

Date: July 29, 2025
Kala Ref: R25035

Tsal'alh First Nation
c/o David Nairne and Associates Ltd.
250 – 171 W Esplanade
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V7M 3J9

Via Email: [Kai Buchan \(KBuchan@davidnairne.com\)](mailto:KBuchan@davidnairne.com)

Attn: Kai Buchan, P.Eng.
Civil Project Engineer

Re: **ONSITE WASTEWATER DISPOSAL SYSTEM (OWDS)
GROUNDWATER SOURCE SUPPLY CONSIDERATIONS
TSAL'ALH FIRST NATION, SHALALTH BC
BC HOUSING PROPOSED 16-PLEX
REPORT OF FINDINGS**

CLIENT TO REVIEW AND APPROVE FOR
FINALIZATION

SIGNATURE

PRINT NAME

DATE

**Please note:* unreviewed reports will be automatically finalized 30 days after the draft report submission; comments provided after the 30 days will result in additional costs to the Client to revise and reissue the report.

1.0 INTRODUCTION

Kala Geosciences Ltd. (Kala) was retained by Tsal'alh First Nation (TFN) in care of David Nairne + Associates Ltd. (DNA) (the "Client") to complete an onsite wastewater disposal system (OWDS) design and groundwater source supply considerations (the "Services") within 6805, 6855 and 6885 Seton Portage Road and 70 Edwards Rd, Seton Portage, BC (the "Subject Property"). Properties of 6805, 6855 and 6885 Seton Portage Rd and 70 Edwards Rd have following legal descriptions:

- 6805 Seton Portage Rd: Lot 9, Plan KAP17213, District Lot 1596, Lillooet Land District, Parcel Identifier (PID): 008-434-573;
- 6855 Seton Portage Rd: Lot 8, Plan KAP17213, District Lot 1596, Lillooet Land District, Parcel Identifier (PID): 008-434-565;
- 6885 Seton Portage Rd: Lot 6, Plan KAP17213, District Lot 1596, Lillooet Land District, Manufactured Home Reg.# 99289, PID: 008-434-522; and
- 70 Edwards RD: Lot 7, Plan KAP17213, District Lot 1596, Lillooet Land District, Parcel Identifier (PID): 008-434-549.

The scale of development comprises a sixteen (16) plex residential housing facility comprising four buildings as shown within figure 6. There was no community water or sanitary and as such the development shall use one of the previous waters wells within the subject property drilled for previous applications. There are three (3) older domestic water wells with well tag numbers (WTNs) of WTN69918, WTN50957 and WTN47098 located within 6805, 6855 and 6885 Seton Portage Rd, which are currently unused.

The project involves conducting yield tests on two (2) existing wells WTN50957 and WTN47098 and undertaking a soil investigation directed at providing predesign wastewater to ground options. The yield tests were carried out to investigate well capacity and groundwater quality under current conditions. Intrusive soil exploration is performed to investigate onsite soil conditions for wastewater disposal predesign purpose. According to DNA, the average daily demand (ADD) and maximum daily demand (MDD) of water supply is 0.46 L/s and 1.16 L/s, respectively.

Explanatory and interpretive figures and tables append the text. Appendix A provides test pit logs and the driller's well log, Appendix B provides pumping test data and interpretive plots, and Appendix C provides certificates of analytical chemistry.

2.0 BACKGROUND

2.1 Scope of Services

The objectives of this project are to investigate the well capacity and groundwater quality under current conditions and to explore soil conditions for wastewater disposal using to ground techniques. The scope of this project includes:

- Task 1: Desktop review and project setup;
- Task 2: Pumping tests at two (2) existing wells;
- Task 3: Laboratory testing for water general potability;
- Task 4: Soil explorations; and
- Task 5: Analysis and Reporting.

2.2 Subject Property Description

The Subject Property is located at Seton Portage, a small village between Anderson Lake and Seton Lake. It is located approximately 25 km west of Lillooet, BC, at an alluvial fan deposited by Whitecap Creek and Spider Creek (Figure 1). The Subject Property is nearly a trapezium in shape having a total area of approximately 1.19 hectares (ha). Access to the Subject Property is gained from Seton Portage Road or Edwards Road.

The Subject Property is lower at northern and southern property portions but higher in the middle with a slope of approximately 10% to 15%. The Subject Property is relatively flat in east/west direction. Seton River flows from east to west at a distance of approximately 40 m north of the Subject Property. Seton River is a stream connecting Anderson Lake, which has an elevation of 263 m,¹ and Seton Lake, which has an elevation of 243 m. The hydraulic gradient is approximately 0.0085 at Seton River, which is very large for surface water. The Subject Property is located at an alluvial fan associated with Whitecap Creek and Spider Creek. Surface drainage is accomplished via infiltration with little to no overland flow.

The Subject Property occurs within the Interior Douglas-fir (IDF) biogeoclimatic zone.² Forests dominated by Douglas-fir trees of all ages and sizes with a grassy understorey in which pinegrass is most common are typical in this zone. On hotter and drier sites, grassland and open ponderosa pine forest predominate, while dense, closed-canopy spruce forests occur on wetter and cooler sites such as in riparian areas. Lodgepole pine is common at higher elevations or where there has been recent fire.

The temperatures in the study area as recorded by Environment Canada, ranged from the average -2.4°C in January to the average 21.6°C in July.³ Annual precipitation in the area as per Lillooet Seton BCHA metering station (Climate ID 1114627) is 349.0 mm, with 26.5 cm of snowfall and 322.5 mm of rainfall at an elevation of 198.10 m above sea level (ASL).

2.3 Hydrogeologic Setting

There are three (3) water wells within the Subject Property (Figure 2): WTN50957, WTN47098 and WTN69918.⁴ WTN50957 is a 152 mm diameter by 15.2 m deep well completed on September 11, 1982. WTN50957 intercepted sand, gravel, and boulders from ground surface to 3.0 m, silt, till, gravel and boulders from 3.0 m to 6.4 m, sand and gravel from 6.4 m to 8.5 m, and water bearing sand and gravel from 8.5 m to 15.2 m (Table 1). Static water level (SWL) was 7.01 m on the well completion date of September 11, 1982. Water bearing sand and gravel depth is 8.5 m while static water piezometric head of 7.01 m is above the water bearing sand and gravel depth of 8.5 m, suggesting that the aquifer is semi-confined at this location. The low permeable layer of silt and till between 3.0 m and 6.4 m is hung over the aquifer and likely part of the confining layer. WTN50957 has no screen installed according to driller's record (Table 2). WTN50957 has a driller's rating of 0.63 L/s (Appendix A).⁴

WTN47098 is a 152 mm diameter by 17.7 m deep well completed on January 20, 1981. WTN47098 intercepted gravel and boulders from ground surface to 6.1 m, silty sand and gravel from 6.1 m to 10.7 m, wet silty sand and gravel from 10.7 m to 13.7 m, and water bearing coarse gravel from 13.7 m to 17.7 m (Table 1). SWL was 10.7 m on the well completion date of January 20, 1981. The aquifer is semi-confined at WTN47098, confining layer is the silty sand and gravel. WTN47098 has no screen installed according to driller's record (Table 2). WTN47098 has a driller's rating of 2.54 L/s (Appendix A).⁴

WTN69918 is a 152 mm diameter by 18.0 m deep well completed on October 16, 1992. WTN69918 intercepted wet silty sand and gravel from 4.9 m to 11.6 m, and water bearing sand and gravel from 11.6 m to 17.7 m (Table 1). Drilling lithology is not available for the interval of ground surface to 4.9 m since WTN69918 is deepened from an existing well. SWL was 5.79 m on the well completion date of October 16, 1992. The aquifer is semi-confined at WTN69918, confining layer is the silty sand and gravel. WTN69918 has no screen installed according to driller's record (Table 2). WTN69918 has a driller's rating of 1.89 L/s (Appendix A).⁴

The aquifer underlying the study area has been mapped and classified and is referred to as Aquifer 323 (Figure 3). Aquifer 323 is an unconfined sand and gravel aquifer with an area of approximately 1.84 km².⁴ Aquifer 323 has a classification of IIB, indicating a moderate development level and a moderate vulnerability to surface borne contaminations. Aquifer 323 has a moderate productivity.

3.0 FIELDWORK

This section details the fieldwork conducted between March and April of 2025. WTN50957 and WTN47098 were selected to be pumping tested wells since WTN69918 has no access.

3.1 WTN50957 Pumping Test and Water Sample Collection

A constant discharge pumping test was undertaken by Kala personnel on March 27, 2025. During the pumping test, water levels were measured using electric tapes. Flow rates were measured using a calibrated inline flow meter. Pumped water was disposed of to the north area of the Subject Property, over 60 m from WTN50957. As the groundwater hydraulic gradient is large, proximate to the Subject Property, re-circulation was not considered a concern -- this is also demonstrated by groundwater level stabilization occurring one minute into the pumping test. Pumping test was performed following the Guide to Conducting Well Pumping Tests, published by BC Ministry of Environment and Climate Change Strategy (BCECCS).⁵ Pumping test data and interpretative plots are provided in Appendix B.

Groundwater samples were collected from WTN50957 225 minutes into the pumping test on March 27, 2025. Samples were shipped to CARO Analytical Services Ltd. (CARO) in a sealed cooler via same-day courier. Prior to collecting water samples, groundwater chemical stabilization was assessed by field monitoring of pH, temperature, conductivity, total dissolved solids (TDS), oxidation-reduction (re-dox) potential and dissolved oxygen. Stabilization was deemed to have occurred when there was less than 3% fluctuation over 20 minute monitoring intervals. All samples requiring filtration were filtered in the field, prior to the addition of required preservatives.

3.2 WTN47098 Pumping Test

A constant discharge pumping test was undertaken at WTN47098 by Kala personnel on April 8, 2025. During the pumping test, water levels were measured using electric tapes. Flow rates were measured using a calibrated inline flow meter. Pumped water was disposed of to the north area of the Subject Property, over 60 m from WTN47098. As the groundwater hydraulic gradient is large proximate to the Subject Property, re-circulation was not considered a concern. Pumping test was performed following the Guide to Conducting Well Pumping Tests, published by BCECCS.⁵ Pumping test data and interpretative plots are provided in Appendix B.

3.3 Soil Investigation

Three (3) soil test pits (TPs), TP25-01, TP25-02 and TP25-03, were advanced within 70 Edwards Rd on April 8, 2025, using a caterpillar 430D backhoe loader provided by a TFN subcontractor. (Figure 4). Each TP was advanced to a depth of approximately 3.0 m to provide a description of natural soil horizons, discontinuities and layers restrictive to water movement. Soils were logged using the Modified Unified Classification System (MUCS) method and include a USDA descriptor. Soil properties described in the field included the soil depth, texture, structure, relative moisture content, color, rooting depth and bulk relative density. Soil profile logs from TPs completed using a backhoe are provided in Appendix A.

Two (2) soil percolation tests (PTs) were performed on April 8, 2025 at hand excavated pits, adjacent to TP25-01 and TP25-02. Each percolation test pit was 0.3 m square and was excavated

to a base depth of 0.60 m. Each test was undertaken following the procedure described in Section III-8.3.2 of the BC Sewage System Standard Practice Manual (SPM), Version 3.⁶

Table 1 includes drilling lithology at WTN50957, WTN47098 and WTN69918. Table 2 provides well completion data. Table 3 provides a summary of pumping tests. A water quality summary is provided in Table 4. Table 5 provides detailed water chemistry with a comparison to water quality guidelines.

Select Site photographs are provided in Figure 5. Pumping data and interpretative plots are included in Appendix B. Certificates of Analytical Chemistry are provided in Appendix C.

4.0 FINDINGS

4.1 Subsurface Conditions and Hydrogeology

Drilling intercepted a layer of silt and till (WTN50957) or a layer of silty sand and gravel (WTN47098 and WTN69918) immediately above the sand and gravel. The layer of silt and till or silty sand and gravel acts as a confining layer. Therefore, the aquifer intercepted by WTN50957, WTN47098 and WTN69918 is considered by Kala as semi-confined to unconfined. Kala understands that the aquifer underlying the Subject Property, Aquifer 323, is mapped as an unconfined aquifer by BCECCS. In fact, the confining layer is not well developed and absent at WTN84372, WTN35792, and others (Figure 3).⁴

The landform in the Seton River Valley is more likely a floodplain. Groundwater flow directions vary with locations. In areas at the foot of the northerly mountains, groundwater flows southwards. In areas at the foot of the southerly mountains, groundwater flows northwards. In the central area of the Seton River Valley, which is the majority of the Valley, groundwater flows parallel to the Valley, from Anderson Lake to Seton Lake. Groundwater is recharged by Anderson Lake, Whitecap Creek, Spider Creek and the lateral flows from both northerly and southerly mountains. Groundwater discharge easterly towards Seton Lake.

4.2 Well Capacity – WTN50957

A constant discharge pumping test was conducted within WTN50957 on March 27, 2025 for a period of 240 minutes discharging at 1.01 L/s (Table 3). During the pumping test, the water level in WTN50957 was drawn down from a SWL of 6.74 mbtoc to a stabilized pumping level of 7.24 mbtoc at the end of the pumping test, resulting in a drawdown of 0.50 m over the 240 minutes of testing time. Stabilization occurred nearly at 1 minutes of pumping test. WTN50957 had recovered to pre-test level of 6.74 mbtoc at $t' = 1$ minute. Easy stabilization and rapid recovery suggest that groundwater recharge is abundant and WTN50957 has a capacity significantly larger than the testing rate of 1.01 L/s.

WTN50957 is situated within a concrete pit. The top of casing is 0.9 m below ground surface. The total available drawdown (TAD), which is the vertical difference from the SWL (6.74 mbtoc) to the bottom of casing (15.24 m or 14.34 mbtoc), is calculated at 7.60 m for WTN50957. The test duration is less than 24 hours. Since groundwater level was stabilized at 1 minute of pumping and the drawdown of 0.5 m accounts for only 6.6% of the TAD, it is anticipated that water level will be stabilized continuously if the test continues for a total of 24 hours.

Since water level was stabilized during the pumping test, the 100-day projected drawdown is the stabilized drawdown of 0.50 m (Appendix B). The 100-day specific capacity (SC) is calculated at $1.01 \text{ L/s} / 0.50 \text{ m} = 2.02 \text{ L/s/m}$.⁷ WTN50957 has a theoretical yield of $0.7 \times 2.02 \text{ L/s/m} \times 7.60 \text{ m} = 10.75 \text{ L/s}$, where 0.7 means 70% of the TAD is utilized. Kala rates WTN50957 at 1.01 L/s, which is the testing rate during the March 27, 2025 pumping test. WTN50957 is likely having a long-term capacity of 6.3 L/s. A pumping test discharge at a higher rate is required to verify this assertion.

WTN47098, which is located 39 m west of WTN50957, was monitored for drawdown interference (DI) during the 240-minute pumping test. Zero DI was observed at WTN47098 during the WTN50957 pumping test, which may attribute to large groundwater recharge. Pumping at WTN50957 at a discharging rate of 1.01 L/s will not impact surrounding water wells and surface water.

4.3 Well Capacity – WTN47098

A constant discharge pumping test was conducted within WTN47098 on April 8, 2025 for a period of 240 minutes discharging at 2.52 L/s (Table 3). During the pumping test, the water level in WTN47098 was drawn down from a SWL of 8.39 mbtoc to a stabilized pumping level of 8.48 mbtoc at the end of the pumping test, resulting in a drawdown of 0.09 m over the 240 minutes of testing time. Stabilization occurred nearly at 1 minutes of pumping test. WTN47098 had recovered to pre-test level of 8.39 mbtoc at $t' = 1$ minute. Easy stabilization and rapid recovery suggest that groundwater recharge is abundant and WTN47098 has a capacity significantly larger than the testing rate of 2.52 L/s.

WTN47098 is situated within a concrete pit. The top of casing is 0.7 m below ground surface. The TAD is calculated at $17.68 \text{ m} - 8.39 \text{ mbtoc} - 0.7 \text{ m} = 8.59 \text{ m}$ for WTN47098, where 17.68 m is the depth of casing bottom. The test duration is less than 24 hours. Since groundwater level was stabilized at 1 minute of pumping and the drawdown of 0.09 m accounts for only 1.0% of the TAD, it is anticipated that water level will be stabilized continuously if the test continues for a total of 24 hours.

Since water level was stabilized during the pumping test, the 100-day projected drawdown is the stabilized drawdown of 0.09 m (Appendix B). The 100-day SC is calculated at $2.52 \text{ L/s} / 0.09 \text{ m} = 28.00 \text{ L/s/m}$.⁷ WTN47098 has a theoretical yield of $0.7 \times 28.00 \text{ L/s/m} \times 8.59 \text{ m} = 168.36 \text{ L/s}$. Kala rates WTN47098 at 2.52 L/s, which is the testing rate during the April 8, 2025 pumping test. WTN47098 is likely having a long-term capacity significantly larger than the testing rate. A pumping test discharge at a higher rate is required to verify this assertion.

WTN50957, which is located 39 m east of WTN47098, was monitored for DI during the 240-minute pumping test. Zero DI was observed at WTN50957 during the WTN47098 pumping test, which may attribute to large groundwater recharge. Pumping at WTN47098 at a discharging rate of 2.52 L/s will not impact surrounding water wells and surface water.

WTN50957 and WTN47098 are completed in 1981 and 1982, respectively. They are 43 years old and likely approaching their life span. There is likely no surface seal installed at both wells, given the completion year of 1981 and 1982. In addition, no screen was installed at either of the two wells. The depth of these two (2) wells are 17.7 m and shallow, which is common in 1980s since drilling would be ceased at old wells when they are capable of producing sufficient water for residential use. Kala does not recommend that these two (2) wells be used as water source because of their age, depth and lack of surface seal.

Kala recommends that a new well be constructed proximate to WIN47098 so it will meet the current BC Groundwater Protection Regulation (BC GWPR).⁸ The new well should have a depth of 24 m or greater to minimize the potential of groundwater at the risk of containing pathogens (GARP).⁹

4.4 Groundwater Quality

Raw groundwater quality is based on the March 27, 2025 samples from WTN50957. Summaries of raw water characteristics (RWC) are provided in Table 4. Certificates of analytical chemistry are provided within Appendix C.

Geochemistry – The groundwater at WTN50957 is Ca-HCO₃ type, moderately hard water with a low mineralization. All parameters tested for were below the Canadian Drinking Water Quality Guidelines (SGCDWQ)-2024 standards with the exception of pH (6.98 pH units),¹⁰ which is just below the standard of 7 pH unit. pH is not a health related parameter.

Nitrate nitrogen and nitrite nitrogen were recorded at 0.071 mg/L and below laboratory detection limit, respectively. Total ammonia nitrogen was recorded at 0.058 mg/L, which is very low. Chloride is low at 0.56 mg/L. Low nitrate nitrogen and low chloride suggest an absence of agricultural or sewage effluent based pollution proximate to the well location.

Bacteriologic – Total coliforms, fecal coliforms and Escherichia coli (E.coli) were all below detection limits in the March 27, 2025 samples.

Treatment – Turbidity was recorded at 0.46 NTU in the March 27, 2025 samples, below the operational guidance value of 1.0 NTU specified in the SGCDWQ-2024.¹⁰ The ultraviolet transmissibility finding was 98.0% at 245 nm.

In summary, groundwater from WTN50957 is of good quality and meets the SGCDWQ-2024 standards for those parameters tested for with the exception of pH,¹⁰ which is just below the standard of SGCDWQ-2024. Detail groundwater chemistry is compiled in Table 5.

4.5 Onsite Wastewater Considerations

TP excavations suggest that soils are primarily a stratified poorly graded gravel to a poorly graded sand with little to some fines and occasional to frequent cobbles (Appendix A). No groundwater or bedrock was encountered to the maximum excavation depth of 3.0 m across the area investigated. No restrictive layer such as clay or cemented formation was intercepted during the field investigation. Subsurface conditions are anticipated to be similar across the entire subject property.

Percolation tests suggest a percolation rate of 1 minute 54 seconds/25 mm at PT25-01 and 1 minute 59 seconds/25 mm at PT25-02. Percolation test results are consistent with soils encountered at TPs. The design soil percolation rate is 2.0 min/25mm. The hydraulic loading rate for design purposes shall be 65 L/m²/day for Type 2 effluent loading.

Groundwater depth was 7.64 m below ground surface (mbgs) at WTN50957 on March 27, 2025 and 9.09 mbgs at WTN47098 on April 8, 2025. The minimum unsaturated thickness is anticipated to exceed 5.0 m during high water events. Groundwater annual fluctuation is anticipated to be less than 2 m at the Subject property owing to large hydraulic gradient in the Seton River Valley. Annual minimum groundwater depth is likely in the range of 5 mbgs at the Subject Property based on ground elevation, local hydrogeology and available groundwater data. Groundwater and soil conditions are suitable for wastewater disposal field construction.

Kala recommends the application of Type 2 combined treatment dispersion systems (CTDS) to avoid the need for treatment plants. Kala has broken the systems into three individual systems as opposed to a centralized treatment plan and dispersion field. This permits spreading the effluent discharge out over a larger portion of the lot and reducing the threats of groundwater impacts from bacteriological or soluble nutrient constituents. Kala has provided a predesign drawing in figure 6.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the scope of services described herein, the following conclusions and recommendations are provided for Client, owner and regulatory consideration:

- a) The aquifer underlying the Subject Property has been mapped as an unconfined aquifer. Drilling lithology at WTN47098, WTN50957 and WTN6991 suggests that a confining layer comprising silty sand and gravel exists overlying the aquifer within the Subject Property. The aquifer underlying the Subject Property is semi-confined.
- b) The aquifer in the Seton River Valley is bounded by Anderson Lake to the west and by Seton Lake to the east. Groundwater recharge is abundant in the Seton River Valley. Groundwater in the Valley flows easterly at a large hydraulic gradient;
- c) WTN50957 is a 152 mm diameter by 15.2 m deep well completed on September 11, 1982. WTN47098 is a 152 mm diameter by 17.7 m deep well completed on January 20, 1981. Both wells have no screen installed;
- d) A 240-minute constant discharge pumping test was undertaken at WTN50957 on March 27, 2025 discharging at 1.01 L/s. A 240-minute constant discharge pumping test was undertaken at WTN47098 on April 8, 2025 discharging at 2.52 L/s;

- e) Groundwater level was stabilized during the two (2) pumping tests. Stabilization occurred at 1 minute of pumping, which also suggests that groundwater recharge is abundant proximate to the Subject Property;
- f) WTN50957 and WTN47098 have a long-term sustainable yield of 1.01 and 2.52 L/s, respectively. Pumping at the Subject Property at the MDD of 1.16 L/s will not impact neighbouring wells and nearby surface water;
- g) All parameters tested for in the groundwater samples collected from WTN50957 were below the Canadian Drinking Water Quality Guideline-2024 standards with the exception of pH (6.98 pH units), which is just below the standards of 7.0 pH units;
- h) Onsite soils are sand and gravel with trace fines. Percolation tests suggest a percolation rate of 2 minutes/25 mm may be used for predesign purposes and a hydraulic loading rates of 65 L/d/m².
- i) No restrictive layer was intercepted to the excavation depth of 3 m across the area investigated. Groundwater depth is likely in the range of 7.0 mbgs at the Subject Property. Groundwater and soil conditions are suitable for OWDS construction; and
- j) Since WTN47098 and WTN50957 are 43 years old and have no screen, Kala does not recommend them to be used for water supply. Instead, Kala recommends that a new groundwater supply well with a depth of 24 m or greater be completed so it will meet the current BC GWPR with low GARP potential.
- k) Kala recommends that Well#1 (southwest) and the former dug well (northwest) be decommissioned in accordance with the auspices of the BC Groundwater Protection Regulation.
- l) Kala has recommended three sperate systems to address onsite wastewater disposal. Each of the systems would comprise Type 2 combined treatment and dispersion systems. This minimized operations and maintenance considerations and further protects the underlying drinking water aquifer form contamination.

6.0 CLOSURE

The data recorded in this GFS report reflect conditions at the time of the test. Water levels, well performance, estimated long-term well yield and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, climate change, human activities and condition of the works, which may change over time.

Please find attached a detailed description of the terms, limitations and constraints applicable to Kala involvement within this project and the uses of this report. If there are questions regarding this document please contact our Kamloops office at your convenience.

Sincerely;
Kala Geosciences Ltd.

Per:
Yanfeng Yin, Ph.D., P.Geo
Senior Hydrogeologist

Per:
Paul J. Blackett, P.Tech., ROWP,
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REFERENCES

Kala acknowledges the following documents and references in the preparation of this report:

1. BC Ministry of Environment and Climate Change Strategy, HabitatWizard.
2. British Columbia Ministry of Forests and Range, Forest Science Program Bio-geoclimatic Ecosystems Classification.
3. Government of Canada. Canadian Climate Normals, 1981-2010 Climate Normals & Averages.
4. BC Ministry of Environment & Climate Change Strategy, BC Water Resources Atlas.
5. BC Ministry of Environment & Climate Change Strategy, Water Stewardship Information Series, 2010. Guide to Conducting Well Pumping Tests.
6. BC Ministry of Health, Sewerage System Standard Practice Manual, Version3, September 2014.
7. BC Ministry of Environment & Climate Change Strategy, August 1999, "Evaluating Long-Term Well Capacity for a Certificate of Public Convenience and Necessity (CPCN)".
8. BC Ministry of Environment & Climate Change Strategy, "Water Sustainability Act" Ground Water Protection Regulation. Includes amendments up to B.C. Reg. 253/2022. Current to November 29, 2022.
9. BC Ministry of Health, Population and Public Health Division, September 2017, Guidance Document for Determining Ground Water at Risk of Containing Pathogens (GARP). Version 3.
10. Health Canada (HC), February 2024. Canadian Drinking Water Quality Guidelines.
11. BC Ministry of Health, Public Health Act, December 2011, "Health Hazards Regulation." B.C. Reg. 216/2011 O.C. 575/2011. Last amended July 20, 2020 by B.C. Reg. 186/2020.
12. BC Public Health Act, Sewage System Regulation. B.C. Reg. 76/2022, current to July 8, 2025.

