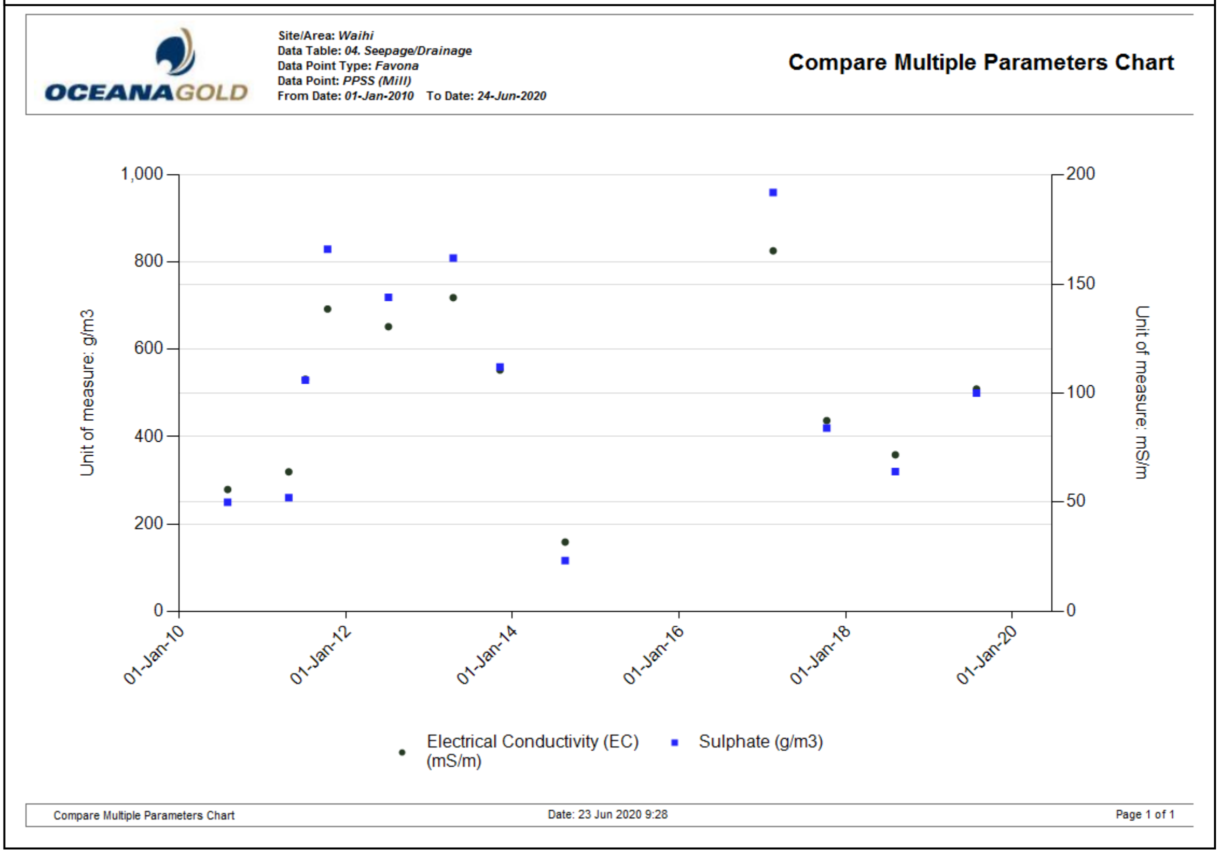
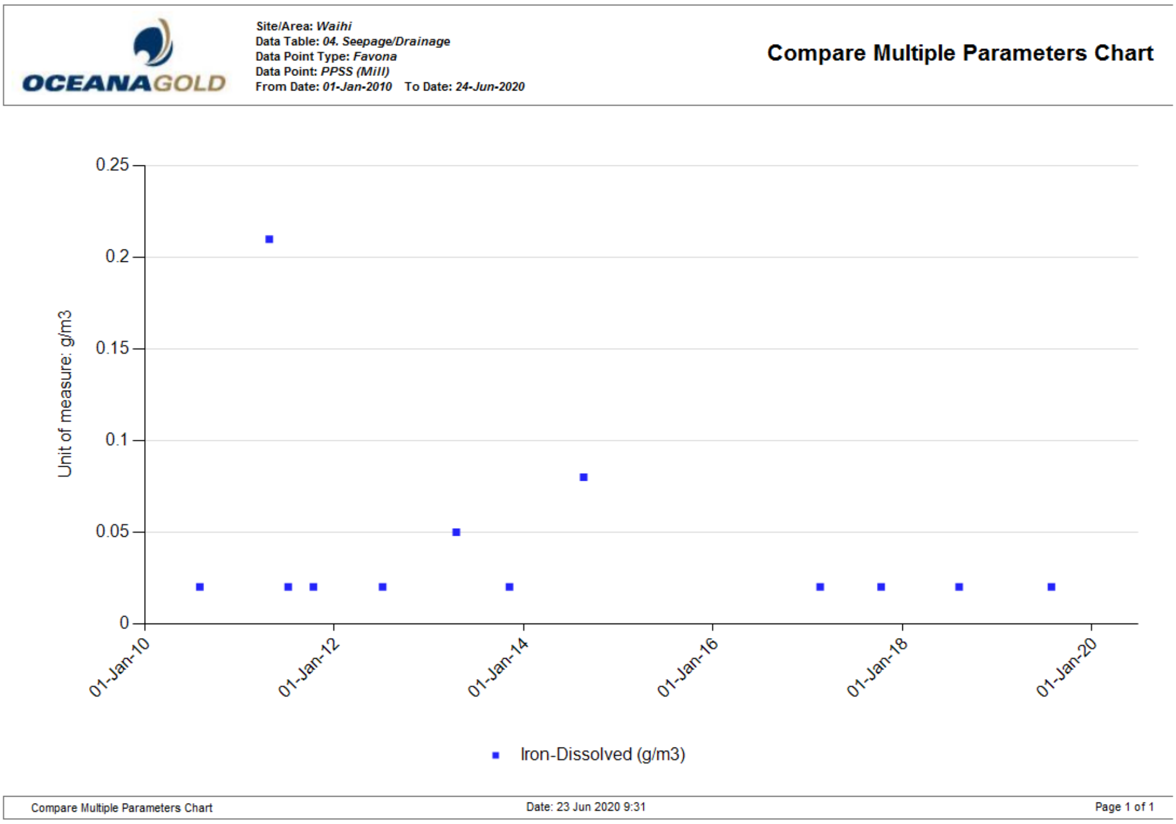


Figure 5: PPSS – pH, EC and SO_4



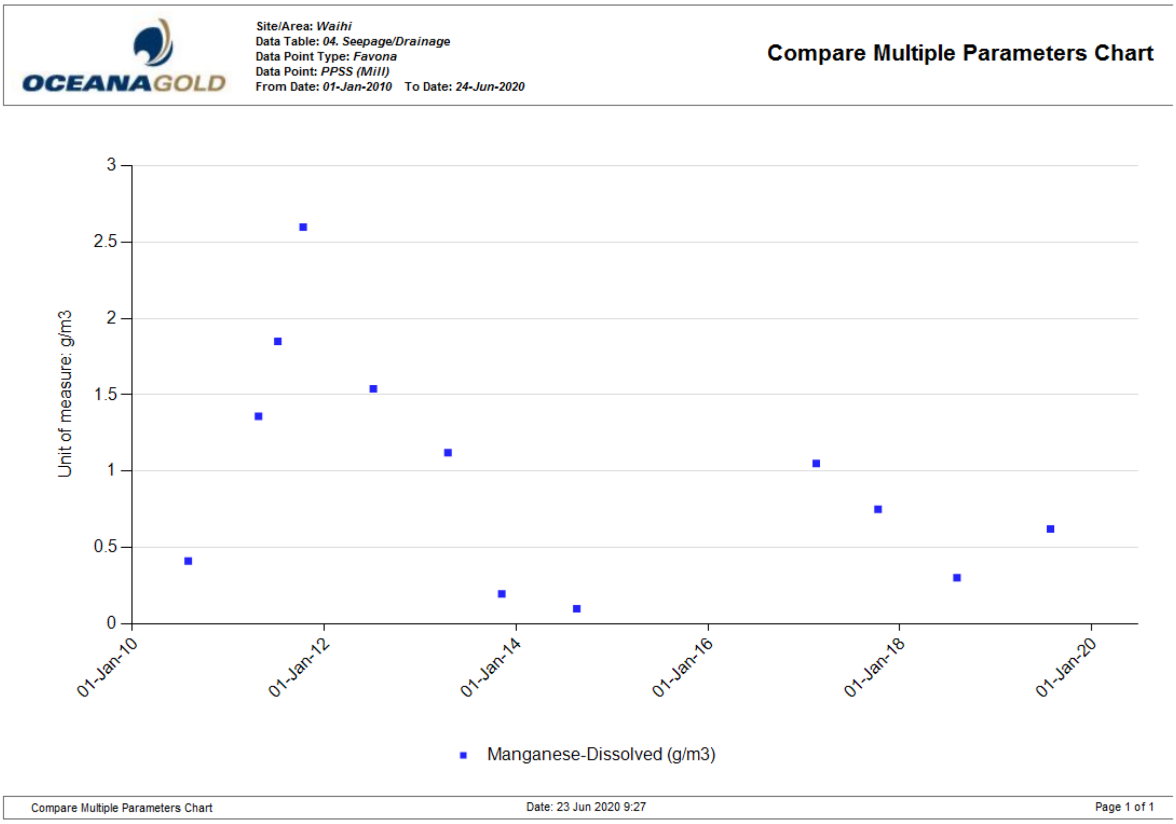


Figure 6: PPSS Fe and Mn

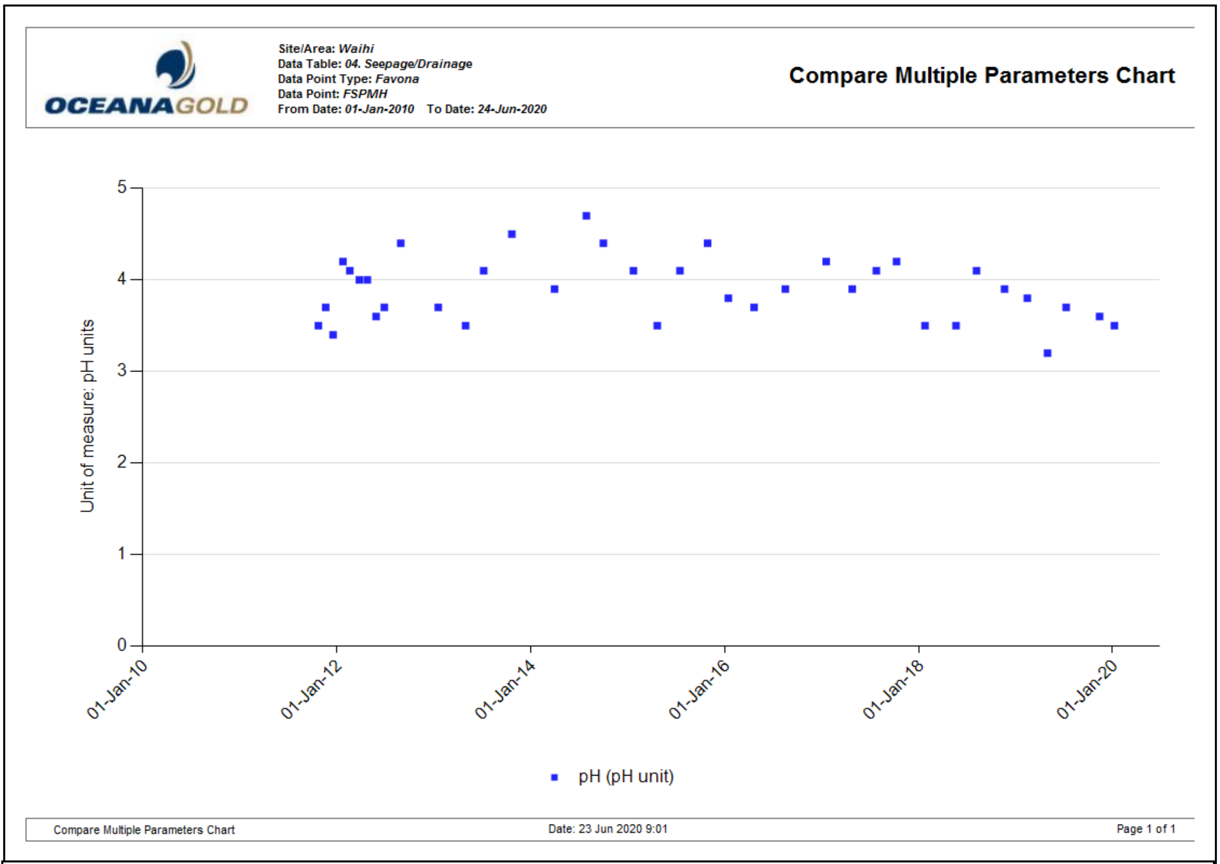
4.3. Collection Pond Water

FSPCP water is a combination of leachate and surface runoff from the stockpile, and ZASS underdrainage pumped from the manhole (Figure 1). The combined water is plumbed via drains to the FSPMH. FSPCP water is sampled at the FSPMH as the FSPCP pond is difficult to access when at low levels.

pH levels have varied between 3.5 to 3.7 units during the reporting period, with a mean of 3.6 units. Some metal/metalloid concentrations are elevated with Cu, Fe, Mn, Hg and Zn outside of receiving water criteria. Co and F are also elevated (hardness-based assessment where relevant) (Appendix 8.2). Pond sulphate and pH results provide a good indication of the overall water quality of the FSPCP. Sulphate concentrations in FSPMH have been variable but have decreased since early sampling rounds. Levels have increased over the reporting period, possibly due to the low rainfall experienced over summer, with a mean concentration of 717 g/m^3 for the reporting period (Figure 7).

Iron has generally decreased since 2010 (due to the application of limestone), with average concentrations of 1.84 g/m^3 for the reporting period. Manganese values have decreased, averaging 6.13 g/m^3 (Figure 8).

FSPCP 2 (Figure 1) is an overflow from FSPCP. It is HDPE lined and not part of a sampling schedule.



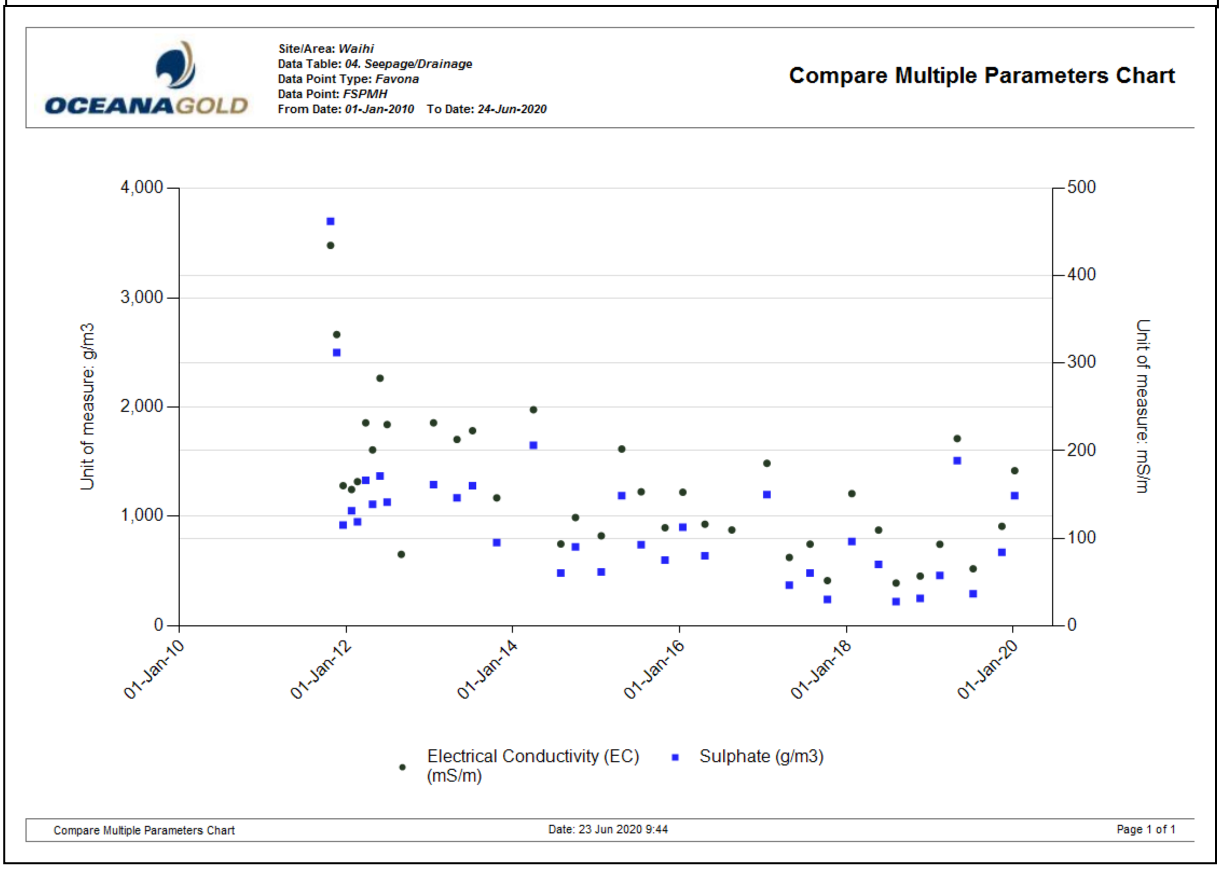


Figure 7: FSPMH - pH, EC and SO_4

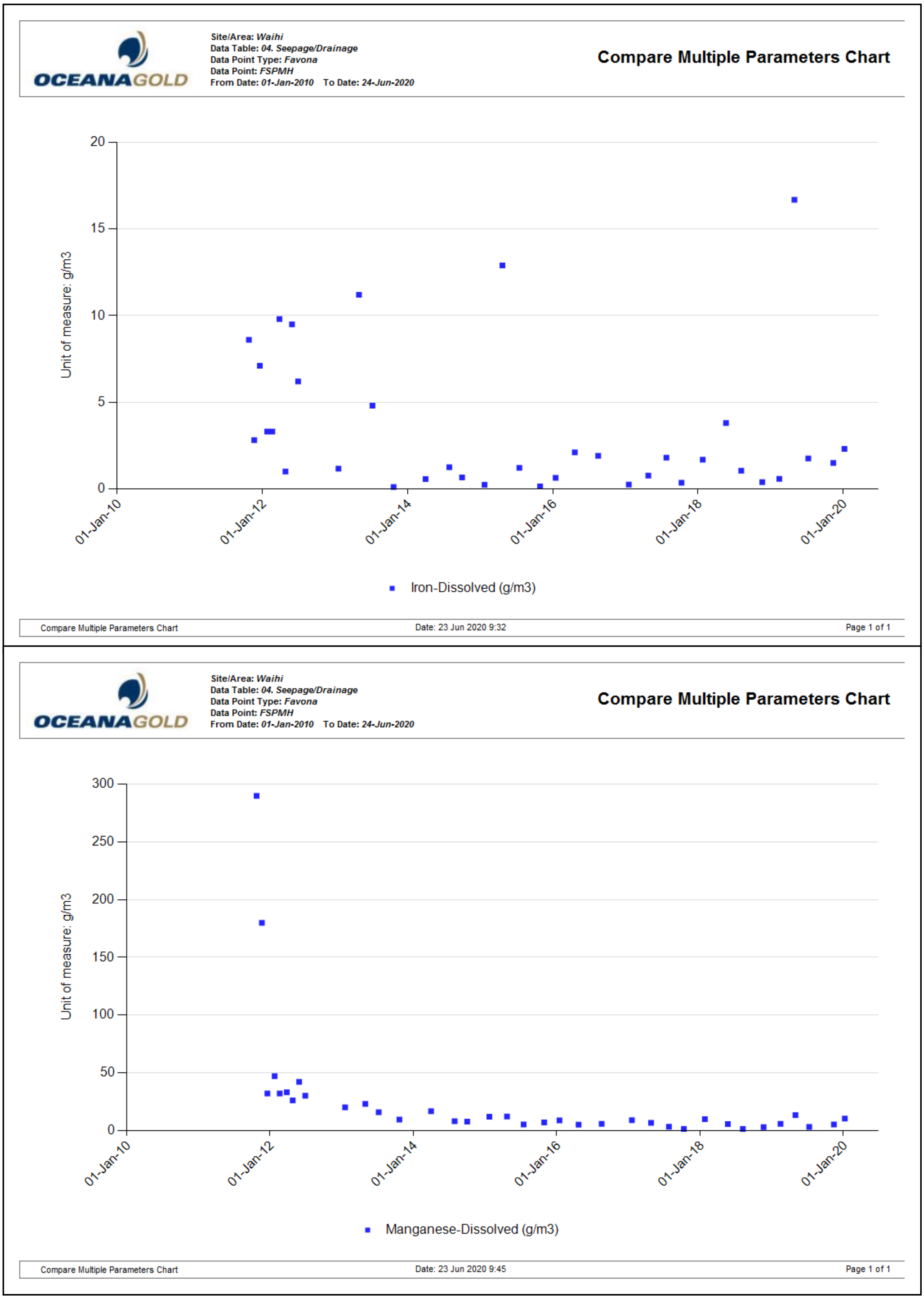


Figure 8: FSPMH - Fe and Mn

4.4. Shallow groundwater

A number of bores monitor the shallow groundwater at various depths and in various lithologies around the stockpile areas (Figure 1, Table 2). However, many of the wells are frequently dry or do not have enough water to sample. During the most recent sampling round in January 2020, following a period of low rainfall, all wells were either dry or had insufficient volume to obtain a sample. However, samples were possible from most wells in the winter of 2019 using a peristaltic pump.

To the south of the Underground portal and associated stockpile are three piezometers - P70, P72 and P99 (P71 was damaged due to expansion of the Favona Workshop laydown yard) and was replaced by P99 in late 2011). These piezometers were designed to intercept groundwater moving through the more permeable ash which overlies the less permeable weathered rock.

East of the FSPCP are piezometers P82 to P84 and P86.

North are two piezometers, P87 and P89, established in 2009 to monitor potential seepage from FSPCP2. Near P87 are two older piezometers P67S and P67D (being 5m and 14m deep respectively) which have been included in the monitoring network. To the west and up-gradient of the stockpile is P88 which is used to monitor background groundwater.

Table 2: Depth, lithology and water represented in the screened zone of the well

Well number	Depth (m)	Lithology in screen zone	Comments
P67S	5.0	clay over dacite*	One sample during reporting period
P67D	14.0	clay over dacite*	One sample during reporting period
P70	1.6	clayey silt over dacite	Dry
P72	1.9	clayey silt over dacite	Dry
P82	6.2	clay over dacite	One sample during reporting period
P83	6.4	clay over dacite	One sample during reporting period
P84	5.9	clay over dacite	One sample during reporting period
P85	3.9	clay over dacite*	One sample during reporting period
P86	4.8	clay over dacite*	One sample during reporting period
P87	6.3	clay over dacite	One sample during reporting period
P88	43.5	altered and silicified andesite	One sample during reporting period
P89	7.5	silty clay over dacite	One sample during reporting period
P99	2.9	clayey silt over dacite	Dry

* assumed (no drill log)

P85 is located south of the Favona bores and east of the polishing ponds. It was constructed to monitor any polishing pond seepage rather than stockpile seepage. The bore is shallow, often dry and contains sediment.

Wells P70, P72 and P99 have been dry for some time and no water quality information is available for these piezometers (which are less than 3 m deep). This indicates that no seepage from the portal stockpile area has been detected through the shallow pathways intercepted by these bores.

Well P88 has been operational since August 2009. The well is 43.5m deep. At 4.1m depth the lithology changes from shallow cover ash layers into andesite. As all other bores are shown to be within dacite, this indicates a geological contact is located somewhere beneath the stockpile area. During drilling the hole was dry to 7.3m depth.

It should be noted in the following charts 'FLS' denotes field readings.

P88 water levels are now greater than 20 m below ground surface which places the groundwater in the intermediate to deep water category. The well has frequently been dry since 2018. A single comprehensive sample was possible during the reporting period. Figure 9 shows pH to range from 4.4 to 6.1 units over the historical record, with a result of 5.8 during the reporting period. P88 is considered a control site up gradient of the stockpile so water chemistry would not be expected to be influenced by mining operations. The andesite rock around the bore may reflect some natural mineralisation. Over the sampling period the conductivity trend has reduced to low values, as have sulphate concentrations (Figure 9). This behaviour is most likely due to cement curing in the relatively new bore hole and changed redox conditions as a result of the well opening the water to the atmosphere. The current lower concentrations are likely to reflect the background groundwater quality at depth.

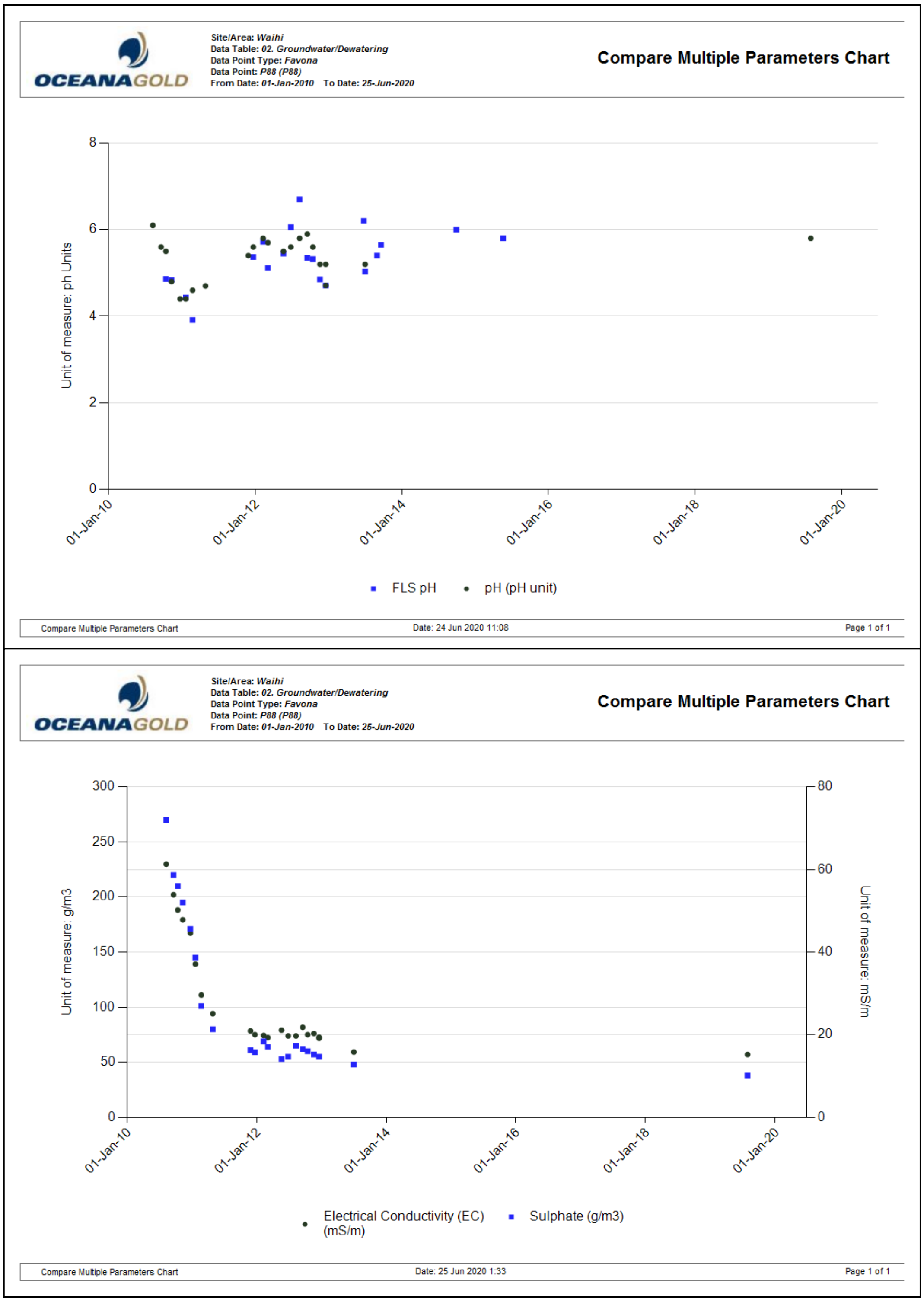


Figure 9: P88 pH, EC and SO_4

Well P89 is located on the northern side of FSPCP2. Water levels range between 2.3 m and 6.8 m from the surface. Water levels have averaged 4.0 m over the historical reporting period, while showing seasonal fluctuations. Only one sample was possible during the reporting period. Figure 10 shows a pH of 6.7 units was recorded during the period, akin to previous years. Conductivity was low at 33 mS/m and sulphate has been steadily reducing, with levels consistently below 50 g/m^3 since early 2015.

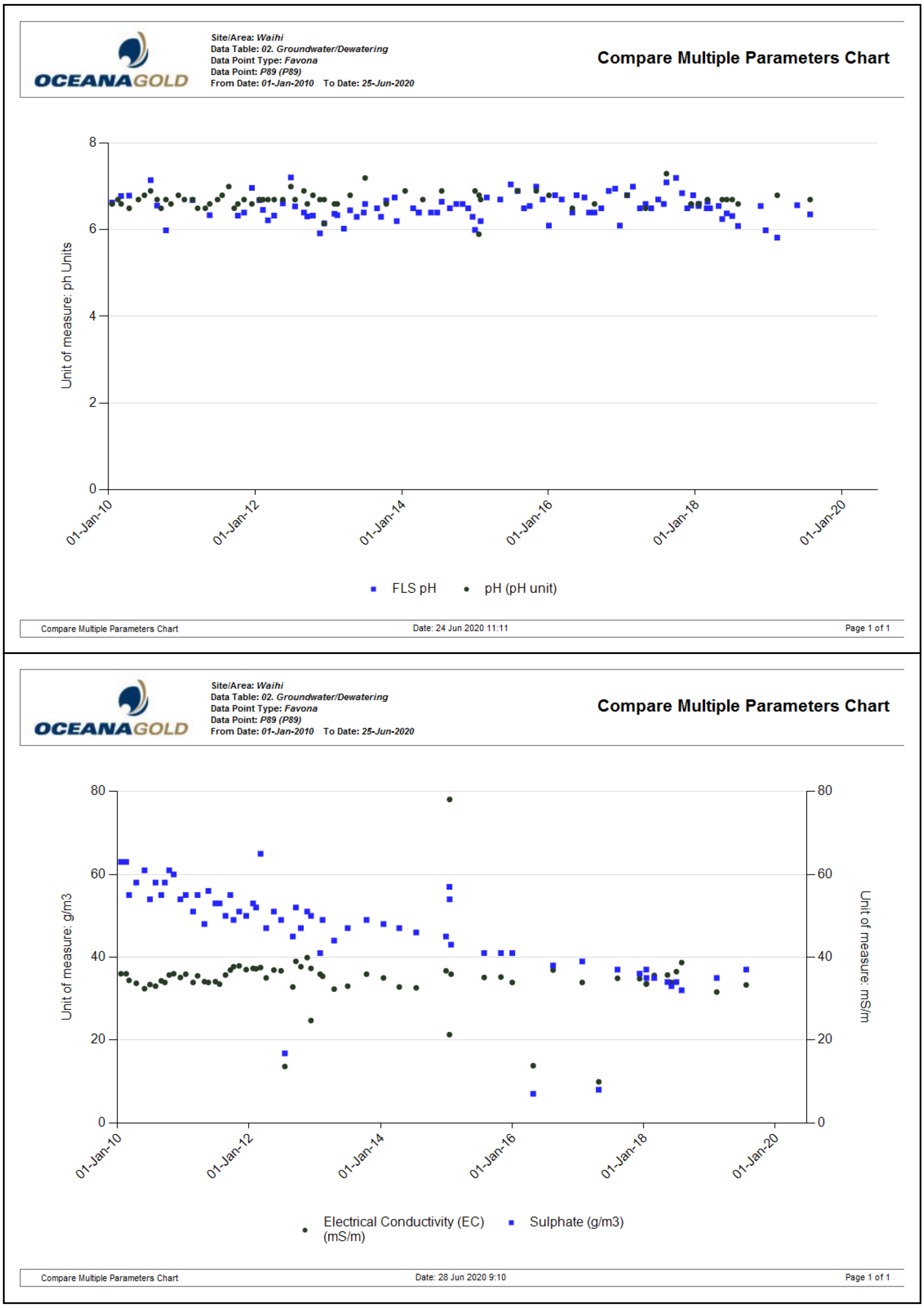


Figure 10: P89 pH, EC and SO_4

The nearest wells to P89 are P67S, P67D and P87 which are eastward and closer to the Ohinemuri River. Well P67S monitoring was reinitiated in March 2010; only water levels have been recorded as there is insufficient depth to obtain a sample for water quality assessment. Well P67D data exists from 2001 with water levels ranging between 3 m to 7 m depth. Only one sample was able to be obtained during the reporting period. The pH was close to neutral at6.8 units. Conductivity remained at low levels, at 17 mS/m and the sulphate concentration was 8 g/m^3 (Figure 11). These are considered to be close to background values.

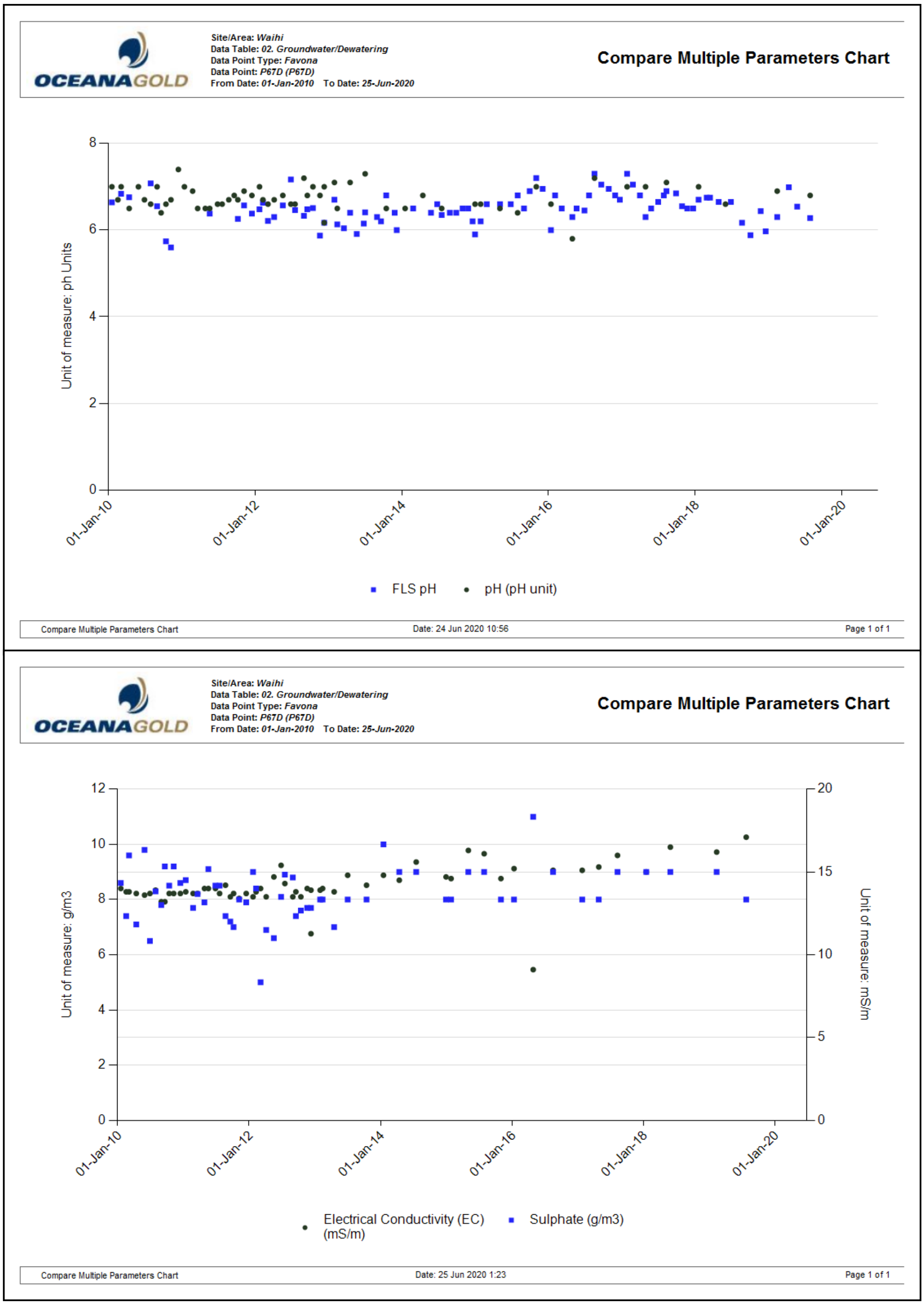


Figure 11: P67D pH, EC and SO_4

Well P87 was established in 2009. Ground elevation of the well collar is higher than at Well P89. The depth of Well P87 is 6.3m and ends in dacite (quartz andesite). The water level in Well P87 behaved similarly to that in Well P89. Elevated suspended solids concentrations have been noted in this well during sampling. Groundwater pH for the reporting period is 6.2. Conductivity and sulphate are very low, at 11 mS/m and 12 g/m^3 respectively (Figure 12). These are close to background levels.

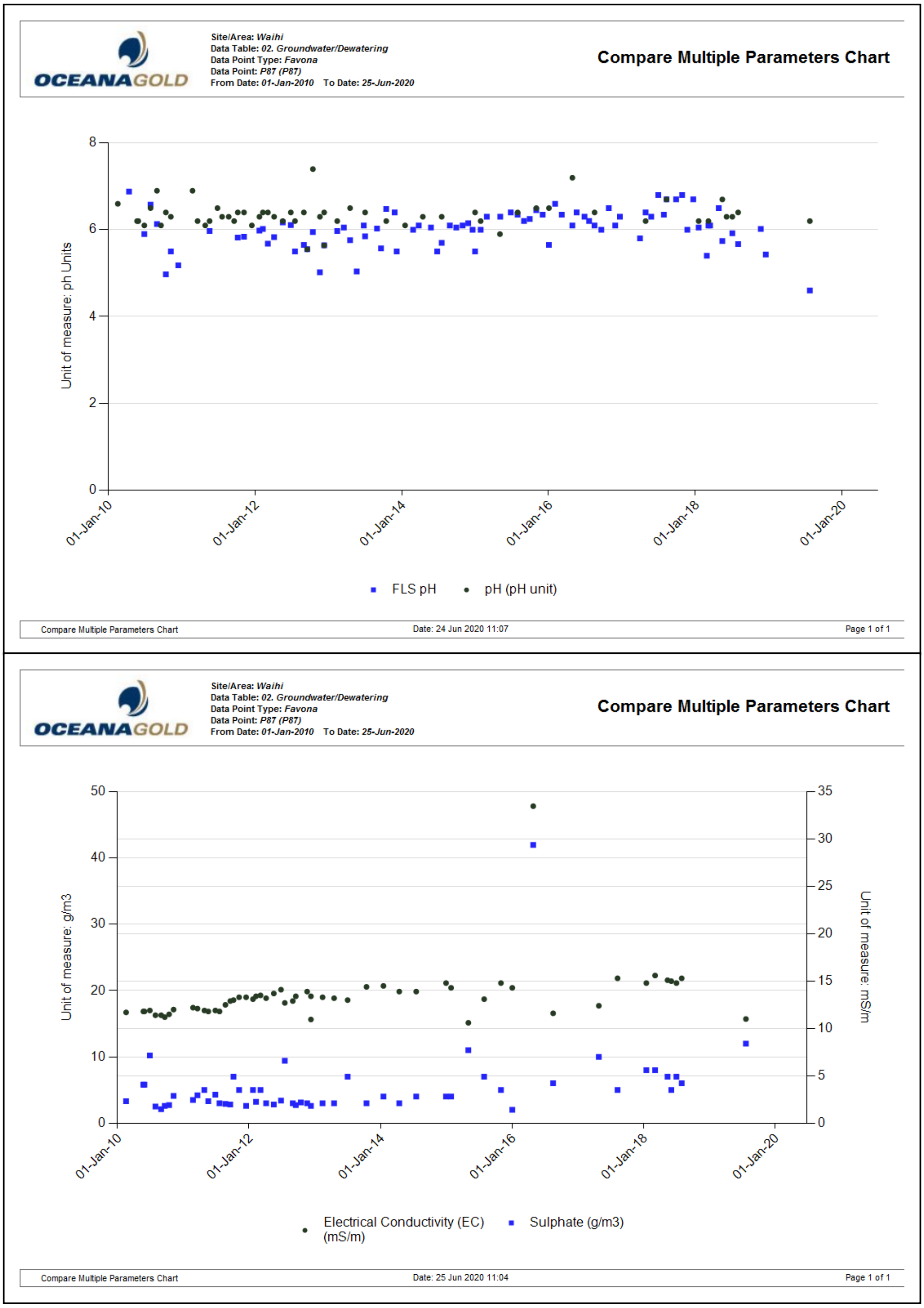


Figure 12: P87 pH, EC and SO_4

The P82 piezometer was operational in February 2007 and is south of P87. Water levels show seasonal fluctuations typical of shallow groundwater with no long-term trends evident. One sample was possible during the reporting period. The historical average pH is 5.9 units, and conductivity has typically been low with an average over the sampled period of 10.9 mS/m. Sulphate concentrations too are low, with a mean of 10 g/m^3 (Figure 13).

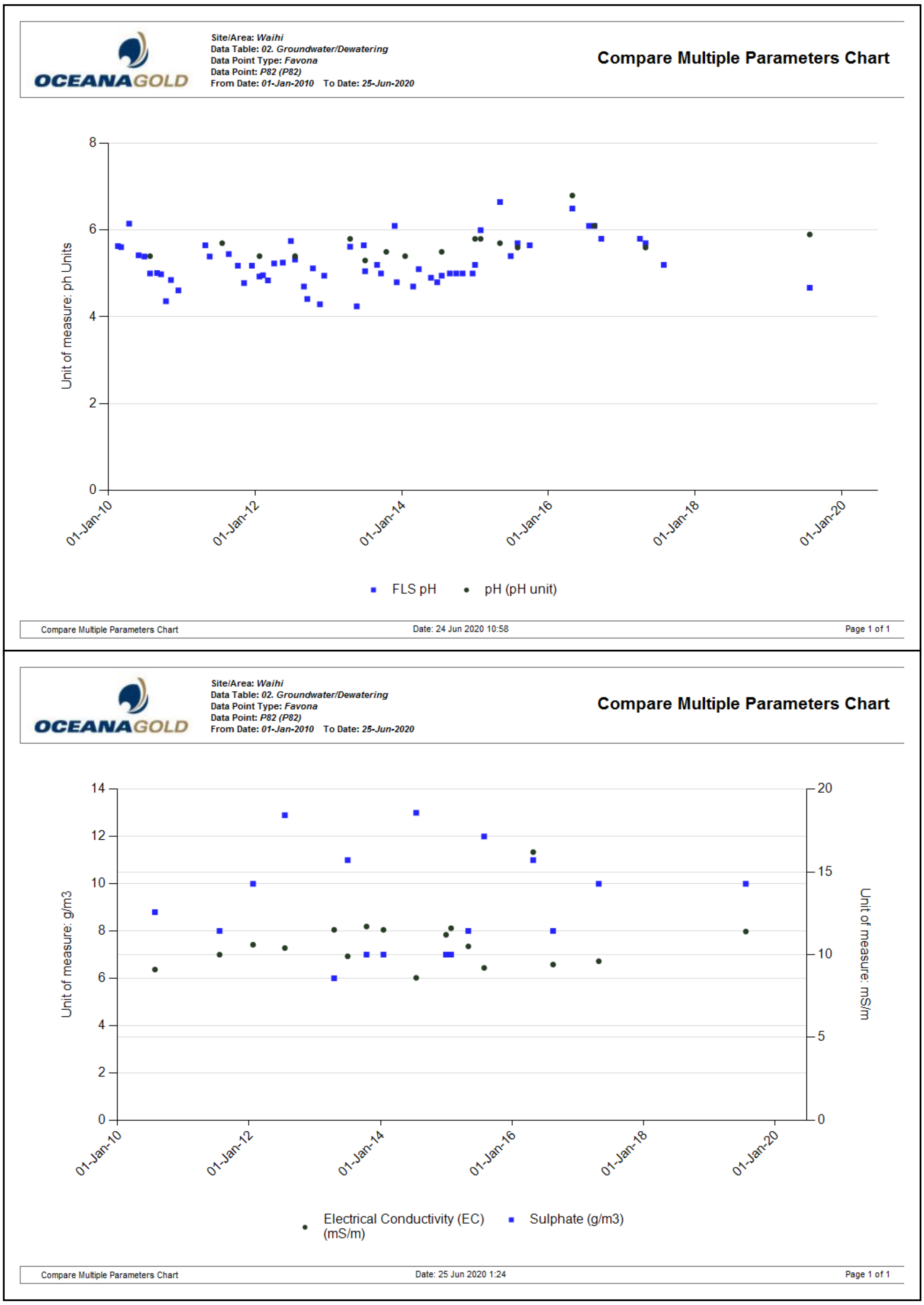


Figure 13: P82 pH, EC and SO_4

Well P83 is further south of well P82 and lies northeast of FSPCP. P83 has the deepest rock contact and may relate to the rock surface between P84 and P82. As this is the lowest point, seepage may be concentrated in this area. Similar groundwater level fluctuations occur here to that in well P82, however it is often dry or contains insufficient depth of water to sample for full analysis. Sediment levels can be high which may influence analytical results. pH values have remained steady at around 5 units while EC and sulphate have been stabilising since 2012 (Figure 14). A single full sample was possible during the reporting period, the first since 2015. Results were similar to previous reporting periods. EC and sulphate were low at 21 mS/m and 78 g/m^3 respectively.

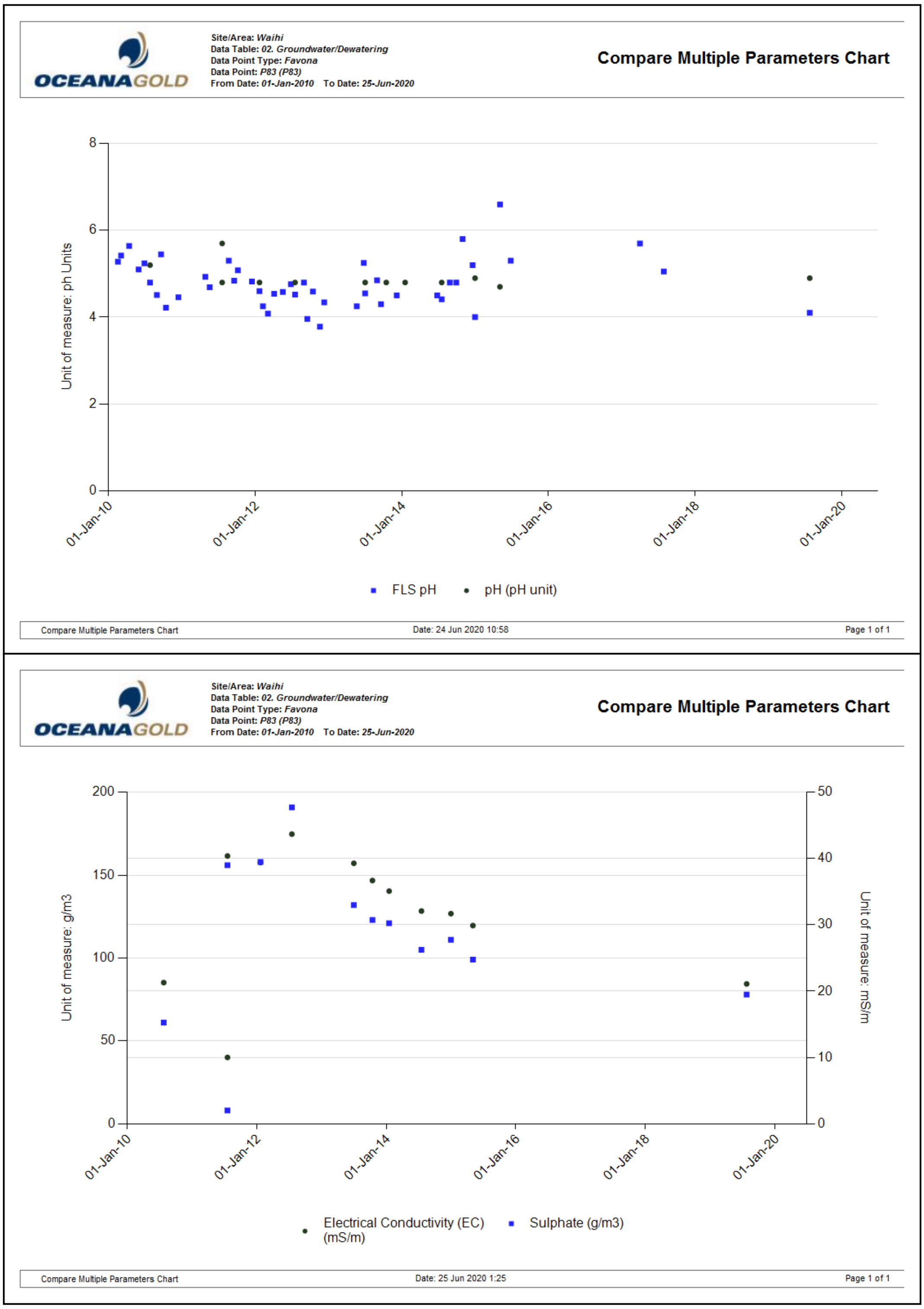


Figure 14: P88 pH, EC and SO_4

Well P86 was established prior to stockpile construction and is located south east of the FSPCP and is also in the proximity of the treated water polishing ponds. Groundwater levels appear to be much higher than in the other piezometers with winter water levels about 3 m below the ground surface, however in recent years the water level is still often too low to sample. EC and sulphate levels have been reducing since 2011. A single sample was possible during the reporting period which showed a pH of 5.0 units, conductivity of 24.4 mS/m and sulphate concentrations at 79 g/m^3 (Figure 15). The elevated field pH recorded at this site during the reporting period may be related to technician or instrument error.

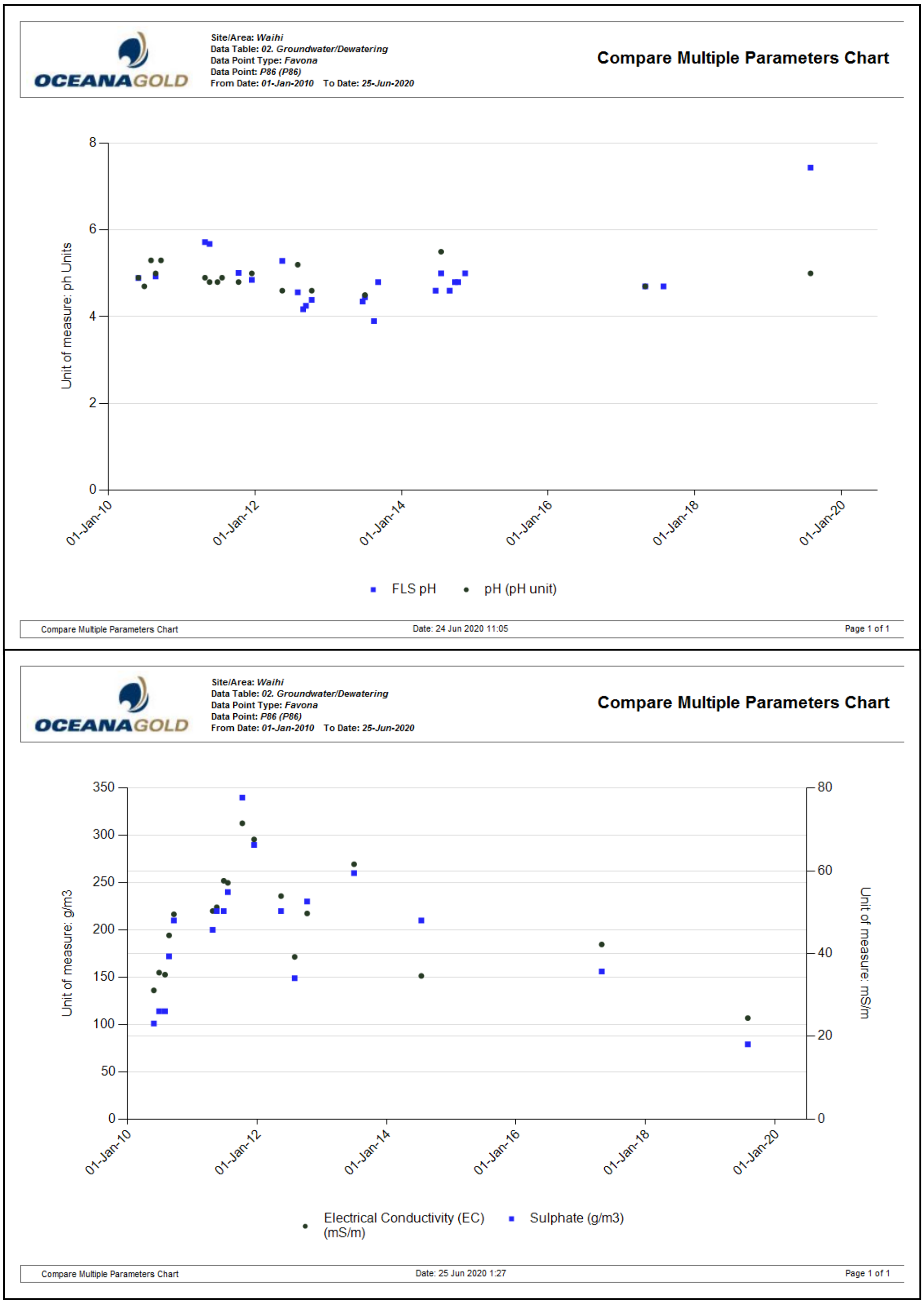


Figure 15: P86 pH, EC and SO_4

P85 is often dry or there is not enough water to sample for full analysis. This well is also high in sediment. A single sample collected during 2019 was the first since 2015. pH was 4.9, conductivity 39 mS/m; and sulphate 152 g/m^3, all at similar levels to previous reporting periods (Figure 16).

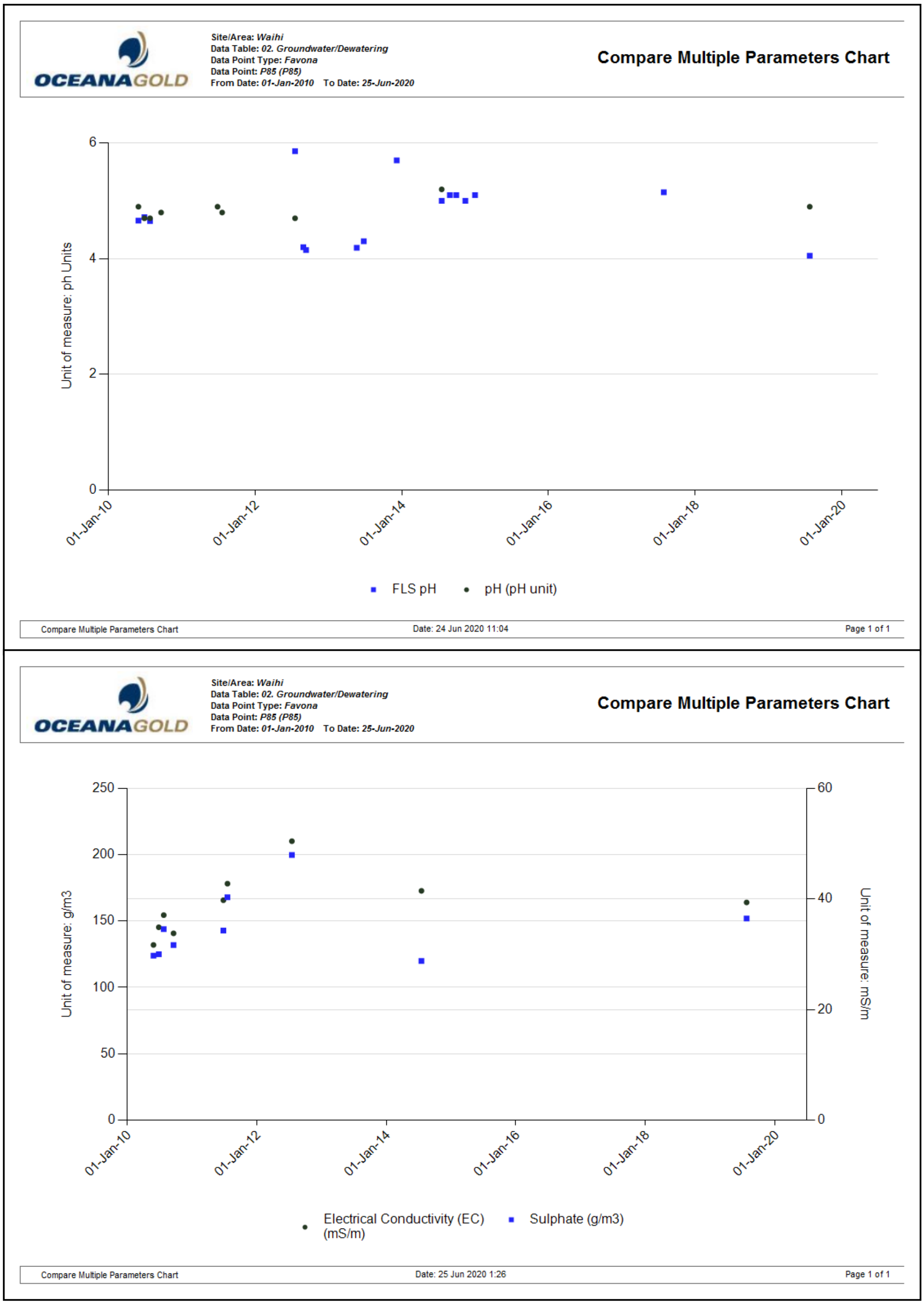


Figure 16: P85 pH, EC and SO_4

Well P84 is situated east and down gradient of the FSPCP spillway. Seasonal changes occur in the groundwater levels; however, this well is also often dry or does not have enough water to sample for full analysis. EC and sulphate have reduced over the well's history and now appear stable (Figure 17). A single sample taken during the reporting period was the first since 2015. pH was 4.9, EC was 19 mS/m and sulphate was 65 g/m³.

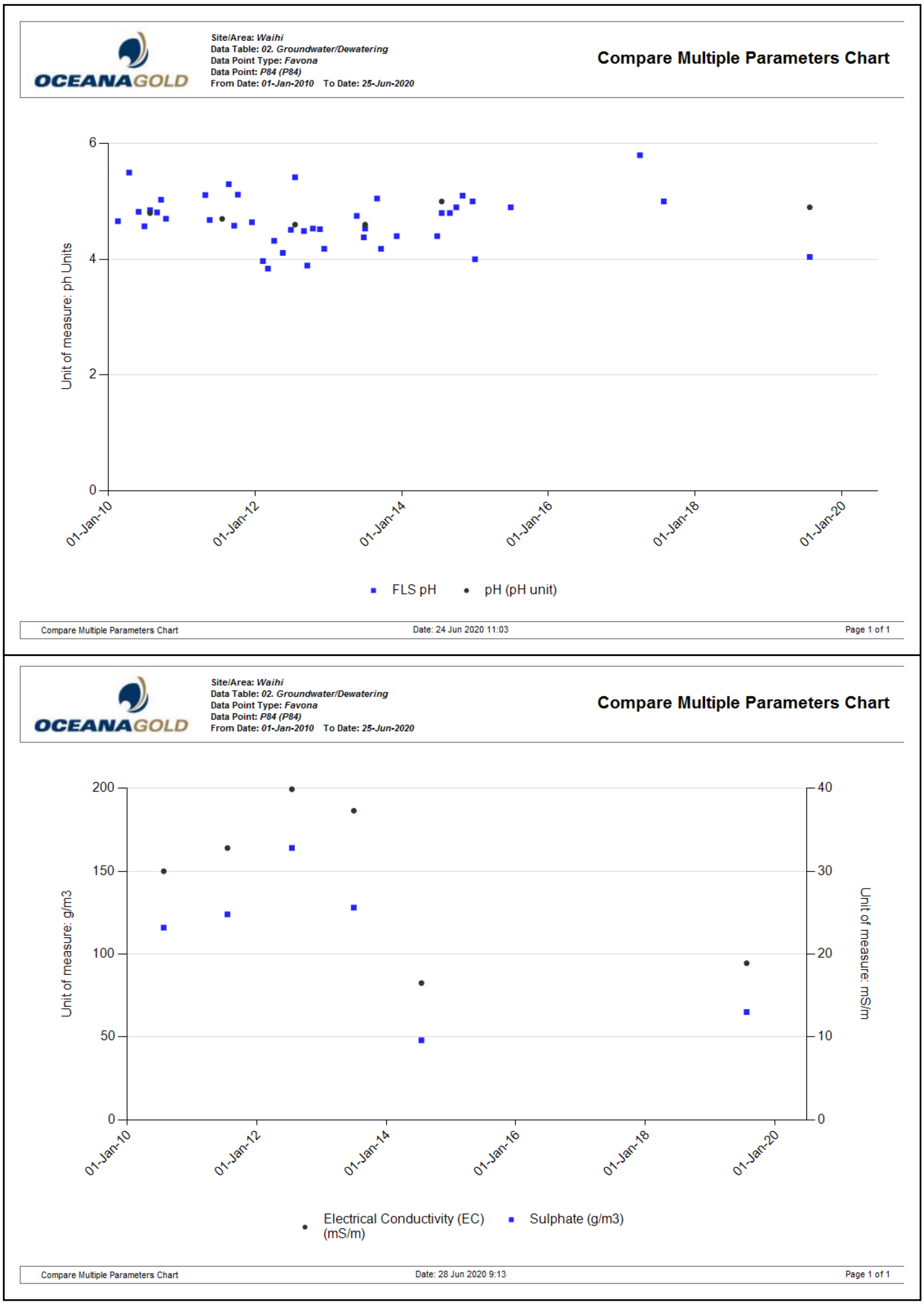


Figure 17: P84 pH, EC and SO_4

During the reporting period, none of the Favona groundwater wells have shown any significant changes in chemistry. Wells which have previously shown elevated EC and sulphate have generally stabilised. Most wells contain little volume of water. This indicates that mass discharge from site is minimal and there is little potential for off-site movement of seepage from the stockpile through the shallow groundwater system.

A new sampling regime has been proposed which will include pH and EC trigger limits to identify changes to well chemistry. The historical data collected from wells supports this change. If approved, these will be implemented in the next reporting period.

5. CHARACTERISATION OF UNDERGROUND MINING MATERIAL

The AECOM Project Martha Geochemical Assessment (Appendix 8.6) concluded that most trace element concentrations predicted in groundwater as a result of backfilling will be approximately equivalent to that of background groundwater. Concentrations of iron and manganese are predicted to be elevated due to the presence of reducing conditions. Other trace elements including arsenic, cadmium, chromium and zinc are predicted to be relatively low while selenium be elevated compared to background levels.

5.1. Waste Rock Monitoring

Results from waste rock monitoring during 2019/2020 are presented in Table 3 and Figure 18. No results over the trigger limit of 103 kg NAPP H_2SO_4/tonne were returned during the reporting period and results have generally declined since the last reporting period. Full data is included as Appendix 8.7.

Table 3: Correnso Waste Rock Monitoring Results

Date	Sulphur%	ANCH2SO4	NAPP kgH_2SO_4/t
05-Jul-19	1.34	23.17	17.8
08-Aug-19	1.46	17.17	27.5
10-Sep-19	1.22	23.54	13.8
08-Oct-19	1.93	62.42	-3.4
07-Nov-19	1.60	55.99	-7.0
13-Dec-19	2.01	53.77	7.7
06-Jan-20	2.00	76.61	-15.4
04-Feb-20	1.26	30.95	7.6
03-Mar-20	2.60	53.82	25.7
29-Apr-20	2.70	42.36	40.3
13-May-20	2.10	53.62	9.3
08-Jun-20	1.74	66.31	-13.1

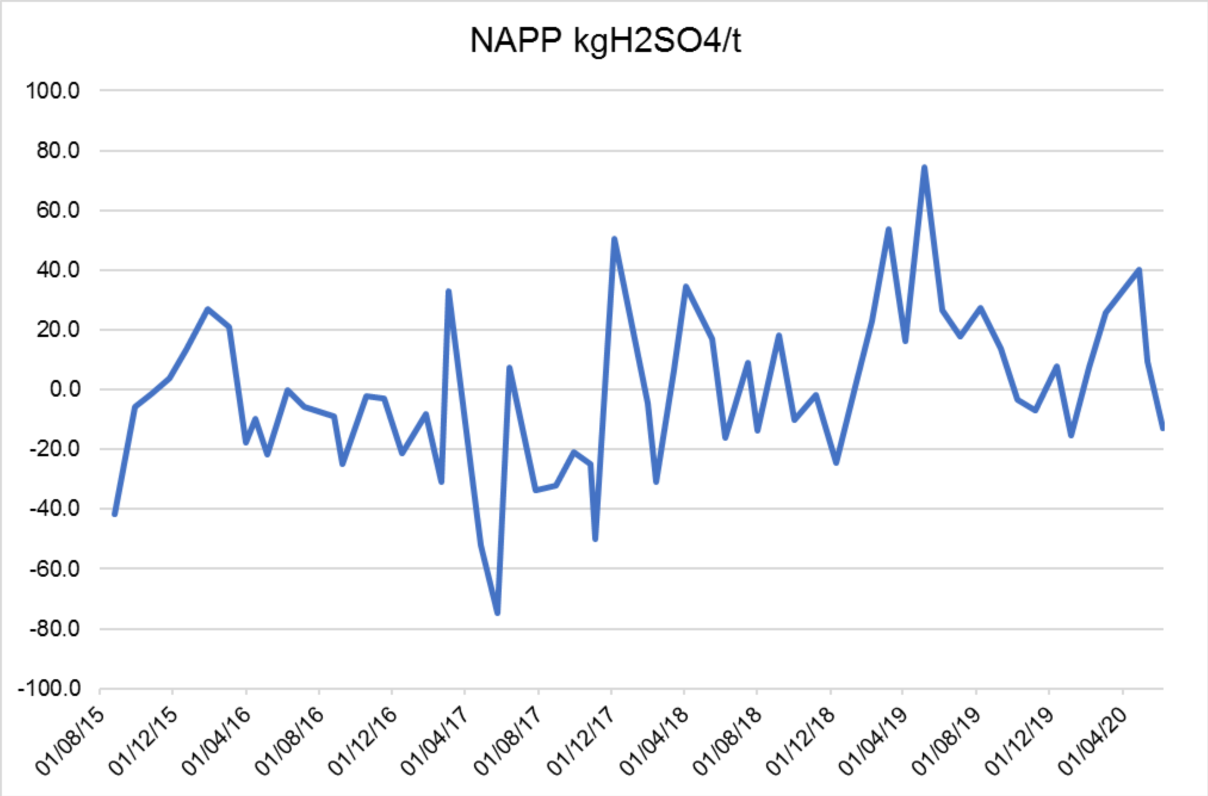


Figure 18: Correnso Waste Rock Net Acid Production Potential

6. CONTINGENCY MEASURES

The preferred management system for FSPCP water is to directly pump to the WTP. If the WTP throughput capacity is compromised, the water is pumped via the RO plant concentrate system to TSF1A.

Lime or limestone has been spread around the surface of the stockpiled waste rock and drains periodically and this has improved the runoff water quality to the collection pond. Lime addition will continue, as required, to mitigate low pH water in FSPCP.

No specific contingency measures are proposed at this stage for groundwater surrounding the FSPCP as little groundwater movement is indicated and, in general, the quality is currently within receiving water criteria.

Currently, all waste rock is stockpiled prior to being used as backfill. If the monitoring programme identifies waste rock as having a NAPP value above the trigger level as per Figure 2, lime will be applied. Additional lime is applied to the ground beneath the stockpile once the waste rock is removed.

7. CONCLUSIONS

ZASS underdrainage exhibits a waste rock chemistry signature indicating that stockpile leachates are continuing to seep through the Zone A clay-liner as per design parameters. The subsoil water is pumped to the FSPCP and treated along with the surface runoff.

The FSPCP pH has fluctuated between 3.5 and 3.7 during the reporting period. Generally, sulphate and iron levels in collection pond water have reduced following the addition of limestone to the stockpile pad.

The shallow groundwater wells are frequently dry or do not have enough water for full analysis, though in most instances sufficient water is able to be obtained for field pH and conductivity (FLS pH and FLS EC), but samples are high in solids. Full samples were possible from most wells during 2019 using a peristaltic pump and no wells have shown any significant changes in chemistry. Data from groundwater monitoring wells P67, P82, P87 and P89 can be considered close to background levels. The data for the other sites (P83, P84, P85 and P86) indicates elevated SO_4 concentrations compared to up gradient control data from well P88.

Key points are that the sites are all close to construction areas where there was disturbance; concentrations in earlier samples are generally orders of magnitude less than source fluids (drains/pond); sediment levels can be high (which can affect acid soluble and total concentration values); movement through the ground is indicated to be slow; mass discharge will be minimal; large dilutions are available in the river and river monitoring has not identified any effects.

Shallow groundwater water quality surrounding the stockpile generally reflects background levels except in the area adjacent the FSPCP. Here the groundwater shows a weak waste rock signature with elevated sulphate concentrations. Current pH and conductivity levels are consistent with previous values, and as a result, trace metal concentrations are unlikely to have changed from previous values. The groundwater quality changes seasonally and has higher concentrations in summer with low water-tables and lower concentrations in winter with higher water-tables; indicating a diluting influence from infiltrating rainfall.

Waste rock monitoring results over the reporting period have consistently been below the NAPP trigger level and have decreased since the last reporting period, indicating that no lime addition is required prior to backfilling.

Compliance with all conditions of the consent was achieved in relation to water quality monitoring and no difficulties were encountered in achieving conformance with the conditions of the consents.

