KALA GEOSCIENCES LTD.
Groundwater ▪ Wastewater ▪ Environmental
Association of Professional Engineers and Geoscientists of British Columbia Permit No. 1000916

Date: June 27, 2025
Kala Ref.: L25050

1367410 BC Ltd.
Attn: [redacted]

Via Email: [redacted] (k4venturesltd@gmail.com)
Cc: Dave Cunliffe (davecunliffe@cablelan.net)

Attn: Dave Cunliffe, P.Eng.
Project Manager

Re: **COLUMBIA SHUSWAP REGIONAL DISTRICT**
HYDROGEOLOGICAL ASSESSMENT
PID'S 002-212-838, 002-212-234 AND 002-212-498
3860, 3862 AND 3868 SQUILAX ANGLEMONT ROAD, SCOTCH CREEK, BC
REVISED REPORT OF FINDINGS

1.0 INTRODUCTION AND BACKGROUND

Kala Geosciences Ltd., ("Kala") was retained by Mr. Dave Cunliffe to undertake a hydrogeological assessment on behalf of 1367410 BC Ltd. (the "Client") pertinent to a proposed development located at 3860, 3862 and 3868 Squilax Anglemont Road (the "Subject Property"), Scotch Creek, BC. The Client proposes a subdivision including the creation of Lot A (mixed use) and Lot B (R2 Residential) within 3860 Squilax Anglemont Road, four (4) residential units and commercial space on 3862 Squilax Anglemont Road, and eight (8) dwelling units and commercial space on 3868 Squilax-Anglemont Road, Scotch Creek, BC. The objectives of this hydrogeological assessment are to verify the long-term reliability of the water supply for the proposed developments; evaluate the impacts of water supply on other water supplies and properties within a radius of 250 m; and review the proposed method of sewage disposal and potential impacts to groundwater.

The Subject Property is located at Scotch Creek, BC, near the center of the Scotch Creek alluvial fan. There is an existing well within Lot B of 3860 Squilax Anglemont Road with a well tag number (WTN) of WTN36448. This project is to conduct a pumping test within WTN36448 to investigate the long-term reliability of water supply at the Subject Property and impacts of water supply on water wells at neighbouring properties. To review wastewater disposal, auger holes, permeameter tests and percolation tests were advanced and performed via this project.

WTN36448 is a 114 mm diameter by 17.7 m deep well located within proposed Lot B of 3860 Squilax Anglemont Road. It was constructed by Stewart Drilling Ltd. on May 21, 1976.[1] It has a driller's rating of 0.95 L/s or 82,080 L/d (Appendix A). WTN36448 is completed in a sand and gravel aquifer with a 35 slot size screen installed between 16.15 and 17.68 m. WTN36448 has a stick up of 0.84 m based on Kala April 30, 2025 field measurement, meeting the requirement of 0.3 m under current BC Groundwater Protection Regulation (GWPR).[2] Driller's log is included in Appendix A.

2.0 FIELDWORK

A 270-minute pumping test was completed by Kala personnel on April 30, 2025 discharging at 64.3 L/min (17 US gallon per minutes, USgpm). A total of 17,360 liters of water was removed during the pumping test (Appendix B). Groundwater samples were collected using laboratory prepared glassware and shipped to CARO Analytical Services Ltd. (CARO) for potable parameters in a sealed cooler via same-day courier. Certificates of analytical chemistry were included in Appendix C.

Eight (8) auger holes (AHs) were advanced within the Subject Property on April 30, 2025. Eight (8) permeameter tests were performed at each of the eight (8) AHs at depths of 0.6 m below ground surface (mbgs) to 0.75 mbgs. Four (4) percolation tests were performed at the Subject Property at four (4) locations at depth of 0.5 mbgs to 0.6 mbgs.

Subject Property location and water well location diagrams are shown in Figures 1 and 2, respectively. Permeameter test and percolation test locations are provided in Figure 3.

3.0 FINDINGS

3.1 Long-term Reliability of Groundwater Supply

WTN36448 was pumping tested at 64.3 L/minutes (1.07 L/s) for 270 minutes on April 30, 2025 and generated a drawdown of only 0.09 m (Appendix B), which is minor. The 0.09 m drawdown accounts for only 1.9% of the total available drawdown (TAD), which is the distance from static water level (12.17 mbtoc or 11.33 mbgs) to the top of screen (16.15 mbgs). WTN36448 has a long-term yield of significantly larger than the testing rate of 64.3 L/min. Based on the pumping data, WTN36448 has a recharge rate of 92,500 liters of water per day.