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Table 1 – Drilling Lithology WTN50957	
Depth (mbgs)	Formation Description
0 – 3.0	Sand, gravel and boulders
3.0 – 6.4	Silt, till, gravel and boulders
6.4 – 8.5	Sand and gravel
8.5 – 15.2	Water bearing sand and gravel
WTN47098	
Depth (mbgs)	Formation Description
0 – 6.1	Gravel and boulders
6.1 – 10.7	Silty sand and gravel
10.7 – 13.7	Wet silty sand and gravel
13.7 – 17.7	Water bearing coarse gravel
WTN69918	
Depth (mbgs)	Formation Description
0 – 4.9	Existing well
4.9 – 11.6	Wet silty sand and gravel
11.6 – 17.7	Water bearing sand and gravel

Notes: mbgs – meters below ground surface

Table 2 – Well Completion Information WTN50957	
Well diameter and depth	152 mm x 15.2 m
Surface seal	None
Well screen assembly	None
Well drilling firm	Nor-West Water Well Drilling Ltd. of Langley, BC
Date of completion	September 11, 1982
WTN47098	
Well diameter and depth	152 mm x 17.7 m
Surface seal	None
Well screen assembly	None
Well drilling firm	Nor-West Water Well Drilling Ltd. of Langley, BC
Date of completion	January 20, 1981
WTN69918	
Well diameter and depth	152 mm x 18.0 m
Surface seal	None
Well screen assembly	0.100" slot screen set between 16.46 m and 17.98 m
Well drilling firm	Nor-West Water Well Drilling Ltd. of Langley, BC
Date of completion	October 16, 1992

Table 3 – Summary of Pumping Tests		
	WTN50957	WTN47098
Duration of test (min.)	240	240
Static water level (mbtoc)	6.74	8.39
Constant flow rate (L/s)	1.01	2.52
Well recovery duration (min.)	3	60
Time of water samples	T = 225 min	N/A
Parameter	Findings	
Final Drawdown (m)	0.50	0.09
Water level stabilization	Yes	Yes
Total Available Drawdown (m)	7.60	8.59
Percent Available Drawdown (%)	6.6	1.0
100 day Specific Capacity (L/s/m)	2.02	28.0

Table 4 – WTN50957 Water Quality Summary	
Date of sampling	March 27, 2025
General quality	Moderately hard and low mineralization
Groundwater type	Ca-HCO ₃
Comparison with Canadian Drinking Water Quality Guideline-2024	pH (6.98 pH units)

Table 5 – Detail Water Chemistry at WTN50957

	Parameters	Units	March 27, 2025	SGCDWQ-2024
Physical Properties	Hardness, Total	mg/L	78.7	None Required
	Colour, True	CU	<5	AO<=15
	pH	pH units	6.98	7.0-10.5
	Solids, Total Dissolved	mg/L	107	AO<=500
	Turbidity	NTU	0.46	OG<1
Major Cations	Total calcium	mg/L	24.5	None required
	Total magnesium	mg/L	4.39	None required
	Total sodium	mg/L	1.92	AO<=200
	Total potassium	mg/L	1.45	N/A
Major Anions	Alkalinity - Bicarbonate	mg/L	69.7	N/A
	Chloride	mg/L	0.56	AO<=250
	Sulfate	mg/L	13.9	AO<=500
Minor Ions	Total iron	mg/L	0.036	AO<=0.3
	Total manganese	mg/L	0.00215	AO<=0.02, MAC=0.12
	Fluoride	mg/L	<0.10	MAC=1.5
	Nitrate (as N)	mg/L	0.071	MAC=10
	Nitrite (as N)	mg/L	<0.01	MAC=1
	Total boron	mg/L	<0.05	MAC=5
Trace Ions	Total aluminum	mg/L	0.0071	MAC=2.9
	Total antimony	mg/L	<0.0002	MAC=0.006
	Total arsenic	mg/L	0.00093	MAC=0.01
	Total barium	mg/L	0.0174	MAC=2
	Total cadmium	mg/L	<0.00001	MAC=0.007
	Total chromium	mg/L	<0.0005	MAC=0.05
	Total copper	mg/L	0.00247	AO<=2.0
	Total lead	mg/L	0.00042	MAC=0.005
	Total mercury	mg/L	<0.00001	MAC=0.001
	Total nickel	mg/L	<0.0004	N/A
	Total selenium	mg/L	<0.0005	MAC=0.05
	Total zinc	mg/L	0.0078	AO<=5
Microbio logical	Coliforms, Total	CFU/100 mL	<1	MAC = 0
	Coliforms, Fecal	CFU/100 mL	<1	N/A
	Escherichia coli	CFU/100 mL	<1	MAC = 0

Notes:

BOLD = Exceeds standard

WTN = Well Tag Number

SGCDWQ-2024 = Canadian Drinking Water Quality Guidelines – 2024

AO = Aesthetic objective

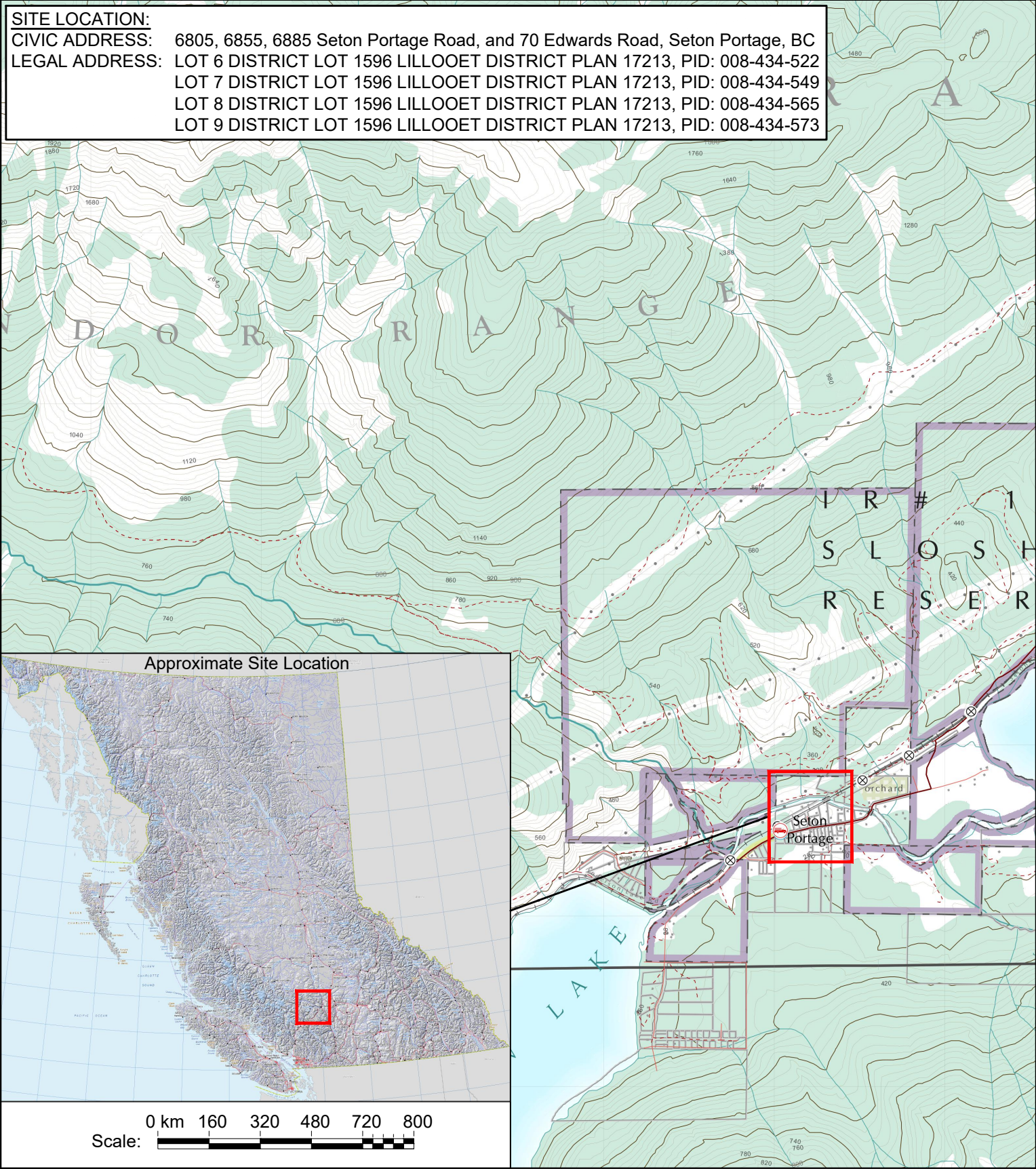
MAC = Maximum acceptable concentration (health based)

OG = Operational guideline (treated water)

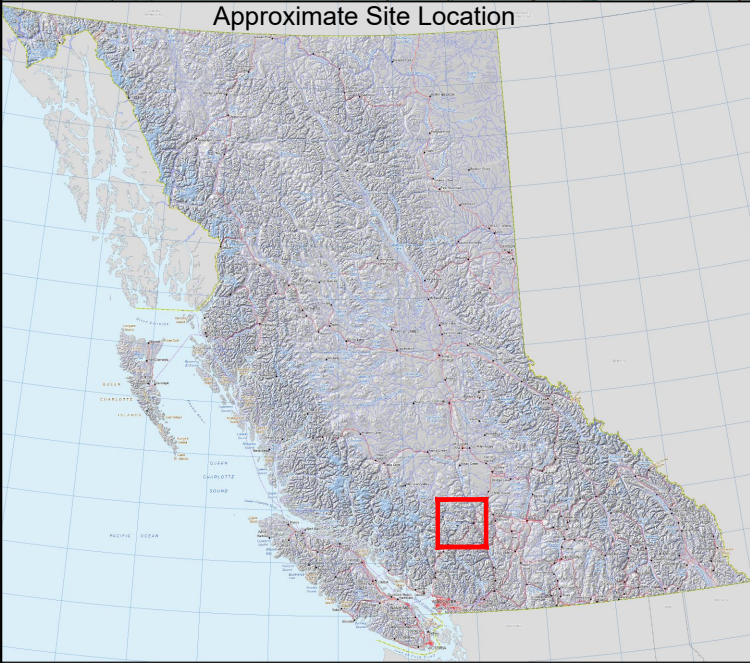
LIST OF FIGURES

- Figure 1: Site Location
- Figure 2: Well Location Diagram
- Figure 3: Mapped Aquifer and Registered Water Wells
- Figure 4: Test Pit Location Diagram
- Figure 5: Site Photographs
- Figure 6: Wastewater to ground - Design Option

SITE LOCATION:
CIVIC ADDRESS: 6805, 6855, 6885 Seton Portage Road, Seton Portage, BC
LEGAL ADDRESS: LOT 6 DISTRICT LOT 1596 LILLOOET DISTRICT PLAN 17213, PID: 008-434-522
 LOT 7 DISTRICT LOT 1596 LILLOOET DISTRICT PLAN 17213, PID: 008-434-549
 LOT 8 DISTRICT LOT 1596 LILLOOET DISTRICT PLAN 17213, PID: 008-434-565
 LOT 9 DISTRICT LOT 1596 LILLOOET DISTRICT PLAN 17213, PID: 008-434-573



Approximate Site Location



Scale: 0 km 160 320 480 720 800

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 Groundwater • Wastewater • Environmental
 1314 McGill Road, Kamloops, BC • Phone: 250.372.8194

Legend: — Approximate Site Location

Drawing References:
 Province of British Columbia

Scale: 0 m 300 600 900 1200 1500

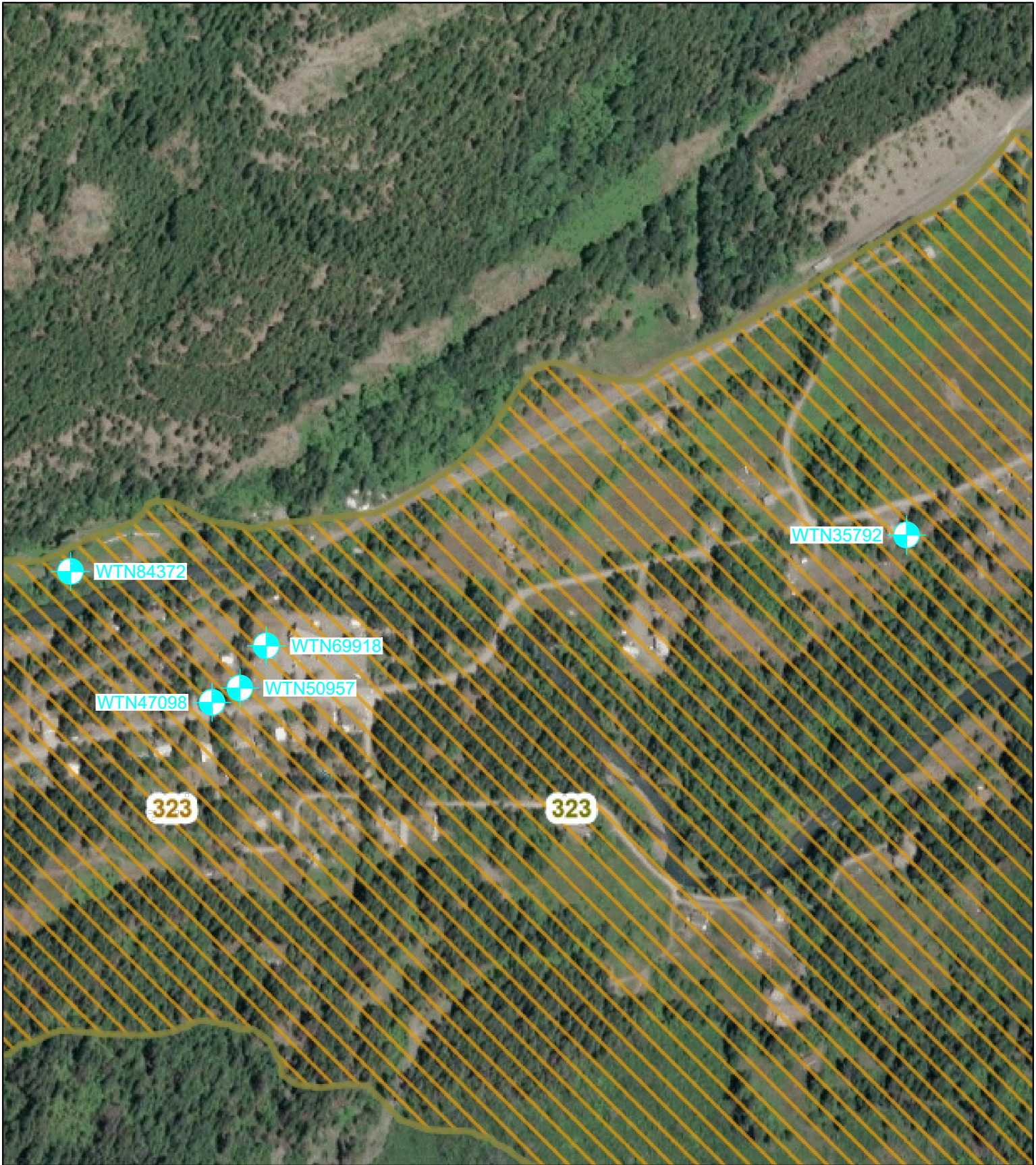
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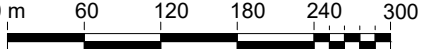
Project #: 25035
 Figure #: 1
 Drawing #: 25035.1
 Design By: YY
 Drawing By: JB
 Rev'd By:
 Date: Jul 2025

Client: Tsal'ah First Nation
 Project: Onsite Wastewater Disposal System (OWDS)
 Groundwater Source Supply Considerations
 6805, 6855, 6885 Seton Portage Road,
 and 70 Edwards Road, Seton Portage, BC
 Title: Site Location

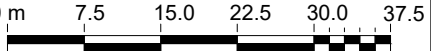


 KALA GEOSCIENCES LTD. Groundwater • Wastewater • Environmental 1214 McGill Road, Kamloops, BC • Phone: 250.372.8194		Legend: ----- Subject Property Line  Well Location	
Drawing References: Google Earth Pro		Client: Tsal'ah First Nation Project: Onsite Wastewater Disposal System (OWDS) Groundwater Source Supply Considerations 6805, 6855, 6885 Seton Portage Road, and 70 Edwards Road, Seton Portage, BC	
Scale: 0 m 7.5 15.0 22.5 30.0 37.5		PREPARED SOLELY FOR THE USE OF OUR CLIENT AND NO REPRESENTATION OF ANY KIND IS MADE TO OTHER PARTIES WITH WHICH KALA GEOSCIENCES LTD. HAS NOT ENTERED INTO A CONTRACT. © KALA GEOSCIENCES LTD. Project #: 25035 Figure #: 2 Drawing #: 25035.2 Design By: YY Drawing By: JB Rev'd By: Date: Jul 2025	
		Title: Well Location Diagram	



 KALA GEOSCIENCES LTD. Groundwater • Wastewater • Environmental 1314 McGill Road, Kamloops, BC • Phone: 250.372.8194		Legend:  Aquifer  Well Location	
Drawing References: BC Water Resources Atlas		Project #: 25035 Figure #: 3 Drawing #: 25035.3 Design By: YY Drawing By: JB Rev'd By: Date: Jul 2025	
Scale:  0 m 60 120 180 240 300		Client: Tsal'ah First Nation Project: Onsite Wastewater Disposal System (OWDS) Groundwater Source Supply Considerations 6805, 6855, 6885 Seton Portage Road, and 70 Edwards Road, Seton Portage, BC Title: Mapped Aquifer and Registered Water Wells	
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 KALA GEOSCIENCES LTD. Groundwater • Wastewater • Environmental 1214 McGill Road, Kamloops, BC • Phone: 250.372.8194		Legend:  Subject Property Line  Test Pit Location	
Drawing References: Google Earth Pro		Project #: 25035 Figure #: 4 Drawing #: 25035.4 Design By: YY Drawing By: JB Rev'd By: Date: Jul 2025	
Scale:  0 m 7.5 15.0 22.5 30.0 37.5		Client: Tsal'ah First Nation Project: Onsite Wastewater Disposal System (OWDS) Groundwater Source Supply Considerations 6805, 6855, 6885 Seton Portage Road, and 70 Edwards Road, Seton Portage, BC Title: Test Pit Location Diagram	
 PREPARED SOLELY FOR THE USE OF OUR CLIENT AND NO REPRESENTATION OF ANY KIND IS MADE TO OTHER PARTIES WITH WHICH KALA GEOSCIENCES LTD. HAS NOT ENTERED INTO A CONTRACT. © KALA GEOSCIENCES LTD.			



P1: Shed covers WTN50957



P2: WTN50957 in a concrete pit



P3: Shed covers WTN47098



P4: Pumping test at WTN47098



P5: Discharge hose during WTN50957 pumping test



P6: TP25-01



P7: TP25-02



P8: TP25-03



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1314 McEwen Road, Kamloops, BC • Phone: 250.372.9194

Drawing Reference:

Scale: N/A

Legend:

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Project #: 25035
Figure: 5
Drawing #: 25035.5
Design By: YY
Drawing By: JB
Rev'd By:
Date: Jul 2025

Client: Tsal'alh First Nation
Project: Onsite Wastewater Disposal System (OWDS)
Groundwater Source Supply Considerations
6805, 6855, 6885 Seton Portage Road,
and 70 Edwards Road, Seton Portage, BC

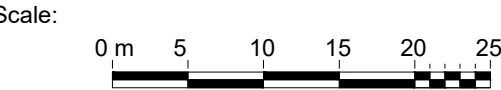
Title: Site Photographs



Summary of OWDS				
Unit	Daily Design Flow	Septic Tank Capacity	Pump Chamber Capacity	Dispersion Field Size
1	5,250 L/d	4,163 IGal	1,250 IGal	3.94 m x 23.83 m (76 Modules)
2	5,250 L/d	4,163 IGal	2,000 IGal - shared with Unit 3	3.94 m x 23.83 m (76 Modules)
3	5,250 L/d	4,163 IGal	2,000 IGal - shared with Unit 2	3.94 m x 23.83 m (76 Modules)
4	4,200 L/d	4,163 IGal	1,000 IGal	3.03 m x 25.05 m (60 Modules)



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Legend:



Project #: 25035
Figure #: 1
Drawing #: 25035.1
Design By: PJB
Drawing By: JB
Rev'd By:
Date: Jul 2025

Client: Tsal'ah First Nation
Project: Onsite Wastewater Disposal System (OWDS)
Groundwater Source Supply Considerations
6805, 6855, 6885 Seton Portage Road,
and 70 Edwards Road, Seton Portage, BC

Title: Proposed Site Layout

Drawing References:
David Nairne + Associates Ltd.

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LIST OF APPENDICES

- Appendix A: Modified Unified Classification System for Soils
Test Pit Logs
Water Well Records
- Appendix B: Terms and Definitions
Pumping Test Data
- Appendix C: Certificates of Analytical Chemistry

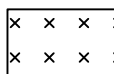
APPENDIX A

Modified Unified Classification System for Soils
Test Pit Logs
Water Well Records

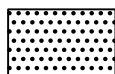
MODIFIED UNIFIED CLASSIFICATION SYSTEM FOR SOILS.

MAJOR DIVISION			GROUP SYMBOL	GRAPH SYMBOL	COLOUR CODE	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS: (more than half by weight larger than 200 sieve)	SILTS: (Below "A" line negligible organic content)		GW		Brown1	WELL GRADED GRAVELS, LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}} > 4$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1 \text{ to } 3$	
			GP		Brown2	POORLY GRADED GRAVELS, AND GRAVEL - SAND MIXTURES. LITTLE OR NO FINES.	NOT MEETING ABOVE REQUIREMENT	
			GM		Brown3	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES.	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE P.I. LESS THAN 4
			GC		Brown4	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES.		ATTERBERG LIMITS BELOW "A" LINE P.I. LESS THAN 7
	SILTS: (Below "A" line negligible organic content)		SW		Tan2	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	$C_U = \frac{D_{60}}{D_{10}} > 6$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1 \text{ to } 3$	
			SP		Tan3	POORLY GRADED SANDS, LITTLE OR NO FINES.	NOT MEETING ABOVE REQUIRMENTS	
			SM		Tan4	SILTY SANDS, SAND - SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE P.I. LESS THAN 4
			SC		Tan5	CLAYEY SANDS, SAND - CLAY MIXTURES.		ATTERBERG LIMITS BELOW "A" LINE P.I. LESS THAN 7
FINE-GRAINED SOILS (more than half by weight passes 200 sieve)	SILTS: (Below "A" line negligible organic content)		ML		Grey	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY SANDS OF SLIGHT PLASTICITY	CLASSIFICATION IS BASED UPON PLASTICITY CHART (SEE BELOW)	
			MH		Grey	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS.		
	CLAYS (above "A" line on plasticity chart negligible content)		CL		Silver	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, LEAN CLAYS.		
			CH		Silver	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.		
	ORGANIC SILTS & CLAYS (below "A" line on chart)		OL		Tan1	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.	NOTE: WHENEVER THE NATURE OF THE FINE CONTENT HAS NOT BEEN DETERMINED, IT IS DESIGNATED BY THE LETTER "F". EXAMPLE: SF - MIXTURE OF SAND WITH SILT OR CLAY.	
			OH		Tan1	ORGANIC CLAYS OF HIGH PLASTICITY.		
			PT		Olive	PEAT AND OTHER HIGHLY ORGANIC SOILS.	STRONG COLOUR OR ODOR, AND OFTEN FIBROUS TEXTURE.	

SPECIAL SYMBOLS



BEDROCK
(undifferentiated)



VOLCANIC ASH

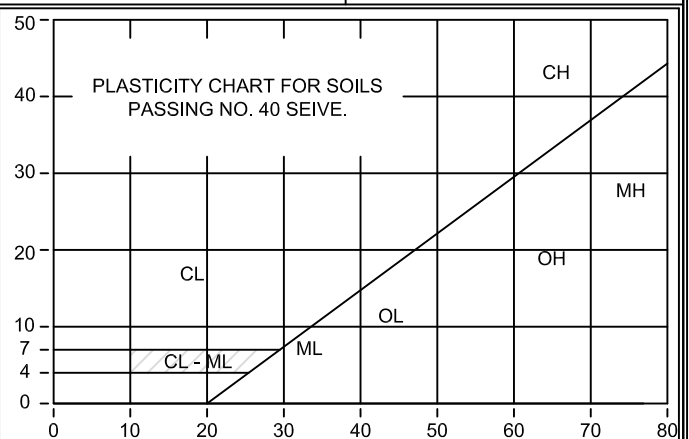
SOIL COMPONENTS

SOIL COMPONENTS	U.S. STANDARD SIEVE SIZE	DEFINING RANGES OF PERCENTAGE BY WEIGHT OF MINOR COMPONENTS.	
	PASSING RETAINED	PERCENT	DESCRIPTOR
GRAVEL:			
coarse	76 mm	50-35	and
fine	19 mm No.4		
SAND:		35-20	some
coarse	4.75 mm	20-10	little
medium	2.00 mm		
fine	425 µm		
SILT: (non plastic) or CLAY: (plastic)	75 µm	0-10	trace

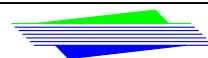
OVERSIZE MATERIAL

Rounded or subrounded
COBBLES 75 mm to 203 mm
BOULDERS > 203 mm

Not Rounded
ROCK FRAGMENTS > 76 mm
ROCKS > 0.76 m³ volume.