8. APPENDICES

8.1 Underdrainage data - ZASS and PPSS

Date	Data Point	FLS Comments	FLS EC (mS/m)	FLS pH	FLS Temp	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba	BaS	Bicarb	BA	BS	CdA	CdS	CaSO	Carb	COD	Cl	CrA	CrS	Cr6col	Cr-T	CoA
ZASS	27/01/2010		148.7	4.54	18.9	<1		<1	23	21	<0.0002	<0.0002	<0.001	<0.001	0.02		<1		0.019	0.0036	0.0038	110	<1		16			<0.001	0.00068	0.23
ZASS	24/02/2010				18.6	<1		1.6	9.2	9.2	<0.0002	<0.0002	<0.001	<0.001	0.017		2		0.017	0.0017	0.0017	59	<1		19			<0.001	<0.00053	0.095
ZASS	18/03/2010		95.9	4.62	17.7	<1		<1	15	13	<0.0002	<0.0002	0.0023	<0.001	0.018		<1		0.018	0.0027	0.0027	93	<1		16			<0.001	0.0018	0.17
ZASS	26/04/2010		198.2	4.21	18.2	<1		<1	35	30	<0.0004	<0.0004	<0.002	<0.002	0.02		<1		0.021	0.005	0.005	171	<1		16.2			<0.001	<0.0011	0.34
ZASS	30/05/2010				16.1	<1		<1	25	22	<0.0002	<0.0002	<0.001	<0.001	0.018		<1		0.015	0.0044	0.0047	127	<1		17.8			<0.001	0.00058	0.25
ZASS	28/06/2010		153.6	4.45	16.1	<1	<1	<1	20	18.1	<0.0004	<0.0004	<0.002	<0.002	0.02		<1		0.016	0.0034	0.0034	111	<1		17.3			<0.001	<0.0011	0.2
ZASS	22/07/2010				16.7	<1	<1	<1	35	28	<0.0002	<0.0002	<0.001	0.0012	0.019	0.031	<1		0.016	0.0059	0.0056	149	<1	90	16.4		0.0007	<0.001	<0.0011	0.33
ZASS	26/10/2010		195.7	3.68	21.2	<1	<1	<1	30	33	0.0003	0.0003	0.0018	0.0012	0.022	0.035	<1		0.024	0.006	0.0053	177	<1	127	14.3		0.0046	<0.001	0.0052	0.37
ZASS	27/01/2011				17.2	<1	<1	<1	29	31	<0.0002	<0.0002	0.0013	0.0013	0.017	0.065	<1		0.017	0.0055	0.0053	155	<1	100	15.2		0.0012	<0.001	0.00144	0.29
ZASS	26/04/2011				17.1	<1	<1	<1	12.5	11.5	<0.0002	<0.0002	<0.001	<0.001	0.018	0.047	<1		0.017	0.0024	0.0027	75	<1	<6	12.7		<0.0005	<0.001	<0.00053	0.141
ZASS	8/07/2011		62.4	4.46	14	<1	2.8	2.8	8.1	7	<0.0002	<0.0002	<0.001	<0.001	0.016	0.058	3.4		0.015	0.00168	0.00167	48	<1	<6	15.5		<0.0005	<0.001	0.00063	0.092
ZASS	13/10/2011		68.4	4.78	16	<1	4.1	4.1	4.9	4.5	<0.0002	<0.0002	<0.001	<0.001	0.017	0.073	5		0.016	0.00108	0.00114	46	<1	<6	16.6		<0.0005	<0.001	<0.00053	0.062
ZASS	25/01/2012		108.4	4.15	17.2	<1	<1	<1	10.9	11.1	<0.0002	<0.0002	<0.001	<0.001	0.018	0.037	<1		0.016	0.0027	0.0029	86	<1	<6	15.4		<0.0005	<0.001	<0.00053	0.144
ZASS	26/04/2012		100.3	4.73	16.2	<1	<1	<1	11.4	11.8	<0.0002	<0.0002	<0.001	<0.001	0.021	0.037	<1		0.023	0.0023	0.0027	270	<1	<6	14.2		0.0006	<0.001	0.00055	0.169
ZASS	1/08/2012				12	<1	1.9	1.9	10.7	9.7	<0.0002	<0.0002	<0.001	<0.001	0.017	0.061	2.3		0.015	0.00187	0.00177	82	<1	<6	15.3		<0.0005	<0.001	<0.00053	0.095
ZASS	1/08/2012		63.4	4.4	12																									
ZASS	18/01/2013		117.4	3.95	17.2	<1	<1	<1	19.1	15.2	<0.0002	<0.0002	0.0018	<0.001	0.021	0.044	<1		0.027	0.0023	0.0021	131	<1	12	16.1		0.001	<0.001	0.0036	0.137
ZASS	19/04/2013		98.6	4.23	17.9	<1	<1	<1	9.4	8.9	<0.0002	<0.0002	<0.001	<0.001	0.024	0.06	<1		0.02	0.00166	0.0017	103	<1	<6	16.2		0.0005	0.0015	0.0007	0.106
ZASS	8/07/2013		66.7	4.5	16.8	<1	3.1	3.1	5.7	4.8	<0.0002	<0.0002	<0.001	<0.001	0.014	0.048	3.8		0.017	0.00091	0.00091	56	<1	<6	16.1		<0.0005	0.001	0.00075	0.046
ZASS	22/10/2013		74.6	4.8	16.6	<1	1.3	1.3	5.1	4.8	<0.0002	<0.0002	<0.001	<0.001	0.014	0.041	1.6		0.015	0.00105	0.00111	56	<1	<6	15.1		<0.0005	<0.001	<0.00053	0.052
ZASS	21/01/2014				18	<1	2.9	2.9	2.4	2.4	<0.0002	<0.0002	<0.001	<0.001	0.012	0.038	3.5		0.013	0.00051	0.00056	31	<1	<6	15.2		<0.0005	<0.01	<0.00053	0.027
ZASS	1/04/2014				17.6	<1	1.8	1.8	3.6	3.6	<0.0002	<0.0002	<0.001	<0.001	0.016	0.041	2.2		0.014	0.00066	0.00065	43	<1	<6	14.7		<0.0005	<0.001	<0.00053	0.033
ZASS	30/07/2014		58.2	4.52	18.8	<1	3.3	3.3	3.4	3.4	<0.0002	<0.0002	<0.001	<0.001		0.042	4	0.016	0.015	0.00088	0.00095	50	<1	<6	15.5		<0.0005	<0.001	<0.00053	0.041
ZASS	2/10/2014		70.9	4.8	15.8	<1	3.6	3.6	4.7	4.7	<0.0002	<0.0002	<0.001	<0.001		0.038	4.4	0.015	0.014	0.00116	0.0012	59	<1	8	14.8		<0.0005	<0.001	<0.00053	0.057
ZASS	23/01/2015		36.4	4.5	17.5	<1	3.3	3.3	2.5	1.77	<0.0002	<0.0002	<0.001	<0.001		0.038	4	0.014	0.013	0.00044	0.00045	26	<1	8	14.1		<0.0005	<0.001	0.00053	0.02
ZASS	23/04/2015					<1	2.2	2.2	4.7	4.5	<0.0002	<0.0002	<0.001	<0.001		0.043	2.7	0.013	0.015	0.00088	0.00089	56	<1	<6	12.7		<0.0005	<0.001	<0.00053	0.045
ZASS	17/07/2015					<1	3.8	3.8	3.5	3.6	<0.0002	<0.0002	<0.001	<0.001		0.045	4.6	0.015	0.016	0.00074	0.00072	47	<1	<6	12.9		<0.0005	<0.001	<0.00053	0.032
ZASS	29/10/2015			4.9	16	<1	3.2	3.2	1.67	1.68	<0.0002	<0.0002	<0.001	<0.001		0.033	3.9	0.013	0.013	0.00039	0.00042	28	<1	11	14.5		<0.0005	<0.001	<0.00053	0.021
ZASS	15/01/2016			4.55	17.8	<1	58	58	0.44	0.123	<0.0002	<0.0002	<0.001	<0.001		0.048	71	0.025	0.027	0.00039	0.0004	95	<1	<6	29		<0.0005	<0.001	<0.00053	0.127
ZASS	21/04/2016			4.9	18.9	<1	3.2	3.2	2.9	2.9	<0.0002	<0.0002	<0.001	<0.001		0.041	3.9	0.016	0.017	0.00067	0.00071	45	<1	<6	11.4		<0.0005	<0.001	<0.00053	0.033
ZASS	17/08/2016		64.7	4.5	16.6						<0.0002	<0.0002	<0.001	<0.001						0.00101	0.00101	56						<0.01		
ZASS	18/01/2017		32.8	5.1	17.4	<1	3.2	3.2	1.14	1.03	<0.0002	<0.0002	<0.001	<0.001			3.9			0.00029	0.00029	22	<1	<6	14.6		0.0005	<0.001	<0.00053	0.0148
ZASS	26/04/2017		58.3	4.8	16.7	<1	2.5	2.5	4.6	4	<0.0002	<0.0002	<0.001	<0.001			3			0.001	0.00101	56			13.9	0.0005	0.0007	<0.01		0.057
ZASS	26/07/2017		50.3	5	14	<1	4.7	4.7	2.5	2.5	<0.0002	<0.0002	<0.001	<0.001			5.7			0.00063	0.00059	39			13.6	<0.0005	<0.0005	<0.01		0.028
ZASS	10/10/2017		47.8	4.45	16.8	<1	20	20	2.1	2	<0.0002	<0.0002	<0.001	<0.001			24			0.00052	0.00058	39			11.8	<0.0005	0.0007	<0.01		0.025
ZASS	25/01/2018		37.5	4.7	22.6	<1	3.3	3.3	2.1	2.3	<0.0002	<0.0002	<0.001	<0.001			4			0.00054	0.0005	37			14.2	0.0006	0.0006	<0.01		0.028
ZASS	22/05/2018					<1	2.8	2.8	3.2	3	<0.0002	<0.0002	<0.001	<0.001			3.4			0.00076	0.00088	44			14	0.0007	<0.0005	<0.01		0.036
ZASS	6/08/2018					<1	2.6	2.6	2.3	2.2	<0.0002	<0.0002	<0.001	<0.001			3.2			0.00053	0.00058	35			11	<0.0005	<0.0005	<0.01		0.025
ZASS	20/11/2018		51	4.26	15.6	<1	3.7	3.7	2.5	2.3	<0.0002	<0.0002	<0.001	<0.001			4.5			0.00059	0.00056	37			13	<0.0005	0.0005	<0.01		0.028
ZASS	14/02/2019		25.8	4.54	20.3	<1	4.1	4.1	0.92	0.89	<0.0002	<0.0002	<0.001	<0.001			5			0.00027	0.00024	17.9			10	<0.0005	0.0009	<0.001		0.0137
ZASS	1/05/2019		45.1	5.68	17	<1	4.3	4.3	1.01	0.91	<0.0004	<0.0004	<0.002	<0.002			5.2			0.00036	0.00031	31			10	<0.001	<0.001	<0.001		0.019
ZASS	10/07/2019	Foul Smell	61.8	4.72	15.3	<1	3.8	3.8	2.6	2.5	<0.0002	<0.0002	<0.001	<0.001			4.6			0.00048	0.00047	37			10	<0.0005	<0.0005	<0.001		0.026
ZASS	13/11/2019		42.9	4.56	17.4	<1	3.4	3.4	2.4	2.3	<0.0002	<0.0002	<0.001	<0.001			4.1			0.0006	0.00057	39			13.5	<0.0005	0.0005	<0.001		0.029
ZASS	8/01/2020		46.6	4.5	18.7	<1	4.8	4.8	1.58	1.41	<0.0002	<0.0002	<0.001	<0.001			5.9			0.00035	0.00032	24			12	<0.0005	<0.0005	<0.001		0.0157

Date	Data Point	CoS	CuA	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeA	FeS	FeT	PbA	PbS	MgSO	MnA	MnS	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP
ZASS	27/01/2010	0.24	0.042	0.044	0.0016	133		<0.01	540	0.97	0.9	0.93	0.00053	0.00052	64	38	33	0.0025		0.0041	<0.0002	<0.0002	0.32	0.33	16	16	<0.002	<0.002	0.47	4.3	<0.004	4.5	<0.004
ZASS	24/02/2010	0.11	0.015	0.016	<0.001	77.4		<0.01	300	0.32	0.31	0.31	0.00027	0.00028	36	14	16	0.0049		0.0067	<0.0002	<0.0002	0.14	0.15	8.9	8.9	<0.002	<0.002	0.27	4.6	<0.004	4.9	<0.004
ZASS	18/03/2010	0.16	0.033	0.031	0.002	105		<0.01	430	4.5	0.98	4.7	0.0007	0.00045	49	26	27	0.0033		0.0039	<0.0002	<0.0002	0.25	0.25	14	14	0.0026	0.0026	0.42	4.5	0.08	4.7	<0.004
ZASS	26/04/2010	0.33	0.058	0.059	<0.001	186.7		<0.01	810	1.22	1.34	1.26	0.00085	0.00089	92	55	51	0.00165		0.002	<0.0004	<0.0004	0.46	0.46	26	26	0.0047	0.0047	0.74	4.2	<0.004	5.4	<0.004
ZASS	30/05/2010	0.26	0.028	0.029	0.0024	163.1		<0.01	650	0.89	0.92	0.87	0.00079	0.00076	82	52	48	0.0055		0.007	<0.0002	<0.0002	0.37	0.39	16.3	16.3	<0.02	<0.02	0.47	4.4	0.005	7	<0.004
ZASS	28/06/2010	0.19	0.024	0.023	<0.001	134.5		<0.01	570	0.94	0.87	0.98	0.0006	0.0006	71	46	38	0.0035		0.0049	<0.0004	<0.0004	0.33	0.31	11.8	11.9	0.016	0.016	0.56	4.5	0.004	6.5	<0.004
ZASS	22/07/2010	0.34	0.055	0.052	<0.001	189.2	1.11	<0.01	780	1.03	0.74	0.81	0.0008	0.00065	99	69	67	0.0024	0.0025	0.0027	<0.0002	<0.0002	0.52	0.53	16.9	16.9	0.011	0.011	0.75	4.3	<0.004	6.1	<0.004
ZASS	26/10/2010	0.33	0.148	0.08	0.0019	205	0.89	<0.01	970	2.2	2	2.1	0.0049	0.0053	127	87	89	0.0027	0.0024	0.0031	<0.0002	<0.0002	0.74	0.7	14.9	15	0.016	0.016	0.94	4.1	0.033	5.9	<0.004
ZASS	27/01/2011	0.29	0.035	0.036	0.0024	178.7	1.02	<0.01	830	0.52	0.63	0.52	0.00077	0.00082	107	67	69	0.0038	0.0036	0.0045	<0.0002	<0.0002	0.52	0.53	11.8	11.8	0.016	0.016	0.57	4.4	0.004	6.8	0.006
ZASS	26/04/2011	0.137	0.024	0.023	<0.001	102	0.68	<0.01	400	0.39	0.22	0.42	0.00046	0.00037	52	30	29	0.002	0.0021	0.0023	<0.0002	<0.0002	0.24	0.24	51	51	0.05	0.05	0.67	4.6	0.013	5.7	<0.004
ZASS	8/07/2011	0.087	0.0097	0.0089	<0.001	72.1	0.49	<0.01	260	0.71	0.6	0.7	0.00027	0.00032	33	20	19.2	0.0021	0.002	0.0024	<0.0002	<0.0002	0.156	0.151	1.77	1.77	<0.02	<0.02	0.47	4.8	0.007	5.4	<0.004
ZASS	13/10/2011	0.066	0.007	0.0064	<0.001	62.3	0.37	<0.01	230	1.44	1.3	1.47	0.00031	0.0002	29	14.3	14.1	0.0026	0.0023	0.0027	<0.0002	<0.0002	0.101	0.095	2.1	2.1	<0.02	<0.02	0.48	4.8	0.006	5.8	<0.004
ZASS	25/01/2012	0.148	0.017	0.0175	<0.001	103.5	0.67	<0.01	450	0.73	0.86	0.83	0.00031	0.00033	57	32	34	0.0036	0.0034	0.0038	<0.0002	<0.0002	0.24	0.24	4.1	4.1	<0.02	<0.02	0.46	4.5	0.146	5.5	<0.004
ZASS	26/04/2012	0.171	0.04	0.038	0.0047	182.6	0.44	<0.01	910	1.31	1.28	1.37	0.00066	0.00066	57	29	28	0.0027	0.0025	0.0027	<0.0002	<0.0002	0.23	0.24	69	70	0.26	0.26	0.94	4.3	<0.004	5.8	<0.004
ZASS	1/08/2012	0.09	0.0104	0.01	<0.001	87.7	0.69	<0.01	360	3.1	2.8	3.1	0.00034	0.00034	38	21	19.5	0.0028	0.0026	0.0029	<0.0002	<0.0002	0.14	0.134	25	25	<0.02	<0.02	0.64	4.6	0.006	5.7	0.006
ZASS	1/08/2012					61.4																							0.64	4.36			
ZASS	18/01/2013	0.145	0.026	0.024	0.0029	127.3	0.2	<0.01	530	13.1	0.5	16	0.0021	0.00048	49	24	25	0.0056	0.0061	0.0064	<0.0002	<0.0002	0.193	0.21	31	31	<0.02	<0.02	0.6	4.4	1.31	5.1	<0.004
ZASS	19/04/2013	0.113	0.0158	0.0168	0.0032	104.5	0.57	<0.01	400	0.19	0.12	0.195	0.00041	0.0004	35	17.8	17.7	0.0036	0.005	0.0051	<0.0002	<0.0002	0.143	0.148	23	23	<0.02	<0.02	0.4	4.4	<0.004	5.6	<0.004
ZASS	8/07/2013	0.046	0.0068	0.007	<0.001	64.7	0.38	<0.01	240	0.92	0.47	0.87	0.00035	0.00029	23	8.5	8.8	0.0053	0.0066	0.0071	<0.0002	<0.0002	0.059	0.062	11.6	11.6	<0.02	<0.02	0.29	4.7	<0.004	5	<0.004
ZASS	22/10/2013	0.054	0.0077	0.008	<0.001	66	0.39	<0.01	250	1.25	0.26	1.37	0.0005	0.00024	27	9.8	10.1	0.0053	0.0069	0.0071	<0.0002	<0.0002	0.07	0.072	9.3	9.3	<0.02	<0.02	0.22	4.6	0.006	4.7	<0.004
ZASS	21/01/2014	0.029	0.0041	0.0044	<0.001	41.3	0.24	<0.01	137	0.18	0.17	0.191	0.00018	0.00018	14.7	4.5	4.6	0.0073	0.0084	0.0094	<0.0002	<0.0002	0.034	0.036	5	5	<0.02	<0.02	0.1	4.8	<0.004	4	<0.004
ZASS	1/04/2014	0.034	0.0057	0.0053	<0.001	50.5	0.3	<0.01	177	0.44	0.17	0.54	0.00029	0.00021	17.1	4.9	5.1	0.0053	0.0079	0.0083	<0.0002	<0.0002	0.038	0.039	8	8	<0.02	<0.02	0.124	4.8	0.022	4.5	<0.004
ZASS	30/07/2014	0.043	0.0053	0.0056	<0.001	60	0.31	<0.01	220	0.19	0.18	0.22	0.00024	0.00022	24	8.3	8.9	0.0043	0.0059	0.0061	<0.0002	<0.0002	0.05	0.053	5	5	<0.02		0.15	4.8	0.018	4.5	<0.004
ZASS	2/10/2014	0.059	0.0077	0.0081	<0.001	71.4	0.45	<0.01	270	0.18	0.18	0.189	0.00027	0.00027	30	11.5	12.2	0.004	0.0051	0.0055	<0.0002	<0.0002	0.074	0.076	6.5	6.5	<0.02		0.17	4.8	<0.004	5.1	<0.004
ZASS	23/01/2015	0.02	0.0043	0.0041	<0.001	37.2	0.22	<0.01	117	0.82	0.13	1.04	0.00035	0.00017	12.6	3.7	3.7	0.0091	0.0085	0.0092	<0.0002	<0.0002	0.024	0.024	2.5	2.5	<0.1		0.065	4.8	<0.004	3.8	<0.004
ZASS	23/04/2015	0.045	0.0063	0.0065	<0.001	63.2	0.36	<0.01	240	0.08	0.08	0.106	0.00025	0.00021	23	8.2	7.7	0.0056	0.0065	0.0069	<0.0002	<0.0002	0.053	0.053	4.7	4.7	<0.1		0.073	4.7	0.005	4.7	<0.004
ZASS	17/07/2015	0.033	0.0043	0.004	<0.001	54.8	0.29	<0.01	210	0.34	0.06	0.34	0.00028	0.00019	22	6.2	6.8	0.003	0.0037	0.004	<0.0002	<0.0002	0.04	0.038	3.9	3.9	<0.1		0.058	4.8	<0.004	4.6	<0.004
ZASS	29/10/2015	0.02	0.0032	0.0032	<0.001	39.5	0.17	<0.01	124	0.17	0.09	0.2	0.00021	0.00014	13	3.8	3.7	0.007	0.0076	0.0084	<0.0002	<0.0002	0.023	0.023	2.1	2.2	<0.1		0.07	4.9	0.112	4.3	<0.004
ZASS	15/01/2016	0.128	0.0009	<0.0005	0.0024	113.3	0.14	<0.01	430	3.6	3.5	3.9	<0.0001	<0.0001	46	18	18.4	<0.00008	<0.00008	<0.00008	0.0004	0.0004	0.185	0.188	0.2	0.23	<0.1		1.9	6.5	0.007	10.2	<0.004
ZASS	21/04/2016	0.032	0.0042	0.0046	<0.001	52.2	0.28	<0.01	191	0.11	0.1	0.118	0.0002	0.0002	19.3	5.9	6.2	0.003	0.0035	0.0039	<0.0002	<0.0002	0.041	0.041	2.7	2.7	<0.1		0.061	4.8	<0.004	4.6	<0.004
ZASS	17/08/2016		0.0065	0.0065		65.3			250	0.28	0.26		0.00025	0.0002	26	8.8	9	0.0034	0.0046				0.055	0.056	3.6	3.6	<0.1		0.142	4.7	<0.004		<0.004
ZASS	18/01/2017	0.0142	0.0023	0.0023	<0.001	31.6	0.09	<0.01	96	0.53	0.4	0.59	0.00014	<0.0001	9.9	2.1	2.2	0.0044	0.0094	0.0111			0.016	0.0156	0.81	0.83	<0.1		0.068	4.8	0.157	3.3	<0.004
ZASS	26/04/2017	0.055	0.0093	0.0096	<0.001	63.3	0.31	<0.01	240	2.6	0.35		0.00051	0.00026	24	9.4	9.9		0.0057	0.0061			0.065	0.065	2.2	2.2	<0.1		0.143	4.7	0.05	4.8	
ZASS	26/07/2017	0.029	0.0038	0.0038	<0.001	48.3	0.26	<0.01	171	0.34	0.36		0.00019	0.00018	18.1	5.4	5.6		0.0049	0.0053			0.034	0.033	1.96	1.96	<0.1		0.069	5	<0.004	4.7	
ZASS	10/10/2017	0.025	0.0038	0.0034	<0.001	45	0.23	<0.01	162	0.09	0.08		0.00017	0.00017	15.9	4.4	4.1		0.0035	0.0038			0.029	0.029	1.96	1.96	<0.1		0.069	4.8	<0.004	4.9	
ZASS	25/01/2018	0.027	0.0041	0.0046	<0.001	45.5	0.25	<0.01	160	0.22	0.1		0.00019	0.00023	16.6	4.3	4.4		0.0095	0.0104			0.03	0.032	1.38	1.42	<0.1		0.07	4.8	0.01	3.9	
ZASS	22/05/2018	0.036	0.0055	0.0055	<0.001	56.3	0.34	<0.01	200	0.95	0.16		0.00032	0.00022	21	6.5	6.7		0.006	0.0063			0.04	0.038	2.2	2.2	<0.1		0.095	4.7	<0.004	4.6	
ZASS	6/08/2018	0.026	0.0025	0.003	<0.02	44.3	0.22	<0.00001	150	0.11	0.12		0.00018	0.00019	15.2	4.7	4.3		0.0043	0.0045			0.025	0.028	1.77	1.77	<0.1		0.058	4.9	<0.004	4.2	
ZASS	20/11/2018	0.028	0.0044	0.0038	<0.02	47.3	0.24	<0.00001	165	0.19	0.12		0.00022	0.00014	17.5	5.3	5.2		0.0058	0.0063			0.03	0.027	1.64	1.66	<0.1		0.061	4.8	<0.004	3.9	
ZASS	14/02/2019	0.0137	0.002	0.0024	<0.02	27.4	0.14	<0.00001	81	0.2	0.12		0.0001	<0.0001	8.8	1.96	1.95		0.0121	0.0132			0.0119	0.013	0.54	0.54	<0.1		0.052	5	<0.004	3.3	
ZASS	1/05/2019	0.0174	0.0023	0.0021	<0.02	37	0.14	<0.00001	131	0.2	0.1		<0.0002	<0.0002	12.7	2.9	2.8		0.01	0.011			0.0186	0.0178	0.6	0.6	<0.1		0.19	5.3	0.004	3.7	
ZASS	10/07/2019	0.025	0.0041	0.004	<0.02	44.2	0.26	<0.00001	159	0.11	0.11		0.00017	0.00016	16	3.9	4.3		0.008	0.008			0.025	0.026	1.25	1.25	<0.1		0.051	4.7	0.017	4.2	
ZASS	13/11/2019	0.03	0.0044	0.0046	<0.02	47.3	0.27	<0.00001	173	0.21	0.12		0.00019	0.00019	18.3	4.6	4.7		0.008	0.011			0.029	0.029	1.19	1.19	<0.1		0.065	4.6	0.006	3.8	
ZASS	8/01/2020	0.0166	0.0028	0.0025	<0.02	31.2	0.17	<0.00001	105	0.74	0.58		0.00016	0.00012	10.8	1.96	2.2		0.0116	0.0128			0.014	0.0156	0.51	0.51	<0.1		0.107	5	<0.004	3.2	

Date	Data Point	SeA	SeS	SeT	SI	SiO2	AgA	AgS	NaSO	SrA	SrS	SO4	SS	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
ZASS	27/01/2010	0.0056	0.0051		52	52	<0.0001	<0.0001	19			730		17	15							1,300		<3	0.2			<0.001	0.7	0.75
ZASS	24/02/2010	0.0014	0.0043		34	34	<0.0001	<0.0001	17			410		9.7	8.5							600		<3	0.5			<0.001	0.29	0.32
ZASS	18/03/2010	0.0031	0.0035		45	45	<0.0001	<0.0001	18			530		13	12							970		65	24			<0.001	0.55	0.54
ZASS	26/04/2010	0.0077	0.009		57	57	<0.0002	<0.0002	23			1,190		27	23							1,770		<3	0.14			<0.001	0.96	0.98
ZASS	30/05/2010	0.0066	0.0082		42	42	<0.0001	<0.0001	19.9			1,060		24	18.4							1,550		<3	0.37			<0.001	0.63	0.63
ZASS	28/06/2010	0.008	0.007		34	34	<0.0002	<0.0002	21			790		17.8	15.9							1,210		<3	0.34			<0.001	0.51	0.51
ZASS	22/07/2010	0.01	0.0098		49	49	<0.0001	<0.0001	21	0.46	0.54	1,180		26	22	0.00059	0.00045	<0.0005	<0.0005	<0.0005	<0.0005	1,900	0.23	<3	0.22	0.0023	0.00178	<0.001	0.91	0.91
ZASS	26/10/2010	0.0079	0.0073		52	52	<0.0001	<0.0001	19.4	0.66	0.65	1,360		30	27	0.00083	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	2,100	0.44	32	17.3	0.00172	0.0019	0.001	1.21	1.12
ZASS	27/01/2011	0.0082	0.01		44	44	<0.0001	<0.0001	20	0.48	0.5	1,070		24	24	0.00046	0.00046	<0.0005	<0.0005	<0.0005	<0.0005	1,850	0.71	<3	0.77	0.00176	0.00177	<0.001	0.82	0.84
ZASS	26/04/2011	0.004	0.0034		29	29	<0.0001	<0.0001	14.7	0.23	0.23	520		14.8	11.2	0.00036	0.00039	<0.0005	<0.0005	0.0029	0.0011	930	0.69	3	2.2	0.001	0.00104	<0.001	0.46	0.46
ZASS	8/07/2011	0.0031	0.0018		28	28	<0.0001	<0.0001	14.5	0.173	0.158	350		8	7.5	0.00035	0.00034	<0.0005	<0.0005	0.0029	0.0026	600	0.59	5	4.4	0.0006	0.00059	<0.001	0.29	0.28
ZASS	13/10/2011	0.0019	0.0012		26	26	<0.0001	<0.0001	14.9	0.151	0.156	290		6.7	6.6	0.00041	0.0004	<0.0005	<0.0005	<0.0005	<0.0005	470	0.5	4	3.6	0.00036	0.00035	<0.001	0.22	0.21
ZASS	25/01/2012	0.0028	0.0031		37	37	<0.0001	<0.0001	16.8	0.24	0.25	610		13.4	12.4	0.00039	0.00039	<0.0005	<0.0005	0.0029	0.0029	960	0.63	41	38	0.00092	0.00095	<0.001	0.4	0.43
ZASS	26/04/2012	0.002	0.0037		26	26	<0.0001	<0.0001	21	0.7	0.78	840		23	22	0.00064	0.00066	<0.0005	<0.0005	0.0027	0.0031	1,670	0.58	<3	0.34	0.00079	0.00084	0.0022	0.52	0.53
ZASS	1/08/2012	0.0039	0.0021		25	25	<0.0001	<0.0001	15.7	0.26	0.25	410		10.9	10	0.00041	0.00042	<0.0005	<0.0005	<0.0005	<0.0005	770	<0.1	<3	2.2	0.00046	0.00046	0.001	0.29	0.29
ZASS	1/08/2012																													
ZASS	18/01/2013	0.003	0.0042		42	42	<0.0001	<0.0001	17.9	0.42	0.41	640		15.9	14.2	0.00053	0.00049	0.0006	<0.0005	0.0009	0.0007	1,070	0.46	2,500	1,010	0.0011	0.00089	<0.001	0.44	0.46
ZASS	19/04/2013	0.0034	0.003		37	37	<0.0001	<0.0001	15.6	0.33	0.33	480	160	12.1	10.6	0.00047	0.0005	<0.0005	<0.0005	0.0005	0.0028	880	0.81	<3	0.47	0.00066	0.00064	<0.001	0.34	0.36
ZASS	8/07/2013	0.0022	0.002		30	30	<0.0001	<0.0001	16.2	0.2	0.193	260		6.8	6.5	0.0004	0.00041	<0.0005	<0.0005	0.002	0.0018	500	0.25	11	5.8	0.00029	0.0003	<0.001	0.158	0.154
ZASS	22/10/2013	0.0022	0.0015		33	33	<0.0001	<0.0001	15.9	0.17	0.188	280		6.9	6.8	0.00037	0.0004	<0.0005	<0.0005	<0.0005	<0.0005	490	0.11	48	25	0.00036	0.00036	<0.001	0.165	0.175
ZASS	21/01/2014	0.001	<0.001		29	29	<0.0001	<0.0001	14.3	0.104	0.107	163		4.2	3.9	0.0003	0.00034	<0.0005	<0.0005	0.003	0.0031	320	0.16	10	4.1	0.00018	0.00016	<0.001	0.089	0.093
ZASS	1/04/2014	<0.001	<0.001		30	30	<0.0001	<0.0001	13.6	0.15	0.148	200		5.2	4.9	0.00035	0.00034	<0.0005	<0.0005	0.0027	0.0027	380	0.17	35	27	0.00024	0.00021	<0.001	0.11	0.112
ZASS	30/07/2014	0.001	0.0013		29		<0.0001	<0.0001	15.3	0.15	0.156	260		6.3	6	0.00033	0.00031	<0.0005	<0.0005	<0.0005	<0.0005	450	0.15	170	88	0.00027	0.00024	<0.001	0.13	0.128
ZASS	2/10/2014	0.002	0.0019		30		<0.0001	<0.0001	16.3	0.174	0.177	340		7.9	7.3	0.00033	0.00033	<0.0005	<0.0005	<0.0005	<0.0005	570	0.31	<3	0.25	0.00039	0.00038	<0.001	0.173	0.18
ZASS	23/01/2015	<0.001	<0.001		29		<0.0001	<0.0001	13	0.091	0.091	126		3.3	3.4	0.00027	0.00028	<0.0005	<0.0005	<0.0005	<0.0005	270	0.23	4	1.21	0.00015	0.00013	<0.001	0.08	0.089
ZASS	23/04/2015	<0.001	<0.001		32		<0.0001	<0.0001	14.1	0.178	0.183	280		6.5	6.2	0.00038	0.00033	<0.0005	<0.0005	0.0026	0.0027	510	0.18	<3	0.31	0.00031	0.00027	<0.001	0.151	0.15
ZASS	17/07/2015	<0.001	<0.001		26		<0.0001	<0.0001	13.2	0.132	0.141	230		5.5	5.5	0.00027	0.00029	<0.0005	<0.0005	<0.0005	<0.0005	420	0.18	<3	1.06	0.00025	0.00022	<0.001	0.11	0.11
ZASS	29/10/2015	<0.001	0.0012		27		<0.0001	<0.0001	12.1	0.091	0.093	151		3.8	3.5	0.00027	0.00028	<0.0005	<0.0005	<0.0005	<0.0005	300	0.43	113	51	0.00015	0.00013	<0.001	0.067	0.07
ZASS	15/01/2016	<0.001	<0.001		30		<0.0001	<0.0001	41	0.29	0.3	520		12.7	11.5	0.00046	0.00047	<0.0005	<0.0005	<0.0005	<0.0005	860	1.84	5	5.6	0.00007	0.00005	0.0023	0.121	0.121
ZASS	21/04/2016	0.0013	<0.001		25		<0.0001	<0.0001	13.3	0.125	0.125	220		5.1	5.1	0.00027	0.00027	<0.0005	<0.0005	<0.0005	<0.0005	430	0.11	<3	0.23	0.00021	0.00025	<0.001	0.103	0.108
ZASS	17/08/2016	0.0031	0.0029	0.0021			<0.0001	<0.0001																<3				<0.001	0.154	0.157
ZASS	18/01/2017	<0.001	<0.001		29		<0.0001	<0.0001	12.8			123		3.1	2.8	0.00026	0.00025					240	0.22	450		0.0001	0.0001	<0.001	0.055	0.051
ZASS	26/04/2017	0.0022	0.0024		31		<0.0001	<0.0001	15.8			290		6.5	6.5	0.00034	0.00037						0.18	84		0.00038	0.00036	<0.001	0.18	0.177
ZASS	26/07/2017	0.0012	<0.001		27		<0.0001	<0.0001	14			210		4.9	4.7	0.0003	0.00028						0.27	<3		0.00022	0.00021	<0.001	0.093	0.097
ZASS	10/10/2017	<0.002	0.0013		24		<0.0001	<0.0001	11.4			184		4.7	4.3	0.00026	0.00027						<0.1	<3		0.00018	0.00017	<0.001	0.08	0.079
ZASS	25/01/2018	<0.001	0.0012		33		<0.0001	<0.0001	14.5			192		4.6	4.4	0.00032	0.00032						0.13	12		0.00023	0.00021	<0.001	0.087	0.091
ZASS	22/05/2018	0.0016	0.0012		31		<0.0001	<0.0001	15.6			240		5.5	5.4	0.00035	0.00036						0.17	<3		0.00029	0.00029	<0.001	0.107	0.107
ZASS	6/08/2018	<0.001	<0.001		24		<0.0001	<0.0001	11.4			182		4.3	4	0.00025	0.00028						0.15	<3		0.00017	0.00019	<0.02	0.074	0.076
ZASS	20/11/2018	<0.001	<0.001		26		<0.0001	<0.0001	13			198		4.7	4.4	0.00028	0.00028						0.1	<10		0.00019	0.0002	<0.02	0.089	0.094
ZASS	14/02/2019	<0.001	<0.001		29		<0.0001	<0.0001	12.4			92		2.3	2.4	0.00024	0.00025						0.11	5		0.0001	0.0001	<0.02	0.044	0.044
ZASS	1/05/2019	<0.002	<0.002		28		<0.0002	<0.0002	12			149		3.5	3.4	0.00026	0.00027						0.26	<3		0.00007	0.00008	<0.02	0.061	0.058
ZASS	10/07/2019	<0.001	<0.001		27		<0.0001	<0.0001	12.5			181		4.2	4.3	0.00027	0.00029						0.1	<3		0.00018	0.00016	<0.02	0.083	0.084
ZASS	13/11/2019	<0.001	<0.001		<0.1		<0.0001	<0.0001	14.3			210		4.9	4.6	0.00028	0.0003						0.1	9		0.0002	0.00021	<0.02	0.085	0.091
ZASS	8/01/2020	<0.001	<0.001		30		<0.0001	<0.0001	12.3			122		3	3	0.0003	0.00026						0.14	<3		0.00011	0.00011	<0.02	0.052	0.059

Date	Data Point	FLS Comments	FLS EC (mS/m)	FLS pH	FLS Temp	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba	BaS
PPSS	1/08/2010				14.2	<1	16.2	16.2	0.033	0.037	<0.0002	<0.0002	<0.001	<0.001	0.016	0.0148
PPSS	26/04/2011				17.2	<1	6.1	6.1	0.145	0.144	<0.0002	<0.0002	<0.001	<0.001	0.019	0.034
PPSS	8/07/2011		86.4	5.09	8.4	<1	9.6	9.6	0.114	0.101	<0.0002	<0.0002	<0.001	<0.001	0.013	0.026
PPSS	13/10/2011				15	<1	7.1	7.1	0.25	0.185	<0.0002	<0.0002	<0.001	<0.001	0.02	0.033
PPSS	6/07/2012		134.7	6.32	14	<1	8.2	8.2	0.128	0.119	<0.0002	<0.0002	<0.001	<0.001	0.015	0.035
PPSS	16/04/2013		146.3	4.98	17.2	<1	5.8	5.8	0.28	0.32	0.0003	0.0003	<0.001	<0.001	0.022	0.151
PPSS	7/11/2013		107.6	5.62	15.4	<1	11.5	11.5	0.039	0.047	<0.0002	<0.0002	<0.001	<0.001	0.017	0.024
PPSS	20/08/2014		28	6.55	17.1	<1	12.5	12.5	0.82	0.198	<0.0002	<0.0002	0.0011	<0.001		0.025
PPSS	29/10/2015	No flow No sample														
PPSS	26/01/2016	No flow														
PPSS	17/08/2016	No Flow														
PPSS	18/01/2017	No flow														
PPSS	16/02/2017	Raining 30ml? First sample for 2017	116.4	6	16.4	<1	8	8	0.185	0.2	<0.0002	<0.0002	<0.001	<0.001		
PPSS	10/10/2017		93.3	5	15.4	<1	24	24	0.21	0.194	<0.0002	<0.0002	<0.001	<0.001		
PPSS	25/01/2018	No Flow														
PPSS	22/05/2018	No flow														
PPSS	6/08/2018					<1	11.6	11.6	0.101	0.104	<0.0002	<0.0002	<0.001	<0.001		
PPSS	20/11/2018	No Flow														
PPSS	14/02/2019	DRY														
PPSS	1/05/2019	DRY														
PPSS	10/07/2019	DRY														
PPSS	28/07/2019		10.5	5.78	15	<1	12.1	12.1		0.092	<0.0002	<0.0002		<0.001		
PPSS	13/11/2019	Dry														
PPSS	8/01/2020	DRY														

Date	Data Point	Bicarb	BA	BS	CdA	CdS	CaSO	Carb	COD	Cl	CrA	CrS	Cr6col	Cr-T	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	F-
PPSS	1/08/2010	19.7		0.011	0.00007	0.00007	67	<1	<6	16.8		<0.0005	<0.001	<0.00053	0.0017	0.0017	<0.0005	<0.0005	<0.001	55.8	<0.05
PPSS	26/04/2011	7.4		0.018	0.00017	0.00021	80	<1	<6	16.9		<0.0005	<0.001	<0.00053	0.0037	0.0037	<0.0005	<0.0005	0.01	63.9	0.09
PPSS	8/07/2011	11.7		0.017	0.00012	0.00015	160	<1	<6	23		<0.0005	0.0024	<0.00053	0.0031	0.0029	<0.0005	<0.0005	<0.001	106.4	0.07
PPSS	13/10/2011	8.7		0.019	0.00025	0.00023	230	<1	<6	32		<0.0005	<0.001	<0.00053	0.0111	0.0119	<0.0005	<0.0005	0.0025	138.6	0.07
PPSS	6/07/2012	10		0.015	0.00025	0.00019	220	<1	<6	33		<0.0005	<0.001	<0.00053	0.0064	0.0062	<0.0005	<0.0005	0.0014	130.5	0.12
PPSS	16/04/2013	7.1		0.023	0.00047	0.00047	280	<1	<6	36		0.0009	<0.001	<0.00053	0.0036	0.0034	<0.0005	<0.001	0.02	143.8	0.15
PPSS	7/11/2013	14		0.016	0.00006	0.00006	167	<1	<6	28		<0.0005	0.0014	<0.00053	0.0024	0.0021	<0.0005	<0.0005	0.0021	110.6	0.07
PPSS	20/08/2014	15.2	0.009	0.009	0.00007	<0.00005	38	<1	13	8.8		<0.0005	<0.001	0.0038	0.0018	0.0004	0.0038	0.001	<0.001	31.7	0.07
PPSS	29/10/2015																				
PPSS	26/01/2016																				
PPSS	17/08/2016																				
PPSS	18/01/2017																				
PPSS	16/02/2017	9.8			0.00015	0.00024	280	<1	<6	42		<0.0005	<0.001	<0.00053	0.0014	0.0016	<0.001	<0.0005	<0.001	165.3	0.11
PPSS	10/10/2017	29			0.00019	0.00018	121			22	<0.0005	<0.0005	<0.01		0.0016	0.0018	<0.0005	<0.0005	<0.001	87.4	0.11
PPSS	25/01/2018																				
PPSS	22/05/2018																				
PPSS	6/08/2018	14.1			0.0001	0.00011	94			18.9	<0.0005	<0.0005	<0.01		0.0005	0.0004	<0.0005	<0.0005	<0.02	71.7	0.1
PPSS	20/11/2018																				
PPSS	14/02/2019																				
PPSS	1/05/2019																				
PPSS	10/07/2019																				
PPSS	28/07/2019	14.8				0.00017	152			26		<0.0005				0.0017		<0.0005		101.9	0.1
PPSS	13/11/2019																				
PPSS	8/01/2020																				

Date	Data Point	NH3	Hard	FeA	FeS	FeT	PbA	PbS	MgSO	MnA	MnS	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N
PPSS	1/08/2010	<0.01	200	<0.02	<0.02	<0.021	<0.0001	<0.0001	8.9	0.4	0.41	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0006	0.0008	1.94	1.94	<0.002
PPSS	26/04/2011	<0.01	260	0.2	0.21	0.21	<0.0001	<0.0001	13.9	1.38	1.36	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0012	0.0012	22	22	0.02
PPSS	8/07/2011	<0.01	510	<0.02	<0.02	0.026	<0.0001	<0.0001	27	1.91	1.85	0.00012	<0.00008	<0.00008	<0.0002	<0.0002	0.0006	0.0011	1.28	1.29	<0.02
PPSS	13/10/2011	<0.01	710	0.07	<0.02	0.067	<0.0001	<0.0001	35	2.8	2.6	0.0001	<0.00008	0.00009	<0.0002	<0.0002	0.0009	0.0007	2.7	2.8	<0.02
PPSS	6/07/2012	<0.01	650	<0.02	<0.02	<0.021	<0.0001	<0.0001	26	1.55	1.54	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0029	0.0026	4.2	4.2	0.03
PPSS	16/04/2013	<0.01	860	0.05	0.05	0.054	<0.0001	<0.0001	35	0.91	1.12	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0025	0.0023	2.6	2.6	<0.02
PPSS	7/11/2013	<0.01	500	<0.02	<0.02	<0.021	<0.0001	<0.0001	19.2	0.197	0.194	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.0005	0.0005	2.2	2.2	<0.02
PPSS	20/08/2014	<0.01	115	0.68	0.08	3.2	0.0052	0.00016	4.8	0.25	0.097	<0.00008	<0.00008	0.0001	<0.0002	<0.0002	0.002	0.0008	1.09	1.09	0.004
PPSS	29/10/2015																				
PPSS	26/01/2016																				
PPSS	17/08/2016																				
PPSS	18/01/2017																				
PPSS	16/02/2017	<0.01	800	<0.02	<0.02	<0.021	<0.0001	<0.0001	23	0.89	1.05	<0.00008	<0.00008	<0.00008			0.0017	0.0022	2.4	2.4	<0.1
PPSS	10/10/2017	<0.01	350	<0.02	0.02		<0.0001	<0.0001	12	0.83	0.75		<0.00008	<0.00008			0.0025	0.003	1.15	1.15	<0.1
PPSS	25/01/2018																				
PPSS	22/05/2018																				
PPSS	6/08/2018	<0.00001	280	<0.02	<0.02		<0.0001	<0.0001	10.1	0.3	0.3		<0.00008	<0.00008			0.0019	0.0017	1.32	1.32	<0.1
PPSS	20/11/2018																				
PPSS	14/02/2019																				
PPSS	1/05/2019																				
PPSS	10/07/2019																				
PPSS	28/07/2019	0.000016	440		<0.02			<0.0001	15.6		0.62	<0.00008	<0.00008					0.0016	2.4	2.5	<0.1
PPSS	13/11/2019																				
PPSS	8/01/2020																				

Date	Data Point	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SeT	SI	SiO2	AgA	AgS	NaSO	SrA	SrS	SO4	SS	Sum Anion	Sum Cation	TiA	TiS
PPSS	1/08/2010	<0.002	<0.01	6.3	<0.004	3.4	<0.004	<0.001	<0.001		12.8	12.8	<0.0001	<0.0001	19.9	0.181	0.174	250		6.2	5	0.00012	0.00014
PPSS	26/04/2011	0.02	0.076	5.4	<0.004	3.6	<0.004	<0.001	<0.001		14.2	14.2	<0.0001	<0.0001	19.8	0.22	0.22	260		7.6	6.2	0.00017	0.00018
PPSS	8/07/2011	<0.02	<0.01	5.7	<0.004	5.1	<0.004	<0.001	<0.001		12.4	12.4	<0.0001	<0.0001	27	0.41	0.4	530		12	11.6	0.00021	0.00019
PPSS	13/10/2011	<0.02	0.087	5.4	<0.004	7	<0.004	<0.001	<0.001		12.9	12.9	<0.0001	<0.0001	47	0.57	0.59	830		18.6	16.6	0.00032	0.00035
PPSS	6/07/2012	0.03	0.11	5.5	<0.004	6.6	<0.004	<0.001	<0.001		15.4	15.4	<0.0001	<0.0001	48	0.53	0.54	720		16.3	15.3	0.00023	0.00024
PPSS	16/04/2013	<0.02	0.23	5.4	<0.004	7.5	<0.004	0.0016	0.0018		12.5	12.5	<0.0001	<0.0001	43	0.68	0.75	810	270	18.2	19.3	0.00028	0.00029
PPSS	7/11/2013	<0.02	0.018	6.3	<0.004	6.3	<0.004	0.0011	<0.001		13.1	13.1	<0.0001	<0.0001	37	0.38	0.36	560		12.9	11.7	0.00017	0.00017
PPSS	20/08/2014		0.042	6.2	0.106	3.6	0.006	<0.001	<0.001		5.6		<0.0001	<0.0001	6.9	0.103	0.092	116		3	2.7	0.00006	<0.00005
PPSS	29/10/2015																						
PPSS	26/01/2016																						
PPSS	17/08/2016																						
PPSS	18/01/2017																						
PPSS	16/02/2017		0.064	5.7	0.004	9.9	<0.004	0.001	<0.001		17		<0.0001	<0.0001	81			960		22	19.7	0.00019	0.00018
PPSS	10/10/2017		<0.01	5.3	<0.004	7.6		<0.002	0.0011		17.6		<0.0001	<0.0001	26			420		9.9	8.4	0.00015	0.00016
PPSS	25/01/2018																						
PPSS	22/05/2018																						
PPSS	6/08/2018		<0.01	5.9	<0.004	3.9		<0.001	<0.001		18		<0.0001	<0.0001	22			320		7.5	6.6	0.00011	0.00011
PPSS	20/11/2018																						
PPSS	14/02/2019																						
PPSS	1/05/2019																						
PPSS	10/07/2019																						
PPSS	28/07/2019		0.131	5.7		4.6		<0.001	<0.001		18.9			<0.0001	36			500		11.4	10.6		0.00016
PPSS	13/11/2019																						
PPSS	8/01/2020																						

Date	Data Point	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
PPSS	1/08/2010	<0.0005	<0.0005	<0.0005	<0.0005	410	<0.1	<3	0.34	<0.00002	<0.00002	<0.001	0.0054	0.0062
PPSS	26/04/2011	<0.0005	<0.0005	<0.0005	<0.0005	490	0.22	<3	0.72	0.00003	0.00002	0.0041	0.0143	0.0182
PPSS	8/07/2011	<0.0005	<0.0005	<0.0005	<0.0005	890	0.1	<3	0.45	0.00003	0.00002	<0.001	0.012	0.0117
PPSS	13/10/2011	<0.0005	<0.0005	<0.0005	<0.0005	1,150	0.22	<3	0.46	0.00004	0.00003	0.0023	0.0164	0.0162
PPSS	6/07/2012	<0.0005	<0.0005	<0.0005	<0.0005	1,110	0.17	<3	0.43	0.00002	0.00003	<0.001	0.011	0.0124
PPSS	16/04/2013	<0.0005	<0.0005	<0.0005	<0.0005	1,240	0.5	<3	0.38	0.00003	0.00003	0.004	0.0197	0.022
PPSS	7/11/2013	<0.0005	<0.0005	<0.0005	<0.0005	880	0.3	<3	0.42	<0.00002	<0.00002	<0.001	0.0046	0.0048
PPSS	20/08/2014	<0.0005	<0.0005	<0.0005	<0.0005	210	0.82	125	68	0.00008	<0.00002	<0.001	0.028	0.0078
PPSS	29/10/2015													
PPSS	26/01/2016													
PPSS	17/08/2016													
PPSS	18/01/2017													
PPSS	16/02/2017					1,390	0.38	<3		0.00004	0.00003	<0.001	0.0126	0.0187
PPSS	10/10/2017						<0.1	<3		0.00002	0.00002	<0.001	0.012	0.0118
PPSS	25/01/2018													
PPSS	22/05/2018													
PPSS	6/08/2018						0.11	<3		<0.00002	0.00002	0.02	0.0072	0.0065
PPSS	20/11/2018													
PPSS	14/02/2019													
PPSS	1/05/2019													
PPSS	10/07/2019													
PPSS	28/07/2019							<3			<0.00002	0.06		0.0078
PPSS	13/11/2019													
PPSS	8/01/2020													

8.2 Pond Data - FSPCP/FSPCPMH

Date	Data Point	FLS Comments	FLS EC (mS/m)	FLS pH	FLS Temp	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba	BaS	Bicarb	BA	BS	CdA	CdS	CaSO	Carb	COD	Cl	CrA	CrS	Cr6col	Cr-T	CoA	CoS
FSPMH	25/10/2011						<1	<1	200	200	<0.001	<0.001	<0.005	<0.005			<1			0.015	0.0161	300			10.7			<0.01		1.55	1.57
FSPMH	21/11/2011						<1	<1	300	103	<0.001	0.0006	<0.005	0.002			<1			0.0097	0.0115	280			19.4			<0.01		1.01	0.93
FSPMH	19/12/2011		135	3.05	17.2		<1	<1	24	28	0.0005	0.0003	0.0015	<0.001			<1			0.0033	0.0029	179			5.9			<0.01		0.24	0.23
FSPMH	25/01/2012		158.7	3.74	20.2		<1	<1	19.6	22	0.0006	0.0006	0.002	<0.001			<1			0.0035	0.0039	170			15.2			<0.01		0.25	0.25
FSPMH	20/02/2012		170.5	4.1	20.4		<1	<1	12	13.6	<0.0004	<0.0004	<0.002	<0.002			<1			0.0027	0.0026	240			9.7			<0.01		0.21	0.22
FSPMH	27/03/2012		126.4	4.18	17.4		<1	<1	24	21	0.0043	0.0044	<0.001	<0.001			<1			0.0035	0.0035	350			18.2			<0.01		0.26	0.22
FSPMH	26/04/2012		112	3.9	15.4		<1	<1	8.9	8.4	<0.0002	<0.0002	<0.001	<0.001			<1			0.0021	0.0025	330			13.4			<0.01		0.159	0.16
FSPMH	29/05/2012		109.3	3.48	14.5		<1	<1	35	37	0.0005	<0.0004	0.003	<0.002			<1			0.0048	0.0048	460			14.3			<0.01		0.35	0.39
FSPMH	29/06/2012		109.3	4.08	11.1		<1	<1	24	23	<0.0004	<0.0004	<0.002	<0.002			<1			0.0035	0.0036	340			14.6			<0.01		0.28	0.25
FSPMH	30/08/2012				11.3																										
FSPMH	18/01/2013		145.8	3.41	17.2	<1	<1	<1	23	28	<0.0002	<0.0002	0.0011	<0.001	0.04	0.035	<1		0.056	0.0035	0.0031	350	<1	<6	11.2		0.0038	<0.001	0.0043	0.197	0.21
FSPMH	1/05/2013					26	<1	<1	35	31	<0.0002	<0.0002	0.001	<0.001	0.036	0.051	<1		0.027	0.0038	0.004	280	<1	<6	13.6		0.0099	<0.001	0.0107	0.23	0.25
FSPMH	8/07/2013		215	3.92	13.4	<1	<1	<1	19.4	17.4	0.0006	<0.0004	<0.002	<0.002	0.033	0.025	<1		0.036	0.0027	0.0025	370	<1	<6	11.1		0.0029	0.001	0.0034	0.165	0.158
FSPMH	22/10/2013		136	4.47	14.4	<1	<1	<1	5.2	4.9	0.0004	0.0003	0.001	<0.001	0.02	0.038	<1		0.022	0.00132	0.00131	220	<1	<6	12.4		<0.0005	<0.001	0.00079	0.067	0.066
FSPMH	1/04/2014					<1	<1	<1	36	37	<0.0004	<0.0004	<0.002	<0.002	0.035	0.023	<1		0.031	0.004	0.0039	390	<1	<6	13.2		0.0025	<0.001	0.0024	0.26	0.27
FSPMH	30/07/2014		90.2	4.11	11.7	<1	1.2	1.2	7.1	7	0.0003	0.0003	<0.001	<0.001		0.034	1.5	0.017	0.018	0.0011	0.00117	114	<1	<6	16.3		0.0008	<0.001	0.0026	0.06	0.062
FSPMH	2/10/2014		121.5	4.2	13.5	<1	<1	<1	8	7.8	<0.0002	<0.0002	<0.001	<0.001		0.025	<1	0.015	0.014	0.0011	0.0012	193	<1	8	12.5		0.001	0.0019	0.00167	0.07	0.072
FSPMH	23/01/2015		102	4.5	19.3	<1	<1	<1	10.8	10.6	<0.0002	<0.0002	<0.001	<0.001		0.03	<1	0.023	0.021	0.00148	0.00145	115	<1	<6	14.9		0.0005	<0.001	0.00065	0.089	0.089
FSPMH	23/04/2015					26	<1	<1	39	39	<0.0002	<0.0002	0.0014	<0.001		0.0155	<1	0.013	0.017	0.0034	0.0032	270	<1	<6	8.2		0.0094	<0.001	0.0105	0.22	0.24
FSPMH	17/07/2015					<1	<1	<1	12.9	13	<0.0002	<0.0002	0.0011	<0.001		0.022	<1	0.012	0.012	0.0015	0.0015	260	<1	<6	8.4		0.0022	<0.001	0.0025	0.089	0.086
FSPMH	29/10/2015			4.35	15.4	<1	<1	<1	10.4	10.1	0.0004	<0.0002	0.006	<0.001		0.029	<1	0.016	0.014	0.00134	0.00138	143	<1	7	13.2		0.0007	<0.001	0.0071	0.082	0.076
FSPMH	15/01/2016			3.6	20.1	<1	<1	<1	19.6	19.4	<0.0002	<0.0002	<0.001	<0.001		0.026	<1	0.018	0.016	0.0022	0.0022	198	<1	6	9.4		0.0027	<0.001	0.0028	0.128	0.13
FSPMH	21/04/2016			3.45	17.7	14.4	<1	<1	16.4	16.3	<0.0002	<0.0002	<0.001	<0.001		0.0181	<1	0.013	0.014	0.0015	0.00148	149	<1	<6	5.3		0.0041	<0.001	0.004	0.109	0.106
FSPMH	17/08/2016		109.5	4.15	12.6						<0.0002	<0.0002	0.0019	<0.001						0.00121	0.0012	143						<0.01			
FSPMH	18/01/2017		109	4	17.9	<1	<1	<1	18.6	19.3	<0.0002	<0.0002	0.0011	<0.001			<1			0.0025	0.0025	320	<1	<6	10.4		0.0013	<0.001	0.00193	0.189	0.187
FSPMH	26/04/2017		69.4	3.9	19	<1	<1	<1	9.5	9.2	<0.0002	<0.0002	0.001	<0.001			<1			0.001	0.00099	81			10.6	0.0017	0.0012	<0.01		0.069	0.067
FSPMH	26/07/2017		80.4	4.15	14.2	<1	<1	<1	8.2	8.2	<0.0002	0.0002	<0.001	<0.001			<1			0.00077	0.00072	127			9.4	0.0013	0.0013	<0.01		0.051	0.053
FSPMH	10/10/2017		54.4	4	16.8	<1	12	12	3.3	3.1	<0.0002	<0.0002	<0.001	<0.001			14.6			0.00039	0.0004	68			4.3	0.0007	0.0007	<0.01		0.025	0.027
FSPMH	25/01/2018		132.2	3.5	25.1	20	<1	<1	29	28	<0.0002	<0.0002	0.0015	0.0012			<1			0.0025	0.0024	178			12.3	0.0082	0.0084	<0.01		0.185	0.19
FSPMH	22/05/2018					32	<1	<1	15.9	16.9	<0.0002	<0.0002	0.0017	<0.001			<1			0.00127	0.00135	114			11	0.0078	0.0075	<0.01		0.095	0.092
FSPMH	6/08/2018					<1	<1	<1	4.5	4.2	<0.0002	<0.0002	<0.001	<0.001			<1			0.00038	0.00041	57			3.5	0.0012	0.0015	<0.01		0.029	0.03
FSPMH	20/11/2018		610	3.59	17.9	<1	<1	<1	5.4	5.1	<0.0002	<0.0002	<0.001	<0.001			<1			0.00053	0.00056	57			8	0.0011	0.0014	<0.01		0.039	0.036
FSPMH	14/02/2019		89	3.53	19.6	<1	<1	<1	11.7	11.6	<0.0002	<0.0002	<0.001	<0.001			<1			0.00089	0.00084	91			13	0.0014	0.0019	<0.001		0.075	0.076
FSPMH	1/05/2019		270	3.04	16.5	66	<1	<1	88	89	<0.0004	<0.0004	0.005	0.003			<1			0.004	0.004	240			<5	0.045	0.043	<0.001		0.33	0.34
FSPMH	10/07/2019		90.5	3.66	11.7	<1	<1	<1	11.1	10.9	<0.0002	<0.0002	<0.001	<0.001			<1			0.00059	0.00062	57			5	0.002	0.0021	<0.001		0.047	0.046
FSPMH	13/11/2019		104.8	3.39	17.8	24	<1	<1	17.1	17.5	<0.0002	<0.0002	<0.001	<0.001			<1			0.00138	0.00132	161			9.8	0.0063	0.0066	<0.001		0.097	0.103
FSPMH	8/01/2020		200	3.46	19	24	<1	<1	47	45	<0.0002	<0.0002	<0.001	<0.001			<1			0.0029	0.0027	250			11	0.0087	0.0093	<0.001		0.23	0.22

Date	Data Point	CuA	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeA	FeS	FeT	PbA	PbS	MgSO	MnA	MnS	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS
FSPMH	25/10/2011	0.53	0.53		435		<0.01	2,200	9.2	8.6		0.0043	0.0044	350	300	290	0.00077	0.00058		<0.001	<0.001	3.4	3.4					0.86	3.5	0.009	4.6	<0.004	0.01	0.008
FSPMH	21/11/2011	0.29	0.25		333		<0.01	1,600	3.3	2.8		0.0032	0.003	220	194	180	0.00025	0.00011		<0.001	<0.0004	2.1	1.87					1.6	3.7	<0.004	7.6	<0.004	<0.005	0.007
FSPMH	19/12/2011	0.135	0.129		160.1		<0.01	690	8.9	7.1		0.0027	0.0026	60	35	32	0.00028	0.00021		<0.0002	<0.0002	0.38	0.37					3.7	3.4	0.008	4.4	<0.004	0.0024	0.0025
FSPMH	25/01/2012	0.079	0.054		155.7		<0.01	730	4.7	3.3		0.00198	0.00171	75	44	47	0.0056	0.0059		<0.0002	<0.0002	0.43	0.42					1.2	4.2	0.018	5.6	<0.004	0.0041	0.0031
FSPMH	20/02/2012	0.072	0.073		164.7		<0.01	830	3.5	3.3		0.0019	0.0017	57	27	32	0.00055	0.00031		<0.0004	<0.0004	0.3	0.3					2.3	4.1	0.004	5.2	<0.004	0.002	0.003
FSPMH	27/03/2012	0.084	0.075		232		<0.01	1,160	11.1	9.8		0.0048	0.0046	68	36	33	0.0021	0.00176		0.0003	<0.0002	0.35	0.3					2.9	4	0.005	9	<0.004	0.0044	0.0037
FSPMH	26/04/2012	0.07	0.068		201		<0.01	1,050	1.03	0.99		0.00179	0.00183	55	26	26	0.00154	0.00155		<0.0002	<0.0002	0.21	0.21					1.4	4	<0.004	5.9	<0.004	0.0028	0.0022
FSPMH	29/05/2012	0.179	0.18		283		<0.01	1,560	11.3	9.5		0.0092	0.0101	100	39	42	0.00144	0.00143		<0.0004	<0.0004	0.5	0.51					1.7	3.6	0.058	6.8	<0.004	0.005	0.003
FSPMH	29/06/2012	0.123	0.121		230		<0.01	1,160	7	6.2		0.0062	0.0058	73	30	30	0.00064	0.00057		<0.0004	<0.0004	0.37	0.34					1.03	3.7	0.006	5.3	<0.004	0.003	0.003
FSPMH	30/08/2012				81.5																							0.45	4.4					
FSPMH	18/01/2013	0.1	0.102	0.0027	232	0.49	<0.01	1,140	1.71	1.15	1.83	0.0079	0.0078	67	19.5	20	0.00065	0.00049	0.00067	<0.0002	<0.0002	0.28	0.29	68	68		<0.02	0.61	3.7	<0.004	4.7	<0.004	0.004	0.0034
FSPMH	1/05/2013	0.087	0.09	0.0028	213	0.58	<0.01	1,000	10.4	11.2	12.7	0.0088	0.008	73	20	23	0.00135	0.002	0.0022	<0.0002	<0.0002	0.3	0.31	48	48		0.02	0.43	3.5	<0.004	5	<0.004	0.0042	0.0051
FSPMH	8/07/2013	0.094	0.097	0.064	223	0.48	<0.01	1,250	5	4.8	5	0.0097	0.0089	82	15.3	15.8	0.00109	0.00129	0.00155	<0.0004	<0.0004	0.22	0.22	39	39		0.05	0.37	4.1	0.004	5.7	<0.004	0.005	0.004
FSPMH	22/10/2013	0.0152	0.0137	0.0019	146.1	0.49	<0.01	760	1.11	0.09	1.07	0.0066	0.0051	47	8.9	9.3	0.00051	0.00063	0.00086	<0.0002	<0.0002	0.093	0.091	18.7	18.8	0.03	0.03	0.166	4.5	0.014	4.5	<0.004	0.0025	0.0023
FSPMH	1/04/2014	0.092	0.094	0.0018	247	0.82	<0.01	1,410	0.66	0.55	0.64	0.0113	0.0116	109	16.3	16.7	0.00015	0.00024	0.0002	<0.0004	<0.0004	0.35	0.36	21	21		<0.02	0.36	3.9	<0.004	4.1	<0.004	0.003	0.004
FSPMH	30/07/2014	0.0154	0.0158	<0.001	93.4	0.38	<0.01	410	1.35	1.24	1.75	0.009	0.0085	31	7.4	8	0.00097	0.00101	0.00151	<0.0002	<0.0002	0.077	0.083	3.9	3.9	0.03		0.26	4.7	0.007	4	<0.004	<0.001	<0.001
FSPMH	2/10/2014	0.0191	0.019	<0.001	123.6	0.38	<0.01	630	1.08	0.65	1.32	0.003	0.0027	35	7.5	7.6	0.00189	0.0024	0.0029	<0.0002	<0.0002	0.093	0.096	4	4	<0.02		0.141	4.4	0.007	3.2	<0.004	0.0013	0.0014
FSPMH	23/01/2015	0.029	0.029	0.0014	102.7	0.46	<0.01	430	0.35	0.23	0.39	0.0055	0.0055	35	12.1	11.9	0.00078	0.00075	0.00085	<0.0002	<0.0002	0.12	0.119	3	3	<0.1		0.047	4.1	0.005	4.6	<0.004	0.0015	<0.001
FSPMH	23/04/2015	0.117	0.121	0.0028	202	0.54	<0.01	940	14.5	12.9	12.8	0.0087	0.0072	66	13.2	12	0.0009	0.00104	0.00137	<0.0002	<0.0002	0.29	0.31	16.1	16.1	<0.1		0.71	3.5	0.006	2.9	<0.004	0.0017	0.0026
FSPMH	17/07/2015	0.042	0.041	0.005	153.1	0.39	<0.01	790	1.53	1.2	1.55	0.008	0.0077	33	4.9	5.1	0.00011	0.00021	0.00038	<0.0002	<0.0002	0.12	0.113	40	40	0.14		0.89	4.1	<0.004	3.3	<0.004	0.0017	0.0015
FSPMH	29/10/2015	0.029	0.027	0.0018	112	0.37	<0.01	480	2.8	0.13	4.7	0.032	0.0158	31	7.4	6.9	0.00042	0.00125	0.00152	<0.0002	<0.0002	0.107	0.103	10.7	10.7	<0.1		0.183	4.4	0.004	4.4	<0.004	0.0014	0.002
FSPMH	15/01/2016	0.057	0.056	0.0012	152.6	0.55	<0.01	660	0.82	0.62	0.88	0.024	0.024	41	8.6	8.7	0.0003	0.00039	0.00043	<0.0002	<0.0002	0.172	0.174	11.7	11.7	<0.1		0.154	3.8	<0.004	3.4	<0.004	0.0024	0.0024
FSPMH	21/04/2016	0.053	0.052	<0.001	116	0.48	<0.01	490	2.3	2.1	2.4	0.0065	0.0066	30	4.7	5	0.00083	0.00108	0.00113	<0.0002	<0.0002	0.145	0.142	1.44	1.44	<0.1		0.069	3.7	<0.004	2.1	<0.004	0.0013	0.0011
FSPMH	17/08/2016	0.03	0.031		109.4			470	2.7	1.9		0.0079	0.0078	28	5.8	5.6	0.00182	0.0024				0.106	0.107	2	2	<0.1		0.26	3.9	<0.004		<0.004	0.0026	0.0025
FSPMH	18/01/2017	0.047	0.047	0.0017	185.7	0.56	<0.01	1,010	0.89	0.24	1.07	0.0088	0.0081	52	8.4	8.9	0.00019	0.00027	0.00028			0.25	0.25	1.16	1.19	<0.1		0.129	4.2	0.01	4	<0.004	0.0031	0.0038
FSPMH	26/04/2017	0.0169	0.0181	<0.001	78	0.32	<0.01	300	2.3	0.75		0.0065	0.0047	23	6.5	6.5		0.0027	0.0029			0.083	0.083	2.4	2.4	<0.1		0.22	3.9	0.013	3.7		0.0013	0.0013
FSPMH	26/07/2017	0.052	0.054	0.141	93.2	0.27	<0.01	410	1.86	1.79		0.00187	0.0018	22	3.1	3.1		0.00084	0.00124			0.073	0.074	1.21	1.23	<0.1		0.24	4.1	<0.004	2.6		0.0012	<0.001
FSPMH	10/10/2017	0.0134	0.0133	<0.001	51.5	0.18	<0.01	210	0.63	0.34		0.00168	0.00162	9.7	1.4	1.28		0.00036	0.0004			0.036	0.038	0.64	0.64	<0.1		0.047	4.2	<0.004	2.4		<0.001	<0.001
FSPMH	25/01/2018	0.111	0.106	0.0088	151	0.48	<0.01	620	2.1	1.67		0.0139	0.0133	42	9.9	9.7		0.00162	0.00169			0.25	0.26	1.45	1.47	<0.1		0.21	3.5	0.005	3.8		0.0029	0.003
FSPMH	22/05/2018	0.048	0.047	<0.001	109.3	0.37	<0.01	410	6	3.8		0.0044	0.0043	31	5	5.4		0.00183	0.0021			0.123	0.12	1.61	1.62	<0.1		0.1	3.5	0.005	2.8		0.0016	0.0016
FSPMH	6/08/2018	0.0136	0.0135	<0.02	48.7	0.17	<0.00001	184	1.08	1.04		0.00182	0.00174	10.3	1.37	1.23		0.0002	0.00028			0.04	0.041	0.53	0.54	<0.1		0.068	4.1	0.006	0.97		<0.001	<0.001
FSPMH	20/11/2018	0.013	0.0118	<0.02	56.6	0.22	<0.00001	200	0.92	0.38		0.0047	0.0046	14.5	3.2	2.9		0.0009	0.00098			0.051	0.045	0.77	0.77	<0.1		0.077	3.9	0.011	2.2		<0.001	<0.001
FSPMH	14/02/2019	0.0162	0.0173	<0.02	93	0.36	<0.00001	340	0.66	0.57		0.0172	0.0176	27	5.6	5.7		0.00069	0.00073			0.093	0.097	0.3	0.3	<0.1		0.25	3.8	<0.004	5.6		<0.001	<0.001
FSPMH	1/05/2019	0.192	0.2	<0.02	214	0.38	<0.00001	900	17.5	16.7		0.0189	0.0183	74	11.8	13.2		0.00014	0.00016			0.47	0.48	0.69	0.7	<0.1		0.167	3.2	0.036	2.7		0.002	0.002
FSPMH	10/07/2019	0.0193	0.0198	<0.02	65	0.24	<0.00001	220	1.71	1.74		0.0044	0.0043	18.7	2.8	3		0.00145	0.00154			0.061	0.065	0.61	0.61	<0.1		0.053	3.7	<0.004	1.94		<0.001	<0.001
FSPMH	13/11/2019	0.045	0.048	<0.02	113.6	0.34	<0.00001	530	2	1.49		0.0182	0.0185	31	5.1	5.2		0.00052	0.00056			0.138	0.139	0.39	0.39	<0.1		0.128	3.6	<0.004	2.7		<0.001	<0.001
FSPMH	8/01/2020	0.076	0.071	<0.02	177.3	0.52	<0.00001	910	2.4	2.3		0.0172	0.0174	72	9.7	10.2		0.00025	0.00027			0.33	0.34	0.24	0.24	<0.1		0.135	3.5	<0.004	2.6		0.001	0.0016

Date	Data Point	SeT	SI	SiO2	AgA	AgS	NaSO	SrA	SrS	SO4	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
FSPMH	25/10/2011				<0.0005	<0.0005	15.5			3,700	78	79									9				0.0011	4.4	4.5
FSPMH	21/11/2011				<0.0005	<0.0002	30			2,500	53	52									<3				0.0096	2.8	2.6
FSPMH	19/12/2011				<0.0001	<0.0001	11.2			920	19.3	19.7									9				0.0058	0.93	0.91
FSPMH	25/01/2012				<0.0001	<0.0001	19.1			1,050	22	20									16				0.029	0.87	0.87
FSPMH	20/02/2012				<0.0002	<0.0002	17.3			950	20	20									3				0.0107	0.6	0.62
FSPMH	27/03/2012				<0.0001	<0.0001	48			1,330	28	30									12				0.037	0.81	0.75
FSPMH	26/04/2012				<0.0001	<0.0001	22			1,110	23	24									3				0.003	0.45	0.44
FSPMH	29/05/2012				<0.0002	<0.0002	30			1,370	29	39									31				0.0041	1.23	1.37
FSPMH	29/06/2012				<0.0002	<0.0002	26			1,130	24	29									9				0.0019	0.99	0.93
FSPMH	30/08/2012																										
FSPMH	18/01/2013			41	<0.0001	<0.0001	21	1.02	1	1,290	32	28	0.00083	0.00086	<0.0005	<0.0005	0.004	0.0039	2,100	<0.1	<3	0.84	0.00154	0.00164	<0.001	0.93	0.95
FSPMH	1/05/2013			40	<0.0001	<0.0001	20	0.7	0.85	1,170	28	26	0.00071	0.00073	0.001	0.001	<0.0005	<0.0005	1,940	<0.1	5	7.2	0.00154	0.00161	<0.001	1	1.09
FSPMH	8/07/2013			29	<0.0002	<0.0002	25	1.15	1.09	1,280	30	29	0.00065	0.00068	<0.001	<0.001	0.0027	0.0025	2,100	0.21	4	6.1	0.00083	0.00077	0.03	0.82	0.8
FSPMH	22/10/2013		23	23	<0.0001	<0.0001	18.2	0.6	0.62	760	17.6	17	0.00041	0.00044	<0.0005	<0.0005	0.003	0.0029	1,280	<0.1	67	44	0.00049	0.00041	<0.001	0.28	0.27
FSPMH	1/04/2014			46	<0.0002	<0.0002	15.6	0.87	0.9	1,650	36	34	0.0006	0.0006	<0.001	<0.001	<0.001	<0.001	2,600	0.11	<3	0.66	0.00156	0.00159	0.0035	1.34	1.37
FSPMH	30/07/2014		28		<0.0001	<0.0001	14.9	0.24	0.26	480	10.8	10.1	0.00044	0.00045	<0.0005	<0.0005	<0.0005	<0.0005	780	0.27	9	8.4	0.00031	0.00031	<0.001	0.33	0.33
FSPMH	2/10/2014		22		<0.0001	<0.0001	12.1	0.33	0.33	720	15.7	14.4	0.00043	0.00041	<0.0005	<0.0005	<0.0005	<0.0005	1,090	0.12	7	6.2	0.00037	0.00034	<0.001	0.29	0.3
FSPMH	23/01/2015		36		<0.0001	<0.0001	15.9	0.26	0.26	490	10.9	11.2	0.00063	0.00062	<0.0005	<0.0005	<0.0005	<0.0005	880	0.15	<3	0.89	0.00048	0.00048	<0.001	0.48	0.48
FSPMH	23/04/2015		43		<0.0001	<0.0001	10.9	0.5	0.49	1,190	26	25	0.00075	0.00069	0.0007	0.0006	0.0009	0.0008	1,940	0.38	14	12.4	0.00159	0.00138	0.0015	1.21	1.22
FSPMH	17/07/2015		19.5		<0.0001	<0.0001	11.7	0.6	0.66	740	18.4	18.2	0.00055	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	1,330	0.71	5	6.2	0.00051	0.00055	0.0032	0.56	0.55
FSPMH	29/10/2015		31		<0.0001	<0.0001	13.9	0.3	0.31	600	13.6	11.9	0.00049	0.00046	<0.0005	<0.0005	<0.0005	<0.0005	930	0.24	27	10.1	0.0004	0.00038	<0.001	0.46	0.45
FSPMH	15/01/2016		44		<0.0001	<0.0001	11.6	0.41	0.41	900	19.9	16.5	0.00059	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	1,420	0.19	<3	2.4	0.00091	0.00093	<0.001	0.72	0.73
FSPMH	21/04/2016		24		<0.0001	<0.0001	6.3	0.22	0.23	640	13.7	12.5	0.00039	0.00038	<0.0005	<0.0005	<0.0005	<0.0005	1,010	0.14	4	5.8	0.00064	0.00066	<0.001	0.56	0.58
FSPMH	17/08/2016	0.0018			<0.0001	<0.0001															<3				<0.001	0.43	0.44
FSPMH	18/01/2017		37		<0.0001	<0.0001	20			1,200	25	24	0.00046	0.00047					1,850	0.3	3		0.00082	0.00082	<0.001	0.79	0.79
FSPMH	26/04/2017		31		<0.0001	<0.0001	12.7			370	8.1	8	0.00061	0.00059						0.31	21		0.00035	0.00038	<0.001	0.3	0.3
FSPMH	26/07/2017		23		<0.0001	<0.0001	12.5			480	10.3	10	0.00037	0.00039						0.44	3		0.00026	0.00025	0.0152	0.27	0.29
FSPMH	10/10/2017		12.7		<0.0001	<0.0001	4.5			240	5.3	4.9	0.00023	0.00022						<0.1	3		0.00013	0.00012	<0.001	0.149	0.151
FSPMH	25/01/2018		44		<0.0001	<0.0001	15.3			770	16.5	17	0.00076	0.00073						0.28	4		0.00139	0.00133	<0.001	0.9	0.91
FSPMH	22/05/2018		34		<0.0001	<0.0001	10.7			560	12.1	11.3	0.00045	0.00044						0.17	13		0.00056	0.00053	<0.001	0.45	0.43
FSPMH	6/08/2018		11.5		<0.0001	<0.0001	3.5			220	4.8	4.5	0.00016	0.00016						0.14	<3		0.00012	0.00014	<0.02	0.16	0.159
FSPMH	20/11/2018		23		<0.0001	<0.0001	6.6			250	5.5	5.2	0.00037	0.00036						0.16	6		0.00021	0.00022	<0.02	0.199	0.21
FSPMH	14/02/2019		53		<0.0001	<0.0001	17.1			460	10	9.4	0.00078	0.00077						0.28	<3		0.00042	0.0004	<0.02	0.41	0.42
FSPMH	1/05/2019		43		<0.0002	<0.0002	8.7			1,510	32	30	0.00054	0.00056						0.44	<3		0.0028	0.0026	<0.02	1.79	1.81
FSPMH	10/07/2019		24		<0.0001	<0.0001	6.9			290	6.3	6.3	0.00034	0.00035						0.24	<3		0.00032	0.0003	<0.02	0.26	0.26
FSPMH	13/11/2019		26		<0.0001	<0.0001	8.8			670	14.3	13.5	0.00053	0.00053						0.21	<3		0.0006	0.00059	<0.02	0.48	0.47
FSPMH	8/01/2020		59		<0.0001	<0.0001	12.1			1,190	25	25	0.00057	0.00054						0.2	4		0.00127	0.00128	<0.02	1.18	1.14

8.3 Bore Data

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	AsT	BaS	Bicarb	BS	CdS	CaS	Cl
18/01/2010	P67D		6.64	15.08	16.9	5.4				43	<0.003	<0.0002	<0.0002				52			5.4	11
17/02/2010	P67D				17.8					45	<0.003	<0.0002	<0.0002				55			5.6	11
5/03/2010	P67D		6.84	12.99	17.8	5.7				43	<0.003	<0.0002	<0.0002				53			5.6	11
14/04/2010	P67D		6.76	12.53	16	5.85				44	<0.003	<0.0002	<0.0002				54			5.8	10.7
30/05/2010	P67D				15.3					43	<0.003	<0.0002	<0.0002				52			5.7	10.4
29/06/2010	P67D				14.8				44	44	<0.003	<0.0002	<0.0002				54			6	11.1
30/07/2010	P67D		7.08	12.58	15	4.6			46	46	<0.003	<0.0002	<0.0002			0.098	56	0.019	<0.00005	6	10.6
31/08/2010	P67D		6.55	12.24	15.2	4.6		<1	42	42	<0.003	<0.0002	<0.0002			0.041	51	0.021	<0.00005	5.8	10.4
20/09/2010	P67D				14.2			<1	41	41	0.065	<0.0002	<0.0002			0.026	50	0.021	<0.00005	5.6	10.2
14/10/2010	P67D		5.74	11.39	15.8	4.85		<1	44	44	<0.003	<0.0002	<0.0002			0.103	53	0.021	<0.00005	5.5	10.5
8/11/2010	P67D		5.6	11.94	15.8	5.25		<1	42	42	<0.003	<0.0002	<0.0002			0.057	51	0.019	<0.00005	5.4	10.5
15/12/2010	P67D				16.3			<1	41	41	<0.003	<0.0002	<0.0002			0.039	49	0.022	<0.00005	5.5	11.3
14/01/2011	P67D				15.9			<1	40	40	<0.003	<0.0002	<0.0002			0.035	48	0.018	<0.00005	5.4	10.7
24/02/2011	P67D				17.1			<1	42	42	<0.003	<0.0002	<0.0002			0.035	51	0.021	<0.00005	5.6	10.8
21/03/2011	P67D				15.7			<1	42	42	<0.003	<0.0002	<0.0002			0.039	52	0.021	<0.00005	5.5	10.9
28/04/2011	P67D				15.7			<1	42	42	<0.003	<0.0002	<0.0002			0.046	51	0.025	<0.00005	5.7	10.4
20/05/2011	P67D		6.38	14.39	15.9	4.7		<1	43	43	0.006	<0.0002	<0.0002			0.052	52	0.023	<0.00005	5.9	10.9
28/06/2011	P67D				15.8			<1	43	44	<0.003	<0.0002	<0.0002			0.05	53	0.02	<0.00005	6.1	10
21/07/2011	P67D				14.8			<1	45	45	<0.003	<0.0002	<0.0002			0.045	54	0.022	<0.00005	5.7	11.1
23/08/2011	P67D				15.5			<1	45	45	<0.003	<0.0002	<0.0002			0.08	55	0.021	<0.00005	5.9	10.8
19/09/2011	P67D				15.3			<1	43	43	<0.003	<0.0002	<0.0002			0.034	53	0.02	<0.00005	5.9	10.9
7/10/2011	P67D		6.26	11.19	15.8	5.1		<1	43	43	<0.003	<0.0002	<0.0002			0.054	52	0.022	<0.00005	5.8	10.8
7/11/2011	P67D		6.57	10.86	16.4	5.42		<1	42	42	<0.003	<0.0002	<0.0002			0.046	51	0.02	<0.00005	5.6	11
16/12/2011	P67D		6.38	13.76	15.6	4.8		<1	42	42	<0.003	<0.0002	<0.0002			0.042	51	0.024	<0.00005	5.7	11.1
23/01/2012	P67D		6.48	13.3	15	4.8		<1	42	42	<0.003	<0.0002	<0.0002			0.036	52	0.024	<0.00005	5.4	10.5
9/02/2012	P67D		6.63	13.68	16.7	5.25		<1	43	43	0.007	<0.0002	<0.0002			0.078	52	0.023	<0.00005	5.8	10.9
5/03/2012	P67D		6.21	10.97	17.1	5.1		<1	42	42	<0.003	<0.0002	<0.0002			0.059	52	0.02	<0.00005	5.5	10.9
5/04/2012	P67D		6.3	11.2	16.6	4.9		<1	43	43	<0.003	<0.0002	<0.0002			0.054	53	0.024	<0.00005	6	10.9
18/05/2012	P67D		6.57	14.69	15.8	4.85		<1	45	45	<0.003	<0.0002	<0.0002			0.043	55	0.027	<0.00005	5.7	11.1
27/06/2012	P67D		7.17	12.48	14.1	5.25		<1	47	47	<0.003	<0.0002	<0.0002			0.073	58	0.025	<0.00005	6.3	12.3
27/06/2012	P67D																				
18/07/2012	P67D				15.8	4.65		<1	46	46	0.004	<0.0002	<0.0002			0.044	56	0.026	<0.00005	6.4	11.2
18/07/2012	P67D		6.46	13.46	15.8																
31/08/2012	P67D		6.33	10.86	16	4.9		<1	43	43	<0.003	<0.0002	<0.0002			0.038	53	0.021	<0.00005	6	10.3
31/08/2012	P67D																				
17/09/2012	P67D		6.48	13.84	15.1	4.7		<1	43	43	<0.003	<0.0002	<0.0002			0.026	52	0.025	<0.00005	6.2	10.8
17/09/2012	P67D																				
15/10/2012	P67D		6.51	13.51	15.5	4.95		<1	43	43	<0.003	<0.0002	<0.0002			0.03	53	0.021	<0.00005	6.2	10.7
15/10/2012	P67D																				
19/11/2012	P67D					5.45															
19/11/2012	P67D		5.87	11.24	15.1			<1	44	44	<0.003	<0.0002	<0.0002			0.04	53	0.024	<0.00005	6	10.6
20/11/2012	P67D																				
10/12/2012	P67D		6.17	11.26	16.2	5.7															
10/12/2012	P67D				16.2			<1	43	43	0.011	<0.0002	<0.0002			0.077	53	0.023	<0.00005	5.7	11.9
30/01/2013	P67D		6.7	12.14	17.1			<1	44	44	<0.003	<0.0002	<0.0002			0.056	53	0.025	<0.00005	5.8	10.8
13/02/2013	P67D		6.13	11.36	15.9	6.8		<1		44	<0.003	<0.0002	<0.0002			0.064	54	0.023	<0.00005	5.9	10.7
18/03/2013	P67D		6.04	11.84	15.9	6															
18/04/2013	P67D		6.4	14.39	16.4	5.7		<1	45	45	<0.003	<0.0002	<0.0002			0.064	55	0.02	<0.00005	6.3	10.7
21/05/2013	P67D		5.91	17.34	16.4	4.35															
25/06/2013	P67D		6.15	12.64	15.4	4.7															
2/07/2013	P67D		6.41	7.7	16	4.8		<1	54	54	<0.003	<0.0002	<0.0002			0.084	66	0.025	<0.00005	6.2	11
30/08/2013	P67D		6.3	8.06	15.8	4.6															
19/09/2013	P67D		6.2	7.24	15.3	4.8															
15/10/2013	P67D		6.8	13.94	15.4	5		<1	45	45	<0.003	<0.0002	<0.0002			0.075	55	0.024	<0.00005	5.8	10
26/11/2013	P67D		6.4	13.8	15.4	5.3															
6/12/2013	P67D		6	16.3	15.7	4.3															
17/01/2014	P67D				17.6			<1	48	48	0.004	<0.0002	<0.0002			0.083	58	0.026	<0.00005	6	10.6
26/02/2014	P67D		6.5	9.2	17.4	5.8															
15/04/2014	P67D				16.3			<1	46	46	<0.003	<0.0002	<0.0002			0.121	56	0.023	<0.00005	5.5	10.1
26/05/2014	P67D		6.4	8.96	16.8	5.5															
26/06/2014	P67D		6.6	15.43	16.2	4.4															
18/07/2014	P67D		6.35	16.97	14.8	4.6		<1	52	52	<0.003	<0.0002	<0.0002			0.047	64	0.026	<0.00005	6.7	10.4
28/08/2014	P67D		6.4	15.8	14.8	5															
29/09/2014	P67D		6.4	12.7	15	4.8															
30/10/2014	P67D		6.5	15.2		5.4															
27/11/2014	P67D		6.5	12.24	15.8	5.6															