Water samples were collected from WTN36448 near the end of pumping test. Groundwater from WTN36448 meets the Summary of Guidelines for Canadian Drinking Water Quality – 2024 (SGCDWQ-2024) for those parameters tested for with the exception of total coliforms (1 CFU/100 mL).[3] Groundwater from WTN36448 does not meet the SGCDWQ-2024 standards but is treatable.

Drawdown is 0.02 m per cycle during the April 30, 2025 pumping test. Using the Cooper-Jacob method, aquifer transmissivity (T) is calculated at:[4]

$$T = \frac{0.183Q}{\Delta s} = \frac{0.183 \times 1.07 L/s \times 86{,}400 s/d \;/\; 1{,}000\ L/m^3}{0.02\ m} = 846\ m^2/d$$

Groundwater flow may be estimated using the following Darcy' equation:

$$Q=TIL \quad (1)$$

Where: Q is flowrate (m^3/d)
T is transmissivity (m^2/d)
I is the flow gradient (0.009)
L is the width of aquifer cross section (3,020 m)

Aquifer recharge is thus 846 m^2/d × 0.009 × 3,020 m = 23,000 m^3/d or 266 L/s.

Groundwater level at provincial groundwater observation well OBS365 at Scotch Creek is plotted in Figure 4. Figure 4 indicates that existing groundwater withdrawal at Scotch Creek alluvial fan is sustainable since no groundwater decline trending occurred to date yet.

The proposed development is mini storage with a single washroom at 3860, four (4) dwelling units and commercial space at 3862 and eight (8) dwelling units and commercial space at 3868 Squilax Anglemont Road. The required water supply is likely in the order of 2,000 L/day at 3860, 8,000 L/day at 3862 and 16,000 L/day at 3868 Squilax Anglemont Road, total at 26,000 L/day or 0.30 L/s based on CSRD Bylaw 680.[5] Comparing to the aquifer recharge of 266 L/s, this required 0.30 L/s (26,000 L/day) of water supply is minimal and is sustainable.

The testing well WTN36448 is constructed in 1976 and approaching its lifespan. The Subject Property is located near the center of the Scotch Creek alluvial fan. Aquifer is expected to be relatively homogeneous. New water well construction will not be challenging. Therefore, long-term reliability of water supply is excellent at the Subject Property. It is recommended that new wells be constructed to a depth of greater than 24 m.

3.2 Impacts of Groundwater Withdrawal on Neighbouring Properties

During the WTN36448 pumping test, WTN76359, which are located approximately 106 m away from WTN36448, is monitored for drawdown interference (DI). DI at the end of the pumping test is zero at WTN76359. Therefore, pumping at the Subject Property at the required rate of 0.30 L/s will have an influence radius of less than 100 m. In addition, the drawdown will be minimal at the pumping well, which has been demonstrated by the 0.09 m drawdown at testing well WTN36448 discharging at 1.07 L/s.

Groundwater withdrawal for the proposed development at the Subject Property will not deplete the aquifer owing to large aquifer recharge. It will not impact or have a minimal impact on water wells at neighbouring properties as demonstrated by the April 30, 2025 pumping test.

3.3 Sewage Disposal at the Subject Property

Wastewater land treatment is a process that uses the natural soil and plant environment to treat wastewater. It has been successfully used for over a century in rural area. It involves applying wastewater to the land surface, where physical, chemical, and biological processes within the soil-plant-water matrix break down pollutants.

Permeameter tests suggest that the average field saturated conductivity of onsite soils is in the order of 2,000 mm/d between a depth of 0.6 m and 0.75 m. Percolation tests suggest a percolation rate of 3 to 10 minutes/25 mm. Field saturated conductivities and percolation rates suggest that the onsite soils are sandy loams to sand.

For wastewater disposal using to ground technique, the land must have no restrictive layer within 1.50 M of infiltration surface to influence effluent downwards movement.[6] In addition, high-water table (HWT) must be below 1.5 m of ground surface to prevent direct interactions between effluent and groundwater from occurring. Available drilling records suggest that there is no restrictive layer such as hardpan, clay, or bedrock within 5 m of ground surface. Groundwater depth is 12.17 mbtoc or 11.33 mbgs on April 30, 2025. Groundwater fluctuation is approximately 0.6 m at Scotch Creek, BC according to provincial observation well OBS365 (Figure 4). Therefore, groundwater depth will be greater than 10.5 m at all time, which is significantly larger than the required vertical separation of 1.5 m. Direct interactions between effluent and groundwater will never occur at the Subject Property. Soil and groundwater conditions are suitable for wastewater disposal. Therefore, sewage disposal at the Subject Property will have no detrimental impacts on groundwater.