- ALL SIEVE SIZES MENTIONED ON THIS CHART ARE U.S.STANDARD, A.S.T.M. E.11.
- BOUNDARY CLASSIFICATIONS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE GIVEN COMBINED GROUP SYMBOLS, EG. GW-GC IS A WELL GRADED GRAVEL SAND MIXTURE WITH CLAY BINDER BETWEEN 5% AND 12%.



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Groundwater • Wastewater • Environmental

1314 MCGILL ROAD
TEL. (250) 372-9194

KAMLOOPS, BC, V2C 6N6
FAX (250) 372-9398

**KALA GEOSCIENCES LTD.**

Groundwater ■ Wastewater ■ Environmental

1314 McGill Road
Kamloops, BC
V2C 6N6Tel (250) 372-9194
Fax (250) 372-9398
info@kalageo.com**LOG OF TP25-01**

(Page 1 of 1)

Tsal'ah First Nation Onsite Wastewater Disposal System (OWDS) Groundwater Source Supply Considerations 6805, 6855, 6885 Seton Portage Road, and 70 Edwards Road, Seton Portage, BC				Date Started : April 8, 2025 Date Completed : April 8, 2025 Excavation Method : Backhoe Sample Method : Grab Company Rep. : AK	UTM Zone : 10U Easting : 550234.57 m E Northing : 5617603.11 m N Survey By: : Logged By: : AK
Depth in Meters	Surf. Elev.	MUCS	GRAPHIC	DESCRIPTION	REMARKS
0.0				Gravel - fine to coarse, and sand fine to coarse, little fines, frequent cobbles, compact, grey, moist	Concrete @ 1.5 mbgs
0.5					
1.0					
1.5		GP			
2.0					
2.5					
3.0				End TP25-01 @ 3.0 mbgs. No G.W. No mottle	
3.5					



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info@kalageo.com

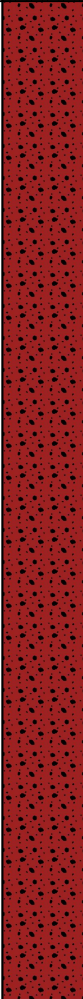
LOG OF TP25-02

(Page 1 of 1)

Tsal'ah First Nation
Onsite Wastewater Disposal System (OWDS)
Groundwater Source Supply Considerations
6805, 6855, 6885 Seton Portage Road,
and 70 Edwards Road, Seton Portage, BC

Date Started : April 8, 2025
Date Completed : April 8, 2025
Excavation Method : Backhoe
Sample Method : Grab
Company Rep. : AK

UTM Zone : 10U
Easting : 550218.44 m E
Northing : 5617601.29 m N
Survey By: :
Logged By: : AK

Depth in Meters	Surf. Elev.	MUCS	GRAPHIC	DESCRIPTION	REMARKS
0.0		SM		Topsoil - sandy loam	
0.5				Gravel - fine to coarse, and sand fine to coarse, little fines, frequent cobbles, compact, grey, moist	
1.0					
1.5		GP			
2.0					
2.5					
3.0		SM		Seam Sand, fine to coarse, little silt, little gravel, trace clay, brown, compact, moist, occasional cobbles/boulders, subrounded	
3.5				End TP25-02 @ 3.0 mbgs. No G.W. No mottle	

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Groundwater ■ Wastewater ■ Environmental

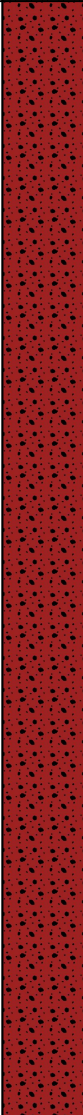
1314 McGill Road
Kamloops, BC
V2C 6N6Tel (250) 372-9194
Fax (250) 372-9398
info@kalageo.com**LOG OF TP25-03**

(Page 1 of 1)

Tsal'alh First Nation
Onsite Wastewater Disposal System (OWDS)
Groundwater Source Supply Considerations
6805, 6855, 6885 Seton Portage Road,
and 70 Edwards Road, Seton Portage, BC

Date Started : April 8, 2025
Date Completed : April 8, 2025
Excavation Method : Backhoe
Sample Method : Grab
Company Rep. : AK

UTM Zone : 10U
Easting : 550212.92 m E
Northing : 5617589.36 m N
Survey By: :
Logged By: : AK

Depth in Meters	Surf. Elev.	MUCS	GRAPHIC	DESCRIPTION	REMARKS
0.0		SM		Topsoil - sandy loam	
				Gravel - fine to coarse, and sand fine to coarse, little fines, frequent cobbles, compact, grey, moist	
0.5					
1.0					
1.5		GP			
2.0					
2.5					
3.0				End TP25-03 @ 3.0 mbgs. No G.W. No mottle	
3.5					

1256/81
✓

NOR-WEST WATER WELL DRILLING LTD.

P.O. Box 3446
Langley 534-4108

23191 Fraser Highway, Langley
Evenings: Langley 534-4222

Depth

Material

WELL LOG

OWNER SCHOOL DISTRICT #29,

ADDRESS P. O. BOX 820,

LILLOOET, B. C.

LOCATION SETON PORTAGE, B. C.

JANUARY 23rd, 19 81

Date Begun JANUARY 20/81 Completed JANUARY 20/81

Yield 40 + Gallons per minute

Static Water Level 35 feet from surface

Pumping Water Level 50 feet from surface

Casing Used 59 FT. 7 INCHES OF 6 INCH

Bottom of Casing 58 FT. 1 INCH feet from surface

Stick-up above ground 1 FT. 6 INCHES feet

Screen Used NONE

Top of Screen N/A feet from surface

Bottom of Screen N/A feet from surface

Sources of Water 40 + g.p.m. at 45 - 50 feet

Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Rig No. A/R #1

Driller D. H. WALSH

RECOMMENDED PUMP SET AT 50 FT. RATE 40 + G.P.M.

0	GRAVEL AND BOULDERS
	GRAVEL AND BOULDERS
20	GRAVEL AND BOULDERS
	SILTY SAND AND GRAVEL
	SILTY SAND AND GRAVEL
35	WET SILTY SAND & GRAVEL
45	WET SILTY SAND & GRAVEL
58	COURSE WATER BEARING GRAVEL

092J-079.2.1.1

WV H7098

17

WATER WELL RECORD

DEPT. OF ENVIRONMENT, WATER RESOURCES SERVICE, WATER INVESTIGATIONS BRANCH

VICTORIA, BRITISH COLUMBIA

Z 07 WELL NO. 014

E

N

Z 7 X 13 Y 30 NO. 14

NAT. TOPO. SHEET NO. 92 J/9

Well Map #48

PRODUCTION TEST SUMMARY

DATE _____
TEST BY _____
BAIL TEST ☐ PUMP TEST ☐ DURATION OF TEST _____
RATE 40 GPM AT 50' DRAWDOWN _____
WATER LEVEL AT COMPLETION OF TEST _____
AVAILABLE DRAWDOWN _____ SPECIFIC CAPACITY _____
PERMEABILITY _____ STORAGE COEFF. _____
TRANSMISSIVITY _____
RECOMMENDED PUMPING RATE 40+ GPM
RECOMMENDED PUMP SETTING 50'

LITHOLOGY

FROM	TO	DESCRIPTION
0	20'	GRAVEL & BOULDERS
20	35	SILTY SAND & GRAVEL
35	45	WET SILTY SAND & GRAVEL
45	58	COARSE, WATER BEARING GRAVEL

SOURCES OF WATER

ANIONS

mg/l

epm

CARBONATE (CO₃)BICARBONATE (HCO₃)SULPHATE (SO₄)

CHLORIDE (Cl)

NO₂ + NO₃ (NITROGEN)

* TKN. (NITROGEN)

PHOSPHORUS (P)

* TKN = TOTAL KJELDAHL NITROGEN

NO₂ = NITRITE NO₃ = NITRATE

CATIONS

mg/l

epm

CALCIUM (Ca)

MAGNESIUM (Mg)

SODIUM (Na)

POTASSIUM (K)

IRON (DISSOLVED)

CHEMISTRY FIELD TESTS

TEST BY _____ DATE _____ EQUIPMENT USED _____

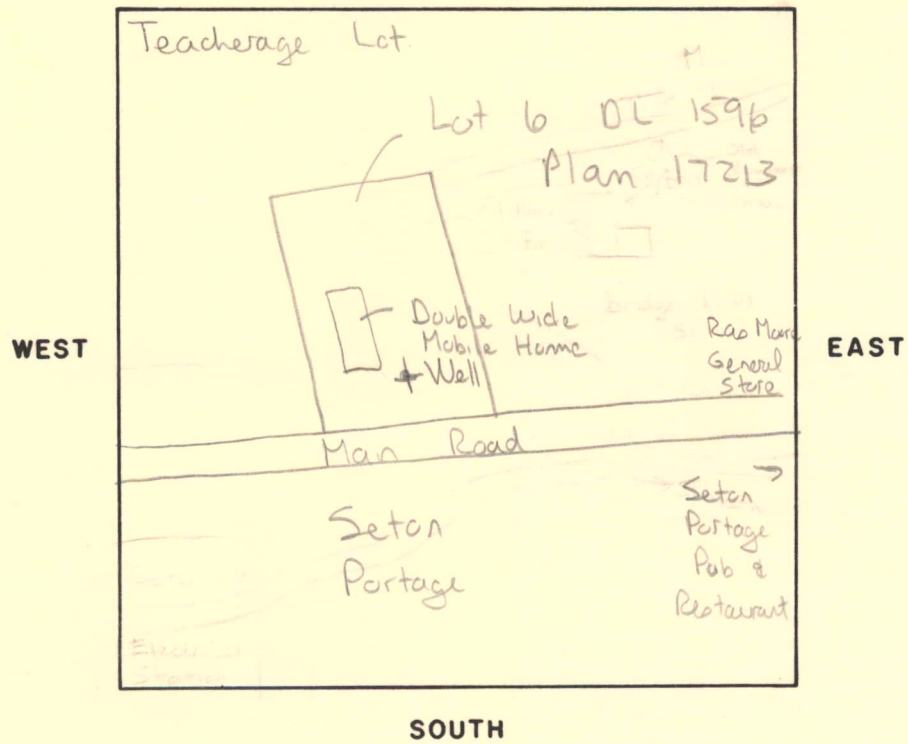
CONTENTS OF FOLDER

☒ DRILL LOG☐ SIEVE ANALYSIS☐ PUMP TEST DATA☐ GEOPHYSICAL LOGS☐ CHEMICAL ANALYSIS☐ REPORT

OTHER _____

SOURCES OF INFORMATION DRILLER

NORTH



CARD BY P.J.W. DATE July 13, 1983.
ADDITIONAL DATA ADDED BY _____

REMARKS

NOR-WEST WATER WELL DRILLING LTD.

P.O. Box 3446
Langley 534-4108

23191 Fraser Highway, Langley
Evenings: Langley 534-4222

Depth

Material

WELL LOG

OWNER MR. MICHAEL O'DONAGHEY,

ADDRESS GENERAL DELIVERY,

SHALALTH, B. C. VON 300

LOCATION SETON PORTAGE, B.C.

RESIDE STORE

SEPTEMBER 13th, 19 82

Date Begun SEPTEMBER 11/82 Completed SEPTEMBER 11/82

Yield 10 + Gallons per minute

Static Water Level 23 feet from surface

Pumping Water Level 40 feet from surface

Casing Used 52FT OF 6 INCH

Bottom of Casing 50 feet from surface

Stick-up above ground 2 feet

Screen Used NOIZ

Top of Screen N/A feet from surface

Bottom of Screen N/A feet from surface

Sources of Water 10 + g.p.m. at 28 - 50 feet

Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Rig No. A/R #1

Driller T. E. WALSH

RECOMMENDED PUMP SET AT 40 FT. RATE 10 G.P.M.

0

DRY SAND, GRAVEL AND
BOULDERS

10

SILT, TILL, GRAVEL AND
BOULDERS

21

WET SILTY SAND AND GRAVEL

28

WATER BEARING SAND
AND GRAVEL

50

No. 17213

DEPOSITED IN THE LAND REGISTRY OFFICE AT Kamloops, B.C., THIS 8th
DAY OF June, 1967.H. Kennedy
REGISTRAR.

THIS SPACE FOR LAND REGISTRY OFFICE USE ONLY

LEGEND

BEARINGS ARE ASTROMOMIC AND ARE DERIVED FROM Plan 3832

O.I.P. DENOTES OLD IRON POST FOUND

I.P. DENOTES IRON POST SET

APPROVAL

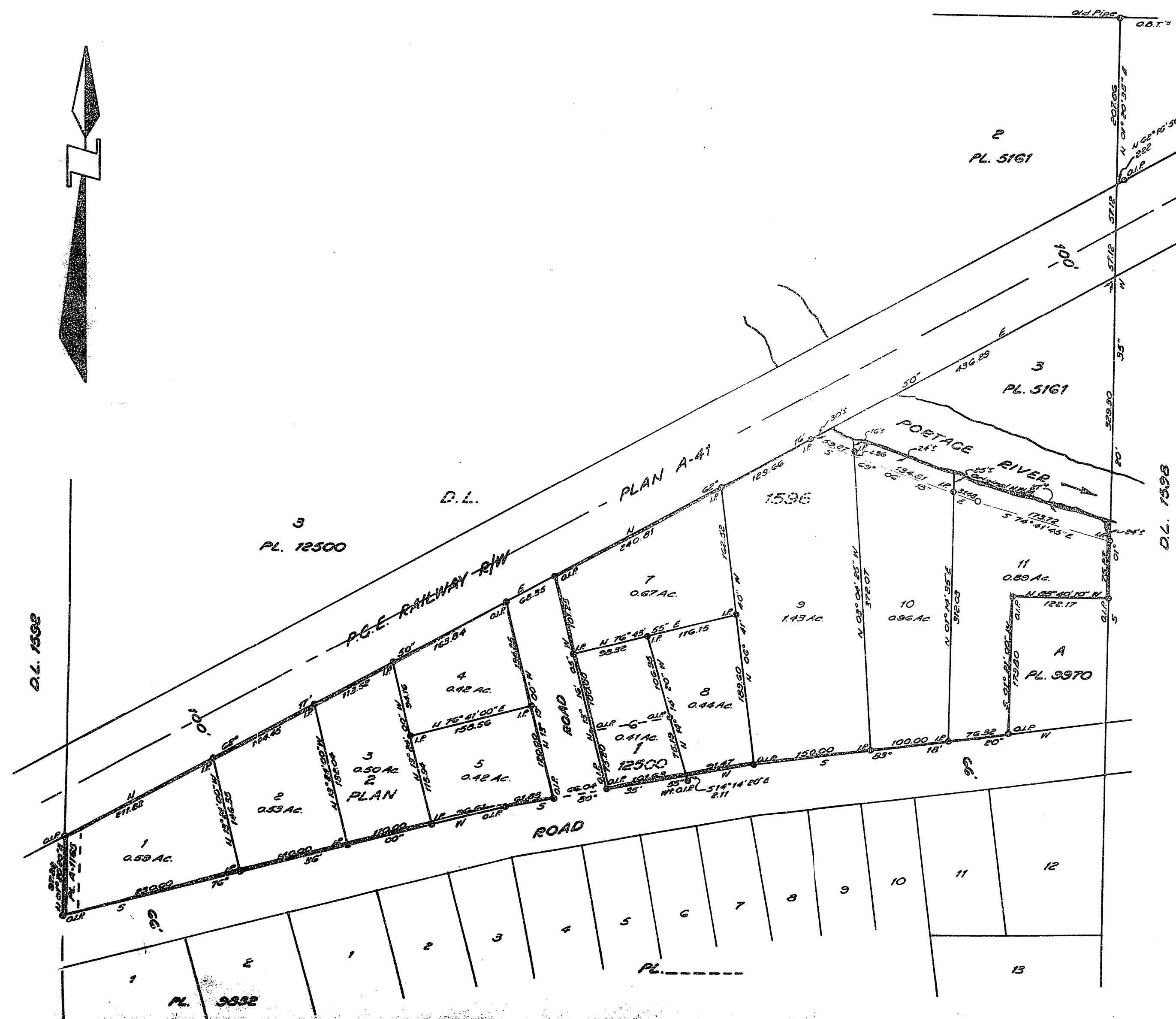
APPROVED UNDER THE LAND REGISTRY ACT THIS 26th DAY OF May 1967.J. W. Nelson
APPROVING OFFICER FOR THE Department
of Highways.

WITNESS

OWNER

Jessie Mayne J. Edwards
Jessie Mayne S. M. EdwardsI, S. B. Leggett OF THE City of
Kamloops, BRITISH COLUMBIA LAND SURVEYOR, MAKE OATH AND
SAY THAT I WAS PRESENT AT AND DID PERSONALLY SUPERINTEND THE SURVEY
REPRESENTED BY THIS PLAN, AND THAT THE SURVEY AND PLAN ARE CORRECT. THE
SAID SURVEY WAS COMPLETED ON THE 11th DAY OF May
1967.SWORN BEFORE ME THIS 15th
DAY OF May, 1967.S. B. Leggett
A COMMISSIONER FOR TAKING
AFFIDAVITS FOR BRITISH COLUMBIAS. B. Leggett and Associates
JOB NO. 15-697 R.B. NO. 587-PRSPLAN OF SUBDIVISION OF LOTS 1 AND 2
PLAN 12500 AND THE REMAINDER OF THE
NORTH 40 ACRES OF DISTRICT LOT 1596
GROUP 1 LILLOOET DISTRICT

Scale: 1 inch = 100 feet

925 079-2-1-1
(9)

092J.079.2.1.1

WELL
50957

9

WATER WELL RECORD

DEPT. OF ENVIRONMENT, WATER RESOURCES SERVICE, WATER INVESTIGATIONS BRANCH

VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 8 SEC. _____ TP. _____ R. _____ D.L. 1596 LAND DISTRICT Lillooet PLAN 17213DESCRIPTIVE LOCATION SETON PORTAGE B.C. LICENCE NO. _____ DATE 821091/13OWNER'S NAME MICHAEL O'DONAGHEY ADDRESS GEN. DEL SHALATH B.C.
DRILLER'S NAME NOR-WEST DRILLING ADDRESS 23191 34 FRASER HWY LANGLEY DATE COMPLETED 821091/11DEPTH 50 ELEVATION 101 ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH 53'

METHOD OF CONSTRUCTION _____ CASING DIAM _____ LENGTH _____

SCREEN LOCATION _____ SCREEN ☐ SIZE _____ LENGTH _____ TYPE _____SANITARY SEAL YES ☐ NO ☐ SCREEN ☐ SIZE _____ LENGTH _____ TYPE _____PERFORATED CASING ☐ LENGTH _____ PERFORATIONS FROM _____ TO _____GRAVEL PACK ☐ LENGTH _____ DIAM. _____ SIZE GRAVEL, ETC. _____DISTANCE TO WATER 23' ☐ ESTIMATED WATER LEVEL
FROM _____ ☐ MEASURED ELEVATION _____ ARTESIAN PRESSURE _____

DATE OF WATER LEVEL MEASUREMENT _____ WATER USE _____

CHEMISTRY

TEST BY _____ DATE _____

TOTAL DISSOLVED SOLIDS _____ mg/l TEMPERATURE _____ °C pH _____ SILICA (SiO₂) _____ mg/lCONDUCTANCE _____ ^{umhos/cm} AT 25°C TOTAL IRON (Fe) _____ mg/l TOTAL HARDNESS (CaCO₃) _____ mg/lTOTAL ALKALINITY (CaCO₃) _____ mg/l PHEN. ALKALINITY (CaCO₃) _____ mg/l MANGANESE (Mn) _____ mg/l

COLOUR _____ ODOUR _____ TURBIDITY _____

ANIONS

mg/l

epm

CARBONATE (CO₃)BICARBONATE (HCO₃)SULPHATE (SO₄)

CHLORIDE (Cl)

NO₂ + NO₃ (NITROGEN)

• TKN. (NITROGEN)

PHOSPHORUS (P)

• TKN = TOTAL KJELDAHL NITROGEN

NO₂ = NITRITE NO₃ = NITRATE

CATIONS

mg/l

epm

CALCIUM (Ca)

MAGNESIUM (Mg)

SODIUM (Na)

POTASSIUM (K)

IRON (DISSOLVED)

CHEMISTRY SITE NO. _____

CHEMISTRY FIELD TESTS

TEST BY _____ DATE _____ EQUIPMENT USED _____

CONTENTS OF FOLDER

☒ DRILL LOG☐ SIEVE ANALYSIS☐ PUMP TEST DATA☐ GEOPHYSICAL LOGS☐ CHEMICAL ANALYSIS☐ REPORTOTHER LTO PLANSOURCES OF INFORMATION DRILLERZ 7 WELL NO. 5

E

N

Z 7 X 13 Y 30 NO. 5NAT. TOPO. SHEET NO. Dist 44Map 48

PRODUCTION TEST SUMMARY

DATE 821091/13

TEST BY _____

BAIL TEST ☐ PUMP TEST ☐ DURATION OF TEST _____RATE 10 GPM DRAWDOWN _____

WATER LEVEL AT COMPLETION OF TEST _____

AVAILABLE DRAWDOWN _____ SPECIFIC CAPACITY _____

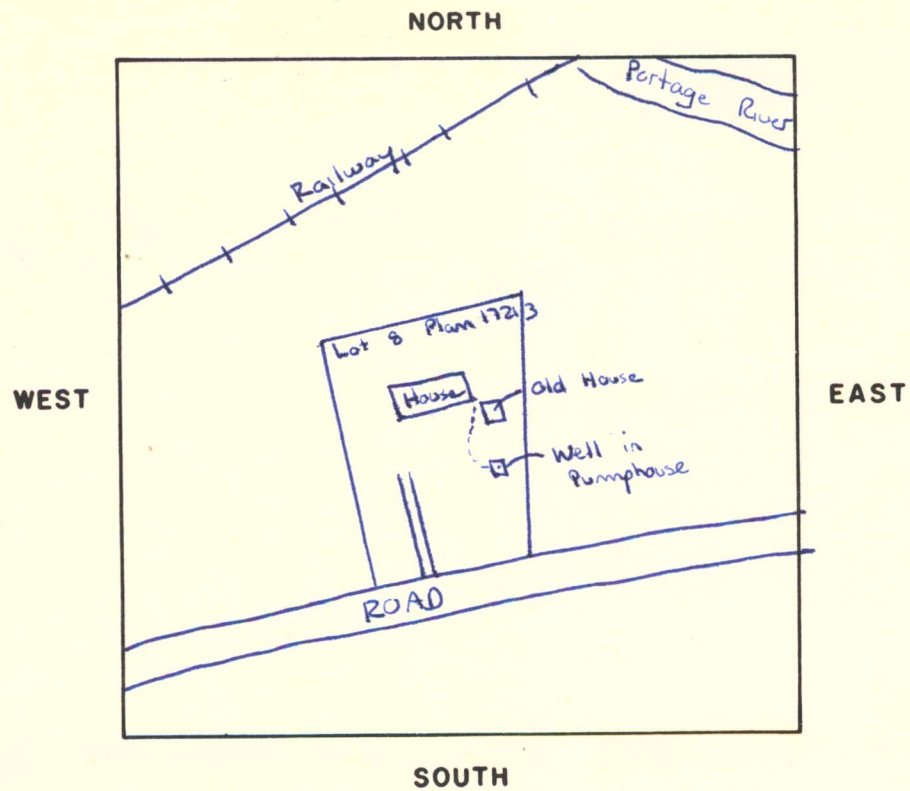
PERMEABILITY _____ STORAGE COEFF. _____

TRANSMISSIVITY _____

RECOMMENDED PUMPING RATE 10 GPMRECOMMENDED PUMP SETTING 40'

LITHOLOGY

FROM	TO	DESCRIPTION
0	10	SAND, GRAVEL & BOULDERS
10	21	SILT, TILL, GRAVEL & BOULDERS
21	28	SAND & GRAVEL
28	50	WATER BEARING SAND & GRAVEL



CARD BY M. Burke DATE Oct 29/84
ADDITIONAL DATA ADDED BY _____

REMARKS

092J079211-20 10,550288 2303/92
NOR-WEST WATER WELL DRILLING LTD. WTN 699K

P.O. Box 3446
Langley 534-4108

23191 Fraser Highway, Langley
Evenings: Langley 534-4222

Depth 561750 Material

WELL LOG

OWNER MR. NICK GALLANT (GALLANT JUNCTION)

ADDRESS BOX 2001

SETON PORTAGE, B.C. V0N 3B0

LOCATION SAME Lillooet CD

OCT. 19 19 92

Date Begun OCT. 16/92 Completed OCT. 16/92

Yield 30 Gallons per minute

Static Water Level 19 feet from surface

Pumping Water Level 50 feet from surface

Casing Used 55 FT. of 6 IN.

Bottom of Casing 53 feet from surface

Stick-up above ground 2 feet

Screen Used #100 SLOT S/S SCREEN C/W 2 FT RISER,
K-PACKER & B. BOTTOM

Top of Screen 54 feet from surface

Bottom of Screen 59 feet from surface

Sources of Water 30 g.p.m. at 53 59 feet

Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Rig No. A3 #1

Driller C.V. WALSH & T. OSTER

RECOMMENDED PUMP SET AT 50 FT. RATE 30 G.P.M.