Date	Data Point	CrS	CoS	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	SS
18/01/2010	P67D		<0.0002	<0.0005	<0.001	14		<0.01	27	0.053	<0.0001	3.3	0.0027				<0.0005	0.023	0.023		<0.002	0.012	7	4.7	<0.001	<0.001		68	<0.0001	13		8.6	
17/02/2010	P67D		<0.0002	<0.0005	<0.001	13.8		<0.01	28	0.093	<0.0001	3.4	0.028				<0.0005	0.031	0.041	0.0097	0.0097	0.016	6.7	5.2	<0.001	<0.001	67	67	<0.0001	14		7.4	
5/03/2010	P67D		<0.0002	<0.0005	<0.001	13.8		<0.01	28	<0.02	<0.0001	3.4	0.033	<0.00008			<0.0005	0.032	0.033	<0.002	<0.002	<0.01	7	4.7	<0.001	<0.001	66	66	<0.0001	13		9.6	
14/04/2010	P67D		<0.0002	<0.0005		13.7		<0.01	30	0.139	<0.0001	3.8	0.054	<0.00008			<0.0005	0.07	0.073	0.0028	0.0028	<0.01	6.5	5.3	<0.001	<0.001	66	66	<0.0001	14.7		7.1	
30/05/2010	P67D		<0.0002	<0.0005		13.6		<0.01	28	0.03	<0.0001	3.3	0.0145	<0.00008			<0.0005	0.039	0.039	<0.002	<0.002	<0.01	7	5.2	<0.001	<0.001	72	72	<0.0001	12.2		9.8	
29/06/2010	P67D		<0.0002	<0.0005		13.7		<0.01	29	<0.02	<0.0001	3.5	0.0041	<0.00008			<0.0005	0.052	0.052	<0.002	<0.002	<0.01	6.7	4.9	<0.001	<0.001	70	70	<0.0001	13.1		6.5	
30/07/2010	P67D	<0.0005	0.0016	<0.0005		13.9	0.06	<0.01	29	1.16	<0.0001	3.3	1.29	<0.00008	<0.00008	<0.0002	0.0008	0.038	0.038	<0.002	<0.002	<0.01	6.6	4.6	<0.001	<0.001	71	71	<0.0001	12.4	0.043	8.3	
31/08/2010	P67D	<0.0005	<0.0002	<0.0005		13.2	0.09	<0.01	29	0.15	<0.0001	3.4	0.027	<0.00008	<0.00008	<0.0002	<0.0005	0.027	0.028	<0.002	<0.002	<0.01	7	5	<0.001	<0.001	65	65	<0.0001	13.8	0.04	7.8	
20/09/2010	P67D	<0.0005	<0.0002	<0.0005		13.2	0.09	<0.01	28	0.28	<0.0001	3.5	0.0038	<0.00008	<0.00008	<0.0002	<0.0005	0.024	0.026	0.002	0.002	0.019	6.4	5	<0.001	<0.001	67	67	<0.0001	13.5	0.039	9.2	
14/10/2010	P67D	<0.0005	0.0033	<0.0005		13.7	0.06	<0.01	27	0.36	<0.0001	3.3	1.09	<0.00008	<0.00008	<0.0002	<0.0005	0.016	0.017	<0.002	<0.002	<0.01	6.6	5.3	<0.001	<0.001	71	71	<0.0001	14.3	0.043	8.5	
8/11/2010	P67D	<0.0005	<0.0002	<0.0005		13.7	0.1	<0.01	27	0.14	<0.0001	3.3	0.032	<0.00008	<0.00008	<0.0002	<0.0005	0.017	0.018	<0.002	<0.002	<0.01	6.7	4.6	<0.001	<0.001	69	69	<0.0001	12.7	0.038	9.2	
15/12/2010	P67D	<0.0005	<0.0002	<0.0005		13.7	0.1	<0.01	28	0.08	<0.0001	3.4	0.0031	<0.00008	<0.00008	<0.0002	<0.0005	0.027	0.028	<0.002	<0.002	<0.01	7.4	4.8	<0.001	<0.001	67	67	<0.0001	13.7	0.039	8.6	
14/01/2011	P67D	<0.0005	<0.0002	<0.0005		13.8	0.1	<0.01	27	0.09	<0.0001	3.2	0.0042	<0.00008	<0.00008	<0.0002	<0.0005	0.037	0.037	<0.002	<0.002	<0.01	7	4.8	<0.001	<0.001	68	68	<0.0001	12.9	0.038	8.7	
24/02/2011	P67D	<0.0005	<0.0002	<0.0005		13.7	0.1	<0.01	28	0.07	<0.0001	3.4	0.0025	<0.00008	<0.00008	<0.0002	<0.0005	0.026	0.027	<0.002	<0.002	<0.01	6.9	5.2	<0.001	<0.001	67	67	<0.0001	14.3	0.037	7.7	
21/03/2011	P67D	<0.0005	<0.0002	<0.0005		13.7	0.11	<0.01	28	0.11	<0.0001	3.4	0.0024	<0.00008	<0.00008	<0.0002	<0.0005	0.038	0.038	<0.002	<0.002	<0.01	6.5	4.8	<0.001	<0.001	67	67	<0.0001	13.2	0.039	8.2	
28/04/2011	P67D	<0.0005	<0.0002	<0.0005		14	0.1	<0.01	28	0.1	0.00011	3.4	0.003	<0.00008	<0.00008	<0.0002	<0.0005	0.029	0.031	<0.002	<0.002	<0.01	6.5	5	<0.001	<0.001	66	66	<0.0001	13.6	0.041	7.9	
20/05/2011	P67D	<0.0005	<0.0002	<0.0005		14	0.08	<0.01	31	0.05	0.00012	3.9	0.0035	<0.00008	<0.00008	<0.0002	<0.0005	0.037	0.037	<0.002	<0.002	<0.01	6.5	4.8	<0.001	<0.001	71	71	<0.0001	13.9	0.04	9.1	
28/06/2011	P67D	<0.0005	<0.0002	<0.0005		14	0.09	<0.01	30	0.02	<0.0001	3.6	0.0008	<0.00008	<0.00008	<0.0002	<0.0005	0.08	0.08	<0.02	<0.02	<0.01	6.6	4.8	<0.001	<0.001	66	66	<0.0001	13	0.043	8.5	
21/07/2011	P67D	<0.0005	<0.0002	<0.0005		13.7	0.1	<0.01	29	<0.02	<0.0001	3.6	0.0013	<0.00008	<0.00008	<0.0002	<0.0005	0.04	0.04	<0.02	<0.02	<0.01	6.6	4.6	<0.001	<0.001	70	70	<0.0001	12.7	0.041	8.5	
23/08/2011	P67D	<0.0005	0.0015	<0.0005		14.2	0.09	<0.01	29	0.1	<0.0001	3.5	0.95	<0.00008	<0.00008	<0.0002	0.0005	0.04	0.05	<0.02	<0.02	<0.01	6.7	5.3	<0.001	<0.001	69	69	<0.0001	13.6	0.044	7.4	
19/09/2011	P67D	<0.0005	<0.0002	0.0006		13.5	0.08	<0.01	29	0.29	0.00022	3.6	0.045	<0.00008	<0.00008	<0.0002	<0.0005	0.05	0.05	<0.02	<0.02	<0.01	6.8	4.8	<0.001	<0.001	70	70	<0.0001	12.7	0.043	7.2	
7/10/2011	P67D	<0.0005	0.0009	<0.0005		13.7	0.07	<0.01	30	1.09	<0.0001	3.8	0.23	<0.00008	<0.00008	<0.0002	<0.0005	0.02	0.03	<0.02	<0.02	<0.01	6.7	5.1	<0.001	<0.001	66	66	<0.0001	14.1	0.042	7	
7/11/2011	P67D	<0.0005	<0.0002	<0.0005		13.4	0.07	<0.01	28	0.09	<0.0001	3.5	0.022	<0.00008	<0.00008	<0.0002	<0.0005	0.03	0.03	<0.02	<0.02	<0.01	6.9	4.7	<0.001	<0.001	68	68	<0.0001	14.1	0.04	8	
16/12/2011	P67D	<0.0005	<0.0002	<0.0005		13.7	0.07	<0.01	29	0.07	<0.0001	3.6	0.0124	<0.00008	<0.00008	<0.0002	<0.0005	0.02	0.02	<0.02	<0.02	<0.01	6.8	5	<0.001	<0.001	70	70	<0.0001	14.4	0.038	7.9	
23/01/2012	P67D	<0.0005	<0.0002	<0.0005		13.5	0.1	<0.01	28	0.1	<0.0001	3.5	0.0044	<0.00008	<0.00008	<0.0002	<0.0005	0.05	0.07	<0.02	<0.02	<0.01	7	5	<0.001	<0.001	66	66	<0.0001	14.7	0.042	9	
9/02/2012	P67D	<0.0005	0.0008	<0.0005		13.8	0.09	<0.01	29	0.09	<0.0001	3.5	0.33	<0.00008	<0.00008	<0.0002	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.01	6.7	4.8	<0.001	<0.001	66	66	<0.0001	14	0.042	8.4	
5/03/2012	P67D	<0.0005	<0.0002	<0.0005		14	0.09	<0.01	27	0.03	<0.0001	3.3	0.045	<0.00008	<0.00008	<0.0002	<0.0005	0.02	0.02	<0.02	<0.02	0.015	6.6	5.1	<0.001	<0.001	64	64	<0.0001	14	0.04	<5	
5/04/2012	P67D	<0.0005	<0.0002	<0.0005		13.5	0.1	<0.01	31	<0.02	<0.0001	3.9	0.04	<0.00008	<0.00008	<0.0002	<0.0005	0.02	0.03	<0.02	<0.02	<0.01	6.7	5.1	<0.001	<0.001	69	69	<0.0001	14.3	0.042	6.9	
18/05/2012	P67D	<0.0005	0.0004	<0.0005		14.7	0.09	<0.01	29	0.03	<0.0001	3.7	0.173	<0.00008	<0.00008	<0.0002	<0.0005	0.03	0.03	<0.02	<0.02	<0.01	6.8	5.2	<0.001	<0.001	69	69	<0.0001	15.2	0.041	6.6	
27/06/2012	P67D	<0.0005	0.0017	0.0005		15.4	0.1	<0.01	31	1.78	<0.0001	3.8	0.8	<0.00008	<0.00008	<0.0002	<0.0005	0.018	0.026	0.008	0.008	0.016	6.6	5.1	<0.001	<0.001	67	67	<0.0001	14.7	0.045	8.1	
27/06/2012	P67D																					<0.01											
18/07/2012	P67D	<0.0005	<0.0002	0.001		14.3	0.1	<0.01	32	0.12	<0.0001	3.8	0.07	<0.00008	<0.00008	<0.0002	0.0006	0.05	0.06	<0.02	<0.02	<0.01	6.6	5.4	<0.001	<0.001	70	70	<0.0001	16.3	0.046	8.9	
18/07/2012	P67D																					<0.01											
31/08/2012	P67D	<0.0005	<0.0002	<0.0005		13.5	0.11	<0.01	30	0.13	<0.0001	3.7	0.0035	<0.00008	<0.00008	<0.0002	<0.0005	0.027	0.027	<0.002	<0.002	<0.01	7.2	5.1	<0.001	<0.001	68	68	<0.0001	14.5	0.042	8.8	
31/08/2012	P67D																					<0.01											
17/09/2012	P67D	<0.0005	<0.0002	0.0005		13.8	0.09	<0.01	31	0.13	0.00011	3.8	0.0014	<0.00008	<0.00008	<0.0002	<0.0005	0.06	0.08	<0.02	<0.02	<0.01	6.8	5.1	<0.001	<0.001	67	67	<0.0001	15	0.038	7.4	
17/09/2012	P67D																					<0.01											
15/10/2012	P67D	<0.0005	<0.0002	<0.0005		13.5	0.1	<0.01	29	0.11	<0.0001	3.4	0.0008	<0.00008	<0.00008	<0.0002	<0.0005	0.02	0.03	<0.02	<0.02	<0.01	7	5	<0.001	<0.001	69	69	<0.0001	14	0.041	7.6	
15/10/2012	P67D																					<0.01											
19/11/2012	P67D																																
19/11/2012	P67D	<0.0005	<0.0002	<0.0005		14	0.11	<0.01	30	0.12	<0.0001	3.6	0.0132	<0.00008	<0.00008	<0.0002	<0.0005	0.03	0.03	<0.02	<0.02	<0.01	6.8	4.9	<0.001	<0.001	70	70	<0.0001	13.7	0.041	7.7	
20/11/2012	P67D																					<0.01											
10/12/2012	P67D					11.27																<0.01	6.17										
10/12/2012	P67D	<0.0005	0.001	0.0005		13.9	0.09	<0.01	28	0.06	<0.0001	3.4	0.34	<0.00008	<0.00008	<0.0002	<0.0005	0.04	0.04	<0.02	<0.02	<0.01	7	4.9	<0.001	<0.001	73	73	<0.0001	13.6	0.042	7.7	
30/01/2013	P67D	<0.0005	<0.0002	0.0007		13.9	0.1	<0.01	29	0.07	<0.0001	3.6	0.053	<0.00008	<0.00008	<0.0002	0.0008	0.02	0.02		<0.02	<0.01	7.1	4.8	<0.001	<0.001		67	<0.0001	13.2	0.041	8	
13/02/2013	P67D	<0.0005	0.0003	<0.0005		14	0.11	<0.01	30	<0.02	<0.0001	3.6	0.109	<0.00008	<0.00008	<0.0002	<0.0005	<0.02	<0.02	<0.02		<0.01	6.5	4.9	<0.001	<0.001	65		<0.0001	13.5	0.045	8	
18/03/2013	P67D																																
18/04/2013	P67D	<0.0005	0.0004	<0.0005		13.8	0.11	<0.01	31	0.05	<0.0001	3.8	0.161	<0.00008	<0.00008	<0.0002	<0.0005	0.03	0.03	<0.02	<0.02	<0.01	7.1	5	<0.001	<0.001	68	68	<0.0001	13.7	0.046	7	2.4
21/05/2013	P67D																																
25/06/2013	P67D																																
2/07/2013	P67D	<0.0005	0.0013	0.0011		14.8	0.1	<0.01	31	0.03	0.0001	3.9	1.25	<0.00008	<0.00008	<0.0002	0.0009	0.03	0.03	<0.02	<0.02	<0.01	7.3	5.2	<0.001	<0.001	64	64	<0.0001	15	0.046	8	
30/08/2013	P67D																																
19/09/2013	P67D																																
15/10/2013	P67D	<0.0005	0.0015	0.0016		14.2	0.1	<0.01	30	0.04	<0.0001	3.7	0.59	<0.00008	<0.00008	<0.0002	<0.0005	0.05	0.05	<0.02	<0.02	<0.01	6.5	5.1	<0.001	<0.001	70	70	<0.0001	15.8	0.042	8	
26/11/2013	P67D																																
6/12/2013	P67D																																
17/01/2014	P67D	<0.0005	0.0008	0.0018		14.8	0.09	<0.01	31	0.18	<0.0001	3.8	0.28	<0.00008	<0.00008	<0.0002	0.0013	<0.02	0.02	<0.02	<0.02	<0.01	6.5	4.9	<0.001	<0.001	65	65	<0.0001	15.6	0.042	10	
26/02/2014	P67D																																
15/04/2014	P67D	<0.0005	0.0051	<0.0005		14.5	0.11	<0.01	29	4.6	<0.0001	3.6	1.2	<0.00008	<0.00008	<0.0002	<0.0005	0.05	0.05	<0.02	<0.02	0.022	6.8	4.7	<0.001	<0.001	66	66	<0.0001	14.2	0.039	9	
26/05/2014	P67D																																
26/06/2014	P67D																																
18/07/2014	P67D	<0.0005	0.0014	<0.0005		15.6	0.11	<0.01	33	0.17	<0.0001	4.1	0.79	<0.00008	<0.00008	<0.0002	<0.0005	<0.02	<0.02	<0.02		0.014	6.5	4.9	<0.001	<0.001	68		<0.0001	15.6	0.048	9	
28/08/2014	P67D																																
29/09/2014	P67D																																
30/10/2014	P67D																																
27/11/2014	P67D																																

Date	Data Point	Sum Anion	Sum Cation	TiS	ThS	SnS	TSS	US	CNWAD	ZnS
18/01/2010	P67D	1.3	1.2							0.0022
17/02/2010	P67D	1.4	1.3							0.0021
5/03/2010	P67D	1.4	1.2						<0.001	0.0019
14/04/2010	P67D	1.34	1.39						<0.001	0.00154
30/05/2010	P67D	1.36	1.22						<0.001	0.0056
29/06/2010	P67D	1.33	1.28						<0.001	0.0033
30/07/2010	P67D	1.39	1.32	0.00015	<0.0005	0.0006	13	<0.00002	<0.001	0.0036
31/08/2010	P67D	1.29	1.31	0.00008	<0.0005	0.0011	8	<0.00002	<0.001	0.0027
20/09/2010	P67D	1.31	1.3	<0.00005	<0.0005	<0.0005	34	<0.00002	<0.001	0.0011
14/10/2010	P67D	1.35	1.36	0.00015	<0.0005	0.0007	46	<0.00002	<0.001	0.0017
8/11/2010	P67D	1.32	1.21	0.00009	<0.0005	0.001	29	<0.00002	<0.001	0.0027
15/12/2010	P67D	1.31	1.28	0.00005	<0.0005	0.0012	21	<0.00002	<0.001	0.0043
14/01/2011	P67D	1.28	1.22	<0.00005	<0.0005	0.0005	10	<0.00002	<0.001	<0.001
24/02/2011	P67D	1.3	1.32	<0.00005	<0.0005	0.0009	8	<0.00002	<0.001	0.0024
21/03/2011	P67D	1.33	1.26	<0.00005	<0.0005	0.0008	6	<0.00002	<0.001	0.0025
28/04/2011	P67D	1.3	1.29	0.00005	<0.0005	<0.0005	<3	<0.00002	<0.001	0.0047
20/05/2011	P67D	1.35	1.34	<0.00005	<0.0005	<0.0005	10	<0.00002	<0.001	0.004
28/06/2011	P67D	1.33	1.29	<0.00005	<0.0005	0.0005	5	<0.00002	<0.001	0.003
21/07/2011	P67D	1.39	1.25	<0.00005	<0.0005	0.0016	4	<0.00002	<0.001	0.0045
23/08/2011	P67D	1.36	1.34	0.00012	<0.0005	0.0012	4	<0.00002	<0.001	0.0037
19/09/2011	P67D	1.33	1.28	0.00007	<0.0005	0.0018	<3	<0.00002	<0.001	0.0036
7/10/2011	P67D	1.31	1.39	0.00009	<0.0005	0.001	10	<0.00002	<0.001	0.0026
7/11/2011	P67D	1.31	1.31	0.00008	<0.0005	0.0012	7	<0.00002	<0.001	0.0026
16/12/2011	P67D	1.32	1.34	0.00006	<0.0005	<0.0005	6	<0.00002	<0.001	<0.001
23/01/2012	P67D	1.34	1.33	<0.00005	<0.0005	0.0007	16	<0.00002	<0.001	0.002
9/02/2012	P67D	1.34	1.33	0.00011	<0.0005	0.0012	26	<0.00002	<0.001	0.0032
5/03/2012	P67D	1.26	1.29	0.00008	<0.0005	0.0011	11	<0.00002	<0.001	0.0024
5/04/2012	P67D	1.31	1.38	0.00007	<0.0005	0.0009	5	<0.00002	<0.001	0.0026
18/05/2012	P67D	1.35	1.39	0.00005	<0.0005	0.0014	<3	<0.00002	<0.001	0.004
27/06/2012	P67D	1.47	1.49	0.0001	<0.0005	0.0009	5	<0.00002	<0.001	0.0032
27/06/2012	P67D									
18/07/2012	P67D	1.42	1.49	0.00008	<0.0005	0.0011	10	<0.00002	<0.001	0.0047
18/07/2012	P67D									
31/08/2012	P67D	1.34	1.37	0.00005	<0.0005	<0.0005	10	<0.00002	<0.001	0.0054
31/08/2012	P67D									
17/09/2012	P67D	1.32	1.41	<0.00005	<0.0005	0.0011	4	<0.00002	<0.001	0.0029
17/09/2012	P67D									
15/10/2012	P67D	1.32	1.33	<0.00005	<0.0005	0.0006	17	<0.00002	<0.001	0.0013
15/10/2012	P67D									
19/11/2012	P67D									
19/11/2012	P67D	1.34	1.32	<0.00005	<0.0005	0.0007	24	<0.00002	<0.001	0.0019
20/11/2012	P67D									
10/12/2012	P67D									
10/12/2012	P67D	1.36	1.3	0.00009	<0.0005	0.0024	36	<0.00002	<0.001	0.008
30/01/2013	P67D	1.35	1.28	0.00008	<0.0005	0.0011	48	<0.00002	<0.001	0.0058
13/02/2013	P67D	1.35	1.31	0.0001	<0.0005	0.0016	21	<0.00002	<0.001	0.0012
18/03/2013	P67D									
18/04/2013	P67D	1.36	1.36	0.00006	<0.0005	0.0007	8	<0.00002	<0.001	0.0011
21/05/2013	P67D									
25/06/2013	P67D									
2/07/2013	P67D	1.57	1.46	0.00016	<0.0005	0.0013	14	<0.00002	<0.001	0.0083
30/08/2013	P67D									
19/09/2013	P67D									
15/10/2013	P67D	1.37	1.43	0.00012	<0.0005	0.001	13	<0.00002	<0.001	0.0041
26/11/2013	P67D									
6/12/2013	P67D									
17/01/2014	P67D	1.45	1.44	0.00011	<0.0005	0.0012	98	<0.00002	<0.001	0.0091
26/02/2014	P67D									
15/04/2014	P67D	1.39	1.52	0.00015	<0.0005	0.0031	45	<0.00002	<0.001	0.0013
26/05/2014	P67D									
26/06/2014	P67D									
18/07/2014	P67D	1.54	1.51	0.00012	<0.0005	<0.0005	4	<0.00002	<0.001	0.0023
28/08/2014	P67D									
29/09/2014	P67D									
30/10/2014	P67D									
27/11/2014	P67D									

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	AsT	BaS	Bicarb	BS	CdS	CaS	Cl
19/12/2014	P67D		6.2	11.2	16	4.2															
31/12/2014	P67D		5.9	17.3	13.5	4.85		<1	47	47	0.003	<0.0002	<0.0002			0.063	57	0.025	<0.00005	5.9	10.3
28/01/2015	P67D		6.2	16.4	16.3	5.7		<1	47	48	<0.003	<0.0002	<0.0002			0.041	58	0.023	<0.00005	5.9	10.2
27/02/2015	P67D	Scan month only	6.6	15.8	17.3	6															
4/05/2015	P67D							<1	55	56	<0.003	<0.0002	<0.0002			0.102	68	0.026	<0.00005	6.6	11
4/05/2015	P67D	pH<6.6 EC<176.1 Temp<15.5																			
4/05/2015	P67D		6.6	17.6	15.5	5.2															
20/05/2015	P67D	Field readings taken but not entered																			
20/05/2015	P67D	Field readings only, not entered.																			
28/05/2015	P67D	Field readings																			
26/06/2015	P67D		6.6	28.8	14.6	5.5															
31/07/2015	P67D					4.8		<1	52	52	0.003	<0.0002	<0.0002			0.13	64	0.028	<0.00005	6.1	10.8
31/07/2015	P67D		6.8		15.1																
31/08/2015	P67D					5.5															
1/09/2015	P67D	WL-5.50m	6.5		15.3																
29/09/2015	P67D					5.3															
29/09/2015	P67D		6.9		16																
1/11/2015	P67D	Sampled	7.2		16.1		2	<1	46	46	<0.003	<0.0002	<0.0002				56		<0.00005	5.8	10.9
6/11/2015	P67D	Sampled				5.5															
3/12/2015	P67D		6.95		16.8		2														
4/12/2015	P67D					5.9															
13/01/2016	P67D	WL-5.7	6		16.2			<1	47	47	<0.003	<0.0002	<0.0002				57		<0.00005	6.7	10.5
14/01/2016	P67D					5.7															
3/02/2016	P67D		6.8		16.8																
16/02/2016	P67D					6															
6/03/2016	P67D					5.75															
7/03/2016	P67D		6.5		16.8																
28/04/2016	P67D		6.3		16.4			<1	10.7	10.7	0.025	<0.0002	<0.0002				13		<0.00005	1.96	8.1
29/04/2016	P67D	Sampled				4.95															
19/05/2016	P67D		6.5	12.4	16																
19/05/2016	P67D						5														
28/06/2016	P67D		6.45	12.7	15.6		4.75														
28/06/2016	P67D					4.75															
21/07/2016	P67D		6.8	19.7	16	4.7															
17/08/2016	P67D		7.3	15.7	16.1	4.75		<1	50	50	0.004	<0.0002	<0.0002				60		<0.00005	6	10.7
20/09/2016	P67D		7.05	16.7	16	5															
27/10/2016	P67D		6.95	15.8	16	5.05															
28/11/2016	P67D	Dead ants in sample	6.8	16.5	15.6	5.3															
21/12/2016	P67D		6.7	16.2	16.7	5.5															
26/01/2017	P67D		7.3	20.2	16.9	5.7		<1	47	47	<0.003	<0.0002	<0.0002	<0.001			57		<0.00005	6	10.9
24/02/2017	P67D		7.05	16.5	17	5.8															
31/03/2017	P67D		6.8	16.7	16.8	4.15															
28/04/2017	P67D		6.3	16.2	17.9	4.75		<1	50	50	0.003	<0.0002	<0.0002	<0.001			61		<0.00005	6.6	10.5
26/05/2017	P67D		6.5	16.9	16	4.8															
30/06/2017	P67D		6.65	15.8	15.7	4.5															
28/07/2017	P67D		6.8	18.2	16.3	4.6															
10/08/2017	P67D		6.9	17.2	16.3	4.65		<1	51	51	0.004	<0.0002	<0.0002	<0.001			62		<0.00005	7.1	10.7
26/09/2017	P67D		6.85	17.2	16.3	4.7															
27/10/2017	P67D		6.55	16.8	16.4	4.65															
22/11/2017	P67D		6.5	18.6	16.2	4.8															
21/12/2017	P67D		6.5	16.3	17	5.25															
17/01/2018	P67D		6.7	13.3	16.6	5		<1	49	49	<0.003	<0.0002	<0.0002	<0.001			59		<0.00005	6.4	10.9
27/02/2018	P67D		6.75	12.5	16.4	4.8															
14/03/2018	P67D		6.75	12.7	16.9	4.72															
27/04/2018	P67D		6.65	11.8	16	5.25															
31/05/2018	P67D							<1	50	50	0.007	<0.0002	<0.0002	<0.001			61		<0.00005	6.7	8
27/06/2018	P67D		6.65	10.8	15.9	5.1															
21/08/2018	P67D		6.17	20.6	16.5	4.65															
2/10/2018	P67D		5.88	19.3	16.4	4.99															
22/11/2018	P67D		6.44	15.8	15.9	4.91															
17/12/2018	P67D		5.97	17.89	16.9	4.72															
12/02/2019	P67D	Dead Insects	6.3	15.3	25	5.61	2	<1	52	52	0.017	<0.0002	<0.0002		0.0019		64		<0.00005	7.5	11
11/04/2019	P67D		6.99	16.9	17.3	5.62															
23/05/2019	P67D		6.54	19.1	16.5	6.21															
26/07/2019	P67D	Sampled using peristaltic pump. Silt removed	6.28	23.7	15.4	4.11	2	<1	64	64	0.007	<0.0002	<0.0002	<0.001			78		<0.00005	7.6	9
14/01/2020	P67D	DRY				14.11															

Date	Data Point	CrS	CoS	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	SS
19/12/2014	P67D																																
31/12/2014	P67D	<0.0005	0.0007	<0.0005		14.7	0.1	<0.01	29	0.12	<0.0001	3.5	0.29	<0.00008	<0.00008	<0.0002	<0.0005	<0.1	<0.1	<0.1		<0.01	6.6	5	<0.001	<0.001	65		<0.0001	14.6	0.041	8	
28/01/2015	P67D	<0.0005	<0.0002	<0.0005		14.6	0.09	<0.01	30	0.11	<0.0001	3.7	0.0061	<0.00008	<0.00008	<0.0002	<0.0005	<0.1	<0.1	<0.1		<0.01	6.6	4.7	<0.001	<0.001	65		<0.0001	13.9	0.041	8	
27/02/2015	P67D																																
4/05/2015	P67D	<0.0005	0.0042	0.0005		16.3	0.1	<0.01	34	1.82	<0.0001	4.2	1.19	<0.00008	<0.00008	<0.0002	<0.0005	<0.1	<0.1	<0.1		0.016	6.5	5.7	<0.001	<0.001	63		<0.0001	17.4	0.042	9	
4/05/2015	P67D																																
4/05/2015	P67D																																
20/05/2015	P67D																																
20/05/2015	P67D																																
28/05/2015	P67D																																
26/06/2015	P67D																																
31/07/2015	P67D	<0.0005	0.0061	<0.0005		16.1	0.11	<0.01	32	2.9	<0.0001	4	1.69	<0.00008	<0.00008	<0.0002	<0.0005	<0.1	<0.1	<0.1		0.015	6.4	4.8	<0.001	<0.001	61		<0.0001	16	0.045	9	
31/07/2015	P67D																																
31/08/2015	P67D																																
1/09/2015	P67D																																
29/09/2015	P67D																																
29/09/2015	P67D																																
1/11/2015	P67D	<0.0005	<0.0002	<0.0005		14.6	0.08	<0.01	30	0.15	<0.0001	3.9	0.0081	<0.00008	<0.00008		<0.0005	<0.1	<0.1	<0.1		0.014	7	4.8	<0.001	<0.001	64		<0.0001	14.9		8	
6/11/2015	P67D																																
3/12/2015	P67D																																
4/12/2015	P67D																																
13/01/2016	P67D	<0.0005	0.001	0.0029		15.2	0.09	<0.01	35	0.02	<0.0001	4.4	0.45	<0.00008	<0.00008		0.0009	<0.1	0.1	<0.1		0.029	6.6	5	<0.001	<0.001	72		<0.0001	16.7		8	
14/01/2016	P67D																																
3/02/2016	P67D																																
16/02/2016	P67D																																
6/03/2016	P67D																																
7/03/2016	P67D																																
28/04/2016	P67D	0.0007	<0.0002	<0.0005		9.1	<0.05	<0.01	11.3	<0.02	0.00012	1.57	0.0066	<0.00008	<0.00008		<0.0005	1.99	1.99	<0.1		<0.01	5.8	1.58	<0.001	<0.001	22		<0.0001	10.5		11	
29/04/2016	P67D																																
19/05/2016	P67D																																
19/05/2016	P67D																																
28/06/2016	P67D																																
28/06/2016	P67D																																
21/07/2016	P67D																																
17/08/2016	P67D	<0.0005	0.0004	0.0007		15.1	0.1	<0.01	32	<0.02	<0.0001	4.2	0.63	<0.00008	<0.00008		0.0005	0.1	0.11	<0.1		<0.01	7.2	4.6	<0.001	<0.001	58		<0.0001	15.9		9	
20/09/2016	P67D																																
27/10/2016	P67D																																
28/11/2016	P67D																																
21/12/2016	P67D																																
26/01/2017	P67D	0.0007	<0.0002	<0.0005		15.1	0.09	<0.01	30	0.31	0.00011	3.6	0.02	<0.00008	<0.00008		<0.0005	0.49	0.49	<0.1		<0.01	7	5.2	<0.001	<0.001	64		<0.0001	14.6		8	
24/02/2017	P67D																																
31/03/2017	P67D																																
28/04/2017	P67D	<0.0005	<0.0002	<0.0005		15.3	0.09	<0.01	34	<0.02	<0.0001	4.3	0.0026	<0.00008	<0.00008		<0.0005	<0.1	<0.1	<0.1		<0.01	7	5.9	<0.001	<0.001	62		<0.0001	15.6		8	
26/05/2017	P67D																																
30/06/2017	P67D																																
28/07/2017	P67D																																
10/08/2017	P67D	<0.0005	0.0045	<0.0005		16	0.12	<0.01	35	1.25	<0.0001	4.3	1.13	<0.00008	<0.00008		0.0007	<0.1	<0.1	<0.1		<0.01	7.1	5.5	<0.001	<0.001	67		<0.0001	15.2		9	
26/09/2017	P67D																																
27/10/2017	P67D																																
22/11/2017	P67D																																
21/12/2017	P67D																																
17/01/2018	P67D	<0.0005	<0.0002	<0.0005		15	0.1	<0.01	32	0.07	<0.0001	4	0.0061	<0.00008	<0.00008		<0.0005	<0.1	<0.1	<0.1		<0.01	7	5.2	<0.001	<0.001	68		<0.0001	15.3		9	
27/02/2018	P67D																																
14/03/2018	P67D																																
27/04/2018	P67D																																
31/05/2018	P67D	<0.0005	<0.0002	<0.0005		16.5	0.1	<0.01	36	<0.02	<0.0001	4.6	0.0184	<0.00008	<0.00008		<0.0005	0.86	0.86	<0.1		0.145	6.6	5.9	<0.001	<0.001	66		<0.0001	16.7		9	
27/06/2018	P67D																																
21/08/2018	P67D																																
2/10/2018	P67D																																
22/11/2018	P67D																																
17/12/2018	P67D																																
12/02/2019	P67D	0.0007	<0.0002	<0.0005		16.2	0.09	<0.000019	38	0.2	0.00022	4.7	0.045	<0.00008	<0.00008		<0.0005	0.19	0.19	<0.1		<0.01	6.9	5.6	<0.001	<0.001	66		<0.0001	16.5		9	
11/04/2019	P67D																																
23/05/2019	P67D																																
26/07/2019	P67D	<0.0005	0.0005	<0.0005		17.1	0.1	0.00026	38	0.18	0.0002	4.5	0.91	<0.00008	<0.00008		0.0006	<0.1	<0.1	<0.1		0.18	6.8	5.7	<0.001	<0.001	66		<0.0001	15.3		8	
14/01/2020	P67D																																

Date	Data Point	Sum Anion	Sum Cation	TiS	ThS	SnS	TSS	US	CNWAD	ZnS
19/12/2014	P67D									
31/12/2014	P67D	1.4	1.36	0.00007	<0.0005	<0.0005	12	<0.00002	<0.001	0.0058
28/01/2015	P67D	1.42	1.33	<0.00005	<0.0005	<0.0005	23	<0.00002	<0.001	0.0026
27/02/2015	P67D									
4/05/2015	P67D	1.6	1.69	0.00011	<0.0005	<0.0005	11	<0.00002	0.0053	0.0026
4/05/2015	P67D									
4/05/2015	P67D									
20/05/2015	P67D									
20/05/2015	P67D									
28/05/2015	P67D									
26/06/2015	P67D									
31/07/2015	P67D	1.54	1.62	0.00016	<0.0005	0.0007	11	<0.00002	<0.001	0.0032
31/07/2015	P67D									
31/08/2015	P67D									
1/09/2015	P67D									
29/09/2015	P67D									
29/09/2015	P67D									
1/11/2015	P67D	1.39	1.39	<0.00005			26	<0.00002	<0.001	0.0072
6/11/2015	P67D									
3/12/2015	P67D									
4/12/2015	P67D									
13/01/2016	P67D	1.4	1.57	0.0001			19	<0.00002	<0.001	0.0151
14/01/2016	P67D									
3/02/2016	P67D									
16/02/2016	P67D									
6/03/2016	P67D									
7/03/2016	P67D									
28/04/2016	P67D	0.8	0.73	<0.00005			89	<0.00002	<0.001	0.0075
29/04/2016	P67D									
19/05/2016	P67D									
19/05/2016	P67D									
28/06/2016	P67D									
28/06/2016	P67D									
21/07/2016	P67D									
17/08/2016	P67D	1.49	1.48	0.00012			<3	<0.00002	<0.001	0.023
20/09/2016	P67D									
27/10/2016	P67D									
28/11/2016	P67D									
21/12/2016	P67D									
26/01/2017	P67D	1.45	1.37	0.00008			27	<0.00002	<0.001	0.0038
24/02/2017	P67D									
31/03/2017	P67D									
28/04/2017	P67D	1.47	1.51	0.00008			5	<0.00002	<0.001	0.0047
26/05/2017	P67D									
30/06/2017	P67D									
28/07/2017	P67D									
10/08/2017	P67D	1.51	1.59	0.00016			19	<0.00002	<0.001	0.0035
26/09/2017	P67D									
27/10/2017	P67D									
22/11/2017	P67D									
21/12/2017	P67D									
17/01/2018	P67D	1.47	1.45	0.00005			12	<0.00002	<0.001	0.0013
27/02/2018	P67D									
14/03/2018	P67D									
27/04/2018	P67D									
31/05/2018	P67D	1.48	1.6	0.00008			5	<0.00002	<0.001	0.0024
27/06/2018	P67D									
21/08/2018	P67D									
2/10/2018	P67D									
22/11/2018	P67D									
17/12/2018	P67D									
12/02/2019	P67D	1.55	1.63	0.0001			11	<0.00002	<0.02	0.0014
11/04/2019	P67D									
23/05/2019	P67D									
26/07/2019	P67D	1.7	1.62	0.00007			9	<0.00002	<0.02	0.0078
14/01/2020	P67D									

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	Bicarb	CdS	CaS	Cl	CrS	CoS	CuS
18/01/2010	P67S					5.42															
17/02/2010	P67S					5.42															
5/03/2010	P67S					5.42															
14/04/2010	P67S					5.36															
31/05/2010	P67S					4.66															
29/06/2010	P67S					4.6															
30/07/2010	P67S				15.2	5															
31/08/2010	P67S					5															
20/09/2010	P67S					4.95															
14/10/2010	P67S					5.22															
8/11/2010	P67S					5.1															
15/12/2010	P67S					5.4															
14/01/2011	P67S					5.42															
20/05/2011	P67S					5.03															
23/08/2011	P67S					5.4															
19/09/2011	P67S					5.4															
7/10/2011	P67S					5.1															
7/11/2011	P67S					5.42															
16/12/2011	P67S					5.42															
23/01/2012	P67S					5															
9/02/2012	P67S					5.42															
5/03/2012	P67S					5.2															
5/04/2012	P67S					5.4															
18/05/2012	P67S					5.4															
27/06/2012	P67S					5.4															
31/08/2012	P67S					5.1															
17/09/2012	P67S					5															
15/10/2012	P67S					5.4															
19/11/2012	P67S					5.42															
10/12/2012	P67S					5.4															
13/02/2013	P67S					5.42															
18/03/2013	P67S					5.42															
18/04/2013	P67S					5.42															
21/05/2013	P67S					4.35															
25/06/2013	P67S					5.4															
2/07/2013	P67S					5.4															
30/08/2013	P67S					5.4															
19/09/2013	P67S					5.4															
15/10/2013	P67S					5.42															
26/11/2013	P67S					5.42															
6/12/2013	P67S					4.2															
17/01/2014	P67S					5.42															
26/02/2014	P67S					5.42															
26/03/2014	P67S					5.4															
15/04/2014	P67S					5.4															
26/05/2014	P67S					5.42															
26/06/2014	P67S					5.42															
18/07/2014	P67S					5.1															
28/08/2014	P67S					5.3															
29/09/2014	P67S					5.1															
30/10/2014	P67S					5															
27/11/2014	P67S					5.4															
19/12/2014	P67S					5.4															
31/12/2014	P67S					5.4															
28/01/2015	P67S					5.4															
27/02/2015	P67S	Dry				5.42															
4/05/2015	P67S	dry																			
4/05/2015	P67S	Dry @ 5.4				5.4															
20/05/2015	P67S	Dry																			
20/05/2015	P67S	Dry																			
28/05/2015	P67S	Dry																			
26/06/2015	P67S	Dry @ 5.40m				5.4															
31/07/2015	P67S	Dry				5.4															
31/07/2015	P67S	Dry																			
31/08/2015	P67S	Dry				5.43															
1/09/2015	P67S	WL-5.43m - DRYY																			

Date	Data Point	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	NiS	NO3-N	NOxN	NO2-N	NH4N	pH	KSO	SeA	SeS	SI	AgS	NaSO	SO4	Sum Anion	Sum Cation	TiS	TSS	US	CNWAD	ZnS
18/01/2010	P67S																														
17/02/2010	P67S																														
5/03/2010	P67S																														
14/04/2010	P67S																														
31/05/2010	P67S																														
29/06/2010	P67S																														
30/07/2010	P67S																														
31/08/2010	P67S																														
20/09/2010	P67S																														
14/10/2010	P67S																														
8/11/2010	P67S																														
15/12/2010	P67S																														
14/01/2011	P67S																														
20/05/2011	P67S																														
23/08/2011	P67S																														
19/09/2011	P67S																														
7/10/2011	P67S																														
7/11/2011	P67S																														
16/12/2011	P67S																														
23/01/2012	P67S																														
9/02/2012	P67S																														
5/03/2012	P67S																														
5/04/2012	P67S																														
18/05/2012	P67S																														
27/06/2012	P67S																														
31/08/2012	P67S																														
17/09/2012	P67S																														
15/10/2012	P67S																														
19/11/2012	P67S																														
10/12/2012	P67S																														
13/02/2013	P67S																														
18/03/2013	P67S																														
18/04/2013	P67S																														
21/05/2013	P67S																														
25/06/2013	P67S																														
2/07/2013	P67S																														
30/08/2013	P67S																														
19/09/2013	P67S																														
15/10/2013	P67S																														
26/11/2013	P67S																														
6/12/2013	P67S																														
17/01/2014	P67S																														
26/02/2014	P67S																														
26/03/2014	P67S																														
15/04/2014	P67S																														
26/05/2014	P67S																														
26/06/2014	P67S																														
18/07/2014	P67S																														
28/08/2014	P67S																														
29/09/2014	P67S																														
30/10/2014	P67S																														
27/11/2014	P67S																														
19/12/2014	P67S																														
31/12/2014	P67S																														
28/01/2015	P67S																														
27/02/2015	P67S																														
4/05/2015	P67S																														
4/05/2015	P67S																														
20/05/2015	P67S																														
20/05/2015	P67S																														
28/05/2015	P67S																														
26/06/2015	P67S																														
31/07/2015	P67S																														
31/07/2015	P67S																														
31/08/2015	P67S																														
1/09/2015	P67S																														

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	Bicarb	CdS	CaS	Cl	CrS	CoS	CuS
29/09/2015	P67S	Dry				5.4															
29/09/2015	P67S	DRY @ 5.40																			
1/11/2015	P67S	Dry																			
6/11/2015	P67S	Dry				5.4															
3/12/2015	P67S	Dry																			
4/12/2015	P67S	Dry				5.1															
13/01/2016	P67S	DRY																			
14/01/2016	P67S					5.42															
3/02/2016	P67S	Dry																			
16/02/2016	P67S					5.4															
6/03/2016	P67S					5.4															
29/04/2016	P67S	Dry				5.42															
19/05/2016	P67S	NES																			
19/05/2016	P67S						5.42														
28/06/2016	P67S	Dry					5.42														
28/06/2016	P67S					5.42															
21/07/2016	P67S	DRY				5.4															
17/08/2016	P67S	Dry				5.42															
20/09/2016	P67S	Dry				5.4															
27/10/2016	P67S	Dry				5.4															
28/11/2016	P67S	Dry				5.4															
21/12/2016	P67S	NES				5.43															
26/01/2017	P67S	Dry				5.42															
24/02/2017	P67S	Dry				5.42															
31/03/2017	P67S	Dry				5.42															
28/04/2017	P67S	DRY				5.4															
26/05/2017	P67S	Dry				5.42															
30/06/2017	P67S	Dry				5.42															
28/07/2017	P67S	Dry				5.42															
26/09/2017	P67S	Dry				5.42															
27/10/2017	P67S	Dry				5.4															
22/11/2017	P67S	Dry				5.4															
21/12/2017	P67S	Dry				5.4															
17/01/2018	P67S	Dry				5.4															
27/02/2018	P67S	Dry				5.4															
14/03/2018	P67S	Dry				5.4															
27/04/2018	P67S	Dry				5.4															
31/05/2018	P67S	Dry				5.4															
27/06/2018	P67S	Dry				5															
21/08/2018	P67S	NES				4.97															
2/10/2018	P67S	NES				5.13															
22/11/2018	P67S	DRY				5.4															
17/12/2018	P67S	NES				4.93															
12/02/2019	P67S	DRY																			
11/04/2019	P67S	Dry				4.98															
26/07/2019	P67S	Sampled using peristaltic pump. Silt removed	4.84	9.5	15.5	4.09	2.5	<1	8.8	8.8	0.016	<0.0002	<0.0002	<0.001	10.7	<0.00005	1.03	7.3	0.001	<0.0002	<0.0005
14/01/2020	P67S	DRY																			

Date	Data Point	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	NiS	NO3-N	NOxN	NO2-N	NH4N	pH	KSO	SeA	SeS	SI	AgS	NaSO	SO4	Sum Anion	Sum Cation	TiS	TSS	US	CNWAD	ZnS
29/09/2015	P67S																														
29/09/2015	P67S																														
1/11/2015	P67S																														
6/11/2015	P67S																														
3/12/2015	P67S																														
4/12/2015	P67S																														
13/01/2016	P67S																														
14/01/2016	P67S																														
3/02/2016	P67S																														
16/02/2016	P67S																														
6/03/2016	P67S																														
29/04/2016	P67S																														
19/05/2016	P67S																														
19/05/2016	P67S																														
28/06/2016	P67S																														
28/06/2016	P67S																														
21/07/2016	P67S																														
17/08/2016	P67S																														
20/09/2016	P67S																														
27/10/2016	P67S																														
28/11/2016	P67S																														
21/12/2016	P67S																														
26/01/2017	P67S																														
24/02/2017	P67S																														
31/03/2017	P67S																														
28/04/2017	P67S																														
26/05/2017	P67S																														
30/06/2017	P67S																														
28/07/2017	P67S																														
26/09/2017	P67S																														
27/10/2017	P67S																														
22/11/2017	P67S																														
21/12/2017	P67S																														
17/01/2018	P67S																														
27/02/2018	P67S																														
14/03/2018	P67S																														
27/04/2018	P67S																														
31/05/2018	P67S																														
27/06/2018	P67S																														
21/08/2018	P67S																														
2/10/2018	P67S																														
22/11/2018	P67S																														
17/12/2018	P67S																														
12/02/2019	P67S																														
11/04/2019	P67S																														
26/07/2019	P67S	6.4	<0.05	<0.00001	6.9	<0.02	<0.0001	1.06	0.0048	<0.00008	<0.00008	<0.0005	1.1	1.1	<0.1	0.05	5.5	1.75	<0.001	<0.001	31	<0.0001	7.4	4	0.54	0.51	<0.00005	<3	<0.00002	<0.02	0.0156
14/01/2020	P67S																														

Date	Data Point	FLS Comments	FLS Water Level (m)	FLS Water Volume Purged (L)
18/01/2010	P70		2.4	
10/02/2010	P70		2.4	
8/03/2010	P70		2.4	
14/04/2010	P70		2.4	
31/05/2010	P70		2.4	
14/06/2010	P70		2.4	
30/07/2010	P70		2.4	
30/08/2010	P70		2.4	
28/09/2010	P70		2.4	
13/10/2010	P70		2.45	
4/11/2010	P70		2.4	
6/12/2010	P70		2.4	
14/01/2011	P70		2.4	
21/02/2011	P70		2.4	
29/07/2011	P70		2.4	
20/08/2011	P70		2.4	
29/09/2011	P70		2.4	
29/11/2011	P70		2.4	
13/12/2011	P70		2.4	
26/01/2012	P70		2.4	
7/02/2012	P70		2.4	
15/03/2012	P70		2.4	
5/04/2012	P70		2.4	
4/05/2012	P70		2.4	
20/07/2012	P70		2.36	
26/07/2012	P70		2.36	
20/08/2012	P70		2.4	
11/09/2012	P70		2.4	
10/10/2012	P70		2.4	
19/11/2012	P70		2.4	
11/12/2012	P70		2.4	
18/01/2013	P70		2.4	
14/02/2013	P70		2.4	
19/03/2013	P70		2.4	
8/04/2013	P70		2.4	
27/05/2013	P70		2.4	
25/06/2013	P70		2.4	
15/07/2013	P70		2.4	
15/08/2013	P70		2.4	
4/09/2013	P70		2.4	
16/10/2013	P70		2.4	
14/11/2013	P70		2.4	
5/12/2013	P70		2.4	
15/01/2014	P70		2.4	
13/02/2014	P70		2.4	
17/03/2014	P70		2.4	
28/03/2014	P70		2.4	
7/04/2014	P70		2.4	
8/05/2014	P70		2.4	
25/06/2014	P70		2.4	
27/08/2014	P70		2.4	
18/09/2014	P70		2.4	
9/10/2014	P70		2.4	
13/11/2014	P70		2.4	
9/12/2014	P70		2.4	
29/01/2015	P70		2.4	
27/02/2015	P70	Dry	2.4	
24/04/2015	P70	Dry		
4/05/2015	P70	Dry @ 2.40	2.4	
20/05/2015	P70	Dry		
20/05/2015	P70	Dry		
28/05/2015	P70	Dry		
26/06/2015	P70	Dry@2.40m	2.4	
31/07/2015	P70	Dry	2.4	
31/07/2015	P70	Dry		
31/08/2015	P70	Dry	2.4	

Date	Data Point	FLS Comments	FLS Water Level (m)	FLS Water Volume Purged (L)
1/09/2015	P70	WL-2.40m - DRY		
29/09/2015	P70	Dry	2.4	
29/09/2015	P70	DRY @ 2.40		
1/11/2015	P70	Dry		
6/11/2015	P70	Dry	2.4	
3/12/2015	P70	Dry		
4/12/2015	P70	Dry	2.4	
13/01/2016	P70	DRY		
14/01/2016	P70		2.4	
3/02/2016	P70	Dry		
16/02/2016	P70		2.4	
6/03/2016	P70		2.4	
29/04/2016	P70	Dry	2.4	
19/05/2016	P70	Dry @2.4		
19/05/2016	P70			2.4
28/06/2016	P70	Dry		2.4
28/06/2016	P70		2.4	
21/07/2016	P70	DRY	2.4	
17/08/2016	P70	Dry	2.4	
20/09/2016	P70	Dry	2.4	
27/10/2016	P70	Dry	2.4	
28/11/2016	P70	Dry	2.4	
21/12/2016	P70	DRY	2.4	
26/01/2017	P70	Dry	2.4	
24/02/2017	P70	Dry	2.4	
31/03/2017	P70	Dry	2.4	
28/04/2017	P70	DRY	2.4	
26/05/2017	P70	Dry	2.4	
30/06/2017	P70	Dry	2.4	
28/07/2017	P70	Dry	2.4	
26/09/2017	P70	Dry	2.4	
27/10/2017	P70	Dry	2.4	
22/11/2017	P70	Dry	2.4	
21/12/2017	P70	Dry	2.4	
17/01/2018	P70	Dry	2.4	
27/02/2018	P70	Dry	2.4	
14/03/2018	P70	Dry	2.4	
27/04/2018	P70	Dry	2.4	
31/05/2018	P70	Dry	2.4	
27/06/2018	P70	Dry	2.4	
21/08/2018	P70	DRY		
2/10/2018	P70	DRY		
22/11/2018	P70	DRY	2.4	
17/12/2018	P70	Dry	2.4	
12/02/2019	P70	DRY		
11/04/2019	P70	Dry	2.4	
23/05/2019	P70	DRY		
24/07/2019	P70	NES		
14/01/2020	P70	DRY		

Date	Data Point	FLS Comments	FLS Water Level (m)
18/01/2010	P72		2.65
10/02/2010	P72		2.65
8/03/2010	P72		2.65
14/04/2010	P72		2.65
31/05/2010	P72		2.65
14/06/2010	P72		2.65
30/07/2010	P72		2.65
30/08/2010	P72		2.65
28/09/2010	P72		2.65
13/10/2010	P72		2.65
4/11/2010	P72		2.65
6/12/2010	P72		2.65
14/01/2011	P72		2.65
24/01/2011	P72		2.65
21/02/2011	P72		2.65
29/07/2011	P72		2.65
20/08/2011	P72		2.65
29/09/2011	P72		2.65
13/12/2011	P72		2.65
29/12/2011	P72		2.65
26/01/2012	P72		2.65
7/02/2012	P72		2.65
15/03/2012	P72		2.65
5/04/2012	P72		2.65
4/05/2012	P72		2.65
13/06/2012	P72		2.65
26/07/2012	P72		2.3
20/08/2012	P72		2.63
11/09/2012	P72		2.65
10/10/2012	P72		2.65
19/11/2012	P72		2.65
11/12/2012	P72		2.65
18/01/2013	P72		2.65
13/02/2013	P72		2.65
14/02/2013	P72		2.65
19/03/2013	P72		2.65
8/04/2013	P72		2.65
27/05/2013	P72		2.65
25/06/2013	P72		2.65
15/07/2013	P72		2.65
15/08/2013	P72		2.65
4/09/2013	P72		2.65
16/10/2013	P72		2.65
14/11/2013	P72		2.65
5/12/2013	P72		2.65
15/01/2014	P72		2.65
13/02/2014	P72		2.65
17/03/2014	P72		2.65
28/03/2014	P72		2.65
7/04/2014	P72		2.65
8/05/2014	P72		2.65
25/06/2014	P72		2.65
16/07/2014	P72		2.65
27/08/2014	P72		2.65
18/09/2014	P72		2.65
9/10/2014	P72		2.65
13/11/2014	P72		2.65
9/12/2014	P72		2.65
29/01/2015	P72		2.65
27/02/2015	P72	Dry	2.65
24/04/2015	P72	Dry	
4/05/2015	P72	Dry @ 2.65	2.65
20/05/2015	P72	Dry	
20/05/2015	P72	Dry	
28/05/2015	P72	Dry	
26/06/2015	P72	Dry@2.65m	2.65

Date	Data Point	FLS Comments	FLS Water Level (m)
31/07/2015	P72	Dry	2.65
31/07/2015	P72	Dry	
31/08/2015	P72	Dry	2.65
1/09/2015	P72	WL-2.65 - DRY	
29/09/2015	P72	Dry	2.65
29/09/2015	P72	DRY @ 2.65	
1/11/2015	P72	Dry	
6/11/2015	P72	Dry	2.65
3/12/2015	P72	Dry	
4/12/2015	P72	Dry	2.65
13/01/2016	P72	DRY	
14/01/2016	P72		2.65
3/02/2016	P72	Dry	
16/02/2016	P72		2.65
6/03/2016	P72		2.65
29/04/2016	P72	Dry	2.65
19/05/2016	P72	Dry @ 2.65	
19/05/2016	P72		
28/06/2016	P72	Dry	
28/06/2016	P72		2.65
21/07/2016	P72	DRY	2.65
17/08/2016	P72	Dry	2.65
20/09/2016	P72	Dry	2.65
27/10/2016	P72	Dry	2.65
28/11/2016	P72	Dry	2.65
21/12/2016	P72	DRY	2.65
26/01/2017	P72	Dry	2.65
24/02/2017	P72	Dry	2.65
31/03/2017	P72	Dry	2.65
28/04/2017	P72	DRY	2.65
26/05/2017	P72	Dry	2.65
30/06/2017	P72	Dry	2.65
28/07/2017	P72	Dry	2.65
26/09/2017	P72	Dry	2.65
27/10/2017	P72	Dry	2.65
22/11/2017	P72	Dry	2.65
21/12/2017	P72	Dry	2.65
17/01/2018	P72	Dry	2.65
27/02/2018	P72	Dry	2.65
14/03/2018	P72	Dry	2.65
27/04/2018	P72	Dry	2.65
31/05/2018	P72	Dry	2.65
27/06/2018	P72	Dry	2.65
21/08/2018	P72	DRY	
2/10/2018	P72	DRY	
22/11/2018	P72	DRY	2.6
17/12/2018	P72	Dry	2.6
12/02/2019	P72	DRY	
11/04/2019	P72	Dry	2.6
23/05/2019	P72	DRY	
24/07/2019	P72	NES	
14/01/2020	P72	DRY	

Data Point	Date	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl
18/01/2010	P82					5.95														
17/02/2010	P82		5.63	8.28	17.6	5.7														
5/03/2010	P82		5.61	8.48	16.7	5.97														
14/04/2010	P82		6.15	10.57	16.2	5.9														
31/05/2010	P82		5.42	8.17	15.9	4.4														
29/06/2010	P82		5.39	8.39	15.5	3.82														
27/07/2010	P82		5	8.55	14.6	4.6			9.4	9.4	0.07	<0.0002	<0.0002		0.044	11.5	0.012	<0.00005	2.5	11.3
31/08/2010	P82		5.01	8.96	14.3	4.55														
20/09/2010	P82		4.98	8.56	14.3	4.35														
14/10/2010	P82		4.36	9.23	15	5.32														
8/11/2010	P82		4.85	8.9	15.4	5.6														
15/12/2010	P82		4.61	10.17	15.7	5.9														
14/01/2011	P82					6.35														
28/04/2011	P82		5.65	11.11	16.8	4.2														
20/05/2011	P82		5.39	13.1	17.1	4.95														
21/07/2011	P82				14.5			<1		13	0.011	<0.0002	<0.0002		0.056	15.8	0.009	<0.00005	2.7	12.9
23/08/2011	P82		5.45	11.84	14.9	5.2														
19/09/2011	P82					5.3														
7/10/2011	P82		5.18	9.52	14.8	5.4														
7/11/2011	P82		4.78	8.9	15.4	5.5														
16/12/2011	P82		5.18	12.13	15.7	4.8														
23/01/2012	P82		4.93	11.42	15.9	5.25		<1	10	10	0.067	<0.0002	<0.0002		0.056	12.2	0.009	<0.00005	2.2	10.7
9/02/2012	P82		4.96	18.06	16.8	5.7														
5/03/2012	P82		4.84	7.61	16.3	5.5														
5/04/2012	P82		5.23	9.08	16.1	5.3														
16/05/2012	P82					5.2														
18/05/2012	P82		5.25	11.94	16.1	5.2														
27/06/2012	P82		5.75	9.09	15.1	5.8														
18/07/2012	P82				16.2	4.9		<1	9.8	9.8	0.07	<0.0002	<0.0002		0.059	11.9	0.01	<0.00005	2.7	11.4
18/07/2012	P82		5.32	10.16	16.2															
31/08/2012	P82		4.7	8.56	14.6	5.15														
17/09/2012	P82		4.41	11.04	14.4	4.9														
15/10/2012	P82		5.12	11.53	14.9	5.3														
19/11/2012	P82		4.29	9.88	14.8	5.8														
10/12/2012	P82		4.95	9.35	15.8	6														
25/01/2013	P82					6.05														
13/02/2013	P82					6.2														
18/03/2013	P82					6.5														
18/04/2013	P82		5.62	12.56	16.6	5.8		<1	17	17	0.072	<0.0002	<0.0002		0.061	21	0.008	<0.00005	3.9	14.8
21/05/2013	P82		4.24	19.4	16.2	4.5														
25/06/2013	P82		5.65	13.24	15	4.8														
2/07/2013	P82		5.05	10.4	16	5.35		<1	12.9	12.9	0.029	<0.0002	<0.0002		0.054	15.7	0.009	<0.00005	2.2	9.8
30/08/2013	P82		5.2	9.86	14	4.9														
19/09/2013	P82		5	9.64	14	5.3														
15/10/2013	P82				15.1			<1	14.4	14.4	0.02	<0.0002	<0.0002		0.063	17.6	0.009	<0.00005	3.5	11.7
26/11/2013	P82		6.1	18.24	15.1	5.7														
6/12/2013	P82		4.8	9.8	15.5	4														
17/01/2014	P82				17.2			<1	13.7	13.7	0.099	<0.0002	<0.0002		0.065	16.7	0.009	<0.00005	3.4	12
26/02/2014	P82		4.7	16.2	17.2	6.1														
26/03/2014	P82		5.1	14.6	16.4	6.1														
15/04/2014	P82					6														
26/05/2014	P82		4.9	9.86	16.4	5.9														
26/06/2014	P82		4.8	11	16	5														
18/07/2014	P82		4.95	10.38	14.5	4.8		<1	7.5	7.5	0.016	<0.0002	<0.0002		0.043	9.1	0.009	<0.00005	1.77	7.1
28/08/2014	P82		5	11.6	15	5.1														
29/09/2014	P82		5	11.2	15.4	5.2														
30/10/2014	P82		5	10.04	15.4	5.8														
27/11/2014	P82					6														
19/12/2014	P82		5	9.24	16	4														
31/12/2014	P82		5.2	12.8	19.5	5.48		<1	14.1	14.1	0.014	<0.0002	<0.0002		0.057	17.2	0.009	<0.00005	3	10.3
28/01/2015	P82		6	15.1	16.1	6		<1	16.4	16.4	0.072	<0.0002	<0.0002		0.064	20	0.009	<0.00005	3.3	10.8
27/02/2015	P82	Not enough for sample				6.3														
27/02/2015	P82	Duplicated site																		
4/05/2015	P82							<1	14.6	14.6	0.054	<0.0002	<0.0002		0.064	17.8	0.01	<0.00005	2.8	10
4/05/2015	P82	pH<6.6 EC<118.3. Temp<15.6																		
4/05/2015	P82	Bottom of well silty	6.65	11.8	15.6	5.5														

Date	CrS	CoS	CuS	EC (µS/m)	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	AgS	NaSO	SrS	SO4	SS	Sum Anion	Sum Cation
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	0.0005	<0.0002	0.0005	9.1		<0.05	<0.01	13.4	0.02	0.00078	1.73	0.0094	<0.00008	<0.00008	<0.0002	0.0005	1.5	1.51	<0.002	<0.002	<0.01	5.4	1.82	<0.001	<0.001	24	<0.0001	13.4	0.021	8.8		0.8	0.91
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	<0.0005	<0.0002	0.001	10		<0.05	<0.01	14.2	<0.02	0.00144	1.8	0.0051	<0.00008	<0.00008	<0.0002	<0.0005	2	2	<0.02		<0.01	5.7	1.7	<0.001	<0.001	26	<0.0001	11.2	0.026	8		0.93	0.82
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	<0.0005	0.0003	0.0009	10.6		<0.05	<0.01	13.2	<0.02	0.00026	1.85	0.0098	<0.00008	<0.00008	<0.0002	0.0008	2.4	2.4	<0.02	<0.02	<0.01	5.4	1.76	<0.001	<0.001	23	<0.0001	13.9	0.026	10		0.88	0.93
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	<0.0005	0.0002	0.0008	10.4		<0.05	<0.01	15.4	<0.02	0.00016	2.1	0.0089	<0.00008	<0.00008	<0.0002	0.0005	2.5	2.5	<0.02	<0.02	<0.01	5.4	1.93	<0.001	<0.001	23	<0.0001	13.5	0.029	12.9		0.96	0.96
P82																					<0.01												
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	0.0016	<0.0002	<0.0005	11.5		<0.05	<0.01	19.4	<0.02	<0.0001	2.4	0.0041	<0.00008	<0.00008	<0.0002	<0.0005	2.3	2.3	<0.02	<0.02	<0.01	5.8	2	<0.001	<0.001	28	<0.0001	13.7	0.037	6	1.9	1.04	1.05
P82																																	
P82																																	
P82	0.0005	0.0003	<0.0005	9.9		<0.05	<0.01	12.9	<0.02	0.00025	1.78	0.0088	<0.00008	<0.00008	<0.0002	0.0006	2.8	2.8	<0.02	<0.02	<0.01	5.3	1.69	<0.001	<0.001	21	<0.0001	12.4	0.027	11		0.96	0.85
P82																																	
P82																																	
P82	0.0008	<0.0002	<0.0005	11.7		<0.05	<0.01	18.9	<0.02	<0.0001	2.4	0.0047	<0.00008	<0.00008	<0.0002	<0.0005	3.4	3.4	<0.02	<0.02	0.016	5.5	1.99	<0.001	<0.001	28	<0.0001	14.9	0.033	7		1	1.08
P82																																	
P82																																	
P82	0.0009	<0.0002	<0.0005	11.5		<0.05	<0.01	17.7	0.02	<0.0001	2.3	0.0076	<0.00008	<0.00008	<0.0002	0.0013	3.5	3.5	<0.02	<0.02	<0.01	5.4	1.91	<0.001	<0.001	26	<0.0001	14.3	0.032	7		1	1.04
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	0.0007	0.0002	<0.0005	8.6		<0.05	<0.01	10.6	<0.02	0.00047	1.51	0.0082	<0.00008	<0.00008	<0.0002	<0.0005	1.51	1.51	<0.02		<0.01	5.5	1.31	<0.001	<0.001	21	<0.0001	10.4	0.0193	13		0.74	0.71
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	<0.0005	<0.0002	0.0007	11.2		1.18	<0.01	15.5	<0.02	0.00013	1.92	0.0053	<0.00008	<0.00008	<0.0002	<0.0005	3.8	3.8	<0.1		<0.01	5.8	1.87	<0.001	<0.001	26	<0.0001	13.3	0.029	7		0.98	0.94
P82	0.0008	<0.0002	<0.0005	11.6		<0.05	<0.01	17	<0.02	<0.0001	2.1	0.0048	0.00014	<0.00008	<0.0002	<0.0005	3.4	3.4	<0.1		<0.01	5.8	1.87	<0.001	<0.001	26	<0.0001	13.1	0.033	7		1.01	0.96
P82																																	
P82																																	
P82	0.0006	<0.0002	<0.0005	10.5		<0.05	<0.01	14.9	<0.02	<0.0001	1.89	0.0064	<0.00008	<0.00008	<0.0002	<0.0005	2.4	2.4	<0.1		<0.01	5.7	1.8	<0.001	<0.001	25	<0.0001	13.8	0.025	8		0.92	0.96
P82																																	
P82																																	

Date	TiS	ThS	SnS	TSS	US	CNWAD	ZnS
P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	<0.0005	230	<0.00002	<0.001	0.0109
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	0.0015	6	<0.00002	<0.001	0.016
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	0.0009	340	<0.00002	<0.001	0.0084
P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	0.0008	240	<0.00002	<0.001	0.0101
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	<0.0005	1,290	<0.00002	<0.001	0.0036
P82							
P82							
P82	<0.00005	<0.0005	0.001	161	<0.00002	<0.001	0.0135
P82							
P82							
P82	<0.00005	<0.0005	0.0012	173	<0.00002	<0.001	0.003
P82							
P82							
P82	<0.00005	<0.0005	0.0009	930	<0.00002	0.0026	0.0047
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	0.0014	80	<0.00002	<0.001	0.0038
P82							
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	<0.0005	61	<0.00002	<0.001	0.0089
P82	<0.00005	<0.0005	<0.0005	1,340	<0.00002	<0.001	0.002
P82							
P82							
P82	<0.00005	<0.0005	<0.0005	660	<0.00002	<0.001	0.003
P82							
P82							

Data Point	Date	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl
20/05/2015	P82	Field readings taken but not entered																		
20/05/2015	P82	Field readings only, not entered.																		
28/05/2015	P82	Field readings																		
26/06/2015	P82		5.4	18.31	14.5	5.5														
31/07/2015	P82	Slightly cloudy	5.7		15	5.4		<1	10	10	0.02	<0.0002	<0.0002		0.04	12.2	0.01	<0.00005	1.71	7.7
31/08/2015	P82	Dry				6.1														
1/09/2015	P82	WL-6.10m - NES																		
29/09/2015	P82					6														
29/09/2015	P82	May not be representative small amount of water in well	5.65		15.3															
1/11/2015	P82	Not enough for sample																		
6/11/2015	P82	NES				6														
3/12/2015	P82	NES																		
4/12/2015	P82					6.2														
13/01/2016	P82	NES																		
14/01/2016	P82					6.1														
3/02/2016	P82	Nes																		
16/02/2016	P82					6.3														
6/03/2016	P82					4.8														
28/04/2016	P82		6.5		16.5			<1	55	55	<0.003	<0.0002	<0.0002			67		<0.00005	6.4	11.1
29/04/2016	P82	Sampled				5.8														
19/05/2016	P82	NES																		
19/05/2016	P82						5.75													
28/06/2016	P82	NES					5.35													
28/06/2016	P82					5.35														
21/07/2016	P82		6.1	13.7	15.6	5.3														
17/08/2016	P82		6.1	10.7	15.7	5.25		<1	11.7	11.7	0.016	<0.0002	<0.0002			14.3		<0.00005	2.3	8
20/09/2016	P82		5.8	17.2	14.8	5.6														
27/10/2016	P82	Nes				5.85														
28/11/2016	P82	Nes				5.8														
21/12/2016	P82	NES				5.9														
26/01/2017	P82	Nes				6.23														
24/02/2017	P82	NES				6.2														
31/03/2017	P82		5.8	11.7	17.1	4														
28/04/2017	P82		5.7	13	16.6	4		<1	9.3	9.3	0.048	<0.0002	<0.0002	<0.001		11.3		<0.00005	2.5	7.4
26/05/2017	P82	NES				4.05														
30/06/2017	P82	Nes				4														
28/07/2017	P82	Low volume	5.2	12.2	15.3	5														
26/09/2017	P82	NES				5.15														
27/10/2017	P82	Nes				5.45														
22/11/2017	P82	Nes				5.5														
21/12/2017	P82	Nes				5.85														
17/01/2018	P82	Nes				5.6														
27/02/2018	P82	Nes				5.45														
14/03/2018	P82	Nes				5.73														
27/04/2018	P82	Nes				6.25														
31/05/2018	P82	NES				5.2														
27/06/2018	P82	NES				5.8														
21/08/2018	P82	NES				5.14														
2/10/2018	P82	NES				5.58														
22/11/2018	P82	NES				5.53														
17/12/2018	P82	NES				5.32														
12/02/2019	P82	NES				5.15														
11/04/2019	P82	NES				5.1														
23/05/2019	P82	Not enough to sample																		
24/07/2019	P82	Sampled using peristaltic pump. Silt removed.	4.67	14	15.3	5.31		<1	15.9	15.9	0.029	<0.0002	<0.0002	<0.001		19.4		<0.00005	4.3	7
14/01/2020	P82	DRY				7.42														

Date	CrS	CoS	CuS	EC (µS/m)	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	AgS	NaSO	SrS	SO4	SS	Sum Anion	Sum Cation
P82																																	
P82																																	
P82																																	
P82					183.1																												
P82	<0.0005	0.0002	0.0009	9.2		<0.05	<0.01	10.4	<0.02	0.00014	1.49	0.0075	<0.00008	<0.00008	<0.0002	<0.0005	2.1	2.2	<0.1		<0.01	5.6	1.3	<0.001	<0.001	22	<0.0001	10.5	0.0186	12		0.82	0.7
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	<0.0005	0.0065	<0.0005	16.2		0.08	<0.01	31	0.71	<0.0001	3.7	3.3	<0.00008	<0.00008		0.0011	0.16	0.16	<0.1		0.066	6.8	5.3	<0.001	<0.001	63	<0.0001	14.5		11		1.65	1.54
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	<0.0005	<0.0002	<0.0005	9.4		<0.05	<0.01	12.8	<0.02	0.00013	1.71	0.0057	<0.00008	<0.00008		<0.0005	2.8	2.8	<0.1		<0.01	6.1	2.4	<0.001	<0.001	23	<0.0001	12.3		8		0.83	0.86
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	0.0006	0.0003	0.0005	9.6		<0.05	<0.01	14.6	<0.02	0.00016	2	0.0113	<0.00008	<0.00008		<0.0005	2.9	2.9	<0.1		0.078	5.6	2.1	<0.001	<0.001	22	<0.0001	12.1		10		0.8	0.89
P82																																	
P82																																	
P82																																	
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P82																																	
P82																																	
P82																																	
P82																																	
P82																																	
P82	0.0005	<0.0002	<0.0005	11.4		<0.05	<0.00001	21	<0.02	0.00012	2.4	0.0058	<0.00008	<0.00008		<0.0005	3.5	3.5	<0.1		<0.01	5.9	1.96	<0.001	<0.001	29	<0.0001	13.2		10		0.98	1.05
P82																																	

Date	TiS	ThS	SnS	TSS	US	CNWAD	ZnS
P82							
P82							
P82							
P82							
P82	<0.00005	<0.0005	<0.0005	110	<0.00002	<0.001	0.0107
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82	0.0002			28	<0.00002	0.001	0.0051
P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005			7	<0.00002	<0.001	0.0103
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005			70	<0.00002	<0.001	0.0114
P82							
P82							
P82							
P82							
P82							
P82							
P82							
P82							
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P82							
P82							
P82							
P82							
P82							
P82							
P82	<0.00005			35	<0.00002	<0.02	0.0041
P82							