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) A 270-minute pumping test has been conducted within the existing well WTN36448 on April 30, 2025 discharging at 1.07 L/s (17 USgpm) to investigate well productivity and impacts on neighbouring wells;

b) Eight (8) permeameter tests and four (4) percolation tests were performed within the Subject Property on April 30, 2025 to investigate the soil and groundwater conditions for sewage disposal considerations;

c) Pumping at WTN36448 generated a drawdown of only 0.09 m at the end of the pumping test. Pumping at a rate for the proposed development will generate a drawdown of less than 0.09 m;

d) The long-term reliability of water supply using groundwater for the proposed development at 3860, 3862 and 3868 Squilax Anglemont Road is excellent owing to large aquifer recharge rate;

e) Water supply at the Subject Property at the water requirement of the proposed development will not deplete the aquifer and will have no to minimal impacts on water wells in neighbouring properties; and

f) Soil and groundwater conditions within the Subject Property are suitable for wastewater disposal. Wastewater disposal at the Subject Property will have no detrimental impacts on groundwater.

6.0 CLOSURE

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 you have any questions regarding this letter report, please contact our office.

Sincerely,
Kala Geosciences Ltd.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA Dr. Y. YIN # 30602 GEOSCIENTIST

2025-06-26

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

Applied Science Technologists and Technicians of British Columbia 09915 PAUL BLACKETT ASCT

250625.

Per:
Paul J. Blackett, ASCT., ROWP, CESA
Project Manager

Distribution: 1 Copy – [redacted] Property Owner
1 Copy – D.S. Cunliffe P.Eng. Consulting Services
1 Copy – Kala Geosciences Ltd.

P:\2025\25050 - [redacted] co Dave Cunliffe, Scotch Creek, Groundwater Well Assessments\9. Reporting\RL25050 250627 AJN.docx

REFERENCES

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

1. BC Ministry of Environment and Climate Change Strategy. Water Resources Atlas.
2. BC Ministry of Environment, "Water Sustainability Act" Ground Water Protection Regulation. Includes amendments up to B.C. Reg. 253/2022, current to November 29, 2022.
3. Health Canada (HC), February 2024, "Summary of Guidelines for Canadian Drinking Water Quality (SGCDWQ)".
4. Dawson, Karen J. and Jonathan D. Istok, 1991. Aquifer Testing - Design and Analysis of Pumping and Slug Tests. Lewis Publishers. ISBN 0-87371-501-2
5. Columbia Shuswap Regional District, February 15, 2024. Subdivision Servicing Bylaw No. 680.
6. BC Ministry of Health, September 2014. Sewerage System Standard Practice Manual, Version 3.

Standard of Care

This study and report has been prepared in accordance with generally accepted hydrogeological and environmental practices. Where possible and applicable Kala has referenced and undertaken authorized commissions in accordance with governing regulatory guidelines. No other warranty, expressed or implied, is provided.

Limitation of Liability

Notwithstanding any other provision of this Report/Service, the total liability of Kala, its officers, directors and employees for liabilities, claims, judgments, demands and causes of action arising under or related to this Report/Service, whether based in contract or tort, shall be limited to the total compensation actually paid to Kala for the services. All claims by the Client shall be deemed relinquished unless filed within one (1) year after substantial completion of the services. In addition, Kala shall not be liable for consequential, incidental, or indirect damages as a result of the use of this report.

Reporting

This report has been prepared for the specific site, design objective, development and purpose that was described to Kala by the Client and summarized in the report of findings. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the report are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Kala, unless Kala was specifically requested by the Client to review and revise the report in light of such alteration or variation. Recommendations from Kala to the Client pertinent to additional and follow up site inspections are mandatory.

Preliminary Site Investigations & Environmental Site Assessments

This section pertains to the completion of Kala reports pertinent to Preliminary Site Investigations (PSIs), Detailed Site Investigations (DSIs), and Environmental Site Assessments (ESAs) as defined by the BC Ministry of Environmental Contaminated Sites Regulation, and Environmental Site Assessments (ESA) as defined by CSA Standard Z768-01 (R2016) - Phase I Environmental Site Assessment

This report authorizes the use of this Kala report by the Client as named herein, its solicitors, lenders, engineers and consultants to the same extent as the Client, and confirms that the Client can rely on this report for financial purposes. This report may be relied upon by the supporting financial institutions and related solicitors, lenders, engineers and consultants to the same extent as the original Client. Reporting is confidential and intended to provide the Client with a baseline assessment of environmental conditions within and adjacent to the subject property as previously defined. Reporting is based on data, information and materials collected during the performance of a (PSI)/(ESA). A PSI or ESA is based solely on site conditions of the subject property during the time of the site visits as described in this report. In evaluating a site, Kala relies in good faith on historical information provided by individuals and agencies noted within the report.