EXISTING WELL

WET SILTY SAND & GRAVEL

WATER BEARING SAND & GRAVEL

92J.079.2.1.1

2303/92

NOR-WEST WATER WELL DRILLING LTD.

P.O. Box 3446
Langley 534-4108

23191 Fraser Highway, Langley
Evenings: Langley 534-4222

Depth

Material

WELL LOG

OWNER MR. NICK GALLANT (GALLANT JUNCTION)

ADDRESS BOX 2001

SETON PORTAGE, R.C. VON 380

LOCATION SAME

OCT. 19 19 92

Date Begun OCT. 16/92 Completed OCT. 16/92

Yield 30 Gallons per minute

Static Water Level 19 feet from surface

Pumping Water Level 50 feet from surface

Casing Used 55 FT. of 6 IN.

Bottom of Casing 53 feet from surface

Stick-up above ground 2 feet

Screen Used #100 SLOT S/S SCREEN C/W 2FT RISER,
K-PACKER & B. BOTTOM

Top of Screen 54 feet from surface

Bottom of Screen 59 feet from surface

Sources of Water 30 g.p.m. at 53 - 59 feet

Sources of Water g.p.m. at feet

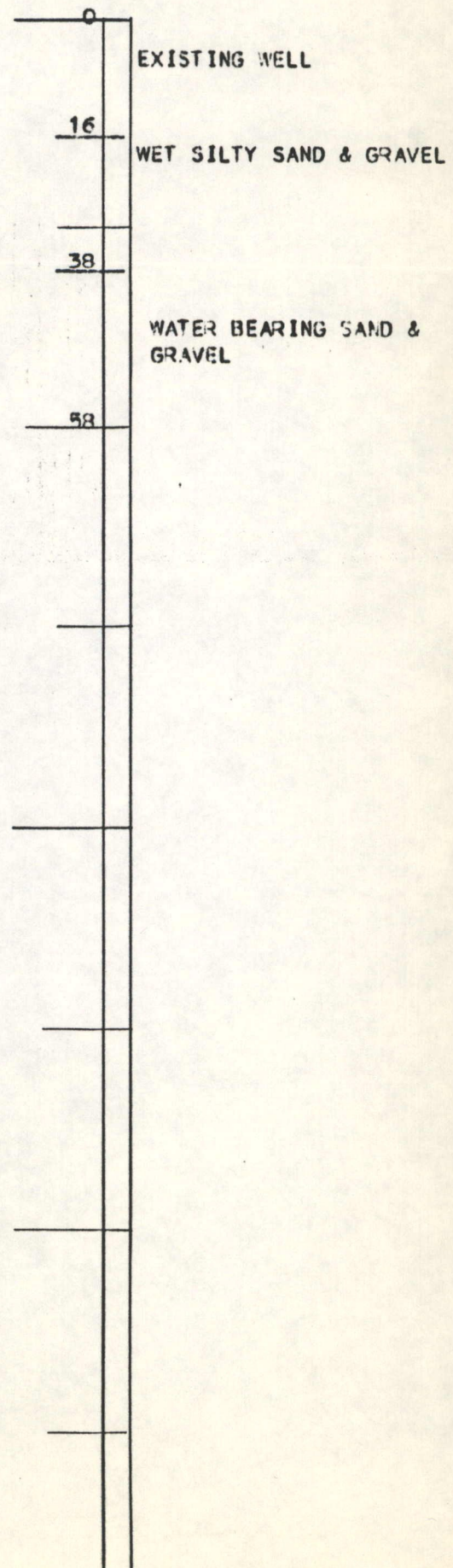
Sources of Water g.p.m. at feet

Sources of Water g.p.m. at feet

Rig No. AR #1

Driller C.V. WALSH & T. OSTER

RECOMMENDED PUMP SET AT 50 FT. RATE 30 G.P.M.



BCGS

MAP

092J • 079 • 2 • 1 • 1

WTN 69918

WELL NO.

20

WATER WELL RECORD

PID 008 434 573

MINISTRY OF ENVIRONMENT WATER MANAGEMENT DIVISION

VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 12 9 SEC. 1 TP. R. D.L. 588 LAND DISTRICT Lillooet PLAN 1704

DESCRIPTIVE LOCATION

Seton Portage Rd.

LICENCE NO. DATE 17213

OWNER'S NAME NICK GAILANT

ADDRESS

Seton Portage Box 2001

DRILLER'S NAME Nor West

ADDRESS

DATE COMPLETED

DEPTH 58 ELEVATION OF ☐ ESTIMATED ☐ SURVEYED CASING DIAM. LENGTH

METHOD OF CONSTRUCTION CASING DIAM. LENGTH

SCREEN LOCATION SCREEN ☐ SIZE LENGTH TYPESANITARY SEAL YES ☐ NO ☐ SCREEN ☐ SIZE LENGTH TYPEPERFORATED CASING ☐ LENGTH PERFORATIONS FROM TOGRAVEL PACK ☐ LENGTH DIAM. SIZE GRAVEL, ETC.DISTANCE TO WATER ☐ ESTIMATED WATER LEVELFROM ☐ MEASURED ELEVATION ARTESIAN PRESSURE

DATE OF WATER LEVEL MEASUREMENT WATER USE

Z 10 WELL NO. 20

550288 E

5617 595 N

Z X Y NO.

NAT. TOPO. SHEET NO.

PRODUCTION TEST SUMMARY

DATE
TEST BY
BAIL TEST ☐ PUMP TEST ☐ DURATION OF TEST
RATE DRAWDOWN
WATER LEVEL AT COMPLETION OF TEST
AVAILABLE DRAWDOWN SPECIFIC CAPACITY
PERMEABILITY STORAGE COEFF.
TRANSMISSIVITY
ESTIMATED WELL YIELD
RECOMMENDED PUMPING RATE
RECOMMENDED PUMP SETTING

CHEMISTRY

TEST BY DATE

TOTAL DISSOLVED SOLIDS mg/l TEMPERATURE °C pH SILICA (SiO₂) mg/lCONDUCTANCE $\mu\text{mhos/cm}$ AT 25°C TOTAL IRON (Fe) mg/l TOTAL HARDNESS (CaCO₃) mg/lTOTAL ALKALINITY (CaCO₃) mg/l PHEN. ALKALINITY (CaCO₃) mg/l MANGANESE (Mn) mg/l

COLOUR ODOUR TURBIDITY

ANIONS

mg/l

epm

CARBONATE (CO ₃)		
BICARBONATE (HCO ₃)		
SULPHATE (SO ₄)		
CHLORIDE (Cl)		
NO ₂ + NO ₃ (NITROGEN)		
TKN. (NITROGEN)		
PHOSPHORUS (P)		

TKN = TOTAL KJELDAHL NITROGEN

NO₂ = NITRITE NO₃ = NITRATE

CATIONS

mg/l

epm

CALCIUM (Ca)		
MAGNESIUM (Mg)		
SODIUM (Na)		
POTASSIUM (K)		
IRON (DISSOLVED)		

CHEMISTRY SITE NO.

CHEMISTRY FIELD TESTS

TEST BY DATE EQUIPMENT USED

CONTENTS OF FOLDER

☐ DRILL LOG☐ SIEVE ANALYSIS☐ PUMP TEST DATA☐ GEOPHYSICAL LOGS☐ CHEMICAL ANALYSIS☐ REPORT

OTHER

SOURCES OF INFORMATION

LITHOLOGY

FROM

TO

DESCRIPTION

The legal
written above
is not
Seton Portage

EAST

CARD BY _____ DATE _____
ADDITIONAL DATA ADDED BY _____

[illegible]

APPENDIX B

Terms and Definitions
Pumping Test Data

Definition of Terms and Abbreviations

Analytical Methods: the use of easily understood mathematical equations and calculations to define groundwater movement and contaminant transport.

Aquiclude: A geological formation, group of formations or part of a formation through which virtually no water moves.

Aquifer: a water-bearing unit that will yield water in a useable quantity to a well or spring.

Aquifer Model: a computerized mathematical description of the aquifer system, used to understand its physical behaviour.

Aquifer System: a general term used to define all areas pertaining to the aquifer that contribute, remove or store groundwater.

Aquitard: A saturated, but poorly permeable bed, formation, or group of formations that does not yield water freely to a well or spring. However, an aquitard may transmit water to or from adjacent aquifers.

Available Drawdown: A volume of water measured from static water level to top of riser above screens.

Bedrock: a general term for consolidated material, such as sandstone and shale, that underlies soils or other unconsolidated material.

Capture Zone: the entire area recharging or contributing water to a well or well field.

Casing Stickup: Well casing distance above ground surface.

Conductivity: A measure of the ability of a material to permit the passage of water. Gravel has high conductivity; clay has a very low conductivity.

Cone of Depression: the depression in the water table or potentiometric surface around a well caused by the withdrawal of water. It defines the area of influence of a well.

Confined Aquifer: an aquifer completely saturated with water and bounded above and below by units, such as clay, which have a distinctly lower permeability than the aquifer itself. In a confined aquifer the groundwater is under pressure, and when a well is drilled into a confined aquifer, the water rises above the level of the aquifer.

Contaminant: an undesirable substance not normally present in the water or soil.

Contamination: the degradation of natural water quality as a result of man's activities. The degree of permissible contamination depends upon the intended end use, or uses, of the water.

Contingency Plan: a plan that prepares for the unforeseen or an accidental occurrence.

Drift deposits: a general term for unconsolidated material transported by glaciers and deposited directly on land or in the sea.

Drawdown: the decline in groundwater level at a point caused by the withdrawal of water from an aquifer.

Evapotranspiration (ET): the process where water absorbed by plants, usually through the roots, is evaporated into the atmosphere from the plant surface.

Flow Lines: lines indicating the direction followed by groundwater toward points of discharge. Flow lines are perpendicular to water table contours.

Flow Path: subsurface course a water molecule or solute would follow.

Flowing Artesian Well: A well in which the water overflows at ground surface.

Groundwater: subsurface water contained in openings and pore spaces below the water table in an unconfined aquifer or located in a confined aquifer.

Groundwater Divide: a ridge in the water table from which groundwater moves away in both directions.

Hydraulic Gradient: the slope of the water table or potentiometric surface; that is, the change in water level per unit distance along the direction of maximum head decrease. Determined by measuring the water level in several wells.

Hydrogeologic: factors that deal with subsurface waters and related geologic aspects of surface waters.

Hydrologic Cycle: the exchange of water between the Earth and the atmosphere through evaporation and precipitation.

Infiltration: the downward entry of water into soil or rock.

Interference: the condition occurring when the cone of depression of a well comes into contact or overlaps that of a neighbouring well. At a given location, the total well interference is the sum of the drawdowns due to each individual well.

IGPM: Imperial Gallons Per Minute

L/s: Litres Per Second

Leaching: removal of materials in solution from rock, soil, or waste; separation or dissolving out of soluble constituents from a porous medium by percolation of water.

Long Term Well Capacity: Maximum recommended long term well capacity based on well equilibrium estimations.

Non-point Source: a dispersed source that discharges contaminants into the environment.

Observation Well: a non-pumping well used to observe the water table elevation or potentiometric surface.

Permeability: the measure of a material's ability to allow the passage of a fluid.

Potentiometric Surface: the potential level to which water will rise above the water level in an aquifer in a well than penetrates a confined aquifer, if the potential level is high than the land surface, the well will overflow.

Point Source: a specific site from which contaminants are or may be discharged into the environment.

Porosity: the ratio of the total volume of voids available for fluid transmission to the total volume of a porous medium.

Potable Water: suitable for human consumption as drinking water.

Production Well (PW): Well producing water for consumption.

Pumping Rate (Q): Constant or step pumping rate; typically in L/s or USgpm.

Pumping Level (PL): Water level to pumping groundwater depth as measured below ground surface.

Recharge: the addition of water to the zone of saturation; also the amount of water added. Can be expressed as a rate (i.e. mm/yr) or a volume.

Recharge Area: area in which water reaches the zone of saturation by surface infiltration.

Reservoir: a natural or artificial place where water is collected and stored for use, especially water for supplying a community, irrigating land etc.

Residual Drawdown: the difference between the non-pumping water level and the water level at a given time (t') after the pumping was stopped.

Runoff: that part of the precipitation, snow melt, or irrigation water that appears in uncontrolled surface streams, rivers, drains or sewers. Run-off may be classified according to speed of appearance after rainfall or melting snow as direct run-off or base run-off, and according to source as surface run-off, storm interflow or groundwater run-off.

Saturated Zone: the portion of the subsurface environment where the void spaces are filled with water.

Specific Capacity (Q/s): Well discharge expressed as rate of yield per unit of drawdown (i.e. USgpm/ft, L/s/m).

Spring: place where groundwater flows naturally from rock or soil onto the land surface or into a surface water body.

Static Water Level (SWL): The level of water in a well that is not being affected by withdrawal of groundwater (pre-pumping)

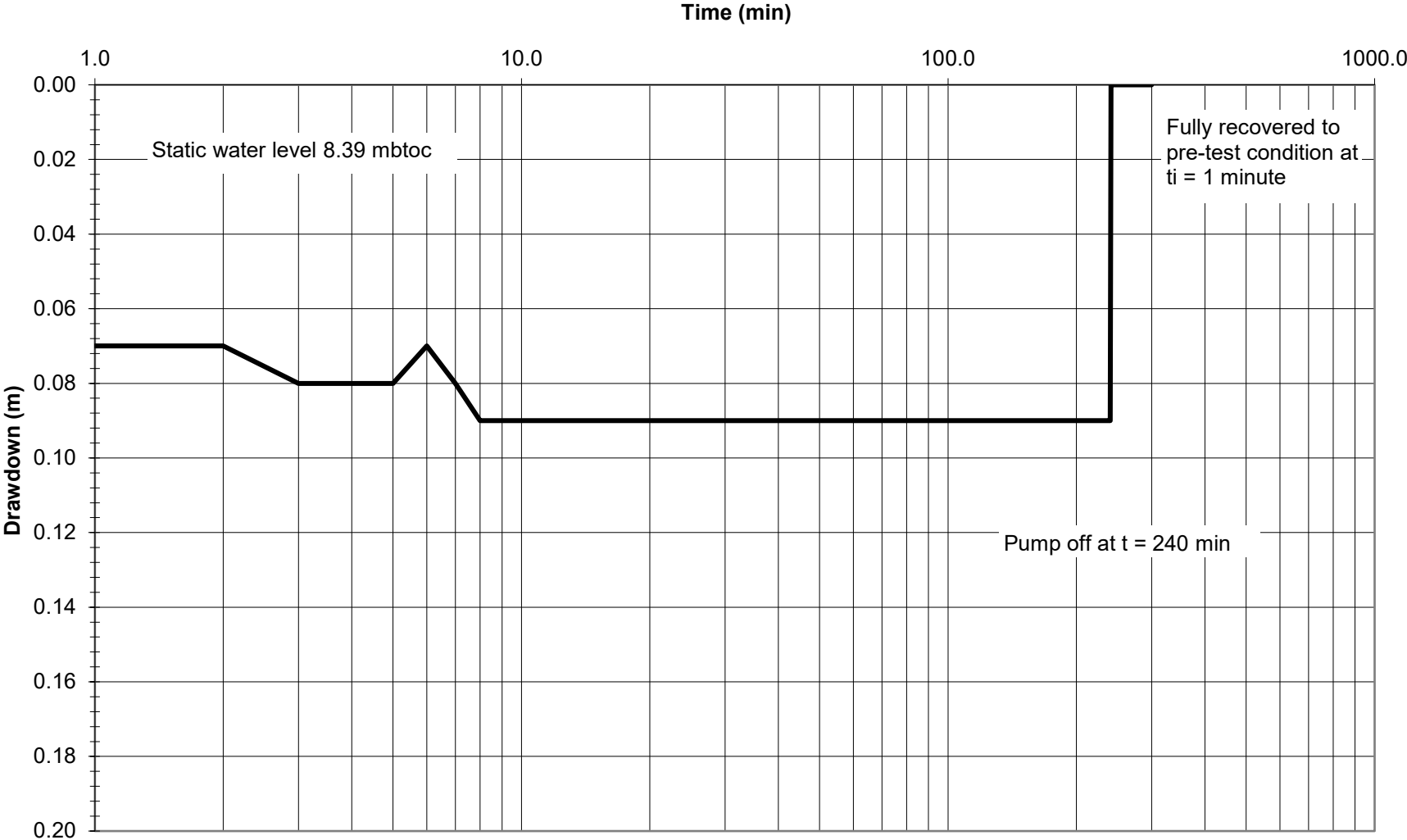
Storage Coefficient: volume of water released from aquifer storage over a unit decline in head.

Storativity (S): The volume of water that the aquifer releases from storage per unit surface area of aquifer per unit loss in the component of hydraulic head normal to that surface.

Surface Water: water on the surface of land such as in a river, lake, creek, wetland etc.

Test Well (TW): Well used for exploratory purposes to determine if a water bearing zone is present.

YIELD TEST - WTN47098, 6885 SETON PORTAGE RD, SETON PORTAGE, BC
(April 8, 2025, 2.52 L/s)



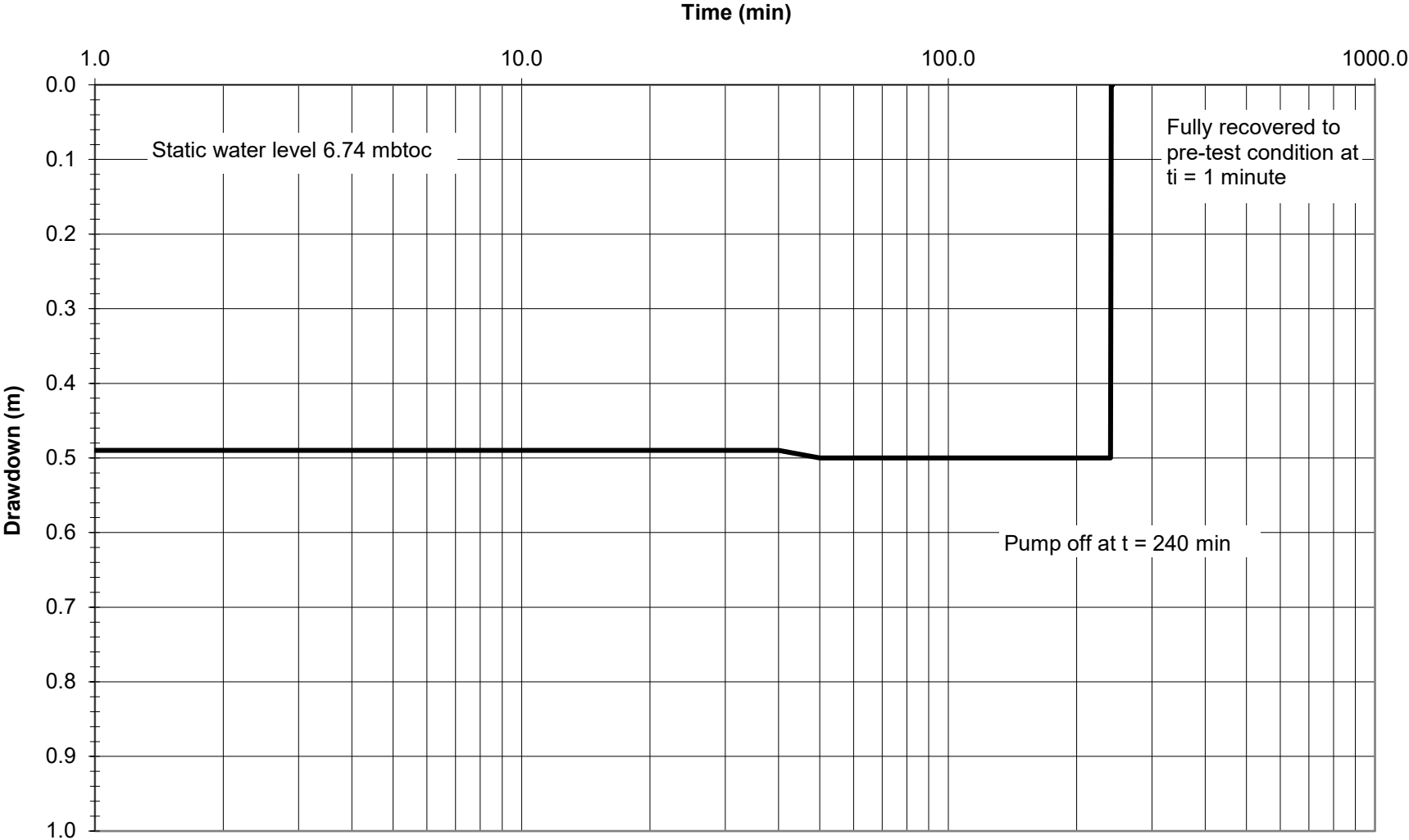
SUMMARY OF PUMPING TEST DATA
AT PUMPING WELL WTN47098 (April 8, 2025)

ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	ELAPSED TIME RECOVERY TIME [-]	Water Level [mbtoc]	Drawdown [m]	Discharge Rate [L/s]	COMMENTS
	[min]	[days]						
0	0	0.0000			8.39	0.00		
1	1	0.0007			8.46	0.07	2.52	
2	2	0.0014			8.46	0.07	2.52	
3	3	0.0021			8.47	0.08	2.52	
4	4	0.0028			8.47	0.08	2.52	
5	5	0.0035			8.47	0.08	2.52	
6	6	0.0042			8.46	0.07	2.52	
7	7	0.0049			8.47	0.08	2.52	
8	8	0.0056			8.48	0.09	2.52	
9	9	0.0063			8.48	0.09	2.52	
10	10	0.0069			8.48	0.09	2.52	
12	12	0.0083			8.48	0.09	2.52	
14	14	0.0097			8.48	0.09	2.52	
16	16	0.0111			8.48	0.09	2.52	
18	18	0.0125			8.48	0.09	2.52	
20	20	0.0139			8.48	0.09	2.52	
25	25	0.0174			8.48	0.09	2.52	
30	30	0.0208			8.48	0.09	2.52	
35	35	0.0243			8.48	0.09	2.52	
40	40	0.0278			8.48	0.09	2.52	
50	50	0.0347			8.48	0.09	2.52	
60	60	0.0417			8.48	0.09	2.52	
70	70	0.0486			8.48	0.09	2.52	
80	80	0.0556			8.48	0.09	2.52	
90	90	0.0625			8.48	0.09	2.52	
100	100	0.0694			8.48	0.09	2.52	
120	120	0.0833			8.48	0.09	2.52	
140	140	0.0972			8.48	0.09	2.52	
160	160	0.1111			8.48	0.09	2.52	
180	180	0.1250			8.48	0.09	2.52	
200	200	0.1389			8.48	0.09	2.52	
240	240	0.1667			8.48	0.09	2.52	Pump off
241			1	241.0000	8.39	0.00		Recovery
242			2	121.0000	8.39	0.00		
243			3	81.0000	8.39	0.00		
244			4	61.0000	8.39	0.00		
245			5	49.0000	8.39	0.00		
246			6	41.0000	8.39	0.00		
247			7	35.2857	8.39	0.00		
248			8	31.0000	8.39	0.00		
249			9	27.6667	8.39	0.00		
250			10	25.0000	8.39	0.00		
252			12	21.0000	8.39	0.00		
254			14	18.1429	8.39	0.00		
256			16	16.0000	8.39	0.00		
258			18	14.3333	8.39	0.00		
260			20	13.0000	8.39	0.00		
265			25	10.6000	8.39	0.00		
270			30	9.0000	8.39	0.00		
275			35	7.8571	8.39	0.00		
280			40	7.0000	8.39	0.00		
290			50	5.8000	8.39	0.00		
300			60	5.0000	8.39	0.00		

NOTES

1. mbtoc = meters below top of casing.