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Leve	FLS Water Volu	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS
P83	18/01/2010					6.62													
P83	17/02/2010		5.28	11.48	16.5	4.03													
P83	5/03/2010		5.42	13.09	16.8	6.49													
P83	14/04/2010		5.64	8.04	15.9	6.01													
P83	31/05/2010		5.1	11.36	15.5	4.2													
P83	29/06/2010		5.24	11.2	15	4.18													
P83	27/07/2010		4.8	17.21	14.5	4.85			5.3	5.3	0.114	<0.0002	<0.0002		0.138	6.5	0.012	0.00007	6
P83	30/08/2010		4.51	51.2	13.9	4.6													
P83	31/08/2010					4.6													
P83	20/09/2010		5.45	49	13.4	4.5													
P83	14/10/2010		4.22	33.6	14.6	6.02													
P83	8/11/2010					6.25													
P83	15/12/2010		4.46	32.6	15.8	6.4													
P83	14/01/2011					6.75													
P83	28/04/2011		4.93	27	16.6	4.3													
P83	20/05/2011		4.69	33	16.8	5.27													
P83	21/07/2011				14.7			<1		4.2	0.27	<0.0002	<0.0002		0.1	5.1	0.011	0.00012	13.2
P83	21/07/2011							<1	13	13	0.011	<0.0002	<0.0002		0.056	15.8	0.009	<0.00005	2.7
P83	23/08/2011		5.3	31.6	14.9	5.7													
P83	19/09/2011		4.84	42.5	15.2	5.95													
P83	7/10/2011		5.08	38.6	14.8	6													
P83	7/11/2011					6.15													
P83	16/12/2011		4.82	39	15.4	5.1													
P83	23/01/2012		4.6	42.9	15.5	6.1		<1	3.2	3.2	0.41	<0.0002	<0.0002		0.046	3.9	0.013	0.00018	19.1
P83	9/02/2012		4.25	42.6	16.8	6.4													
P83	5/03/2012		4.08	22.9	16	6.1													
P83	5/04/2012		4.54	18.6	15.5	6.15													
P83	18/05/2012		4.58	20.4	16	5.3													
P83	27/06/2012		4.76	18	14.7	6.1													
P83	18/07/2012				16	5.1		<1	2.3	2.3	0.35	<0.0002	<0.0002		0.04	2.8	0.013	0.00017	17.7
P83	18/07/2012		4.52	45.3	16														
P83	31/08/2012		4.8	32	14.8	5.65													
P83	17/09/2012		3.96	31.5	14.2	5.3													
P83	15/10/2012		4.59	44.7	15	5.9													
P83	19/11/2012		3.78	30.8	14.6	6.4													
P83	10/12/2012		4.34	29.6	15.2	6.6													
P83	25/01/2013					6.65													
P83	13/02/2013					6.8													
P83	18/03/2013					6.8													
P83	18/04/2013					6.3													
P83	21/05/2013		4.25	31.4	16.4	4.7													
P83	25/06/2013		5.25	31.6	14.8	5.2													
P83	2/07/2013		4.55	39.5	16	6.2		<1	3.7	3.7	0.48	<0.0002	<0.0002		0.03	4.5	0.012	0.00028	23
P83	30/08/2013		4.85	26.5	15.8	5.1													
P83	19/09/2013		4.3	28.6	14.5	6.1													
P83	15/10/2013				15.3			<1	2.4	2.4	0.38	<0.0002	<0.0002		0.027	2.9	0.01	0.0002	18.7
P83	26/11/2013					6.6													
P83	6/12/2013		4.5	25.9	15.4	4													
P83	17/01/2014				17.7			<1	2.7	2.7	0.39	<0.0002	<0.0002		0.027	3.3	0.01	0.00027	18.9
P83	26/02/2014					6.8													
P83	26/03/2014					6.7													
P83	15/04/2014					6.5													
P83	26/05/2014					6.5													
P83	26/06/2014		4.5	30.9	16	5.8													
P83	18/07/2014		4.41	28.4	15.9	5		<1	2.3	2.3	0.29	<0.0002	0.0005		0.026	2.8	0.012	0.00017	15.4
P83	28/08/2014		4.8	29.4	15	5.4													
P83	29/09/2014		4.8	21.5	15.4	6													
P83	30/10/2014		5.8	22.2	15.4	6.6													
P83	27/11/2014					6.8													
P83	19/12/2014		5.2	19.64	16	4.5													
P83	31/12/2014		4	0.315	16.7	6.35		<1	3	3	0.26	<0.0002	<0.0002		0.026	3.7	0.011	0.00017	16
P83	28/01/2015					6.8													
P83	27/02/2015	Not enough for				6.95													
P83	27/02/2015	Duplication of s																	
P83	4/05/2015							<1	2.9	2.9	0.29	<0.0002	<0.0002		0.029	3.5	0.013	0.0002	15.1
P83	4/05/2015	pH<6.6 EC<310																	

Date	Data Point	Cl	CrS	CoS	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN
P83	18/01/2010																		
P83	17/02/2010																		
P83	5/03/2010																		
P83	14/04/2010																		
P83	31/05/2010																		
P83	29/06/2010																		
P83	27/07/2010	12	<0.0005	0.001	0.0016	21.3	0.07	<0.01	41	<0.02	0.0037	6.3	0.038	<0.00008	<0.00008	<0.0002	0.0016	3.3	3.3
P83	30/08/2010																		
P83	31/08/2010																		
P83	20/09/2010																		
P83	14/10/2010																		
P83	8/11/2010																		
P83	15/12/2010																		
P83	14/01/2011																		
P83	28/04/2011																		
P83	20/05/2011																		
P83	21/07/2011	9.2	0.0007	0.0016	0.001	40.4	0.24	<0.01	84	<0.02	0.0025	12.4	0.113	<0.00008	<0.00008	<0.0002	0.0012	4	4
P83	21/07/2011		<0.0005	<0.0002	0.001	10	<0.05	<0.01	14.2	<0.02	0.00144	1.8	0.0051	<0.00008	<0.00008	<0.0002	<0.0005	2	2
P83	23/08/2011																		
P83	19/09/2011																		
P83	7/10/2011																		
P83	7/11/2011																		
P83	16/12/2011																		
P83	23/01/2012	8.2	0.0006	0.002	0.0008	39.4	0.09	<0.01	123	<0.02	0.00109	18.3	0.174	<0.00008	<0.00008	<0.0002	0.0015	3.3	3.4
P83	9/02/2012																		
P83	5/03/2012																		
P83	5/04/2012																		
P83	18/05/2012																		
P83	27/06/2012																		
P83	18/07/2012	7.2	<0.0005	0.0016	0.0014	43.7	0.27	<0.01	112	<0.02	0.0031	16.4	0.162	<0.00008	<0.00008	<0.0002	0.0015	3.3	3.3
P83	18/07/2012																		
P83	31/08/2012																		
P83	17/09/2012																		
P83	15/10/2012																		
P83	19/11/2012																		
P83	10/12/2012																		
P83	25/01/2013																		
P83	13/02/2013																		
P83	18/03/2013																		
P83	18/04/2013																		
P83	21/05/2013																		
P83	25/06/2013																		
P83	2/07/2013	8.9	0.0006	0.0027	0.0012	39.3	0.2	<0.01	140	<0.02	0.00063	20	0.53	<0.00008	<0.00008	<0.0002	0.0025	7.5	7.5
P83	30/08/2013																		
P83	19/09/2013																		
P83	15/10/2013	8.6	0.0006	0.0021	0.0007	36.7	0.13	<0.01	120	<0.02	0.00012	17.7	0.33	<0.00008	<0.00008	<0.0002	0.002	6.3	6.3
P83	26/11/2013																		
P83	6/12/2013																		
P83	17/01/2014	7.7	0.0007	0.0021	0.0009	35.1	0.07	<0.01	116	<0.02	0.00015	16.7	0.45	<0.00008	<0.00008	<0.0002	0.0032	5.7	5.8
P83	26/02/2014																		
P83	26/03/2014																		
P83	15/04/2014																		
P83	26/05/2014																		
P83	26/06/2014																		
P83	18/07/2014	6.7	0.0005	0.0017	0.0011	32.1	0.16	<0.01	96	<0.02	0.00185	14	0.31	<0.00008	<0.00008	<0.0002	0.0015	3.7	3.7
P83	28/08/2014																		
P83	29/09/2014																		
P83	30/10/2014																		
P83	27/11/2014																		
P83	19/12/2014																		
P83	31/12/2014	6.2	<0.0005	0.0017	0.0007	31.7	0.22	<0.01	99	<0.02	0.0002	14.2	0.35	<0.00008	<0.00008	<0.0002	0.0015	3.7	3.7
P83	28/01/2015																		
P83	27/02/2015																		
P83	27/02/2015																		
P83	4/05/2015	6.8	0.0008	0.0016	0.001	29.9	0.08	<0.01	97	<0.02	0.00016	14.5	0.32	<0.00008	<0.00008	<0.0002	0.0026	3.4	3.4
P83	4/05/2015																		

Date	Data Point	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation	TiS	ThS	SnS
P83	18/01/2010																		
P83	17/02/2010																		
P83	5/03/2010																		
P83	14/04/2010																		
P83	31/05/2010																		
P83	29/06/2010																		
P83	27/07/2010	0.002	0.002	<0.01	5.2	2.7	<0.001	<0.001	27	27	<0.0001	17.2	0.062	61	1.95	1.65	<0.00005	<0.0005	<0.0005
P83	30/08/2010																		
P83	31/08/2010																		
P83	20/09/2010																		
P83	14/10/2010																		
P83	8/11/2010																		
P83	15/12/2010																		
P83	14/01/2011																		
P83	28/04/2011																		
P83	20/05/2011																		
P83	21/07/2011	<0.002		<0.01	4.8	4.1	0.0015	<0.001	33		<0.0001	22	0.134	156	3.9	2.8	0.00006	<0.0005	0.0016
P83	21/07/2011		<0.02	<0.01	5.7	1.7	<0.001	<0.001		26	<0.0001	11.2	0.026	8	0.93	0.82	<0.00005	<0.0005	0.0015
P83	23/08/2011																		
P83	19/09/2011																		
P83	7/10/2011																		
P83	7/11/2011																		
P83	16/12/2011																		
P83	23/01/2012	<0.02	<0.02	<0.01	4.8	4.5	0.0016	0.0017	30	30	<0.0001	21	0.175	158	3.8	3.6	0.00005	<0.0005	0.001
P83	9/02/2012																		
P83	5/03/2012																		
P83	5/04/2012																		
P83	18/05/2012																		
P83	27/06/2012																		
P83	18/07/2012	<0.02	<0.02	<0.01	4.8	4.6	0.0014	0.0013	31	31	<0.0001	19.6	0.144	191	4.5	3.3	<0.00005	<0.0005	0.0009
P83	18/07/2012			<0.01															
P83	31/08/2012																		
P83	17/09/2012																		
P83	15/10/2012																		
P83	19/11/2012																		
P83	10/12/2012																		
P83	25/01/2013																		
P83	13/02/2013																		
P83	18/03/2013																		
P83	18/04/2013																		
P83	21/05/2013																		
P83	25/06/2013																		
P83	2/07/2013	<0.02	<0.02	0.019	4.8	3.6	0.0015	0.0015	27	27	<0.0001	13.9	0.156	132	3.6	3.6	0.00006	<0.0005	<0.0005
P83	30/08/2013																		
P83	19/09/2013																		
P83	15/10/2013	<0.02	<0.02	<0.01	4.8	3.8	0.0014	0.0012	28	28	<0.0001	16.9	0.129	123	3.3	3.3	0.00005	<0.0005	0.001
P83	26/11/2013																		
P83	6/12/2013																		
P83	17/01/2014	<0.02	<0.02	<0.01	4.8	3.3	0.0012	0.001	27	27	<0.0001	13.1	0.122	121	3.2	3	0.00005	<0.0005	0.0009
P83	26/02/2014																		
P83	26/03/2014																		
P83	15/04/2014																		
P83	26/05/2014																		
P83	26/06/2014																		
P83	18/07/2014	<0.02		<0.01	4.8	3.3	<0.001	0.0011	27		<0.0001	14.3	0.109	105	2.7	2.7	0.00006	<0.0005	0.0007
P83	28/08/2014																		
P83	29/09/2014																		
P83	30/10/2014																		
P83	27/11/2014																		
P83	19/12/2014																		
P83	31/12/2014	<0.1		<0.01	4.9	3.2	<0.001	<0.001	28		<0.0001	12.6	0.107	111	2.8	2.7	<0.00005	<0.0005	<0.0005
P83	28/01/2015																		
P83	27/02/2015																		
P83	27/02/2015																		
P83	4/05/2015	<0.1		<0.01	4.7	3.4	0.0011	<0.001	27		<0.0001	17.1	0.094	99	2.5	2.8	0.00005	<0.0005	<0.0005
P83	4/05/2015																		

Date	Data Point	TSS	US	CNWAD	ZnS
P83	18/01/2010				
P83	17/02/2010				
P83	5/03/2010				
P83	14/04/2010				
P83	31/05/2010				
P83	29/06/2010				
P83	27/07/2010	144	<0.00002	<0.001	0.031
P83	30/08/2010				
P83	31/08/2010				
P83	20/09/2010				
P83	14/10/2010				
P83	8/11/2010				
P83	15/12/2010				
P83	14/01/2011				
P83	28/04/2011				
P83	20/05/2011				
P83	21/07/2011	8	0.00003	<0.001	0.021
P83	21/07/2011	6	<0.00002	<0.001	0.016
P83	23/08/2011				
P83	19/09/2011				
P83	7/10/2011				
P83	7/11/2011				
P83	16/12/2011				
P83	23/01/2012	920	0.00004	<0.001	0.0177
P83	9/02/2012				
P83	5/03/2012				
P83	5/04/2012				
P83	18/05/2012				
P83	27/06/2012				
P83	18/07/2012	167	0.00003	<0.001	0.02
P83	18/07/2012				
P83	31/08/2012				
P83	17/09/2012				
P83	15/10/2012				
P83	19/11/2012				
P83	10/12/2012				
P83	25/01/2013				
P83	13/02/2013				
P83	18/03/2013				
P83	18/04/2013				
P83	21/05/2013				
P83	25/06/2013				
P83	2/07/2013	420	0.00004	<0.001	0.027
P83	30/08/2013				
P83	19/09/2013				
P83	15/10/2013	890	0.00004	<0.001	0.0123
P83	26/11/2013				
P83	6/12/2013				
P83	17/01/2014	2,300	0.00004	0.0059	0.015
P83	26/02/2014				
P83	26/03/2014				
P83	15/04/2014				
P83	26/05/2014				
P83	26/06/2014				
P83	18/07/2014	15	0.00003	<0.001	0.0186
P83	28/08/2014				
P83	29/09/2014				
P83	30/10/2014				
P83	27/11/2014				
P83	19/12/2014				
P83	31/12/2014	530	0.00005	<0.001	0.036
P83	28/01/2015				
P83	27/02/2015				
P83	27/02/2015				
P83	4/05/2015	1,090	0.00003	<0.001	0.0121
P83	4/05/2015				

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Leve	FLS Water Volu	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AIS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS
P83	4/05/2015	Bottom of well	6.6	31	15.7	6.2													
P83	20/05/2015	Field readings t																	
P83	20/05/2015	Field readings c																	
P83	28/05/2015	Field readings																	
P83	26/06/2015	Bottom of well	5.3	52.5	14.5	6.6													
P83	31/07/2015	NES				6.2													
P83	31/07/2015	Not enough for																	
P83	31/08/2015	Dry				6.7													
P83	1/09/2015	WL-6.70m - NE																	
P83	29/09/2015	NES				6.4													
P83	29/09/2015	WL-6.40 NES																	
P83	1/11/2015	Not enough for																	
P83	6/11/2015	NES				6.7													
P83	3/12/2015	NES																	
P83	4/12/2015					6.9													
P83	13/01/2016	NES																	
P83	14/01/2016					6.7													
P83	3/02/2016	Nes																	
P83	16/02/2016					6.9													
P83	6/03/2016					5													
P83	29/04/2016	Nes				6.4													
P83	19/05/2016	NES																	
P83	19/05/2016						6.4												
P83	28/06/2016	NES					6												
P83	28/06/2016					6													
P83	21/07/2016	NES				6.1													
P83	17/08/2016	Nes				3.1													
P83	20/09/2016	Nes				6.5													
P83	27/10/2016	Nes				6.6													
P83	28/11/2016	Nes				6.65													
P83	21/12/2016	NES				6.62													
P83	26/01/2017	Nes				6.92													
P83	24/02/2017	NES				6.85													
P83	31/03/2017		5.7	18.5	17.2	4.15													
P83	28/04/2017	NES				6.3													
P83	26/05/2017	NES				4.2													
P83	30/06/2017	Nes				4.1													
P83	28/07/2017	Low volume	5.05	22.8	15.7	5.4													
P83	26/09/2017	NES				6.05													
P83	27/10/2017	Nes				6.1													
P83	22/11/2017	Nes				6.48													
P83	21/12/2017	Nes				6.7													
P83	17/01/2018	Nes				6.55													
P83	27/02/2018	Nes				6.4													
P83	14/03/2018	Nes				6.3													
P83	27/04/2018	Nes				6.5													
P83	31/05/2018	NES				5.98													
P83	27/06/2018	NES				6.05													
P83	21/08/2018	NES				6.07													
P83	2/10/2018	NES				6.45													
P83	22/11/2018	NES				6.37													
P83	17/12/2018	NES				6.21													
P83	12/02/2019	NES				6.7													
P83	11/04/2019	NES				6.7													
P83	23/05/2019	Not enough to																	
P83	24/07/2019	Sampled using	4.1	26.3	15.5	5.92		<1	2.6	2.6	0.199	<0.0002	<0.0002	<0.001		3.2		0.00015	12.3
P83	14/01/2020	DRY				7.69													

Date	Data Point	Cl	CrS	CoS	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN
P83	4/05/2015																		
P83	20/05/2015																		
P83	20/05/2015																		
P83	28/05/2015																		
P83	26/06/2015																		
P83	31/07/2015																		
P83	31/07/2015																		
P83	31/08/2015																		
P83	1/09/2015																		
P83	29/09/2015																		
P83	29/09/2015																		
P83	1/11/2015																		
P83	6/11/2015																		
P83	3/12/2015																		
P83	4/12/2015																		
P83	13/01/2016																		
P83	14/01/2016																		
P83	3/02/2016																		
P83	16/02/2016																		
P83	6/03/2016																		
P83	29/04/2016																		
P83	19/05/2016																		
P83	19/05/2016																		
P83	28/06/2016																		
P83	28/06/2016																		
P83	21/07/2016																		
P83	17/08/2016																		
P83	20/09/2016																		
P83	27/10/2016																		
P83	28/11/2016																		
P83	21/12/2016																		
P83	26/01/2017																		
P83	24/02/2017																		
P83	31/03/2017																		
P83	28/04/2017																		
P83	26/05/2017																		
P83	30/06/2017																		
P83	28/07/2017																		
P83	26/09/2017																		
P83	27/10/2017																		
P83	22/11/2017																		
P83	21/12/2017																		
P83	17/01/2018																		
P83	27/02/2018																		
P83	14/03/2018																		
P83	27/04/2018																		
P83	31/05/2018																		
P83	27/06/2018																		
P83	21/08/2018																		
P83	2/10/2018																		
P83	22/11/2018																		
P83	17/12/2018																		
P83	12/02/2019																		
P83	11/04/2019																		
P83	23/05/2019																		
P83	24/07/2019	<5	0.0005	0.0008	<0.0005	21.1	0.1	<0.00001	75	<0.02	0.00011	10.8	0.27	<0.00008	<0.00008		0.0006	1.4	1.4
P83	14/01/2020																		

Date	Data Point	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation	TiS	ThS	SnS
P83	4/05/2015																		
P83	20/05/2015																		
P83	20/05/2015																		
P83	28/05/2015																		
P83	26/06/2015																		
P83	31/07/2015																		
P83	31/07/2015																		
P83	31/08/2015																		
P83	1/09/2015																		
P83	29/09/2015																		
P83	29/09/2015																		
P83	1/11/2015																		
P83	6/11/2015																		
P83	3/12/2015																		
P83	4/12/2015																		
P83	13/01/2016																		
P83	14/01/2016																		
P83	3/02/2016																		
P83	16/02/2016																		
P83	6/03/2016																		
P83	29/04/2016																		
P83	19/05/2016																		
P83	19/05/2016																		
P83	28/06/2016																		
P83	28/06/2016																		
P83	21/07/2016																		
P83	17/08/2016																		
P83	20/09/2016																		
P83	27/10/2016																		
P83	28/11/2016																		
P83	21/12/2016																		
P83	26/01/2017																		
P83	24/02/2017																		
P83	31/03/2017																		
P83	28/04/2017																		
P83	26/05/2017																		
P83	30/06/2017																		
P83	28/07/2017																		
P83	26/09/2017																		
P83	27/10/2017																		
P83	22/11/2017																		
P83	21/12/2017																		
P83	17/01/2018																		
P83	27/02/2018																		
P83	14/03/2018																		
P83	27/04/2018																		
P83	31/05/2018																		
P83	27/06/2018																		
P83	21/08/2018																		
P83	2/10/2018																		
P83	22/11/2018																		
P83	17/12/2018																		
P83	12/02/2019																		
P83	11/04/2019																		
P83	23/05/2019																		
P83	24/07/2019	<0.1		<0.01	4.9	2.3	<0.001	<0.001	26		<0.0001	7.7		78	1.89	1.95	<0.00005		
P83	14/01/2020																		

Date	Data Point	TSS	US	CNWAD	ZnS
P83	4/05/2015				
P83	20/05/2015				
P83	20/05/2015				
P83	28/05/2015				
P83	26/06/2015				
P83	31/07/2015				
P83	31/07/2015				
P83	31/08/2015				
P83	1/09/2015				
P83	29/09/2015				
P83	29/09/2015				
P83	1/11/2015				
P83	6/11/2015				
P83	3/12/2015				
P83	4/12/2015				
P83	13/01/2016				
P83	14/01/2016				
P83	3/02/2016				
P83	16/02/2016				
P83	6/03/2016				
P83	29/04/2016				
P83	19/05/2016				
P83	19/05/2016				
P83	28/06/2016				
P83	28/06/2016				
P83	21/07/2016				
P83	17/08/2016				
P83	20/09/2016				
P83	27/10/2016				
P83	28/11/2016				
P83	21/12/2016				
P83	26/01/2017				
P83	24/02/2017				
P83	31/03/2017				
P83	28/04/2017				
P83	26/05/2017				
P83	30/06/2017				
P83	28/07/2017				
P83	26/09/2017				
P83	27/10/2017				
P83	22/11/2017				
P83	21/12/2017				
P83	17/01/2018				
P83	27/02/2018				
P83	14/03/2018				
P83	27/04/2018				
P83	31/05/2018				
P83	27/06/2018				
P83	21/08/2018				
P83	2/10/2018				
P83	22/11/2018				
P83	17/12/2018				
P83	12/02/2019				
P83	11/04/2019				
P83	23/05/2019				
P83	24/07/2019	3	0.00002	<0.02	0.0061
P83	14/01/2020				

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl	CrS
18/01/2010	P84					6.45															
17/02/2010	P84		4.66	86.4	17.1	6.1															
5/03/2010	P84					6.51															
14/04/2010	P84		5.5	12.67	16	6.46															
31/05/2010	P84		4.82	13.77	15.9	4.4															
29/06/2010	P84		4.57	13.83	15.5	4.4															
27/07/2010	P84		4.85	32.9	15.1	5			2.1	2.1	0.78	<0.0002	<0.0002		0.061	2.6	0.012	0.00026	11.3	12.1	0.0006
31/08/2010	P84		4.81	38	14.3	4.95															
20/09/2010	P84		5.03	35.2	13.9	4.6															
14/10/2010	P84		4.7	44.5	15.1	6.14															
8/11/2010	P84					6.3															
15/12/2010	P84					6.36															
14/01/2011	P84					6.75															
28/04/2011	P84		5.11	24.5	16.6	4.6															
20/05/2011	P84		4.68	44.1	16.9	5.51															
21/07/2011	P84				14.8			<1	2.8	2.8	0.53	<0.0002	<0.0002		0.082	3.4	0.011	0.00025	9.7	10.2	0.0007
23/08/2011	P84		5.3	23.2	14.9	5.8															
19/09/2011	P84		4.58	59	15.2	5.9															
7/10/2011	P84		5.12	68.7	15.1	6															
7/11/2011	P84					6.2															
16/12/2011	P84		4.64	73	15.9	5.6															
23/01/2012	P84					6.2															
9/02/2012	P84		3.97	57.2	16.8	6.4															
5/03/2012	P84		3.84	37.8	16.3	6.2															
5/04/2012	P84		4.32	25.8	16	6.2															
18/05/2012	P84		4.11	23.6	16.2	5.4															
27/06/2012	P84		4.51	33	13.7	6.1															
18/07/2012	P84				15.8	5.2		<1	1.4	1.4	0.89	<0.0002	<0.0002		0.049	1.7	0.011	0.00038	15.2	10.1	0.0005
18/07/2012	P84		5.42	33.8	15.8																
31/08/2012	P84		4.49	28.5	14.8	5.7															
17/09/2012	P84		3.89	28.6	14.5	5.4															
15/10/2012	P84		4.53	53.3	15.1	5.9															
19/11/2012	P84		4.52	43.3	15.1	6.4															
10/12/2012	P84		4.18	42.5	15.7	6.9															
25/01/2013	P84					6.6															
13/02/2013	P84					6.7															
18/03/2013	P84					6.8															
18/04/2013	P84					6															
21/05/2013	P84		4.75	10.2	16.4	4.3															
25/06/2013	P84		4.38	23.2	14.8	5.1															
2/07/2013	P84		4.53	37.9	16	6.2		<1	1.9	1.9	0.79	<0.0002	<0.0002		0.031	2.3	0.011	0.00037	18.1	10.2	0.0012
30/08/2013	P84		5.05	26.8	15.4	5.3				26.8											
19/09/2013	P84		4.18	27	14.5	6.1															
15/10/2013	P84					6.4															
26/11/2013	P84					6.6															
6/12/2013	P84		4.4	20.3	15.7	4.3															
17/01/2014	P84					6.6															
26/02/2014	P84					6.8															
26/03/2014	P84					6.7															
15/04/2014	P84					6.7															
26/06/2014	P84		4.4	35.1	16.1	5.8															
18/07/2014	P84		4.8	19.86	14.5	5		<1	2.4	2.4	0.24	<0.0002	<0.0002		0.05	2.9	0.01	0.00012	5.5	7.7	0.0007
28/08/2014	P84		4.8	30.6	14.8	6.1															
29/09/2014	P84		4.9	19.6	15.4	6															
30/10/2014	P84		5.1	38.2	15.4	6.6															
27/11/2014	P84					6.7															
19/12/2014	P84		5	16.4	16	4.4															
31/12/2014	P84		4		19.3	6.37															
28/01/2015	P84					6.8															
27/02/2015	P84	Not enough for sample				6.9															
27/02/2015	P84	Duplication of site MP field																			
4/05/2015	P84	Not enough for sample																			
5/05/2015	P84	Not enough for sample				6.3															
20/05/2015	P84	Not enough for sample																			
20/05/2015	P84	Field readings only, not entered.																			
28/05/2015	P84	Field readings																			

Date	Data Point	CoS	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation
18/01/2010	P84																															
17/02/2010	P84																															
5/03/2010	P84																															
14/04/2010	P84																															
31/05/2010	P84																															
29/06/2010	P84																															
27/07/2010	P84	0.0071	<0.0005	30	0.23	<0.01	90	<0.02	0.00058	15	0.8	<0.00008	<0.00008	<0.0002	0.0071	2.2	2.2	<0.002	<0.002	<0.01	4.8	3.1	<0.001	<0.001	26	26	<0.0001	16	0.105	116	3	2.7
31/08/2010	P84																															
20/09/2010	P84																															
14/10/2010	P84																															
8/11/2010	P84																															
15/12/2010	P84																															
14/01/2011	P84																															
28/04/2011	P84																															
20/05/2011	P84																															
21/07/2011	P84	0.0058	0.0021	32.8	0.39	<0.01	71	<0.02	0.00095	11.3	0.65	<0.00008	<0.00008	<0.0002	0.0055	2.1	2.1	<0.02	<0.02	<0.01	4.7	3	<0.001	<0.001	29	29	<0.0001	13.3	0.09	124	3.1	2.2
23/08/2011	P84																															
19/09/2011	P84																															
7/10/2011	P84																															
7/11/2011	P84																															
16/12/2011	P84																															
23/01/2012	P84																															
9/02/2012	P84																															
5/03/2012	P84																															
5/04/2012	P84																															
18/05/2012	P84																															
27/06/2012	P84																															
18/07/2012	P84	0.0084	0.0014	39.9	0.47	<0.01	103	<0.02	0.00047	15.7	1.38	0.00009	0.00008	<0.0002	0.0098	3.2	3.3	0.05	0.05	<0.01	4.6	3.5	0.0013	<0.001	28	28	<0.0001	14.5	0.107	164	4	2.9
18/07/2012	P84																			<0.01												
31/08/2012	P84																															
17/09/2012	P84																															
15/10/2012	P84																															
19/11/2012	P84																															
10/12/2012	P84																															
25/01/2013	P84																															
13/02/2013	P84																															
18/03/2013	P84																															
18/04/2013	P84																															
21/05/2013	P84																															
25/06/2013	P84																															
2/07/2013	P84	0.0081	0.001	37.3	0.15	<0.01	116	0.03	0.0005	17.2	1.45	0.00018	0.00011	<0.0002	0.0095	4.6	4.6	<0.02	<0.02	<0.01	4.6	3.9	0.0011	0.0011	26	26	<0.0001	15.1	0.116	128	3.3	3.2
30/08/2013	P84																															
19/09/2013	P84																															
15/10/2013	P84																															
26/11/2013	P84																															
6/12/2013	P84																															
17/01/2014	P84																															
26/02/2014	P84																															
26/03/2014	P84																															
15/04/2014	P84																															
26/06/2014	P84																															
18/07/2014	P84	0.0027	<0.0005	16.5	0.15	<0.01	39	<0.02	0.00037	6.2	0.34	<0.00008	<0.00008	<0.0002	0.0022	1.24	1.24	<0.02		<0.01	5	2.3	<0.001	<0.001	23		<0.0001	9.5	0.051	48	1.36	1.3
28/08/2014	P84																															
29/09/2014	P84																															
30/10/2014	P84																															
27/11/2014	P84																															
19/12/2014	P84																															
31/12/2014	P84																															
28/01/2015	P84																															
27/02/2015	P84																															
27/02/2015	P84																															
4/05/2015	P84																															
5/05/2015	P84																															
20/05/2015	P84																															
20/05/2015	P84																															
28/05/2015	P84																															

Date	Data Point	TiS	ThS	SnS	TSS	US	CNWAD	ZnS
18/01/2010	P84							
17/02/2010	P84							
5/03/2010	P84							
14/04/2010	P84							
31/05/2010	P84							
29/06/2010	P84							
27/07/2010	P84	0.00005	<0.0005	<0.0005	185	0.00005	<0.001	0.023
31/08/2010	P84							
20/09/2010	P84							
14/10/2010	P84							
8/11/2010	P84							
15/12/2010	P84							
14/01/2011	P84							
28/04/2011	P84							
20/05/2011	P84							
21/07/2011	P84	<0.00005	<0.0005	0.0013	14	0.00004	<0.001	0.025
23/08/2011	P84							
19/09/2011	P84							
7/10/2011	P84							
7/11/2011	P84							
16/12/2011	P84							
23/01/2012	P84							
9/02/2012	P84							
5/03/2012	P84							
5/04/2012	P84							
18/05/2012	P84							
27/06/2012	P84							
18/07/2012	P84	<0.00005	<0.0005	0.001	171	0.00006	<0.001	0.031
18/07/2012	P84							
31/08/2012	P84							
17/09/2012	P84							
15/10/2012	P84							
19/11/2012	P84							
10/12/2012	P84							
25/01/2013	P84							
13/02/2013	P84							
18/03/2013	P84							
18/04/2013	P84							
21/05/2013	P84							
25/06/2013	P84							
2/07/2013	P84	0.00005	<0.0005	0.0011	3,700	0.00006	<0.001	0.027
30/08/2013	P84							
19/09/2013	P84							
15/10/2013	P84							
26/11/2013	P84							
6/12/2013	P84							
17/01/2014	P84							
26/02/2014	P84							
26/03/2014	P84							
15/04/2014	P84							
26/06/2014	P84							
18/07/2014	P84	<0.00005	<0.0005	0.0007	18	0.00002	<0.001	0.0141
28/08/2014	P84							
29/09/2014	P84							
30/10/2014	P84							
27/11/2014	P84							
19/12/2014	P84							
31/12/2014	P84							
28/01/2015	P84							
27/02/2015	P84							
27/02/2015	P84							
4/05/2015	P84							
5/05/2015	P84							
20/05/2015	P84							
20/05/2015	P84							
28/05/2015	P84							

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl	CrS
26/06/2015	P84	Bottom of well scan may not be representative	4.9	56.9	14.5	6.5															
31/07/2015	P84	NES				6.2															
31/07/2015	P84	Not enough for field results or sample																			
31/08/2015	P84	Dry				6.6															
1/09/2015	P84	WL-6.60m - NES																			
29/09/2015	P84	NES				6.4															
29/09/2015	P84	WL-6.40 NES																			
1/11/2015	P84	Not enough for sample																			
6/11/2015	P84	NES				6.7															
3/12/2015	P84	NES																			
4/12/2015	P84					6.9															
13/01/2016	P84	NES																			
14/01/2016	P84					6.7															
3/02/2016	P84	Nes																			
16/02/2016	P84					6.9															
6/03/2016	P84					5.9															
29/04/2016	P84	Nes				6.4															
19/05/2016	P84	NES																			
19/05/2016	P84						6.4														
28/06/2016	P84	NES					6														
28/06/2016	P84					6															
21/07/2016	P84	NES				6.1															
17/08/2016	P84	Nes				6.1															
20/09/2016	P84	Nes				6.6															
27/10/2016	P84	Nes				6.6															
28/11/2016	P84	Nes				6.65															
21/12/2016	P84	NES				6.6															
26/01/2017	P84	Nes				6.9															
24/02/2017	P84	NES				6.82															
31/03/2017	P84		5.8	13.5	17.2	4.2															
28/04/2017	P84	NES				6.2															
26/05/2017	P84	NES				4.2															
30/06/2017	P84	Nes				4.1															
28/07/2017	P84	Low volume	5	20	15.9	5.8															
26/09/2017	P84	NES				6.05															
27/10/2017	P84	Nes				6.1															
22/11/2017	P84	Nes				6.5															
21/12/2017	P84	Nes				6.7															
17/01/2018	P84	Nes				6.55															
27/02/2018	P84	Nes				6.4															
14/03/2018	P84	Nes				6.3															
27/04/2018	P84	Nes				6.5															
31/05/2018	P84	NES				6.1															
27/06/2018	P84	NES				6.2															
21/08/2018	P84	NES				6.05															
2/10/2018	P84	NES				5.49															
22/11/2018	P84	NES				6.37															
17/12/2018	P84	NES				6.2															
12/02/2019	P84	DRY																			
11/04/2019	P84	NES				6.2															
23/05/2019	P84	Not enough to sample																			
24/07/2019	P84	Sampled using peristaltic pump. Silt removed.	4.04	22.7	15.4	6		<1	1.4	1.4	0.33	<0.0002	<0.0002	<0.001		1.7		0.00017	8.6	5	<0.0005
14/01/2020	P84	DRY				7.21															

Date	Data Point	CoS	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation
26/06/2015	P84																															
31/07/2015	P84																															
31/07/2015	P84																															
31/08/2015	P84																															
1/09/2015	P84																															
29/09/2015	P84																															
29/09/2015	P84																															
1/11/2015	P84																															
6/11/2015	P84																															
3/12/2015	P84																															
4/12/2015	P84																															
13/01/2016	P84																															
14/01/2016	P84																															
3/02/2016	P84																															
16/02/2016	P84																															
6/03/2016	P84																															
29/04/2016	P84																															
19/05/2016	P84																															
19/05/2016	P84																															
28/06/2016	P84																															
28/06/2016	P84																															
21/07/2016	P84																															
17/08/2016	P84																															
20/09/2016	P84																															
27/10/2016	P84																															
28/11/2016	P84																															
21/12/2016	P84																															
26/01/2017	P84																															
24/02/2017	P84																															
31/03/2017	P84																															
28/04/2017	P84																															
26/05/2017	P84																															
30/06/2017	P84																															
28/07/2017	P84																															
26/09/2017	P84																															
27/10/2017	P84																															
22/11/2017	P84																															
21/12/2017	P84																															
17/01/2018	P84																															
27/02/2018	P84																															
14/03/2018	P84																															
27/04/2018	P84																															
31/05/2018	P84																															
27/06/2018	P84																															
21/08/2018	P84																															
2/10/2018	P84																															
22/11/2018	P84																															
17/12/2018	P84																															
12/02/2019	P84																															
11/04/2019	P84																															
23/05/2019	P84																															
24/07/2019	P84	0.0036	<0.0005	18.9	0.16	<0.00001	56	<0.02	0.00033	8.3	0.65	<0.00008	<0.00008		0.0032	0.96	0.96	<0.1		<0.01	4.9	2.5	<0.001	<0.001	24		<0.0001	8.2		65	1.59	1.61
14/01/2020	P84																															

Date	Data Point	TiS	ThS	SnS	TSS	US	CNWAD	ZnS
26/06/2015	P84							
31/07/2015	P84							
31/07/2015	P84							
31/08/2015	P84							
1/09/2015	P84							
29/09/2015	P84							
29/09/2015	P84							
1/11/2015	P84							
6/11/2015	P84							
3/12/2015	P84							
4/12/2015	P84							
13/01/2016	P84							
14/01/2016	P84							
3/02/2016	P84							
16/02/2016	P84							
6/03/2016	P84							
29/04/2016	P84							
19/05/2016	P84							
19/05/2016	P84							
28/06/2016	P84							
28/06/2016	P84							
21/07/2016	P84							
17/08/2016	P84							
20/09/2016	P84							
27/10/2016	P84							
28/11/2016	P84							
21/12/2016	P84							
26/01/2017	P84							
24/02/2017	P84							
31/03/2017	P84							
28/04/2017	P84							
26/05/2017	P84							
30/06/2017	P84							
28/07/2017	P84							
26/09/2017	P84							
27/10/2017	P84							
22/11/2017	P84							
21/12/2017	P84							
17/01/2018	P84							
27/02/2018	P84							
14/03/2018	P84							
27/04/2018	P84							
31/05/2018	P84							
27/06/2018	P84							
21/08/2018	P84							
2/10/2018	P84							
22/11/2018	P84							
17/12/2018	P84							
12/02/2019	P84							
11/04/2019	P84							
23/05/2019	P84							
24/07/2019	P84	<0.00005			55	0.00003	<0.02	0.0139
14/01/2020	P84							

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl	CrS
18/01/2010	P85					4.22															
17/02/2010	P85					4.22															
5/03/2010	P85					4.2															
14/04/2010	P85					6.43															
30/05/2010	P85		4.66	46.8	16.3					2.4	0.27	<0.0002	<0.0002			2.9			14.1	14.7	
31/05/2010	P85					3															
29/06/2010	P85		4.72	33	15.5	3.15			2.7	2.7	0.38	<0.0002	<0.0002			3.3			14.9	15.6	
27/07/2010	P85		4.65	47	15.2	3.3			2.7	2.7	0.55	<0.0002	<0.0002		0.032	3.3	0.009	0.00031	19.5	16.3	<0.0005
31/08/2010	P85					3.35															
20/09/2010	P85				14.7			<1	2.2	2.2	0.41	<0.0002	<0.0002		0.025	2.7	0.011	0.00025	16.5	14.9	<0.0005
13/10/2010	P85					4.15															
8/11/2010	P85					4.1															
15/12/2010	P85					4.25															
14/01/2011	P85					4.35															
28/04/2011	P85					2.8															
20/05/2011	P85					3.51															
28/06/2011	P85				16			<1	3.2	3.2	0.49	<0.0002	<0.0002		0.029	3.9	0.011	0.00031	21	17	<0.0005
21/07/2011	P85				14.2			<1	3.1	3.1	0.53	<0.0002	<0.0002		0.03	3.8	0.011	0.00035	22	19.6	<0.0005
23/08/2011	P85					3.9															
19/09/2011	P85					3.5															
7/10/2011	P85					3.75															
7/11/2011	P85					4															
16/12/2011	P85					3.5															
23/01/2012	P85					3.8															
9/02/2012	P85					4.15															
5/03/2012	P85					3.9															
5/04/2012	P85					4															
18/05/2012	P85					4.1															
27/06/2012	P85					4															
18/07/2012	P85				17.1	3.3		<1	2.4	2.4	0.68	<0.0002	<0.0002		0.027	2.9	0.011	0.00032	30	19.8	<0.0005
18/07/2012	P85		5.86	58.6	17.1																
28/08/2012	P85		4.2	38.9	14.3	2.65															
11/09/2012	P85		4.15	40.8	14.7	3.1															
15/10/2012	P85					3.9															
19/11/2012	P85					4.3															
10/12/2012	P85					4.3															
25/01/2013	P85					4.2															
13/02/2013	P85					4.35															
18/03/2013	P85					4.4															
18/04/2013	P85					4.4															
21/05/2013	P85		4.19	26.1	16.5	2.65															
25/06/2013	P85		4.3	38.6	14.8	2.2															
2/07/2013	P85					3.5															
30/08/2013	P85					3.55															
19/09/2013	P85					3.7															
14/10/2013	P85					3.95															
26/11/2013	P85					4.1															
6/12/2013	P85		5.7	16.3	16	2.4															
17/01/2014	P85					4.4															
26/02/2014	P85					4.3															
26/03/2014	P85					4.2															
15/04/2014	P85					4															
27/05/2014	P85					4.2															
26/06/2014	P85					3.4															
18/07/2014	P85		5	41.4	17	3.2		<1	5.8	5.8	0.35	<0.0002	<0.0002		0.03	7.1	0.011	0.00022	16.5	14.8	<0.0005
28/08/2014	P85		5.1	42	14.8	3.6															
29/09/2014	P85		5.1	39.8	15.4	3.6															
30/10/2014	P85					4															
13/11/2014	P85		5	33.2		4.4															
9/12/2014	P85					4.5															
31/12/2014	P85		5.1	57.2	18.1																
28/01/2015	P85					4.5															
27/02/2015	P85	Not enough for sample				4.5															
27/02/2015	P85	Duplication of site MP field																			
4/05/2015	P85	Not enough for sample																			
5/05/2015	P85	Not enough for sample				3.65															

Date	Data Point	CoS	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation	TiS
18/01/2010	P85																																
17/02/2010	P85																																
5/03/2010	P85																																
14/04/2010	P85																																
30/05/2010	P85	0.0044	<0.0005	31.7		<0.01	70	<0.02	0.00027	8.5	0.64	0.00025			0.0005	1.81	1.82	<0.02	<0.02	<0.01	4.9	3	<0.001	<0.001	28	28	<0.0001	19.2		124	3.2	2.4	
31/05/2010	P85																																
29/06/2010	P85	0.0043	<0.0005	34.9		<0.01	77	0.03	0.00019	9.7	0.64	0.00039			0.0005	1.57	1.57	<0.002	<0.002	<0.01	4.7	3	<0.001	<0.001	27	27	<0.0001	21		125	3.2	2.6	
27/07/2010	P85	0.0061	<0.0005	37.1	0.11	<0.01	112	0.02	0.00034	15.2	1	0.00027	0.00053	<0.0002	0.0012	1.38	1.38	<0.002	<0.002	<0.01	4.7	3.6	<0.001	<0.001	29	29	<0.0001	26	0.113	144	3.6	3.6	0.00012
31/08/2010	P85																																
20/09/2010	P85	0.0053	<0.0005	33.8	0.09	<0.01	89	<0.02	0.00029	11.6	0.75	0.00026	0.0004	<0.0002	0.0006	1.2	1.2	<0.002	<0.002	0.016	4.8	3.4	<0.001	<0.001	27	27	<0.0001	24	0.09	132	3.3	3	0.00008
13/10/2010	P85																																
8/11/2010	P85																																
15/12/2010	P85																																
14/01/2011	P85																																
28/04/2011	P85																																
20/05/2011	P85																																
28/06/2011	P85	0.0064	<0.0005	39.8	0.2	<0.01	108	0.03	0.0002	13.4	0.98	<0.00008	0.00017	<0.0002	0.0006	1.68	1.69	<0.02	<0.02	0.015	4.9	3.6	<0.001	<0.001	30	30	<0.0001	26	0.105	143	3.6	3.5	0.00011
21/07/2011	P85	0.0071	<0.0005	42.8	0.22	<0.01	113	<0.02	0.00041	14.3	1.01	0.00056	0.00079	<0.0002	0.0008	1.28	1.29	<0.02	<0.02	<0.01	4.8	3.5	<0.001	<0.001	32	32	<0.0001	26	0.113	168	4.2	3.6	0.00013
23/08/2011	P85																																
19/09/2011	P85																																
7/10/2011	P85																																
7/11/2011	P85																																
16/12/2011	P85																																
23/01/2012	P85																																
9/02/2012	P85																																
5/03/2012	P85																																
5/04/2012	P85																																
18/05/2012	P85																																
27/06/2012	P85																																
18/07/2012	P85	0.0085	<0.0005	50.5	0.26	<0.01	150	0.12	0.00033	18.1	1.4	<0.00008	<0.00008	<0.0002	0.0013	1.54	1.54	<0.02	<0.02	0.022	4.7	4.5	<0.001	<0.001	33	33	<0.0001	35	0.147	200	5	4.8	0.00008
18/07/2012	P85																		<0.01														
28/08/2012	P85																																
11/09/2012	P85																																
15/10/2012	P85																																
19/11/2012	P85																																
10/12/2012	P85																																
25/01/2013	P85																																
13/02/2013	P85																																
18/03/2013	P85																																
18/04/2013	P85																																
21/05/2013	P85																																
25/06/2013	P85																																
2/07/2013	P85																																
30/08/2013	P85																																
19/09/2013	P85																																
14/10/2013	P85																																
26/11/2013	P85																																
6/12/2013	P85																																
17/01/2014	P85																																
26/02/2014	P85																																
26/03/2014	P85																																
15/04/2014	P85																																
27/05/2014	P85																																
26/06/2014	P85																																
18/07/2014	P85	0.0046	<0.0005	41.5	0.2	<0.01	83	<0.02	0.00018	10.2	0.8	<0.00008	0.00069	<0.0002	0.0006	1.05	1.05	<0.02		0.24	5.2	3.2	<0.001	<0.001	32		<0.0001	24	0.083	120	3.1	2.9	0.00009
28/08/2014	P85																																
29/09/2014	P85																																
30/10/2014	P85																																
13/11/2014	P85																																
9/12/2014	P85																																
31/12/2014	P85																																
28/01/2015	P85																																
27/02/2015	P85																																
27/02/2015	P85																																
4/05/2015	P85																																
5/05/2015	P85																																

Date	Data Point	ThS	SnS	TSS	US	CNWAD	ZnS
18/01/2010	P85						
17/02/2010	P85						
5/03/2010	P85						
14/04/2010	P85						
30/05/2010	P85					<0.001	0.0161
31/05/2010	P85						
29/06/2010	P85					0.0011	0.0191
27/07/2010	P85	<0.0005	0.0006	470	0.00006	<0.001	0.024
31/08/2010	P85						
20/09/2010	P85	<0.0005	0.0007	460	0.00004	<0.001	0.023
13/10/2010	P85						
8/11/2010	P85						
15/12/2010	P85						
14/01/2011	P85						
28/04/2011	P85						
20/05/2011	P85						
28/06/2011	P85	<0.0005	0.0015	320	0.00006	<0.001	0.024
21/07/2011	P85	<0.0005	0.0009	510	0.00007	<0.001	0.032
23/08/2011	P85						
19/09/2011	P85						
7/10/2011	P85						
7/11/2011	P85						
16/12/2011	P85						
23/01/2012	P85						
9/02/2012	P85						
5/03/2012	P85						
5/04/2012	P85						
18/05/2012	P85						
27/06/2012	P85						
18/07/2012	P85	<0.0005	0.0006	490	0.00007	<0.001	0.035
18/07/2012	P85						
28/08/2012	P85						
11/09/2012	P85						
15/10/2012	P85						
19/11/2012	P85						
10/12/2012	P85						
25/01/2013	P85						
13/02/2013	P85						
18/03/2013	P85						
18/04/2013	P85						
21/05/2013	P85						
25/06/2013	P85						
2/07/2013	P85						
30/08/2013	P85						
19/09/2013	P85						
14/10/2013	P85						
26/11/2013	P85						
6/12/2013	P85						
17/01/2014	P85						
26/02/2014	P85						
26/03/2014	P85						
15/04/2014	P85						
27/05/2014	P85						
26/06/2014	P85						
18/07/2014	P85	<0.0005	<0.0005	220	0.00005	<0.001	0.0186
28/08/2014	P85						
29/09/2014	P85						
30/10/2014	P85						
13/11/2014	P85						
9/12/2014	P85						
31/12/2014	P85						
28/01/2015	P85						
27/02/2015	P85						
27/02/2015	P85						
4/05/2015	P85						
5/05/2015	P85						

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl	CrS
20/05/2015	P85	Not enough for sample																			
20/05/2015	P85	Field readings only, not entered.																			
28/05/2015	P85	Field readings																			
26/06/2015	P85	Not enough for scan				3.7															
31/07/2015	P85	NES				3.8															
31/07/2015	P85	Not enough for field results or sample																			
29/09/2015	P85	NES				4.2															
29/09/2015	P85	WL-4.20 NES																			
1/11/2015	P85	Not enough for sample																			
6/11/2015	P85	NES				4.2															
3/12/2015	P85	NES																			
4/12/2015	P85					4.4															
13/01/2016	P85	NES																			
14/01/2016	P85					4.1															
16/02/2016	P85					4.3															
6/03/2016	P85					3.1															
29/04/2016	P85	Nes				3.8															
19/05/2016	P85	NES																			
19/05/2016	P85						3.55														
28/06/2016	P85	NES					3.15														
28/06/2016	P85					3.05															
21/07/2016	P85	NES				3.05															
17/08/2016	P85	Nes				3															
20/09/2016	P85	Nes				4.1															
27/10/2016	P85	Nes				4.5															
28/11/2016	P85	Nes				4.1															
21/12/2016	P85	NES				3.95															
26/01/2017	P85	Nes				4.1															
24/02/2017	P85	NES				4.05															
31/03/2017	P85	Nes				4															
28/04/2017	P85	NES				3.8															
26/05/2017	P85	NES				3.9															
30/06/2017	P85	Nes				3.5															
28/07/2017	P85	Low volume	5.15	21.4	14.7	2.9															
26/09/2017	P85	NES				3.2															
27/10/2017	P85	Nes				3.35															
22/11/2017	P85	Nes				4.05															
21/12/2017	P85	Nes				4.2															
17/01/2018	P85	Nes				3.95															
27/02/2018	P85	Nes				3.5															
14/03/2018	P85	Nes				3.4															
27/04/2018	P85	Nes				3.95															
31/05/2018	P85	NES				3.15															
27/06/2018	P85	NES				3.25															
21/08/2018	P85	NES				3.63															
2/10/2018	P85	NES				4.03															
22/11/2018	P85	NES				3.78															
17/12/2018	P85	NES				3.72															
12/02/2019	P85	DRY																			
11/04/2019	P85	NES				3.72															
23/05/2019	P85	DRY																			
24/07/2019	P85	Sampled using peristaltic pump. Silt removed.	4.05	53.2	14.8	3.46		<1	2.2	2.2	0.44	<0.0002	<0.0002	<0.001		2.7		0.00027	24	13	<0.0005
14/01/2020	P85	DRY				4.61															

Date	Data Point	CoS	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation	TiS
20/05/2015	P85																																
20/05/2015	P85																																
28/05/2015	P85																																
26/06/2015	P85																																
31/07/2015	P85																																
31/07/2015	P85																																
29/09/2015	P85																																
29/09/2015	P85																																
1/11/2015	P85																																
6/11/2015	P85																																
3/12/2015	P85																																
4/12/2015	P85																																
13/01/2016	P85																																
14/01/2016	P85																																
16/02/2016	P85																																
6/03/2016	P85																																
29/04/2016	P85																																
19/05/2016	P85																																
19/05/2016	P85																																
28/06/2016	P85																																
28/06/2016	P85																																
21/07/2016	P85																																
17/08/2016	P85																																
20/09/2016	P85																																
27/10/2016	P85																																
28/11/2016	P85																																
21/12/2016	P85																																
26/01/2017	P85																																
24/02/2017	P85																																
31/03/2017	P85																																
28/04/2017	P85																																
26/05/2017	P85																																
30/06/2017	P85																																
28/07/2017	P85																																
26/09/2017	P85																																
27/10/2017	P85																																
22/11/2017	P85																																
21/12/2017	P85																																
17/01/2018	P85																																
27/02/2018	P85																																
14/03/2018	P85																																
27/04/2018	P85																																
31/05/2018	P85																																
27/06/2018	P85																																
21/08/2018	P85																																
2/10/2018	P85																																
22/11/2018	P85																																
17/12/2018	P85																																
12/02/2019	P85																																
11/04/2019	P85																																
23/05/2019	P85																																
24/07/2019	P85	0.0055	<0.0005	39.4	0.2	<0.00001	122	<0.02	0.0002	14.7	1.03	0.00147	0.00189		0.0008	1.38	1.38	<0.1		<0.01	4.9	3.8	<0.001	<0.001	32		<0.0001	25		152	3.7	3.7	0.00011
14/01/2020	P85																																

Date	Data Point	ThS	SnS	TSS	US	CNWAD	ZnS
20/05/2015	P85						
20/05/2015	P85						
28/05/2015	P85						
26/06/2015	P85						
31/07/2015	P85						
31/07/2015	P85						
29/09/2015	P85						
29/09/2015	P85						
1/11/2015	P85						
6/11/2015	P85						
3/12/2015	P85						
4/12/2015	P85						
13/01/2016	P85						
14/01/2016	P85						
16/02/2016	P85						
6/03/2016	P85						
29/04/2016	P85						
19/05/2016	P85						
19/05/2016	P85						
28/06/2016	P85						
28/06/2016	P85						
21/07/2016	P85						
17/08/2016	P85						
20/09/2016	P85						
27/10/2016	P85						
28/11/2016	P85						
21/12/2016	P85						
26/01/2017	P85						
24/02/2017	P85						
31/03/2017	P85						
28/04/2017	P85						
26/05/2017	P85						
30/06/2017	P85						
28/07/2017	P85						
26/09/2017	P85						
27/10/2017	P85						
22/11/2017	P85						
21/12/2017	P85						
17/01/2018	P85						
27/02/2018	P85						
14/03/2018	P85						
27/04/2018	P85						
31/05/2018	P85						
27/06/2018	P85						
21/08/2018	P85						
2/10/2018	P85						
22/11/2018	P85						
17/12/2018	P85						
12/02/2019	P85						
11/04/2019	P85						
23/05/2019	P85						
24/07/2019	P85			6	0.00005	<0.02	0.021
14/01/2020	P85						

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl	CrS	CoS
18/01/2010	P86					3.6																
17/02/2010	P86					4.25																
14/04/2010	P86					3.56																
30/05/2010	P86		4.89	37.5	15.2					3.8	0.51	<0.0002	<0.0002			4.6			14	11.9		0.0037
31/05/2010	P86					2.1																
29/06/2010	P86				14.7				3.5	3.5	0.82	<0.0002	<0.0002			4.3			17.8	11.8		0.0047
1/08/2010	P86				14.2				9	9	0.71	<0.0002	<0.0002		0.059	11	0.01	0.00017	17.4	10.7	0.0007	0.0044
24/08/2010	P86		4.93	58.2	13.2	2.28		<1	5.7	5.7	1.26	<0.0002	<0.0002		0.075	6.9	0.012	0.00029	23	11.3	<0.0005	0.0054
20/09/2010	P86				13.9			<1	7.5	7.5	1.21	<0.0002	<0.0002		0.083	9.1	0.009	0.00026	26	10.5	<0.0005	0.005
13/10/2010	P86					3.58																
4/11/2010	P86					3.6																
6/12/2010	P86					3.7																
14/01/2011	P86					4.3																
27/04/2011	P86		5.72	38	16.1	2.1		<1	3.7	3.7	0.63	<0.0002	<0.0002		0.058	4.5	0.014	0.00019	24	12.5	<0.0005	0.0028
20/05/2011	P86		5.68	36.5	16.1	2.59		<1	2.7	2.7	1.63	<0.0002	<0.0002		0.055	3.3	0.012	0.00044	28	10.9	<0.0005	0.0064
28/06/2011	P86				14.5			<1	3.2	3.2	2.2	<0.0002	<0.0002		0.046	3.9	0.012	0.00054	37	9.3	<0.0005	0.0081
21/07/2011	P86				13.4			<1	4.3	4.3	1.97	<0.0002	<0.0002		0.048	5.2	0.012	0.00052	34	9.7	<0.0005	0.0074
23/08/2011	P86					3																
6/09/2011	P86					3.3																
11/10/2011	P86		5.01	56.4	14.3	2.6		<1	2.5	2.5	3.1	<0.0002	<0.0002		0.035	3	0.012	0.00068	51	14.9	<0.0005	0.0144
7/11/2011	P86					3.85																
16/12/2011	P86		4.85	65.9	15.7	2.6		<1	5.3	5.3	2.5	<0.0002	<0.0002		0.037	6.5	0.013	0.00045	46	21	<0.0005	0.0095
20/01/2012	P86					3.1																
17/04/2012	P86					3.8																
16/05/2012	P86		5.29	37.5	14.9	2.5		<1	2.1	2.1	1.88	<0.0002	<0.0002		0.029	2.6	0.012	0.00044	34	11.6	<0.0005	0.0068
18/06/2012	P86					3.55																
1/08/2012	P86				12.6			<1	5.7	5.7	0.87	<0.0002	<0.0002		0.03	6.9	0.01	0.00026	23	8.3	0.0008	0.0038
1/08/2012	P86		4.56	31.8	12.6																	
28/08/2012	P86		4.17	31.8	14.4	2.75																
11/09/2012	P86		4.25	36.3	14.8	3.05																
10/10/2012	P86		4.39	37.5	13.3	2.85		<1	1.2	1.2	1.63	<0.0002	<0.0002		0.024	1.5	0.013	0.00047	34	8.1	<0.0005	0.0068
10/10/2012	P86																					
15/10/2012	P86					5.9																
19/11/2012	P86					4.2																
4/12/2012	P86					4																
18/01/2013	P86					3.8																
13/02/2013	P86					4.4																
11/04/2013	P86					4.15																
24/05/2013	P86					2.2																
20/06/2013	P86		4.35	32.6	15	2.2																
2/07/2013	P86		4.45	61.1	15.6	3.2		<1	1.1	1.1	1.82	<0.0002	<0.0002		0.029	1.3	0.012	0.00051	46	13.6	<0.0005	0.0096
16/08/2013	P86		3.9	107.7	13.6	3.3																
6/09/2013	P86		4.8	56.1	14.4	2.8																
9/10/2013	P86					3.3																
22/11/2013	P86					3.6																
16/12/2013	P86					2.8																
15/01/2014	P86					3.6																
10/02/2014	P86					3.4																
26/03/2014	P86					3.6																
15/04/2014	P86					3																
26/05/2014	P86					3.5																
19/06/2014	P86		4.6	58	15.3	2.4																
16/07/2014	P86		5	49.9	14.1	2.3		<1	8.3	8.3	1.36	<0.0002	<0.0002		0.027	10.1	0.01	0.00038	42	10.4	<0.0005	0.0054
28/08/2014	P86		4.6	48.9	14.8	2.7																
23/09/2014	P86		4.8	40.6	14.8	2.4																
9/10/2014	P86		4.8	41	15	3.2																
13/11/2014	P86		5	9.86		3.6																
4/12/2014	P86					3.9																
16/01/2015	P86					3.9																
27/02/2015	P86	Not enough for sample				4.2																
4/05/2015	P86	Not enough for sample																				
5/05/2015	P86	Not enough for sample				3																
20/05/2015	P86	Not enough for sample																				
20/05/2015	P86	Field readings only, not entered.																				
28/05/2015	P86	Field readings																				
26/06/2015	P86	Not enough for scan				3.5																

Date	Data Point	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation	TiS
18/01/2010	P86																															
17/02/2010	P86																															
14/04/2010	P86																															
30/05/2010	P86	0.0006	31.1		<0.01	80	0.02	0.00025	10.8	0.24	<0.00008			0.0006	6.8	6.8	<0.02	<0.02	<0.01	4.9	3.1	<0.001	<0.001	23	23	<0.0001	16.6		101	3	2.5	
31/05/2010	P86																															
29/06/2010	P86	<0.0005	35.4		<0.01	112	0.02	0.00015	16.4	0.34	<0.00008			0.0009	7.1	7.1	<0.002	<0.002	<0.01	4.7	3.4	0.0014	0.0015	24	24	<0.0001	20		114	3.3	3.3	
1/08/2010	P86	0.0012	34.9	0.27	<0.01	96	0.1	0.00028	12.8	0.29	<0.00008	<0.00008	<0.0002	0.0015	5.4	5.4	<0.002	<0.002	<0.01	5.3	3.4	0.0017	0.0013	21	21	<0.0001	17.8	0.098	114	3.2	2.9	0.00009
24/08/2010	P86	<0.0005	44.4	0.39	<0.01	148	0.06	0.00019	22	0.48	<0.00008	<0.00008	<0.0002	0.0014	5.6	5.6	<0.02	<0.02	<0.01	5	3.7	0.0015	0.0019	25	25	<0.0001	22	0.145	172	4.4	4.2	0.00008
20/09/2010	P86	0.0012	49.5	0.45	<0.01	155	<0.02	0.00025	22	0.52	<0.00008	<0.00008	<0.0002	0.0016	5.9	5.9	<0.002	<0.002	0.016	5.3	3.8	0.0022	<0.001	25	25	<0.0001	19.1	0.157	210	5.2	4.2	0.0001
13/10/2010	P86																															
4/11/2010	P86																															
6/12/2010	P86																															
14/01/2011	P86																															
27/04/2011	P86	0.0017	50.3	0.5	<0.01	124	0.09	0.00024	15.6	0.38	<0.00008	<0.00008	<0.0002	0.0012	7.1	7.1	<0.002	<0.002	<0.01	4.9	3.7	0.0019	<0.001	25	25	<0.0001	15.8	0.121	200	5.1	3.4	0.00008
20/05/2011	P86	<0.0005	51.2	0.51	<0.01	179	0.02	0.00022	26	0.85	<0.00008	<0.00008	<0.0002	0.0027	6	6	<0.02	<0.02	0.012	4.8	3.8	0.0021	0.0018	28	28	<0.0001	20	0.137	220	5.3	4.8	0.0001
28/06/2011	P86	<0.0005	57.6	0.66	<0.01	230	<0.02	0.00023	33	1.38	<0.00008	<0.00008	<0.0002	0.0044	6.9	6.9	<0.02	<0.02	<0.01	4.8	3.9	0.0026	0.0027	27	27	<0.0001	19.8	0.169	220	5.5	5.8	0.00012
21/07/2011	P86	0.0007	57.1	0.66	<0.01	210	0.03	0.00024	31	1.33	<0.00008	<0.00008	<0.0002	0.0045	6.1	6.1	0.02	0.02	<0.01	4.9	3.6	0.0026	0.0025	27	27	<0.0001	18.2	0.159	240	5.9	5.4	0.00011
23/08/2011	P86																															
6/09/2011	P86																															
11/10/2011	P86	<0.0005	71.5	0.74	<0.01	310	<0.02	0.00026	43	1.71	<0.00008	<0.00008	<0.0002	0.0046	5.4	5.4	<0.02	<0.02	<0.01	4.8	4.4	0.0031	0.0031	28	28	<0.0001	27	0.22	340	7.8	7.8	0.00012
7/11/2011	P86																															
16/12/2011	P86	0.0009	67.6	0.7	<0.01	260	<0.02	0.00022	35	1.25	<0.00008	<0.00008	<0.0002	0.0026	4	4.1	<0.02	<0.02	<0.01	5	4.1	0.0023	0.0019	32	32	<0.0001	23	0.173	290	6.9	6.6	0.00011
20/01/2012	P86																															
17/04/2012	P86																															
16/05/2012	P86	<0.0005	53.9	0.59	<0.01	210	<0.02	0.00018	30	1.39	<0.00008	<0.00008	<0.0002	0.0036	6.2	6.2	<0.02	<0.02	<0.01	4.6	3.7	0.0018	0.0015	25	25	<0.0001	19.9	0.139	220	5.3	5.4	0.00011
18/06/2012	P86																															
1/08/2012	P86	0.001	39.2	0.38	<0.01	129	0.03	0.00018	17.4	0.83	<0.00008	<0.00008	<0.0002	0.0025	5.3	5.3	<0.02	<0.02	0.011	5.2	3.1	0.0013	0.0012	18.7	18.7	<0.0001	13.1	0.095	149	3.8	3.4	0.00007
1/08/2012	P86																		<0.01													
28/08/2012	P86																															
11/09/2012	P86																															
10/10/2012	P86	<0.0005	49.7	0.47	<0.01	200	<0.02	0.00019	28	1.45	<0.00008	<0.00008	<0.0002	0.0043	4.5	4.5	<0.02	<0.02	<0.01	4.6	3.5	0.0016	0.0012	25	25	<0.0001	18.3	0.128	230	5.3	5.1	0.0001
10/10/2012	P86																		<0.01													
15/10/2012	P86																															
19/11/2012	P86																															
4/12/2012	P86																															
18/01/2013	P86																															
13/02/2013	P86																															
11/04/2013	P86																															
24/05/2013	P86																															
20/06/2013	P86																															
2/07/2013	P86	<0.0005	61.6	0.5	<0.01	230	<0.02	0.00027	28	1.55	<0.00008	<0.00008	<0.0002	0.0036	6.2	6.2	<0.02	<0.02	<0.01	4.5	4.1	0.0024	0.0028	23	23	<0.0001	23	0.181	260	6.3	6	0.00012
16/08/2013	P86																															
6/09/2013	P86																															
9/10/2013	P86																															
22/11/2013	P86																															
16/12/2013	P86																															
15/01/2014	P86																															
10/02/2014	P86																															
26/03/2014	P86																															
15/04/2014	P86																															
26/05/2014	P86																															
19/06/2014	P86																															
16/07/2014	P86	0.0005	34.6	0.3	<0.01	191	<0.02	0.00022	21	0.98	<0.00008	<0.00008	<0.0002	0.0024	5.9	5.9	<0.02		<0.01	5.5	3.3	<0.001	0.0012	18.6		<0.0001	17.2	0.134	210	5.3	4.8	0.0001
28/08/2014	P86																															
23/09/2014	P86																															
9/10/2014	P86																															
13/11/2014	P86																															
4/12/2014	P86																															
16/01/2015	P86																															
27/02/2015	P86																															
4/05/2015	P86																															
5/05/2015	P86																															
20/05/2015	P86																															
20/05/2015	P86																															
28/05/2015	P86																															
26/06/2015	P86																															

Date	Data Point	ThS	SnS	TSS	US	CNWAD	ZnS
18/01/2010	P86						
17/02/2010	P86						
14/04/2010	P86						
30/05/2010	P86					<0.001	0.0085
31/05/2010	P86						
29/06/2010	P86					<0.001	0.0111
1/08/2010	P86	<0.0005	0.0009	110	0.00006	<0.001	0.0124
24/08/2010	P86	<0.0005	0.0007	165	0.00006	<0.001	0.0118
20/09/2010	P86	<0.0005	0.0015	125	0.00006	<0.001	0.012
13/10/2010	P86						
4/11/2010	P86						
6/12/2010	P86						
14/01/2011	P86						
27/04/2011	P86	<0.0005	0.0012	79	0.00005	<0.001	0.0145
20/05/2011	P86	<0.0005	0.0024	44	0.00008	<0.001	0.0148
28/06/2011	P86	<0.0005	0.0018	75	0.0001	<0.001	0.0161
21/07/2011	P86	<0.0005	0.001	62	0.00009	<0.001	0.0175
23/08/2011	P86						
6/09/2011	P86						
11/10/2011	P86	<0.0005	0.0009	173	0.00012	<0.001	0.0187
7/11/2011	P86						
16/12/2011	P86	<0.0005	0.001	78	0.00009	0.001	0.0145
20/01/2012	P86						
17/04/2012	P86						
16/05/2012	P86	<0.0005	0.0007	50	0.00008	<0.001	0.0148
18/06/2012	P86						
1/08/2012	P86	<0.0005	0.0008	200	0.00006	<0.001	0.0113
1/08/2012	P86						
28/08/2012	P86						
11/09/2012	P86						
10/10/2012	P86	<0.0005	0.0006	330	0.00008	<0.001	0.0189
10/10/2012	P86						
15/10/2012	P86						
19/11/2012	P86						
4/12/2012	P86						
18/01/2013	P86						
13/02/2013	P86						
11/04/2013	P86						
24/05/2013	P86						
20/06/2013	P86						
2/07/2013	P86	<0.0005	0.001	460	0.00009	<0.001	0.0141
16/08/2013	P86						
6/09/2013	P86						
9/10/2013	P86						
22/11/2013	P86						
16/12/2013	P86						
15/01/2014	P86						
10/02/2014	P86						
26/03/2014	P86						
15/04/2014	P86						
26/05/2014	P86						
19/06/2014	P86						
16/07/2014	P86	<0.0005	<0.0005	12	0.00006	<0.001	0.0132
28/08/2014	P86						
23/09/2014	P86						
9/10/2014	P86						
13/11/2014	P86						
4/12/2014	P86						
16/01/2015	P86						
27/02/2015	P86						
4/05/2015	P86						
5/05/2015	P86						
20/05/2015	P86						
20/05/2015	P86						
28/05/2015	P86						
26/06/2015	P86						

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CsS	Cl	CrS	CoS
31/07/2015	P86	NES				3.6																
31/07/2015	P86	Not enough for field results or sample																				
31/08/2015	P86	Dry				3.7																
1/09/2015	P86	WL-3.70m - NES																				
29/09/2015	P86	NES				3.4																
29/09/2015	P86	WL-3.40 NES																				
1/11/2015	P86	Not enough for sample																				
6/11/2015	P86	NES				3.75																
3/12/2015	P86	NES																				
4/12/2015	P86					3.9																
13/01/2016	P86	NES																				
14/01/2016	P86					3.95																
3/02/2016	P86	Nes																				
16/02/2016	P86					4.1																
6/03/2016	P86					2.8																
29/04/2016	P86	Nes				3.8																
19/05/2016	P86	NES																				
19/05/2016	P86						3.5															
28/06/2016	P86	NES					2.85															
28/06/2016	P86					2.8																
21/07/2016	P86	NES				3.1																
17/08/2016	P86	Nes				3.05																
20/09/2016	P86	Nes				3.8																
27/10/2016	P86	Nes				4																
28/11/2016	P86	Nes				4.3																
21/12/2016	P86	NES				4.1																
26/01/2017	P86	Nes				4.25																
24/02/2017	P86	NES				4.2																
31/03/2017	P86	Nes				4.2																
28/04/2017	P86	Bottom of well	4.7	48.8	16.8	3.2		<1	1.4	1.4	0.86	<0.0002	<0.0002	<0.001		1.7		0.00022	38	10.3	<0.0005	0.0041
26/05/2017	P86	NES				3.4																
30/06/2017	P86	Nes				3																
28/07/2017	P86	Low volume	4.7	45.2	14.8	2.7																
26/09/2017	P86	NES				3																
27/10/2017	P86	Nes				3.15																
22/11/2017	P86	Nes				3.95																
21/12/2017	P86	Nes				3.85																
17/01/2018	P86	Nes				4.05																
27/02/2018	P86	Nes				3.25																
14/03/2018	P86	Nes				3.15																
27/04/2018	P86	Nes				3.75																
31/05/2018	P86	NES				2.95																
27/06/2018	P86	NES				3.95																
21/08/2018	P86	NES				2.81																
2/10/2018	P86	NES				3.5																
22/11/2018	P86	NES				3.24																
17/12/2018	P86	NES				3.07																
12/02/2019	P86	NES				4.2																
11/04/2019	P86	Dry				4.2																
23/05/2019	P86	DRY																				
30/07/2019	P86	Clear, odourless.	7.44	1.6	16.3	1.93	3	<1	2.4	2.4	0.43	<0.0002	<0.0002	<0.001		2.9		0.00015	19.2	<5	<0.0005	0.002
14/01/2020	P86	DRY																				

Date	Data Point	CuS	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgS	NaSO	SrS	SO4	Sum Anion	Sum Cation	TiS
31/07/2015	P86																															
31/07/2015	P86																															
31/08/2015	P86																															
1/09/2015	P86																															
29/09/2015	P86																															
29/09/2015	P86																															
1/11/2015	P86																															
6/11/2015	P86																															
3/12/2015	P86																															
4/12/2015	P86																															
13/01/2016	P86																															
14/01/2016	P86																															
3/02/2016	P86																															
16/02/2016	P86																															
6/03/2016	P86																															
29/04/2016	P86																															
19/05/2016	P86																															
19/05/2016	P86																															
28/06/2016	P86																															
28/06/2016	P86																															
21/07/2016	P86																															
17/08/2016	P86																															
20/09/2016	P86																															
27/10/2016	P86																															
28/11/2016	P86																															
21/12/2016	P86																															
26/01/2017	P86																															
24/02/2017	P86																															
31/03/2017	P86																															
28/04/2017	P86	0.0005	42.2	0.24	<0.01	159	0.04	0.00025	15.5	0.68	<0.00008	<0.00008		0.0013	6.5	6.5	<0.1		<0.01	4.7	3.9	<0.001	<0.001	20		<0.0001	16.6		156	4	4.1	0.00009
26/05/2017	P86																															
30/06/2017	P86																															
28/07/2017	P86																															
26/09/2017	P86																															
27/10/2017	P86																															
22/11/2017	P86																															
21/12/2017	P86																															
17/01/2018	P86																															
27/02/2018	P86																															
14/03/2018	P86																															
27/04/2018	P86																															
31/05/2018	P86																															
27/06/2018	P86																															
21/08/2018	P86																															
2/10/2018	P86																															
22/11/2018	P86																															
17/12/2018	P86																															
12/02/2019	P86																															
11/04/2019	P86																															
23/05/2019	P86																															
30/07/2019	P86	0.001	24.4	0.17	<0.00001	85	<0.02	0.00015	9.1	0.33	<0.00008	<0.00008		0.001	4.6	4.6	<0.1		<0.01	5	2.1	<0.001	<0.001	18.1		<0.0001	8.3		79	2.1	2.2	0.00006
14/01/2020	P86																															

Date	Data Point	ThS	SnS	TSS	US	CNWAD	ZnS
31/07/2015	P86						
31/07/2015	P86						
31/08/2015	P86						
1/09/2015	P86						
29/09/2015	P86						
29/09/2015	P86						
1/11/2015	P86						
6/11/2015	P86						
3/12/2015	P86						
4/12/2015	P86						
13/01/2016	P86						
14/01/2016	P86						
3/02/2016	P86						
16/02/2016	P86						
6/03/2016	P86						
29/04/2016	P86						
19/05/2016	P86						
19/05/2016	P86						
28/06/2016	P86						
28/06/2016	P86						
21/07/2016	P86						
17/08/2016	P86						
20/09/2016	P86						
27/10/2016	P86						
28/11/2016	P86						
21/12/2016	P86						
26/01/2017	P86						
24/02/2017	P86						
31/03/2017	P86						
28/04/2017	P86			129	0.00006	<0.001	0.014
26/05/2017	P86						
30/06/2017	P86						
28/07/2017	P86						
26/09/2017	P86						
27/10/2017	P86						
22/11/2017	P86						
21/12/2017	P86						
17/01/2018	P86						
27/02/2018	P86						
14/03/2018	P86						
27/04/2018	P86						
31/05/2018	P86						
27/06/2018	P86						
21/08/2018	P86						
2/10/2018	P86						
22/11/2018	P86						
17/12/2018	P86						
12/02/2019	P86						
11/04/2019	P86						
23/05/2019	P86						
30/07/2019	P86			6	0.00002	<0.02	0.0102
14/01/2020	P86						

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CaSO
18/01/2010	P87					5.65													
17/02/2010	P87				19.2					39	0.12	<0.0002	<0.0002			47			6.3
5/03/2010	P87					5.75													
14/04/2010	P87		6.88	10.73	16.3	5.87													
24/05/2010	P87									30	0.011	<0.0002	<0.0002			37			6.4
30/05/2010	P87				15.7					30	0.011	<0.0002	<0.0002			37			6.4
29/06/2010	P87		5.9	10.45	14.7	4.32			26	26	0.005	<0.0002	<0.0002			31			6.7
30/07/2010	P87		6.58	12.35	16	4.6			34	34	0.2	<0.0002	<0.0002		0.038	42	0.011	<0.00005	6.5
31/08/2010	P87		6.13	10.24	14.3	4.55		<1	33	33	0.062	<0.0002	<0.0002		0.037	41	0.01	<0.00005	6.4
20/09/2010	P87				16			<1	33	33	0.088	<0.0002	<0.0002		0.037	40	0.01	<0.00005	6.4
14/10/2010	P87		4.97	10.41	16.4	50.9		<1	34	34	0.164	<0.0002	<0.0002		0.042	42	0.01	<0.00005	6.4
8/11/2010	P87		5.5	10.44	16.5	5.3		<1	35	35	0.075	<0.0002	<0.0002		0.039	42	0.01	<0.00005	6.8
15/12/2010	P87		5.18	10.91	17.1	5.7													
14/01/2011	P87					6.15													
24/02/2011	P87				17.8			<1	34	34	0.049	<0.0002	<0.0002		0.036	42	0.011	<0.00005	7.2
21/03/2011	P87				16.2			<1	35	35	0.033	<0.0002	<0.0002		0.041	43	0.009	<0.00005	6.8
28/04/2011	P87				16.6			<1	29	29	0.021	<0.0002	<0.0002		0.044	35	0.012	<0.00005	6.5
20/05/2011	P87		5.97	12.56	16.4	4.37		<1	33	33	0.034	<0.0002	<0.0002		0.043	41	0.009	<0.00005	6.7
28/06/2011	P87				15.9			<1	34	34	0.04	<0.0002	<0.0002		0.042	41	0.008	<0.00005	7
21/07/2011	P87				15			<1	35	35	0.064	<0.0002	<0.0002		0.041	43	0.01	<0.00005	6.8
23/08/2011	P87				16			<1	36	36	0.072	<0.0002	<0.0002		0.046	44	0.01	<0.00005	7.5
19/09/2011	P87				15.8			<1	36	36	0.06	<0.0002	<0.0002		0.048	44	0.01	<0.00005	7.9
7/10/2011	P87		5.82	10.38	15.7	5.1		<1	38	38	0.041	<0.0002	<0.0002		0.046	46	0.011	<0.00005	8
7/11/2011	P87		5.84	10.86	16.1	5.1		<1	40	40	0.079	<0.0002	<0.0002		0.047	48	0.012	<0.00005	8.2
16/12/2011	P87				16.5			<1	39	39	0.041	<0.0002	<0.0002		0.048	48	0.011	<0.00005	8.5
23/01/2012	P87		5.98	12.74	15.4	4.2		<1	38	38	0.08	<0.0002	<0.0002		0.049	47	0.009	<0.00005	7.6
9/02/2012	P87		6.02	13.47	16.2	5.3		<1	40	40	0.072	<0.0002	<0.0002		0.048	48	0.01	<0.00005	8.1
5/03/2012	P87		5.68	10.37	17.3	5.1		<1	38	38	0.026	<0.0002	<0.0002		0.048	46	0.01	<0.00005	8.5
5/04/2012	P87		5.83	10.92	16.3	4.8		<1	38	38	0.029	<0.0002	<0.0002		0.049	46	0.01	<0.00005	8.3
18/05/2012	P87		6.17	13.64	16.7	4.9		<1	39	39	0.066	<0.0002	<0.0002		0.051	48	0.012	<0.00005	8.3
27/06/2012	P87		6.11	10.64	15.3	5.25		<1	41	41	0.047	<0.0002	<0.0002		0.052	50	0.011	<0.00005	9
27/06/2012	P87																		
18/07/2012	P87				16.5	4.7		<1	30	30	0.009	<0.0002	<0.0002		0.057	37	0.011	<0.00005	7.2
18/07/2012	P87		5.5	12.25	16.5														
31/08/2012	P87		5.65	10.27	17.1	4.8		<1	37	38	0.033	<0.0002	<0.0002		0.046	46	0.009	<0.00005	8
31/08/2012	P87																		
17/09/2012	P87		5.55	13.6	15.6	4.7		<1	38	38	0.047	<0.0002	<0.0002		0.048	46	0.01	<0.00005	8
15/10/2012	P87		5.95	13.64	15.7	4.9		<1	39	39	0.072	<0.0002	<0.0002		0.051	48	0.01	<0.00005	9
19/11/2012	P87		5.02	10.43	16.1	5.5		<1	41	41	0.093	<0.0002	<0.0002		0.048	49	0.013	<0.00005	8.4
20/11/2012	P87																		
10/12/2012	P87				17	5.8		<1	39	39	0.177	<0.0002	<0.0002		0.049	47	0.011	<0.00005	8.1
10/12/2012	P87		5.64	10.95	17														
25/01/2013	P87					6													
13/02/2013	P87		5.97	10.87	16.1	4.4		<1		38	0.025	<0.0002	<0.0002		0.047	47	0.01	<0.00005	8
18/03/2013	P87		6.05	11.51	17.1	6.1													
18/04/2013	P87		5.76	13.79	16.5	5.5		<1	39	39	0.05	<0.0002	<0.0002		0.044	47	0.01	<0.00005	8.6
21/05/2013	P87		5.04	11.3	16.8	4.15													
25/06/2013	P87		6.1	13	15	4.6													
2/07/2013	P87		5.85	11.56	16.5	4.8		<1	43	43	0.076	<0.0002	<0.0002		0.054	53	0.011	<0.00005	7.2
30/08/2013	P87		6.03	9.24	15.4	4.6													
19/09/2013	P87		5.57	14.08	15.3	4.8													
15/10/2013	P87		6.48	13.43	16.1	5		<1	41	41	0.043	<0.0002	<0.0002		0.053	50	0.01	<0.00005	8.8
26/11/2013	P87		6.4	13.86	15.3	5.3													
6/12/2013	P87		5.5	14.7	15.6	4.1													
17/01/2014	P87				17.5			<1	43	43	0.101	<0.0002	<0.0002		0.057	53	0.011	<0.00005	9.4
26/02/2014	P87		6	8.9	17.3	5.9													
26/03/2014	P87		6.1	9.8	16.8	5.9													
15/04/2014	P87				17.4			<1	40	40	0.006	<0.0002	<0.0002		0.051	49	0.009	<0.00005	8.7
26/05/2014	P87		6.05	8.64	16.8	5.6													
27/05/2014	P87					4.2													
26/06/2014	P87		5.5	10.69	16.6	4.6													
18/07/2014	P87		5.7	15.6	15.3	4.6		<1	39	39	0.01	<0.0002	<0.0002		0.052	48	0.01	<0.00005	8.5
28/08/2014	P87		6.1	9.26	14.8	5													
29/09/2014	P87		6.05	9.24	15.4	4.7													
30/10/2014	P87		6.1	8.46	15.4	5.7													
27/11/2014	P87		6.15	8.24	15.8	5.9													

Date	Data Point	Cl	CrS	CoS	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NT	NH4N	pH	KSO	SeA	SeS	Si	AgS	NaSO	SrS	SO4
18/01/2010	P87																																
17/02/2010	P87	12		<0.0002	<0.0005	<0.001	11.7		<0.01	25	0.039	0.00014	2.3	0.0012				<0.0005	0.79	0.79	<0.002	<0.002		0.028	6.6	2.6	<0.001	<0.001	44	<0.0001	12		3.3
5/03/2010	P87																																
14/04/2010	P87																																
24/05/2010	P87	11.6		<0.0002	<0.0005		11.8		<0.01	25	<0.02	0.0024	2.1	0.0014	<0.00008			<0.0005	0.77	0.77		<0.02		<0.01	6.2	2.5	<0.001	<0.001		<0.0001	10.5		5.8
30/05/2010	P87	11.6		<0.0002	<0.0005		11.8		<0.01	25	<0.02	0.0024	2.1	0.0014	<0.00008			<0.0005	0.77	0.77	<0.02			<0.01	6.2	2.5	<0.001	<0.001	45	<0.0001	10.5		5.8
29/06/2010	P87	11.7		<0.0002	<0.0005		11.9		<0.01	25	<0.02	0.023	2.2	0.0053	<0.00008			<0.0005	0.76	0.76	<0.002	<0.002		<0.01	6.1	2.4	<0.001	<0.001	37	<0.0001	11.6		10.2
30/07/2010	P87	11.8	0.0007	<0.0002	<0.0005		11.4	<0.05	<0.01	26	0.06	0.00014	2.3	0.0019	<0.00008	<0.00008	<0.0002	0.0033	0.78	0.78	<0.002	<0.002		<0.01	6.5	2.2	<0.001	<0.001	47	<0.0001	10.5	0.046	2.5
31/08/2010	P87	11.7	0.0007	<0.0002	<0.0005		11.4	<0.05	<0.01	25	0.02	<0.0001	2.3	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	0.87	0.87	<0.002	<0.002		<0.01	6.9	2.5	<0.001	<0.001	44	<0.0001	11.3	0.046	2.1
20/09/2010	P87	11.6	0.0006	<0.0002	<0.0005		11.2	<0.05	<0.01	25	0.03	<0.0001	2.3	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	0.84	0.84	<0.002	<0.002		0.036	6.1	2.5	<0.001	<0.001	46	<0.0001	11.2	0.046	2.6
14/10/2010	P87	11.5	0.0006	<0.0002	<0.0005		11.5	<0.05	<0.01	25	0.05	0.00012	2.2	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	0.8	0.8	<0.002	<0.002		<0.01	6.4	2.7	<0.001	<0.001	48	<0.0001	11.9	0.047	2.7
8/11/2010	P87	11.8	0.0009	<0.0002	<0.0005		12	<0.1	<0.01	28	0.02	<0.0001	2.6	0.0006	<0.00008	<0.00008	<0.0002	<0.0005	0.82	0.82	<0.002	<0.002		<0.01	6.3	2.6	<0.001	<0.001	47	<0.0001	11.6	0.049	4.1
15/12/2010	P87																																
14/01/2011	P87																																
24/02/2011	P87	11.9	0.001	<0.0002	<0.0005		12.2	<0.05	<0.01	28	<0.02	0.00013	2.5	0.0013	<0.00008	<0.00008	<0.0002	<0.0005	0.9	0.9	<0.002	<0.002		<0.01	6.9	2.7	<0.001	<0.001	44	<0.0001	12.7	0.046	3.5
21/03/2011	P87	12.4	0.0005	<0.0002	<0.0005		12.1	<0.05	<0.01	27	<0.02	<0.0001	2.5	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.12	1.12	<0.002	<0.002		<0.01	6.2	2.5	<0.001	<0.001	43	<0.0001	11.5	0.048	4.2
28/04/2011	P87	11.6	<0.0005	<0.0002	<0.0005		11.9	<0.05	<0.01	25	<0.02	0.00076	2.2	0.0006	<0.00008	<0.00008	<0.0002	<0.0005	0.98	0.98	<0.002	<0.002		<0.01	6.1	2.6	<0.001	<0.001	41	<0.0001	11.6	0.046	5
20/05/2011	P87	12.1	0.0005	<0.0002	<0.0005		11.8	<0.05	<0.01	27	<0.02	<0.0001	2.5	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	0.94	0.95	<0.02	<0.02		<0.01	6.2	2.5	<0.001	<0.001	50	<0.0001	11.7	0.047	3.3
28/06/2011	P87	11.2	0.0006	<0.0002	<0.0005		11.9	<0.05	<0.01	27	<0.02	<0.0001	2.4	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	0.98	1	<0.02	<0.02		<0.01	6.5	2.5	<0.001	<0.001	46	<0.0001	11.2	0.05	4.3
21/07/2011	P87	12.4	0.0006	<0.0002	<0.0005		11.8	<0.05	<0.01	27	<0.02	0.00014	2.4	0.001	<0.00008	<0.00008	<0.0002	<0.0005	1.11	1.12	<0.02	<0.02		<0.01	6.3	2.5	<0.001	<0.001	47	<0.0001	11	0.049	3
23/08/2011	P87	12.3	0.0006	<0.0002	<0.0005		12.5	<0.05	<0.01	30	<0.02	0.0001	2.6	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.17	1.17	<0.02	<0.02		<0.01	6.3	2.7	<0.001	<0.001	47	<0.0001	12.2	0.052	2.9
19/09/2011	P87	12.5	0.0006	<0.0002	0.0041		12.9	<0.05	<0.01	31	<0.02	0.00017	2.8	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.02	1.02	<0.02	<0.02		<0.01	6.2	2.7	<0.001	<0.001	48	<0.0001	11.9	0.057	2.8
7/10/2011	P87	12.3	0.0006	<0.0002	<0.0005		13	<0.05	<0.01	33	<0.02	<0.0001	3	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.15	1.15	<0.02	<0.02		<0.01	6.4	2.9	<0.001	<0.001	47	<0.0001	13.1	0.056	7
7/11/2011	P87	12.7	0.0007	<0.0002	<0.0005		13.3	<0.05	<0.01	33	<0.02	<0.0001	3	0.0006	0.00009	<0.00008	<0.0002	<0.0005	1.15	1.15	<0.02	<0.02		<0.01	6.4	2.8	<0.001	<0.001	48	<0.0001	12.9	0.056	<5
16/12/2011	P87	12.6	0.0007	<0.0002	<0.0005		13.3	<0.05	<0.01	33	<0.02	<0.0001	2.9	<0.0005	0.00013	<0.00008	<0.0002	<0.0005	1.36	1.36	<0.02	<0.02		<0.01	6.1	2.8	<0.001	<0.001	51	<0.0001	12.4	0.057	2.6
23/01/2012	P87	11.6	0.0005	<0.0002	<0.0005		13.1	<0.05	<0.01	30	0.02	<0.0001	2.7	0.001	0.00013	<0.00008	<0.0002	0.0007	1.22	1.24	0.02	0.02		<0.01	6.3	2.6	<0.001	<0.001	47	<0.0001	12.7	0.057	5
9/02/2012	P87	12.5	0.0007	<0.0002	0.0009		13.4	<0.05	<0.01	32	0.03	<0.0001	2.9	0.0016	<0.00008	<0.00008	<0.0002	<0.0005	1.35	1.36	<0.02	<0.02		<0.01	6.4	2.7	<0.001	<0.001	46	<0.0001	12.5	0.058	3.2
5/03/2012	P87	12.1	0.0009	<0.0002	<0.0005		13.5	<0.05	<0.01	34	<0.02	<0.0001	3	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.38	1.39	<0.02	<0.02		<0.01	6.4	2.9	<0.001	<0.001	47	<0.0001	13.2	0.059	<5
5/04/2012	P87	12.3	0.0007	<0.0002	<0.0005		13.2	<0.05	<0.01	33	<0.02	<0.0001	3	<0.0005	0.00014	<0.00008	<0.0002	<0.0005	1.36	1.36	<0.02	<0.02		0.01	6.3	2.8	<0.001	<0.001	47	<0.0001	12.5	0.059	3
18/05/2012	P87	12.7	<0.0005	<0.0002	<0.0005		13.7	<0.05	<0.01	33	<0.02	<0.0001	2.9	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.46	1.46	<0.02	<0.02		<0.01	6.2	2.7	<0.001	<0.001	47	<0.0001	13.2	0.061	2.8
27/06/2012	P87	13.2	0.0007	<0.0002	<0.0005		14.1	<0.05	<0.01	35	<0.02	<0.0001	3.2	<0.0005	0.00012	<0.00008	<0.0002	<0.0005	1.65	1.65	<0.002	<0.002		<0.01	6.4	2.8	<0.001	<0.001	48	<0.0001	13.7	0.064	3.4
27/06/2012	P87																							<0.01									
18/07/2012	P87	12.2	0.0005	<0.0002	<0.0005		12.7	<0.05	<0.01	30	<0.02	0.00049	2.9	0.0034	<0.00008	<0.00008	<0.0002	<0.0005	1.53	1.54	<0.02	<0.02		<0.01	6.2	2.9	<0.001	<0.001	43	<0.0001	14.4	0.055	9.4
18/07/2012	P87																							<0.01									
31/08/2012	P87	11.7	0.0007	<0.0002	<0.0005		12.9	<0.05	<0.01	31	<0.02	<0.0001	2.8	<0.0005	0.00011	<0.00008	<0.0002	<0.0005	1.37	1.37	<0.002	<0.002		<0.01	6.4	2.8	<0.001	<0.001	48	<0.0001	13.1	0.058	3
31/08/2012	P87																							<0.01									
17/09/2012	P87	12.3	0.0008	<0.0002	<0.0005		13.4	<0.05	<0.01	32	<0.02	<0.0001	2.9	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.45	1.46	0.003	0.003		0.011	5.55	2.7	<0.001	<0.001	47	<0.0001	13	0.058	2.7
15/10/2012	P87	12.1	0.001	<0.0002	<0.0005			<0.05	<0.01	34	0.02	<0.0001	2.8	<0.0005	0.00012	<0.00008	<0.0002	<0.0005	1.58	1.58	<0.02	<0.02		<0.01	7.4	2.8	<0.001	<0.001	47	<0.0001	13.2	0.061	3.1
19/11/2012	P87	12.2	0.0007	<0.0002	<0.0005		13.9	<0.05	<0.01	33	0.03	<0.0001	3	<0.0005	0.00019	0.00009	<0.0002	<0.0005	1.51	1.51	<0.02	<0.02		<0.01	6.3	2.8	<0.001	<0.001	48	<0.0001	12.6	0.06	3
20/11/2012	P87																							<0.01									
10/12/2012	P87	13.2	0.0009	<0.0002	0.0015		13.4	<0.05	<0.01	32	0.05	0.00013	2.9	0.0025	0.00015	<0.00008	<0.0002	0.0011	1.62	1.62	<0.02	<0.02		<0.01	6.4	2.8	<0.001	<0.001	50	<0.0001	12.3	0.058	2.6
10/12/2012	P87						10.95																	<0.01	5.64								
25/01/2013	P87																																
13/02/2013	P87	12.2	0.0022	<0.0002	<0.0005		13.3	<0.05	<0.01	32	<0.02	<0.0001	2.9	<0.0005	0.00045	<0.00008	<0.0002	<0.0005	1.59	1.59	<0.002			0.026	6.2	2.6	<0.001	<0.001	48	<0.0001	12.5	0.059	3
18/03/2013	P87																																
18/04/2013	P87	12.1	0.001	<0.0002	<0.0005		13.2	<0.05	<0.01	34	<0.02	<0.0001	3	<0.0005	0.0002	<0.00008	<0.0002	<0.0005	1.6	1.6	<0.02	<0.02		<0.01	6.5	2.7	<0.001	<0.001	47	<0.0001	12.8	0.061	3
21/05/2013	P87																																
25/06/2013	P87																																
2/07/2013	P87	11.6	0.0009	<0.0002	0.0008		13	<0.05	<0.01	28	0.02	0.0002	2.6	0.0014	<0.00008	<0.00008	<0.0002	0.0008	1.66	1.66	<0.02	<0.02		<0.01	6.4	2.7	<0.001	<0.001	42	<0.0001	12.6	0.056	7
30/08/2013	P87																																
19/09/2013	P87																																
15/10/2013	P87	11.7	0.0008	<0.0002	<0.0005		14.4	<0.05	<0.01	35	<0.02	<0.0001	3.2	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	1.88	1.88	<0.02	<0.02		<0.01	6.2	2.9	<0.001	<0.001	49	<0.0001	14	0.06	3
26/11/2013	P87																																
6/12/2013	P87																																
17/01/2014	P87	11.2	0.0008	<0.0002	<0.0005		14.5	<0.05	<0.01	37	0.02	<0.0001	3.3	0.0014	0.00024	<0.00008	<0.0002	0.0005	1.71	1.73	0.02	0.02		<0.01	6.1	3.1	<0.001	<0.001	49	<0.0001	14.2	0.066	4
26/02/2014	P87																																
26/03/2014	P87																																
15/04/2014	P87	11.4	0.0007	<0.0002	<0.0005		13.9	<0.05	<0.01	35	<0.02	<0.0001	3.1	<0.0005	0.00022	<0.00008	<0.0002	<0.0005	1.64	1.65	<0.02	<0.02		<0.01	6.3	2.9	<0.001	<0.001	48	<0.0001	12.5	0.062	3
26/05/2014	P87																																
27/05/2014	P87																																
26/06/2014	P87																																
18/07/2014	P87	11.6	0.0005	<0.0002	<0.0005		13.9	<0.05	<0.01	34	<0.02	<0.0001	3.1	0.0019	<0.00008	<0.00008	<0.0002	<0.0005	1.71	1.71	<0.02			<0.01	6.3	2.7	<0.001	<0.001	47	<0.0001	13.1	0.064	4
28/08/2014	P87																																
29/09/2014	P87																																
30/10/2014	P87																																
27/11/2014	P87																																

Date	Data Point	SS	Sum Anion	Sum Cation	TiS	ThS	SnS	TKN	TSS	US	CNWAD	ZnS
18/01/2010	P87											
17/02/2010	P87		1.2	1.1								0.0026
5/03/2010	P87											
14/04/2010	P87											
24/05/2010	P87		1.11	1.02							<0.001	0.0095
30/05/2010	P87		1.11	1.02							<0.001	0.0095
29/06/2010	P87		1.11	1.08							<0.001	0.0065
30/07/2010	P87		1.13	1.05	<0.00005	<0.0005	<0.0005		2,100	0.00003	<0.001	0.0036
31/08/2010	P87		1.1	1.07	<0.00005	<0.0005	<0.0005		870	0.00003	<0.001	0.0012
20/09/2010	P87		1.09	1.07	<0.00005	<0.0005	0.0006		920	0.00003	<0.001	0.0025
14/10/2010	P87		1.12	1.11	<0.00005	<0.0005	0.0005		1,420	0.00003	<0.001	0.0028
8/11/2010	P87		1.17	1.13	<0.00005	<0.0005	0.0005		910	0.00003	<0.001	0.0049
15/12/2010	P87											
14/01/2011	P87											
24/02/2011	P87		1.15	1.19	<0.00005	<0.0005	<0.0005		480	0.00003	<0.001	0.0019
21/03/2011	P87		1.22	1.11	<0.00005	<0.0005	0.001		820	0.00003	0.0041	0.0022
28/04/2011	P87		1.08	1.08	<0.00005	<0.0005	<0.0005		141	0.00003	<0.001	0.0038
20/05/2011	P87		1.15	1.12	<0.00005	<0.0005	<0.0005		320	0.00003	<0.001	0.0036
28/06/2011	P87		1.15	1.1	<0.00005	<0.0005	0.0009		250	0.00003	0.001	0.0047
21/07/2011	P87		1.2	1.09	<0.00005	<0.0005	0.001		290	0.00003	<0.001	0.0088
23/08/2011	P87		1.21	1.2	<0.00005	<0.0005	0.0007		290	0.00003	<0.001	0.0057
19/09/2011	P87		1.21	1.22	<0.00005	<0.0005	0.0011		260	0.00003	<0.001	0.0063
7/10/2011	P87		1.33	1.3	<0.00005	<0.0005	0.0008		350	0.00004	0.0012	0.0034
7/11/2011	P87		1.32	1.3	<0.00005	<0.0005	<0.0005		650	0.00003	<0.001	0.003
16/12/2011	P87		1.29	1.28	<0.00005	<0.0005	<0.0005		470	0.00005	<0.001	0.0032
23/01/2012	P87		1.29	1.23	<0.00005	<0.0005	0.0006		600	0.00003	<0.001	0.0037
9/02/2012	P87		1.31	1.27	<0.00005	<0.0005	<0.0005		1,250	0.00004	<0.001	0.037
5/03/2012	P87		1.2	1.32	<0.00005	<0.0005	0.0006		580	0.00004	<0.001	0.0016
5/04/2012	P87		1.27	1.28	<0.00005	<0.0005	0.0008		780	0.00004	<0.001	0.0018
18/05/2012	P87		1.31	1.31	<0.00005	<0.0005	0.0008		380	0.00004	<0.001	0.0035
27/06/2012	P87		1.38	1.38	<0.00005	<0.0005	0.0006		930	0.00004	<0.001	0.0045
27/06/2012	P87											
18/07/2012	P87		1.25	1.3	<0.00005	<0.0005	0.0033		290	0.00003	<0.001	0.0023
18/07/2012	P87											
31/08/2012	P87		1.24	1.27	<0.00005	<0.0005	0.0006		330	0.00004	<0.001	0.0017
31/08/2012	P87											
17/09/2012	P87		1.26	1.27	<0.00005	<0.0005	0.0006		164	0.00003	<0.001	0.0013
15/10/2012	P87		1.3	1.33	<0.00005	<0.0005	0.0006		380	0.00005	<0.001	0.0037
19/11/2012	P87		1.32	1.3	<0.00005	<0.0005	0.0007		700	0.00005	0.003	0.0021
20/11/2012	P87											
10/12/2012	P87		1.31	1.27	<0.00005	<0.0005	0.003		690	0.00004	<0.001	0.014
10/12/2012	P87											
25/01/2013	P87											
13/02/2013	P87		1.28	1.25	<0.00005	<0.0005	0.0009		4,700	0.00004	0.0027	0.0027
18/03/2013	P87											
18/04/2013	P87	0.9	1.29	1.31	<0.00005	<0.0005	0.0007		1,050	0.00004	<0.001	0.002
21/05/2013	P87											
25/06/2013	P87											
2/07/2013	P87		1.46	1.19	<0.00005	<0.0005	0.0011		280	0.00003	<0.001	0.0057
30/08/2013	P87											
19/09/2013	P87											
15/10/2013	P87		1.36	1.39	<0.00005	<0.0005	0.0006		400	0.00004	<0.001	0.0021
26/11/2013	P87											
6/12/2013	P87											
17/01/2014	P87		1.38	1.45	<0.00005	<0.0005	0.0009		760	0.00005	<0.001	0.0035
26/02/2014	P87											
26/03/2014	P87											
15/04/2014	P87		1.31	1.31	<0.00005	<0.0005	0.0035		790	0.00004	0.0016	0.0017
26/05/2014	P87											
27/05/2014	P87											
26/06/2014	P87											
18/07/2014	P87		1.32	1.32	<0.00005	<0.0005	<0.0005		182	0.00003	<0.001	0.0018
28/08/2014	P87											
29/09/2014	P87											
30/10/2014	P87											
27/11/2014	P87											

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CaSO
19/12/2014	P87		6	8.64	16	4													
31/12/2014	P87		5.5	17.3	18.4	4.95		<1	44	44	0.015	<0.0002	<0.0002		0.053	54	0.013	<0.00005	9.3
28/01/2015	P87		6	16.4	17.5	5.7		<1	44	44	0.024	<0.0002	<0.0002		0.054	53	0.01	<0.00005	9.2
27/02/2015	P87	Scan only	6.3	15.3	17.1	6													
4/05/2015	P87							<1	20	20	0.017	<0.0002	<0.0002		0.052	25	0.012	<0.00005	4.4
4/05/2015	P87	pH<6.3 EC<121.1 Temp<15.7																	
5/05/2015	P87		6.3	12	15.7	5.7													
20/05/2015	P87	Field readings taken but not entered																	
28/05/2015	P87	Field readings																	
26/06/2015	P87		6.4	23.2	14.5	5.3													
31/07/2015	P87		6.35		15	4.8		<1	37	37	0.045	<0.0002	<0.0002		0.051	45	0.012	<0.00005	7.7
31/08/2015	P87					5.8													
1/09/2015	P87	WL-5.80m	6.2		15.3														
29/09/2015	P87					5.4													
29/09/2015	P87		6.25		16.4														
1/11/2015	P87	Sampled	6.45		16.6		2	<1	43	43	<0.003	<0.0002	<0.0002			53		<0.00005	9.1
6/11/2015	P87	Sampled				5.6													
3/12/2015	P87		6.35		16.9		3												
4/12/2015	P87					5.9													
3/01/2016	P87	WL-5.8 Clody sample slight silt content	5.65		16.8			<1	44	44	0.025	<0.0002	<0.0002			53		0.00006	7.8
14/01/2016	P87					5.8													
3/02/2016	P87		6.6		16.9														
16/02/2016	P87					6													
6/03/2016	P87					5.75													
7/03/2016	P87		6.35		16.9														
28/04/2016	P87		6.1		17			<1	109	109	<0.003	<0.0002	<0.0002			132		0.00005	29
29/04/2016	P87	Sampled				5													
19/05/2016	P87		6.4		16.1														
19/05/2016	P87						4.95												
28/06/2016	P87		6.3		16.6		4.7												
28/06/2016	P87					4.7													
21/07/2016	P87		6.2	17.4	16.9	4.7													
17/08/2016	P87		6.1	18.3	17.2	4.75		<1	23	23	0.012	<0.0002	<0.0002			28		<0.00005	8.6
20/09/2016	P87		6	19.4	16	5													
27/10/2016	P87		6.5	18.7	16	5.1													
28/11/2016	P87		6.1	16.8	16.4	5.35													
21/12/2016	P87		6.3	15.4	16.8	6.15													
26/01/2017	P87	Nes				6													
24/02/2017	P87	NES				5.85													
31/03/2017	P87		5.8	14.2	17.3	5.85													
28/04/2017	P87		6.4	16.1	17.5	5		<1	22	22	0.017	<0.0002	<0.0002	<0.001		27		<0.00005	7.2
26/05/2017	P87		6.3	15.9	15.9	5.1													
30/06/2017	P87		6.8	14.5	15.6	5													
28/07/2017	P87		6.35	16.5	16.3	4.65													
10/08/2017	P87		6.7	16.3	16	4.7		<1	44	44	0.044	<0.0002	<0.0002	<0.001		54		<0.00005	9.6
26/09/2017	P87		6.7	13.8	16.2	4.7													
27/10/2017	P87		6.8	14.5	16.4	4.6													
22/11/2017	P87		6	19.6	16.5	5													
21/12/2017	P87		6.7	13.4	16.9	5.38													
17/01/2018	P87	Cloudy	6.05	12.8	16.7	5.05		<1	38	38	0.042	<0.0002	<0.0002	<0.001		46		<0.00005	8.9
27/02/2018	P87		5.4	12.8	16.4	4.9													
6/03/2018	P87	Clear, no odur. Rapid recharge, but moderately slow to stabilse	6.1	15.18	18.3	4.973	2.5			44	<0.003		<0.0002	<0.001	0.062	54	0.008	<0.00005	9.9
14/03/2018	P87		6.1	12.8	17	4.8													
27/04/2018	P87		6.5	12.8	16.1	5.3													
14/05/2018	P87	Clear, odourless	5.74	15.3	16.9	4.51	2			43	<0.003		<0.0002	<0.001	0.058	52	0.01	<0.00005	9.2
31/05/2018	P87	Piezo-Favona				4.7													
5/06/2018	P87									42	0.007		<0.0002	<0.001		51	0.01	<0.00005	9.9
27/06/2018	P87	Piezo																	
3/07/2018	P87	Clear, no odour	5.92	14.05	16.2	4.665	1.5			42	<0.003		<0.0002	<0.001		51	0.011	<0.00005	9.5
1/08/2018	P87	Clear, odourless	5.67	28.03	16.6	4.73	1.5			43	<0.003		<0.0002	<0.001	0.058	53	0.01	<0.00005	9.5
21/08/2018	P87					4.68													
2/10/2018	P87	NES				5.08													
22/11/2018	P87		6.02	20.1	16.7	5													
17/12/2018	P87		5.43	17.36	17.4	4.77													
12/02/2019	P87	NES				5.08													
11/04/2019	P87	NES				4.76													

Date	Data Point	Cl	CrS	CoS	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NT	NH4N	pH	KSO	SeA	SeS	Si	AgS	NaSO	SrS	SO4
19/12/2014	P87																																
31/12/2014	P87	10.9	0.0007	<0.0002	<0.0005		14.8	<0.05	<0.01	36	<0.02	0.00011	3	0.0009	<0.00008	<0.00008	<0.0002	<0.0005	1.86	1.86	<0.1			<0.01	6.4	2.9	<0.001	<0.001	47	<0.0001	13	0.062	4
28/01/2015	P87	10.8	0.0008	<0.0002	<0.0005		14.3	<0.05	<0.01	36	<0.02	<0.0001	3.1	<0.0005	0.00087	<0.00008	<0.0002	<0.0005	1.75	1.75	<0.1			<0.01	6.2	2.7	<0.001	<0.001	47	<0.0001	12.4	0.065	4
27/02/2015	P87																																
4/05/2015	P87	8.6	0.0009	0.0002	0.0006		10.6	<0.05	<0.01	20	<0.02	<0.0001	2.2	0.0071	<0.00008	<0.00008	<0.0002	<0.0005	1.09	1.09	<0.1			<0.01	5.9	2.1	<0.001	<0.001	36	<0.0001	11.8	0.032	11
4/05/2015	P87																																
5/05/2015	P87																																
20/05/2015	P87																																
28/05/2015	P87																																
26/06/2015	P87																																
31/07/2015	P87	9.5	0.0007	<0.0002	0.0007		13.1	<0.05	<0.01	31	<0.02	<0.0001	2.8	0.0008	<0.00008	<0.00008	<0.0002	<0.0005	1.2	1.26	<0.1			<0.01	6.4	2.7	<0.001	<0.001	42	<0.0001	12.6	0.058	7
31/08/2015	P87																																
1/09/2015	P87																																
29/09/2015	P87																																
29/09/2015	P87																																
1/11/2015	P87	10.9	<0.0005	<0.0002	<0.0005		14.8	<0.05	<0.01	36	<0.02	<0.0001	3.3	<0.0005	0.00017	<0.00008		<0.0005	1.59	1.65	<0.1			<0.01	6.5	2.9	<0.001	<0.001	48	<0.0001	13.4		5
6/11/2015	P87																																
3/12/2015	P87																																
4/12/2015	P87																																
3/01/2016	P87	10.9	<0.0005	<0.0002	0.0012		14.3	<0.05	<0.01	66	<0.02	0.00094	11.3	0.024	0.00013	<0.00008		0.0007	1.7	1.74	<0.1			<0.01	6.5	3.6	<0.001	<0.001	52	<0.0001	28		<2
14/01/2016	P87																																
3/02/2016	P87																																
16/02/2016	P87																																
6/03/2016	P87																																
7/03/2016	P87																																
28/04/2016	P87	13.4	<0.0005	<0.0002	<0.0005		33.5	0.21	<0.01	112	<0.02	<0.0001	9.4	0.031	<0.00008	<0.00008		<0.0005	<0.1	<0.1	<0.1			<0.01	7.2	6	<0.001	<0.001	30	<0.0001	22		42
29/04/2016	P87																																
19/05/2016	P87																																
19/05/2016	P87																																
28/06/2016	P87																																
28/06/2016	P87																																
21/07/2016	P87																																
17/08/2016	P87	9.8	<0.0005	<0.0002	0.0005		11.6	<0.05	<0.01	34	<0.02	<0.0001	3.1	0.0014	<0.00008	<0.00008		<0.0005	1.76	1.76	<0.1			<0.01	6.4	3	<0.001	<0.001	32	<0.0001	13.3		6
20/09/2016	P87																																
27/10/2016	P87																																
28/11/2016	P87																																
21/12/2016	P87																																
26/01/2017	P87																																
24/02/2017	P87																																
31/03/2017	P87																																
28/04/2017	P87	9.4	0.0009	<0.0002	<0.0005		12.4	<0.05	<0.01	29	<0.02	0.00017	2.7	0.0022	<0.00008	<0.00008		<0.0005	1.63	1.63	<0.1			<0.01	6.2	2.7	<0.001	<0.001	33	<0.0001	13.1		10
26/05/2017	P87																																
30/06/2017	P87																																
28/07/2017	P87																																
10/08/2017	P87	11	0.0009	<0.0002	<0.0005		15.3	<0.05	<0.01	38	0.02	<0.0001	3.5	0.0103	0.00008	0.00011		<0.0005	1.91	1.91	<0.1			0.058	6.7	3.1	<0.001	<0.001	47	<0.0001	13.6		5
26/09/2017	P87																																
27/10/2017	P87																																
22/11/2017	P87																																
21/12/2017	P87																																
17/01/2018	P87	10.6	0.001	<0.0002	<0.0005		14.8	<0.05	<0.01	35	<0.02	<0.0001	3	0.0015	<0.00008	<0.00008		<0.0005	2.5	2.5	<0.1			<0.01	6.2	2.9	<0.001	<0.001	47	<0.0001	13.7		8
27/02/2018	P87																																
6/03/2018	P87	12	0.0012	<0.0002	<0.0005		15.6				<0.02	<0.0001	3.4	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005		2.4			2.4	<0.01	6.2	3.1		<0.001		<0.0001	14.2	0.068	8
14/03/2018	P87																																
27/04/2018	P87																																
14/05/2018	P87	13	0.001	<0.0002	<0.0005		15.1				<0.02	<0.0001	3.4	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005		2.2			2.2	<0.01	6.7	3.1		<0.001		<0.0001	14.3	0.068	7
31/05/2018	P87																																
5/06/2018	P87	12	0.0009	0.0004	<0.0005		15			39	<0.02	<0.0001	3.6	0.091	<0.00008	<0.00008	<0.0002	0.0008	2.3	2.3	<0.002				6.3	3.1					13.8		<5
27/06/2018	P87																																
3/07/2018	P87	9	0.0011	<0.0002	<0.0005		14.8			37	<0.02	<0.0001	3.1	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005	2.2	2.2	<0.002				6.3	3.1					12.9		7
1/08/2018	P87	11	0.0009	<0.0002	<0.0005		15.3				<0.02	<0.0001	3.3	<0.0005	<0.00008	<0.00008	<0.0002	<0.0005		2.4			2.5	<0.01	6.4	3.1		<0.001		<0.0001	13.7	0.071	6
21/08/2018	P87																																
2/10/2018	P87																																
22/11/2018	P87																																
17/12/2018	P87																																
12/02/2019	P87																																
11/04/2019	P87																																

Date	Data Point	SS	Sum Anion	Sum Cation	TiS	ThS	SnS	TKN	TSS	US	CNWAD	ZnS
19/12/2014	P87											
31/12/2014	P87		1.41	1.35	<0.00005	<0.0005	<0.0005		420	0.00004	<0.001	0.0088
28/01/2015	P87		1.38	1.33	<0.00005	<0.0005	<0.0005		2,000	0.00004	<0.001	0.0016
27/02/2015	P87											
4/05/2015	P87		0.96	0.98	<0.00005	<0.0005	<0.0005		320	0.00004	0.0052	0.0057
4/05/2015	P87											
5/05/2015	P87											
20/05/2015	P87											
28/05/2015	P87											
26/06/2015	P87											
31/07/2015	P87		1.24	1.24	<0.00005	<0.0005	0.0009		159	0.00004	<0.001	0.0049
31/08/2015	P87											
1/09/2015	P87											
29/09/2015	P87											
29/09/2015	P87											
1/11/2015	P87		1.38	1.38	<0.00005				240	0.00004	<0.001	0.0024
6/11/2015	P87											
3/12/2015	P87											
4/12/2015	P87											
3/01/2016	P87		1.33	2.6	0.00034				670	<0.00002	<0.001	0.013
14/01/2016	P87											
3/02/2016	P87											
16/02/2016	P87											
6/03/2016	P87											
7/03/2016	P87											
28/04/2016	P87		3.4	3.3	0.00012				<3	0.00009	<0.001	0.0069
29/04/2016	P87											
19/05/2016	P87											
19/05/2016	P87											
28/06/2016	P87											
28/06/2016	P87											
21/07/2016	P87											
17/08/2016	P87		0.98	1.34	0.00005				87	0.00004	<0.001	0.02
20/09/2016	P87											
27/10/2016	P87											
28/11/2016	P87											
21/12/2016	P87											
26/01/2017	P87											
24/02/2017	P87											
31/03/2017	P87											
28/04/2017	P87		1.03	1.23	<0.00005				4	0.00003	<0.001	0.0138
26/05/2017	P87											
30/06/2017	P87											
28/07/2017	P87											
10/08/2017	P87		1.43	1.44	<0.00005				920	0.00004	<0.001	0.0016
26/09/2017	P87											
27/10/2017	P87											
22/11/2017	P87											
21/12/2017	P87											
17/01/2018	P87		1.4	1.37	<0.00005				460	0.00005	<0.001	0.011
27/02/2018	P87											
6/03/2018	P87				<0.00005		<0.0005	<0.1	<3	0.00004	<0.001	<0.001
14/03/2018	P87											
27/04/2018	P87											
14/05/2018	P87				0.00005		<0.0005	<0.1	<3	0.00004	<0.001	<0.001
31/05/2018	P87											
5/06/2018	P87		1.43	1.47			<0.0005					0.0014
27/06/2018	P87											
3/07/2018	P87		1.4	1.37			<0.0005					0.0029
1/08/2018	P87				<0.00005		<0.0005	<0.1	<3	0.00004	<0.002	<0.001
21/08/2018	P87											
2/10/2018	P87											
22/11/2018	P87											
17/12/2018	P87											
12/02/2019	P87											
11/04/2019	P87											

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbA	SbS	AsS	BaS	Bicarb	BS	CdS	CaSO
23/05/2019	P87	Not enough to sample																	
24/07/2019	P87	Cleaned of silt using peristaltic pump	4.6	12.4	15.9	4.77	2	<1	26	26	0.005	<0.0002	<0.0002	<0.001		32		<0.00005	6.1
14/01/2020	P87	DRY				7.32													

Date	Data Point	Cl	CrS	CoS	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoS	NiS	NO3-N	NOxN	NO2-N	NO2	NT	NH4N	pH	KSO	SeA	SeS	Si	AgS	NaSO	SrS	SO4
23/05/2019	P87																																
24/07/2019	P87	8	0.0006	<0.0002	<0.0005		11	<0.05	<0.00001	26	<0.02	<0.0001	2.6	0.0065	<0.00008	<0.00008		<0.0005	1.95	1.95	<0.1			<0.01	6.2	2.4	<0.001	<0.001	39	<0.0001	11.4		12
14/01/2020	P87																																

Date	Data Point	SS	Sum Anion	Sum Cation	TiS	ThS	SnS	TKN	TSS	US	CNWAD	ZnS
23/05/2019	P87											
24/07/2019	P87		1.12	1.08	0.00006				6	0.00002	<0.02	0.0019
14/01/2020	P87											

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba	BaS	Bicarb	BS	CdA	CdS	CaSO
18/01/2010	P88					32.8																	
8/03/2010	P88					36.23																	
23/03/2010	P88					36.4																	
14/04/2010	P88					37.06																	
31/05/2010	P88					22.4																	
29/06/2010	P88					33																	
30/07/2010	P88					29.45																	
10/08/2010	P88				14.3			<1	13.8	13.8	1.53	0.95	0.056	0.051	0.022	0.0098	0.045	0.049	16.8	0.053	0.00018	0.00019	65
20/09/2010	P88				14.86			<1	11.2	11.2	1.08	0.46	0.033	0.022	0.034	<0.001	0.042	0.05	13.7	0.047	0.00019	0.00022	51
14/10/2010	P88		4.86	55.3	16	37.1		<1	6	6	1.16	0.73	0.023	0.016	0.023	<0.001	0.042	0.043	7.3	0.041	0.00016	0.00017	47
11/11/2010	P88		4.84	53.3	16.1	37		<1	2.6	2.6		1.37	0.0168	0.0125				0.033	3.2	0.04		0.00014	37
24/12/2010	P88				16.6			<1	<1	<1	2.2	1.95	0.0188	0.0082	0.027	0.0016	0.039	0.028	<1	0.035	0.00012	0.00011	34
21/01/2011	P88		4.43	44.7	17.8	37.4		<1	<1	<1	1.54	1.33	0.0129	0.0065	0.021	0.0013	0.033	0.028	<1	0.03	0.00011	0.00011	26
24/02/2011	P88		3.91	32.1	17.4	37.2		<1	1.4	1.4		1.05	0.007	0.0069				0.029	1.7	0.029		0.00008	20
29/04/2011	P88				15.6			<1	<1	1		0.67	0.0052	0.0042				0.03	1.2	0.028		0.00006	15.1
26/08/2011	P88					37																	
19/09/2011	P88					3.75																	
26/10/2011	P88					37.2																	
28/11/2011	P88				16.9			<1	5.8	5.8		0.26	0.0055	0.0053				0.044	7.1	0.025		0.00008	14.9
23/12/2011	P88		5.37	19.84	15.3	37		<1	6.3	6.3		0.23	0.0064	0.0057				0.039	7.7	0.02		0.00005	13.9
31/01/2012	P88					37.4																	
10/02/2012	P88		5.72	21.8	17.5	37.1		<1	8	8		0.123	0.0059	0.0063				0.04	9.8	0.021		0.00006	15.2
5/03/2012	P88		5.12	11.01	16.6	37		<1	6.9	6.9		0.189	0.0066	0.0065				0.035	8.4	0.022		<0.00005	14
16/04/2012	P88					37.1																	
21/05/2012	P88		5.45	21.5	15.6	37		<1	7.2	7.2		0.187	0.0057	0.0056				0.035	8.8	0.023		0.00005	14.7
27/06/2012	P88		6.06	15.46	14.8	37		<1	5.8	5.8		0.24	0.0061	0.0063				0.033	7.1	0.025		0.00005	14.6
27/06/2012	P88																						
10/08/2012	P88				14.8	37		<1	8.4	8.4		0.151	0.0091	0.006				0.033	10.2	0.023		0.00006	14.5
10/08/2012	P88		6.7	16.34	14.8																		
6/09/2012	P88					37.8																	
17/09/2012	P88		5.35	14.9	15.3	36.9		<1	12.6	12.6		0.136	0.0062	0.0056				0.038	15.4	0.026		<0.00005	16.8
17/09/2012	P88																						
15/10/2012	P88		5.32	21.4	15.8	36.9		<1	6.8	6.8		0.149	0.0058	0.0055				0.036	8.3	0.027		0.00005	17.9
15/10/2012	P88																						
19/11/2012	P88		4.85	16.58	16.3	37		<1	4.6	4.6		0.5	0.0055	0.0052				0.027	5.6	0.028		<0.00005	13.7
20/11/2012	P88																						
18/12/2012	P88		4.71	19.14	16.8	37		<1	5.2	5.2		0.37	0.007	0.0063				0.027	6.3	0.027		<0.00005	13.6
18/12/2012	P88				16.8																		
31/01/2013	P88					37.1																	
13/02/2013	P88					37.5																	
18/03/2013	P88					37.2																	
18/04/2013	P88					37.6																	
30/05/2013	P88					36.5																	
25/06/2013	P88		6.2	24.6	15.4	36.9																	
2/07/2013	P88		5.03	16.6	15.2	37.1		<1	5.4	5.4		0.33	0.0063	0.004				0.023	6.6	0.024		<0.00005	10.4
30/08/2013	P88		5.4	17.7	14.8	37																	
19/09/2013	P88		5.65	17.2	15.2	37.8																	
15/10/2013	P88					37.6																	
22/11/2013	P88					37.1																	
16/12/2013	P88					37																	
17/01/2014	P88					37.2																	
25/02/2014	P88					37.3																	
26/03/2014	P88					37.4																	
11/04/2014	P88					37.8																	
26/05/2014	P88					37.7																	
26/06/2014	P88					37																	
18/07/2014	P88					36.9																	
28/08/2014	P88					37.2																	
29/09/2014	P88		6	17.2	15.4	37																	
22/10/2014	P88					37																	
27/11/2014	P88					37.3																	
2/12/2014	P88					37.3																	
28/01/2015	P88					37.5																	
27/02/2015	P88	Not enough for sample				37																	
4/05/2015	P88	Not enough for sample																					
5/05/2015	P88	Not enough for sample				37.1																	

Date	Data Point	Carb	COD	Cl	CrS	Cr6col	Cr-T	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeA	FeS	FeT	PbA	PbS	MgSO	MnA	MnS	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N
18/01/2010	P88																															
8/03/2010	P88																															
23/03/2010	P88																															
14/04/2010	P88																															
31/05/2010	P88																															
29/06/2010	P88																															
30/07/2010	P88																															
10/08/2010	P88	<1	<6	25	<0.0005	<0.001	0.00101	0.0046	0.0044	0.0033	0.002	0.001	61.3	0.44	<0.01	230	4.3	3.9	4.9	0.0125	0.0049	16.2	0.4	0.4	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0088	0.0082	0.015
20/09/2010	P88	<1	<6	23	<0.0005	<0.001	0.00078	0.0037	0.0033	0.0047	0.0033	<0.001	53.9	0.4	<0.01	185	1.62	<0.02	1.53	0.0111	0.0024	13.8	0.34	0.34	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0073	0.0064	0.008
14/10/2010	P88	<1	<6	22	<0.0005	<0.001	0.00088	0.0034	0.0036	0.0074	0.0048	<0.001	50.2	0.42	<0.01	174	1.08	<0.02	1.22	0.039	0.0146	13.7	0.3	0.34	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0072	0.0072	0.006
11/11/2010	P88			22	<0.0005				0.0027		0.0077		47.8	0.47	<0.01	141		<0.02			0.0162	11.9		0.29	<0.00008	<0.00008			<0.0002		0.0057	0.004
24/12/2010	P88	<1	<6	22	<0.0005	<0.001	0.00064	0.0026	0.0025	0.0145	0.0148	<0.001	44.6	0.45	<0.01	134	1.13	0.06	1.3	0.0199	0.0155	11.9	0.31	0.33	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0054	0.0054	0.002
21/01/2011	P88	<1	<6	19.7	<0.0005	<0.001	0.00067	0.0021	0.0019	0.0129	0.0144	<0.001	37.1	0.31	<0.01	98	0.72	0.03	0.8	0.0131	0.0119	8.3	0.25	0.23	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	0.0043	0.0043	0.003
24/02/2011	P88			16.8	<0.0005				0.0014		0.0055		29.6	0.22	<0.01	82		<0.02			0.0055	7.5		0.199	<0.00008	<0.00008			<0.0002		0.003	0.004
29/04/2011	P88			16.5	<0.0005				0.0011		0.0057		25.1	0.18	<0.01	63		<0.02			0.0037	6.1		0.154	<0.00008	<0.00008			<0.0002		0.0024	0.027
26/08/2011	P88																															
19/09/2011	P88																															
26/10/2011	P88																															
28/11/2011	P88			14.6	<0.0005				0.0009		0.0074		20.9	0.13	<0.01	59		<0.02			0.00154	5.3		0.146	<0.00008	<0.00008			<0.0002		0.0018	0.1
23/12/2011	P88			14.6	<0.0005				0.0008		0.0039		20	0.13	<0.01	55		<0.02			0.00095	4.9		0.131	<0.00008	<0.00008			<0.0002		0.0016	0.16
31/01/2012	P88																															
10/02/2012	P88			13.9	<0.0005				0.0007		0.0031		19.8	0.12	<0.01	57		<0.02			0.00049	4.7		0.123	<0.00008	<0.00008			<0.0002		0.0022	0.21
5/03/2012	P88			14.3	<0.0005				0.0007		0.003		19.3	0.12	<0.01	54		<0.02			0.00062	4.7		0.129	<0.00008	<0.00008			<0.0002		0.0016	0.21
16/04/2012	P88																															
21/05/2012	P88			14.7	<0.0005				0.0008		0.0028		21.1	0.15	<0.01	56		<0.02			0.00087	4.7		0.133	<0.00008	<0.00008			<0.0002		0.0027	0.21
27/06/2012	P88			15.4	<0.0005				0.0008		0.0029		19.7	0.15	<0.01	57		<0.02			0.00087	5		0.144	<0.00008	<0.00008			<0.0002		0.0019	0.194
27/06/2012	P88																															
10/08/2012	P88			14.8	<0.0005				0.0007		0.0023		19.7	0.13	<0.01	55		<0.02			0.0005	4.7		0.129	<0.00008	<0.00008			<0.0002		0.002	0.18
10/08/2012	P88																															
6/09/2012	P88																															
17/09/2012	P88			14.7	<0.0005				0.0008		0.0017		21.8	0.12	<0.01	63		<0.02			0.00047	5.2		0.145	<0.00008	<0.00008			<0.0002		0.0015	0.12
17/09/2012	P88																															
15/10/2012	P88			14.3	<0.0005				0.0008		0.0022		20	0.15	<0.01	66		<0.02			0.00045	5.1		0.147	<0.00008	<0.00008			<0.0002		0.0022	0.15
15/10/2012	P88																															
19/11/2012	P88			15.1	<0.0005				0.0009		0.002		20.3	0.18	<0.01	56		<0.02			0.00196	5.2		0.162	<0.00008	<0.00008			<0.0002		0.0015	0.16
20/11/2012	P88																															
18/12/2012	P88			14.6	0.0006				0.0009		0.0018		19.4	0.17	<0.01	53		0.03			0.0047	4.7		0.145	<0.00008	<0.00008			<0.0002		0.0015	0.17
18/12/2012	P88												19.14																			
31/01/2013	P88																															
13/02/2013	P88																															
18/03/2013	P88																															
18/04/2013	P88																															
30/05/2013	P88																															
25/06/2013	P88																															
2/07/2013	P88			12.7	<0.0005				0.0007		0.0016		15.8	0.12	<0.01	43		<0.02			0.0032	4.3		0.132	<0.00008	<0.00008			<0.0002		0.0014	0.17
30/08/2013	P88																															
19/09/2013	P88																															
15/10/2013	P88																															
22/11/2013	P88																															
16/12/2013	P88																															
17/01/2014	P88																															
25/02/2014	P88																															
26/03/2014	P88																															
11/04/2014	P88																															
26/05/2014	P88																															
26/06/2014	P88																															
18/07/2014	P88																															
28/08/2014	P88																															
29/09/2014	P88																															
22/10/2014	P88																															
27/11/2014	P88																															
2/12/2014	P88																															
28/01/2015	P88																															
27/02/2015	P88																															
4/05/2015	P88																															
5/05/2015	P88																															

Date	Data Point	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SI	SiO2	AgA	AgS	NaSO	SrA	SrS	SO4	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US
18/01/2010	P88																																
8/03/2010	P88																																
23/03/2010	P88																																
14/04/2010	P88																																
31/05/2010	P88																																
29/06/2010	P88																																
30/07/2010	P88																																
10/08/2010	P88	0.02	0.006	0.006	0.89	6.1	0.006	9.2	<0.004	<0.001	<0.001	10.5	10.5	<0.0001	<0.0001	31	0.32	0.33	270	6.5	6.5	0.00147	0.0015	<0.0005	<0.0005	<0.0005	<0.0005	430	1.12	45	32	0.00004	0.00003
20/09/2010	P88	0.008	<0.002	<0.002	0.8	5.6	0.006	8.9	<0.004	<0.001	<0.001	10.1	10.1	<0.0001	<0.0001	26	0.31	0.32	220	5.5	5.2	0.00135	0.00134	<0.0005	<0.0005	<0.0005	<0.0005	370	0.9	29	24	0.00003	<0.00002
14/10/2010	P88	0.008	0.002	0.002	0.7	5.5	<0.004	7.7	<0.004	<0.001	<0.001	10.5	10.5	<0.0001	<0.0001	22	0.23	0.25	210	5.1	4.8	0.00132	0.00127	<0.0005	<0.0005	<0.0005	<0.0005	360	0.85	45	33	0.00004	0.00002
11/11/2010	P88	0.005	<0.002	<0.002	0.64	4.8		6.6		<0.001	<0.001	10.6	10.6		<0.0001	21		0.153	195	4.7	4.1		0.00116		<0.0005		<0.0005			12			0.00005
24/12/2010	P88	0.003		<0.002	0.53	4.4	<0.004	5.7	<0.004	<0.001	<0.001	11.8	11.8	<0.0001	<0.0001	21	0.101	0.104	171	4.2	4.1	0.0011	0.00107	<0.0005	<0.0005	<0.0005	<0.0005	300	0.6	11	9.3	0.00005	0.00005
21/01/2011	P88	0.003	<0.002	<0.002	0.46	4.4	<0.004	5.1	<0.004	<0.001	<0.001	12	12	<0.0001	<0.0001	17.9	0.08	0.079	145	3.6	3.1	0.00095	0.00091	<0.0005	<0.0005	<0.0005	<0.0005	250	0.42	6	5.9	0.00004	0.00004
24/02/2011	P88	0.004	<0.002	<0.002	0.37	4.6		5.1		<0.001	<0.001	11.6	11.6		<0.0001	16.6		0.063	101	2.6	2.7		0.00079		<0.0005		<0.0005			<3			0.00002
29/04/2011	P88	0.032	0.005	0.005	0.29	4.7		4.3		<0.001	<0.001	11.7	11.7		<0.0001	12.7		0.054	80	2.2	2		0.00071		<0.0005		<0.0005			<3			<0.00002
26/08/2011	P88																																
19/09/2011	P88																																
26/10/2011	P88																																
28/11/2011	P88	0.1	<0.02	<0.02	0.192	5.4		3.6		<0.001	<0.001	11.5	11.5		<0.0001	10.9		0.116	61	1.8	1.8		0.00061		<0.0005		<0.0005			<3			<0.00002
23/12/2011	P88	0.16	<0.02	<0.02	0.069	5.6		3.2		<0.001	<0.001	13	13		<0.0001	9.7		0.098	59	1.78	1.64		0.00056		<0.0005		<0.0005			6			<0.00002
31/01/2012	P88																																
10/02/2012	P88	0.21	<0.02	<0.02	<0.01	5.8		3.3		<0.001	<0.001	11.3	11.3		<0.0001	10.7		0.109	69	2	1.72		0.00054		<0.0005		<0.0005			<3			<0.00002
5/03/2012	P88	0.21	<0.02	<0.02	<0.01	5.7		3.2		<0.001	<0.001	11.1	11.1		<0.0001	10.3		0.091	64	1.88	1.65		0.0005		<0.0005		<0.0005			<3			<0.00002
16/04/2012	P88																																
21/05/2012	P88	0.21	<0.002	<0.002	<0.01	5.5		3.2		<0.001	<0.001	11.7	11.7		<0.0001	10.8		0.094	53	1.67	1.71		0.00054		<0.0005		<0.0005			<3			<0.00002
27/06/2012	P88	0.194	<0.002	<0.002	<0.01	5.6		3.2		<0.001	<0.001	11.2	11.2		<0.0001	11.6		0.095	55	1.7	1.77		0.00055		<0.0005		<0.0005			<3			<0.00002
27/06/2012	P88				0.018																												
10/08/2012	P88	0.18	<0.02	<0.02	<0.01	5.8		3.2		<0.001	<0.001	11.5	11.5		<0.0001	10.3		0.105	65	1.94	1.67		0.00053		<0.0005		<0.0005			6			<0.00002
10/08/2012	P88				<0.01																												
6/09/2012	P88																																
17/09/2012	P88	0.12	<0.02	<0.02	<0.01	5.9		3.2		<0.001	<0.001	11	11		<0.0001	12.1		0.108	62	1.96	1.9		0.00058		<0.0005		<0.0005			<3			<0.00002
17/09/2012	P88				<0.01																												
15/10/2012	P88	0.16	<0.02	<0.02	<0.01	5.6		3.3		<0.001	<0.001	11.6	11.6		<0.0001	11.9		0.103	60	1.8	1.95		0.00053		<0.0005		<0.0005			<3			<0.00002
15/10/2012	P88				<0.01																												
19/11/2012	P88	0.16	<0.02	<0.02	<0.01	5.2		3		<0.001	<0.001	11.5	11.5		<0.0001	11.3		0.058	57	1.72	1.75		0.00053		<0.0005		<0.0005			<3			<0.00002
20/11/2012	P88				<0.01																												
18/12/2012	P88	0.17	<0.02	<0.02	0.018	5.2		2.9		<0.001	<0.001	10.5	10.5		<0.0001	11		0.051	55	1.68	1.67		0.00053		<0.0005		<0.0005			16			<0.00002
18/12/2012	P88				<0.01	4.71																											
31/01/2013	P88																																
13/02/2013	P88																																
18/03/2013	P88																																
18/04/2013	P88																																
30/05/2013	P88																																
25/06/2013	P88																																
2/07/2013	P88	0.17	<0.02	<0.02	<0.01	5.2		2.8		<0.001	<0.001	12.3	12.3		<0.0001	9.6		0.04	48	1.48	1.41		0.00051		<0.0005		<0.0005			13			<0.00002
30/08/2013	P88																																
19/09/2013	P88																																
15/10/2013	P88																																
22/11/2013	P88																																
16/12/2013	P88																																
17/01/2014	P88																																
25/02/2014	P88																																
26/03/2014	P88																																
11/04/2014	P88																																
26/05/2014	P88																																
26/06/2014	P88																																
18/07/2014	P88																																
28/08/2014	P88																																
29/09/2014	P88																																
22/10/2014	P88																																
27/11/2014	P88																																
2/12/2014	P88																																
28/01/2015	P88																																
27/02/2015	P88																																
4/05/2015	P88																																
5/05/2015	P88																																

Date	Data Point	CNWAD	ZnA	ZnS
18/01/2010	P88			
8/03/2010	P88			
23/03/2010	P88			
14/04/2010	P88			
31/05/2010	P88			
29/06/2010	P88			
30/07/2010	P88			
10/08/2010	P88	<0.001	0.28	0.25
20/09/2010	P88	<0.001	0.24	0.23
14/10/2010	P88	<0.001	0.24	0.28
11/11/2010	P88	<0.001		0.25
24/12/2010	P88	<0.001	0.3	0.29
21/01/2011	P88	<0.001	0.25	0.25
24/02/2011	P88	<0.001		0.171
29/04/2011	P88	<0.001		0.157
26/08/2011	P88			
19/09/2011	P88			
26/10/2011	P88			
28/11/2011	P88	<0.001		0.123
23/12/2011	P88	<0.001		0.103
31/01/2012	P88			
10/02/2012	P88	<0.001		0.125
5/03/2012	P88	<0.001		0.105
16/04/2012	P88			
21/05/2012	P88	0.0027		0.104
27/06/2012	P88	<0.001		0.102
27/06/2012	P88			
10/08/2012	P88	<0.001		0.1
10/08/2012	P88			
6/09/2012	P88			
17/09/2012	P88	<0.001		0.104
17/09/2012	P88			
15/10/2012	P88	<0.001		0.133
15/10/2012	P88			
19/11/2012	P88	0.0034		0.115
20/11/2012	P88			
18/12/2012	P88	<0.001		0.111
18/12/2012	P88			
31/01/2013	P88			
13/02/2013	P88			
18/03/2013	P88			
18/04/2013	P88			
30/05/2013	P88			
25/06/2013	P88			
2/07/2013	P88	<0.001		0.097
30/08/2013	P88			
19/09/2013	P88			
15/10/2013	P88			
22/11/2013	P88			
16/12/2013	P88			
17/01/2014	P88			
25/02/2014	P88			
26/03/2014	P88			
11/04/2014	P88			
26/05/2014	P88			
26/06/2014	P88			
18/07/2014	P88			
28/08/2014	P88			
29/09/2014	P88			
22/10/2014	P88			
27/11/2014	P88			
2/12/2014	P88			
28/01/2015	P88			
27/02/2015	P88			
4/05/2015	P88			
5/05/2015	P88			

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Level (m)	FLS Water Volume Purged (L)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba	BaS	Bicarb	BS	CdA	CdS	CaSO
20/05/2015	P88			10.5																			
20/05/2015	P88		5.8	10.5	15.5																		
20/05/2015	P88	Field readings only, not entered.																					
28/05/2015	P88	Field readings																					
26/06/2015	P88	Not enough for scan				37.3																	
31/07/2015	P88	NES				37.3																	
31/07/2015	P88	Not enough for field results or sample																					
31/08/2015	P88	Dry				37.2																	
1/09/2015	P88	WL-37.20m - NES																					
29/09/2015	P88	NES				37.4																	
29/09/2015	P88	WL-37.40 NES																					
1/11/2015	P88	Not enough for sample																					
6/11/2015	P88	NES				37.4																	
3/12/2015	P88	NES																					
4/12/2015	P88					37.6																	
13/01/2016	P88	NES																					
14/01/2016	P88					37.8																	
3/02/2016	P88	Nes																					
16/02/2016	P88					37.6																	
6/03/2016	P88					37.7																	
29/04/2016	P88	Nes				37.9																	
19/05/2016	P88	NES																					
19/05/2016	P88						37.85																
28/06/2016	P88	NES					37.15																
28/06/2016	P88					37.15																	
21/07/2016	P88	NES				35.6																	
20/09/2016	P88	Nes				35.8																	
27/10/2016	P88	Nes				35.75																	
28/11/2016	P88	Nes				36.1																	
21/12/2016	P88	NES				35.9																	
26/01/2017	P88	Nes				36																	
24/02/2017	P88	NES				36.12																	
31/03/2017	P88	Nes				36.1																	
28/04/2017	P88	NES				35.85																	
26/05/2017	P88	NES				36.9																	
30/06/2017	P88	Nes				36.4																	
28/07/2017	P88	Too deep for sample				34.8																	
26/09/2017	P88	NES				34.5																	
27/10/2017	P88	Nes				34.68																	
22/11/2017	P88	Nes				33.28																	
21/12/2017	P88	Nes				35.16																	
17/01/2018	P88	Nes				35.05																	
27/02/2018	P88	Nes				34.9																	
14/03/2018	P88	Nes				34.8																	
27/04/2018	P88	Nes				36.8																	
31/05/2018	P88	NES				36.9																	
27/06/2018	P88	NES				36.5																	
21/08/2018	P88	DRY																					
2/10/2018	P88	DRY				36.73																	
22/11/2018	P88	NES				36.72																	
17/12/2018	P88	Dry				36.72																	
12/02/2019	P88	DRY																					
11/04/2019	P88	Dry				36.72																	
23/05/2019	P88	DRY																					
29/07/2019	P88	No field readings.						<1	9.6	9.6		0.099	0.0101	0.0068		0.0015			11.7			<0.00005	11.3
14/01/2020	P88	DRY																					

Date	Data Point	Carb	COD	Cl	CrS	Cr6col	Cr-T	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeA	FeS	FeT	PbA	PbS	MgSO	MnA	MnS	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N
20/05/2015	P88																															
20/05/2015	P88																															
20/05/2015	P88																															
28/05/2015	P88																															
26/06/2015	P88																															
31/07/2015	P88																															
31/07/2015	P88																															
31/08/2015	P88																															
1/09/2015	P88																															
29/09/2015	P88																															
29/09/2015	P88																															
1/11/2015	P88																															
6/11/2015	P88																															
3/12/2015	P88																															
4/12/2015	P88																															
13/01/2016	P88																															
14/01/2016	P88																															
3/02/2016	P88																															
16/02/2016	P88																															
6/03/2016	P88																															
29/04/2016	P88																															
19/05/2016	P88																															
19/05/2016	P88																															
28/06/2016	P88																															
28/06/2016	P88																															
21/07/2016	P88																															
20/09/2016	P88																															
27/10/2016	P88																															
28/11/2016	P88																															
21/12/2016	P88																															
26/01/2017	P88																															
24/02/2017	P88																															
31/03/2017	P88																															
28/04/2017	P88																															
26/05/2017	P88																															
30/06/2017	P88																															
28/07/2017	P88																															
26/09/2017	P88																															
27/10/2017	P88																															
22/11/2017	P88																															
21/12/2017	P88																															
17/01/2018	P88																															
27/02/2018	P88																															
14/03/2018	P88																															
27/04/2018	P88																															
31/05/2018	P88																															
27/06/2018	P88																															
21/08/2018	P88																															
2/10/2018	P88																															
22/11/2018	P88																															
17/12/2018	P88																															
12/02/2019	P88																															
11/04/2019	P88																															
23/05/2019	P88																															
29/07/2019	P88			10	<0.0005				0.0004		0.0005		15.2	0.1	<0.00001	44		<0.02			0.00017	3.8		0.118	<0.00008	<0.00008					0.0007	0.12
14/01/2020	P88																															

Date	Data Point	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SI	SiO2	AgA	AgS	NaSO	SrA	SrS	SO4	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US
20/05/2015	P88																																
20/05/2015	P88																																
20/05/2015	P88																																
28/05/2015	P88																																
26/06/2015	P88																																
31/07/2015	P88																																
31/07/2015	P88																																
31/08/2015	P88																																
1/09/2015	P88																																
29/09/2015	P88																																
29/09/2015	P88																																
1/11/2015	P88																																
6/11/2015	P88																																
3/12/2015	P88																																
4/12/2015	P88																																
13/01/2016	P88																																
14/01/2016	P88																																
3/02/2016	P88																																
16/02/2016	P88																																
6/03/2016	P88																																
29/04/2016	P88																																
19/05/2016	P88																																
19/05/2016	P88																																
28/06/2016	P88																																
28/06/2016	P88																																
21/07/2016	P88																																
20/09/2016	P88																																
27/10/2016	P88																																
28/11/2016	P88																																
21/12/2016	P88																																
26/01/2017	P88																																
24/02/2017	P88																																
31/03/2017	P88																																
28/04/2017	P88																																
26/05/2017	P88																																
30/06/2017	P88																																
28/07/2017	P88																																
26/09/2017	P88																																
27/10/2017	P88																																
22/11/2017	P88																																
21/12/2017	P88																																
17/01/2018	P88																																
27/02/2018	P88																																
14/03/2018	P88																																
27/04/2018	P88																																
31/05/2018	P88																																
27/06/2018	P88																																
21/08/2018	P88																																
2/10/2018	P88																																
22/11/2018	P88																																
17/12/2018	P88																																
12/02/2019	P88																																
11/04/2019	P88																																
23/05/2019	P88																																
29/07/2019	P88	0.12	<0.1		<0.01	5.8		2		<0.001	<0.001	12.8			<0.0001	8.4			38	1.26	1.32		0.0004							15			<0.00002
14/01/2020	P88																																

Date	Data Point	CNWAD	ZnA	ZnS
20/05/2015	P88			
20/05/2015	P88			
20/05/2015	P88			
28/05/2015	P88			
26/06/2015	P88			
31/07/2015	P88			
31/07/2015	P88			
31/08/2015	P88			
1/09/2015	P88			
29/09/2015	P88			
29/09/2015	P88			
1/11/2015	P88			
6/11/2015	P88			
3/12/2015	P88			
4/12/2015	P88			
13/01/2016	P88			
14/01/2016	P88			
3/02/2016	P88			
16/02/2016	P88			
6/03/2016	P88			
29/04/2016	P88			
19/05/2016	P88			
19/05/2016	P88			
28/06/2016	P88			
28/06/2016	P88			
21/07/2016	P88			
20/09/2016	P88			
27/10/2016	P88			
28/11/2016	P88			
21/12/2016	P88			
26/01/2017	P88			
24/02/2017	P88			
31/03/2017	P88			
28/04/2017	P88			
26/05/2017	P88			
30/06/2017	P88			
28/07/2017	P88			
26/09/2017	P88			
27/10/2017	P88			
22/11/2017	P88			
21/12/2017	P88			
17/01/2018	P88			
27/02/2018	P88			
14/03/2018	P88			
27/04/2018	P88			
31/05/2018	P88			
27/06/2018	P88			
21/08/2018	P88			
2/10/2018	P88			
22/11/2018	P88			
17/12/2018	P88			
12/02/2019	P88			
11/04/2019	P88			
23/05/2019	P88			
29/07/2019	P88	<0.02		0.077
14/01/2020	P88			

Date	Data Point	FLS Comments	FLS pH	FLS EC (mS/m)	FLS Temp	FLS Water Leve	FLS Water Volu	Acidity (pH 3.7	Alk-Bicarb	Alk-T	AlA	SbA	SbS	AsA	AsT	BaS	Bicarb	BS	CdS
18/01/2010	P89					4.7													
19/01/2010	P89		6.63	47.3	15.2					100	0.031	<0.0002	<0.0002				120		
17/02/2010	P89				16.5					100	0.0061	<0.0002	<0.0002				120		
5/03/2010	P89		6.78	43.9	16.4	4.9				95	0.0033	<0.0002	<0.0002				120		
14/04/2010	P89		6.79	43	15.3	5.27				92	0.082	<0.0002	<0.0002				112		
30/05/2010	P89				15.8					86	<0.003	<0.0002	<0.0002				105		
29/06/2010	P89				15.6				93	93	<0.003	<0.0002	<0.0002				113		
30/07/2010	P89		7.15	42	15	3.7			92	92	0.016	<0.0002	<0.0002			0.104	112	0.033	0.00016
31/08/2010	P89		6.56	44.8	14.3	3.6		<1	97	97	<0.003	<0.0002	<0.0002			0.113	118	0.031	0.00012
20/09/2010	P89				14.2			<1	96	96	0.008	<0.0002	<0.0002			0.107	118	0.034	0.00014
14/10/2010	P89		5.99	43.2	15	3.92		<1	104	104	<0.003	<0.0002	<0.0002			0.121	126	0.034	0.00015
8/11/2010	P89				15.4			<1	104	104	0.007	<0.0002	<0.0002			0.109	127	0.032	0.00016
15/12/2010	P89				16.4			<1	99	99	<0.003	<0.0002	<0.0002			0.097	121	0.034	0.00016
14/01/2011	P89				15.5			<1	101	101	0.006	<0.0002	<0.0002			0.102	123	0.029	0.00011
24/02/2011	P89		6.69	40.7	16.6	3.9		<1	96	96	<0.003	<0.0002	<0.0002			0.098	117	0.035	0.00016
21/03/2011	P89				15.4			<1	103	104	<0.003	<0.0002	<0.0002			0.107	126	0.031	0.00016
28/04/2011	P89				15.3			<1	97	97	<0.003	<0.0002	<0.0002			0.11	118	0.031	0.00016
20/05/2011	P89		6.34	39.8	15.6	3.6		<1	97	97	<0.003	<0.0002	<0.0002			0.12	118	0.032	0.00022
28/06/2011	P89				15.1			<1	99	100	<0.003	<0.0002	<0.0002			0.106	121	0.032	0.00014
21/07/2011	P89				14			<1	103	103	<0.003	<0.0002	<0.0002			0.107	125	0.031	0.00014
23/08/2011	P89				14.7			<1	107	107	<0.003	<0.0002	<0.0002			0.116	131	0.03	0.00021
19/09/2011	P89				15.4			<1	117	117	<0.003	<0.0002	<0.0002			0.12	143	0.031	0.00021
7/10/2011	P89		6.33	40.1	14.7	4.9		<1	121	121	0.007	<0.0002	<0.0002			0.113	148	0.032	0.00017
7/11/2011	P89		6.4	39.6	14.9	3.9		<1	122	122	<0.003	<0.0002	<0.0002			0.115	149	0.029	0.00018
16/12/2011	P89		6.97	39.2	15.8	4.05		<1	117	117	<0.003	<0.0002	<0.0002			0.111	143	0.034	0.00016
23/01/2012	P89		6.69	39.5	14.9	4.6		<1	122	122	0.021	<0.0002	<0.0002			0.117	149	0.032	0.00018
9/02/2012	P89		6.46	38.3	17.3	4.1		<1	122	122	0.004	<0.0002	<0.0002			0.117	149	0.029	0.00018
5/03/2012	P89		6.22	21.4	16.2	4		<1	122	122	<0.003	<0.0002	<0.0002			0.122	148	0.031	0.00017
5/04/2012	P89		6.33	19.6	15.3	3.7		<1	116	116	<0.003	<0.0002	<0.0002			0.119	142	0.031	0.00022
18/05/2012	P89		6.61	22.2	15.7	3.8		<1	116	116	<0.003	<0.0002	<0.0002			0.137	142	0.039	0.00022
27/06/2012	P89		7.21	17.8	14.7	4.1		<1	118	118	<0.003	<0.0002	<0.0002			0.124	143	0.035	0.00017
27/06/2012	P89																		
18/07/2012	P89				15.8	3.4		<1	39	39	0.42	<0.0002	<0.0002			0.049	47	0.016	<0.00005
18/07/2012	P89		6.54	13	15.8														
31/08/2012	P89		6.4	22.3	14.8	3.65		<1	106	106	0.024	<0.0002	<0.0002			0.102	129	0.028	0.00009
31/08/2012	P89																		
17/09/2012	P89		6.31	26.7	14.3	3.55		<1	129	129	<0.003	<0.0002	<0.0002			0.12	158	0.032	0.00022
17/09/2012	P89																		
15/10/2012	P89		6.33	40	14.7	3.75		<1	134	134	<0.003	<0.0002	<0.0002			0.12	164	0.034	0.00024
15/10/2012	P89																		
19/11/2012	P89		5.92	27.6	14.4	4.3		<1	132	132	<0.003	<0.0002	<0.0002			0.115	161	0.032	0.00019
20/11/2012	P89																		
10/12/2012	P89				15.3	4.85		<1	121	121	<0.003	<0.0002	<0.0002			0.118	148	0.031	0.00021
10/12/2012	P89		6.15	24.7	15.3														
30/01/2013	P89		6.37	22.9	15.8			<1	115	115	<0.003	<0.0002	<0.0002			0.115	140	0.033	0.0002
13/02/2013	P89		6.34	24.5	16	5.1		<1		110	<0.003	<0.0002	<0.0002			0.118	134	0.033	0.00018
18/03/2013	P89		6.03	23.6	16.7	5.2													
18/04/2013	P89		6.45	14.6	15.8	5.1		<1	98	98	<0.003	<0.0002	<0.0002			0.105	120	0.029	0.00013
21/05/2013	P89		6.3	34.5	16.3	3.05													
25/06/2013	P89		6.4	18.9	15.4	3													
2/07/2013	P89		6.6	32.8	15.3	2.5		<1	103	103	0.005	<0.0002	<0.0002			0.108	126	0.033	0.00009
30/08/2013	P89		6.5	18.64	15.8	2.3													
19/09/2013	P89		6.3	18.94	15.3	3.7													
15/10/2013	P89		6.68	33.8	14.1	3.7		<1	114	114	<0.003	<0.0002	<0.0002			0.108	139	0.034	0.00016
26/11/2013	P89		6.75	18.96	15	4													
6/12/2013	P89		6.2	35	15.2	3.4													
17/01/2014	P89				17			<1	114	114	0.009	<0.0002	<0.0002			0.116	139	0.035	0.00011
26/02/2014	P89		6.5	28.8	17	4.3													
26/03/2014	P89		6.4	9.6	16.8	5.8													
26/03/2014	P89		6.4	15.8	16.8														
15/04/2014	P89				16.5			<1	100	100	<0.003	<0.0002	<0.0002			0.106	122	0.031	0.0002
26/05/2014	P89		6.4	26.2	16.4	4.9													
26/06/2014	P89		6.4	12.64	16	3.6													
18/07/2014	P89		6.65	30.5	14.5	3.5		<1	101	101	<0.003	<0.0002	<0.0002			0.095	123	0.034	0.0001
28/08/2014	P89		6.5	25.8	14.8	3.9													
29/09/2014	P89		6.6	29.8	15	3.6													