**YIELD TEST - WTN50957, 6855 SETON PORTAGE RD, SETON PORTAGE, BC
(March 27, 2025, 1.01 L/s)**



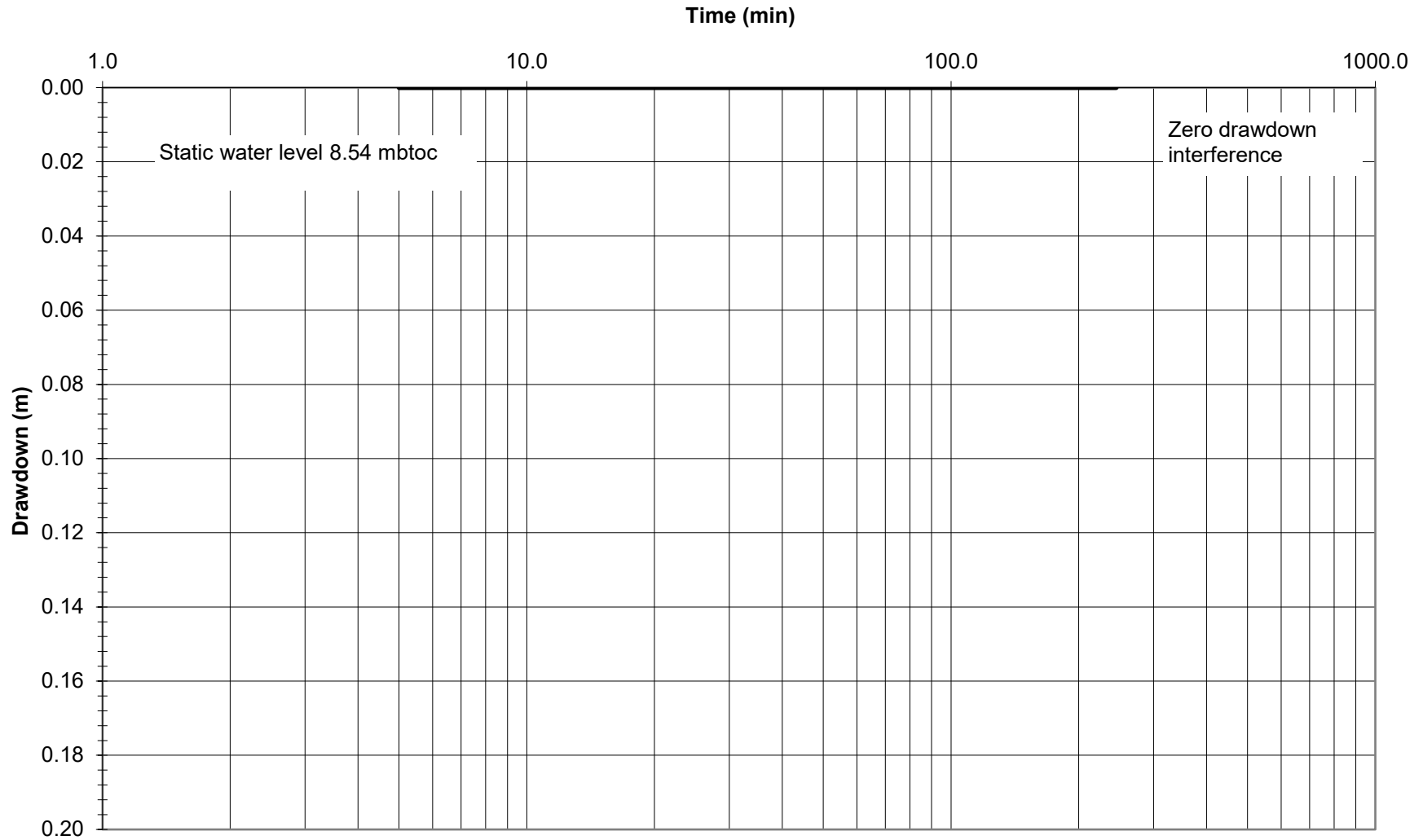
**SUMMARY OF PUMPING TEST DATA
AT PUMPING WELL WTN50957 (March 27, 2025)**

ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	ELAPSED TIME RECOVERY TIME [-]	Water Level [mbtoc]	Drawdown [m]	Discharge Rate [L/s]	COMMENTS
	[min]	[days]						
0	0	0.0000			6.74	0.00		
1	1	0.0007			7.23	0.49	1.01	
2	2	0.0014			7.23	0.49	1.01	
3	3	0.0021			7.23	0.49	1.01	
4	4	0.0028			7.23	0.49	1.01	
5	5	0.0035			7.23	0.49	1.01	
6	6	0.0042			7.23	0.49	1.01	
7	7	0.0049			7.23	0.49	1.01	
8	8	0.0056			7.23	0.49	1.01	
9	9	0.0063			7.23	0.49	1.01	
10	10	0.0069			7.23	0.49	1.01	
12	12	0.0083			7.23	0.49	1.01	
14	14	0.0097			7.23	0.49	1.01	
16	16	0.0111			7.23	0.49	1.01	
18	18	0.0125			7.23	0.49	1.01	
20	20	0.0139			7.23	0.49	1.01	
25	25	0.0174			7.23	0.49	1.01	
30	30	0.0208			7.23	0.49	1.01	
35	35	0.0243			7.23	0.49	1.01	
40	40	0.0278			7.23	0.49	1.01	
50	50	0.0347			7.24	0.50	1.01	
60	60	0.0417			7.24	0.50	1.01	
70	70	0.0486			7.24	0.50	1.01	
80	80	0.0556			7.24	0.50	1.01	
90	90	0.0625			7.24	0.50	1.01	
100	100	0.0694			7.24	0.50	1.01	
120	120	0.0833			7.24	0.50	1.01	
140	140	0.0972			7.24	0.50	1.01	
160	160	0.1111			7.24	0.50	1.01	
180	180	0.1250			7.24	0.50	1.01	
200	200	0.1389			7.24	0.50	1.01	
240	240	0.1667			7.24	0.50	1.01	Pump off
241			1	241.0000	6.74	0.00		Recovery
242			2	121.0000	6.73	-0.01		
243			3	81.0000	6.74	0.00		

NOTES

1. mbtoc = meters below top of casing.

Drawdown at WTN47098 during WTN50957 Pumping Test
6855 Seton Portage Rd, Seton Portage, BC
(March 27, 2025)



**SUMMARY OF DRAWDOWN
AT MONITORING WELL WTN47098 (March 27, 2025)**

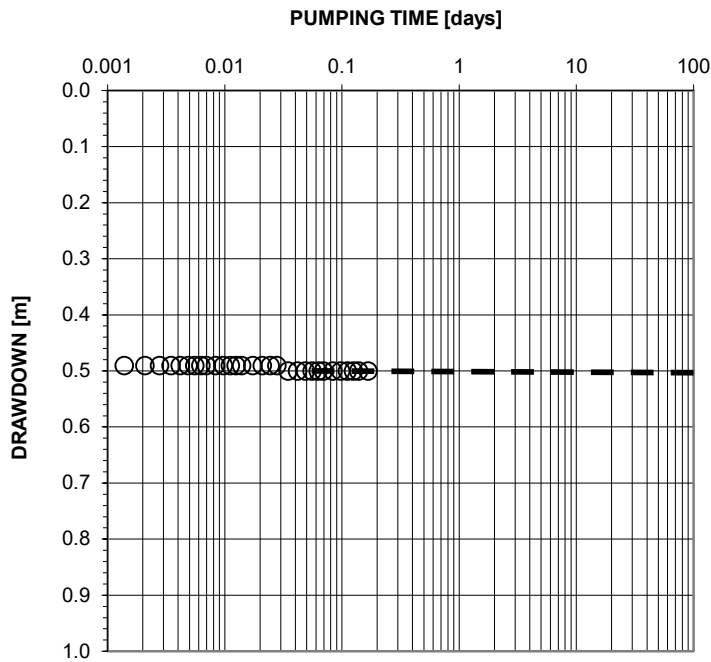
ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	WIN21397 (r = 39 m)		COMMENTS
	[min]	[days]		Water Level [mbtoc]	Drawdown [m]	
0	0	0.0000		8.54	0.00	
5	5	0.0035		8.54	0.00	
10	10	0.0069		8.54	0.00	
15	15	0.0104		8.54	0.00	
20	20	0.0139		8.54	0.00	
25	25	0.0174		8.54	0.00	
30	30	0.0208		8.54	0.00	
40	40	0.0278		8.54	0.00	
60	60	0.0417		8.54	0.00	
90	90	0.0625		8.54	0.00	
120	120	0.0833		8.54	0.00	
150	150	0.1042		8.54	0.00	
180	180	0.1250		8.54	0.00	
240	240	0.1667		8.54	0.00	Pump off
245			5	8.54	0.00	Recovery

NOTES

1. mbtoc = meters below top of casing.

6855 SETON PORTAGE RD, SETON PORTAGE, BC PUMPING TEST ANALYSIS - WTN50957

DRAWDOWN FORECAST



SPECIFIC CAPACITY CALCULATIONS

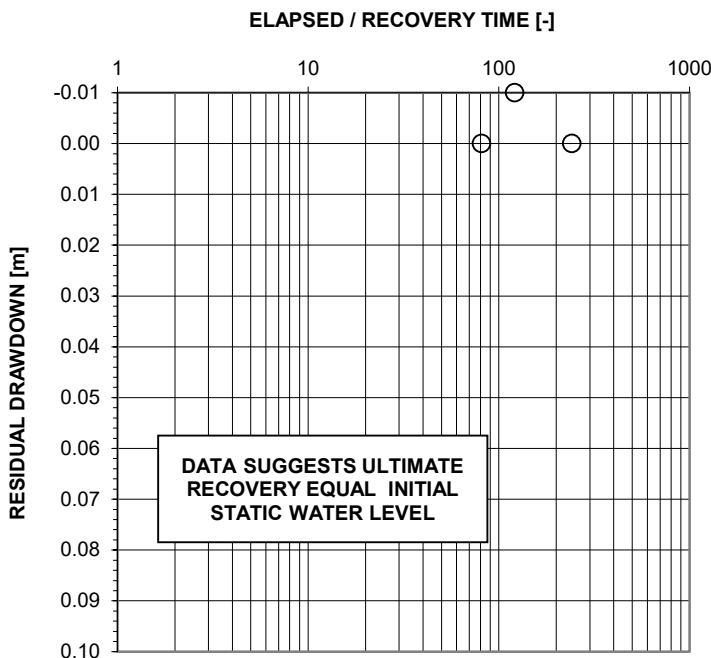
$$SC_{4hr} = \frac{Q}{s_4} = \frac{1.01}{0.5} \frac{L/s}{m} = 2.02 \text{ L/s/m}$$

$$SC_{100 \text{ day}} = \frac{Q}{s_{100}} = \frac{1.01}{0.50} \frac{L/s}{m} = 2.02 \text{ L/s/m}$$

Where:

Q = Flowrate
 s_n = Drawdown forecast at time n
 SC_n = Specific capacity forecast at time n

RESIDUAL DRAWDOWN FORECAST



RECOVERY CALCULATIONS

$$\text{Recovery at End of Test} = \frac{0.50}{0.50} \frac{m}{m} = 100\%$$

$$\text{Projected Ultimate Recovery} = 0 \text{ metres residual drawdown}$$

6855 SETON PORTAGE RD, SETON PORTAGE, BC
CALCULATION OF RECOMMENDED PUMPING RATE - WTN50957

DESCRIPTION	UNITS	4 HOUR FORECAST		100 DAY FORECAST	
STATIC WATER LEVEL (SWL) Depth to SWL at time of well completion Depth to SWL at time of pumping test Design value for calculations	mbtoc mbtoc mbtoc	unknown 6.7 6.7	- <i>Not Artesian</i> <i>See Note 1</i>	unknown 6.7 6.7	- <i>Not Artesian</i> <i>See Note 1</i>
DRAWDOWN INTERFERENCE (DI) Maximum Estimated Drawdown Interference	m	0.0	Conservative	0.0	Conservative
PUMPING INFRASTRUCTURE Depth to top of screen Minimum distance from K-packer to base of motor Motor length Lowest allowable pump intake set-point Length of pump Recommended minimum pump water cover Lowest Allowable Dynamic Water Level (DWL)	mbtoc m m mbtoc m m mbtoc	14.3 0.0 0.0 14.3 0.0 0.0 14.3	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended	14.3 0.0 0.0 14.3 0.0 0.0 14.3	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended
SPECIFIC CAPACITY (SC) Forecast SC trend (assuming continuous drawdown) Derated SC (from screen incrustation and biofouling)	L/s/m L/s/m	2.02 2.02	See Table 3b 100% (Short-Term)	2.02 2.02	See Table 3b 100% (Long-Term)
AVAILABLE WATER COLUMN Forecast of lowest expected SWL Lowest Allowable DWL Maximum Water Column (MWC) Estimated Drawdown Interference (DI) Allowance for incomplete recovery Maximum Available Drawdown (MAD) Safety Factor Total Allowable Drawdown (TAD) Operational Water Level (OWL)	mbtoc mbtoc m m m m m m mbtoc	6.7 14.3 7.6 0.0 0.0 7.6 100% 7.6 14.3		6.7 14.3 7.6 0.0 0.0 7.6 70% 5.3 12.1	
THEORETICAL WELL YIELD Theoretical maximum % of 1.01 L/s testing rate	L/s Usgpm %	15.35 243 1520%		10.75 170 1064%	
WELL SCREEN LIMITATIONS Maximum recommended flow rate through screen Theoretical Yield as % of limitation Is theoretical well yield limited by screens?	L/s %	N/A #VALUE! unknown		N/A #VALUE! unknown	
WELL CASING LIMITATIONS Maximum recommended flow rate based upon casing diameter (limits maximum pump diameter) Theoretical Yield as % of limitation Is theoretical well yield limited by casing diameter?	L/s %	12.6 122% YES	152 mm Diameter	12.6 85% NO	152 mm Diameter
RECOMMENDED PUMPING RATE	L/s Usgpm	1.26 20		1.01 16	

Notes

1. Design SWL includes 0 m seasonal adjustment.
2. mbtoc = meters below top of casing.

6855 SETON PORTAGE RD, SETON PORTAGE, BC
WATER CHEMSITRY SCREENING - WTN50957

PARAMETER	RESULTS - Mar 27, 2025	CANADIAN DRINKING WATER STANDARDS - 2024
Physical Tests		
Colour	below detection limit	15 TCU ²
Conductivity	171	
Total Dissolved Solids	107	500 mg/L ²
Hardness	78.7	
pH	6.98	7.0 - 10.5 ²
Turbidity	0.46	1 NTU
Dissolved Anions		
Alkalinity - Total	69.7	
Alkalinity - Bicarbonate	69.7	
Chloride	0.56	250 mg/L ²
Fluoride	below detection limit	1.5 mg/L ³
Sulphate	13.9	500 mg/L ²
Nutrients		
Nitrate Nitrogen	0.071	10 mg/L ³
Nitrite Nitrogen	below detection limit	1 mg/L ³
Nitrite/Nitrate Nitrogen	0.0706	
Cyanides		
Total Cyanide	below detection limit	0.2 mg/L ³
Bateriological Tests		
E.coli	0	0 CFU/100 mL ³
Fecal Coliform	0	
Total Coliform	0	0 CFU/100 mL ³
Heterotrophic Plate Count (CFU/mL)	22	
Total Metals		
Aluminum	0.0071	2.9 mg/L ³
Antimony	below detection limit	0.006 mg/L ³
Arsenic	0.00093	0.01 mg/L ³
Barium	0.0174	2.0 mg/L ³
Beryllium	below detection limit	
Boron	below detection limit	5 mg/L ³
Cadmium	below detection limit	0.007 mg/L ³
Calcium	24.5	
Chromium	below detection limit	0.05 mg/L ³
Cobalt	below detection limit	
Copper	0.00247	2.0 mg/L ²
Iron	0.036	0.3 mg/L ²
Lead	0.00042	0.005 mg/L ³
Magnesium	4.39	
Manganese	0.00215	0.12 mg/L ³
Mercury	below detection limit	0.001 mg/L ³
Nickel	below detection limit	
Phosphorus	below detection limit	
Potassium	1.45	
Selenium	below detection limit	0.05 mg/L ³
Silver	below detection limit	
Sodium	1.92	200 mg/L ²
Uranium	0.000124	0.02 mg/L ³
Zinc	0.0078	5.0 mg/L ²
Dissolved Metals		
Calcium	24.4	
Iron	0.012	
Magnesium	4.27	
Manganese	0.00184	
Sodium	1.91	

NOTES

- Generally accepted values.
- AO = Aesthetic Objective

**SUMMARY OF DRAWDOWN
AT MONITORING WELL WTN50957 (April 8, 2025)**

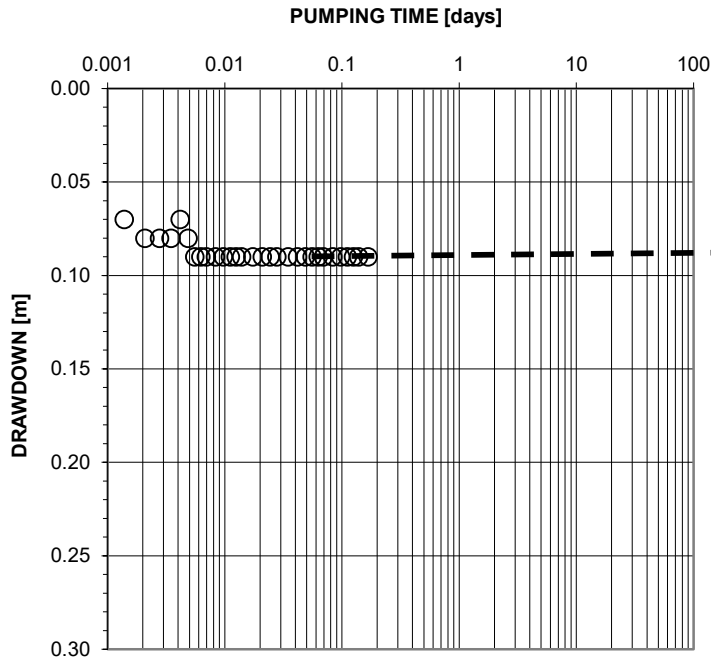
ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	WIN21397 (r = 39 m)		COMMENTS
	[min]	[days]		Water Level [mbtoc]	Drawdown [m]	
0	0	0.0000		6.61	0.00	
5	5	0.0035		6.61	0.00	
10	10	0.0069		6.61	0.00	
15	15	0.0104		6.61	0.00	
20	20	0.0139		6.61	0.00	
25	25	0.0174		6.61	0.00	
30	30	0.0208		6.61	0.00	
40	40	0.0278		6.61	0.00	
60	60	0.0417		6.61	0.00	
90	90	0.0625		6.61	0.00	
120	120	0.0833		6.61	0.00	
150	150	0.1042		6.61	0.00	
180	180	0.1250		6.61	0.00	
240	240	0.1667		6.61	0.00	Pump off
245			5	6.61	0.00	Recovery

NOTES

1. mbtoc = meters below top of casing.

6885 SETON PORTAGE RD, SETON PORTAGE, BC PUMPING TEST ANALYSIS - WTN47098

DRAWDOWN FORECAST



SPECIFIC CAPACITY CALCULATIONS

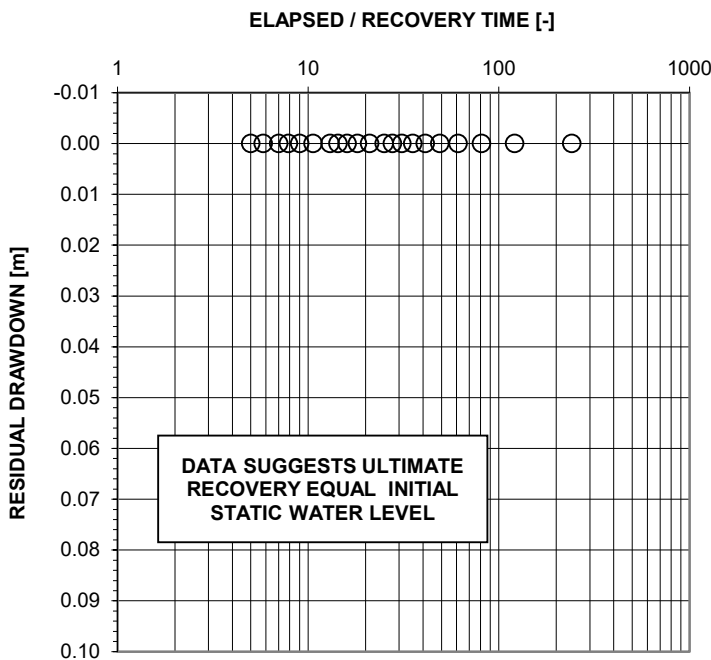
$$SC_{4\text{hr}} = \frac{Q}{s_4} = \frac{2.52}{0.09} \frac{\text{L/s}}{\text{m}} = 28.00 \text{ L/s/m}$$

$$SC_{100 \text{ day}} = \frac{Q}{s_{100}} = \frac{2.52}{0.09} \frac{\text{L/s}}{\text{m}} = 28.00 \text{ L/s/m}$$

Where:

Q = Flowrate
 s_n = Drawdown forecast at time n
 SC_n = Specific capacity forecast at time n

RESIDUAL DRAWDOWN FORECAST



RECOVERY CALCULATIONS

$$\text{Recovery at End of Test} = \frac{0.09}{0.09} \text{ m} = 100\%$$

$$\text{Projected Ultimate Recovery} = 0 \text{ metres residual drawdown}$$

6885 SETON PORTAGE RD, SETON PORTAGE, BC
CALCULATION OF RECOMMENDED PUMPING RATE - WTN47098

DESCRIPTION	UNITS	4 HOUR FORECAST		100 DAY FORECAST	
STATIC WATER LEVEL (SWL) Depth to SWL at time of well completion Depth to SWL at time of pumping test Design value for calculations	mbtoc mbtoc mbtoc	unknown 8.4 8.4	- <i>Not Artesian</i> <i>See Note 1</i>	unknown 8.4 8.4	- <i>Not Artesian</i> <i>See Note 1</i>
DRAWDOWN INTERFERENCE (DI) Maximum Estimated Drawdown Interference	m	0.0	Conservative	0.0	Conservative
PUMPING INFRASTRUCTURE Depth to top of screen Minimum distance from K-packer to base of motor Motor length Lowest allowable pump intake set-point Length of pump Recommended minimum pump water cover Lowest Allowable Dynamic Water Level (DWL)	mbtoc m m mbtoc m m mbtoc	17.0 0.0 0.0 17.0 0.0 0.0 17.0	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended	17.0 0.0 0.0 17.0 0.0 0.0 17.0	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended
SPECIFIC CAPACITY (SC) Forecast SC trend (assuming continuous drawdown) Derated SC (from screen incrustation and biofouling)	L/s/m L/s/m	28.00 28.00	See Table 3b 100% (Short-Term)	28.00 28.00	See Table 3b 100% (Long-Term)
AVAILABLE WATER COLUMN Forecast of lowest expected SWL Lowest Allowable DWL Maximum Water Column (MWC) Estimated Drawdown Interference (DI) Allowance for incomplete recovery Maximum Available Drawdown (MAD) Safety Factor Total Allowable Drawdown (TAD) Operational Water Level (OWL)	mbtoc mbtoc m m m m m m mbtoc	8.4 17.0 8.6 0.0 0.0 8.6 100% 8.6 17.0		8.4 17.0 8.6 0.0 0.0 8.6 70% 6.0 14.4	
THEORETICAL WELL YIELD Theoretical maximum % of 2.52 L/s testing rate	L/s Usgpm %	240.52 3,812 9544%		168.36 2,669 6681%	
WELL SCREEN LIMITATIONS Maximum recommended flow rate through screen Theoretical Yield as % of limitation Is theoretical well yield limited by screens?	L/s %	N/A #VALUE! unknown		N/A #VALUE! unknown	
WELL CASING LIMITATIONS Maximum recommended flow rate based upon casing diameter (limits maximum pump diameter) Theoretical Yield as % of limitation Is theoretical well yield limited by casing diameter?	L/s %	12.6 1909% YES	152 mm Diameter	12.6 1336% NO	152 mm Diameter
RECOMMENDED PUMPING RATE	L/s Usgpm	6.30 100		6.30 100	

Notes

1. Design SWL includes 0 m seasonal adjustment.
2. mbtoc = meters below top of casing.

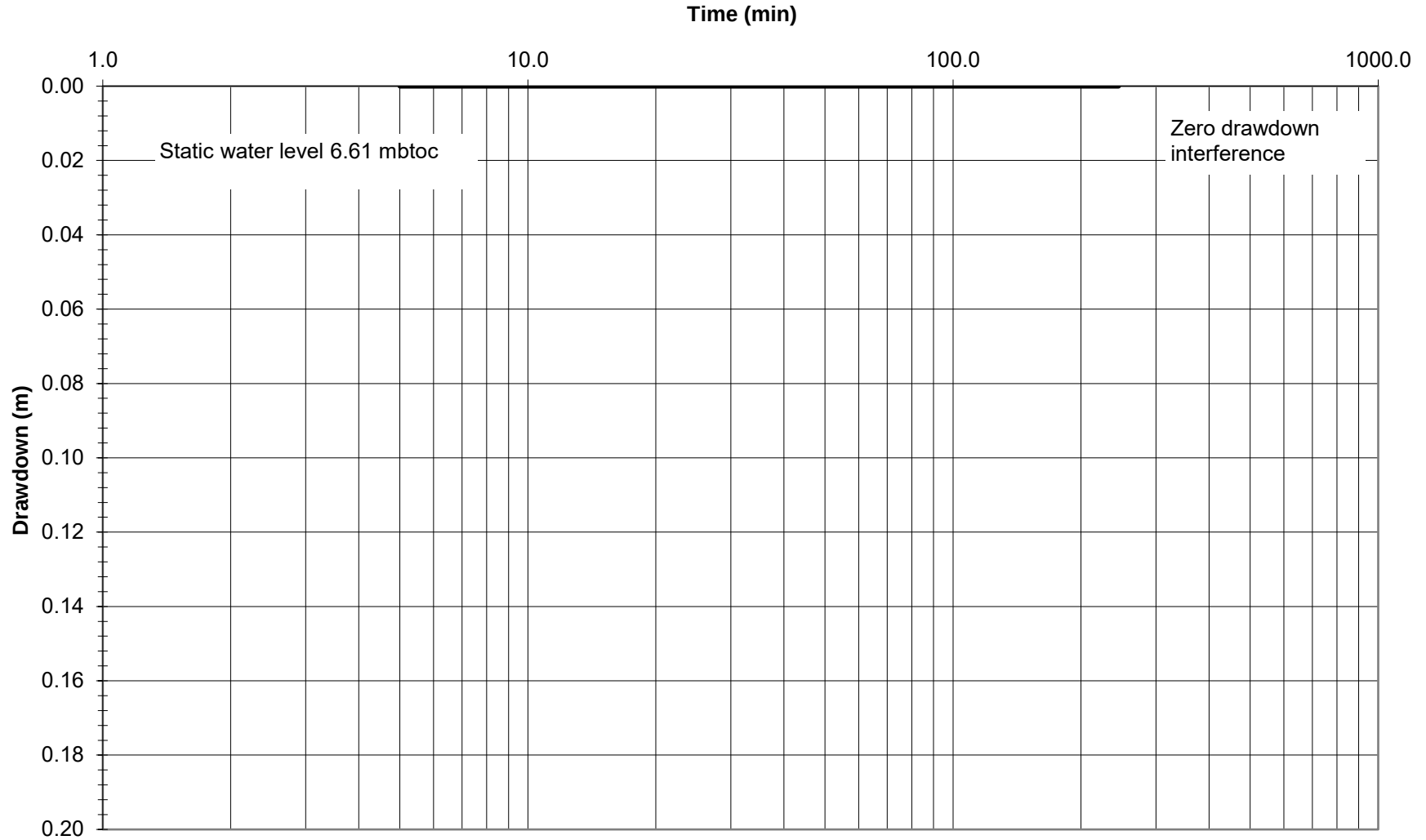
SUMMARY OF PUMPING TEST DATA
AT PUMPING WELL WTN47098 (April 8, 2025)

ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	ELAPSED TIME RECOVERY TIME [-]	Water Level [mbtoc]	Drawdown [m]	Discharge Rate [L/s]	COMMENTS
	[min]	[days]						
0	0	0.0000			8.39	0.00		
1	1	0.0007			8.46	0.07	2.52	
2	2	0.0014			8.46	0.07	2.52	
3	3	0.0021			8.47	0.08	2.52	
4	4	0.0028			8.47	0.08	2.52	
5	5	0.0035			8.47	0.08	2.52	
6	6	0.0042			8.46	0.07	2.52	
7	7	0.0049			8.47	0.08	2.52	
8	8	0.0056			8.48	0.09	2.52	
9	9	0.0063			8.48	0.09	2.52	
10	10	0.0069			8.48	0.09	2.52	
12	12	0.0083			8.48	0.09	2.52	
14	14	0.0097			8.48	0.09	2.52	
16	16	0.0111			8.48	0.09	2.52	
18	18	0.0125			8.48	0.09	2.52	
20	20	0.0139			8.48	0.09	2.52	
25	25	0.0174			8.48	0.09	2.52	
30	30	0.0208			8.48	0.09	2.52	
35	35	0.0243			8.48	0.09	2.52	
40	40	0.0278			8.48	0.09	2.52	
50	50	0.0347			8.48	0.09	2.52	
60	60	0.0417			8.48	0.09	2.52	
70	70	0.0486			8.48	0.09	2.52	
80	80	0.0556			8.48	0.09	2.52	
90	90	0.0625			8.48	0.09	2.52	
100	100	0.0694			8.48	0.09	2.52	
120	120	0.0833			8.48	0.09	2.52	
140	140	0.0972			8.48	0.09	2.52	
160	160	0.1111			8.48	0.09	2.52	
180	180	0.1250			8.48	0.09	2.52	
200	200	0.1389			8.48	0.09	2.52	
240	240	0.1667			8.48	0.09	2.52	Pump off
241			1	241.0000	8.39	0.00		Recovery
242			2	121.0000	8.39	0.00		
243			3	81.0000	8.39	0.00		
244			4	61.0000	8.39	0.00		
245			5	49.0000	8.39	0.00		
246			6	41.0000	8.39	0.00		
247			7	35.2857	8.39	0.00		
248			8	31.0000	8.39	0.00		
249			9	27.6667	8.39	0.00		
250			10	25.0000	8.39	0.00		
252			12	21.0000	8.39	0.00		
254			14	18.1429	8.39	0.00		
256			16	16.0000	8.39	0.00		
258			18	14.3333	8.39	0.00		
260			20	13.0000	8.39	0.00		
265			25	10.6000	8.39	0.00		
270			30	9.0000	8.39	0.00		
275			35	7.8571	8.39	0.00		
280			40	7.0000	8.39	0.00		
290			50	5.8000	8.39	0.00		
300			60	5.0000	8.39	0.00		

NOTES

1. mbtoc = meters below top of casing.