Date	Data Point	CaSO	Cl	CrS	Cr6col	CuS	CNTOT	EC (mS/m)	F-	NH3	Hard	FeS	PbS	MgSO	MnS	HgA	HgS	MoA	NiS
18/01/2010	P89																		
19/01/2010	P89	28	13		0.0028	<0.0005	<0.001	36		<0.01	110	0.08	<0.0001	10	0.15				<0.0005
17/02/2010	P89	28	13		0.0025	0.0005	<0.001	36		<0.01	110	0.14	0.0002	9.9	0.13				0.0006
5/03/2010	P89	26	13		0.0023	<0.0005	<0.001	34.4		<0.01	100	0.12	<0.0001	9.2	0.12	<0.00008			<0.0005
14/04/2010	P89	27	12.8		0.0023	<0.0005		33.7		<0.01	107	0.129	<0.0001	9.8	0.119	<0.00008			<0.0005
30/05/2010	P89	24	12.8		0.0018	0.0009		32.4		<0.01	92	<0.02	0.002	8.1	0.115	<0.00008			<0.0005
29/06/2010	P89	27	13.3		0.0016	0.0008		33.4		<0.01	106	<0.02	0.0023	9.2	0.102	<0.00008			<0.0005
30/07/2010	P89	27	13.2	<0.0005	0.0013	0.0006		33	0.19	<0.01	106	<0.02	0.00157	9.5	0.099	<0.00008	<0.00008	<0.0002	<0.0005
31/08/2010	P89	28	13.2	<0.0005	0.0018	<0.0005		34.3	0.21	<0.01	109	0.03	0.00036	9.7	0.107	<0.00008	<0.00008	<0.0002	<0.0005
20/09/2010	P89	27	13	<0.0005	0.0016	<0.0005		33.9	0.19	<0.01	110	0.04	0.0003	10.1	0.111	<0.00008	<0.00008	<0.0002	<0.0005
14/10/2010	P89	31	13.2	<0.0005	0.002	<0.0005		35.7	0.18	<0.01	121	0.03	0.00011	10.9	0.114	<0.00008	<0.00008	<0.0002	<0.0005
8/11/2010	P89	30	13.2	<0.0005	0.0019	<0.0005		36	0.23	<0.01	122	0.04	0.00014	11.4	0.118	<0.00008	<0.00008	<0.0002	<0.0005
15/12/2010	P89	29	14.1	<0.0005	0.0019	<0.0005		35.1	0.2	<0.01	115	0.03	<0.0001	10.4	0.115	<0.00008	<0.00008	<0.0002	<0.0005
14/01/2011	P89	30	13.4	<0.0005	0.0019	<0.0005		35.9	0.22	<0.01	117	0.06	<0.0001	10.4	0.112	<0.00008	<0.00008	<0.0002	<0.0005
24/02/2011	P89	27	13.2	<0.0005	0.0013	<0.0005		33.9	0.21	<0.01	108	<0.02	<0.0001	9.7	0.1	<0.00008	<0.00008	<0.0002	<0.0005
21/03/2011	P89	28	13.7	<0.0005	0.0017	<0.0005		35.5	0.24	<0.01	112	0.04	<0.0001	10	0.107	<0.00008	<0.00008	<0.0002	<0.0005
28/04/2011	P89	27	13.5	<0.0005	0.0014	<0.0005		34.1	0.22	<0.01	106	<0.02	0.00013	9.5	0.096	<0.00008	<0.00008	<0.0002	<0.0005
20/05/2011	P89	26	13.5	<0.0005	0.0013	<0.0005		33.9	0.21	<0.01	106	<0.02	<0.0001	10	0.091	<0.00008	<0.00008	<0.0002	<0.0005
28/06/2011	P89	27	13.5	<0.0005	<0.0002	<0.0005		34.1	0.22	<0.01	108	<0.02	<0.0001	9.5	0.033	<0.00008	0.00017	<0.0002	<0.0005
21/07/2011	P89	27	13.6	<0.0005	<0.0002	0.0006		33.5	0.23	<0.01	108	<0.02	<0.0001	9.8	0.059	<0.00008	<0.00008	<0.0002	<0.0005
23/08/2011	P89	29	13.6	<0.0005	0.0003	<0.0005		35.7	0.21	<0.01	119	<0.02	<0.0001	11	0.086	<0.00008	<0.00008	<0.0002	<0.0005
19/09/2011	P89	33	13.8	<0.0005	0.0019	<0.0005		36.9	0.19	<0.01	134	0.04	<0.0001	12.8	0.129	<0.00008	<0.00008	<0.0002	<0.0005
7/10/2011	P89	35	13.7	<0.0005	0.002	<0.0005		37.7	0.19	<0.01	147	0.04	0.00012	14.5	0.136	<0.00008	<0.00008	<0.0002	<0.0005
7/11/2011	P89	34	13.8	<0.0005	0.0019	<0.0005		37.9	0.18	<0.01	135	<0.02	<0.0001	12.3	0.126	<0.00008	<0.00008	<0.0002	<0.0005
16/12/2011	P89	33	13.6	<0.0005	0.0019	<0.0005		37	0.18	<0.01	136	0.04	0.00018	12.8	0.13	<0.00008	<0.00008	<0.0002	<0.0005
23/01/2012	P89	32	12.8	<0.0005	0.0015	<0.0005		37.3	0.21	<0.01	129	0.1	0.00093	11.9	0.118	<0.00008	<0.00008	<0.0002	<0.0005
9/02/2012	P89	34	13.6	<0.0005	0.0017	<0.0005		37.2	0.21	<0.01	134	0.04	0.00013	12.2	0.12	<0.00008	<0.00008	<0.0002	<0.0005
5/03/2012	P89	33	13.3	<0.0005	0.002	<0.0005		37.5	0.21	<0.01	133	0.04	<0.0001	12.1	0.124	<0.00008	<0.00008	<0.0002	<0.0005
5/04/2012	P89	34	13.3	<0.0005	0.0016	0.0007		35	0.21	<0.01	134	<0.02	0.00016	11.9	0.112	<0.00008	<0.00008	<0.0002	<0.0005
18/05/2012	P89	31	13.4	<0.0005	0.0013	<0.0005		36.9	0.21	<0.01	128	<0.02	<0.0001	12.3	0.111	<0.00008	<0.00008	<0.0002	<0.0005
27/06/2012	P89	33	14.2	<0.0005	0.0009	<0.0005		36.7	0.23	<0.01	131	0.02	<0.0001	12	0.099	<0.00008	<0.00008	<0.0002	<0.0005
27/06/2012	P89																		
18/07/2012	P89	9.9	7.9	<0.0005	<0.0002	0.0009		13.6	0.11	<0.01	40	0.13	0.00033	3.7	0.003	<0.00008	<0.00008	<0.0002	<0.0005
18/07/2012	P89																		
31/08/2012	P89	30	11.7	<0.0005	<0.0002	0.0009		32.8	0.21	<0.01	118	<0.02	0.00015	10.5	0.0049	<0.00008	<0.00008	<0.0002	<0.0005
31/08/2012	P89																		
17/09/2012	P89	36	13.3	<0.0005	0.0019	<0.0005		39	0.21	<0.01	147	<0.02	<0.0001	13.9	0.145	<0.00008	<0.00008	<0.0002	<0.0005
17/09/2012	P89																		
15/10/2012	P89	40	13.1	<0.0005	0.002	<0.0005		37.7	0.22	<0.01	155	<0.02	<0.0001	13.5	0.147	<0.00008	<0.00008	<0.0002	<0.0005
15/10/2012	P89																		
19/11/2012	P89	36	13.7	<0.0005	0.002	<0.0005		39.9	0.22	<0.01	143	<0.02	<0.0001	12.9	0.149	<0.00008	<0.00008	<0.0002	<0.0005
20/11/2012	P89																		
10/12/2012	P89	33	14.1	<0.0005	0.0017	<0.0005		37.3	0.22	<0.01	131	0.03	<0.0001	11.9	0.119	<0.00008	<0.00008	<0.0002	<0.0005
10/12/2012	P89							24.7											
30/01/2013	P89	32	13.2	0.0006	0.0017	0.0006		35.9	0.22	<0.01	124	0.04	<0.0001	11.1	0.113	<0.00008	<0.00008	<0.0002	0.0006
13/02/2013	P89	29	13	0.0007	0.0016	0.001		35.4	0.23	<0.01	115	<0.02	<0.0001	10.1	0.106	<0.00008	<0.00008	<0.0002	0.0009
18/03/2013	P89																		
18/04/2013	P89	26	13.1	<0.0005	0.0015	<0.0005		32.3	0.22	<0.01	104	0.05	<0.0001	9.3	0.091	<0.00008	<0.00008	<0.0002	<0.0005
21/05/2013	P89																		
25/06/2013	P89																		
2/07/2013	P89	28	13	<0.0005	<0.0002	<0.0005		33	0.21	<0.01	110	<0.02	<0.0001	9.8	0.016	<0.00008	<0.00008	<0.0002	<0.0005
30/08/2013	P89																		
19/09/2013	P89																		
15/10/2013	P89	30	12.6	<0.0005	0.0017	<0.0005		35.9	0.21	<0.01	123	<0.02	<0.0001	11.6	0.119	<0.00008	<0.00008	<0.0002	<0.0005
26/11/2013	P89																		
6/12/2013	P89																		
17/01/2014	P89	31	16.6	<0.0005	0.0016	0.0008		35	0.19	<0.01	121	0.21	<0.0001	10.9	0.107	<0.00008	<0.00008	<0.0002	<0.0005
26/02/2014	P89																		
26/03/2014	P89																		
26/03/2014	P89																		
15/04/2014	P89	27	12.5	<0.0005	0.0011	<0.0005		32.8	0.22	<0.01	107	0.05	<0.0001	9.5	0.089	<0.00008	<0.00008	<0.0002	<0.0005
26/05/2014	P89																		
26/06/2014	P89																		
18/07/2014	P89	27	12.7	<0.0005	<0.0002	<0.0005		32.6	0.22	<0.01	105	<0.02	<0.0001	9.5	0.0119	<0.00008	<0.00008	<0.0002	<0.0005
28/08/2014	P89																		
29/09/2014	P89																		

Date	Data Point	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	KSO	SeA	SeS	SI	SiO2	AgA	NaSO	SrA	SO4	SS	Sum Anion	Sum Cation
18/01/2010	P89																		
19/01/2010	P89	0.0071	0.0071	<0.002	<0.002	0.021	6.6	5.6	<0.001	<0.001	31	31	<0.0001	23		63		3.7	3.4
17/02/2010	P89	0.0092	0.01	<0.002	<0.002	<0.01	6.7	6.4	<0.001	<0.001	29	29	<0.0001	25		63		3.7	3.5
5/03/2010	P89	0.024	0.025	<0.002	<0.002	<0.01	6.6	5.6	<0.001	<0.001	29	29	<0.0001	24		55		3.4	3.2
14/04/2010	P89	0.021	0.021	<0.002	<0.002	<0.01	6.5	5.8	<0.001	<0.001	29	29	<0.0001	25		58		3.4	3.4
30/05/2010	P89	0.021	0.021	<0.002	<0.002	<0.01	6.7	5.8	<0.001	<0.001	31	31	<0.0001	22		61		3.4	2.9
29/06/2010	P89	0.031	0.031	<0.002	<0.002	<0.01	6.8	5.8	<0.001	<0.001	29	29	<0.0001	24		54		3.4	3.3
30/07/2010	P89	0.055	0.056	<0.002	<0.002	<0.01	6.9	5.4	<0.001	<0.001	31	31	<0.0001	23	0.163	58		3.4	3.3
31/08/2010	P89	0.006	0.006	<0.002	<0.002	<0.01	6.7	5.8	<0.001	<0.001	29	29	<0.0001	25	0.173	55		3.4	3.4
20/09/2010	P89	0.006	0.007	<0.002	<0.002	0.015	6.5	6	<0.001	<0.001	29	29	<0.0001	24	0.167	58		3.5	3.4
14/10/2010	P89	0.008	0.009	<0.002	<0.002	<0.01	6.7	6.6	<0.001	<0.001	31	31	<0.0001	27	0.195	61		3.7	3.8
8/11/2010	P89	0.009	0.009	<0.002	<0.002	<0.01	6.6	6.1	<0.001	<0.001	30	30	<0.0001	25	0.182	60		3.7	3.7
15/12/2010	P89	0.003	0.003	<0.002	<0.002	<0.01	6.8	5.7	<0.001	<0.001	30	30	<0.0001	24	0.179	54		3.5	3.5
14/01/2011	P89	0.004	0.004	<0.002	<0.002	<0.01	6.7	5.7	<0.001	<0.001	30	30	<0.0001	23	0.181	55		3.5	3.5
24/02/2011	P89	0.016	0.021	0.005	0.005	<0.01	6.7	6.1	<0.001	<0.001	29	29	<0.0001	26	0.159	51		3.4	3.4
21/03/2011	P89	0.025	0.025	<0.002	<0.002	<0.01	6.5	5.8	<0.001	<0.001	30	30	<0.0001	24	0.172	55		3.6	3.4
28/04/2011	P89	0.031	0.031	<0.002	<0.002	<0.01	6.5	5.9	<0.001	<0.001	29	29	<0.0001	24	0.168	48		3.3	3.3
20/05/2011	P89	0.057	0.057	<0.002	<0.002	<0.01	6.6	5.6	<0.001	<0.001	31	31	<0.0001	24	0.166	56		3.5	3.3
28/06/2011	P89	0.05	0.06	<0.02	<0.02	<0.01	6.7	5.6	<0.001	<0.001	30	30	<0.0001	23	0.167	53		3.5	3.3
21/07/2011	P89	0.054	0.055	<0.002	<0.002	<0.01	6.8	5.5	<0.001	<0.001	31	31	<0.0001	23	0.173	53		3.6	3.3
23/08/2011	P89	0.06	0.07	<0.02	<0.02	<0.01	7	6.4	<0.001	<0.001	31	31	<0.0001	24	0.196	50		3.6	3.6
19/09/2011	P89	0.004	0.004	<0.002	<0.002	<0.01	6.5	6.1	<0.001	<0.001	31	31	<0.0001	23	0.2	55		3.9	3.9
7/10/2011	P89	0.03	0.03	<0.02	<0.02	<0.01	6.6	6.3	<0.001	<0.001	31	31	<0.0001	25	0.21	49		3.8	4.2
7/11/2011	P89	0.02	0.02	<0.02	<0.02	<0.01	6.7	6.1	<0.001	<0.001	32	32	<0.0001	24	0.2	51		3.9	3.9
16/12/2011	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.6	6.4	<0.001	<0.001	36	36	<0.0001	24	0.2	50		3.8	3.9
23/01/2012	P89	0.02	0.04	<0.02	<0.02	<0.01	6.7	6.3	<0.001	<0.001	30	30	<0.0001	25	0.21	53		3.9	3.8
9/02/2012	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.7	6	<0.001	<0.001	30	30	<0.0001	24	0.2	52		3.9	3.9
5/03/2012	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.7	6.4	<0.001	<0.001	30	30	<0.0001	23	0.2	65		4.2	3.8
5/04/2012	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.7	6.5	<0.001	<0.001	31	31	<0.0001	26	0.21	47		3.7	4
18/05/2012	P89	0.014	0.015	<0.002	<0.002	<0.01	6.7	6.6	<0.001	<0.001	30	30	<0.0001	27	0.22	51		3.8	3.9
27/06/2012	P89	0.036	0.036	<0.002	<0.002	<0.01	7	6.3	<0.001	<0.001	30	30	<0.0001	26	0.21	49		3.8	3.9
27/06/2012	P89					0.013													
18/07/2012	P89	0.53	0.53	<0.02	<0.02	<0.01	6.7	4.5	<0.001	<0.001	9.5	9.5	<0.0001	9.8	0.057	16.8		1.38	1.39
18/07/2012	P89					<0.01													
31/08/2012	P89	0.09	0.09	<0.002	<0.002	<0.01	6.9	6.1	<0.001	<0.001	25	25	<0.0001	21	0.181	45		3.4	3.5
31/08/2012	P89					<0.01													
17/09/2012	P89	0.02	0.02	<0.02	<0.02	0.014	6.6	6.7	<0.001	<0.001	29	29	<0.0001	24	0.22	52		4.1	4.2
17/09/2012	P89					<0.01													
15/10/2012	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.8	6.4	<0.001	<0.001	30	30	<0.0001	24	0.23	47		4	4.3
15/10/2012	P89					<0.01													
19/11/2012	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.7	6.1	<0.001	<0.001	30	30	<0.0001	22	0.22	51		4.1	4
20/11/2012	P89					0.01													
10/12/2012	P89	0.04	0.04	<0.02	<0.02	<0.01	6.7	6.1	<0.001	<0.001	30	30	<0.0001	23	0.21	50		3.9	3.8
10/12/2012	P89					<0.01	6.15												
30/01/2013	P89	<0.02	<0.02		<0.02	<0.01	6.6	5.9	<0.001	<0.001		30	<0.0001	22	0.192	41		3.5	3.6
13/02/2013	P89	<0.02	<0.02	<0.02		<0.01	6.6	5.8	<0.001	<0.001	29		<0.0001	22	0.188	49		3.6	3.4
18/03/2013	P89																		
18/04/2013	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.8	5.3	<0.001	<0.001	29	29	<0.0001	22	0.159	44	14.8	3.3	3.2
21/05/2013	P89																		
25/06/2013	P89																		
2/07/2013	P89	0.06	0.06	<0.02	<0.02	<0.01	7.2	6	<0.001	<0.001	29	29	<0.0001	24	0.185	47		3.4	3.4
30/08/2013	P89																		
19/09/2013	P89																		
15/10/2013	P89	0.05	0.05	<0.02	<0.02	<0.01	6.6	6.2	<0.001	<0.001	32	32	<0.0001	25	0.177	49		3.7	3.7
26/11/2013	P89																		
6/12/2013	P89																		
17/01/2014	P89	<0.02	<0.02	<0.02	<0.02	<0.01	6.9	6.1	<0.001	<0.001	31	31	<0.0001	24	0.187	48		3.7	3.6
26/02/2014	P89																		
26/03/2014	P89																		
26/03/2014	P89																		
15/04/2014	P89	0.04	0.04	<0.02	<0.02	<0.01	6.7	5.5	<0.001	<0.001	30	30	<0.0001	22	0.163	47		3.3	3.2
26/05/2014	P89																		
26/06/2014	P89																		
18/07/2014	P89	0.04	0.05	<0.02		<0.01	6.9	5.5	<0.001	<0.001	30		<0.0001	23	0.169	46		3.3	3.2
28/08/2014	P89																		
29/09/2014	P89																		

Date	Data Point	TiA	ThS	SnS	TKN	TSS	US	CNWAD	ZnS
18/01/2010	P89								
19/01/2010	P89								0.0033
17/02/2010	P89								0.0079
5/03/2010	P89							<0.001	0.0033
14/04/2010	P89							<0.001	0.0024
30/05/2010	P89							<0.001	0.012
29/06/2010	P89							<0.001	0.0095
30/07/2010	P89	0.00017	<0.0005	<0.0005		16	0.00007	<0.001	0.0119
31/08/2010	P89	0.00018	<0.0005	<0.0005		4	0.0001	<0.001	0.0054
20/09/2010	P89	0.0002	<0.0005	<0.0005		49	0.00009	<0.001	0.0063
14/10/2010	P89	0.0002	<0.0005	0.0006		22	0.00009	<0.001	0.0052
8/11/2010	P89	0.00019	<0.0005	<0.0005		148	0.0001	<0.001	0.0033
15/12/2010	P89	0.00018	<0.0005	0.0007		45	0.00009	<0.001	0.0048
14/01/2011	P89	0.00019	<0.0005	<0.0005		53	0.0001	<0.001	0.0022
24/02/2011	P89	0.00018	<0.0005	<0.0005		4	0.00007	<0.001	0.0065
21/03/2011	P89	0.00018	<0.0005	<0.0005		<3	0.0001	<0.001	0.0069
28/04/2011	P89	0.0002	<0.0005	<0.0005		<3	0.00008	<0.001	0.0053
20/05/2011	P89	0.00019	<0.0005	<0.0005		<3	0.00008	<0.001	0.0098
28/06/2011	P89	0.00019	<0.0005	0.0046		<3	0.00009	<0.001	0.0113
21/07/2011	P89	0.00019	<0.0005	0.0017		3	0.00009	<0.001	0.01
23/08/2011	P89	0.0002	<0.0005	0.0007		<3	0.00013	<0.001	0.0107
19/09/2011	P89	0.00024	<0.0005	0.0007		10	0.00014	<0.001	0.0045
7/10/2011	P89	0.00024	<0.0005	0.0009		66	0.00015	<0.001	0.0038
7/11/2011	P89	0.00021	<0.0005	0.0008		9	0.00014	<0.001	0.0028
16/12/2011	P89	0.00022	<0.0005	<0.0005		45	0.00013	<0.001	0.0046
23/01/2012	P89	0.00022	<0.0005	0.0013		28	0.00014	<0.001	0.0053
9/02/2012	P89	0.00022	<0.0005	0.0008		6	0.00015	<0.001	0.0048
5/03/2012	P89	0.00021	<0.0005	0.0012		<3	0.00014	<0.001	0.0044
5/04/2012	P89	0.00023	<0.0005	0.0018		<3	0.00012	<0.001	0.009
18/05/2012	P89	0.00022	<0.0005	0.0014		<3	0.00015	<0.001	0.0102
27/06/2012	P89	0.0002	<0.0005	0.001		4	0.00015	<0.001	0.0049
27/06/2012	P89								
18/07/2012	P89	0.00008	<0.0005	0.0008		142	0.00003	<0.001	0.0135
18/07/2012	P89								
31/08/2012	P89	0.00018	<0.0005	0.0006		17	0.0001	<0.001	0.0062
31/08/2012	P89								
17/09/2012	P89	0.00023	<0.0005	0.0006		69	0.00015	<0.001	0.0045
17/09/2012	P89								
15/10/2012	P89	0.00025	<0.0005	0.0008		87	0.00018	<0.001	0.0028
15/10/2012	P89								
19/11/2012	P89	0.00023	<0.0005	0.0009		14	0.00019	<0.001	0.004
20/11/2012	P89								
10/12/2012	P89	0.0002	<0.0005	0.0005		9	0.00015	<0.001	0.004
10/12/2012	P89								
30/01/2013	P89	0.00021	<0.0005	0.0014		19	0.00012	0.0011	0.0067
13/02/2013	P89	0.00021	<0.0005	0.0014		9	0.00011	<0.001	0.0087
18/03/2013	P89								
18/04/2013	P89	0.00018	<0.0005	0.0012		41	0.00008	<0.001	0.0079
21/05/2013	P89								
25/06/2013	P89								
2/07/2013	P89	0.00018	<0.0005	<0.0005		7	0.00009	<0.001	0.0096
30/08/2013	P89								
19/09/2013	P89								
15/10/2013	P89	0.00019	<0.0005	0.0009		17	0.00011	<0.001	0.0034
26/11/2013	P89								
6/12/2013	P89								
17/01/2014	P89	0.00019	<0.0005	0.0015		48	0.00012	0.0013	0.0062
26/02/2014	P89								
26/03/2014	P89								
26/03/2014	P89								
15/04/2014	P89	0.00018	<0.0005	0.0032		15	0.0001	<0.001	0.0019
26/05/2014	P89								
26/06/2014	P89								
18/07/2014	P89	0.00017	<0.0005	<0.0005		<3	0.00012	<0.001	0.0033
28/08/2014	P89								
29/09/2014	P89								

30/05/2010	P89				15.8					86	<0.003	<0.0002	<0.0002				105		
30/10/2014	P89		6.6	19.24	15.4	4.1													
27/11/2014	P89		6.5	14.46	15.8	4.5													
19/12/2014	P89		6.3	14	16	3.6													
31/12/2014	P89		6	36.7	17.2	3.6		<1	122	122	<0.003	<0.0002	<0.0002			0.106	149	0.036	0.00017
12/01/2015	P89										0.015								
19/01/2015	P89																		
19/01/2015	P89							<1	11.3	11.3	0.013	<0.0002	<0.0002			0.106	13.8	0.011	0.00006
20/01/2015	P89							<1	340	340	0.005	0.0002	<0.0002			0.105	410	0.025	<0.00005
28/01/2015	P89		6.2	34.8	17	4.7		<1	120	120	0.003	<0.0002	<0.0002			0.105	147	0.033	0.00016
27/02/2015	P89	Scan only	6.75	32.9	17	5.1													
4/05/2015	P89	pH<6.7 EC<321																	
5/05/2015	P89		6.7	32	15	3.9													
20/05/2015	P89	Not enough for																	
28/05/2015	P89	Field readings																	
26/06/2015	P89		7.05	56.4	14.6	4													
31/07/2015	P89		6.9		15.1	3.7		<1	115	115	0.004	<0.0002	<0.0002			0.111	140	0.035	0.0002
31/08/2015	P89					4.5													
1/09/2015	P89	WL-4.50m - NE	6.5		15.3														
29/09/2015	P89					4.2													
29/09/2015	P89		6.55		14.5														
1/11/2015	P89	Sampled	7		14.7		2	<1	114	114	<0.003	<0.0002	<0.0002				139		0.00017
6/11/2015	P89	Sampled				4.3													
3/12/2015	P89		6.7		16.9		4												
4/12/2015	P89					4.5													
3/01/2016	P89	WL-5.7	6.1		16.1			<1	112	112	<0.003	<0.0002	<0.0002				136		0.00017
14/01/2016	P89					5.7													
3/02/2016	P89		6.8		16.9														
16/02/2016	P89					6													
6/03/2016	P89					5.8													
7/03/2016	P89		6.7		16.9														
28/04/2016	P89		6.4		15.2			<1	40	40	0.051	<0.0002	<0.0002				49		<0.00005
29/04/2016	P89	Sampled				3.75													
19/05/2016	P89		6.8	15.2	16.1														
19/05/2016	P89						3.7												
28/06/2016	P89		6.75	15.6	15.6		3.1												
28/06/2016	P89					3.1													
21/07/2016	P89		6.4	28.6	14.9	3.6													
17/08/2016	P89		6.4	36.3	14.6	3.65		<1	133	133	<0.003	<0.0002	<0.0002				162		0.00023
20/09/2016	P89		6.5	28.9	14.8	3.7													
27/10/2016	P89		6.9	18.5	16	3.85													
28/11/2016	P89		6.95	16.5	16	4.1													
21/12/2016	P89		6.1	15.6	16.7	6.8													
26/01/2017	P89		6.8	35.8	17			<1	110	110	<0.003	<0.0002	<0.0002	<0.001			134		0.00022
24/02/2017	P89		7	32.4	16.9	6.7													
31/03/2017	P89		6.5	32.4	17.2	4.9													
28/04/2017	P89	Dead ants in sa	6.6	12.2	15.9	3.3		<1	26	26	0.076	<0.0002	<0.0002	<0.001			31		0.00016
26/05/2017	P89		6.5	12.6	15.9	3.3													
30/06/2017	P89		6.7	13.2	15.7	3.2													
28/07/2017	P89		6.6	39.2	14.5	3.32													
10/08/2017	P89		7.1	37.4	14.6	3.75		<1	115	115	<0.003	<0.0002	<0.0002	<0.001			140		0.00015
26/09/2017	P89		7.2	26.4	14.8	3.45													
27/10/2017	P89		6.85	10.3	15	3.4													
22/11/2017	P89		6.5	39.3	15.8	3.63													
11/12/2017	P89	Low Flow Samp	6.56	28.3	16.5	3.9	8			116	<0.003		<0.0002	<0.001		0.115	141	0.031	0.00019
21/12/2017	P89		6.8	13.6	16.9	3.65													
17/01/2018	P89		6.55	29.6	15.2	3.45		<1	114	114	<0.003	<0.0002	<0.0002	<0.001			139		0.00016
18/01/2018	P89	Low flow sampl	6.6	33	15.9	3.45	6			114	<0.003		<0.0002	<0.001			139	0.031	0.00015
27/02/2018	P89		6.5	27.6	15.4	3.2													
2/03/2018	P89	Clear, no odour	6.65	33.25	17.1	3.275	2			121	<0.003		<0.0002	<0.001		0.112	148	0.028	0.00012
14/03/2018	P89		6.5	27.6	17.1	3.1													
27/04/2018	P89		6.55	26.4	16.2	3.6													
14/05/2018	P89	Clear, slight sul	6.25	36.32	17	3.02	1.5			127	<0.003		<0.0002	<0.001		0.116	155	0.031	0.00011
31/05/2018	P89	Piezo-Favona																	
6/06/2018	P89	Clear at end of	6.38	32.81	14.9	2.845	5			118	0.03		<0.0002	<0.001			143	0.033	0.0007
27/06/2018	P89	Piezo																	
3/07/2018	P89	Clear, odourles	6.32	43.71	15.2	3.145	2			135	0.006		<0.0002	<0.001			164	0.033	0.00012

30/05/2010	P89	24	12.8		0.0018	0.0009		32.4		<0.01	92	<0.02	0.002	8.1	0.115	<0.00008			<0.0005
30/10/2014	P89																		
27/11/2014	P89																		
19/12/2014	P89																		
31/12/2014	P89	32	13	<0.0005	0.0016	0.0009		36.7	0.23	<0.01	129	0.03	0.00013	11.7	0.123	<0.00008	<0.00008	<0.0002	<0.0005
12/01/2015	P89																		
19/01/2015	P89						84												
19/01/2015	P89	12.6	13.1	<0.0005	<0.0002	0.0006		21.3	<0.05	<0.01	64	<0.02	0.00036	7.9	0.0176	<0.00008	<0.00008	<0.0002	<0.0005
20/01/2015	P89	132	27	0.003	0.0004	<0.0005		78.1	0.08	<0.01	370	<0.02	<0.0001	8.4	0.165	<0.00008	<0.00008	0.0005	0.0007
28/01/2015	P89	32	12.9	<0.0005	0.0006	0.0005		35.9	0.21	<0.01	128	<0.02	<0.0001	11.6	0.085	<0.00008	<0.00008	<0.0002	0.0005
27/02/2015	P89																		
4/05/2015	P89																		
5/05/2015	P89																		
20/05/2015	P89																		
28/05/2015	P89																		
26/06/2015	P89																		
31/07/2015	P89	30	12.8	<0.0005	0.0017	<0.0005		35.1	0.22	<0.01	124	0.03	0.00013	11.8	0.12	<0.00008	<0.00008	<0.0002	<0.0005
31/08/2015	P89																		
1/09/2015	P89																		
29/09/2015	P89																		
29/09/2015	P89																		
1/11/2015	P89	30	13	<0.0005	0.001	<0.0005		35.2	0.21	<0.01	120	<0.02	<0.0001	11.1	0.097	<0.00008	<0.00008		<0.0005
6/11/2015	P89																		
3/12/2015	P89																		
4/12/2015	P89																		
3/01/2016	P89	30	12.8	<0.0005	0.0015	0.0008		33.9	0.22	<0.01	122	<0.02	<0.0001	11.2	0.114	<0.00008	<0.00008		0.001
14/01/2016	P89																		
3/02/2016	P89																		
16/02/2016	P89																		
6/03/2016	P89																		
7/03/2016	P89																		
28/04/2016	P89	9.5	10.2	0.0009	<0.0002	<0.0005		13.8	<0.05	<0.01	36	<0.02	<0.0001	3	0.0007	0.0001	<0.00008		<0.0005
29/04/2016	P89																		
19/05/2016	P89																		
19/05/2016	P89																		
28/06/2016	P89																		
28/06/2016	P89																		
21/07/2016	P89																		
17/08/2016	P89	33	13.3	<0.0005	0.0017	<0.0005		36.9	0.22	<0.01	132	<0.02	<0.0001	11.9	0.131	<0.00008	<0.00008		<0.0005
20/09/2016	P89																		
27/10/2016	P89																		
28/11/2016	P89																		
21/12/2016	P89																		
26/01/2017	P89	28	12.6	<0.0005	0.0014	<0.0005		33.9	0.21	<0.01	109	0.02	<0.0001	9.7	0.101	<0.00008	<0.00008		<0.0005
24/02/2017	P89																		
31/03/2017	P89																		
28/04/2017	P89	5	6.2	<0.0005	0.021	0.0013		9.9	0.08	<0.01	20	0.51	0.00051	1.85	0.55	<0.00008	<0.00008		<0.0005
26/05/2017	P89																		
30/06/2017	P89																		
28/07/2017	P89																		
10/08/2017	P89	30	13.2	<0.0005	0.0016	<0.0005		34.9	0.22	<0.01	121	<0.02	0.00014	10.9	0.118	<0.00008	<0.00008		0.071
26/09/2017	P89																		
27/10/2017	P89																		
22/11/2017	P89																		
11/12/2017	P89	30	13	<0.0005	0.0019	0.001		34.8				<0.02	<0.0001	11.3	0.13		<0.00008	<0.0002	0.001
21/12/2017	P89																		
17/01/2018	P89	30	13.1	<0.0005	0.0021	0.0006		33.5	0.22	<0.01	116	<0.02	<0.0001	10.1	0.113	<0.00008	<0.00008		<0.0005
18/01/2018	P89	29	12.7	<0.0005	0.0019	<0.0005		33.6			114	<0.02	<0.0001	9.9	0.12	<0.00008	<0.00008	<0.0002	0.0013
27/02/2018	P89																		
2/03/2018	P89	29	13	<0.0005	0.0022	<0.0005		35.6				0.37	<0.0001	10.2	0.135	<0.00008	<0.00008	<0.0002	<0.0005
14/03/2018	P89																		
27/04/2018	P89																		
14/05/2018	P89	32	14	<0.0005	0.0031	<0.0005		35.7				1.6	<0.0001	11.7	0.149	<0.00008	<0.00008	<0.0002	<0.0005
31/05/2018	P89																		
6/06/2018	P89	30	13	<0.0005	0.0021	<0.0005		33.9			121	0.07	<0.0001	11.1	0.137	<0.00008	<0.00008	<0.0002	<0.0005
27/06/2018	P89																		
3/07/2018	P89	34	11	<0.0005	0.0022	<0.0005		36.5			132	0.15	<0.0001	11.6	0.148	<0.00008	<0.00008	<0.0002	<0.0005

30/05/2010	P89	0.021	0.021	<0.002	<0.002	<0.01	6.7	5.8	<0.001	<0.001	31	31	<0.0001	22		61		3.4	2.9
30/10/2014	P89																		
27/11/2014	P89																		
19/12/2014	P89																		
31/12/2014	P89	<0.1	<0.1	<0.1		<0.01	6.9	6.2	<0.001	<0.001	31		<0.0001	21	0.199	45		3.8	3.7
12/01/2015	P89																		
19/01/2015	P89																		
19/01/2015	P89	1.01	1.02	<0.1		<0.01	5.9	3.3	0.0014	0.0011	20		<0.0001	9.1	0.057	57		1.85	1.76
20/01/2015	P89	0.15	0.22	<0.1		0.067	6.8	6.9	<0.001	<0.001	37		<0.0001	22	0.26	54		8.6	8.5
28/01/2015	P89	<0.1	<0.1	<0.1		<0.01	6.7	5.8	<0.001	<0.001	30		<0.0001	20	0.188	43		3.7	3.6
27/02/2015	P89																		
4/05/2015	P89																		
5/05/2015	P89																		
20/05/2015	P89																		
28/05/2015	P89																		
26/06/2015	P89																		
31/07/2015	P89	<0.1	<0.1	<0.1		<0.01	6.9	5.9	<0.001	<0.001	30		<0.0001	23	0.19	41		3.5	3.6
31/08/2015	P89																		
1/09/2015	P89																		
29/09/2015	P89																		
29/09/2015	P89																		
1/11/2015	P89	<0.1	<0.1	<0.1		<0.01	6.9	5.9	<0.001	<0.001	30		<0.0001	22		41		3.5	3.5
6/11/2015	P89																		
3/12/2015	P89																		
4/12/2015	P89																		
3/01/2016	P89	<0.1	<0.1	<0.1		<0.01	6.8	5.5	<0.001	<0.001	32		<0.0001	24		41		3.4	3.6
14/01/2016	P89																		
3/02/2016	P89																		
16/02/2016	P89																		
6/03/2016	P89																		
7/03/2016	P89																		
28/04/2016	P89	1.34	1.34	<0.1		<0.01	6.5	3	<0.001	<0.001	46		<0.0001	12.8		7		1.33	1.36
29/04/2016	P89																		
19/05/2016	P89																		
19/05/2016	P89																		
28/06/2016	P89																		
28/06/2016	P89																		
21/07/2016	P89																		
17/08/2016	P89	<0.1	<0.1	<0.1		<0.01	6.6	6.5	<0.001	<0.001	29		<0.0001	22		38		3.8	3.8
20/09/2016	P89																		
27/10/2016	P89																		
28/11/2016	P89																		
21/12/2016	P89																		
26/01/2017	P89	0.2	0.23	<0.1		0.23	6.8	5.6	<0.001	<0.001	30		<0.0001	21		39		3.4	3.2
24/02/2017	P89																		
31/03/2017	P89																		
28/04/2017	P89	0.28	0.31	<0.1		0.28	6.5	6.1	<0.001	<0.001	8.7		<0.0001	6.5		8		0.87	0.91
26/05/2017	P89																		
30/06/2017	P89																		
28/07/2017	P89																		
10/08/2017	P89	<0.1	<0.1	<0.1		<0.01	7.3	6	<0.001	<0.001	31		<0.0001	21		37		3.4	3.5
26/09/2017	P89																		
27/10/2017	P89																		
22/11/2017	P89																		
11/12/2017	P89		<0.002			<0.01	6.6	6		<0.001			<0.0001	22	0.183	36			
21/12/2017	P89																		
17/01/2018	P89	<0.1	<0.1	<0.1		<0.01	6.6	5.7	<0.001	<0.001	31		<0.0001	21		37		3.4	3.4
18/01/2018	P89	<0.002	<0.002	<0.002			6.6	5.8						21		35		3.4	3.3
27/02/2018	P89																		
2/03/2018	P89		0.008			<0.01	6.7	6.1		<0.001			<0.0001	21	0.186	35			
14/03/2018	P89																		
27/04/2018	P89																		
14/05/2018	P89		<0.002			0.015	6.7	6.1		<0.001			<0.0001	23	0.19	34			
31/05/2018	P89																		
6/06/2018	P89	0.062	0.063	<0.002			6.7	6.3						23		33		3.4	3.6
27/06/2018	P89																		
3/07/2018	P89	0.091	0.091	<0.002			6.7	6.2						21		34		3.7	3.7

30/05/2010	P89							<0.001	0.012
30/10/2014	P89								
27/11/2014	P89								
19/12/2014	P89								
31/12/2014	P89	0.00019	<0.0005	<0.0005		18	0.00013	<0.001	0.0113
12/01/2015	P89								
19/01/2015	P89							78	
19/01/2015	P89	0.00012	<0.0005	<0.0005		13	0.00005	<0.001	0.0165
20/01/2015	P89	0.00007	<0.0005	<0.0005		<3	0.00086	<0.001	0.0013
28/01/2015	P89	0.0002	<0.0005	<0.0005		18	0.00014	<0.001	0.0038
27/02/2015	P89								
4/05/2015	P89								
5/05/2015	P89								
20/05/2015	P89								
28/05/2015	P89								
26/06/2015	P89								
31/07/2015	P89	0.00021	<0.0005	0.0011		4	0.00013	<0.001	0.0039
31/08/2015	P89								
1/09/2015	P89								
29/09/2015	P89								
29/09/2015	P89								
1/11/2015	P89	0.00021				8	0.00012	<0.001	0.0089
6/11/2015	P89								
3/12/2015	P89								
4/12/2015	P89								
3/01/2016	P89	0.00021				8	0.00013	<0.001	0.011
14/01/2016	P89								
3/02/2016	P89								
16/02/2016	P89								
6/03/2016	P89								
7/03/2016	P89								
28/04/2016	P89	<0.00005				570	0.00005	<0.001	0.008
29/04/2016	P89								
19/05/2016	P89								
19/05/2016	P89								
28/06/2016	P89								
28/06/2016	P89								
21/07/2016	P89								
17/08/2016	P89	0.00022				25	0.00013	<0.001	0.0068
20/09/2016	P89								
27/10/2016	P89								
28/11/2016	P89								
21/12/2016	P89								
26/01/2017	P89	0.00019				38	0.00011	<0.001	0.0047
24/02/2017	P89								
31/03/2017	P89								
28/04/2017	P89	0.00018				49	<0.00002	<0.001	0.055
26/05/2017	P89								
30/06/2017	P89								
28/07/2017	P89								
10/08/2017	P89	0.00018				10	0.00013	<0.001	0.0045
26/09/2017	P89								
27/10/2017	P89								
22/11/2017	P89								
11/12/2017	P89	0.0002		<0.0005	0.24	<3	0.00012	<0.001	0.0025
21/12/2017	P89								
17/01/2018	P89	0.00022				5	0.00012	<0.001	0.0042
18/01/2018	P89			<0.0005					0.0034
27/02/2018	P89								
2/03/2018	P89	0.00021		<0.0005	<0.1	<3	0.00012	<0.001	0.0013
14/03/2018	P89								
27/04/2018	P89								
14/05/2018	P89	0.0002		<0.0005	<0.1	<3	0.00014	0.0049	0.0016
31/05/2018	P89								
6/06/2018	P89			<0.0005					0.0067
27/06/2018	P89								
3/07/2018	P89			<0.0005					0.0026

30/05/2010	P89				15.8					86	<0.003	<0.0002	<0.0002				105		
1/08/2018	P89	Clear, sulphur s	6.09	45.09	15	3.14	2			146	<0.003		<0.0002	<0.001		0.118	178	0.032	0.00007
21/08/2018	P89					3.1													
2/10/2018	P89					3.5													
22/11/2018	P89		6.55	21.4	16.6	3.32													
17/12/2018	P89	Well cap off, in	5.99	25.22	15.9	3.28													
12/02/2019	P89	Insects, foul sm	5.82	30.5	19	4.67	3	<1	106	106	0.008	<0.0002	<0.0002		<0.0011		129		0.00013
11/04/2019	P89	NES				3.41													
23/05/2019	P89		6.57	13.84	16.4	5.53													
26/07/2019	P89	Sampled using	6.36	42.4	14.9	3.23	1.5	<1	120	120	<0.003	<0.0002	<0.0002	<0.001			146		<0.00005
14/01/2020	P89	NES				5.15													

30/05/2010	P89	24	12.8		0.0018	0.0009		32.4		<0.01	92	<0.02	0.002	8.1	0.115	<0.00008			<0.0005
1/08/2018	P89	37	13	0.0007	0.0024	<0.0005		38.7				0.18	<0.0001	12.1	0.164	<0.00008	<0.00008	<0.0002	<0.0005
21/08/2018	P89																		
2/10/2018	P89																		
22/11/2018	P89																		
17/12/2018	P89																		
12/02/2019	P89	29	11.9	0.001	0.0024	<0.0005		31.6	0.2	0.00176	115	0.81	0.00026	10.1	0.119	<0.00008	<0.00008		<0.0005
11/04/2019	P89																		
23/05/2019	P89																		
26/07/2019	P89	30	12.2	<0.0005	0.0031	<0.0005		33.3	0.23	0.000057	119	0.19	0.00012	11	0.22	<0.00008	<0.00008		<0.0005
14/01/2020	P89																		

30/05/2010	P89	0.021	0.021	<0.002	<0.002	<0.01	6.7	5.8	<0.001	<0.001	31	31	<0.0001	22		61		3.4	2.9
1/08/2018	P89		0.002			<0.01	6.6	6.3		<0.001			<0.0001	22	0.22	32			
21/08/2018	P89																		
2/10/2018	P89																		
22/11/2018	P89																		
17/12/2018	P89																		
12/02/2019	P89	0.17	0.2	<0.1		1.35	6.8	6.3	<0.001	<0.001	28		<0.0001	21		35		3.2	3.5
11/04/2019	P89																		
23/05/2019	P89																		
26/07/2019	P89	<0.1	<0.1	<0.1		0.053	6.7	5.7	<0.001	<0.001	33		<0.0001	18.4		37		3.5	3.3
14/01/2020	P89																		

30/05/2010	P89							<0.001	0.012
1/08/2018	P89	0.00023		<0.0005	<0.1	<3	0.00021	<0.002	0.002
21/08/2018	P89								
2/10/2018	P89								
22/11/2018	P89								
17/12/2018	P89								
12/02/2019	P89	0.00019				51	0.00015	<0.02	0.0061
11/04/2019	P89								
23/05/2019	P89								
26/07/2019	P89	0.00023				<3	0.00013	<0.02	0.0032
14/01/2020	P89								

Date	Data Point	FLS Comments	FLS Water Level (m)	FLS Water Volume Purged (L)(L)
29/09/2011	P99		2.9	
29/11/2011	P99		2.95	
13/12/2011	P99		2.95	
26/01/2012	P99		2.95	
7/02/2012	P99		2.95	
5/04/2012	P99		2.99	
4/05/2012	P99		2.95	
13/06/2012	P99		2.75	
26/07/2012	P99		2.9	
20/08/2012	P99		2.95	
11/09/2012	P99		2.95	
10/10/2012	P99		2.95	
19/11/2012	P99		2.95	
11/12/2012	P99		2.95	
18/01/2013	P99		2.95	
14/02/2013	P99		2.95	
19/03/2013	P99		2.95	
8/04/2013	P99		2.95	
27/05/2013	P99		2.95	
25/06/2013	P99		2.95	
10/07/2013	P99		2.95	
15/07/2013	P99		2.95	
15/08/2013	P99		2.95	
4/09/2013	P99		2.95	
16/10/2013	P99		2.95	
14/11/2013	P99		2.95	
5/12/2013	P99		2.95	
15/01/2014	P99		2.95	
13/02/2014	P99		2.95	
17/03/2014	P99		2.95	
7/04/2014	P99		2.95	
8/05/2014	P99		2.95	
25/06/2014	P99		2.95	
16/07/2014	P99		2.95	
27/08/2014	P99		2.95	
18/09/2014	P99		2.95	
23/09/2014	P99		2.95	
9/10/2014	P99		2.95	
13/11/2014	P99		2.95	
9/12/2014	P99		2.95	
29/01/2015	P99		2.95	
27/02/2015	P99		2.95	
27/02/2015	P99	Dry		
24/04/2015	P99	Dry		
5/05/2015	P99		2.95	
5/05/2015	P99	Dry		
20/05/2015	P99	Dry		
20/05/2015	P99	Dry		
28/05/2015	P99	Field readings		

Date	Data Point	FLS Comments	FLS Water Level (m)	FLS Water Volume Purged (L)(L)
26/06/2015	P99	Dry@2.95m		
26/06/2015	P99		2.95	
31/07/2015	P99	Dry	2.95	
31/07/2015	P99	Dry		
31/08/2015	P99	Dry	2.95	
1/09/2015	P99	WL-2.95m - DRY		
29/09/2015	P99	Dry	2.95	
29/09/2015	P99	DRY @ 2.95		
1/11/2015	P99	Dry		
6/11/2015	P99	Dry	2.95	
3/12/2015	P99	Dry		
4/12/2015	P99	Dry	2.95	
13/01/2016	P99	DRY		
14/01/2016	P99		2.95	
3/02/2016	P99	Dry		
16/02/2016	P99		2.99	
29/04/2016	P99	Dry	2.95	
19/05/2016	P99	DRY @2.95		
19/05/2016	P99			2.95
28/06/2016	P99	Dry		2.95
28/06/2016	P99		2.95	
21/07/2016	P99	DRY	2.95	
17/08/2016	P99	Dry	2.95	
20/09/2016	P99	Dry	2.95	
27/10/2016	P99	Dry	2.95	
28/11/2016	P99	Dry	2.95	
21/12/2016	P99	DRY	2.9	
26/01/2017	P99	Dry	2.95	
24/02/2017	P99	Dry	2.95	
31/03/2017	P99	Dry	2.95	
28/04/2017	P99	DRY	2.95	
26/05/2017	P99	Dry	2.95	
30/06/2017	P99	Dry	2.95	
28/07/2017	P99	Dry	2.95	
26/09/2017	P99	Dry	2.95	
27/10/2017	P99	Dry	2.95	
22/11/2017	P99	Dry	2.95	
21/12/2017	P99	Dry	2.95	
21/12/2017	P99	Dry	2.95	
17/01/2018	P99	Dry	2.95	
27/02/2018	P99	Dry	2.95	
14/03/2018	P99	Dry	2.95	
27/04/2018	P99	Dry	2.95	
31/05/2018	P99	Dry	2.95	
27/06/2018	P99	Dry	2.95	
21/08/2018	P99	DRY		
2/10/2018	P99	DRY		
22/11/2018	P99	DRY	2.95	
17/12/2018	P99	Dry	2.95	

Date	Data Point	FLS Comments	FLS Water Level (m)	FLS Water Volume Purged (L)(L)
12/02/2019	P99	DRY		
11/04/2019	P99	Dry	2.95	
23/05/2019	P99	DRY		
24/07/2019	P99	Collapsed Bore		
14/01/2020	P99	DRY		

8.4 Underground Water Quality Data – Underground Dewatering, Correnso, Favona

Date	Data Point	FLS Comments	FLS pH(ph Units)	FLS EC (mS/m)	FLS Temp	Acidity - Total (g/m3 as CaCO3)	Acidity (pH 8.3)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba
28/01/2010	Underground Dewatering				19.6			<1		24	0.3	0.012	<0.0002	<0.0002	0.003	<0.001	0.025
18/02/2010	Underground Dewatering				30.8			<1		93	0.0034	<0.003	0.00028	0.00054	0.0053	0.0059	0.12
19/02/2010	Underground Dewatering				19.5			<1		24	0.041	0.011	<0.0002	<0.0002	<0.001	<0.001	0.018
2/03/2010	Underground Dewatering				19.5			<1		22	0.14	0.011	<0.0002	<0.0002	0.0029	<0.001	0.022
13/04/2010	Underground Dewatering				15.3			<1		19.2	2	0.0199	<0.0002	<0.0002	0.00105	<0.001	0.0156
25/05/2010	Underground Dewatering				16.3			<1		20	0.034	0.013	<0.0002	<0.0002	<0.001	<0.001	0.014
30/06/2010	Underground Dewatering		6.26	11.84	11.6			<1	21	21	0.019	0.011	<0.0002	<0.0002	<0.001	<0.001	0.015
6/07/2010	Underground Dewatering		6.58	13.04	16.2			<1	21	21	0.012	0.014	<0.0002	<0.0002	<0.001	<0.001	0.014
13/07/2010	Underground Dewatering							<1	102	102	0.009	0.004	<0.0002	0.0002	0.0019	0.002	0.058
30/07/2010	Underground Dewatering		6.43	13.54	16.4									<0.0002		<0.001	
26/08/2010	Underground Dewatering							<1	105	106	<0.003	<0.003	<0.0002	<0.0002	0.0137	0.0126	0.066
27/08/2010	Underground Dewatering				16.1			<1	19.8	19.8		0.011	<0.0002	<0.0002			
7/09/2010	Underground Dewatering							<1	91	92	<0.003	0.003	0.0002	0.0002	0.007	0.0064	0.108
28/09/2010	Underground Dewatering		5.66	12.59	17			<1	19.5	19.5		0.008	<0.0002	<0.0002			
7/10/2010	Underground Dewatering							<1	107	107	0.005	<0.003	0.0015	0.0014	0.028	0.026	0.069
22/10/2010	Underground Dewatering				14.1			<1	22	22	0.027	0.01	<0.0002	<0.0002	<0.001	<0.001	0.014
18/11/2010	Underground Dewatering							<1	38	38	0.015	0.004	0.0006	0.0005	0.0145	0.0144	0.045
19/11/2010	Underground Dewatering				17			<1	24	24	0.097	0.014	<0.0002	<0.0002	<0.001	<0.001	0.012
3/12/2010	Underground Dewatering		7.8	14.04	17.3			<1		22		0.011	<0.0002	<0.0002			
27/01/2011	Underground Dewatering				18.1			<1	19.4	19.4		0.007	<0.0002	<0.0002			
9/02/2011	Underground Dewatering													0.0007		0.0186	
17/02/2011	Underground Dewatering		5.98	17.74	18			<1		21		0.007	<0.0002	<0.0002			
18/02/2011	Underground Dewatering		5.43	7.885													
19/02/2011	Underground Dewatering		7.24	54.7													
9/03/2011	Underground Dewatering		6.2	328	24.9												
18/03/2011	Underground Dewatering								142	143				<0.001		<0.005	
25/03/2011	Underground Dewatering		5.69	16.5	17.2			<1	21	21		0.009	<0.0002	<0.0002			
28/04/2011	Underground Dewatering							<1	19.4	19.4		0.013	<0.0002	<0.0002			
19/05/2011	Underground Dewatering		6.28	1.648	15.6			<1	19.7	19.7		0.014	<0.0002	<0.0002			
30/05/2011	Underground Dewatering							<1		140							
10/06/2011	Underground Dewatering		5.95	15.89	14.2			<1	19.7	19.7		0.014	<0.0002	<0.0002			
4/07/2011	Underground Dewatering		6.4	137.6	18.9			<1	133	133		<0.006		<0.0004		<0.002	
29/07/2011	Underground Dewatering		6.09	14.74	16			<1	20	20		0.013	<0.0002	<0.0002			
12/08/2011	Underground Dewatering		6.19	14.1	16.2			<1	21	21		0.014	<0.0002	<0.0002			
23/08/2011	Underground Dewatering							<1		160							
8/09/2011	Underground Dewatering							<1	21	22		0.012	<0.0002	<0.0002			
9/09/2011	Underground Dewatering							<1		167							
26/10/2011	Underground Dewatering							<1	158	158		<0.015		<0.001		<0.005	
31/10/2011	Underground Dewatering				16.5			<1	21	21		0.012	<0.0002	<0.0002			
4/11/2011	Underground Dewatering		6.55	289	25.6			<1		285							
18/11/2011	Underground Dewatering		6.24	14.37	16.3			<1	21	21		0.013	<0.0002	<0.0002			
20/12/2011	Underground Dewatering							<1	21	21		0.011	<0.0002	<0.0002			
18/01/2012	Underground Dewatering				17.2			<1	21	21		0.009	<0.0002	<0.0002			
20/01/2012	Underground Dewatering		6.29	271	25.3			<1	121	121		<0.006		<0.0004		<0.002	
10/02/2012	Underground Dewatering		7.24	17.23	16.4			<1	23	23		0.01	<0.0002	<0.0002			
29/02/2012	Underground Dewatering		6.27	166.4	25			<1		148							
20/03/2012	Underground Dewatering		6	14.63	16.1			<1	20	20		0.015	<0.0002	<0.0002			
28/03/2012	Underground Dewatering		6.52	137.1	25.4			<1		116							
16/04/2012	Underground Dewatering		6.03	14.02	16.2			<1	21	21		0.014	<0.0002	<0.0002			
27/04/2012	Underground Dewatering		7.4	148.7	24.6			<1	151	151		<0.006		<0.0004		<0.002	
22/05/2012	Underground Dewatering		5.55	15.76	15			<1	21	21		0.012	<0.0002	<0.0002			
25/05/2012	Underground Dewatering		6.65	668	26.4			<1		168							
22/06/2012	Underground Dewatering		7.4	13.46	16			<1	22	22		0.014	<0.0002	<0.0002			
29/06/2012	Underground Dewatering		6.71	132.5	24.2			<1		134							
26/07/2012	Underground Dewatering		6.09	71.1	19.8			<1	43	44		0.025		0.0003		<0.001	
13/08/2012	Underground Dewatering		6.01	11.82	15.5			<1	19.2	19.2		0.015	<0.0002	<0.0002			
13/08/2012	Underground Dewatering																
21/08/2012	Underground Dewatering		8.49	62.5	18.9			<1	156	165	16.4	0.052	0.008	0.0096	0.075	0.0045	0.077
28/08/2012	Underground Dewatering		5.36	13.34	15			<1	21	21		0.014	<0.0002	<0.0002			
28/08/2012	Underground Dewatering																
30/08/2012	Underground Dewatering		6.12	143.4	23.6			<1		118							
18/09/2012	Underground Dewatering		5.8	17.64	16			<1	21	21		0.011	<0.0002	<0.0002			
18/09/2012	Underground Dewatering																
19/09/2012	Underground Dewatering		6.26	169.2	25.5			<1		123							
16/10/2012	Underground Dewatering		6.07	15.56	17.6			<1	21	21		0.009	<0.0002	<0.0002			
31/10/2012	Underground Dewatering		6.16	140	25.6			<1	119	119		<0.006		<0.0004		<0.002	

Date	Data Point	BaS	Bicarb	BS	CdA	CdS	CaS	Carb	COD	Cl	CrS	Cr6col	CrT	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	E. Coli	Fl	NH3	AuS	Hard	FeA	FeS	FeT	PbA
28/01/2010	Underground Dewatering		29	0.017	0.000076	<0.00005	4.2	<1		13		<0.001	0.00084	0.007	0.0064	<0.0005	<0.0005	0.0025	15.6			<0.01		19	2	<0.02	2.1	0.00039
18/02/2010	Underground Dewatering		110	0.11	<0.00005	<0.00005	21	<1		10		<0.001	<0.00053	<0.0002	0.00033	<0.0005	0.0036	0.084	37.7			<0.01		56	<0.02	<0.02	<0.021	<0.0001
19/02/2010	Underground Dewatering		29	0.015	<0.00005	<0.00005	3.6	<1		14		<0.001	<0.00053	0.006	0.006	<0.0005	<0.0005	0.0018	15			<0.01		16	0.35	<0.02	0.48	<0.0001
2/03/2010	Underground Dewatering		27	0.018	<0.00005	<0.00005	3.4	<1		12		<0.001	0.00062	0.0071	0.0056	<0.0005	<0.0005	0.001	14.3			<0.01		16	2.6	0.046	3.3	0.00022
13/04/2010	Underground Dewatering		23	0.0132	0.000068	<0.00005	2.8	<1		12.8		<0.001	0.00111	0.0053	0.0042	0.00104	<0.0005	0.00136	12.8			<0.01		13.5	9	2.8	11.2	0.00189
25/05/2010	Underground Dewatering		25	0.017	<0.00005	<0.00005	3.6	<1		12.5		<0.001	<0.00053	0.0065	0.0062	<0.0005	<0.0005	0.0022	14.7		<0.05	<0.01		16.6	0.15	<0.02	0.2	<0.0001
30/06/2010	Underground Dewatering		25	0.013	<0.00005	<0.00005	3.8	<1		12.6		<0.001	<0.00053	0.0067	0.0054	<0.0005	<0.0005	0.0018	14.5			<0.01		16.7	0.04	<0.02	0.046	<0.0001
6/07/2010	Underground Dewatering		25	0.015	<0.00005	<0.00005	3.8	<1		12.9		<0.001	<0.00053	0.0048	0.0048	<0.0005	<0.0005	0.0034	14.3			<0.01		17	0.04	<0.02	0.026	<0.0001
13/07/2010	Underground Dewatering		124	0.073	<0.00005	<0.00005	66	<1		13.7		<0.001	<0.00053	<0.0002	<0.0002	<0.001	<0.0005	<0.001	50.8			<0.01		175	0.2	0.17	0.22	0.00013
30/07/2010	Underground Dewatering					<0.00005	4.1					<0.01					<0.0005		14.6			<0.01		18		<0.02		
26/08/2010	Underground Dewatering	0.024	128	0.06	<0.00005	<0.00005	60	<1	<6	13	<0.0005	<0.001	<0.00053	<0.0002	<0.0002	<0.0005	<0.0005	0.003	49.3		<0.5	<0.01		160	1.34	0.02	1.47	<0.0001
27/08/2010	Underground Dewatering	0.149	24	0.013		<0.00005	4.1			12.7	<0.0005				0.0038		<0.0005		14.3		<0.05	<0.01		18		<0.02		
7/09/2010	Underground Dewatering	0.035	111	0.105	<0.00005	<0.00005	29	<1	<6	11.2	<0.0005	<0.001	<0.00053	<0.0002	<0.0002	<0.0005	<0.0005	<0.001	42.8		0.57	<0.01		76	0.05	0.04	0.036	<0.0001
28/09/2010	Underground Dewatering	0.145	24	0.012		<0.00005	4.2			13.4	<0.0005				0.0042		<0.0005		14.2		<0.05	<0.01		19.1		<0.02		
7/10/2010	Underground Dewatering	0.024	130	0.074	<0.00005	<0.00005	56	<1	<6	12.5	<0.0005	<0.001	<0.00053	<0.0002	<0.0002	<0.0005	<0.0005	0.0022	47.2		0.25	<0.01		151	1.38	0.09	1.46	<0.0001
22/10/2010	Underground Dewatering	0.155	27	0.015	<0.00005	<0.00005	4.2	<1	<6	12.2	<0.0005	<0.001	<0.00053	0.0069	0.0064	<0.0005	<0.0005	0.0061	14.9		0.07	<0.01		18.9	0.72	0.05	0.82	<0.0001
18/11/2010	Underground Dewatering	0.034	46	0.04	<0.00005	<0.00005	3.3	<1	<6	11.1	<0.0005	<0.001	<0.00053	0.0003	0.0003	0.0018	<0.0005	<0.001	17.6		0.37	<0.01		21	0.6	0.09	0.62	0.00067
19/11/2010	Underground Dewatering	0.168	29	0.015	<0.00005	<0.00005	4.2	<1	26	14.4	<0.0005	<0.001	<0.00053	0.0071	0.0069	<0.0005	<0.0005	0.0053	17.2		<0.05	<0.01		18.1	0.5	<0.02	0.74	0.0001
3/12/2010	Underground Dewatering	0.167	27	0.014		<0.00005	3.9			12.1	<0.0005				0.0073		<0.0005		15.6		<0.05	<0.01		17.2		0.04		
27/01/2011	Underground Dewatering	0.169	24	0.013		<0.00005	4.2			13	<0.0005				0.0077		<0.0005		16.7		<0.05	<0.01		18.4		<0.02		
9/02/2011	Underground Dewatering					<0.00005	2.2					<0.01					<0.0005		14.6			<0.01		15		0.73		
17/02/2011	Underground Dewatering	0.175	26	0.013		<0.00005	4.2			12.1	<0.0005				0.0075		<0.0005		15.9		<0.05	<0.01		18.4		<0.02		
18/02/2011	Underground Dewatering																											
19/02/2011	Underground Dewatering																											
9/03/2011	Underground Dewatering																											
18/03/2011	Underground Dewatering		174			0.0006	470	<1		11.2		<0.01			0.014		0.007	<0.001	285					1,700		<0.1		
25/03/2011	Underground Dewatering	0.177	26	0.014		<0.00005	4.6			13.5	<0.0005				0.007		<0.0005		15.8		<0.05	<0.01		20		<0.02		
28/04/2011	Underground Dewatering	0.179	24	0.014		<0.00005	4.4			13.4	<0.0005				0.0073		<0.0005		15.6		<0.05	<0.01		19.7		<0.02		
19/05/2011	Underground Dewatering	0.174	24	0.013		<0.00005	4.5			13.3	<0.0005				0.0078		<0.0005		15.9		<0.05	<0.01		19.8		<0.02		
30/05/2011	Underground Dewatering						447.232			11.8									262					1,600	0.504			
10/06/2011	Underground Dewatering	0.173	24	0.014		<0.00005	4.3			13.3	<0.0005				0.0071		<0.0005		14.7		<0.05	<0.01		19.2		0.03		
4/07/2011	Underground Dewatering		162	0.081		0.00067	510		<6	10.6	<0.001	<0.01			0.0178		0.002	0.0029	265			<0.01	<0.001	1,800	0.44		0.5	
29/07/2011	Underground Dewatering	0.199	25	0.013		<0.00005	4.8			13.3	<0.0005				0.0082		<0.0005		15.8		<0.05	<0.01		21		<0.02		
12/08/2011	Underground Dewatering	0.182	25	0.015		<0.00005	5.1			13	<0.0005				0.0078		<0.0005		16.4		<0.05	<0.01		23		<0.02		
23/08/2011	Underground Dewatering						484.645			12.2									279					1,800	0.763			
8/09/2011	Underground Dewatering	0.184	26	0.013		<0.00005	4.7			13.3	<0.0005				0.009		<0.0005		16.7		<0.05	<0.01		20		<0.02		
9/09/2011	Underground Dewatering						497			11.9									276					1,900	0.23			
26/10/2011	Underground Dewatering		193	0.1		0.0007	550		<6	12.5	<0.003	<0.01			0.0149		0.003	0.0024	282			<0.01	<0.003	1,940	0.68		0.78	
31/10/2011	Underground Dewatering	0.196	26	0.013		<0.00005	4.9			13.4	<0.0005				0.009		<0.0005		16.5		<0.05	<0.01		22		0.17		
4/11/2011	Underground Dewatering						494.311			12.7									286					1,700	0.706			
18/11/2011	Underground Dewatering	0.199	26	0.016		<0.00005	5.4			13.9	<0.0005				0.0094		<0.0005		17.8		<0.05	<0.01		24		<0.02		
20/12/2011	Underground Dewatering	0.22	26	0.014		<0.00005	4.9			13.3	<0.0005				0.0066		<0.0005		16.5		<0.05	<0.01		21		0.02		
18/01/2012	Underground Dewatering	0.21	26	0.013		<0.00005	5			13.3	<0.0005				0.0079		<0.0005		16.8		<0.05	<0.01		23		<0.02		
20/01/2012	Underground Dewatering		147	0.085		0.0021	500		<6	11.3	<0.001	<0.01			0.029		0.0093	0.003	270			<0.01	<0.001	1,770	0.29		0.31	
10/02/2012	Underground Dewatering	0.22	28	0.014		<0.00005	5.1			13.6	<0.0005				0.0091		<0.0005		18.1		<0.05	<0.01		23		0.02		
29/02/2012	Underground Dewatering						522.05			11.6									282					1,800	0.23			
20/03/2012	Underground Dewatering	0.173	24	0.014		<0.00005	5			13	<0.0005				0.007		<0.0005		15.8		<0.05	<0.01		23		0.06		
28/03/2012	Underground Dewatering						477			11.4									262					1,700	1.2			
16/04/2012	Underground Dewatering	0.21	25	0.012		<0.00005	5.1			13.7	<0.0005				0.0078		<0.0005		16.8		<0.05	<0.01		23		0.12		
27/04/2012	Underground Dewatering		184	0.085		0.00125	530		<6	11.5	<0.001	<0.01			0.021		0.0017	0.0028	283			<0.01	<0.001	1,850	0.51		0.5	
22/05/2012	Underground Dewatering	0.22	26	0.015		<0.00005	5.2			13.6	<0.0005				0.0091		<0.0005		18		<0.05	<0.01		23		0.02		
25/05/2012	Underground Dewatering						478.291			11.4									286					1,500	0.791			
22/06/2012	Underground Dewatering	0.21	26	0.015		<0.00005	5.2			14.6	<0.0005				0.0093		<0.0005		18.3		<0.05	<0.01		24		0.02		
29/06/2012	Underground Dewatering						479			11.8									1,083					1,700	1.66			
26/07/2012	Underground Dewatering		53	0.031		0.00055	164		<6	6.5	<0.0005	<0.01			0.0143		0.0028	0.0053	103.3			<0.01	<0.0006	550	0.27		0.38	
13/08/2012	Underground Dewatering	0.174	23	0.012		<0.00005	5.2			12.6	<0.0005				0.0053		<0.0005		15.2		0.06	<0.01		23		<0.02		
13/08/2012	Underground Dewatering																											
21/08/2012	Underground Dewatering	0.07	190	0.059	0.0037	<0.00005	220	5.2	1,530	17.7	<0.0005	<0.001	0.088	0.056	0.0056	0.15	0.0008	0.0115	146.2		0.73	0.5		680	30	<0.02	152	2.2
28/08/2012	Underground Dewatering	0.22	26	0.015		<0.00005	5.4			13.6	<0.0005				0.0081		<0.0005		17.4		<0.05	<0.01		24		<0.02		
28/08/2012	Underground Dewatering																											
30/08/2012	Underground Dewatering						412.23			10.1									193					1,500	0.906			
18/09/2012	Underground Dewatering	0.23	26	0.014		<0.00005	5.3			13.5	<0.0005				0.0084		<0.0005		17.6		<0.05	<0.01		23		<0.02		
18/09/2012	Underground Dewatering																											
19/09/2012	Underground Dewatering						413.322			10.5									253					1,500	0.315			
16/10/2012	Underground Dewatering	0.21	26	0.014		<0.00005	5.1			13.5	<0.0005				0.0083		<0.0005		17.6		<0.05	<0.01		23		<0.02		
31/10/2012	Underground Dewatering		145	0.08		0.00181	520		<6		<0.001	<0.01			0.021		0.0024	0.0012	276			<0.01	<0.001	1,800	0.48		0.48	

Date	Data Point	PbS	MgS	MnA	MnS	MnTR	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SeT	SeTR
28/01/2010	Underground Dewatering	<0.0001	1.9	0.16	0.01		0.00016		0.00096	<0.0002	<0.0002	<0.0005	<0.0005	0.19	0.2	0.0075	0.0075	0.18	6.4	0.21	7.6	0.019	<0.001	<0.001		
18/02/2010	Underground Dewatering	<0.0001	0.69	0.05	0.051		<0.00008		<0.00008	0.0005	0.00049	<0.0005	<0.0005	0.0045	0.0045	<0.002		0.073	8.2	0.0075	2.8	0.005	<0.001	<0.001		
19/02/2010	Underground Dewatering	<0.0001	1.7	0.027	0.0048		<0.00008		0.00031	<0.0002	<0.0002	<0.0005	<0.0005	<0.002	<0.002	<0.002	<0.002	<0.01	6.3	0.29	4.7	0.0052	<0.001	<0.001		
2/03/2010	Underground Dewatering	<0.0001	1.7	0.11	0.0068		<0.00008		<0.00008	<0.0002	<0.0002	<0.0005	<0.0005	0.049	0.049	<0.002	<0.002	<0.01	6.6	0.18	5.5	0.0048	<0.001	<0.001		
13/04/2010	Underground Dewatering	<0.0001	1.61	0.47	0.39		<0.00008		0.00021	<0.0002	<0.0002	<0.0005	<0.0005	<0.002	<0.002	<0.002	<0.002	0.03	6	3.1	3.8	0.008	<0.001	<0.001		
25/05/2010	Underground Dewatering	<0.0001	1.85	0.0107	0.0044		<0.00008		0.00024	<0.0002	<0.0002	<0.0005	<0.0005	0.112	0.112	<0.002	<0.002	<0.01	6.3	0.02	5.6	0.012	<0.001	<0.001		
30/06/2010	Underground Dewatering	<0.0001	1.73	0.0092	0.0047		<0.00008		<0.00008	<0.0002	<0.0002	<0.0005	<0.0005	0.2	0.2	<0.002	<0.002	<0.01	6.8	0.014	4.7	0.011	<0.001	<0.001		
6/07/2010	Underground Dewatering	<0.0001	1.84	0.0105	0.0074		<0.00008		0.0001	<0.0002	<0.0002	<0.0005	<0.0005	0.34	0.34	<0.002	<0.002	<0.01	6.4	0.012	4.7	0.012	<0.001	<0.001		
13/07/2010	Underground Dewatering	<0.0001	2.7	0.38	0.36		<0.00008		<0.00008	0.0002	0.0002	<0.0005	<0.0005	<0.002	<0.002		<0.002	0.029	7.3	0.038	3.6	0.029	<0.001	<0.001		
30/07/2010	Underground Dewatering	<0.0001	1.86		0.0048			<0.00008					<0.0005					<0.01	6.4					<0.001		
26/08/2010	Underground Dewatering	<0.0001	2.4	0.45	0.37		<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.0005	<0.0005	0.009	0.01		<0.002	0.046	7.5	0.132	2.8	0.007	<0.001	<0.001		
27/08/2010	Underground Dewatering	<0.0001	1.89		0.009		<0.00008	<0.00008			<0.0002		<0.0005	0.28	0.28	<0.002	<0.002	<0.01	6.5		4.4		<0.001	<0.001		
7/09/2010	Underground Dewatering	<0.0001	1.13	0.081	0.072		<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.0005	<0.0005	0.005	0.008		0.002	0.066	7.8	0.007	3.1	0.009	<0.001	<0.001		
28/09/2010	Underground Dewatering	<0.0001	2.1		0.0101		<0.00008	<0.00008			<0.0002		<0.0005	0.22	0.22	<0.002	<0.002	0.014	6.5		4.3		<0.001	<0.001		
7/10/2010	Underground Dewatering	<0.0001	2.5	0.37	0.36		<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.0005	<0.0005	0.005	0.005		<0.002	0.028	7.2	0.114	2.6	0.004	<0.001	<0.001		
22/10/2010	Underground Dewatering	<0.0001	2.1	0.089	0.0144		<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.0005	<0.0005	0.01	0.011	<0.002	<0.002	<0.01	6.4	0.063	4.5	0.005	<0.001	<0.001		
18/11/2010	Underground Dewatering	0.00011	3.1	0.24	0.24		<0.00008	<0.00008	<0.00008	<0.0002	0.0002	<0.0005	<0.0005	0.003	0.005		<0.002	<0.01	7.2	0.104	3.5	0.052	<0.001	<0.001		
19/11/2010	Underground Dewatering	<0.0001	1.88	0.028	0.007		<0.00008	<0.00008	0.00023	<0.0002	<0.0002	<0.0005	<0.0005	0.24	0.25	0.002	0.002	0.07	6.4	0.37	4.5	0.015	<0.001	<0.001		
3/12/2010	Underground Dewatering	<0.0001	1.8		0.0095		<0.00008	<0.00008			<0.0002		<0.0005	0.002	0.003	<0.002		<0.01	6.5		4.9		<0.001	<0.001		
27/01/2011	Underground Dewatering	<0.0001	1.92		0.0093		<0.00008	<0.00008			<0.0002		<0.0005	0.086	0.086	<0.002	<0.002	0.069	6.2		5.1		<0.001	<0.001		
9/02/2011	Underground Dewatering	<0.0001	2.3		0.18			<0.00008					<0.0005					0.061	6.6					<0.001		
17/02/2011	Underground Dewatering	<0.0001	1.91		0.0026		<0.00008	<0.00008			<0.0002		<0.0005	<0.002	<0.002	<0.002		<0.01	6.2		4.8		<0.001	<0.001		
18/02/2011	Underground Dewatering																									
19/02/2011	Underground Dewatering																									
9/03/2011	Underground Dewatering																									
18/03/2011	Underground Dewatering	0.0015	125		14.3		<0.00008	<0.00008			<0.001		0.031	0.096	0.096		<0.002	0.067	6.9	0.008	10.6	<0.004		<0.005		
25/03/2011	Underground Dewatering	<0.0001	2.1		0.0043		<0.00008	<0.00008			<0.0002		<0.0005	0.199	0.2		<0.002	0.054	6.2		5.2		<0.001	<0.001		
28/04/2011	Underground Dewatering	<0.0001	2.1		0.0179		<0.00008	<0.00008			<0.0002		<0.0005	0.32	0.32		<0.002	0.013	6.4		5.2		<0.001	<0.001		
19/05/2011	Underground Dewatering	<0.0001	2.1		0.04		<0.00008	<0.00008			<0.0002		<0.0005	0.33	0.33		<0.002	<0.01	6.6		4.9		<0.001	<0.001		
30/05/2011	Underground Dewatering		117.796	13.389															6.4		9.198			0.004	0.004	
10/06/2011	Underground Dewatering	<0.0001	2		0.064		<0.00008	<0.00008			<0.0002		<0.0005	0.22	0.23		<0.02	0.011	6.6		4.8		<0.001	<0.001		
4/07/2011	Underground Dewatering	0.001	130		15.5		<0.00008		<0.00008				0.039	0.03	0.041		0.011	0.081	6.4	0.007	10.1	<0.004		<0.002	<0.0021	
29/07/2011	Underground Dewatering	<0.0001	2.2		0.038		<0.00008	<0.00008			<0.0002		<0.0005	0.34	0.34		<0.02	<0.01	6.4		5.1		<0.001	<0.001		
12/08/2011	Underground Dewatering	<0.0001	2.4		0.036		<0.00008	<0.00008			<0.0002		<0.0005	0.22	0.24		<0.02	<0.01	7.2		5.4		<0.001	<0.001		
23/08/2011	Underground Dewatering		124.121	12.433															6.2		9.681			0.002	0.003	
8/09/2011	Underground Dewatering	<0.0001	2.1		0.0144		<0.00008	<0.00008			<0.0002		<0.0005	0.1	0.1		<0.02	<0.01	6.7		5.8		<0.001	<0.001		
9/09/2011	Underground Dewatering		109	12															6.5		9.7			<0.0094	<0.0094	
26/10/2011	Underground Dewatering	0.0007	136		14.6		<0.00008		<0.00008				0.033	0.18	0.19		<0.02	0.036	6.5	0.007	11.1	<0.004		<0.005	<0.0053	
31/10/2011	Underground Dewatering	<0.0001	2.3		0.054		0.00008	<0.00008			<0.0002		<0.0005	0.12	0.12	<0.02	<0.02	<0.01	6.3		5.8		<0.001	<0.001		
4/11/2011	Underground Dewatering		113.894	12.553															6.5		9.14			0.002	0.002	
18/11/2011	Underground Dewatering	<0.0001	2.6		0.0051		<0.00008	<0.00008			<0.0002		<0.0005	0.084	0.086	0.002	0.002	0.012	6.4		6		<0.001	<0.001		
20/12/2011	Underground Dewatering	<0.0001	2.2		0.021		<0.00008	<0.00008			<0.0002		<0.0005	0.18	0.18		<0.02	<0.01	6.4		5.5		<0.001	<0.001		
18/01/2012	Underground Dewatering	<0.0001	2.6		0.014		<0.00008	<0.00008			<0.0002		<0.0005	0.17	0.17	<0.02	<0.02	<0.01	6.6		5.2		<0.001	<0.001		
20/01/2012	Underground Dewatering	0.0015	128		14		<0.00008		<0.00008				0.067	0.4	0.4		<0.02	<0.01	6.4	<0.004	10	<0.004		<0.002	<0.0021	
10/02/2012	Underground Dewatering	<0.0001	2.4		0.0158		<0.00008	<0.00008			<0.0002		<0.0005	0.18	0.18	<0.02	<0.02	0.103	6.3		5.6		<0.001	<0.001		
29/02/2012	Underground Dewatering		125.86	14.12															6.4		10.18			<0.0094	<0.0094	
20/03/2012	Underground Dewatering	<0.0001	2.5		0.028		<0.00008	<0.00008			<0.0002		<0.0005	0.29	0.3	<0.02	<0.02	<0.01	6.5		5.6		<0.001	<0.001		
28/03/2012	Underground Dewatering		122	13															6.2		9.8			<0.0094	<0.0094	
16/04/2012	Underground Dewatering	<0.0001	2.4		0.025		<0.00008	<0.00008			<0.0002		<0.0005	0.11	0.11	<0.02	<0.02	<0.01	6.3		5.2		<0.001	<0.001		
27/04/2012	Underground Dewatering	0.0007	130		13.9		<0.00008		<0.00008				0.043	0.06	0.06	<0.02	<0.02	0.05	6.6	0.01	10	<0.004		<0.002	<0.0021	
22/05/2012	Underground Dewatering	<0.0001	2.5		0.0122		<0.00008	<0.00008			<0.0002		<0.0005	0.19	0.19	<0.02	<0.02	<0.01	6.5		5.5		<0.001	<0.001		
25/05/2012	Underground Dewatering		108.817	11.261															6.2		9.286			<0.0094	<0.0094	<0.0094
22/06/2012	Underground Dewatering	<0.0001	2.6		0.0097		<0.00008	<0.00008			<0.0002		<0.0005	0.144	0.144	<0.002	<0.002	<0.01	6.4		5.8		<0.001	<0.001		
29/06/2012	Underground Dewatering		123	12.91															6.4		9.45			<0.0094	<0.0094	<0.0094
26/07/2012	Underground Dewatering	<0.0001	34		4.2		<0.00008		0.00014				0.032	10.8	10.8	0.034	0.034	0.126	6.6	0.01	4.4	<0.004		<0.001	<0.0011	
13/08/2012	Underground Dewatering	<0.0001	2.3		0.0179		<0.00008	<0.00008			<0.0002		<0.0005	0.49	0.49	<0.02	<0.02	<0.01	6.4		4.5		<0.001	<0.001		
13/08/2012	Underground Dewatering																	<0.01								
21/08/2012	Underground Dewatering	0.00013	31	3.7	0.42		<0.00008	<0.00008	0.0039	0.0014	0.0027	0.062	<0.001	5.9	7	1.11	1.11	4.2	8.8	5.8	12.1	0.013	0.0035	0.0021		
28/08/2012	Underground Dewatering	<0.0001	2.5		0.0137		<0.00008	<0.00008			<0.0002		<0.0005	0.17	0.18	<0.02	<0.02	<0.01	6.6		5.4		<0.001	<0.001		
28/08/2012	Underground Dewatering																	<0.01								
30/08/2012	Underground Dewatering		95.68	13.62															6.3		8.54			<0.0094	<0.0094	<0.0094
18/09/2012	Underground Dewatering	<0.0001	2.4		0.0116		<0.00008	<0.00008			<0.0002		<0.0005	0.186	0.187	<0.002	<0.002	<0.01	6.8		5.8		<0.001	<0.001		
18/09/2012	Underground Dewatering																	<0.01								
19/09/2012	Underground Dewatering		103.628	13.999															6.1		8.963			<0.0094	<0.0094	<0.0094
16/10/2012	Underground Dewatering	<0.0001	2.4		0.0078		<0.00008	<0.00008			<0.0002		<0.0005	0.12	0.13	<0.02	<0.02	<0.01	6.3		4.9		<0.001	<0.001		
31/10/2012	Underground Dewatering	0.0004	123		14.7		<0.00008		<0.00008				0.064	0.07	0.07	<0.02	<0.02	0.021	6.4	<0.004	9.3	<0.004		<0.002	<0.0021	

Date	Data Point	Si	AgA	AgS	NaSO	SrA	SrS	SO4	SS	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
28/01/2010	Underground Dewatering	62	<0.0001	<0.0001	19			30		1.5	1.4							150		38	12			<0.001	0.011	0.0068
18/02/2010	Underground Dewatering	28	<0.0001	<0.0001	57			79		3.8	3.7							260		<3	0.36			<0.001	0.007	0.0072
19/02/2010	Underground Dewatering	46	<0.0001	<0.0001	18			24		1.4	1.2							130		130	21			<0.001	0.01	0.003
2/03/2010	Underground Dewatering	61	<0.0001	<0.0001	21			21		1.2	1.4							140		47	6.7			<0.001	0.0064	0.0018
13/04/2010	Underground Dewatering	54	<0.0001	<0.0001	17			19.9		1.16	1.23							129		700	220			<0.001	0.0097	0.00136
25/05/2010	Underground Dewatering	63	<0.0001	<0.0001	22			27		1.33	1.44							145		<3	1.14			<0.001	0.0032	0.0047
30/06/2010	Underground Dewatering	57	<0.0001	<0.0001	18.1			27		1.36	1.24							143		<3	0.41			<0.001	0.0044	0.0031
6/07/2010	Underground Dewatering	57	<0.0001	<0.0001	17.5			23		1.28	1.22							135		<3	0.34			<0.001	0.0033	0.004
13/07/2010	Underground Dewatering		<0.0001	<0.0001	39			184		6.3	5.3							380		<3	1.49			<0.001	0.0102	0.0062
30/07/2010	Underground Dewatering			<0.0001																<3				<0.001		0.0024
26/08/2010	Underground Dewatering		<0.0001	<0.0001	34	0.43	0.41	122		5	4.7	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	320	<0.1	38	9.4	<0.00002	<0.00002	<0.001	0.002	0.0023
27/08/2010	Underground Dewatering	54		<0.0001	16.1		0.031	25		1.29	1.17		<0.00005		<0.0005		<0.0005			<3			0.00003	<0.001		0.004
7/09/2010	Underground Dewatering		<0.0001	<0.0001	56	0.16	0.153	104		4.3	4	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	240	0.13	<30	0.42	<0.00002	<0.00002	<0.001	0.0012	0.0014
28/09/2010	Underground Dewatering	49		<0.0001	16.6		0.033	25		1.31	1.22		<0.00005		<0.0005		<0.0005			<3			0.00002	0.0014		0.0025
7/10/2010	Underground Dewatering		<0.0001	<0.0001	36	0.38	0.37	114		4.9	4.6	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	330	<0.1	5	11.5	<0.00002	<0.00002	<0.001	<0.001	<0.001
22/10/2010	Underground Dewatering	57	<0.0001	<0.0001	18.5	0.036	0.032	27		1.35	1.3	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	145	0.24	20	5.8	0.00008	0.00002	0.0025	0.0031	0.0025
18/11/2010	Underground Dewatering		<0.0001	<0.0001	24	0.0141	0.0141	28		1.67	1.58	0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	109	<0.1	<15	7.8	<0.00002	<0.00002	<0.001	0.0029	0.0025
19/11/2010	Underground Dewatering	55	<0.0001	<0.0001	18.8	0.036	0.037	32		1.57	1.3	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	158	0.89	105	19.8	0.00025	0.00003	0.0012	0.0036	0.0031
3/12/2010	Underground Dewatering	49		<0.0001	19.7		0.034	29		1.38	1.33		<0.00005		<0.0005		<0.0005			63			0.00004	0.0013		0.0013
27/01/2011	Underground Dewatering	61		<0.0001	19.5		0.035	28		1.35	1.35		<0.00005		<0.0005		<0.0005			25			0.00002	<0.001		0.004
9/02/2011	Underground Dewatering			<0.0001																7				0.0016		0.053
17/02/2011	Underground Dewatering	51		<0.0001	19.6		0.036	30		1.39	1.35		<0.00005		<0.0005		<0.0005			76			0.00003	<0.001		0.0032
18/02/2011	Underground Dewatering																									
19/02/2011	Underground Dewatering																									
9/03/2011	Underground Dewatering																									
18/03/2011	Underground Dewatering			<0.0005	43			1,830		41	37								<0.1	4	5.1			<0.001		0.32
25/03/2011	Underground Dewatering			<0.0001	18.9		0.036	30		1.45	1.36		<0.00005		<0.0005		<0.0005			44			0.00002	<0.001		0.0086
28/04/2011	Underground Dewatering			<0.0001	19.1		0.037	26		1.34	1.36		<0.00005		<0.0005		<0.0005			<3			0.00004	<0.001		0.0036
19/05/2011	Underground Dewatering			<0.0001	17.7		0.038	29		1.39	1.3		<0.00005		<0.0005		<0.0005			<3			0.00004	<0.001		0.0048
30/05/2011	Underground Dewatering				40.302			1,760												12						
10/06/2011	Underground Dewatering			<0.0001	16.1		0.036	24		1.29	1.21		<0.00005		<0.0005		<0.0005			19			0.00005	<0.001		0.0043
4/07/2011	Underground Dewatering			<0.0002	43			1,660		38	39								<0.1	<3				<0.001		0.36
29/07/2011	Underground Dewatering			<0.0001	19.6		0.041	30		1.44	1.41		<0.00005		<0.0005		<0.0005			<3			0.00005	<0.001		0.0038
12/08/2011	Underground Dewatering			<0.0001	20		0.04	31		1.44	1.47		<0.00005		<0.0005		<0.0005			5			0.00004	<0.001		0.0041
23/08/2011	Underground Dewatering				46.146			1,800												6						
8/09/2011	Underground Dewatering			<0.0001	24		0.039	32		1.48	1.6		<0.00005		<0.0005		<0.0005			28			0.00003	0.0012		0.0032
9/09/2011	Underground Dewatering				46			1,890												3						
26/10/2011	Underground Dewatering			<0.0005	50			1,960		44	42								<0.1	<3				<0.001		0.37
31/10/2011	Underground Dewatering	59		<0.0001	21		0.042	37		1.57	1.5		<0.00005		<0.0005		<0.0005			35			0.00004	0.0014		0.004
4/11/2011	Underground Dewatering				42.918			1,970												<2						
18/11/2011	Underground Dewatering	61		<0.0001	21		0.042	37		1.59	1.57		<0.00005		<0.0005		<0.0005			210			0.00004	0.0016		0.0045
20/12/2011	Underground Dewatering			<0.0001	20		0.044	34		1.53	1.44		<0.00005		<0.0005		<0.0005			230			0.00004	0.0012		0.004
18/01/2012	Underground Dewatering	58		<0.0001	20		0.04	24		1.32	1.47		<0.00005		<0.0005		<0.0005			30			0.00004	0.0018		0.0034
20/01/2012	Underground Dewatering			<0.0002	41			1,790		40	38								<0.1	<3				<0.001		0.92
10/02/2012	Underground Dewatering	60		<0.0001	22		0.044	42		1.73	1.58		<0.00005		<0.0005		<0.0005			132			0.00005	0.0014		0.0034
29/02/2012	Underground Dewatering				43.17			2,200												<2						
20/03/2012	Underground Dewatering	54		<0.0001	19.7		0.039	29		1.4	1.46		<0.00005		<0.0005		<0.0005			<3			0.00004	<0.001		0.0037
28/03/2012	Underground Dewatering				45			1,780												6						
16/04/2012	Underground Dewatering	60		<0.0001	22		0.042	34		1.52	1.53		<0.00005		<0.0005		<0.0005			7			0.00004	0.0013		0.0037
27/04/2012	Underground Dewatering	40		<0.0002	46			1,970		44	40								<0.1	4				<0.001		0.61
22/05/2012	Underground Dewatering	62		<0.0001	22		0.043	41		1.67	1.54		<0.00005		<0.0005		<0.0005			78			0.00005	<0.001		0.003
25/05/2012	Underground Dewatering				41.122			1,770												5						
22/06/2012	Underground Dewatering	61		<0.0001	22		0.043	38		1.63	1.58		<0.00005		<0.0005		<0.0005			98			0.00004	<0.001		0.0027
29/06/2012	Underground Dewatering				40.87			1,860												11						
26/07/2012	Underground Dewatering	14.3		<0.0001	15.3			470		11.6	12								<0.1	8				0.0039		0.199
13/08/2012	Underground Dewatering	50		<0.0001	16.7		0.038	31		1.42	1.3		<0.00005		<0.0005		<0.0005			6			0.00004	<0.001		0.0042
13/08/2012	Underground Dewatering																									
21/08/2012	Underground Dewatering	13.6	0.00016	<0.0001	57	1.09	1.01	770		20	16.6	0.00199	0.00072	0.002	<0.0005	<0.0005	<0.0005	1,220	11.2	11,900	6,700	0.00056	0.00016	0.0025	3.1	0.0044
28/08/2012	Underground Dewatering	57		<0.0001	21		0.046	34		1.52	1.55		<0.00005		<0.0005		<0.0005			5			0.00006	<0.001		0.0033
28/08/2012	Underground Dewatering																									
30/08/2012	Underground Dewatering				31.37			1,690												4						
18/09/2012	Underground Dewatering	59		<0.0001	22		0.045	37		1.58	1.55		<0.00005		<0.0005		<0.0005			10			0.00006	<0.001		0.0032
18/09/2012	Underground Dewatering																									
19/09/2012	Underground Dewatering				33.535			1,850												8						
16/10/2012	Underground Dewatering	61		<0.0001	19.8		0.044	37		1.59	1.44		<0.00005		<0.0005		<0.0005			<3			0.00005	<0.001		0.0028
31/10/2012	Underground Dewatering	39		<0.0002	38			1,670		37	38								<0.1	5				<0.001		1.1

Date	Data Point	FLS Comments	FLS pH(ph Units)	FLS EC (mS/m)	FLS Temp	Acidity - Total (g/m3 as CaCO3)	Acidity (pH 8.3)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba
31/10/2012	Underground Dewatering		6.25	28.1	19.5			<1	9.6	9.6		0.006		0.0006		0.037	
1/11/2012	Underground Dewatering		2.49	610	21.8			690		<2.7							
23/11/2012	Underground Dewatering		5.75	14.96	16.4			<1	22	22		0.012	<0.0002	<0.0002			
23/11/2012	Underground Dewatering		5.75	14.96	16.4												
30/11/2012	Underground Dewatering							<0.1		169							
13/12/2012	Underground Dewatering							<1		153							
18/12/2012	Underground Dewatering		5.58	18.7	17			<1	21	22		0.013	<0.0002	<0.0002			
18/12/2012	Underground Dewatering		5.58	18.7	17												
22/01/2013	Underground Dewatering		5.56	15.86	17.2			<1	23	23		0.01	<0.0002	<0.0002			
30/01/2013	Underground Dewatering		6.21	179.7	27.5			<1	140	140		<0.006		<0.0004		<0.002	
13/02/2013	Underground Dewatering		5.78	15.3	16.7			<1		22		0.009	<0.0002	<0.0002			
21/02/2013	Underground Dewatering		6.26	192.2	26.8			<1		151							
28/03/2013	Underground Dewatering		6.47	194.7	26.8					167							
9/04/2013	Underground Dewatering				15.2			<1	22	22		0.011	<0.0002	<0.0002			
23/04/2013	Underground Dewatering		6.1	123.9	25.7			<1	118	118		<0.006		<0.0004		<0.002	
29/05/2013	Underground Dewatering		6.33	252	24.5					109							
27/06/2013	Underground Dewatering		6.37	232	23.8					110							
8/07/2013	Underground Dewatering		6.87	127.3	17.5			<1	60	60		0.013		0.0022		0.0013	
22/07/2013	Underground Dewatering		6.12	19	16.4			<1	21	21		0.011	<0.0002	<0.0002			
26/07/2013	Underground Dewatering		6.41	264	24.7			<1	116	116		<0.006		<0.0004		<0.002	
29/08/2013	Underground Dewatering		6.32	157	21.8					98.4							
3/09/2013	Underground Dewatering							430		<1							
30/09/2013	Underground Dewatering							<1		95							
10/10/2013	Underground Dewatering				15.8			<1	21	21		0.009	<0.0002	<0.0002			
30/10/2013	Underground Dewatering		6.48	269	24.6			<1	125	125		<0.006		<0.0004		<0.002	
29/11/2013	Underground Dewatering		6	261	25.2			<1		116							
18/12/2013	Underground Dewatering		6.1	260	23.6			<1		104							
20/01/2014	Underground Dewatering				25.2			<1	122	122		<0.006		<0.0004		<0.002	
27/02/2014	Underground Dewatering				27.6					139							
28/03/2014	Underground Dewatering				28.2					127							
7/04/2014	Underground Dewatering							<1	140	140		<0.006		<0.0004		<0.002	
29/05/2014	Underground Dewatering		6.48	231	21.1												
29/05/2014	Underground Dewatering							<1		48.7							
29/05/2014	Underground Dewatering													0.022			
26/06/2014	Underground Dewatering		6.1	265	23.2			<1		75.5							
30/07/2014	Underground Dewatering		6.14	235	24.6			<1	77	77		0.009		<0.0004		<0.002	
26/08/2014	Underground Dewatering		5.5	17.8	15			<1	19.7	19.7		0.008	<0.0002	<0.0002			
28/08/2014	Underground Dewatering		5.7	266	23.5												
26/09/2014	Underground Dewatering		6.5	18.46	15			<1	20	20		0.009	<0.0002	<0.0002			
29/09/2014	Underground Dewatering		6	248	21.8			<1		80.3							
21/10/2014	Underground Dewatering		6.1	10.27	16.1			<1	21	21		0.011	<0.0002	<0.0002			
28/10/2014	Underground Dewatering		6.3	287	24.4			<1	94	94		<0.006		<0.0004		<0.002	
24/11/2014	Underground Dewatering		5.7	271	26.5			<1		114							
25/11/2014	Underground Dewatering		6.1	19.2	18			<1	21	21		0.01	<0.0002	<0.0002			
16/12/2014	Underground Dewatering		6.2	19	15.2			<1	20	20		0.008	<0.0002	<0.0002			
19/12/2014	Underground Dewatering		6.6	274	28.4			<1		109							
23/01/2015	Underground Dewatering		6.1	270	26.7			<1	114	114		<0.006		<0.0004		<0.002	
23/02/2015	Underground Dewatering					109		<1									
25/03/2015	Underground Dewatering							<1	117								
23/04/2015	Underground Dewatering							<1	125	125		<0.006		<0.0004		<0.002	
4/05/2015	Underground Dewatering							<1	99	100		<0.003	<0.0002	<0.0002			
28/05/2015	Underground Dewatering							<1		46							
28/05/2015	Underground Dewatering	Flow diverted this is runoff from mill rom	6.5	166.2	19.8												
26/06/2015	Underground Dewatering	No flow from sample tap. Informed mill															
17/07/2015	Underground Dewatering	No flow from sample point for the last 2 months															
24/07/2015	Underground Dewatering							<1	119	119		0.015		0.0031		0.005	
24/07/2015	Underground Dewatering	Very slow flow air in pipe.	6.9		16.2												
21/08/2015	Underground Dewatering					<1											
14/09/2015	Underground Dewatering					<1											
1/10/2015	Underground Dewatering		6.3		24.5			<1	12.3	12.3		0.22		0.0023		0.004	
10/11/2015	Underground Dewatering					<1											
27/11/2015	Underground Dewatering	1A Raw minewater															
27/11/2015	Underground Dewatering	1B Settled 15 minutes															
27/11/2015	Underground Dewatering	1C Settled 30 minutes															
27/11/2015	Underground Dewatering	1D Settled 5 hours															
27/11/2015	Underground Dewatering	2A Dr. Minewater															

Date	Data Point	BaS	Bicarb	BS	CdA	CdS	CaS	Carb	COD	Cl	CrS	Cr6col	CrT	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	E. Coli	Fl	NH3	AuS	Hard	FeA	FeS	FeT	PbA
31/10/2012	Underground Dewatering		11.7	0.057		<0.00005	13.8		24	14.9	<0.0005	<0.01			0.0055		<0.0005	0.0022	37.6			<0.01	<0.0005	72	63		109	
1/11/2012	Underground Dewatering						392			55									737					3,000	164			
23/11/2012	Underground Dewatering	0.23	26	0.014		<0.00005	5.2			13.5	<0.0005				0.0096		<0.0005		18.3		<0.05	<0.01		23		<0.02		
23/11/2012	Underground Dewatering																											
30/11/2012	Underground Dewatering						459.35			11.2									270					1,600	0.786			
13/12/2012	Underground Dewatering						484.503			13									290					1,700	0.039			
18/12/2012	Underground Dewatering	0.23	26	0.016		<0.00005	5.7			13.7	<0.0005				0.0111		<0.0005		18.4		0.05	<0.01		24		0.02		
18/12/2012	Underground Dewatering																		18.7									
22/01/2013	Underground Dewatering	0.23	28	0.015		<0.00005	5.5			13.8	0.0006				0.01		<0.0005		19		<0.05	<0.01		24		0.04		
30/01/2013	Underground Dewatering		170	0.093		0.00102	520		<6	10.5	<0.001	<0.01			0.022		<0.003	0.0037	288			<0.01	<0.001	1,800	1.24		1.38	
13/02/2013	Underground Dewatering	0.23	27	0.014		<0.00005	5.4			13.3	<0.0005				0.0085		<0.0005		19.1		<0.05	<0.01		23		0.05		
21/02/2013	Underground Dewatering						500.244			10.8									254					1,700	0.579			
28/03/2013	Underground Dewatering						524.405												279					2,000	0.826			
9/04/2013	Underground Dewatering	0.23	27	0.015		<0.00005	5.8			13.9	<0.0005				0.0088		<0.0005		19.5		<0.05	<0.01		26		0.03		
23/04/2013	Underground Dewatering		143	0.082		0.00156	460		<6	10	<0.001	<0.01			0.032		0.0035	0.0074	272			<0.01	<0.001	1,580	0.48		0.47	
29/05/2013	Underground Dewatering						361.019												258					1,400	0.098			
27/06/2013	Underground Dewatering						481												0.7					1,700	0.125			
8/07/2013	Underground Dewatering		73	0.042		0.00087	170		<6	22	<0.0005	<0.01			0.03		0.0034	0.0118	126.6			0.014	<0.0006	560	0.62		0.99	
22/07/2013	Underground Dewatering	0.23	26	0.015		<0.00005	5.7			13.6	<0.0005				0.009		<0.0005		18.6		<0.05	<0.01		25		<0.02		
26/07/2013	Underground Dewatering		142	0.089		0.0024	510		<6	10.7	<0.001	<0.01			0.0114		0.0065	0.0028	275			<0.01	<0.001	1,760	0.21		0.21	
29/08/2013	Underground Dewatering						460			10.7									258					1,700	1			
3/09/2013	Underground Dewatering																		506									
30/09/2013	Underground Dewatering						463			9.5									261					1,600	<0.071			
10/10/2013	Underground Dewatering	0.23	26	0.015		<0.00005	5.8			13.7	<0.0005				0.0088		<0.0005		19		<0.05	<0.01		26		<0.02		
30/10/2013	Underground Dewatering		152	0.095		0.00183	550		<6	10.6	<0.001	<0.01			0.0089		0.0042	0.0016	284			<0.01	<0.001	1,940	0.14		0.167	
29/11/2013	Underground Dewatering						481.947099			9.6									270					1,600	0.179897			
18/12/2013	Underground Dewatering						391			9.3									269					1,600	0.23			
20/01/2014	Underground Dewatering		149	0.089		0.00176	530		<6	10.4	<0.001	<0.01			0.0102		0.0038	0.0013	279			<0.01	<0.001	1,870	0.28		0.28	
27/02/2014	Underground Dewatering						541			10.7									294.1					1,800	0.37			
28/03/2014	Underground Dewatering						536			10.7									293.3					1,900	0.22			
7/04/2014	Underground Dewatering		171	0.096		0.00127	550		<6	10.6	<0.001	<0.01			0.0095		0.0026	0.0026	293			<0.01	<0.001	1,890	0.64		0.66	
29/05/2014	Underground Dewatering																											
29/05/2014	Underground Dewatering						431.01641			65									266.8					1,270	0.08063			
29/05/2014	Underground Dewatering										<0.001				0.038		0.0101		282					1,210				
26/06/2014	Underground Dewatering						466			12.1									269.9					1,700	0.42			
30/07/2014	Underground Dewatering		94	0.1		0.006	490		6	10.5	<0.001	<0.01			0.027		0.0148	0.0032	274			<0.01	<0.001	1,760	0.88		0.85	
26/08/2014	Underground Dewatering	0.155	24	0.013		<0.00005	5.5			13.4	<0.0005				0.0091		<0.0005		18.8		0.05	<0.01		24		0.02		
28/08/2014	Underground Dewatering						447.9006									0.0158			269.4					1,700				
26/09/2014	Underground Dewatering	0.147	25	0.013		<0.00005	5.7			13.7	<0.0005				0.0079		<0.0005		18.2		<0.05	<0.01		25		0.03		
29/09/2014	Underground Dewatering						462			11.6									270.1					1,700	0.59			
21/10/2014	Underground Dewatering	0.166	26	0.013		<0.00005	5.9			13.3	<0.0005				0.0096		<0.0005		19.1		<0.05	<0.01		26		0.04		
28/10/2014	Underground Dewatering		115	0.087		0.0029	530		60	11.2	<0.001	<0.01			0.0172		0.013	0.0025	287			<0.01	<0.0005	1,930	1.86		1.89	
24/11/2014	Underground Dewatering						491			14.5									294.8					1,800	0.34			
25/11/2014	Underground Dewatering	0.161	26	0.013		<0.00005	5.8			12.8	<0.0005				0.01		<0.0005		19.2		<0.05	<0.01		26		0.04		
16/12/2014	Underground Dewatering	0.152	25	0.014		<0.00005	5.9			13.6	<0.0005				0.009		<0.0005		19.3		0.07	<0.01		26		0.05		
19/12/2014	Underground Dewatering						463.032928			13.1									288					1,700	0.202741			
23/01/2015	Underground Dewatering		139	0.091		0.0021	530		<6	10.5	<0.001	<0.01			0.0153		0.0088	0.002	293			<0.01	<0.0006	1,950	0.27		0.28	
23/02/2015	Underground Dewatering						365			19.7									240.1					1,300	2.9			
25/03/2015	Underground Dewatering						486			12.3									295.2					1,900	0.15			
23/04/2015	Underground Dewatering		152	0.083		0.00128	530		<6	9.9	<0.001	<0.01			0.0155		0.0077	0.002	290			<0.01	<0.001	1,890	0.19		0.23	
4/05/2015	Underground Dewatering	0.111	121	0.035		0.00014	27			13.1	<0.0005				0.0008		<0.0005		32		0.21	<0.01		108		<0.02		
28/05/2015	Underground Dewatering						265			24									163					760	19			
28/05/2015	Underground Dewatering																		166									
26/06/2015	Underground Dewatering																											
17/07/2015	Underground Dewatering																											
24/07/2015	Underground Dewatering		145	0.081		0.0039	310		<60	14.9	<0.001	<0.01			0.031		0.0014	0.0021	184.8			<0.01	<0.0005	950	28		57	
24/07/2015	Underground Dewatering																		114.8									
21/08/2015	Underground Dewatering						312			16.3									184					930	9.5			
14/09/2015	Underground Dewatering						355.872			15									216.1					1,110	14.581			
1/10/2015	Underground Dewatering		15	0.076		0.0114	430		26	16	<0.001	<0.01			0.107		0.062	0.0046	275			<0.01	<0.0005	1,430	24		28	
10/11/2015	Underground Dewatering						587			14.6									293					2,200	38			
27/11/2015	Underground Dewatering																											
27/11/2015	Underground Dewatering																											
27/11/2015	Underground Dewatering																											
27/11/2015	Underground Dewatering																											
27/11/2015	Underground Dewatering																											

Date	Data Point	PbS	MgS	MnA	MnS	MnTR	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SeT	SeTR
31/10/2012	Underground Dewatering	<0.0001	9.2		0.96		<0.00008		0.022				0.003	<0.02	0.03	<0.02		1.4	5.8	1.3	5.5	<0.004		<0.001	<0.0011	
1/11/2012	Underground Dewatering		361	67															2.7		36			0.019	0.035	0.035
23/11/2012	Underground Dewatering	<0.0001	2.4		0.0058		<0.00008	<0.00008			<0.0002		<0.0005	0.04	0.04	<0.02	<0.02	<0.01	6.4		5.6		<0.001	<0.001		
23/11/2012	Underground Dewatering																	<0.01								
30/11/2012	Underground Dewatering		117.895	13.947															6.2		9.445			<0.0094	<0.0094	
13/12/2012	Underground Dewatering		115.53	11.004															6.5		9.156			0	0	
18/12/2012	Underground Dewatering	<0.0001	2.4		0.0131		<0.00008	<0.00008			<0.0002		<0.0005	0.13	0.13	<0.02	<0.02	<0.01	6.3		5.7		<0.001	<0.001		
18/12/2012	Underground Dewatering																	<0.01	5.58							
22/01/2013	Underground Dewatering	<0.0001	2.6		0.0119		<0.00008	<0.00008			<0.0002		<0.0005	0.08	0.08	<0.02	<0.02	0.045	6.3		5.8		<0.001	<0.001		
30/01/2013	Underground Dewatering	0.0003	126		13.6		<0.00008		<0.00008				0.038	0.033	0.037	0.004	0.004	0.058	6.5	0.01	10.1	<0.004		<0.002	<0.0021	
13/02/2013	Underground Dewatering	<0.0001	2.4		0.0114		<0.00008	<0.00008			<0.0002		<0.0005	0.1	0.11	<0.02		0.012	6.3		5.5		<0.001	<0.001		
21/02/2013	Underground Dewatering		128.838	13.975															6.1		10.645			<0.007		<0.007
28/03/2013	Underground Dewatering		148.313	13.352															6.4		10.485			<0.0094	<0.0094	<0.0094
9/04/2013	Underground Dewatering	<0.0001	2.7		0.0135		<0.00008	<0.00008			<0.0002		<0.0005	0.12	0.12	<0.02	<0.02	<0.01	6.3		6.1		<0.001	<0.001		
23/04/2013	Underground Dewatering	0.0003	104		12.4		<0.00008		<0.00008				0.064	0.36	0.37	<0.02	<0.02	0.017	6.3	<0.004	10.5	<0.004		<0.002	0.0025	
29/05/2013	Underground Dewatering		85.823	8.305															6.3		6.862			<0.0094	<0.00094	
27/06/2013	Underground Dewatering		118.57	9.7															6.3		9.84			0.002	0.003	0.003
8/07/2013	Underground Dewatering	0.00011	33		3.6		<0.00008		<0.00008				0.022	1.79	1.93	0.14	0.14	1.7	7.6	0.008	10.2	<0.004		0.0011	0.002	
22/07/2013	Underground Dewatering	<0.0001	2.6		0.0083		0.0001	<0.00008			<0.0002		<0.0005	0.17	0.18	<0.02	<0.02	0.01	6.2		5.8		<0.001	<0.001		
26/07/2013	Underground Dewatering	0.0006	118		11.3		<0.00008		<0.00008				0.065	0.51	0.52	<0.02	<0.02	<0.01	6.5	<0.004	10.3	<0.004		<0.002	<0.0021	
29/08/2013	Underground Dewatering		110	8.9															6.8		9.1					
3/09/2013	Underground Dewatering																		2.6							
30/09/2013	Underground Dewatering		114	8.9															6.3		9.4			<0.0094	<0.0094	
10/10/2013	Underground Dewatering	<0.0001	2.8		0.0054		<0.00008	<0.00008			<0.0002		<0.0005	0.15	0.15	<0.002	<0.002	0.012	6.4		6		<0.001	<0.001		
30/10/2013	Underground Dewatering	<0.0002	134		12		<0.00008		<0.00008				0.052	0.013	0.014	<0.002	<0.002	<0.01	6.7	<0.004	9.2	<0.004		<0.002	0.0025	
29/11/2013	Underground Dewatering		107.677118	11.229225															6.2		9.867314			<0.007	<0.007	
18/12/2013	Underground Dewatering		94	9.9															6.4		8.1			<0.0094	<0.0094	
20/01/2014	Underground Dewatering	<0.0002	131		12.6		<0.00008		<0.00008				0.058	0.15	0.15	<0.02	<0.02	<0.01	6.5	0.129	10.2	0.129		<0.002	<0.0021	
27/02/2014	Underground Dewatering		109	13															6.4		11					
28/03/2014	Underground Dewatering		143	13															6.4		11					
7/04/2014	Underground Dewatering	<0.0002	124		12.8		<0.00008		<0.00008				0.042	0.116	0.116		<0.002	0.046	6.6	0.044	9.5	0.04		<0.002	<0.0053	
29/05/2014	Underground Dewatering																									
29/05/2014	Underground Dewatering		45.49154	0.04784															8.5		22.15679			0.0382		0.03502
29/05/2014	Underground Dewatering		38		0.031						0.03								6.3					0.035		
26/06/2014	Underground Dewatering		133	13															6.2		9.6			<0.007		<0.007
30/07/2014	Underground Dewatering	0.0013	128		13.1		<0.00008		<0.00008				0.147	0.24	0.25	<0.02		<0.01	6.2	0.114	10.7	0.099		<0.002	<0.0021	
26/08/2014	Underground Dewatering	<0.0001	2.6		0.0054		<0.00008	<0.00008			<0.0002		<0.0005	0.13	0.14	<0.02		<0.01	6.5		5.7		<0.001	<0.001		
28/08/2014	Underground Dewatering				13.4668	13.5588													6.3							
26/09/2014	Underground Dewatering	<0.0001	2.6		0.0059		<0.00008	<0.00008			<0.0002		<0.0005	0.15	0.15	<0.02		<0.01	6.5		5		<0.001	<0.001		
29/09/2014	Underground Dewatering		125	12															6.2		9.3			<0.0094		<0.0094
21/10/2014	Underground Dewatering	<0.0001	2.8		0.0071		<0.00008	<0.00008			<0.0002		<0.0005	<0.1	<0.1	<0.1		<0.01	6.6		5.5		<0.001	<0.001		
28/10/2014	Underground Dewatering	0.0016	150		15		<0.00008		<0.00008				0.109	0.14	0.15	<0.1		0.01	6.3	<0.004	10	<0.004		<0.002	<0.0021	
24/11/2014	Underground Dewatering		148	15															6.2		11			<0.0094		<0.0094
25/11/2014	Underground Dewatering	<0.0001	2.7		0.0083		<0.00008	<0.00008			<0.0002		<0.0005	<0.1	<0.1	<0.1		<0.01	6.6		5.4		<0.001	<0.001		
16/12/2014	Underground Dewatering	<0.0001	2.7		0.0066		<0.00008	<0.00008			<0.0002		<0.0005	0.11	0.11	<0.1		<0.01	6.6		5.5		<0.001	<0.001		
19/12/2014	Underground Dewatering		134	14															6.2		8.886404			<0.007		<0.007
23/01/2015	Underground Dewatering	0.0005	150		15.4		<0.00008		<0.00008				0.071	<0.1	<0.1	<0.1		<0.01	6.3	0.005	10.5	<0.004		<0.002	<0.0021	
23/02/2015	Underground Dewatering		106	136															6.5		9.1			<0.0094		<0.0094
25/03/2015	Underground Dewatering		164	14															6.4		9.4			<0.007		<0.007
23/04/2015	Underground Dewatering	0.0007	139		13.9		<0.00008		<0.00008				0.059	<0.1	<0.1	<0.1		<0.01	6.8	0.008	10	<0.004		<0.002	0.0025	
4/05/2015	Underground Dewatering	<0.0001	10.1		0.075		<0.00008	<0.00008			<0.0002		<0.0005	<0.1	<0.1	<0.1		<0.01	6.5		5.8		<0.001	<0.001		
28/05/2015	Underground Dewatering		24	5.8															6.8		7.1			<0.0094		<0.0094
28/05/2015	Underground Dewatering																									
26/06/2015	Underground Dewatering																									
17/07/2015	Underground Dewatering																									
24/07/2015	Underground Dewatering	<0.0002	44		6.9		<0.00008		0.00021				0.048	1.43	1.66	0.23		0.76	6.9	0.52	7.6	<0.004		<0.002	<0.011	
24/07/2015	Underground Dewatering																									
21/08/2015	Underground Dewatering		38	6															7.3		6.6			<0.0094		<0.0094
14/09/2015	Underground Dewatering		54.283	10.772															6.9		6.368			<0.0094		<0.0094
1/10/2015	Underground Dewatering	0.0006	83		11.9		<0.00008		<0.00008				0.143	2.1	2.3	0.21		1	5.5	0.004	8.4	<0.004		<0.002	0.0032	
10/11/2015	Underground Dewatering		101	20															7		12			0.023		0.038
27/11/2015	Underground Dewatering																									
27/11/2015	Underground Dewatering																									
27/11/2015	Underground Dewatering																									
27/11/2015	Underground Dewatering																									
27/11/2015	Underground Dewatering																									

Date	Data Point	Si	AgA	AgS	NaSO	SrA	SrS	SO4	SS	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
31/10/2012	Underground Dewatering	20		<0.0001	18.4			133		3.4	2.5								1.44	780				<0.001		0.0059
1/11/2012	Underground Dewatering				123			6,100												15						
23/11/2012	Underground Dewatering	59		<0.0001	22		0.045	40		1.64	1.54		<0.00005		<0.0005		<0.0005			77			0.00005	0.0032		0.0031
23/11/2012	Underground Dewatering																									
30/11/2012	Underground Dewatering				39.734			2,000												2						
13/12/2012	Underground Dewatering				42.616			1,850												2						
18/12/2012	Underground Dewatering	63		<0.0001	23		0.048	41		1.67	1.61		<0.00005		<0.0005		<0.0005			28			0.00006	<0.001		0.004
18/12/2012	Underground Dewatering																									
22/01/2013	Underground Dewatering	62		<0.0001	23		0.046	42		1.72	1.63		<0.00005		<0.0005		<0.0005			173			0.00006	0.0013		0.0029
30/01/2013	Underground Dewatering	41		<0.0002	47			1,850		42	39								<0.1	7				0.002		0.64
13/02/2013	Underground Dewatering	59		<0.0001	22		0.049	43		1.7	1.57		<0.00005		<0.0005		<0.0005			44			0.00006	0.0012		0.003
21/02/2013	Underground Dewatering				44.168			1,940												4						
28/03/2013	Underground Dewatering				53.162															<2						
9/04/2013	Underground Dewatering	63		<0.0001	23		0.049	45	14.9	1.77	1.69		<0.00005		<0.0005		<0.0005			163			0.00006	0.0016		0.0032
23/04/2013	Underground Dewatering	37		<0.0002	39			1,760	590	39	34								<0.1	<3				0.0057		0.63
29/05/2013	Underground Dewatering				31.504															2						
27/06/2013	Underground Dewatering				41.38															6						
8/07/2013	Underground Dewatering	29		<0.0001	56			640		15.3	14.2								2.2	48				0.0059		0.35
22/07/2013	Underground Dewatering	58		<0.0001	23		0.047	40		1.65	1.64		<0.00005		<0.0005		<0.0005			152			0.00007	<0.001		0.0047
26/07/2013	Underground Dewatering	38		<0.0002	44			1,720		38	38								<0.1	<3				<0.001		1.18
29/08/2013	Underground Dewatering				41			1,680												10						
3/09/2013	Underground Dewatering							4,100																		
30/09/2013	Underground Dewatering				40			1,780												<2						
10/10/2013	Underground Dewatering	64		<0.0001	25		0.05	42		1.69	1.76		<0.00005		<0.0005		<0.0005			11			0.00005	0.0029		0.0033
30/10/2013	Underground Dewatering	41		<0.0002	43			1,830		41	41								<0.1	<3				<0.001		0.86
29/11/2013	Underground Dewatering				39.715373			2,100												<2						
18/12/2013	Underground Dewatering				36			1,680												16						
20/01/2014	Underground Dewatering	41		<0.0002	46			1,710		38	40								<0.1	<3				<0.001		0.78
27/02/2014	Underground Dewatering				42			1,880																		
28/03/2014	Underground Dewatering				46			1,850												5						
7/04/2014	Underground Dewatering			<0.0002	50			1,920		43	41								<0.1	<3				<0.001		0.58
29/05/2014	Underground Dewatering																									
29/05/2014	Underground Dewatering				164.19063			1,530												<2						
29/05/2014	Underground Dewatering																			15	12.7					
26/06/2014	Underground Dewatering				39			1,840												<2						
30/07/2014	Underground Dewatering	40		<0.0002	41			1,830		40	38								<0.1	4				<0.001		3.3
26/08/2014	Underground Dewatering	59		<0.0001	22		0.047	43		1.68	1.61		<0.00005		<0.0005		<0.0005			6			0.00003	<0.001		0.004
28/08/2014	Underground Dewatering							1,810												4				<0.007		
26/09/2014	Underground Dewatering	49		<0.0001	20		0.046	42		1.67	1.5		<0.00005		<0.0005		<0.0005			<3			0.00002	0.0023		0.0038
29/09/2014	Underground Dewatering				36			1,740												3						
21/10/2014	Underground Dewatering	57		<0.0001	23		0.047	45		1.74	1.68		<0.00005		<0.0005		<0.0005			8			0.00002	<0.001		0.004
28/10/2014	Underground Dewatering	40		<0.0002	42			1,790		40	41								<0.1	<3				<0.001		1.89
24/11/2014	Underground Dewatering				41			1,890												5						
25/11/2014	Underground Dewatering	58		<0.0001	23		0.048	46		1.75	1.68		<0.00005		<0.0005		<0.0005			9			0.00002	<0.001		0.0051
16/12/2014	Underground Dewatering	57		<0.0001	23		0.047	46		1.75	1.64		<0.00005		<0.0005		<0.0005			<3			0.00002	<0.001		0.0033
19/12/2014	Underground Dewatering				43.896607			1,820												<2						
23/01/2015	Underground Dewatering	40		<0.0002	43			1,910		42	42								<0.1	<3				<0.001		1.2
23/02/2015	Underground Dewatering				53			1,400												36						
25/03/2015	Underground Dewatering				58			1,920												<2						
23/04/2015	Underground Dewatering	40		<0.0002	40			1,850		41	40								<0.1	3				<0.001		0.78
4/05/2015	Underground Dewatering	30		<0.0001	23		0.146	39		3.2	3.3		0.00018		<0.0005		<0.0005			4			0.00006	<0.001		0.0051
28/05/2015	Underground Dewatering				66			860												850						
28/05/2015	Underground Dewatering																									
26/06/2015	Underground Dewatering																									
17/07/2015	Underground Dewatering																									
24/07/2015	Underground Dewatering	33		<0.0002	60			1,110		26	22								1.5	1,550				<0.001		2.7
24/07/2015	Underground Dewatering																									
21/08/2015	Underground Dewatering				69			1,010												1,100						
14/09/2015	Underground Dewatering				59.209			1,250												270						
1/10/2015	Underground Dewatering	45		<0.0002	62			1,360		29	32								1.5	570				0.0031		6.4
10/11/2015	Underground Dewatering				61			1,820												6,700						
27/11/2015	Underground Dewatering																			160						
27/11/2015	Underground Dewatering																			230						
27/11/2015	Underground Dewatering																			260						
27/11/2015	Underground Dewatering																			27						
27/11/2015	Underground Dewatering																			52,300						

Date	Data Point	FLS Comments	FLS pH(ph Units)	FLS EC (mS/m)	FLS Temp	Acidity - Total (g/m3 as CaCO3)	Acidity (pH 8.3)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba
27/11/2015	Underground Dewatering	2B Dr. Minewater settled 15 minutes															
22/12/2015	Underground Dewatering					<1											
10/01/2016	Underground Dewatering							<1	137	137		0.011		0.0048		0.009	
10/03/2016	Underground Dewatering					<1											
7/04/2016	Underground Dewatering		6.5	244	28.5			<1	102	102		0.015		0.0046		0.006	
10/05/2016	Underground Dewatering						<1										
9/06/2016	Underground Dewatering																
27/06/2016	Underground Dewatering						<1										
28/07/2016	Underground Dewatering							<1	127	127		0.058		0.0051		0.003	
31/08/2016	Underground Dewatering						<1										
23/09/2016	Underground Dewatering						<1										
6/10/2016	Underground Dewatering		7.5	224.1	25.8			<1	182	182		<0.006		0.0038		0.024	
16/11/2016	Underground Dewatering						<1										
9/12/2016	Underground Dewatering						<1										
18/01/2017	Underground Dewatering		7.3	235.7	28.4			<1	187	188		0.012		0.0035		0.013	
20/02/2017	Underground Dewatering		6.55	260.4	28.4		<1										
16/03/2017	Underground Dewatering						<1										
26/04/2017	Underground Dewatering		6.8	234.6	24.1			<1	360	360		0.03		0.0059		0.004	
25/05/2017	Underground Dewatering						<1										
14/06/2017	Underground Dewatering						<1										
27/07/2017	Underground Dewatering		6.65	223.3	27.4			<1	100	100		0.029		0.0051		0.009	
29/08/2017	Underground Dewatering						<1										
29/09/2017	Underground Dewatering		6.9	278	25.2		<1										
6/10/2017	Underground Dewatering		6.95	278	26.1												
9/10/2017	Underground Dewatering		6.9	284	26												
10/10/2017	Underground Dewatering		6.95	278.4	25.8												
11/10/2017	Underground Dewatering		6.9	293.4	27												
12/10/2017	Underground Dewatering		6.8	276.9	27.3												
13/10/2017	Underground Dewatering		6.75	283.4	27.1												
16/10/2017	Underground Dewatering		6.75	243.4	25.3												
17/10/2017	Underground Dewatering		6.9	268.4	26												
18/10/2017	Underground Dewatering		6.8	274.6	26.4												
19/10/2017	Underground Dewatering		6.9	262.4	27.2												
20/10/2017	Underground Dewatering		6.8	258.4	27.4												
24/10/2017	Underground Dewatering		6.5	324.6													
26/10/2017	Underground Dewatering		6.7	332	25.1			<1	430	430		0.022		0.0048		0.009	
26/10/2017	Underground Dewatering		6.7	332	25.2												
31/10/2017	Underground Dewatering		6.85	302	26.4												
1/11/2017	Underground Dewatering		6.9	301.4	25.7												
2/11/2017	Underground Dewatering		7	300.3	28												
3/11/2017	Underground Dewatering		6.9	296.4	26.5												
7/11/2017	Underground Dewatering		7.1	297.4	27.5												
8/11/2017	Underground Dewatering		6.9	310.6	25.6												
9/11/2017	Underground Dewatering		7	310	26.8												
10/11/2017	Underground Dewatering		6.95	310.4	26.8												
22/11/2017	Underground Dewatering		7.05	221.3	30.4		<1										
14/12/2017	Underground Dewatering						<1										
25/01/2018	Underground Dewatering		7.3	324	24.8			<1	300	300		0.008		0.0067		0.034	
27/02/2018	Underground Dewatering		7.05	233.2	28.4		<1										
14/03/2018	Underground Dewatering						<1										
26/04/2018	Underground Dewatering		7	283.6	27.4		<1										
18/05/2018	Underground Dewatering							<1	193	193		0.012		0.0041		0.01	
17/07/2018	Underground Dewatering						<1										
6/08/2018	Underground Dewatering		7.24	33.7	29.7			<1	490	490		0.013		0.0139		0.04	
19/09/2018	Underground Dewatering		7.08	33.5	28.4		<1										
10/10/2018	Underground Dewatering						<1										
7/11/2018	Underground Dewatering						<1										
11/12/2018	Underground Dewatering							<1	330	330		0.021		0.0093		0.013	
9/01/2019	Underground Dewatering						<1										
8/02/2019	Underground Dewatering							<1	200	200		0.018		0.0069		0.018	
8/03/2019	Underground Dewatering						<1										
10/04/2019	Underground Dewatering						<1										
7/05/2019	Underground Dewatering		7.32	232	25.5			<1	199	200		0.022		0.0092		0.01	
6/06/2019	Underground Dewatering		7.25	237.5	25.1		<1										
9/07/2019	Underground Dewatering		7.6	254	24.2			<1	192	192		0.056		0.0065		0.009	
12/08/2019	Underground Dewatering		7.78	251.6	23.9		<1										

Date	Data Point	BaS	Bicarb	BS	CdA	CdS	CaS	Carb	COD	Cl	CrS	Cr6col	CrT	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	E. Coli	Fl	NH3	AuS	Hard	FeA	FeS	FeT	PbA
27/11/2015	Underground Dewatering																											
22/12/2015	Underground Dewatering						563.579			19									280.5					1,700	20.124			
10/01/2016	Underground Dewatering		167	0.069		0.00088	530		16	15.4	<0.001	<0.01			0.032		<0.001	0.0024	270			<0.01	<0.0006	1,660	10.2		11.8	
10/03/2016	Underground Dewatering									14.8									254.8					1,600	17			
7/04/2016	Underground Dewatering		125	0.076		0.0023	520		<6	16.3	<0.001	<0.01			0.049		0.0194	0.02	276			<0.01	<0.0006	1,660	26		29	
10/05/2016	Underground Dewatering						477			16.7									297.7					1,500	18			
9/06/2016	Underground Dewatering																			<1								
27/06/2016	Underground Dewatering						517.094			16.3									323					1,600	<0.071			
28/07/2016	Underground Dewatering		155			0.0042	490		<6	13.3	<0.001	<0.01			0.073		0.011	0.0022	274			<0.01	<0.0006	1,570	46		85	
31/08/2016	Underground Dewatering						492			14.1									257.8					1,500	2.7			
23/09/2016	Underground Dewatering						523			14.2									260.7					1,700	15.58			
6/10/2016	Underground Dewatering		220			0.00023	510		<6	15	<0.001	<0.01			0.0051		<0.001	0.0125	266			<0.01	<0.0006	1,620	1.56		2.2	
16/11/2016	Underground Dewatering						536			12.5									248.1					1,600	3.1			
9/12/2016	Underground Dewatering						237			10.8									155.4					830	27			
18/01/2017	Underground Dewatering		230			0.00164	510		<6	13.2	<0.001	<0.01			0.035		0.0018	0.0035	259			<0.01	<0.0006	1,610	8.4		29	
20/02/2017	Underground Dewatering						509.616141			14.6									270					1,700	24.381189			
16/03/2017	Underground Dewatering						291			17.2									147					870	27			
26/04/2017	Underground Dewatering		440			0.0026	440		<6	12.5	<0.001	<0.01			0.079		0.027	0.033	223			0.031	<0.0006	1,530	15.5		31	
25/05/2017	Underground Dewatering						563			14.4									293.4					1,900	23			
14/06/2017	Underground Dewatering						534			12.1									279.2					1,800	24			
27/07/2017	Underground Dewatering		122			0.00142	530		14	14.6	<0.001	<0.01			0.04		0.0037	0.0048	282			<0.01	<0.0006	1,770	4.6		6.2	
29/08/2017	Underground Dewatering						517			16.3									253					1,600	16			
29/09/2017	Underground Dewatering						521			16.1									259					1,600	9.6			
6/10/2017	Underground Dewatering																											
9/10/2017	Underground Dewatering																											
10/10/2017	Underground Dewatering																											
11/10/2017	Underground Dewatering																											
12/10/2017	Underground Dewatering																											
13/10/2017	Underground Dewatering																											
16/10/2017	Underground Dewatering																											
17/10/2017	Underground Dewatering																											
18/10/2017	Underground Dewatering																											
19/10/2017	Underground Dewatering																											
20/10/2017	Underground Dewatering																											
24/10/2017	Underground Dewatering																											
26/10/2017	Underground Dewatering		520			0.00083	440		68	14	<0.001	<0.01			0.041		<0.001	<0.001	275			<0.01	<0.0006	1,400	15.4		27	
26/10/2017	Underground Dewatering																											
31/10/2017	Underground Dewatering																											
1/11/2017	Underground Dewatering																											
2/11/2017	Underground Dewatering																											
3/11/2017	Underground Dewatering																											
7/11/2017	Underground Dewatering																											
8/11/2017	Underground Dewatering																											
9/11/2017	Underground Dewatering																											
10/11/2017	Underground Dewatering																											
22/11/2017	Underground Dewatering						459			14.6									252					1,400	4.4			
14/12/2017	Underground Dewatering						615			13.5									262					1,800	6.3			
25/01/2018	Underground Dewatering		360			<0.0001	540		32	15.8	<0.001	<0.01			0.0053		<0.001	0.057	276			0.024	<0.0006	1,610	2.3		8.4	
27/02/2018	Underground Dewatering						594			13									273					1,800	3.5			
14/03/2018	Underground Dewatering						540			13									270					1,700	7.2			
26/04/2018	Underground Dewatering						539			13.7									258					1,600	5.1			
18/05/2018	Underground Dewatering		230			0.00083	510		<6	14	<0.001	<0.01			0.022		<0.001	0.0029	269			<0.01	<0.0006	1,590	6.3		13.5	
17/07/2018	Underground Dewatering						447			16									255					1,400	16			
6/08/2018	Underground Dewatering		600			<0.0001	490		35	12	<0.001	<0.01			0.0028		<0.001	0.03	269			0.028	<0.0006	1,480	3.2		30	
19/09/2018	Underground Dewatering						595			11.2									275					1,800	3.7			
10/10/2018	Underground Dewatering						520			14									261					1,600	3.6			
7/11/2018	Underground Dewatering						494			13									257					2,200	6.4			
11/12/2018	Underground Dewatering		400			0.00019	470		62	20	<0.001	<0.01			0.0068		0.004	<0.02	258			0.081	<0.0006	1,390	3.9		38	
9/01/2019	Underground Dewatering						539			10.9									258.2					1,700	2.2			
8/02/2019	Underground Dewatering		250			0.00023	500		6	12	<0.001	<0.01			0.0068		<0.001	<0.02	265			0.0057	<0.0006	1,540	4.2		23	
8/03/2019	Underground Dewatering						504			12.4									255					1,500	5.2			
10/04/2019	Underground Dewatering						537			16.8									252					1,600	8.7			
7/05/2019	Underground Dewatering		240			0.00011	470		28	11	<0.001	<0.01			0.0049		<0.001	0.07	247			0.0033	<0.0006	1,440	4.3		26	
6/06/2019	Underground Dewatering						502			15.3									245					1,500	4.4			
9/07/2019	Underground Dewatering		230			0.00033	510		10	33	<0.001	<0.01			0.0159		<0.001	0.08	249			0.00137	<0.0006	1,600	8.8		32	
12/08/2019	Underground Dewatering						474			15.1									250					1,400	7.1			

Date	Data Point	PbS	MgS	MnA	MnS	MnTR	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SeT	SeTR
27/11/2015	Underground Dewatering																									
22/12/2015	Underground Dewatering		92.552	10.313															6.9		9.567			<0.0094		0.0111
10/01/2016	Underground Dewatering	<0.0002	85		8.7		<0.00008		<0.00008				0.036	2.1	2.6	0.5		0.9	7.2	<0.004	10.9	<0.004		<0.002	<0.0021	
10/03/2016	Underground Dewatering		84	8.6															7.1		9.6			<0.0094		<0.0094
7/04/2016	Underground Dewatering	<0.0002	89		8.8		<0.00008		<0.00008				0.054	5.9	6.3	0.48		3.8	6.7	0.083	10.2	<0.004		<0.002	0.0031	
10/05/2016	Underground Dewatering		85	10															7.5		12			<0.0094		0.018
9/06/2016	Underground Dewatering																									
27/06/2016	Underground Dewatering		86.3796	7.887															7.2		11.75254			<0.0094		<0.0094
28/07/2016	Underground Dewatering	<0.0002	83		9.4		<0.00008		0.00023				0.089	0.94	0.98	<0.1		0.164	6.5	0.23	9	<0.004		<0.002	<0.011	
31/08/2016	Underground Dewatering		73	8.5															7.3		7.5			<0.0094		<0.0094
23/09/2016	Underground Dewatering		86	8.57															7.1		9.4			<0.0094		<0.0094
6/10/2016	Underground Dewatering	<0.0002	84		9.6		<0.00008		<0.00008				0.005	2.5	3.3	0.74		1.3	7.4	0.015	9.6	<0.004		<0.002	<0.0021	
16/11/2016	Underground Dewatering		70	9.5															7.2		8.1			<0.0094		<0.0094
9/12/2016	Underground Dewatering		58	7.5															6.8		9.5			<0.0094		0.013
18/01/2017	Underground Dewatering	<0.0002	83		8.9		<0.00008		0.00018				0.037	2.2	2.4	0.19		0.5	7.7	0.134	9	<0.004		<0.002	0.0025	
20/02/2017	Underground Dewatering		95.472807	11.364444															6.7		9.508706			<0.0094		<0.0094
16/03/2017	Underground Dewatering		35	7.1															7.7		12			<0.0094		0.0094
26/04/2017	Underground Dewatering	<0.0002	102		9.6		<0.00008		0.00014				0.106	15.7	15.9	0.18		11.6	7.1	2.4	11.3	<0.004		<0.002	0.0028	
25/05/2017	Underground Dewatering		120	13															6.6		10			<0.0094		<0.0094
14/06/2017	Underground Dewatering		110	14															6.6		9.5			<0.0094		<0.0094
27/07/2017	Underground Dewatering	<0.0002	108		11.3		<0.00008		<0.00008				0.068	1.26	1.37	0.1		0.87	6.9	0.167	9.8	<0.004		<0.002	0.0035	
29/08/2017	Underground Dewatering		82	15															6.9		9.2			<0.0094		0.011
29/09/2017	Underground Dewatering		82	11															7.1		12			<0.0094		<0.0094
6/10/2017	Underground Dewatering																									
9/10/2017	Underground Dewatering																									
10/10/2017	Underground Dewatering																									
11/10/2017	Underground Dewatering																									
12/10/2017	Underground Dewatering																									
13/10/2017	Underground Dewatering																									
16/10/2017	Underground Dewatering																									
17/10/2017	Underground Dewatering																									
18/10/2017	Underground Dewatering																									
19/10/2017	Underground Dewatering																									
20/10/2017	Underground Dewatering																									
24/10/2017	Underground Dewatering																									
26/10/2017	Underground Dewatering	<0.0002	74		8.4		<0.00008		<0.00008				0.058	4.7	4.8	0.15		4	6.9	1.06	13.2	<0.004		0.002	0.0036	
26/10/2017	Underground Dewatering																									
31/10/2017	Underground Dewatering																									
1/11/2017	Underground Dewatering																									
2/11/2017	Underground Dewatering																									
3/11/2017	Underground Dewatering																									
7/11/2017	Underground Dewatering																									
8/11/2017	Underground Dewatering																									
9/11/2017	Underground Dewatering																									
10/11/2017	Underground Dewatering																									
22/11/2017	Underground Dewatering		66	8.5															7		7.7			<0.0094		<0.0094
14/12/2017	Underground Dewatering		72	10															7.5		8.5			<0.0094		<0.0094
25/01/2018	Underground Dewatering	0.0008	63		7.1		<0.00008		<0.00008				0.0085	5.8	6.1	0.29		4.6	7.4	1.03	10.8	<0.004		0.003	0.004	
27/02/2018	Underground Dewatering		73	10															7.5		9			<0.0094		<0.0094
14/03/2018	Underground Dewatering		76	9.9															7.3		8.1			<0.0094		<0.0094
26/04/2018	Underground Dewatering		70	9.6															7.3		7.7			<0.0094		<0.0094
18/05/2018	Underground Dewatering	<0.0002	74		9		<0.00008		<0.00008				0.028	1.41	1.53	0.11		1.1	7.4	0.22	9.1	<0.004		<0.002	0.0029	
17/07/2018	Underground Dewatering		70	11															7.4		9.3			<0.0094		0.016
6/08/2018	Underground Dewatering	0.005	60		7		<0.00008		0.00018				0.01	4.9	5	0.12		3.4	7.6	0.57	9.4	<0.004		<0.002	0.0035	
19/09/2018	Underground Dewatering		86	8.9															7.6		8.6			<0.0094		<0.0094
10/10/2018	Underground Dewatering		67	8.2															7.5		7.3			<0.0094		<0.0094
7/11/2018	Underground Dewatering		70	8.1															7.3		7.6			<0.0094		<0.0094
11/12/2018	Underground Dewatering	0.0044	52		4.4		<0.00008		0.00029				0.0116	8.2	9	0.79		5.6	7.8	0.68	13.9	<0.004		0.004	0.0055	
9/01/2019	Underground Dewatering		75	7.5															7.7		8.5			<0.0094		<0.0094
8/02/2019	Underground Dewatering	0.0005	72		7.6		<0.00008		<0.00008				0.013	0.85	1.01	0.16		0.54	7.7	0.23	8.4	<0.004		<0.002	<0.0021	
8/03/2019	Underground Dewatering		66	10															7.6		7.3			<0.0094		<0.0094
10/04/2019	Underground Dewatering		67	9.1															7.3		8.7			<0.0094		<0.0094
7/05/2019	Underground Dewatering	0.0003	61		7.2		<0.00008		0.00014				0.0092	1.16	1.41	0.25		0.52	7.5	0.21	8.7	<0.004		<0.002	<0.011	
6/06/2019	Underground Dewatering		70	7.9															7.6		8.4			<0.0094		<0.0094
9/07/2019	Underground Dewatering	<0.0002	78		8.5		<0.00008		0.00023				0.023	0.57	0.68	0.11		0.3	7.3	0.25	9.3	<0.004		<0.002	<0.0021	
12/08/2019	Underground Dewatering		63	8.3															7.7		8.8			<0.0094		<0.0094

Date	Data Point	Si	AgA	AgS	NaSO	SrA	SrS	SO4	SS	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
27/11/2015	Underground Dewatering																			53						
22/12/2015	Underground Dewatering				64.998			1,690												170						
10/01/2016	Underground Dewatering	40		<0.0002	70			1,480		34	37								1.75	340				0.0016		0.82
10/03/2016	Underground Dewatering				67			1,550										486.808004		620						
7/04/2016	Underground Dewatering	37		<0.0002	64			1,610		36	37								4.3	290				0.0118		1.37
10/05/2016	Underground Dewatering				69			1,590												4,600						
9/06/2016	Underground Dewatering																									
27/06/2016	Underground Dewatering				64.767			1,590												2,500						
28/07/2016	Underground Dewatering	38		<0.0002	60			1,810		41	35								0.26	1,090				<0.001		2.3
31/08/2016	Underground Dewatering				61			1,510												260						
23/09/2016	Underground Dewatering				55			1,980												450						
6/10/2016	Underground Dewatering	40		<0.0002	54			1,640		39	35								1.46	65				0.0057		0.158
16/11/2016	Underground Dewatering				71			1,450												220						
9/12/2016	Underground Dewatering				38			860												7,000						
18/01/2017	Underground Dewatering	43		<0.0002	59			1,620		38	35								0.83	840				0.0015		0.89
20/02/2017	Underground Dewatering				61.8635			1,750												1,200						
16/03/2017	Underground Dewatering				41			750												7,300						
26/04/2017	Underground Dewatering	30		<0.0002	50			1,510		40	34								7.4	7,500				0.028		1.61
25/05/2017	Underground Dewatering				62			2,200												1,100						
14/06/2017	Underground Dewatering				54			1,610												2,100						
27/07/2017	Underground Dewatering	41		<0.0002	54			1,750		39	39								1.7	580				0.0033		1.04
29/08/2017	Underground Dewatering				53			1,610												4,400						
29/09/2017	Underground Dewatering				66			1,560												1,100						
6/10/2017	Underground Dewatering																									
9/10/2017	Underground Dewatering																									
10/10/2017	Underground Dewatering																									
11/10/2017	Underground Dewatering																									
12/10/2017	Underground Dewatering																									
13/10/2017	Underground Dewatering																									
16/10/2017	Underground Dewatering																									
17/10/2017	Underground Dewatering																									
18/10/2017	Underground Dewatering																									
19/10/2017	Underground Dewatering																									
20/10/2017	Underground Dewatering																									
24/10/2017	Underground Dewatering																									
26/10/2017	Underground Dewatering	44		<0.0002	55			1,840		48	31								7.3	2,800				<0.001		0.78
26/10/2017	Underground Dewatering																									
31/10/2017	Underground Dewatering																									
1/11/2017	Underground Dewatering																									
2/11/2017	Underground Dewatering																									
3/11/2017	Underground Dewatering																									
7/11/2017	Underground Dewatering																									
8/11/2017	Underground Dewatering																									
9/11/2017	Underground Dewatering																									
10/11/2017	Underground Dewatering																									
22/11/2017	Underground Dewatering				50			1,490												240						
14/12/2017	Underground Dewatering				60			1,620												2,000						
25/01/2018	Underground Dewatering	37		<0.0002	71			1,350		35	36								5.9	2,600				0.0189		0.058
27/02/2018	Underground Dewatering				59			1,720												420						
14/03/2018	Underground Dewatering				56			1,670												410						
26/04/2018	Underground Dewatering				61			1,550												370						
18/05/2018	Underground Dewatering	47		<0.0002	59			1,630		38	35								1.2	780				0.0028		0.49
17/07/2018	Underground Dewatering				48			660												8,000						
6/08/2018	Underground Dewatering	42		<0.0002	59			1,660		45	33								4.8	2,200				<0.02		0.055
19/09/2018	Underground Dewatering				55			1,780												530						
10/10/2018	Underground Dewatering				53			1,490												430						
7/11/2018	Underground Dewatering				58			1,460												570						
11/12/2018	Underground Dewatering	33		<0.0002	75			1,500		39	32								6.8	3,800				<0.02		0.1
9/01/2019	Underground Dewatering				47			1,380												300						
8/02/2019	Underground Dewatering	42		<0.0002	61			1,590		38	34								0.77	850				<0.02		0.174
8/03/2019	Underground Dewatering				55			1,510												1,400						
10/04/2019	Underground Dewatering				51			1,500												2,000						
7/05/2019	Underground Dewatering	43		<0.0002	60			1,620		38	32								1.06	1,480				<0.02		0.107
6/06/2019	Underground Dewatering				62			1,440												970						
9/07/2019	Underground Dewatering	41		<0.0002	63			1,470		35	35								0.99	900				<0.02		0.26
12/08/2019	Underground Dewatering				58			1,420												1,800						

Date	Data Point	FLS Comments	FLS pH(ph Units)	FLS EC (mS/m)	FLS Temp	Acidity - Total (g/m3 as CaCO3)	Acidity (pH 8.3)	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Ba
10/09/2019	Underground Dewatering		7.18	25.4	21.1		<1										
8/10/2019	Underground Dewatering																
22/10/2019	Underground Dewatering		7.34	25.3	22.7			<1	430	430		0.021		0.0082		0.014	
6/11/2019	Underground Dewatering						<1										
13/11/2019	Underground Dewatering		6.59	23.9	20.4			<1	210	210		0.033		0.0048		0.007	
13/12/2019	Underground Dewatering						<1										
6/01/2020	Underground Dewatering						<1										
14/01/2020	Underground Dewatering		7.25	28.4	29			<1	169	169		0.041		0.0071		0.011	
4/02/2020	Underground Dewatering		7.34	256.6	28.4			<1	192	192		0.04		0.0078		0.006	
3/03/2020	Underground Dewatering		7.14	255	28.6		<1										
29/04/2020	Underground Dewatering		7.46	271	27.3		<1										
13/05/2020	Underground Dewatering		7.58	194	18.5		<1										
7/06/2020	Underground Dewatering		7.14	18.7	15.2		<1										
8/07/2020	Underground Dewatering		8.95	222.8	13.9												

Date	Data Point	BaS	Bicarb	BS	CdA	CdS	CaS	Carb	COD	Cl	CrS	Cr6col	CrT	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	E. Coli	Fl	NH3	AuS	Hard	FeA	FeS	FeT	PbA
10/09/2019	Underground Dewatering						512			13.7									267					1,500	1.2			
8/10/2019	Underground Dewatering						532			14									258					1,600	7.2			
22/10/2019	Underground Dewatering		520			0.00052	510		82	9	<0.001	<0.01			0.0057		<0.001	0.03	250			0.028	<0.0006	1,580	8.2		109	
6/11/2019	Underground Dewatering						524			15.2									263					1,600	10			
13/11/2019	Underground Dewatering		250			0.00149	510		<6	16	<0.001	<0.01			0.043		0.0014	<0.02	260			0.002	<0.0006	1,670	7.6		26	
13/12/2019	Underground Dewatering						502			24.8									268					1,600	16			
6/01/2020	Underground Dewatering						527			14.9									268					1,600	17			
14/01/2020	Underground Dewatering		210			0.00043	520		13	11	<0.001	<0.01			0.0102		<0.001	<0.02	251			0.00027	<0.0006	1,610	3.8		18	
4/02/2020	Underground Dewatering		230			0.00058	530		24	13	<0.001	<0.01			0.0118		<0.001	<0.02	259			0.00064	<0.0006	1,650	10		42	
3/03/2020	Underground Dewatering						498			12.3									278					1,500	5			
29/04/2020	Underground Dewatering						493			16.8									263					1,500	5.8			
13/05/2020	Underground Dewatering						509			13.5									256					1,600	4.9			
7/06/2020	Underground Dewatering						467			13.5									252					1,500	<0.071			
8/07/2020	Underground Dewatering																											

Date	Data Point	PbS	MgS	MnA	MnS	MnTR	HgA	HgS	HgT	MoA	MoS	NiA	NiS	NO3-N	NOxN	NO2-N	NO2	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SeT	SeTR
10/09/2019	Underground Dewatering		66	10															7.3		8.3			<0.0094		<0.0094
8/10/2019	Underground Dewatering		69	10															7.2		8.9			<0.0094		<0.0094
22/10/2019	Underground Dewatering	0.0008	74		8		<0.00008		0.0005				0.0121	6.9	7.2	0.33		2.8	7.7	0.55	9.1	<0.004		<0.002	0.0029	
6/11/2019	Underground Dewatering		76	9.5															7.1		9.1			<0.0094		<0.0094
13/11/2019	Underground Dewatering	<0.0002	96		9.7		<0.00008		<0.00008				0.054	1.13	1.26	0.14		0.73	7.1	0.61	9.5	0.007		<0.002	<0.0021	
13/12/2019	Underground Dewatering		75	10															7.2		9.6			<0.0094		<0.0094
6/01/2020	Underground Dewatering		69	11															7.2		11			<0.0094		0.0099
14/01/2020	Underground Dewatering	0.0002	77		8.7		<0.00008		0.00009				0.0183	0.73	0.76	<0.1		0.093	7.1	0.1	7.9	<0.004		<0.002	<0.0021	
4/02/2020	Underground Dewatering	0.0003	82		8.9		<0.00008		0.00022				0.0196	1.13	1.16	<0.1		0.199	7.2	0.116	8.7	0.006		<0.002	<0.0021	
3/03/2020	Underground Dewatering		70	8.9															7.2		8.1			<0.0094		<0.0094
29/04/2020	Underground Dewatering		70	8.2															7.3		9.5			<0.0094		<0.0094
13/05/2020	Underground Dewatering		75	8.2															7.5		7.5			<0.0094		<0.0094
7/06/2020	Underground Dewatering		73	7															7.2		7.3			<0.0094		<0.0094
8/07/2020	Underground Dewatering																									

Date	Data Point	Si	AgA	AgS	NaSO	SrA	SrS	SO4	SS	Sum Anion	Sum Cation	TiA	TiS	ThA	ThS	SnA	SnS	TDS	TKN	TSS	NTU	UA	US	CNWAD	ZnA	ZnS
10/09/2019	Underground Dewatering				62			1,460												86						
8/10/2019	Underground Dewatering				65			1,550												3,000						
22/10/2019	Underground Dewatering	39		<0.0002	62			1,460		40	35								4.5	3,400				0.02		0.32
6/11/2019	Underground Dewatering				59			1,610												2,000						
13/11/2019	Underground Dewatering	39		<0.0002	59			1,640		39	37								1.01	2,400				<0.02		0.78
13/12/2019	Underground Dewatering				57			1,640												2,800						
6/01/2020	Underground Dewatering				56			1,400												10,400						
14/01/2020	Underground Dewatering	42		<0.0002	60			1,500		35	35								0.2	83				<0.02		0.28
4/02/2020	Underground Dewatering	41		<0.0002	60			1,610		38	36								0.43	630				<0.02		0.33
3/03/2020	Underground Dewatering				58			1,500												690						
29/04/2020	Underground Dewatering				61			1,530												1,400						
13/05/2020	Underground Dewatering				57			1,470												1,200						
7/06/2020	Underground Dewatering				52			1,410												64						
8/07/2020	Underground Dewatering																									

Date	Data Point	FLS pH(ph Units)	FLS EC (mS/m)	FLS Temp	Acidity (ph 3.7)	Alk-Bicarb	Alk-T	AlA	AlS	SbA	SbS	AsA	AsS	Bicarb	CdA	CdS	CaS	COD	Cl	CrA	CrS	Cr6col	CoA	CoS	CuA	CuS	CNTOT	EC (mS/m)	Fl
26/02/2019	705 Gladstone sump	6.87	244.2	30	<1	185	186		<0.006		0.0031		0.042	230		<0.0001	530	<6	9		<0.001	<0.01		0.0027		<0.001	<0.02	251	
19/06/2019	705 Gladstone sump				<1	190	191		0.009		0.0147		0.015	230		0.00034	520	<6	9		<0.001	<0.01		0.0055		<0.001	0.03	256	
4/09/2019	705 Gladstone sump	6.67	251		<1	187	187		<0.006		0.0104		0.019	230		0.00024	580	<6	9		<0.001	<0.01		0.0046		<0.001	<0.02	259	
25/06/2020	705 Gladstone sump				<1	184	184	0.016	<0.006	0.0047	0.0037	0.057	0.03	220	0.00028	0.00022	550		<5	<0.001	<0.001	<0.001	0.0041	0.0044	<0.001	<0.001	<0.02	258	0.18

Date	Data Point	NH3	AuS	Hard	FeA	FeS	FeT	PbA	PbS	MgS	MnA	MnS	HgA	HgS	HgT	NiA	NiS	NO3-N	NOxN	NO2-N	NH4N	pH	PTO	KSO	DRP	SeA	SeS	SeT	SI	AgA	AgS	NaSO	SO4
26/02/2019	705 Gladstone sump	0.00011	<0.0006	1,610	1.08		1.4		0.0004	70		8.4	<0.00008		<0.00008		0.0053	<0.1	<0.1	<0.1	0.051	7	0.012	7.8	<0.004		<0.002	<0.0021	46		<0.0002	65	1,590
19/06/2019	705 Gladstone sump	0.00068	<0.0006	1,600	1.04		1.24		0.0003	75		9.3	<0.00008		<0.00008		0.0117	0.17	0.2	<0.1	0.124	7.4	0.023	7.8	<0.004		<0.002	<0.0021	45		<0.0002	56	1,580
4/09/2019	705 Gladstone sump	0.00026	<0.0006	1,780	0.61		0.76		<0.0002	81		9.8	<0.00008		<0.00008		0.0087	0.2	0.21	<0.1	0.113	7	0.008	7.7	<0.004		<0.002	<0.0021	41		<0.0002	59	1,660
25/06/2020	705 Gladstone sump	0.00007		1,690	1.01	0.04		0.0016	<0.0002	81	9.3	9.4		<0.00008	<0.00008	0.0088	0.0089	0.25	0.25	<0.1	0.031	7	0.012	7.6		<0.002	<0.002		43	<0.0002	<0.0002	57	1,590

Date	Data Point	Sum Anion	Sum Cation	TiA	TiS	TKN	TSS	UA	US	CNWAD	ZnA	ZnS
26/02/2019	705 Gladstone sump	37	35			<0.1	20			<0.02		0.035
19/06/2019	705 Gladstone sump	37	35			0.23	128			<0.02		0.163
4/09/2019	705 Gladstone sump	39	39			0.13	29			<0.02		0.166
25/06/2020	705 Gladstone sump	37	37	0.00047	0.00045	<0.1	6	<0.00004	<0.00004	<0.02	0.159	0.161

Date	Data Point	FLS Comments	FLS pH(ph Units)	FLS EC (mS/m)	FLS Temp	Acidity (pH 3.7)	Alk-Bicarb	Alk-T	AlS	SbS	AsS	Bicarb	CdS	CaS	COD	Cl	CrS	Cr6col	CoS	CuS	CNTOT	EC (mS/m)	E. Coli	NH3	AuS
8/03/2018	Favona 800 sump (Dewatering)					<1	250	250	0.046	0.001	<0.002	300	<0.0001	520	3,800	19	<0.001	<0.01	0.134	<0.001	0.0018	297	20	<0.01	<0.0006
1/08/2018	Favona 800 sump (Dewatering)					<1	960	960	0.058	0.0027	0.0012	1,170	0.00042	210	240	15.6	<0.0005	<0.01	0.0101	<0.0005	<0.02	139.7		0.00192	<0.0006
26/02/2019	Favona 800 sump (Dewatering)		7.66	226.9	26	<1	67	68	0.029	0.0102	0.006	82	<0.0001	510	<6	30	0.001	<0.01	0.0016	<0.001	<0.02	238		0.031	<0.0006
19/06/2019	Favona 800 sump (Dewatering)					<1	330	330	0.57	0.0011	<0.002	400	0.0069	550	230	19	<0.001	<0.01	0.27	0.0027	<0.02	347		0.00067	<0.0006
4/09/2019	Favona 800 sump (Dewatering)					98	<1	<1	25	0.0007	0.003	<1	0.0063	540	22	15	0.002	<0.01	0.26	0.091	<0.02	387		<0.00001	<0.0006
25/06/2020	Favona 800 sump (Dewatering)	Dry -just mud																							

Date	Data Point	Hard	FeA	FeT	PbS	MgS	MnS	HgA	HgT	NiS	NO3-N	NOxN	NO2-N	NH4N	pH	PTO	KSO	DRP	SeS	SeT	SI	AgS	NaSO	SO4	Sum Anion	Sum Cation	TKN	TSS	CNWAD	ZnS
8/03/2018	Favona 800 sump (Dewatering)	1,860	10.9	19	<0.0002	139	12.8	<0.00008	<0.00008	0.143	1.99	2.4	0.37	0.45	6.7	5.6	13.1	<0.004	<0.002	0.0032	35	<0.0002	57	1,960	46	41	13.8	>6,700	<0.005	2.2
1/08/2018	Favona 800 sump (Dewatering)	670	48	430	0.00014	36	3	<0.002	0.0046	0.0091	2.6	2.9	0.37	0.28	7.5	11.3	8.3	<0.004	0.002	0.021	15.5	<0.0001	26	770	36	14.8	4.3	41,000	<0.02	0.037
26/02/2019	Favona 800 sump (Dewatering)	1,400	0.15	0.23	0.0007	32	0.42	<0.00008	<0.00008	0.0099	13.6	14.8	1.17	3.3	7.6	0.078	12.2	<0.004	<0.002	<0.0021	22	<0.0002	62	1,510	35	31	3.6	189	<0.02	0.046
19/06/2019	Favona 800 sump (Dewatering)	2,100	119	650	0.001	181	17.6	<0.00008	0.00086	0.29	1.19	1.46	0.26	0.93	6.5	3.7	12.6	0.022	<0.002	0.033	49	<0.0002	55	2,400	57	46	3.8	33,000	<0.02	4.7
4/09/2019	Favona 800 sump (Dewatering)	2,300	100	106	0.044	220	18.8	<0.00008	<0.00008	0.29	0.11	0.12	<0.1	1.71	3.7	0.035	15.2	0.012	<0.002	0.0024	91	<0.0002	71	2,700	57	52	1.7	21	<0.02	6.9
25/06/2020	Favona 800 sump (Dewatering)																													

8.5 Recommendation by GWS Ltd on 14 August 2017

MEMO

GWS LTD

14th Aug 2017

To: Mark

From: Wayne

Subject: Favona Bore Results

Mark,

As requested, I have reviewed the Favona shallow bore data. Figure 1 provides the plot of pH over time for samples from the bores. This shows that current minimum pH values are similar to those in 2014-2015.