Drawdown at WTN50957 during WTN47098 Pumping Test
6885 Seton Portage Rd, Seton Portage, BC
(April 8, 2025)



**SUMMARY OF DRAWDOWN
AT MONITORING WELL WTN50957 (April 8, 2025)**

ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	WIN21397 (r = 39 m)		COMMENTS
	[min]	[days]		Water Level [mbtoc]	Drawdown [m]	
0	0	0.0000		6.61	0.00	
5	5	0.0035		6.61	0.00	
10	10	0.0069		6.61	0.00	
15	15	0.0104		6.61	0.00	
20	20	0.0139		6.61	0.00	
25	25	0.0174		6.61	0.00	
30	30	0.0208		6.61	0.00	
40	40	0.0278		6.61	0.00	
60	60	0.0417		6.61	0.00	
90	90	0.0625		6.61	0.00	
120	120	0.0833		6.61	0.00	
150	150	0.1042		6.61	0.00	
180	180	0.1250		6.61	0.00	
240	240	0.1667		6.61	0.00	Pump off
245			5	6.61	0.00	Recovery

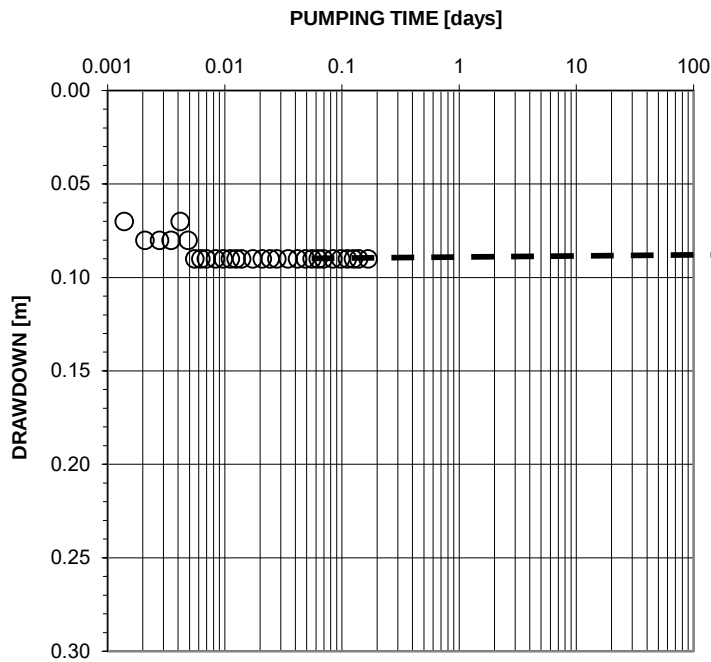
NOTES

1. mbtoc = meters below top of casing.

6885 SETON PORTAGE RD, SETON PORTAGE, BC

PUMPING TEST ANALYSIS - WTN47098

DRAWDOWN FORECAST



SPECIFIC CAPACITY CALCULATIONS

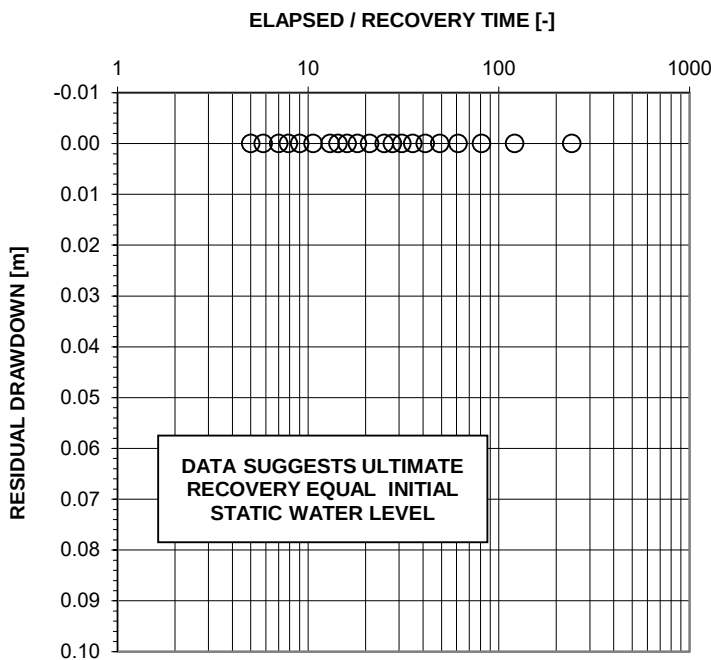
$$SC_{4\text{hr}} = \frac{Q}{s_4} = \frac{2.52}{0.09} \frac{\text{L/s}}{\text{m}} = 28.00 \text{ L/s/m}$$

$$SC_{100 \text{ day}} = \frac{Q}{s_{100}} = \frac{2.52}{0.09} \frac{\text{L/s}}{\text{m}} = 28.00 \text{ L/s/m}$$

Where:

Q = Flowrate
 s_n = Drawdown forecast at time n
 SC_n = Specific capacity forecast at time n

RESIDUAL DRAWDOWN FORECAST



RECOVERY CALCULATIONS

$$\text{Recovery at End of Test} = \frac{0.09}{0.09} \frac{\text{m}}{\text{m}} = 100\%$$

$$\text{Projected Ultimate Recovery} = 0 \text{ metres residual drawdown}$$

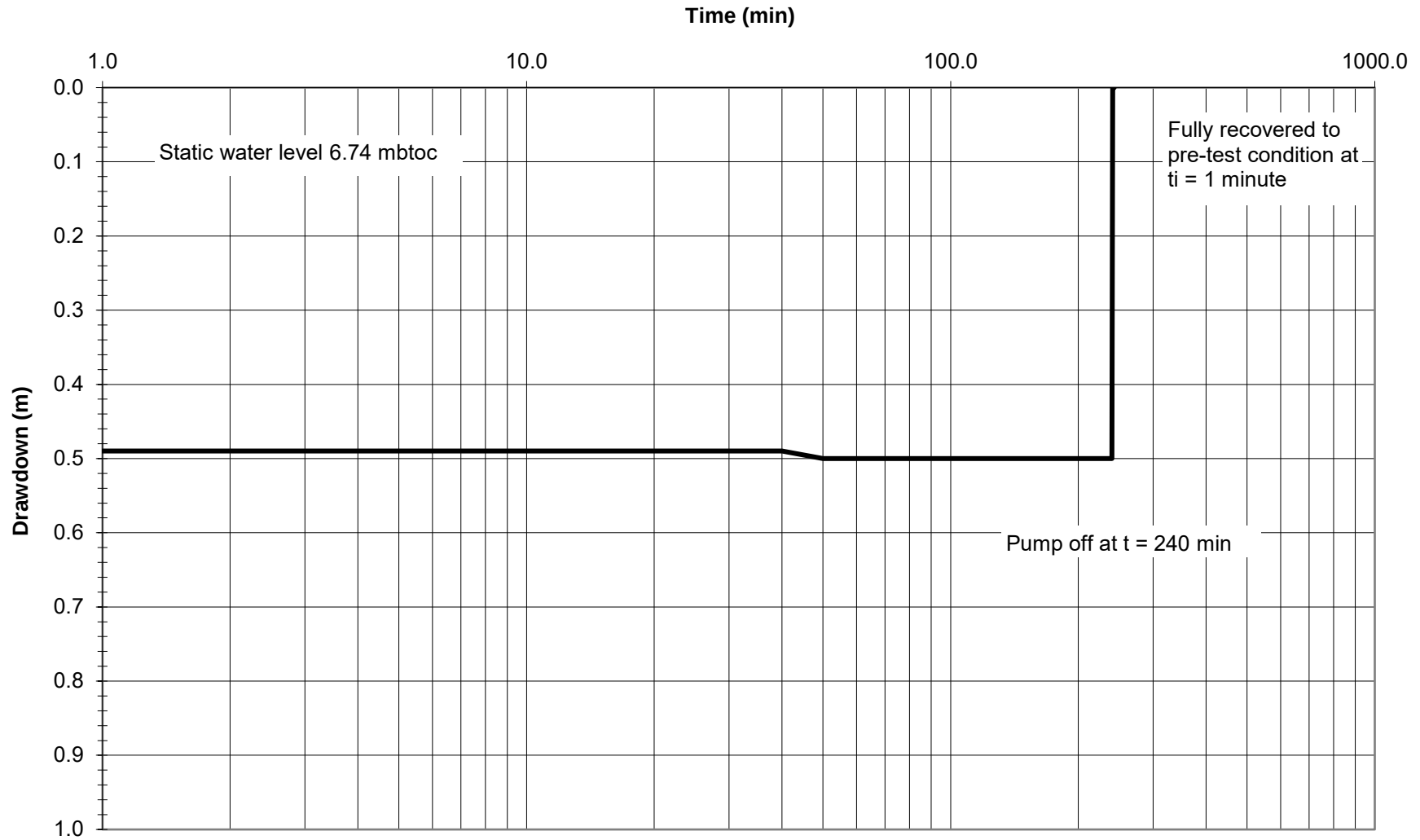
6885 SETON PORTAGE RD, SETON PORTAGE, BC
CALCULATION OF RECOMMENDED PUMPING RATE - WTN47098

DESCRIPTION	UNITS	4 HOUR FORECAST		100 DAY FORECAST	
STATIC WATER LEVEL (SWL) Depth to SWL at time of well completion Depth to SWL at time of pumping test Design value for calculations	mbtoc mbtoc mbtoc	unknown 8.4 8.4	- <i>Not Artesian</i> <i>See Note 1</i>	unknown 8.4 8.4	- <i>Not Artesian</i> <i>See Note 1</i>
DRAWDOWN INTERFERENCE (DI) Maximum Estimated Drawdown Interference	m	0.0	Conservative	0.0	Conservative
PUMPING INFRASTRUCTURE Depth to top of screen Minimum distance from K-packer to base of motor Motor length Lowest allowable pump intake set-point Length of pump Recommended minimum pump water cover Lowest Allowable Dynamic Water Level (DWL)	mbtoc m m mbtoc m m mbtoc	17.0 0.0 0.0 17.0 0.0 0.0 17.0	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended	17.0 0.0 0.0 17.0 0.0 0.0 17.0	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended
SPECIFIC CAPACITY (SC) Forecast SC trend (assuming continuous drawdown) Derated SC (from screen incrustation and biofouling)	L/s/m L/s/m	28.00 28.00	See Table 3b 100% (Short-Term)	28.00 28.00	See Table 3b 100% (Long-Term)
AVAILABLE WATER COLUMN Forecast of lowest expected SWL Lowest Allowable DWL Maximum Water Column (MWC) Estimated Drawdown Interference (DI) Allowance for incomplete recovery Maximum Available Drawdown (MAD) Safety Factor Total Allowable Drawdown (TAD) Operational Water Level (OWL)	mbtoc mbtoc m m m m m m mbtoc	8.4 17.0 8.6 0.0 0.0 8.6 100% 8.6 17.0		8.4 17.0 8.6 0.0 0.0 8.6 70% 6.0 14.4	
THEORETICAL WELL YIELD Theoretical maximum % of 2.52 L/s testing rate	L/s Usgpm %	240.52 3,812 9544%		168.36 2,669 6681%	
WELL SCREEN LIMITATIONS Maximum recommended flow rate through screen Theoretical Yield as % of limitation Is theoretical well yield limited by screens?	L/s %	N/A #VALUE! unknown		N/A #VALUE! unknown	
WELL CASING LIMITATIONS Maximum recommended flow rate based upon casing diameter (limits maximum pump diameter) Theoretical Yield as % of limitation Is theoretical well yield limited by casing diameter?	L/s %	12.6 1909% YES	152 mm Diameter	12.6 1336% NO	152 mm Diameter
RECOMMENDED PUMPING RATE	L/s Usgpm	6.30 100		6.30 100	

Notes

1. Design SWL includes 0 m seasonal adjustment.
2. mbtoc = meters below top of casing.

(March 27, 2025, 1.01 L/s)



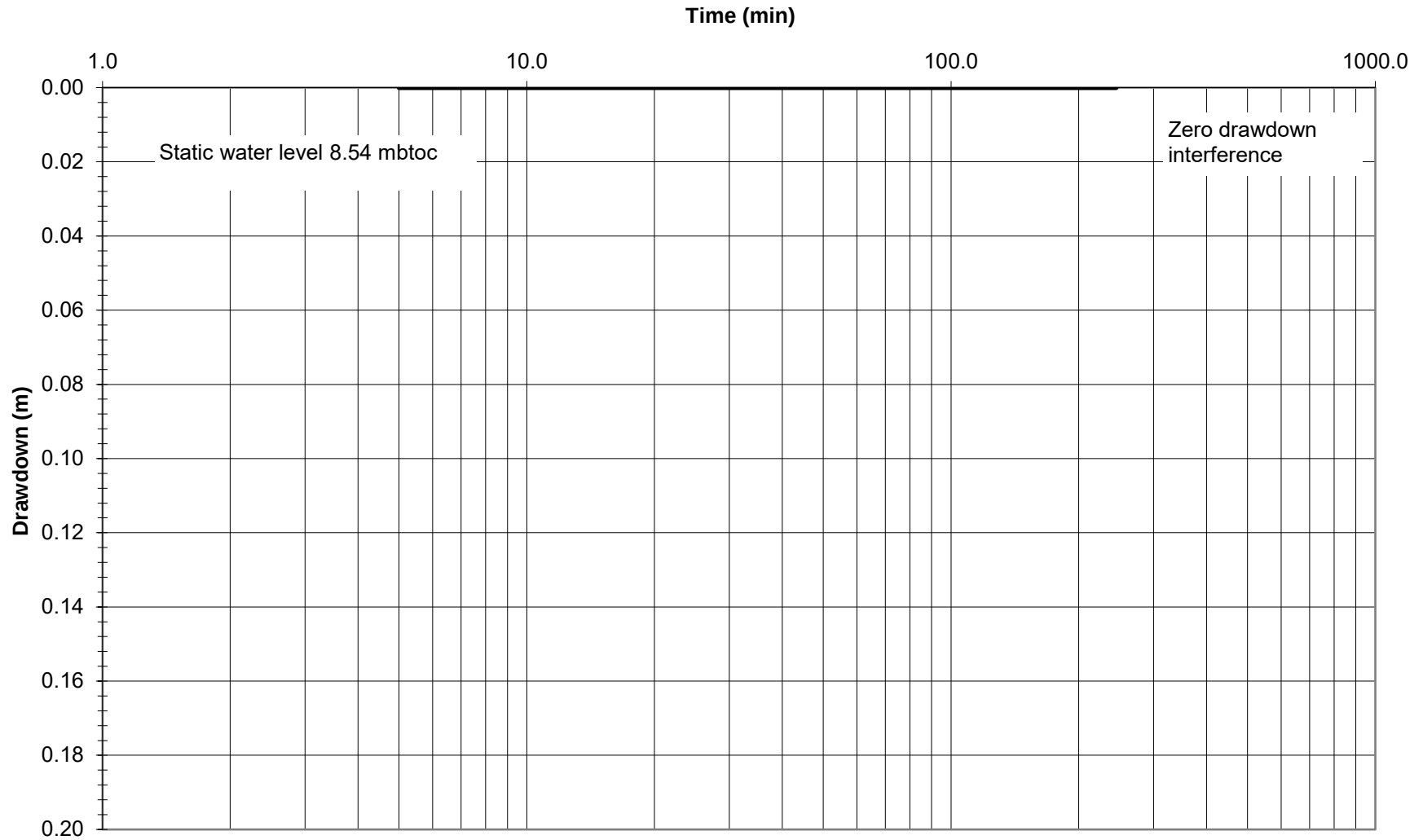
**SUMMARY OF PUMPING TEST DATA
AT PUMPING WELL WTN50957 (March 27, 2025)**

ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	ELAPSED TIME RECOVERY TIME [-]	Water Level [mbtoc]	Drawdown [m]	Discharge Rate [L/s]	COMMENTS
	[min]	[days]						
0	0	0.0000			6.74	0.00		
1	1	0.0007			7.23	0.49	1.01	
2	2	0.0014			7.23	0.49	1.01	
3	3	0.0021			7.23	0.49	1.01	
4	4	0.0028			7.23	0.49	1.01	
5	5	0.0035			7.23	0.49	1.01	
6	6	0.0042			7.23	0.49	1.01	
7	7	0.0049			7.23	0.49	1.01	
8	8	0.0056			7.23	0.49	1.01	
9	9	0.0063			7.23	0.49	1.01	
10	10	0.0069			7.23	0.49	1.01	
12	12	0.0083			7.23	0.49	1.01	
14	14	0.0097			7.23	0.49	1.01	
16	16	0.0111			7.23	0.49	1.01	
18	18	0.0125			7.23	0.49	1.01	
20	20	0.0139			7.23	0.49	1.01	
25	25	0.0174			7.23	0.49	1.01	
30	30	0.0208			7.23	0.49	1.01	
35	35	0.0243			7.23	0.49	1.01	
40	40	0.0278			7.23	0.49	1.01	
50	50	0.0347			7.24	0.50	1.01	
60	60	0.0417			7.24	0.50	1.01	
70	70	0.0486			7.24	0.50	1.01	
80	80	0.0556			7.24	0.50	1.01	
90	90	0.0625			7.24	0.50	1.01	
100	100	0.0694			7.24	0.50	1.01	
120	120	0.0833			7.24	0.50	1.01	
140	140	0.0972			7.24	0.50	1.01	
160	160	0.1111			7.24	0.50	1.01	
180	180	0.1250			7.24	0.50	1.01	
200	200	0.1389			7.24	0.50	1.01	
240	240	0.1667			7.24	0.50	1.01	Pump off
241			1	241.0000	6.74	0.00		Recovery
242			2	121.0000	6.73	-0.01		
243			3	81.0000	6.74	0.00		

NOTES

1. mbtoc = meters below top of casing.

Drawdown at WTN47098 during WTN50957 Pumping Test
6855 Seton Portage Rd, Seton Portage, BC
(March 27, 2025)



**SUMMARY OF DRAWDOWN
AT MONITORING WELL WTN47098 (March 27, 2025)**

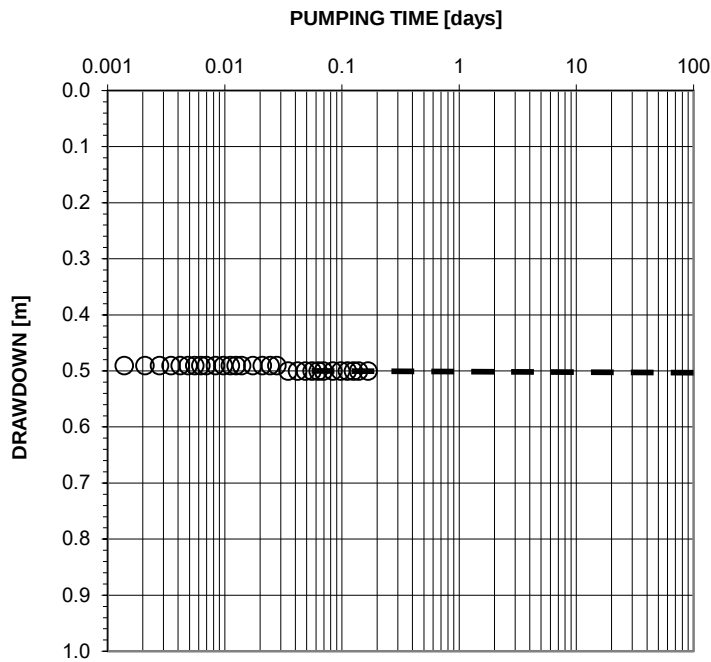
ELAPSED TIME [min]	PUMPING TIME		RECOVERY TIME [min]	WIN21397 (r = 39 m)		COMMENTS
	[min]	[days]		Water Level [mbtoc]	Drawdown [m]	
0	0	0.0000		8.54	0.00	
5	5	0.0035		8.54	0.00	
10	10	0.0069		8.54	0.00	
15	15	0.0104		8.54	0.00	
20	20	0.0139		8.54	0.00	
25	25	0.0174		8.54	0.00	
30	30	0.0208		8.54	0.00	
40	40	0.0278		8.54	0.00	
60	60	0.0417		8.54	0.00	
90	90	0.0625		8.54	0.00	
120	120	0.0833		8.54	0.00	
150	150	0.1042		8.54	0.00	
180	180	0.1250		8.54	0.00	
240	240	0.1667		8.54	0.00	Pump off
245			5	8.54	0.00	Recovery

NOTES

1. mbtoc = meters below top of casing.