Table 1 provides the bores with pH values from 4 to 5.2 units. EC and SO4 are also included where available. Only three SO4 values have been recorded and these were for samples for P82 in 2014; P83 in 2014; and P86 in 2017. Bores P83 and P86 are downgradient from the FSPCP.

Figure 2 provides the calibration of the three SO4 values with EC. The regression equation shown on Figure 2 was used to calculate SO4 values based on EC values. These calculated SO4 values are also included on Table 1. While only three points were used in this correlation, data from other groundwater samples on site display a strong correlation between EC and SO4.

- Samples from P86 have shown a generally consistent pH and EC except for 13/11/2014 where EC was low, probably as a result of heavy rainfall infiltration or high river level.
- P82 has shown consistently low EC throughout the record.
- P83 samples showed calculated SO4 values between 52 and 111 assuming the EC on 14/12/2014 was 31.5 not 0.315
- P84 samples are shown calculated SO4 to range from 32 to 160 EC mS/m with the 2017 result at 54 mS/m.
- Calculated SO4 values for P85 samples range from 62 to 160 mS/m.

Boreholes P83; P84; and P86 are downgradient of the FSPCP and indicate elevated SO4 in the groundwater over the period of the record. P86 is downgradient of the polishing pond and elevated SO4 is also indicated.

However, given the sample notes indicate wells are often dry or have limited depth of water and have high suspended solids, the mass discharge is expected to be limited.

Responding to your questions:

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Auckland 2105

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MEMO

GWS LTD

I agree that when bores contain little depth of water and also contain high suspended solids, it will be difficult to obtain a representative groundwater analysis.

Given the above and the indicated low mass discharge, risk of an identifiable discharge to the Ohinemuri River is low.

Our recommendation would be to continue to sample for pH and EC as and when able as a scan can demonstrate that conditions remain stable.

Wayne Russell
For and on behalf of GWS Limited

Table 1

Da+G611+A	Date	FLS EC (	FLS pH	Sulphate (g/	SO4 Calc
P82 (P82)	28/08/2014	11.6	5		<5
P83 (P83)	28/08/2014	29.4	4.8		102
P84 (P84)	28/08/2014	30.6	4.8		107
P85 (P85)	28/08/2014	42	5.1		144
P86 (P86)	28/08/2014	48.9	4.6		156
P86 (P86)	23/09/2014	40.6	4.8		141
P82 (P82)	29/09/2014	11.2	5		<5
P83 (P83)	29/09/2014	21.5	4.8		63
P84 (P84)	29/09/2014	19.6	4.9		51
P85 (P85)	29/09/2014	39.8	5.1		139
P86 (P86)	9/10/2014	41	4.8		142
P82 (P82)	30/10/2014	10.04	5		<5
P84 (P84)	30/10/2014	38.2	5.1		134
P85 (P85)	13/11/2014	33.2	5		118
P86 (P86)	13/11/2014	9.86	5		<5
P82 (P82)	19/12/2014	9.24	5		<5
P83 (P83)	19/12/2014	19.64	5.2		52
P84 (P84)	19/12/2014	16.4	5		32
P82 (P82)	31/12/2014	12.8	5.2	7	7
P83 (P83)	31/12/2014	31.5	4	111	111
P84 (P84)	31/12/2014		4		
P85 (P85)	31/12/2014	57.2	5.1		160
P84 (P84)	26/06/2015	56.9	4.9		160
P86 (P86)	28/04/2017	48.8	4.7	156	156
P82 (P82)	28/07/2017	12.2	5.2		<5
P83 (P83)	28/07/2017	22.8	5.05		70
P84 (P84)	28/07/2017	20	5		54
P85 (P85)	28/07/2017	21.4	5.15		62
P86 (P86)	28/07/2017	45.2	4.7		151

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MEMO

GWS LTD

Figure 1

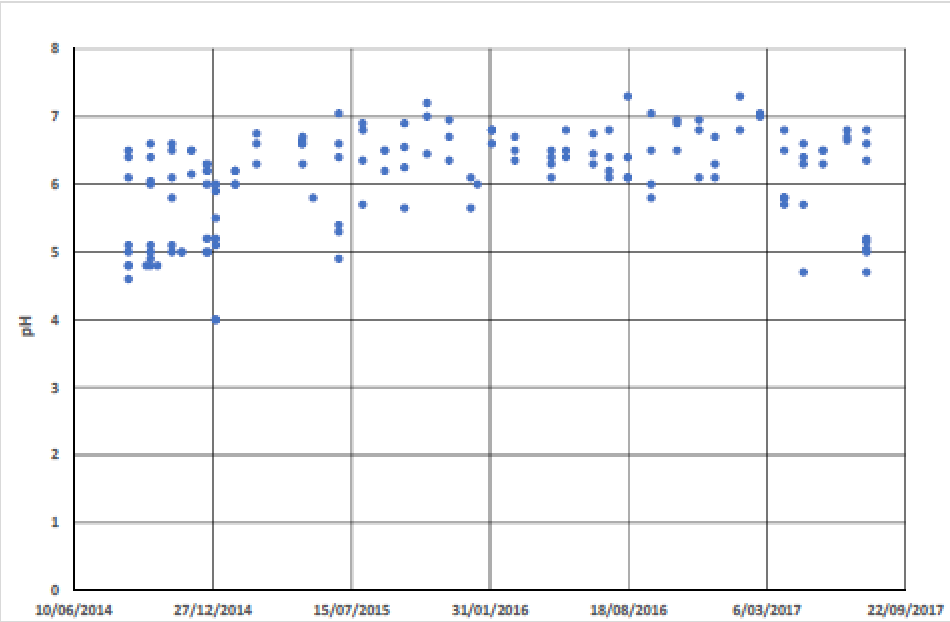
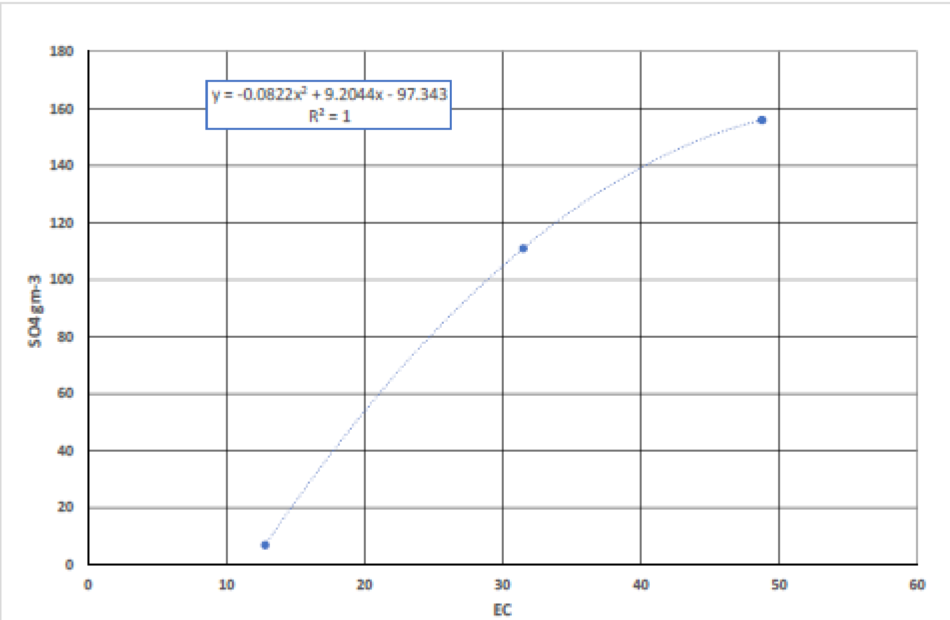


Figure 2



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8.6 AECOM Project Martha Geochemical Assessment

S

APPENDIX S

Geochemical Assessment
(AECOM)

AECOM Imagine it. Delivered.

Oceana Gold Project Martha
Anderson Lloyd
24-May-2018

Project Martha Geochemical Assessment

Geochemistry of Martha Phase 4 Pit, Martha Underground and Rex Orebody

Project Martha Geochemical Assessment

Geochemistry of Martha Phase 4 Pit, Martha Underground and Rex Orebody

Client: Anderson Lloyd

Co No.: 5719274

Prepared by

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24-May-2018

Job No.: 60544823

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 AS/NZS4801 and OHSAS18001.

Quality Information

Document	Project Martha Geochemical Assessment
Ref	60544823
Date	24-May-2018
Prepared by	Tim Mulliner
Reviewed by	Ian Jenkins

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
1	24-May-2018		Ian Jenkins Technical Lead Geochemistry	

Table of Contents

Glossary

ANC	Acid Neutralising Capacity
ARD	Acid Rock Drainage
CAF	Cement Aggregate Fill
HFO	Hydrous Ferric Oxide
MP4	Martha Phase 4 Pit
MPA	Maximum Potential Acidity
NAF	Non-Acid Forming
NAPP	Net Acid Producing Potential
NPR	Net Potential Ratio
PAF	Potentially Acid Forming
ROM	Run of Mine
RTSA	Rock and Tailings Storage Area
SUPA	Slevin Underground Project Area
TSF	Tailings Storage Facility
UCL	Upper Confidence Limit

Executive Summary

The proposed Martha Phase 4 (MP4) and Martha Underground including the Rex vein (collectively known as Project Martha) will include the recovery and processing of approximately 4,000,000 tonnes of ore and approximately 8,000,000 tonnes of overburden.

The relevant ore bodies are considered of similar mineralogy to the existing Martha, Favona, Trio, Correnso and Slevin Underground Project Area (SUPA) mines, owing to the shared geological setting and mode of mineralisation. The existing Martha Mine overburden and ore have been conservatively adopted as representative of overburden likely to be encountered in Project Martha as the open pit dataset exhibits the highest average and maximum sulphur and maximum potential acidity (MPA) values as well as exhibiting a low acid neutralisation capacity (ANC).

The overall overburden management strategy is based on continued use of the existing storage facilities and the current overburden management practices which have shown to be effective at preventing acid rock drainage. The specific recommended mitigation outlined, depends on the overburden's source and ultimate end state and is broadly discussed in three broad categories:

- Temporary storage of overburden sourced from Project Martha in existing stockpiles prior to placement within permanent disposal structures;
- Disposal of overburden to underground backfill; and
- Disposal of overburden sourced from the slip material within Martha Pit.

Potentially acid forming (PAF) overburden placed into temporary stockpiles at the Rock and Tailings Storage Area (RTSA) should be amended with limestone to ensure the introduction of a 30 week lag period. This will ensure that PAF overburden material is neutralised until the material is placed permanently outside of the zone of oxidation. For overburden that will potentially be exposed for a period in excess of this, additional amendment may be required as it is currently.

The potential for ongoing oxidation of overburden placed as underground backfill is considered negligible for overburden material of similar acid producing properties to the current geochemical dataset. However, as there is potential for some leaching of sulphate and trace metals into the groundwater, this potential impact on groundwater quality within the vicinity of the workings has been assessed by undertaking geochemical equilibrium modelling. The results suggest that mixing of acidified porewater with groundwater results in a reasonably unchanged groundwater quality. This is primarily driven by concentrations of sulphate currently being at (or near) the limits of saturation and a high degree of attenuation on trace elements due to sorption to ion-hydroxide minerals. For overburden material exhibiting acid producing properties in excess of the current dataset, it is recommended that amendment of the material with limestone is required prior to placing the overburden underground as backfill.

Overburden contained within the slip material (within the Martha Pit) has been exposed for an extended period of time (over a three year period) and is likely to have resulted in the generation of acidity and production of acid rock drainage (ARD) during this time as its natural neutralising capacity would have been consumed. Amendment with limestone at a rate that will sufficiently neutralise the residual sulphate mass is recommended, before being placed in permanent disposal structures (eg. The existing Central and Eastern Stockpiles or the Tailings Storage Facilities (TSFs)).

The amendment rates outlined are considered conservative and within the current operating limits of the site. Monitoring of the overburden material will enable refinement to those calculated and outlined and will be part of ongoing operations.

The geochemistry of the ore for Project Martha is considered to be similar in characteristics to the Martha Mine. The current tailings storage facilities (TSF1A and TSF2) are dominated by ore from this area and therefore it is unlikely that the ore deposited from Project Martha will alter the current decant or leachate water quality significantly. Furthermore, consolidation of existing tails over time result in a lower seepage velocity and improved seepage quality through retardation of trace-element migration from adsorption onto secondary mineral precipitates.

1.0 Introduction

1.1 Introduction

Project Martha is a development proposed by Oceana Gold (New Zealand) Limited (OGNZL) that has the potential to extend the current life of mine from mid-2019 to 2030 by adding 0.7 million ounces of gold production to its Waihi operations. The project consists of two key components:

- The Martha Phase 4 pit; and
- The Martha Underground, including the Rex vein.

Anderson Lloyd has engaged AECOM New Zealand Limited (AECOM) to carry out a geochemical study of the ore, tailings and overburden expected to be recovered from the proposed mine areas, and to assess the potential influence these materials may have on the environment.

The purpose of this study is to determine the following in order to support the consenting process:

- Undertake geochemical assessment of overburden material and ore.
- Undertake analysis of treatment requirements to mitigate potential acid generating conditions.

The project utilises the existing mine infrastructure and additional consents for the conveyor and the Rock and Tailings Storage Area (RTSA) are not required.

1.2 Background

The Phase 4 pit and the underground mines can provide a total ore tonnage of 4.5 Mt which is more than the remaining consented tailings capacity. The Company will decide based on the prevailing economics at that time, whether to process the open pit feed in preference to the underground feed or alternatively to complete the underground mine in preference to completing the open pit.

1.2.1 Martha Phase 4 Pit (MP4)

Up to nine hundred thousand tonnes of ore and 7 Mt of overburden could be mined from the MP4 component of the project. This includes material associated with two main slip events in the vicinity of the north wall of the existing Martha Pit which occurred during April 2015 and April 2016 (estimated to contain approximately 2 Mt of overburden).

Overburden material excavated will comprise similar geologies to that mined from the Martha Pit over the previous three decades. Overburden from MP4 will provide a source of backfill to the Martha Underground. The existing Central and Eastern stockpiles located in the RTSA and the existing Tailings Storage Facilities (TSF) will provide permanent disposal for the bulk of the material balance.

1.2.2 Martha Underground

Up to approximately 3.7 Mt of ore and 1.6 Mt of overburden could be mined from the Martha Underground project.

Overburden material excavated from the Martha Underground is expected to comprise similar geologies to that mined from the Martha Pit over the previous three decades. Where possible, overburden will remain underground and be used to backfill excavated voids. During the initial stages of excavation, it is proposed overburden will be stored temporarily in the vicinity of the Favona portal or in the Polishing Pond Stockpile which are designed to collect and manage seepage and runoff before being returned later as underground backfill. Ore is proposed to be stored at the existing Run Of Mine (ROM) stockpile to await processing.

1.2.3 Tailings and Overburden Storage Facilities

TSF1A

TSF1A is expected to have approximately 1.7 Mm^3 of spare capacity following the current life of mine when raised to the consented height of 177.25 mRL to incorporate additional material sourced from the Martha Ore. The crest raise will utilise a combination of both potentially acid forming (PAF) and non-acid forming (NAF) overburden sourced from Project Martha.

TSF2

TSF2 is expected to have approximately 1.6 Mm^3 of spare capacity when raised by 5 metres to 161 mRL to incorporate additional material sourced from the Martha Ore. The crest raise will utilise NAF overburden (0.19 Mm^3) sourced primarily from existing stockpiles.

Underground Disposal

Overburden will be utilised within the underground workings for stope backfill and it is estimated that 2.39 Mm^3 of overburden material will be deposited in this way.

Overburden Storage Facility

Overburden not used for the TSF embankment crest raises or rehabilitation will be permanently disposed of in the existing Central and Eastern stockpiles which are designed to collect and manage seepage and runoff and are located within the RTSA.

1.3 Geochemistry of Mine Wastes

Acid Rock Drainage (ARD) is a broad term incorporating the natural process of sulphide oxidation (which occurs when rocks containing sulphide minerals such as pyrite are exposed to air and water) leading to the formation of acid (ie. low pH) drainage and metalliferous drainage (which may have a neutral drainage (ie. pH 6-7)). The potential for environmental effects from ARD due to a depressed pH and/or elevated trace metal concentrations can be avoided by overburden characterisation, overburden removal and handling practices, and adopted overburden storage and/or treatment strategies.

Pyrite (FeS_2) is the most predominant “acid” forming sulphide mineral present in the Waihi mining situation. When pyrite is exposed to air and water, it decomposes into water-soluble components, including ferrous iron (Fe^{2+}), sulphate (SO_4) and acid (H^+). The relatively reduced water-soluble components are further oxidised to form ferric iron (Fe^{3+}) and water. The formation of ferric iron (Fe^{3+}) in water takes the form of ferric hydroxide ($Fe(OH)_3^-$ an orange precipitate) and additional acidity (H^+). Once sulphides have been oxidised to sulphates, it is extremely difficult to avoid oxidation of aqueous ferrous species to ferric species and subsequent hydroxide precipitation. Acidic waters increase the mobility of trace elements that can be elevated as a result of the mineralisation.

The actual potential for, and rate of oxidation of pyrite (and other sulphide minerals), and the potential impact to the receiving environment (notwithstanding the importance of the adopted overburden management practices) is dependent on many factors, including the concentration of the sulphides in the overburden, morphology of the sulphides, oxygen concentration and exposure time, wetting and drying cycles, presence of bacteria, and acid consuming materials (neutralisation capacity).

The following analytical testing methods are commonly used to characterise overburden with respect to its acid generating potential:

- Multi-element analysis - whole-rock testing for a range of trace and major elements to allow characterisation of the rock for potential contaminants that may leach and adversely influence water quality.
- Static testing – whole-rock testing for parameters indicative of the potential for acid generation.
- Kinetic testing – accelerated weathering of selected crushed overburden samples to assess the rate of potential acid generation and trace element leaching.
- Column testing – on site weathering of selected crushed overburden samples exposed to atmospheric conditions and to assess management practices.

The geochemistry of the Martha Mine ore and overburden is well understood and characterised. This knowledge has come as a result of the past 30 years of mining, during which time existing ore and waste management practices on site have been developed. These practices have proven to be appropriate for controlling ARD and are the basis for the practices recommended and outlined in this report for managing overburden from Project Martha.

1.4 Report Structure

This report is structured in the following manner:

- Section 2: Geology and Mineralogy – describes the geological setting of the greater Waihi epithermal area and the corresponding mineralogy associated with hydrothermal alteration and ore deposits in the area.
- Section 3: Geochemical Assessment – describes the analysis and assessment of ore and overburden undertaken to characterise the geochemistry of these materials.
- Section 4: Overburden Management – describes the proposed management of overburden for the proposed developments, including stockpiling, backfilling of material and management of material contained within the Martha Pit slip.
- Section 5: Mine Tailings and Tailings Management – describes management of mine tailings and impacts to the decant and seepage waters associated with the placement of tailings from the proposed mining development into the existing tailings storage facilities.
- Section 6: Conclusion – summarises the findings of this assessment.

2.0 Geology and Mineralogy

2.1 Local Geology

The mineralised overburden types at Waihi, encountered in Martha have been divided into the following main groups:

- **Andesite Host Rock** primarily consists of fine to medium porphyritic andesite flows with varying degrees of clay alteration and silicification. Also included within this category are volcanic ash and tephra deposits stratified within the main body of the andesite host rock. This host rock is prevalent throughout the wider area. Characteristic alteration assemblages include quartz, albite, adularia, calcite, pyrite, illite, chlorite, interlayered illite-smectite and chlorite-smectite clays extending over tens of metres laterally from major veins. There is also an association of quartz + interlayered chlorite-smectite (corrensite) + chlorite, producing a distinctive pale green colouration. The system is locally oxidised to depths in excess of 350 m below ground level along fractures.
- **Quartz Andesite** is the dominant host lithology for the Martha Vein system and in the Union Hill epithermal vein system which includes the Trio, Amaranth and Union veins. This lithology is described as a quartz-feldspar phyric andesite lava.

Ignimbrite, volcanic ash and alluvial sediments overlie the andesite. These rocks were formed subsequent to the mineralisation phase, and analyses have confirmed that these rocks are NAF.

The various component mining areas of Project Martha form part of the greater Waihi epithermal vein system. The Waihi vein system, including Martha Hill, Union Hill, Favona, Correnso and Slevin Underground Project Area (SUPA), has been interpreted as located within a series of sub-regional scale NE-trending grabens. The quartz andesite unit attains thicknesses in excess of 400 m in the Union Hill – Waihi East area with only minor variation in texture or modal composition. The quartz andesite is overlain by a fine-grained tuff, which forms a distinctive marker horizon and is overlain in turn by a series of feldspar-phyric andesite flows and volcaniclastics.

The geology and mineralogy of the proposed project areas, as with the greater Waihi epithermal vein system, is expected to be generally consistent with that encountered in the existing Martha, Favona, Trio and Correnso mines.

3.0 Geochemical Assessment

3.1 Introduction

Data from geochemical assessments of ore, tailings and overburden produced from previously mined areas associated with the Waihi Vein system and the current site operations at Martha (Martha Pit, Favona underground, Trio underground and Correnso underground) are summarised in the various technical reports that were produced for these mining operations. The source of this information is summarised in Table 1.

Table 1 Geochemistry Source Data Summary

		Total Element	Acid Base Accounting	NAG	Kinetics	Column
Overburden	Martha	(4) GCNZ, 1986	(2) EGI, 1994	(2) EGI, 1994		
Overburden	Favona	(6) URS, 2001	(6) URS, 2001	(6) URS, 2001		
Overburden	Trio	(5) URS, 2010	(5) URS, 2010	(5) URS, 2010		
Overburden	Correnso Deep	(1) URS, 2012	(1) URS, 2012	(1) URS, 2012	(1) URS, 2012	
Tailings	Martha		(2) EGI, 1994	(2) EGI, 1994		(5) EGI, 2012b
Tailings	Favona	(6) URS, 2001	(6) URS, 2001	(6) URS, 2001		(3) EGI, 2012a
Tailings	Trio					
Tailings	Correnso Deeps					
		Existing				
		Unknown				
		No Data				

GCNZ, 1986 Groundwater Consultants (NZ) Ltd. And Stuart D Miller & Associates Pty Ltd. Geochemical Evaluation of leachates from Waste Rock and Tailings. August 1986.

EGI, 1994 Environmental Geochemistry International Pty Ltd. Waihi Gold Mining Company. Acid forming characteristics of waste rock and tailings and implications for waste disposal. Stage 1 Report. March 1994.

URS, 2001 URS New Zealand Ltd. Favona Reef, Waihi. Underground Mining Consent Geochemistry. 30 November 2001.

URS, 2010 URS New Zealand Ltd. Trio Development Project - Geochemistry of Waste Rock. 08 June 2010.

EGI, 2012a Environmental Geochemistry International Pty Ltd. Martha Mine. Column Leach Testing of Favona Tailings. Progress Report - Year 3. June 2012

EGI, 2012b Environmental Geochemistry International Pty Ltd. Martha Mine. Column Leach Testing of a composite tailings sample from storage 2: Progress Report Year 8. June 2012.

URS, 2012 URS New Zealand Ltd. Correnso Underground Mine and Golden Link Project, Area - Geochemistry of Ore, Tailings and Waste Rock. 5 June 2012

3.2 Characterisation Philosophy

The geology and mineralogy of Project Martha (MP4, Rex and the remainder of the Martha Underground) is expected to be generally consistent with that encountered in the existing mine. Therefore the geochemical characteristics and behaviour of the ore and overburden (once mined) is well understood.

Geochemical analytical results from the three main areas associated with Project Martha are currently scheduled for multi element analysis and static testing. The number of required analyses from both the Martha Underground and the MP4 cutback areas has been calculated based on the minimal sample size required to categorise the mean concentration (from the existing datasets). The calculation in the existing datasets was focused on the variable concentrations of sulphur, antimony, selenium and arsenic as they are the four analytes which currently exhibit a geochemical abundance index of greater than 3.

The assessment given here (in lieu of receiving the targeted analytical results) is undertaken on the premise that as the ore bodies of Project Martha are of similar mineralogy to the Martha, Favona, Correnso and Trio ore bodies, a conservative approach has been adopted in characterising overburden and ore from Project Martha to account for potential variation in overburden geochemical properties. The adopted approach is outlined below.

3.2.1 Project Martha

Historic static overburden data from previously mined areas is summarised and presented in Table 2. Data from the Martha Mine overburden (highlighted) has been conservatively adopted as representative of overburden likely to be encountered in Project Martha as the dataset exhibits the highest average and maximum sulphur and MPA values as well as exhibiting a low ANC.

Long term column leach tests of Martha overburden sourced from the Martha Pit walls have been considered to provide the best indication of acidification kinetics for overburden from the proposed project.

Kinetic testing comprised daily leaching at a rate equivalent to rainfall, with leachate samples collected at regular intervals to allow characterisation of changing leachate quality. This methodology is considered sufficiently robust to allow assessment of the kinetics of acidification for these samples and it is considered that these kinetic test results provide a suitable proxy for overburden produced for the current project for the following reasons:

- The mineralogy in Martha, Favona, Correnso and Trio overburden rock is similar, with the degree to which acidification occurs primarily a function of total sulphur content and any inherent neutralisation potential that may be present in the overburden. The total sulphur and neutralisation potential differs spatially across the ore body, however adopting the full variability within the Martha, Favona, Correnso and Trio dataset is considered a conservative approach in terms of representing the variability present within the Project Martha rock and ore.
- The testing of overburden rock samples for total sulphur allows the calculated dosage rates to be scaled in accordance with overburden rock sulphur content, on the assumption that the mineralogy is approximately equivalent and acid generation rates are a function of sulphur content.
- The column testing results were not scaled for particle size, providing a conservatively high rate of acidification as a function of the significantly greater surface area of the crushed sample relative to overburden rock.
- The use of sulphate generation rates is conservative in that not all sulphide minerals generate acidity on oxidation.

3.2.2 Slip Material

During April 2015 and April 2016, two main slip events occurred in the vicinity of the north wall of the Martha Pit. These events released and exposed a significant volume of rock into the open pit. The combined slip cut haul road access to the bottom of the pit and extended to the base of the pit (RL – 885 mRL).

Due to the exposure period (ca. 2-3 years+), this material is likely to have resulted in the generation of acidity and production of acid rock drainage (ARD). Some of this ARD production has reported to the underground workings and currently this ARD (generated from the slip material) is being managed via the underground dewatering and water treatment processes. As part of the MP4 and Martha Underground projects, this material will have to be removed, treated and disposed of accordingly.

Due to the nature and exposure time of this material (to oxidising processes), an assessment of the acid producing characteristics of this material and its likely in-pit geochemical status has been carried out with a view of developing a management strategy for this material which will be removed and disposed of as part of the proposed development of the Martha Pit. This assessment methodology is summarised in Figure 1 and detailed in Appendix A.

In summary, the methodology adopted is based on conservatively calculating the volume of oxidised products based on likely whole rock geochemistry, expected sulphate oxidation rates and exposure period. The assessment undertaken was considered conservative based on the following:

- Adopted Net Acid Producing Potential NAPP values representative of the material contained within the slip are based on the 95th percent Upper Confidence Limit UCL of analytical data sourced from the north wall of Martha Pit before the slip event;
- A likely scaling factor of 5 has been calculated in the assessment based on likely differences in porosity and particle size distribution between column tests and material contained within the slip, however amendment rates have been calculated based on a scaling factor of 1 (ie. column sulphate generation rates have been assumed to be reflective of field sulphate generation rates);
- A maximum oxidation depth of 5 m below the surface has been assumed over the total surface of the slip; and
- No lag has been taken into account.

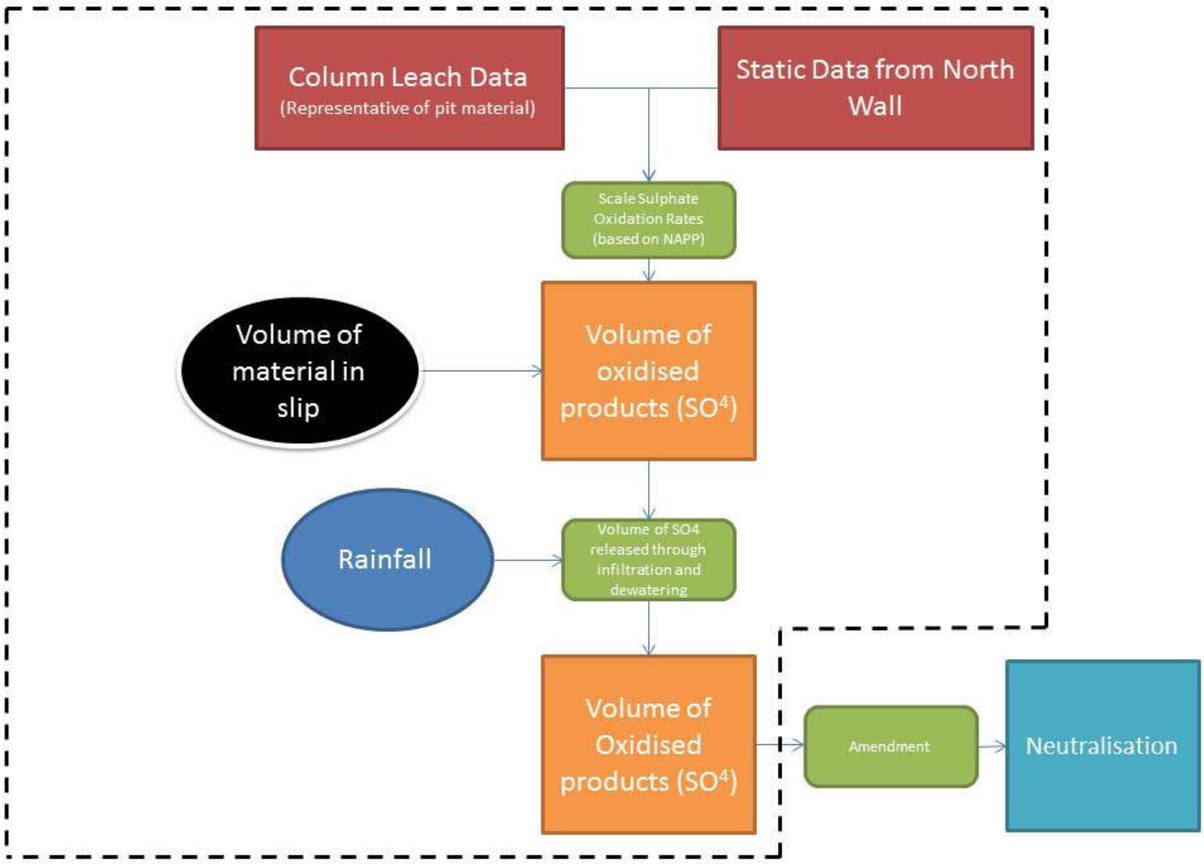

Figure 1 Conceptualised Assessment Methodology for Slip Material

Table 2 Summary of Geochemical Results for Overburden

Parameter	Trio Andesite Waste Rock		Favona Andesite Waste Rock		Martha Mine Waste Rock		Correnso Andesite Waste Rock		North Wall Data		Mean Concentration in Earths Crust[1]	Geochemical Abundance Index[2]			
	25 Samples		85 Samples		46 Samples		27 Samples		15 Samples						
	Arithmetic Mean	Range	Arithmetic Mean	Range	Arithmetic Mean	Range	Arithmetic Mean	Range	Arithmetic Mean	Range		Trio	Favona	Martha	Correnso
Acid Generating Potential															
Total Sulphur (%)	2.1	0.5 - 5.1	2.3	0.01 – 6.0	3.0	0.01 – 9.3	2.15	0.47 - 3.39	3.3	0.58 - 4.5	0.03	5	5	5	5
Total Carbon (%)	0.3	0.02 - 0.7	-	-	-	-	0.70	0.21 - 1.53	-	-	-	-	-	-	-
MPA (%CaCO3)	6.5	1.5 – 15.9	7.0	0.03 – 19	9.5	0.03 – 29	6.7	1.5 - 10.6	10.0	1.8 - 14.1	-	-	-	-	-
ANC (%CaCO3)	7.8	<2 – 15.0	1.5	0.03 – 13	3.1	<2 – 16	7.3	2.0 - 15	4.7	0 - 32	-	-	-	-	-
ANC/MPA	1.6	0.13 - 8.12	1	0.004 – 32	0.9	0 – 18	1.36	0.2 - 4.6	0.45	0 - 2.7	-	-	-	-	-
AP (kg $CaCO_3$/tonne)	65	15 - 159	70	0.3 - 190	112	0.3 - 291	67	14.7 - 106	102	18 - 140	-	-	-	-	-
NP (kg $CaCO_3$/tonne)	53 (26)[2]	20 - 150 (1.7 - 58.7)[2]	15	0.3 - 130	31	<2 - 155	58	17.5 - 127	-	-	-	-	-	-	-
NNP (kg $CaCO_3$/tonne)	-41	-152 - 43	-54	-181 - 114	-73	-252 – 63	-15	-87.8 - 72.5	-	-	-	-	-	-	-
NAG pH	-	-	-	-	3.4	2.1 - 7.5	8.7	2.3 - 11.2	4.1	2.3 - 8.5	-	-	-	-	-

Notes:
1. Bowen, HJM, 1979,Environmental Geochemistry of the Elements.
2. Values based on total carbon.

4.0 Overburden Management

During development and mining, overburden is to be managed to minimise the requirement for surface stockpiling and the need for externally sourced backfill materials. Overburden used as backfill will be permanently stored within the underground workings, limiting the potential for oxidation of the overburden prior to flooding of the workings at some point in the future.

Overall the overburden management strategy for underground backfill is to monitor the material and to add limestone if necessary prior to placement. Based on current data, the requirement to add limestone to underground backfill is expected to be minimal.

Likewise, overburden in the Central and Eastern stockpiles, or used within the TSF embankments will be compacted upon deposition in order to limit oxygen ingress within these storage facilities. Overburden placed within the zone of oxidation for the final proposed landforms (typically within the final 2 metres of directly placed and/or stockpiled material) should comprise NAF material only. Within temporary stockpiles stored at the RTSA, appropriate mitigation measures in the form of limestone amendment will be required to limit sulphide oxidation rates and/or limit the effects of already oxidised material.

Overall the overburden management strategy at the RTSA is based on current overburden management practices adopted on site and is summarized in Figure 2. The overriding philosophy is:

- The overburden will likely be consistent with the materials produced by the current mining operations;
- Addition of limestone to PAF material is required to create a lag in acid generation until overburden is encapsulated within a permanent repository;
- The refinements to the management practices over the past decades are based on maintaining a pH of above 5.5 until final capping is complete to control the rate of sulphate release;
- Testing of the material prior to conveying allows the limestone addition via the lime silo on the conveyor belt to be adjusted as necessary;
- Regular (monthly) PAF slurry testing and regular surface limestone application after placement have proven to be effective at managing the material prior to placement of a permanent cover; and
- The current overburden management practices are effective at controlling the mine overburden materials and preventing acid rock drainage.

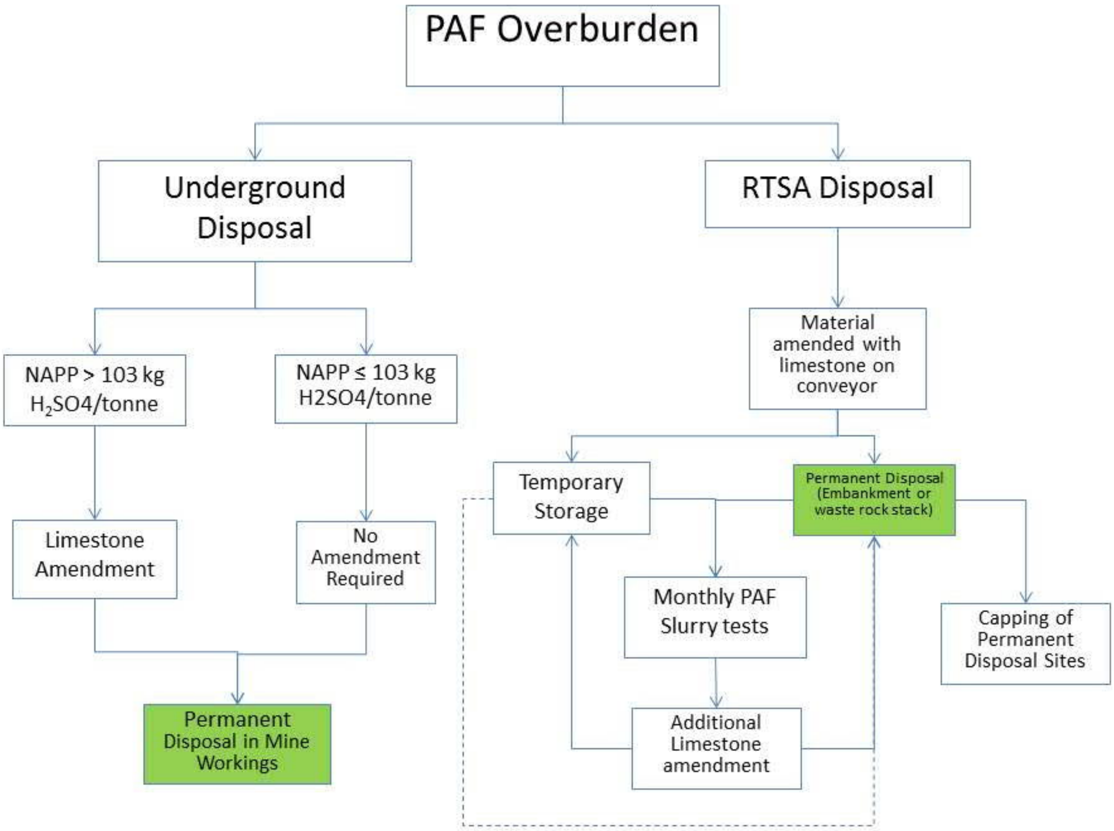

Figure 2 Conceptualised Overburden Management

The mitigation measures outlined here relate largely to limestone amendment which has been widely used on site in the past. The actual management of overburden (and amendment rates) will depend on its source and its ultimate end state. As such, overburden management is discussed in three broad categories:

- Disposal of freshly mined overburden to temporary stockpiles at the RTSA prior to permanent disposal;
- Disposal of freshly mined overburden to backfill (underground); and
- Disposal of overburden sourced from the slip material within Martha Pit.

4.1 Overburden disposal to temporary stockpiles (RTSA Disposal)

While OGNZL prefers to place overburden directly into the permanent repositories, there are times of the year (generally during the winter) when that is not possible, and the material needs to be stored temporarily prior to permanent placement.

Sulphate generation rates for overburden from Project Martha, excluding the slip material have been conservatively estimated by utilising the adopted static geochemical results (refer Table 2) and kinetic testing of Martha overburden collected within the open Martha Pit. The 95th percent UCL NAPP has been adopted for conservatism and is the basis for calculating the predicted sulphate generation rates.

The rate of sulphate generation has been calculated from selected Martha Overburden Columns. Selected columns including oxidation state, NAPP and calculated sulphate generation rate of a mix of oxidised and unoxidised material are presented in Table 3. In calculating the sulphate generation rate, the initial 20 weeks of data was excluded to exclude any lag from the sulphate generation rate calculation.

Table 3 Selected Martha Overburden Columns

Sample	Location within Martha Pit	Oxidation State	NAPP	Sulphate Generation Rate (Calculated)
			kg H_2SO_4/t	mg SO_4/kg/day
WR2	South Wall	Unoxidised	65	4
WR3	South Wall	Oxidised / Unoxidised	20	41
WR4	South Wall	Oxidised	17	16
WR6	South Wall	Unoxidised	65	5
WR7	South Wall	Oxidised / Unoxidised	20	51
WR8	South Wall	Oxidised	20	18
WR17	North of Martha Lode	Unoxidised	16	20
WR18	North of Martha Lode	Partially Oxidised	123	56
WR20	North of Martha Lode	Oxidised	47	20
WR29	Waste	Oxidised	23	1
Mean			42	23
95% UCL	Martha Static Data (Refer to Table 2)	103		
Scaled Sulphate Generation Rate				57

4.1.1 Limestone dosing requirements

The limestone amendment required for overburden placed within the temporary stockpiles at the RTSA is proposed to be dependent upon the results of testing of the material prior to it leaving the open pit. Current operational practises see daily testing of the overburden for NAG pH and NAPP. Depending on the results, material is then classified as PAF or NAF, a limestone amendment rate is calculated and application rate is adjusted accordingly. These same practices are proposed for calculating limestone amendment rates for overburden sourced from Project Martha.

Overburden to be placed in temporary storage structures and left exposed for a period of no more than 30 weeks should be blended with crushed limestone at a rate designed to provide a lag period appropriate to mitigate generation of ARD for a 30 week period (Table 4). It is proposed that limestone amendment occurs on the conveyor while moving overburden out of the pit area as per current practice.

Monitoring of placed rock will ensure these dosing rates are appropriate and enable refinement as part of ongoing operations. The dosing rate given in Table 4 are considered conservative based on the assumptions outlined in Section 4.1.2.

Table 4 Overburden Limestone Dosing Requirements – Short Term Exposure

Item	Value
NAPP (95th percent UCL)	103 kg H_2SO_4/tonne
Adopted Sulphate Generation Rate	0.06 kg SO_4/tonne/day
Limestone Dosing Requirement (for 200 day lag)	12 kg $CaCO_3$/tonne overburden
Limestone Amendment Rate	1.2 %

4.1.2 Key Assumptions

The calculated limestone dosage rates given in Table 4 are considered to provide a high degree of conservatism in that it is assumed that all sulphur is present as acid generating pyrite (FeS2), with no allowance for other sulphide minerals that do not generate equivalent acidity, such as sphalerite. In addition, the use of a 95th UCL NAPP provides a degree of conservatism that on average, the given dosing rate requirement should provide sufficient excess limestone to account for any variation encountered.

Refinement of the predicted dosage rates for overburden will be undertaken as additional information from routine monitoring becomes available. Specific information requirements to allow such a review may include:

- Determination of a period of exposure
- Static data for overburden

The derivation of the rates for limestone dosing has proven to be effective in managing rock stockpiles at the site to date. The method is conservative and waste specific dose rates are effectively revised as part of the current operation on site.

The key assumptions used in assessing and calculating the amendment requirements are as follows:

- That collected static data and calculated NAPP (based on the 95th percent UCL of the Martha overburden geochemical dataset) is representative of the mass of the overburden material.
- Overburden used within the kinetic column tests is representative of overburden from the proposed mining areas (with calculated sulphate generation rates proportional to calculated NAPP values).
- No scaling factors have been applied to the sulphate generation rates calculated from the column leachate tests. This is considered a conservative assumption as it does not take into account likely differences in porosity and particle size distribution.
- No inherent lag within the overburden material has been taken into account and it is assumed that sulphides within overburden will oxidise immediately upon removal. This is considered a conservative approach as it is likely an inherent lag period will exist within the overburden.

4.2 Freshly Mined Overburden Disposal to Backfill Underground

Approximately half of the overburden from Project Martha will be utilised to backfill the underground workings and voids. The potential for ongoing oxidation of overburden once the materials are at their final destinations is considered to be negligible. Furthermore, approximately 30% of total backfill will compromise cement aggregate fill (CAF) which will introduce a source of alkalinity with the overburden mitigating adverse seepage.

To date additional mitigation (aside from limestone amendment during temporary storage prior to permanent disposal) has not been required by existing underground operations at the site and it is not considered necessary for Project Martha based on the assumed overburden acid base accounting properties (95th % UCL NAPP of 103 kg H_2SO4/tonne). However in the event that overburden to be disposed to backfill has acid producing properties higher than this assumed NAPP of 103 kg H_2SO4/tonne, it is recommended that amendment of the material with limestone is considered prior to placing the overburden underground as backfill. Therefore two different amendment scenarios are recommended depending on the acid producing properties of the overburden. These properties will be redefined based on the geochemical analytical results from overburden associated with Project Martha.

In both scenarios, it is recommended the backfilling of overburden should be completed with minimum stockpiling following exposure, such that the overburden's inherent lag will ensure that material is placed before the onset of acidification.

4.2.1 Limestone amendment prior to backfill

It is expected that the majority of the backfill will not require limestone addition (assuming Project Martha overburden is within the 95th percent UCL of the Martha overburden geochemical dataset). For overburden material with acid producing characteristics in excess of this, amendment with limestone prior to backfilling may be appropriate. The rate of amendment would depend on the monitoring results of the backfill material. To ensure appropriate mixing of limestone and overburden, one option is to place limestone on top of the benches prior to removal.

4.2.2 No amendment requirement prior to backfill

For material geochemically similar to the current Martha dataset (ie. NAPP of 103 kg H_2SO4/tonne or below) no limestone amendment prior to backfill is required. This is based on the potential for acidification of this material being low (due to the minimisation of long term temporary storage within the pit), and the existing groundwater geochemistry in the area of backfill which is already impacted by historic mine drainage. An assessment on the potential effects to groundwater based on the acidification of the placed overburden and a subsequent release of trace metals to groundwater has been undertaken.

4.2.3 Assessment of Effects on Groundwater

Once the backfilled overburden material is saturated, there is the potential for some leaching of oxidation products and trace metals into the groundwater within the vicinity of the workings. As stated previously, due to a preference for overburden material to be placed directly underground and/or amendment of overburden prior to backfilling; the volume of oxidised products available for leaching is likely to be low. However for means of comparison, it is assumed here that backfilled overburden is in an advanced oxidised state and that the porewater chemistry within is elevated with respect to sulphate and trace elements. This assessment is therefore considered 'worst case'. The assessment does not assess potential effects of backfilling overburden that is considered outside the current Martha dataset (ie. NAPP > 103 kg H_2SO_4/tonne). In the event that the geochemical analytical results for the overburden are greater than the conservatively assumed 95% UCL NAPP, the need for amendment with limestone prior to backfilling should be evaluated (refer to Section 4.2.1)

Despite the conservatism of the assessment, it is not expected that backfilled overburden will impact the water quality of the groundwater due to the current over saturation of elements. For means of illustration geochemical modelling was undertaken utilising the geochemical modelling software PHREEQC version 3.3.12 and the Minteq.v4 database.

The modelling utilised the following steps and process:

1. Equilibrate leachate from the Martha column tests with a range of minerals that typically influence the solubility of the various contaminants of concern. The minerals considered include sulphides, hydroxides, carbonates and sulphates.
2. Determine the influence of changing groundwater conditions on the adsorption/desorption of trace elements to iron oxy-hydroxides or hydrous ferric oxides (HFO). The insoluble iron mass (is assumed to be present as ferrihydrite), is provided for sorption reactions. In this manner a new equilibrium between adsorbed and soluble trace elements can be modelled.
3. The removal of trace elements via adsorption to ferrihydrite can change the ionic strength of the water and this can lower the solubility of the iron remaining in solution. To ensure solubility limits for iron minerals are not being exceeded following the adsorption reactions, and to

address the overall solubility of goethite, mineral equilibrium for goethite was carried out subsequent to surface adsorption.

Modelled groundwater quality is considered to reflect an average chemistry that would be expected to occur within the underground backfill upon flooding (assuming porewater is reflective of raw column leachate). Localised differences are expected, with these the result of the variability of overburden material, the degree of oxidation, the presence of neutralising minerals and the availability of ion-hydroxide minerals for adsorption of trace elements.

The range of predicted contaminant concentrations (mixed at ratios of 9:1, 8:2 and 7:3 for existing groundwater / porewater respectively) are generally consistent with the background groundwater quality and are characteristically high in sulphate, with elevated concentrations of some analytes such as iron and manganese due to the reducing conditions present (Table 5). Concentrations of trace elements arsenic, cadmium, chromium, copper, lead, nickel and zinc are predicted to be relatively low due to the high degree of attenuation provided by sorption to ion-hydroxide minerals.

Selenium which is present in groundwater as an anion, is predicted to be elevated in concentration relative to background. This is primarily a function of the poor adsorption of selenium under the conditions assessed. Iron and cadmium, which are also elevated under the anaerobic conditions modelled, are expected to precipitate under aerobic conditions. Therefore there is likely to be no discernible difference in concentration of these elements within the discharge of the Martha Pit Lake when formed (refer to AECOM Report Martha Pit Lake Management Strategy, 2018).

Table 5 Predicted Groundwater Concentration

Input	Existing Groundwater	Porewater of backfilled material	Predicted Groundwater Quality	Predicted Groundwater Quality	Predicted Groundwater Quality
Source	Shaft No.7[#]	Raw Column Data[#]	90 % Groundwater	80% Groundwater	70% Groundwater
pH	6.5	2.5	7.1	7.1	7.1
SO_4	1230	1153	1223	1214	1206
Ca	370	39	4	1	1
Mg	90.2	45	61	44	30
Na	46	5	42	38	34
K	9	6	9	9	8
Fe	0.4	196	20	39	59
As	0.01	0.006	<0.002	<0.002	<0.002
Cd	0.0002	0.02	0.002	0.003	0.005
Cr	0.0002	0.01	<0.0001	<0.0001	<0.0001
Cu	0.001	1.4	<0.0001	<0.0001	<0.0001
Pb	0.0002	0.01	<0.0001	<0.0005	<0.0005
Ni	0.03	1.4	<0.0001	<0.0001	<0.0001
Zn	0.1	1.7	0.0005	0.0005	0.0005
Mn	11	2	2.5	2.7	2.9
Hg	0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Sb	0.001	0.001	0.0001	0.0001	0.0002
Se	0.001	0.02	0.003	0.005	0.007
Co	0.01	2	< 0.0001	< 0.0001	< 0.0001

*All concentrations in mg/l (pH = pH units)
[#]Based on mean recorded concentrations

Overall, the mixing of porewater within the backfilled overburden subject to acidification with the 'natural' groundwater results in a reasonably unchanged groundwater quality. It is therefore considered that the potential for the backfilled overburden to negatively impact groundwater quality within the vicinity of the workings is negligible based on the following:

- The assessment assumes that overburden will be subject to oxidation and is not placed in a way that limits oxidation properties.
- Overburden used within the kinetic column tests is representative of overburden from the proposed mining areas.
- No scaling factors have been applied to the sulphate generation rates calculated from the column leachate tests. This is considered a conservative assumption as it does not take into account likely differences in porosity and particle size distribution.
- No inherent lag within the overburden material has been taken into account and it is assumed that sulphides within overburden will oxidise immediately upon removal. This is considered a conservative approach as it is likely an inherent lag period will exist within the overburden.
- Concentrations of sulphate in groundwater are currently at (or near) saturation limits.

- A high degree of attenuation on trace elements is expected by sorption to ion-hydroxide minerals.

4.3 Overburden Disposal (Slip Material)

The assessment methodology adopted is outlined in Section 3.2.2 and provided in Appendix A. The slip material may be used as underground backfill, stored temporarily at the RTSA, or the material may to be placed in permanent above ground storage structures. It is recommended that the slip material at the RTSA be blended with limestone at a rate sufficient to fully neutralise the residual oxidation products. Slip material to be disposed of underground will require testing as outlined in Section 4.2.3.

4.3.1 Limestone Application Rate (for disposal outside of pit)

The recommended mass of alkalinity (in the form of limestone) to be blended with material potentially exposed to oxidation (estimated to be the top 5 metres of the slip material) has been calculated based on the mass of PAF rock present within the slip material, exposure period and sulphate oxidation rate. Actual measurements on slip material have not been undertaken, however theoretical acid base accounting estimates suggest that the maximum potential limestone amendment rates required to be blended with the oxidised slip material could be up to 21 kg/$CaCO_3$ per tonne of material or at a rate of 2.1 % per volume, per year of exposure based on achieving a net potential ratio (NPR) of 1.2. It should be noted that ongoing onsite waste management practices at the site have refined amendment rates from the theoretical levels to approximately 25% to 50% of these rates, and these lower rates have been shown to adequately control acid rock drainage.

The maximum potential application rates are summarised in Table 6. This rate of amendment only accounts for the exposure period up until the time of disposal. It does not account for additional oxidation and sulphate generation from the period of disposal until oxidation controls are fully in place (i.e. material is no longer subject to oxidation through either permanent placement underground as backfill or placed in an engineered fill and capped). Therefore the requirements for monitoring and additional limestone application should be followed as outlined in Section 4.1.1.

Monitoring of the slip material will ensure that dosing rates are appropriate and enable refinement as part of ongoing operations. The dosing rate given here is an indicative rate based on the assumptions outlined in Section 3.2.2 and are therefore expected to represent an upper bound for limestone amendment rates.

Table 6 Recommended Rate of Amendment – Slip Material When Disposed of out of Pit

Item	Value
Residual Sulphate Production Rate	24,000 t/SO_4/year
NPR	1.2
Volume of Oxidised Material	1,170,000 tonne
Volume of amendment required (per tonne of material per year of exposure)	21 kg $CaCO_3$
Maximum Potential Rate of amendment (per year of exposure)*	2.1%

*Based on a linear relationship between sulphate production rate and time

5.0 Mine Tailings Management

Current tailings storage facilities (TSF1A and TSF2) contain a high proportion of tailings sourced from the Martha Pit area (approximately 70% and 100% for TSF1A and TSF2 respectively). The balance of TSF1A is made up from processed ore from the underground Favona, Trio, Correnso and SUPA mines. Following current mining activities, TSF1A is expected to have approximately 1.7 Mm^3 of spare capacity. TSF2 will allow an additional 1.6 Mm^3 of spare capacity. Collectively, this spare capacity will be utilised for processed ore from Project Martha and once in place, ore from the project will comprise approximately 5% of the material balance stored within each of these facilities.

Current TSF seepage water quality from both TSF1A and TSF2 is presented in Table 7.

Table 7 Actual TSF Seepage Water Quality

	TSF1A (Actual) [2]	TSF2 (Actual) [1]
pH	6.3	6.4
SO_4	492	97
Al	0.005	0.01
Fe	21	5
Ca	51	21
Mg	27	9.1
Na	154	73
K	16	8
Sb	0.0002	0.0002
As	0.002	0.001
Ba	0.05	0.14
Cd	0.0001	0.00005
Co	0.17	0.11
Cr	0.001	0.001
Cu	0.002	0.002
Pb	0.0001	0.0001
Hg	0.0001	0.0001
Mn	8.7	3.8
Ni	0.014	0.005
Zn	0.03	0.004

All concentrations reported in mg/L (where actual data was below the method detection limit, the detected limit has been taken as the recorded concentration).

[1] Mean Underdrainage Data (U1-U4), 2014 to July 2017

[2] Mean Underdrainage Data (TU), 2014 to August 2017

When processed ore is deposited at the top of the tailings facilities, the tailings porewater will be exposed to atmospheric conditions and saturated with respect to a number of trace elements and via the formation of Ferrihydrite, Gibbsite and hydrous ferrous oxygen compounds resulting in trace elements Al, Cd, Ca, Cr, As, Pb, Hg, Co and Zn largely precipitating out of solution. In addition, as porewater seeps through the consolidated tailings, attenuation of trace elements through adsorption onto secondary mineral precipitates will occur. The resultant tailings leachate geochemistry as shown in Table 7 is largely depressed with respect to trace elements of concern

The geochemistry of the ore for Project Martha is considered to be of similar characteristics to Martha Mine. As both current tailings storage facilities are dominated by ore from this area (approximately 70 to 100% for TSF1A and TSF2 respectively) it is unlikely that the geochemistry of the ore deposited from Martha will differ significantly to what is already present and the resultant leachate should not differ significantly from the data presented Table 7. In addition to the material balance, the likely leachate is unlikely to change significantly from current concentrations due to the following:

- The consolidation of existing tailings will reduce hydraulic conductivities and thereby result in a lower seepage velocity; and
- This lower seepage velocity coupled with a longer flow path will attenuate changes in seepage quality through retardation of trace element migration from adsorption onto secondary mineral precipitates.

Any variance in geochemistry (between ore from Project Martha and ore from previously mined areas) is likely to be more pronounced in the decant water quality. However, as the geochemistry of both is considered to be similar, and current decant water quality is well within the operational constraints of the water treatment plant, no significant changes to the decant water (that would affect consent compliance) are considered likely. It is recommended that once the ore geochemistry data is available, the similarity with the current geochemistry dataset is confirmed and a reassessment of any key variances that could result in the ultimate tailings pore and seepage water quality is made.

6.0 Conclusions

Overburden and ore material excavated from MP4 and the Martha Underground mines will comprise similar geology to that mined from the Martha Pit over the previous three decades and as such no significant difference to the overburden management or philosophy from past practices is expected.

Overburden backfilled into the underground workings is unlikely to impact groundwater based on a limited potential for oxidation once the materials are at their final destinations assuming that the overburden material has similar acid producing characteristics to the current known dataset. The current oversaturation of groundwater in respect to sulphate and a likely high degree of attenuation on trace elements via the sorption to ion-hydroxide minerals will ensure that any impacts of groundwater quality within the vicinity of the workings as a result of oxidised overburden should be minimal. For overburden material exhibiting acid producing properties in excess of the current dataset, it is recommended that amendment of the material with limestone is required prior to placing the overburden underground as backfill.

For the slip material contained within the Martha Pit, disposal directly underground or to the RTSA (either temporary stockpiles or permanent placement) is possible. For slip material at the RTSA, amendment with limestone at a rate that will sufficiently neutralise the residual sulphate mass is recommended. Additional amendment measures may be required prior to final disposal if this material is placed in temporary storage.

The dosing rates outlined for the temporary storage of overburden material and for the slip material are considered conservative and within the current operating limits of the site. Monitoring of the overburden material will ensure that dosing rates given are appropriate and will enable refinement to those calculated here as part of ongoing operations.

Current tailings storage facilities (TSF1A and TSF2) are dominated by ore mined from the Martha pit to date and which is expected to be reflective of the characteristics of the ore from Project Martha. Coupled with reduced porewater release from the consolidated tailings, a resultant lower seepage velocity, and improved seepage water quality, as well as current decant water quality being within the operating constraints of the water treatment plant, no additional management measures are recommended for the disposal of ore into these existing facilities.

7.0 Standard Limitations

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Appendix A

Martha Pit Slip Material - Geochemical Assessment

A.1 Geochemical Properties of Slip Material

Static data from a 2011 survey of the north wall area has been assumed to be reflective of material contained within the slip material (Table 8). The 95th percent UCL NAPP has been calculated as 86 kg/H_2SO_4/t (84 kg $CaCO_3$/t) and has been conservatively adopted as representative of overburden contained within the slip material.

Table 8 Static Data Summary

Sample Collection Date	Site ID	NAPP kg H_2SO_4/t
28-Jun-11	NU7 E	-45
28-Jun-11	NU7 D	52
28-Jun-11	NU7 C	91
28-Jun-11	NU7 B	82
28-Jun-11	NU7 A	94
28-Jun-11	NU6 E	124
28-Jun-11	NU6 D	128
28-Jun-11	NU6 C	109
28-Jun-11	NU6 B	93
28-Jun-11	NU6 A	75
27-Jun-11	NU5 E	32
27-Jun-11	NU5 D	23
27-Jun-11	NU5 C	-198
27-Jun-11	NU5 B	26
27-Jun-11	NU5 A	75
Mean		**53**
95th percent UCL		**86**

A.2 Sulphate Generation Rate of Slip Material

Selected kinetic data has been summarised from column testing undertaken on Martha Overburden. The initial 20 weeks of data has been excluded in order to exclude initial lag periods which were present in the column tests, which is deemed applicable due to the exposure of the former pit wall to a period of oxidation prior to the slip event. However any lag associated with rock previously not exposed to the oxidation front (ie. unoxidised and unweathered rock within the pit wall exposed by the slip event) has not been taken into account; the approach is therefore considered conservative.

A.2.1 Scaling Factors

In order to account for the scaling effect between the column tests and the slip material (and their respective expected sulphate oxidation rates), a scaling factor is considered appropriate. The actual scaling factor will depend upon the estimated differences in waste-rock particle size (between lab samples and slip material) and hence total surface area and overall porosity of the material noting the following:-

- The material used in the column tests had a maximum particle size in the order of 4 mm diameter, whereas the slip material likely consists of material of greater than 1m in diameter.

- The slip material also likely contains a large volume of fines, the overall difference between the overburden in the column data and the overburden contained within the slip material cannot therefore be defined.
- Based on the slip morphology and pre-slip pit wall contours, a bulking factor of 1.13 is estimated which equates to a slip material porosity of 18% (assuming an initial in-situ porosity of 5%). The porosity of the column tests are likely to have been in the order of 30%.

Due to the uncertainties in applicable scaling factor, a scaling factor of between 1 (no scaling factor) and 5 (which conservatively takes into account porosity and particle size distribution) is considered appropriate, however the adopted sulphate generation rate and resultant amendment rate is based on a scaling factor of 1 (ie. no scaling applied) with the potential to refine the estimate when further data becomes available.

The scaling factors applied suggest a calculated sulphate generation rate of between 10 to 50 mg/SO_4 per kilogram of oxidising slip material per day of exposure (based 95% UCL NAPP value).

The adopted values are outlined in Table 9.

Table 9 Overburden Sulphate Generation Rate – Slip Material

Item	Value
NAPP (95th percent UCL)	84 kg $CaCO_3$/tonne
Column Sulphate Generation Rate	0.05 kg SO_4/tonne/day
Calculated Scaling Factor	1 – 5
Calculated Sulphate Generation Rate	0.01 – 0.05 kg SO_4/tonne/day
Adopted Scaling Factor	1
Adopted Sulphate Generation Rate	0.05 g SO_4/tonne/day

A.3 Volume of Oxidising Material in Slip

Generally PAF overburden is placed in engineered embankment structures with lifts of well compacted overburden. This reduces the permeability of the overburden, which limits the rate of oxygen ingress into the overburden which limits the rate of sulphate oxidation. Sulphate generation rates of between 3 and 4 kg(SO_4)/ha/day have been predicted from the analysis of oxygen data in compacted and covered overburden stacks at site (SRK, 2011).

As the material in the slip is considered 'loose' and has not been placed in a controlled manner, it is assumed that initially permeability is high and the depth of the oxidation will be greater. However as the base portion of the overburden is likely to become saturated and oxidation advances deeper into the waste rock, the concentration gradient (of oxygen) diminishes which should limit advective flow (and transport of additional oxygen) into deeper portions of the overburden, limiting oxidation of the lower portions of the slip material. Previous investigations by SRK (2011) suggest that in uncompacted and/or covered overburden stacks, the oxidation ingress is limited to the top 5 m below the surface. This depth has been adopted here in order to estimate the volume of material likely to be influenced by oxidation.

The volume of material within the slip available for oxidation has been based on the total surface area of the slip. It is assumed that at depths of below 5 m, oxygen infiltration is minimal and that the slip material is at least 5 metres deep over its total surface area. The total material available of oxidation has therefore been calculated as 1,170,000 tonnes out of a total assumed mass of 2,000,000 tonnes (Table 10).

Table 10 Slip Overburden Volume Calculation

Item	Value
Volume of PAF Overburden in Slip	920,000 m3
Tonnes of PAF Material	2,000,000 t
Area of Exposed Overburden	107,358 m2
Depth of Oxidation	5 m
Volume of Material Available for Oxidation	536,790 m3
Tonnes of Material Available for Oxidation	1,170,000 t

A.4Total Sulphate Oxidation in Slip Material

The annual mass load of sulphate generated through the oxidation process has been adopted based on the tonnes of material available for oxidation 1,170,000 tonnes (0) and the calculated sulphate production rate per kg of material (0.05 kg SO_4/tonne/day) (0). The total annual sulphate production load is therefore estimated to be 24,450 tonnes per annum (Table 11). A lag period has not been taken into account, although as material within the former pit wall was previously exposed, it is assumed that a significant quantity of this material was oxidised / partially oxidised before the slip events occurred.

Table 11 Sulphate Generation Rate per Annum - Slip Material

Item	Value
Tonnes of Material Available for Oxidation	1,170,000 t
Adopted Sulphate Generation Rate	0.05 kg SO_4/tonne/day
Sulphate Production Rate	24,450 tonne SO_4/year

When compared to estimates given in ANSTO (1994) and SRK (2011), estimated sulphate generation rates for uncompacted scenarios vary from 1,400 kg(SO_4)/ha/day (ANSTO, 1994) to 1,991 kg(SO_4)/ha/day) (SRK, 2011) which calculate to between 5500 to 8000 tonne of SO_4 per annum (Table 12) based on the calculated area of the slip material. These numbers are based on processed overburden – which will likely have a larger surface area than overburden within the slip material. Furthermore the permeable toe in the slip material has water and sediment covering it further reducing sulphate oxidation potential. The estimate calculated here is therefore considered conservative.

Table 12 Sulphate Production Rate Comparison

Source	kg/SO_4/Ha per day	Tonne/SO_4/per annum
Calculated Sulphate Production Rate	5,200	24,450 t/SO_4/year
ANTSO 1994	1,400	5,500 t/SO_4/year
SRK 2011	1,991	8,000 t/SO_4/year

A.5 Residual Sulphate mass

Combined with frequent wetting and drying cycles, (depending on whether water infiltrates or flows over), oxidised material will frequently be flushed out of the overburden (or not). Over time, consolidation of the slip material is likely which would reduce the permeability of the slip material, however this has not been taken into account during this assessment and it is conservatively assumed the rate of sulphate oxidation has remained constant throughout the exposure period.

In order to calculate the residual sulphate mass – after removal through infiltration and seepage, the residual mass of sulphate within the slip material has been calculated by subtracting the potential mass of sulphate leaching from the total sulphate oxidation mass calculated.

Based on an assumed average yearly rainfall for the site (2084 mm/year) and assuming all of this rainfall with the addition of runoff from the area of pit immediately above the slip material infiltrates the slip material, . the calculated horizontal surface area of the combined slip material and pit wall immediately above the slip material is 92,592 m^2. This equates to a calculated volume of infiltrating rainfall of 192,922 m^3 per annum.

Based on the theoretical maximum concentration of sulphate in water of 2300 mg/L – controlled by the solubility of gypsum, it is estimated that approximately 450 tonne of sulphate is released to the pit through infiltrating rainfall per annum.

The residual sulphate mass is therefore 24,450 t/SO_4/year less 450 t/SO_4/year representing sulphate mass removed through the pit dewatering processes per annum resulting in a residual sulphate mass of 24,000 t/SO_4/year (Table 13).

Table 13 Residual Sulphate Production – Slip Material

Item	Value
Annual Average Rainfall	2084 mm/year
Horizontal Surface Area of Slip	92,593 m^2
Volume of Infiltrating Rainfall	192,922 m^3
Theoretical Maximum Concentration of SO_4 in Water	2,300 mg/L
SO_4 released per annum	450 t/SO_4/year
Calculated Sulphate Production Rate	24,450 t/SO_4/year
Residual Sulphate Production Rate	24,000 t/SO_4/year

A.6 Key Assumptions

The key assumptions used in assessing and calculating the residual sulphate mass are as follows:

- That collected static data and calculated NAPP (based on the 95th percent UCL) is representative of the mass of the slip material.
- Overburden used within the kinetic column tests is representative of overburden contained within the slip material (with calculated sulphate generation rates proportional to calculated NAPP values).
- A scaling factor of between 1 and 5 applied to the sulphate generation rates calculated from the column leachate is applicable and takes into account differences in porosity and particle size distribution. However the scaling factor of 1 (ie. no scaling factor) has been adopted for this assessment.
- No lag has been taken into account.
- Rainfall infiltrates the mass of material

- The concentration of sulphate in water draining from the slip mass is 2300 mg/L
- No groundwater infiltrates the slip mass material
- Rock within the slip mass has an oxidation profile down to a depth of 5 m
- The depth of the slip mass is at least 5 m over its surface area

A.7 References

ANTSO, 1994. Oxidation and Sulphate Generation Rates in the Waste Rock Dump at the Martha Hill Mine Site. ANTSO/c400 Australian Nuclear Science and Technology Organisation.

SRK, 2011. Waste Rock Oxidation in Storage 2. NEM009. SRK Consulting (Australia) Pty Ltd.

8.7 Waste Rock Monitoring Results

CREATION_D	LOCATION	Sulphur%	ANCFizz	ANCH2SO4	ANCCaCO3	ReactionS	NAGPh	NAG45	NAG70	NAPP kgH2SO4/t	Comments
26/08/2015	Correnso wasterock	2.3	3	112	11.41		9.8	0.1	0.1	-41.6	
29/09/2015	Correnso wasterock	2.31	2	76.38	7.79	DNR	10.81	0.1	0.1	-5.7	
27/10/2015	Correnso wasterock	2.02	2	63.03	6.43	DNR	9.28	0.1	0.1	-1.2	
24/11/2015	Correnso wasterock	2.24	2	64.52	6.58	RON	8.69	0.1	0.1	4.0	
23/12/2015	Correnso wasterock	2.41	2	60.17	6.14	<180	9.2	0.1	0.1	13.6	
27/01/2016	Correnso wasterock	2.72	2	56.21	5.74	ROH	9.28	0.1	0.1	27.0	
4/03/2016	Correnso wasterock	2.05	2	41.71	4.26	ROH	8.98	0.1	0.1	21.0	
31/03/2016	Correnso wasterock	2.21	2	85.28	8.7	<150	9.18	0.1	0.1	-17.7	
15/04/2016	Correnso wasterock	2.52	2	86.69	8.85	ROH	10.95	0.1	0.1	-9.6	
5/05/2016	Correnso wasterock	2.14	2	87.08	8.89	ROH	10.92	0.1	0.1	-21.6	
9/06/2016	Correnso wasterock	0.07	0	2.34	2	<180	8.36	0.1	0.1	-0.2	
7/07/2016	Correnso wasterock	0.153	0	10.38	2	DNR	8.78	0.1	0.1	-5.7	
26/08/2016	Correnso wasterock	0.26	1	16.77	2	ROH	9.55	0.1	0.1	-8.8	
8/09/2016	Correnso wasterock	1.47	2	69.72	7.11	ROH	10.45	0.1	0.1	-24.7	
18/10/2016	Correnso wasterock	0.351	1	13.02	2	RON	9.32	0.1	0.1	-2.3	
16/11/2016	Correnso wasterock	0.07	0	5.12	2	DNR	8.1	0.1	0.1	-3.0	
16/12/2016	Correnso wasterock	0.95	2	50.51	5.15	RON	10.45	0.1	0.1	-21.4	
25/01/2017	Correnso wasterock	0.438	1	21.39	2.18	RON	7.99	0.1	0.1	-8.0	
20/02/2017	Correnso wasterock	0.52	2	46.96	4.79	ROH	9.09	0.1	0.1	-31.0	
4/03/2017	Correnso wasterock	2.79	2	52.43	5.35	ROH	10.29	0.1	0.1	32.9	
26/04/2017	Correnso wasterock	1.26	2	90.73	9.26	RON	8.72	0.1	0.1	-52.2	
25/05/2017	Correnso wasterock	2.2	3	142	14.46	ROH	11.47	0.1	0.1	-74.7	
14/06/2017	Correnso wasterock	2.55	2	70.44	7.19	ROH	9.59	0.1	0.1	7.6	
27/07/2017	Correnso wasterock	2	2	94.68	9.66	ROH	10.21	0.1	0.1	-33.5	
30/08/2017	Correnso wasterock	1.2	2	68.84	7.02	ROH	10.69	0.1	0.1	-32.1	
29/09/2017	Correnso wasterock	1.41	2	64.21	6.55	ROH	10.82	0.1	0.1	-21.1	
26/10/2017	Correnso wasterock	1.97	2	85.22	8.7	ROH	11.22	0.1	0.1	-24.9	
3/11/2017	Correnso wasterock	0.41	2	62.49	6.38	ROH	11.13	0.1	0.1	-49.9	
5/12/2017	Correnso wasterock	2.90	1	38.21	3.9	ROH	8.64	0.1	0.1	50.5	
31/01/2018	Correnso wasterock	0.16	0	9.45	2	DNR	8.62	0.1	0.1	-4.6	
13/02/2018	Correnso wasterock	0.76	2	54.24	5.53	RON	9.84	0.1	0.1	-31.0	
14/03/2018	Correnso wasterock	0.32	0	3.27	2	DNR	3.2	3.92	7.06	6.6	
4/04/2018	Correnso wasterock	2.27	1	34.72	3.54	ROH	10.07	0.1	0.1	34.7	
17/05/2018	Correnso wasterock	2.40	2	56.35	5.75	ROH	10.34	0.1	0.1	17.1	
8/06/2018	Correnso wasterock	1.76	2	70.1	7.15	RON	9.35	0.1	0.1	-16.2	
17/07/2018	Correnso wasterock	1.80	2	45.91	4.68	RON	10.21	0.1	0.1	9.2	
1/08/2018	Correnso wasterock	0.75	1	36.44	3.72	ROH	3.32	4.29	8.38	-13.6	
5/09/2018	Correnso wasterock	1.78	1	36.45	3.72	ROH	10.12	0.1	0.1	18.0	
1/10/2018	Correnso wasterock	1.50	2	56.07	5.72	ROH	10.69	0.1	0.1	-10.2	
7/11/2018	Correnso wasterock	1.59	2	50.23	5.13	ROH	9.62	0.1	0.1	-1.6	
11/12/2018	Correnso wasterock	1.24	2	62.5	6.38	ROH	11.05	0.1	0.1	-24.6	
16/01/2019	Correnso wasterock	1.63	2	45.79	4.67	ROH	10.64	0.1	0.1	4.1	
8/02/2019	Correnso wasterock	2.17	2	43.4	4.43	ROH	8.62	0.1	0.1	23.0	
8/03/2019	Correnso wasterock	3.20	2	44.13	4.5	ROH	2.49	28.89	37.93	53.8	
5/04/2019	Correnso wasterock	2.50	2	60.37	6.16	ROH	8.49	0.1	0.1	16.1	
7/05/2019	Correnso wasterock	2.50	0	2.02	2	RON	2.19	49.96	57.6	74.5	
5/06/2019	Correnso wasterock	1.86	1	30.18	3.08	RON	2.79	12.88	19.13	26.7	
5/07/2019	Correnso wasterock	1.34	1	23.17	2.36	RON	2.45	27.88	40.83	17.8	
8/08/2019	Correnso wasterock	1.46	1	17.17	2	ROH	2.58	20.72	28.15	27.5	
10/09/2019	Correnso wasterock	1.22	1	23.54	2.4	<150	9.56	0.1	0.1	13.8	
8/10/2019	Correnso wasterock	1.93	2	62.42	6.37	ROH	10.81	0.1	0.1	-3.4	
7/11/2019	Correnso wasterock	1.60	2	55.99	5.71	RON	9.1	0.1	0.1	-7.0	
13/12/2019	Correnso wasterock	2.01	2	53.77	5.49	ROH	9.57	0.1	0.1	7.7	
6/01/2020	Correnso wasterock	2.00	2	76.61	7.82	ROH	8.46	0.1	0.01	-15.4	
4/02/2020	Correnso wasterock	1.26	1	30.95	3.16	<180	10.37	0.1	0.1	7.6	
3/03/2020	Correnso wasterock	2.60	2	53.82	5.49	ROH	10.89	0.1	0.1	25.7	
29/04/2020	Correnso wasterock	2.70	2	42.36	4.32	ROH	2.37	33.14	44.84	40.3	
13/05/2020	Correnso wasterock	2.06	2	53.62	5.47	ROH	8.54	0.1	0.1	9.3	
8/06/2020	Correnso wasterock	1.74	2	66.31	6.77	ROH	11.39	0.1	0.1	-13.1	