6855 SETON PORTAGE RD, SETON PORTAGE, BC PUMPING TEST ANALYSIS - WTN50957

DRAWDOWN FORECAST



SPECIFIC CAPACITY CALCULATIONS

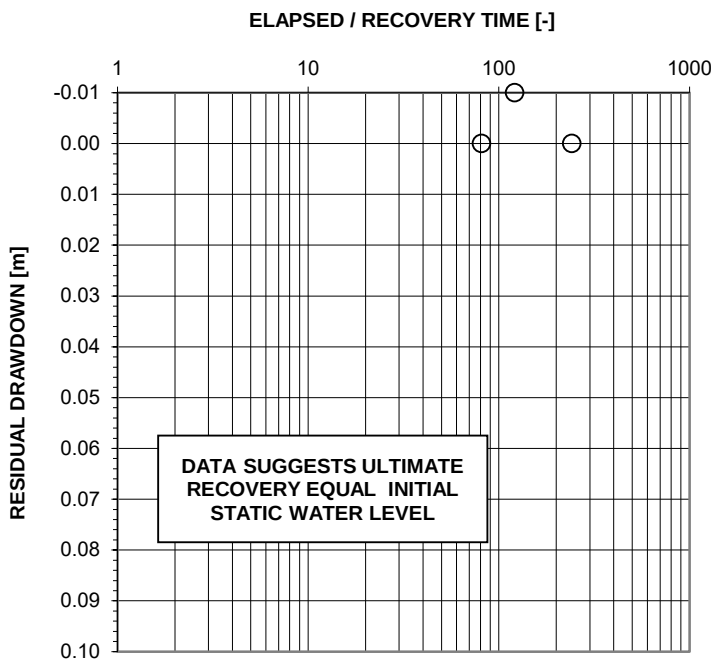
$$SC_{4\text{hr}} = \frac{Q}{s_4} = \frac{1.01}{0.5} \frac{\text{L/s}}{\text{m}} = 2.02 \text{ L/s/m}$$

$$SC_{100 \text{ day}} = \frac{Q}{s_{100}} = \frac{1.01}{0.50} \frac{\text{L/s}}{\text{m}} = 2.02 \text{ L/s/m}$$

Where:

Q = Flowrate
 s_n = Drawdown forecast at time n
 SC_n = Specific capacity forecast at time n

RESIDUAL DRAWDOWN FORECAST



RECOVERY CALCULATIONS

$$\text{Recovery at End of Test} = \frac{0.50}{0.50} \text{ m} = 100\%$$

$$\text{Projected Ultimate Recovery} = 0 \text{ metres residual drawdown}$$

DATA SUGGESTS ULTIMATE
RECOVERY EQUAL INITIAL
STATIC WATER LEVEL

6855 SETON PORTAGE RD, SETON PORTAGE, BC
CALCULATION OF RECOMMENDED PUMPING RATE - WTN50957

DESCRIPTION	UNITS	4 HOUR FORECAST		100 DAY FORECAST	
STATIC WATER LEVEL (SWL) Depth to SWL at time of well completion Depth to SWL at time of pumping test Design value for calculations	mbtoc mbtoc mbtoc	unknown 6.7 6.7	- Not Artesian See Note 1	unknown 6.7 6.7	- Not Artesian See Note 1
DRAWDOWN INTERFERENCE (DI) Maximum Estimated Drawdown Interference	m	0.0	Conservative	0.0	Conservative
PUMPING INFRASTRUCTURE Depth to top of screen Minimum distance from K-packer to base of motor Motor length Lowest allowable pump intake set-point Length of pump Recommended minimum pump water cover Lowest Allowable Dynamic Water Level (DWL)	mbtoc m m mbtoc m m mbtoc	14.3 0.0 0.0 14.3 0.0 0.0 14.3	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended	14.3 0.0 0.0 14.3 0.0 0.0 14.3	Estimated Min. Recommended Estimated Estimated Min. Recommended Min. Recommended
SPECIFIC CAPACITY (SC) Forecast SC trend (assuming continuous drawdown) Derated SC (from screen incrustation and biofouling)	L/s/m L/s/m	2.02 2.02	See Table 3b 100% (Short-Term)	2.02 2.02	See Table 3b 100% (Long-Term)
AVAILABLE WATER COLUMN Forecast of lowest expected SWL Lowest Allowable DWL Maximum Water Column (MWC) Estimated Drawdown Interference (DI) Allowance for incomplete recovery Maximum Available Drawdown (MAD) Safety Factor Total Allowable Drawdown (TAD) Operational Water Level (OWL)	mbtoc mbtoc m m m m m m mbtoc	6.7 14.3 7.6 0.0 0.0 7.6 100% 7.6 14.3		6.7 14.3 7.6 0.0 0.0 7.6 70% 5.3 12.1	
THEORETICAL WELL YIELD Theoretical maximum % of 1.01 L/s testing rate	L/s Usgpm %	15.35 243 1520%		10.75 170 1064%	
WELL SCREEN LIMITATIONS Maximum recommended flow rate through screen Theoretical Yield as % of limitation Is theoretical well yield limited by screens?	L/s %	N/A #VALUE! unknown		N/A #VALUE! unknown	
WELL CASING LIMITATIONS Maximum recommended flow rate based upon casing diameter (limits maximum pump diameter) Theoretical Yield as % of limitation Is theoretical well yield limited by casing diameter?	L/s %	12.6 122% YES	152 mm Diameter	12.6 85% NO	152 mm Diameter
RECOMMENDED PUMPING RATE	L/s Usgpm	1.26 20		1.01 16	

Notes

1. Design SWL includes 0 m seasonal adjustment.
2. mbtoc = meters below top of casing.

**6855 SETON PORTAGE RD, SETON PORTAGE, BC
WATER CHEMSITRY SCREENING - WTN50957**

PARAMETER	RESULTS - Mar 27, 2025	CANADIAN DRINKING WATER STANDARDS - 2024
Physical Tests		
Colour	below detection limit	15 TCU ²
Conductivity	171	
Total Dissolved Solids	107	500 mg/L ²
Hardness	78.7	
pH	6.98	7.0 - 10.5 ²
Turbidity	0.46	1 NTU
Dissolved Anions		
Alkalinity - Total	69.7	
Alkalinity - Bicarbonate	69.7	
Chloride	0.56	250 mg/L ²
Fluoride	below detection limit	1.5 mg/L ³
Sulphate	13.9	500 mg/L ²
Nutrients		
Nitrate Nitrogen	0.071	10 mg/L ³
Nitrite Nitrogen	below detection limit	1 mg/L ³
Nitrite/Nitrate Nitrogen	0.0706	
Cyanides		
Total Cyanide	below detection limit	0.2 mg/L ³
Bateriological Tests		
E.coli	0	0 CFU/100 mL ³
Fecal Coliform	0	
Total Coliform	0	0 CFU/100 mL ³
Heterotrophic Plate Count (CFU/mL)	22	
Total Metals		
Aluminum	0.0071	2.9 mg/L ³
Antimony	below detection limit	0.006 mg/L ³
Arsenic	0.00093	0.01 mg/L ³
Barium	0.0174	2.0 mg/L ³
Beryllium	below detection limit	
Boron	below detection limit	5 mg/L ³
Cadmium	below detection limit	0.007 mg/L ³
Calcium	24.5	
Chromium	below detection limit	0.05 mg/L ³
Cobalt	below detection limit	
Copper	0.00247	2.0 mg/L ²
Iron	0.036	0.3 mg/L ²
Lead	0.00042	0.005 mg/L ³
Magnesium	4.39	
Manganese	0.00215	0.12 mg/L ³
Mercury	below detection limit	0.001 mg/L ³
Nickel	below detection limit	
Phosphorus	below detection limit	
Potassium	1.45	
Selenium	below detection limit	0.05 mg/L ³
Silver	below detection limit	
Sodium	1.92	200 mg/L ²
Uranium	0.000124	0.02 mg/L ³
Zinc	0.0078	5.0 mg/L ²
Dissolved Metals		
Calcium	24.4	
Iron	0.012	
Magnesium	4.27	
Manganese	0.00184	
Sodium	1.91	

NOTES

- Generally accepted values.
- AO = Aesthetic Objective

APPENDIX C

Certificates of Analytical Chemistry

CERTIFICATE OF ANALYSIS

REPORTED TO Kala Geosciences Ltd.
1314 McGill Rd.
Kamloops, BC V2C 6N6

ATTENTION General

PO NUMBER 25035

PROJECT 25035 - Tsal'alh First Nation

PROJECT INFO Kala Basic Domestic Potability

WORK ORDER 25C3441

RECEIVED / TEMP 2025-03-28 13:45 / 4.6°C

REPORTED 2025-04-04 13:47

COC NUMBER No Number

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

Work Order Comments:

Custody Seals Intact: YES

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here:
<https://www.caro.ca/terms-conditions>

If you have any questions or concerns, please contact me at bwhitehead@caro.ca

Authorized By:

Brent Whitehead
Account Manager

1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5S 1H7 |
#108 4475 Wayburne Drive Burnaby, BC V5G 4X4

TEST RESULTS

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Win 50957 (25C3441-01) Matrix: Water Sampled: 2025-03-27 16:00						FILT, PRES
Anions						
Chloride	0.56	AO ≤ 250	0.10	mg/L	2025-03-29	
Fluoride	< 0.10	MAC = 1.5	0.10	mg/L	2025-03-29	
Nitrate (as N)	0.071	MAC = 10	0.010	mg/L	2025-03-29	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2025-03-29	
Sulfate	13.9	AO ≤ 500	1.0	mg/L	2025-03-29	
Calculated Parameters						
Hardness, Dissolved (as CaCO ₃)	78.7	N/A	0.500	mg/L	N/A	
Langelier Index	-1.3	N/A	-5.0		2025-04-03	CT6
Nitrate+Nitrite (as N)	0.0706	N/A	0.0100	mg/L	N/A	
Nitrogen, Organic	< 0.0500	N/A	0.0500	mg/L	N/A	
Dissolved Metals						
Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	2025-04-02	
Antimony, dissolved	< 0.00020	N/A	0.00020	mg/L	2025-04-02	
Arsenic, dissolved	0.00090	N/A	0.00050	mg/L	2025-04-02	
Barium, dissolved	0.0182	N/A	0.0050	mg/L	2025-04-02	
Beryllium, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-04-02	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-04-02	
Boron, dissolved	< 0.0500	N/A	0.0500	mg/L	2025-04-02	
Cadmium, dissolved	< 0.000010	N/A	0.000010	mg/L	2025-04-02	
Calcium, dissolved	24.4	N/A	0.20	mg/L	2025-04-02	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	2025-04-02	
Cobalt, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-04-02	
Copper, dissolved	0.00070	N/A	0.00040	mg/L	2025-04-02	
Iron, dissolved	0.012	N/A	0.010	mg/L	2025-04-02	
Lead, dissolved	< 0.00020	N/A	0.00020	mg/L	2025-04-02	
Lithium, dissolved	0.00098	N/A	0.00010	mg/L	2025-04-02	
Magnesium, dissolved	4.27	N/A	0.010	mg/L	2025-04-02	
Manganese, dissolved	0.00184	N/A	0.00020	mg/L	2025-04-02	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2025-04-02	
Molybdenum, dissolved	0.00127	N/A	0.00010	mg/L	2025-04-02	
Nickel, dissolved	< 0.00040	N/A	0.00040	mg/L	2025-04-02	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2025-04-02	
Potassium, dissolved	1.32	N/A	0.10	mg/L	2025-04-02	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2025-04-02	
Silicon, dissolved	2.8	N/A	1.0	mg/L	2025-04-02	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2025-04-02	
Sodium, dissolved	1.91	N/A	0.10	mg/L	2025-04-02	
Strontium, dissolved	0.119	N/A	0.0010	mg/L	2025-04-02	
Sulfur, dissolved	4.4	N/A	3.0	mg/L	2025-04-02	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2025-04-02	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2025-04-02	

TEST RESULTS

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Win 50957 (25C3441-01) Matrix: Water Sampled: 2025-03-27 16:00, Continued						FILT, PRES

Dissolved Metals, Continued

Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-04-02	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2025-04-02	
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2025-04-02	
Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2025-04-02	
Uranium, dissolved	0.000130	N/A	0.000020	mg/L	2025-04-02	
Vanadium, dissolved	< 0.0050	N/A	0.0050	mg/L	2025-04-02	
Zinc, dissolved	< 0.0040	N/A	0.0040	mg/L	2025-04-02	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-04-02	

General Parameters

Alkalinity, Total (as CaCO ₃)	69.7	N/A	1.0	mg/L	2025-04-01	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-04-01	
Alkalinity, Bicarbonate (as CaCO ₃)	69.7	N/A	1.0	mg/L	2025-04-01	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-04-01	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-04-01	
Ammonia, Total (as N)	0.058	None Required	0.050	mg/L	2025-04-01	
Carbon, Total Organic	< 0.50	N/A	0.50	mg/L	2025-04-01	
Carbon, Dissolved Organic	< 0.50	N/A	0.50	mg/L	2025-04-01	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2025-04-02	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2025-03-29	
Conductivity (EC)	171	N/A	2.0	µS/cm	2025-04-01	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-03-29	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2025-04-04	
pH	6.98	7.0-10.5	0.10	pH units	2025-04-01	HT2
Solids, Total Dissolved	107	AO ≤ 500	15	mg/L	2025-04-03	HT1
Temperature, at pH	21.5	N/A		°C	2025-04-01	HT2
Turbidity	0.46	OG < 1	0.10	NTU	2025-03-29	
UV Transmittance @ 254 nm - Unfiltered	98.0	N/A	0.10	% T	2025-03-29	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2025-03-28	
Background Colonies	750	N/A	1	CFU/100 mL	2025-03-28	MIC15
Coliforms, Fecal	< 1	N/A	1	CFU/100 mL	2025-03-28	
Heterotrophic Plate Count	22	N/A	5	CFU/mL	2025-03-28	
E. coli	< 1	MAC = 0	1	CFU/100 mL	2025-03-28	

Total Metals

Aluminum, total	0.0071	OG < 0.1	0.0050	mg/L	2025-04-02	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-04-02	
Arsenic, total	0.00093	MAC = 0.01	0.00050	mg/L	2025-04-02	
Barium, total	0.0174	MAC = 2	0.0050	mg/L	2025-04-02	
Beryllium, total	< 0.00010	N/A	0.00010	mg/L	2025-04-02	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2025-04-02	

TEST RESULTS

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Win 50957 (25C3441-01) Matrix: Water Sampled: 2025-03-27 16:00, Continued						FILT, PRES

Total Metals, Continued

Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-04-02
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-04-02
Calcium, total	24.5	None Required	0.20	mg/L	2025-04-02
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-04-02
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2025-04-02
Copper, total	0.00247	MAC = 2	0.00040	mg/L	2025-04-02
Iron, total	0.036	AO ≤ 0.1	0.010	mg/L	2025-04-02
Lead, total	0.00042	MAC = 0.005	0.00020	mg/L	2025-04-02
Lithium, total	0.00103	N/A	0.00010	mg/L	2025-04-02
Magnesium, total	4.39	None Required	0.010	mg/L	2025-04-02
Manganese, total	0.00215	MAC = 0.12	0.00020	mg/L	2025-04-02
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2025-04-02
Molybdenum, total	0.00124	N/A	0.00010	mg/L	2025-04-02
Nickel, total	< 0.00040	N/A	0.00040	mg/L	2025-04-02
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2025-04-02
Potassium, total	1.45	N/A	0.10	mg/L	2025-04-02
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-04-02
Silicon, total	2.8	N/A	1.0	mg/L	2025-04-02
Silver, total	< 0.000050	None Required	0.000050	mg/L	2025-04-02
Sodium, total	1.92	AO ≤ 200	0.10	mg/L	2025-04-02
Strontium, total	0.113	MAC = 7	0.0010	mg/L	2025-04-02
Sulfur, total	4.8	N/A	3.0	mg/L	2025-04-02
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2025-04-02
Thallium, total	< 0.000020	N/A	0.000020	mg/L	2025-04-02
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2025-04-02
Tin, total	< 0.00020	N/A	0.00020	mg/L	2025-04-02
Titanium, total	< 0.0050	N/A	0.0050	mg/L	2025-04-02
Tungsten, total	< 0.0010	N/A	0.0010	mg/L	2025-04-02
Uranium, total	0.000124	MAC = 0.02	0.000020	mg/L	2025-04-02
Vanadium, total	< 0.0050	N/A	0.0050	mg/L	2025-04-02
Zinc, total	0.0078	AO ≤ 5	0.0040	mg/L	2025-04-02
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2025-04-02

Sample Qualifiers:

CT6	Results were based on lab temperature & lab pH.
FILT	The sample has been filtered for DOC in the laboratory. Results may not reflect conditions at the time of sampling.
HT1	The sample was prepared and/or analyzed past the recommended holding time.
HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
MIC15	The final result is estimated due to a high bacterial count.
PRES	Sample has been preserved for CN,TOC,DOC in the laboratory and the holding time has been extended.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Kelowna
Carbon, Dissolved Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Chemical Oxygen Demand in Water	SM 5220 D* (2022)	Closed Reflux, Colorimetry	✓	Kelowna
Coliforms, Fecal in Water	SM 9222 D (2015)	Membrane Filtration / m-FC Agar	✓	Kelowna
Coliforms, Total in Water	SM 9222* (2015)	Membrane Filtration / Chromocult Agar	✓	Kelowna
Colour, True in Water	SM 2120 C (2021)	Spectrophotometry (456 nm)	✓	Kelowna
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
Cyanide, SAD in Water	ASTM D7511-12	Flow Injection with In-Line UV Digestion and Amperometry	✓	Kelowna
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
E. coli in Water	SM 9222* (2015)	Membrane Filtration / Chromocult Agar	✓	Kelowna
Hardness in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Hardness in Water	SM 2340 B* (2021)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	✓	N/A
Heterotrophic Plate Count in Water	SM 9215 D (2022)	Membrane Filtration / Membrane Filtration	✓	Kelowna
Langelier Index in Water	SM 2330 B (2021)	Calculation		N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Nitrogen, Total Kjeldahl in Water	SM 4500-Norg D* (2021)	Block Digestion and Flow Injection Analysis	✓	Kelowna
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Solids, Total Dissolved in Water	Solids in Water, Filtered / SM 2540 C* (2020)	Solids in Water, Filtered / Gravimetry (Dried at 103-105C)	✓	Kelowna
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Transmittance at 254 nm - Unfiltered in Water	SM 5910 B* (2021)	Ultraviolet Absorption	✓	Kelowna
Turbidity in Water	SM 2130 B (2020)	Nephelometry	✓	Kelowna

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Glossary of Terms:

RL	Reporting Limit (default)
% T	Percent Transmittance
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
°C	Degrees Celcius
AO	Aesthetic Objective
CFU/100 mL	Colony Forming Units per 100 millilitres
CFU/mL	Colony Forming Units per millilitre
CU	Colour Units (referenced against a platinum cobalt standard)
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
OG	Operational Guideline (treated water)
pH units	pH < 7 = acidic, pH > 7 = basic
µS/cm	Microsiemens per centimetre
ASTM	ASTM International Test Methods
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager: bwhitehead@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.

APPENDIX 2: QUALITY CONTROL RESULTS

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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (BLK):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Anions, Batch B5C4651

Blank (B5C4651-BLK1)			Prepared: 2025-03-29, Analyzed: 2025-03-29						
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 1.0	1.0 mg/L							

Blank (B5C4651-BLK2)			Prepared: 2025-03-29, Analyzed: 2025-03-29						
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 1.0	1.0 mg/L							

LCS (B5C4651-BS1)			Prepared: 2025-03-29, Analyzed: 2025-03-29						
Chloride	16.1	0.10 mg/L	16.0		101	90-110			
Fluoride	4.05	0.10 mg/L	4.00		101	88-108			
Nitrate (as N)	4.03	0.010 mg/L	4.00		101	90-110			
Nitrite (as N)	2.20	0.010 mg/L	2.00		110	85-115			
Sulfate	16.1	1.0 mg/L	16.0		101	90-110			

LCS (B5C4651-BS2)			Prepared: 2025-03-29, Analyzed: 2025-03-29						
Chloride	16.1	0.10 mg/L	16.0		100	90-110			
Fluoride	4.01	0.10 mg/L	4.00		100	88-108			
Nitrate (as N)	4.05	0.010 mg/L	4.00		101	90-110			
Nitrite (as N)	2.02	0.010 mg/L	2.00		101	85-115			
Sulfate	16.1	1.0 mg/L	16.0		101	90-110			

Dissolved Metals, Batch B5D1757

Blank (B5D1757-BLK1)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	< 0.000010	0.000010 mg/L							

Blank (B5D1757-BLK2)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	< 0.000010	0.000010 mg/L							

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B5D1757, Continued									
Blank (B5D1757-BLK3)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Blank (B5D1757-BLK4)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Blank (B5D1757-BLK5)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	< 0.000010	0.000010 mg/L							
LCS (B5D1757-BS1)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	0.00255	0.000010 mg/L	0.00250		102	80-120			
LCS (B5D1757-BS2)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	0.00254	0.000010 mg/L	0.00250		102	80-120			
LCS (B5D1757-BS3)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	0.00265	0.000010 mg/L	0.00250		106	80-120			
LCS (B5D1757-BS4)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	0.00256	0.000010 mg/L	0.00250		103	80-120			
LCS (B5D1757-BS5)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Mercury, dissolved	0.00236	0.000010 mg/L	0.00250		94	80-120			

Dissolved Metals, Batch B5D1766

Blank (B5D1766-BLK1)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0500	0.0500 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							

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Dissolved Metals, Batch B5D1766, Continued

Blank (B5D1766-BLK1), Continued

Prepared: 2025-04-02, Analyzed: 2025-04-02

Titanium, dissolved	< 0.0050	0.0050 mg/L
Tungsten, dissolved	< 0.0010	0.0010 mg/L
Uranium, dissolved	< 0.000020	0.000020 mg/L
Vanadium, dissolved	< 0.0050	0.0050 mg/L
Zinc, dissolved	< 0.0040	0.0040 mg/L
Zirconium, dissolved	< 0.00010	0.00010 mg/L

Blank (B5D1766-BLK2)

Prepared: 2025-04-02, Analyzed: 2025-04-02

Aluminum, dissolved	< 0.0050	0.0050 mg/L
Antimony, dissolved	< 0.00020	0.00020 mg/L
Arsenic, dissolved	< 0.00050	0.00050 mg/L
Barium, dissolved	< 0.0050	0.0050 mg/L
Beryllium, dissolved	< 0.00010	0.00010 mg/L
Bismuth, dissolved	< 0.00010	0.00010 mg/L
Boron, dissolved	< 0.0500	0.0500 mg/L
Cadmium, dissolved	< 0.000010	0.000010 mg/L
Calcium, dissolved	< 0.20	0.20 mg/L
Chromium, dissolved	< 0.00050	0.00050 mg/L
Cobalt, dissolved	< 0.00010	0.00010 mg/L
Copper, dissolved	< 0.00040	0.00040 mg/L
Iron, dissolved	< 0.010	0.010 mg/L
Lead, dissolved	< 0.00020	0.00020 mg/L
Lithium, dissolved	< 0.00010	0.00010 mg/L
Magnesium, dissolved	< 0.010	0.010 mg/L
Manganese, dissolved	< 0.00020	0.00020 mg/L
Molybdenum, dissolved	< 0.00010	0.00010 mg/L
Nickel, dissolved	< 0.00040	0.00040 mg/L
Phosphorus, dissolved	< 0.050	0.050 mg/L
Potassium, dissolved	< 0.10	0.10 mg/L
Selenium, dissolved	< 0.00050	0.00050 mg/L
Silicon, dissolved	< 1.0	1.0 mg/L
Silver, dissolved	< 0.000050	0.000050 mg/L
Sodium, dissolved	< 0.10	0.10 mg/L
Strontium, dissolved	< 0.0010	0.0010 mg/L
Sulfur, dissolved	< 3.0	3.0 mg/L
Tellurium, dissolved	< 0.00050	0.00050 mg/L
Thallium, dissolved	< 0.000020	0.000020 mg/L
Thorium, dissolved	< 0.00010	0.00010 mg/L
Tin, dissolved	< 0.00020	0.00020 mg/L
Titanium, dissolved	< 0.0050	0.0050 mg/L
Tungsten, dissolved	< 0.0010	0.0010 mg/L
Uranium, dissolved	< 0.000020	0.000020 mg/L
Vanadium, dissolved	< 0.0050	0.0050 mg/L
Zinc, dissolved	< 0.0040	0.0040 mg/L
Zirconium, dissolved	< 0.00010	0.00010 mg/L

LCS (B5D1766-BS1)

Prepared: 2025-04-02, Analyzed: 2025-04-02

Aluminum, dissolved	4.05	0.0050 mg/L	4.00	101	80-120
Antimony, dissolved	0.0405	0.00020 mg/L	0.0400	101	80-120
Arsenic, dissolved	0.411	0.00050 mg/L	0.400	103	80-120
Barium, dissolved	0.0426	0.0050 mg/L	0.0400	106	80-120
Beryllium, dissolved	0.0419	0.00010 mg/L	0.0400	105	80-120
Bismuth, dissolved	0.0418	0.00010 mg/L	0.0400	104	80-120
Boron, dissolved	0.398	0.0500 mg/L	0.400	100	80-120
Cadmium, dissolved	0.0414	0.000010 mg/L	0.0400	103	80-120
Calcium, dissolved	4.12	0.20 mg/L	4.00	103	80-120
Chromium, dissolved	0.0412	0.00050 mg/L	0.0400	103	80-120

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Dissolved Metals, Batch B5D1766, Continued									
LCS (B5D1766-BS1), Continued					Prepared: 2025-04-02, Analyzed: 2025-04-02				
Cobalt, dissolved	0.0409	0.00010 mg/L	0.0400		102	80-120			
Copper, dissolved	0.0414	0.00040 mg/L	0.0400		103	80-120			
Iron, dissolved	4.15	0.010 mg/L	4.00		104	80-120			
Lead, dissolved	0.0418	0.00020 mg/L	0.0400		105	80-120			
Lithium, dissolved	0.0429	0.00010 mg/L	0.0400		107	80-120			
Magnesium, dissolved	4.13	0.010 mg/L	4.00		103	80-120			
Manganese, dissolved	0.0414	0.00020 mg/L	0.0400		103	80-120			
Molybdenum, dissolved	0.0409	0.00010 mg/L	0.0400		102	80-120			
Nickel, dissolved	0.0414	0.00040 mg/L	0.0400		104	80-120			
Phosphorus, dissolved	4.09	0.050 mg/L	4.00		102	80-120			
Potassium, dissolved	4.22	0.10 mg/L	4.00		106	80-120			
Selenium, dissolved	0.409	0.00050 mg/L	0.400		102	80-120			
Silicon, dissolved	4.0	1.0 mg/L	4.00		100	80-120			
Silver, dissolved	0.0415	0.000050 mg/L	0.0400		104	80-120			
Sodium, dissolved	4.20	0.10 mg/L	4.00		105	80-120			
Strontium, dissolved	0.0417	0.0010 mg/L	0.0400		104	80-120			
Sulfur, dissolved	41.5	3.0 mg/L	40.0		104	80-120			
Tellurium, dissolved	0.0396	0.00050 mg/L	0.0400		99	80-120			
Thallium, dissolved	0.0418	0.000020 mg/L	0.0400		104	80-120			
Thorium, dissolved	0.0419	0.00010 mg/L	0.0400		105	80-120			
Tin, dissolved	0.0407	0.00020 mg/L	0.0400		102	80-120			
Titanium, dissolved	0.0420	0.0050 mg/L	0.0400		105	80-120			
Tungsten, dissolved	0.0401	0.0010 mg/L	0.0400		100	80-120			
Uranium, dissolved	0.0407	0.000020 mg/L	0.0400		102	80-120			
Vanadium, dissolved	0.0416	0.0050 mg/L	0.0400		104	80-120			
Zinc, dissolved	0.410	0.0040 mg/L	0.400		103	80-120			
Zirconium, dissolved	0.0400	0.00010 mg/L	0.0400		100	80-120			
LCS (B5D1766-BS2)					Prepared: 2025-04-03, Analyzed: 2025-04-03				
Aluminum, dissolved	4.04	0.0050 mg/L	4.00		101	80-120			
Antimony, dissolved	0.0407	0.00020 mg/L	0.0400		102	80-120			
Arsenic, dissolved	0.406	0.00050 mg/L	0.400		102	80-120			
Barium, dissolved	0.0426	0.0050 mg/L	0.0400		106	80-120			
Beryllium, dissolved	0.0409	0.00010 mg/L	0.0400		102	80-120			
Bismuth, dissolved	0.0410	0.00010 mg/L	0.0400		102	80-120			
Boron, dissolved	0.392	0.0500 mg/L	0.400		98	80-120			
Cadmium, dissolved	0.0413	0.000010 mg/L	0.0400		103	80-120			
Calcium, dissolved	4.10	0.20 mg/L	4.00		103	80-120			
Chromium, dissolved	0.0412	0.00050 mg/L	0.0400		103	80-120			
Cobalt, dissolved	0.0406	0.00010 mg/L	0.0400		101	80-120			
Copper, dissolved	0.0408	0.00040 mg/L	0.0400		102	80-120			
Iron, dissolved	4.05	0.010 mg/L	4.00		101	80-120			
Lead, dissolved	0.0424	0.00020 mg/L	0.0400		106	80-120			
Lithium, dissolved	0.0421	0.00010 mg/L	0.0400		105	80-120			
Magnesium, dissolved	4.05	0.010 mg/L	4.00		101	80-120			
Manganese, dissolved	0.0408	0.00020 mg/L	0.0400		102	80-120			
Molybdenum, dissolved	0.0406	0.00010 mg/L	0.0400		101	80-120			
Nickel, dissolved	0.0408	0.00040 mg/L	0.0400		102	80-120			
Phosphorus, dissolved	4.06	0.050 mg/L	4.00		101	80-120			
Potassium, dissolved	4.17	0.10 mg/L	4.00		104	80-120			
Selenium, dissolved	0.403	0.00050 mg/L	0.400		101	80-120			
Silicon, dissolved	3.9	1.0 mg/L	4.00		98	80-120			
Silver, dissolved	0.0411	0.000050 mg/L	0.0400		103	80-120			
Sodium, dissolved	4.13	0.10 mg/L	4.00		103	80-120			
Strontium, dissolved	0.0411	0.0010 mg/L	0.0400		103	80-120			
Sulfur, dissolved	40.4	3.0 mg/L	40.0		101	80-120			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B5D1766, Continued									
LCS (B5D1766-BS2), Continued					Prepared: 2025-04-03, Analyzed: 2025-04-03				
Tellurium, dissolved	0.0388	0.00050 mg/L	0.0400		97	80-120			
Thallium, dissolved	0.0413	0.000020 mg/L	0.0400		103	80-120			
Thorium, dissolved	0.0403	0.00010 mg/L	0.0400		101	80-120			
Tin, dissolved	0.0403	0.00020 mg/L	0.0400		101	80-120			
Titanium, dissolved	0.0401	0.0050 mg/L	0.0400		100	80-120			
Tungsten, dissolved	0.0401	0.0010 mg/L	0.0400		100	80-120			
Uranium, dissolved	0.0412	0.000020 mg/L	0.0400		103	80-120			
Vanadium, dissolved	0.0403	0.0050 mg/L	0.0400		101	80-120			
Zinc, dissolved	0.404	0.0040 mg/L	0.400		101	80-120			
Zirconium, dissolved	0.0400	0.00010 mg/L	0.0400		100	80-120			
General Parameters, Batch B5C4620									
Blank (B5C4620-BLK1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	< 0.0020	0.0020 mg/L							
Blank (B5C4620-BLK2)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	< 0.0020	0.0020 mg/L							
Blank (B5C4620-BLK3)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	< 0.0020	0.0020 mg/L							
LCS (B5C4620-BS1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	0.0194	0.0020 mg/L	0.0200		97	82-120			
LCS (B5C4620-BS2)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	0.0208	0.0020 mg/L	0.0200		104	82-120			
LCS (B5C4620-BS3)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	0.0191	0.0020 mg/L	0.0200		95	82-120			
LCS Dup (B5C4620-BSD1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	0.0199	0.0020 mg/L	0.0200		100	82-120	3	10	
LCS Dup (B5C4620-BSD2)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	0.0209	0.0020 mg/L	0.0200		105	82-120	< 1	10	
LCS Dup (B5C4620-BSD3)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Cyanide, Total	0.0194	0.0020 mg/L	0.0200		97	82-120	2	10	
General Parameters, Batch B5C4642									
Blank (B5C4642-BLK1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Turbidity	< 0.10	0.10 NTU							
LCS (B5C4642-BS1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Turbidity	150	0.10 NTU	151		99	90-110			
General Parameters, Batch B5C4661									
Blank (B5C4661-BLK1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Colour, True	< 5.0	5.0 CU							
LCS (B5C4661-BS1)					Prepared: 2025-03-29, Analyzed: 2025-03-29				
Colour, True	23	5.0 CU	20.0		113	85-115			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5C4675									
Blank (B5C4675-BLK1)			Prepared: 2025-03-29, Analyzed: 2025-03-29						
UV Transmittance @ 254 nm - Unfiltered	< 0.10	0.10 % T							
LCS (B5C4675-BS1)			Prepared: 2025-03-29, Analyzed: 2025-03-29						
UV Transmittance @ 254 nm - Unfiltered	44.8	0.10 % T	44.6		100	95-105			
General Parameters, Batch B5C4790									
Blank (B5C4790-BLK1)			Prepared: 2025-03-31, Analyzed: 2025-04-01						
Carbon, Total Organic	< 0.50	0.50 mg/L							
Carbon, Dissolved Organic	< 0.50	0.50 mg/L							
Blank (B5C4790-BLK2)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Carbon, Total Organic	< 0.50	0.50 mg/L							
Carbon, Dissolved Organic	< 0.50	0.50 mg/L							
Blank (B5C4790-BLK3)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Carbon, Total Organic	< 0.50	0.50 mg/L							
Carbon, Dissolved Organic	< 0.50	0.50 mg/L							
Blank (B5C4790-BLK4)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Carbon, Total Organic	< 0.50	0.50 mg/L							
Carbon, Dissolved Organic	< 0.50	0.50 mg/L							
Blank (B5C4790-BLK5)			Prepared: 2025-04-02, Analyzed: 2025-04-03						
Carbon, Total Organic	< 0.50	0.50 mg/L							
Carbon, Dissolved Organic	< 0.50	0.50 mg/L							
LCS (B5C4790-BS1)			Prepared: 2025-03-31, Analyzed: 2025-04-03						
Carbon, Total Organic	9.10	0.50 mg/L	10.0		91	78-116			
Carbon, Dissolved Organic	9.28	0.50 mg/L	10.0		93	78-116			
LCS (B5C4790-BS2)			Prepared: 2025-04-01, Analyzed: 2025-04-03						
Carbon, Total Organic	9.12	0.50 mg/L	10.0		91	78-116			
Carbon, Dissolved Organic	9.16	0.50 mg/L	10.0		92	78-116			
LCS (B5C4790-BS3)			Prepared: 2025-04-01, Analyzed: 2025-04-03						
Carbon, Total Organic	9.39	0.50 mg/L	10.0		94	78-116			
Carbon, Dissolved Organic	9.50	0.50 mg/L	10.0		95	78-116			
LCS (B5C4790-BS4)			Prepared: 2025-04-02, Analyzed: 2025-04-03						
Carbon, Total Organic	9.46	0.50 mg/L	10.0		95	78-116			
Carbon, Dissolved Organic	9.37	0.50 mg/L	10.0		94	78-116			
LCS (B5C4790-BS5)			Prepared: 2025-04-02, Analyzed: 2025-04-03						
Carbon, Total Organic	9.57	0.50 mg/L	10.0		96	78-116			
Carbon, Dissolved Organic	9.45	0.50 mg/L	10.0		95	78-116			
General Parameters, Batch B5C4796									
Blank (B5C4796-BLK1)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Alkalinity, Total (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	1.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
Temperature, at pH	19.8	°C							

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5C4796, Continued									
Blank (B5C4796-BLK2)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Alkalinity, Total (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	1.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
Temperature, at pH	21.3	°C							
Blank (B5C4796-BLK3)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Alkalinity, Total (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	1.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
Temperature, at pH	22.6	°C							
LCS (B5C4796-BS1)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Alkalinity, Total (as CaCO ₃)	96.9	1.0 mg/L	100		97	80-120			
LCS (B5C4796-BS2)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Conductivity (EC)	1420	2.0 µS/cm	1410		101	95-105			
LCS (B5C4796-BS3)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Alkalinity, Total (as CaCO ₃)	95.7	1.0 mg/L	100		96	80-120			
LCS (B5C4796-BS4)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Conductivity (EC)	1420	2.0 µS/cm	1410		100	95-105			
LCS (B5C4796-BS5)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Alkalinity, Total (as CaCO ₃)	97.5	1.0 mg/L	100		97	80-120			
LCS (B5C4796-BS6)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
Conductivity (EC)	1440	2.0 µS/cm	1410		102	95-105			
Reference (B5C4796-SRM1)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
pH	7.02	0.10 pH units	7.01		100	98-102			
Reference (B5C4796-SRM2)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
pH	7.02	0.10 pH units	7.01		100	98-102			
Reference (B5C4796-SRM3)			Prepared: 2025-04-01, Analyzed: 2025-04-01						
pH	7.02	0.10 pH units	7.01		100	98-102			

General Parameters, Batch B5D1524

Blank (B5D1524-BLK1)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Chemical Oxygen Demand	< 20	20 mg/L							
Blank (B5D1524-BLK2)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Chemical Oxygen Demand	< 20	20 mg/L							
LCS (B5D1524-BS1)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Chemical Oxygen Demand	510	20 mg/L	500		102	89-115			
LCS (B5D1524-BS2)			Prepared: 2025-04-02, Analyzed: 2025-04-02						
Chemical Oxygen Demand	508	20 mg/L	500		102	89-115			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5D1524, Continued									
Duplicate (B5D1524-DUP2)		Source: 25C3441-01		Prepared: 2025-04-02, Analyzed: 2025-04-02					
Chemical Oxygen Demand	< 20	20 mg/L		< 20			14		
Matrix Spike (B5D1524-MS2)		Source: 25C3441-01		Prepared: 2025-04-02, Analyzed: 2025-04-02					
Chemical Oxygen Demand	149	20 mg/L	125	< 20	111	75-125			
General Parameters, Batch B5D1532									
Blank (B5D1532-BLK1)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
Blank (B5D1532-BLK2)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
Blank (B5D1532-BLK3)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
Blank (B5D1532-BLK4)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
LCS (B5D1532-BS1)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	0.965	0.050 mg/L	1.00		96	85-115			
LCS (B5D1532-BS2)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	0.911	0.050 mg/L	1.00		91	85-115			
LCS (B5D1532-BS3)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	0.928	0.050 mg/L	1.00		93	85-115			
LCS (B5D1532-BS4)		Prepared: 2025-04-01, Analyzed: 2025-04-01							
Ammonia, Total (as N)	0.972	0.050 mg/L	1.00		97	85-115			
General Parameters, Batch B5D1845									
Blank (B5D1845-BLK1)		Prepared: 2025-04-03, Analyzed: 2025-04-04							
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B5D1845-BLK2)		Prepared: 2025-04-03, Analyzed: 2025-04-04							
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B5D1845-BS1)		Prepared: 2025-04-03, Analyzed: 2025-04-04							
Nitrogen, Total Kjeldahl	1.02	0.050 mg/L	1.00		102	85-115			
LCS (B5D1845-BS2)		Prepared: 2025-04-03, Analyzed: 2025-04-04							
Nitrogen, Total Kjeldahl	1.02	0.050 mg/L	1.00		102	85-115			
General Parameters, Batch B5D1859									
Blank (B5D1859-BLK1)		Prepared: 2025-04-03, Analyzed: 2025-04-03							
Solids, Total Dissolved	< 15	15 mg/L							
Blank (B5D1859-BLK2)		Prepared: 2025-04-03, Analyzed: 2025-04-03							
Solids, Total Dissolved	< 15	15 mg/L							
LCS (B5D1859-BS1)		Prepared: 2025-04-03, Analyzed: 2025-04-03							
Solids, Total Dissolved	248	15 mg/L	240		103	85-115			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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General Parameters, Batch B5D1859, Continued

LCS (B5D1859-BS2)				Prepared: 2025-04-03, Analyzed: 2025-04-03					
Solids, Total Dissolved	235	15 mg/L	240		98	85-115			

Microbiological Parameters, Batch B5C4617

Blank (B5C4617-BLK1)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Coliforms, Total	< 1	1 CFU/100 mL							
E. coli	< 1	1 CFU/100 mL							

Blank (B5C4617-BLK2)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Coliforms, Total	< 1	1 CFU/100 mL							
E. coli	< 1	1 CFU/100 mL							

Blank (B5C4617-BLK3)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Coliforms, Total	< 1	1 CFU/100 mL							
E. coli	< 1	1 CFU/100 mL							

Blank (B5C4617-BLK4)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Coliforms, Total	< 1	1 CFU/100 mL							
E. coli	< 1	1 CFU/100 mL							

Blank (B5C4617-BLK5)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Coliforms, Total	< 1	1 CFU/100 mL							
E. coli	< 1	1 CFU/100 mL							

Microbiological Parameters, Batch B5C4632

Blank (B5C4632-BLK1)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Coliforms, Fecal	< 1	1 CFU/100 mL							

Microbiological Parameters, Batch B5C4638

Blank (B5C4638-BLK1)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Heterotrophic Plate Count	< 5	5 CFU/mL							

Blank (B5C4638-BLK2)				Prepared: 2025-03-28, Analyzed: 2025-03-28					
Heterotrophic Plate Count	< 5	5 CFU/mL							

Total Metals, Batch B5D1601

Blank (B5D1601-BLK1)				Prepared: 2025-04-01, Analyzed: 2025-04-01					
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0500	0.0500 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5D1601, Continued									
Blank (B5D1601-BLK1), Continued					Prepared: 2025-04-01, Analyzed: 2025-04-01				
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0050	0.0050 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							
Blank (B5D1601-BLK2)					Prepared: 2025-04-01, Analyzed: 2025-04-01				
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0500	0.0500 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5D1601, Continued									
Blank (B5D1601-BLK2), Continued					Prepared: 2025-04-01, Analyzed: 2025-04-01				
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0050	0.0050 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							
LCS (B5D1601-BS1)					Prepared: 2025-04-01, Analyzed: 2025-04-02				
Aluminum, total	4.01	0.0050 mg/L	4.00		100	80-120			
Antimony, total	0.0395	0.00020 mg/L	0.0400		99	80-120			
Arsenic, total	0.396	0.00050 mg/L	0.400		99	80-120			
Barium, total	0.0407	0.0050 mg/L	0.0400		102	80-120			
Beryllium, total	0.0388	0.00010 mg/L	0.0400		97	80-120			
Bismuth, total	0.0394	0.00010 mg/L	0.0400		99	80-120			
Boron, total	0.388	0.0500 mg/L	0.400		97	80-120			
Cadmium, total	0.0403	0.000010 mg/L	0.0400		101	80-120			
Calcium, total	4.09	0.20 mg/L	4.00		102	80-120			
Chromium, total	0.0410	0.00050 mg/L	0.0400		103	80-120			
Cobalt, total	0.0403	0.00010 mg/L	0.0400		101	80-120			
Copper, total	0.0408	0.00040 mg/L	0.0400		102	80-120			
Iron, total	4.05	0.010 mg/L	4.00		101	80-120			
Lead, total	0.0393	0.00020 mg/L	0.0400		98	80-120			
Lithium, total	0.0385	0.00010 mg/L	0.0400		96	80-120			
Magnesium, total	3.95	0.010 mg/L	4.00		99	80-120			
Manganese, total	0.0403	0.00020 mg/L	0.0400		101	80-120			
Molybdenum, total	0.0406	0.00010 mg/L	0.0400		102	80-120			
Nickel, total	0.0401	0.00040 mg/L	0.0400		100	80-120			
Phosphorus, total	3.99	0.050 mg/L	4.00		100	80-120			
Potassium, total	3.90	0.10 mg/L	4.00		97	80-120			
Selenium, total	0.405	0.00050 mg/L	0.400		101	80-120			
Silicon, total	4.1	1.0 mg/L	4.00		102	80-120			
Silver, total	0.0398	0.000050 mg/L	0.0400		99	80-120			
Sodium, total	3.99	0.10 mg/L	4.00		100	80-120			
Strontium, total	0.0388	0.0010 mg/L	0.0400		97	80-120			
Sulfur, total	40.0	3.0 mg/L	40.0		100	80-120			
Tellurium, total	0.0389	0.00050 mg/L	0.0400		97	80-120			
Thallium, total	0.0394	0.000020 mg/L	0.0400		99	80-120			
Thorium, total	0.0400	0.00010 mg/L	0.0400		100	80-120			
Tin, total	0.0398	0.00020 mg/L	0.0400		100	80-120			
Titanium, total	0.0394	0.0050 mg/L	0.0400		99	80-120			
Tungsten, total	0.0398	0.0010 mg/L	0.0400		100	80-120			
Uranium, total	0.0399	0.000020 mg/L	0.0400		100	80-120			
Vanadium, total	0.0404	0.0050 mg/L	0.0400		101	80-120			
Zinc, total	0.397	0.0040 mg/L	0.400		99	80-120			
Zirconium, total	0.0401	0.00010 mg/L	0.0400		100	80-120			
LCS (B5D1601-BS2)					Prepared: 2025-04-01, Analyzed: 2025-04-02				
Aluminum, total	4.03	0.0050 mg/L	4.00		101	80-120			
Antimony, total	0.0392	0.00020 mg/L	0.0400		98	80-120			
Arsenic, total	0.396	0.00050 mg/L	0.400		99	80-120			
Barium, total	0.0409	0.0050 mg/L	0.0400		102	80-120			
Beryllium, total	0.0376	0.00010 mg/L	0.0400		94	80-120			
Bismuth, total	0.0394	0.00010 mg/L	0.0400		99	80-120			
Boron, total	0.376	0.0500 mg/L	0.400		94	80-120			
Cadmium, total	0.0398	0.000010 mg/L	0.0400		100	80-120			
Calcium, total	4.10	0.20 mg/L	4.00		102	80-120			
Chromium, total	0.0414	0.00050 mg/L	0.0400		103	80-120			
Cobalt, total	0.0411	0.00010 mg/L	0.0400		103	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5D1601, Continued									
LCS (B5D1601-BS2), Continued				Prepared: 2025-04-01, Analyzed: 2025-04-02					
Copper, total	0.0406	0.00040 mg/L	0.0400		101	80-120			
Iron, total	4.09	0.010 mg/L	4.00		102	80-120			
Lead, total	0.0397	0.00020 mg/L	0.0400		99	80-120			
Lithium, total	0.0371	0.00010 mg/L	0.0400		93	80-120			
Magnesium, total	4.07	0.010 mg/L	4.00		102	80-120			
Manganese, total	0.0401	0.00020 mg/L	0.0400		100	80-120			
Molybdenum, total	0.0403	0.00010 mg/L	0.0400		101	80-120			
Nickel, total	0.0401	0.00040 mg/L	0.0400		100	80-120			
Phosphorus, total	3.97	0.050 mg/L	4.00		99	80-120			
Potassium, total	4.04	0.10 mg/L	4.00		101	80-120			
Selenium, total	0.395	0.00050 mg/L	0.400		99	80-120			
Silicon, total	4.0	1.0 mg/L	4.00		101	80-120			
Silver, total	0.0398	0.000050 mg/L	0.0400		100	80-120			
Sodium, total	4.07	0.10 mg/L	4.00		102	80-120			
Strontium, total	0.0393	0.0010 mg/L	0.0400		98	80-120			
Sulfur, total	39.8	3.0 mg/L	40.0		100	80-120			
Tellurium, total	0.0377	0.00050 mg/L	0.0400		94	80-120			
Thallium, total	0.0395	0.000020 mg/L	0.0400		99	80-120			
Thorium, total	0.0399	0.00010 mg/L	0.0400		100	80-120			
Tin, total	0.0398	0.00020 mg/L	0.0400		99	80-120			
Titanium, total	0.0402	0.0050 mg/L	0.0400		100	80-120			
Tungsten, total	0.0399	0.0010 mg/L	0.0400		100	80-120			
Uranium, total	0.0399	0.000020 mg/L	0.0400		100	80-120			
Vanadium, total	0.0410	0.0050 mg/L	0.0400		103	80-120			
Zinc, total	0.397	0.0040 mg/L	0.400		99	80-120			
Zirconium, total	0.0396	0.00010 mg/L	0.0400		99	80-120			
Duplicate (B5D1601-DUP1)				Source: 25C3441-01		Prepared: 2025-04-01, Analyzed: 2025-04-02			
Aluminum, total	0.0073	0.0050 mg/L		0.0071				20	
Antimony, total	< 0.00020	0.00020 mg/L		< 0.00020				20	
Arsenic, total	0.00093	0.00050 mg/L		0.00093				20	
Barium, total	0.0173	0.0050 mg/L		0.0174				20	
Beryllium, total	< 0.00010	0.00010 mg/L		< 0.00010				20	
Bismuth, total	< 0.00010	0.00010 mg/L		< 0.00010				20	
Boron, total	< 0.0500	0.0500 mg/L		< 0.0500				20	
Cadmium, total	< 0.000010	0.000010 mg/L		< 0.000010				20	
Calcium, total	24.7	0.20 mg/L		24.5			< 1	20	
Chromium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Cobalt, total	< 0.00010	0.00010 mg/L		< 0.00010				20	
Copper, total	0.00250	0.00040 mg/L		0.00247			1	20	
Iron, total	0.035	0.010 mg/L		0.036				20	
Lead, total	0.00041	0.00020 mg/L		0.00042				20	
Lithium, total	0.00105	0.00010 mg/L		0.00103			2	20	
Magnesium, total	4.45	0.010 mg/L		4.39			1	20	
Manganese, total	0.00219	0.00020 mg/L		0.00215			2	20	
Molybdenum, total	0.00126	0.00010 mg/L		0.00124			1	20	
Nickel, total	< 0.00040	0.00040 mg/L		< 0.00040				20	
Phosphorus, total	< 0.050	0.050 mg/L		< 0.050				20	
Potassium, total	1.47	0.10 mg/L		1.45			1	20	
Selenium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Silicon, total	2.8	1.0 mg/L		2.8				20	
Silver, total	< 0.000050	0.000050 mg/L		< 0.000050				20	
Sodium, total	1.96	0.10 mg/L		1.92			2	20	
Strontium, total	0.114	0.0010 mg/L		0.113			1	20	
Sulfur, total	5.0	3.0 mg/L		4.8				20	
Tellurium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Kala Geosciences Ltd.
25035 - Tsal'alh First Nation

WORK ORDER REPORTED 25C3441
2025-04-04 13:47

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5D1601, Continued									
Duplicate (B5D1601-DUP1), Continued		Source: 25C3441-01		Prepared: 2025-04-01, Analyzed: 2025-04-02					
Thallium, total	< 0.000020	0.000020 mg/L		< 0.000020				20	
Thorium, total	< 0.00010	0.00010 mg/L		< 0.00010				20	
Tin, total	< 0.00020	0.00020 mg/L		< 0.00020				20	
Titanium, total	< 0.0050	0.0050 mg/L		< 0.0050				20	
Tungsten, total	< 0.0010	0.0010 mg/L		< 0.0010				20	
Uranium, total	0.000129	0.000020 mg/L		0.000124			4	20	
Vanadium, total	< 0.0050	0.0050 mg/L		< 0.0050				20	
Zinc, total	0.0079	0.0040 mg/L		0.0078				20	
Zirconium, total	< 0.00010	0.00010 mg/L		< 0.00010				20	

Total Metals, Batch B5D1757

Blank (B5D1757-BLK1)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5D1757-BLK2)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5D1757-BLK3)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5D1757-BLK4)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5D1757-BLK5)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	< 0.000010	0.000010 mg/L							
LCS (B5D1757-BS1)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	0.00255	0.000010 mg/L		0.00250	102	80-120			
LCS (B5D1757-BS2)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	0.00254	0.000010 mg/L		0.00250	102	80-120			
LCS (B5D1757-BS3)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	0.00265	0.000010 mg/L		0.00250	106	80-120			
LCS (B5D1757-BS4)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	0.00256	0.000010 mg/L		0.00250	103	80-120			
LCS (B5D1757-BS5)		Prepared: 2025-04-02, Analyzed: 2025-04-02							
Mercury, total	0.00236	0.000010 mg/L		0.00250	94	80-120			