Kala does not warranty any property, explicitly or implicitly. Although every effort is made to verify the authenticity of pertinent information, Kala assumes no responsibility for any deficiency, misstatement or inaccuracy contained within a report as a result of omissions, misrepresentation or fraudulent acts of the individuals or parties interviewed. Kala generally deems a Stage 1 or 2 PSI, or a Phase 1 or 2 ESA to be valid for a particular site for no more than 5 years from the published date of issue. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to Kala. If new information about the environmental conditions at the site is found, the information should be provided to Kala so that it can be reviewed and revisions to the conclusions and/or recommendations can be made, if warranted.

The conclusions presented in this report were based, in part, on visual observations of the site and structures. Our conclusions cannot be and are not extended to include those portions of the site or structures which were not reasonably available, in Kala's opinion, for direct observation. The environmental conditions at the site were assessed within the limitations set forth here within. A review of compliance by past owners or occupants of the site with any applicable local, provincial or federal by-laws, orders-in-council, legislative enactments and regulations was not performed. Where testing was performed, it was carried out in accordance with the terms of our contract providing for testing. Other substances or different quantities of substances tested for, may be present on site and may be revealed to be different if other testing not provided for in our contract is completed. Because of the limitations referred to above, different environmental conditions from those stated in Kala's report may exist. Should such different conditions be encountered, Kala must be notified in order that it may determine if modifications to the conclusions in the report are necessary. Provided that the report is still reliable, and less than 12 months old, Kala will issue a third-party reliance letter to such parties the Client identifies in writing, upon payment of the current fee for such letters. All third parties relying on Kala's report by such reliance agree to be bound by our proposal and Kala's standard reliance letter. Kala's standard reliance letter indicates that in no event shall Kala be liable for any damages, howsoever arising, relating to third-party use of Kala's report.

Groundwater Potential Evaluations and Proof of Sufficient Water Investigations

Groundwater potential evaluations are based on a review of maps, databases and published documents available at the time of the assessment, and a site reconnaissance. The conclusions provided by Kala do not preclude the existence of other aquifers from those identified. A groundwater supply investigation involving test wells and evaluation techniques is required to verify the presence or absence of suspected aquifers. If additional information or assessment findings arise which may alter the conclusions and/or recommendations of this report Kala would be pleased to review and append our report where required.

Proof of water assessments are based on pumping test information provided by others and interpreted by Kala unless otherwise noted. Groundwater sourced from fractured bedrock aquifers is dependent on the density and aperture of randomly and structurally oriented fractures and joints. Kala cannot warranty the long term viability of domestic water wells completed within fractured bedrock. Water well maintenance is required on a regular basis to sustain long term yields.

Kala proof of water evaluations are valid for the time of year and site conditions noted. The impacts of neighboring water wells on the pumping well or the later alteration of site conditions to include additional water wells has not been determined. While every effort is made to establish a recommended pumping rate for a subject water well based on the data provided, the Client or well owner is responsible for monitoring long term well water to verify an aquifers response to pumping and maintain the well such that well bore deterioration does not impact well performance.

Kala recommends the construction, development and use of drilled wells over and above excavated wells where ever possible. Dug wells generally comprise shallow culvert style excavations which are directly under the influence of surface water owing to depth and proximity to surface water recharge. Dug wells, unlike deeper drilled wells, are more sensitive to fluctuations in total available drawdown which impacts the quantity of water available. Seasonal fluctuations in water level especially during drought periods can have pronounced impact on dug wells. Dug wells are not developed to a silt and sand free condition as deeper drilled wells completed in unconsolidated formations are; rather, dug wells rely on the filtering capacity of the surrounding envelope of drain rock to improve water quality. Both the quality and quantity of water sourced from dug wells is more sensitive to surface and local watershed changes.

Report Use

The information and opinions expressed in the report, or any document forming part of the report are for the sole benefit of the client and their approved users. No other party may use, lend, sell or otherwise make available the report or any portion thereof, to any other party without the permission of Kala. Any use of the report, or any portion of the report, by a third party are the sole responsibility of such third party. Kala is not responsible for damages suffered by any third party resulting from unauthorized use of the report.

Third Party Report Use

The information provided within this report is for the exclusive use of the Client/owner and their authorized users and agents. Third party use of this report or any reliance or decisions made on the subject information herein, is at the sole risk of the third party. Kala has no obligation, contractual or otherwise to any third persons or parties, using or relying on this information for any reason and therefore accepts no responsibility for damages incurred by a third party as a result of actions taken or decisions made on the basis of the subject information.

Complete Report

The report is not intended to stand alone without reference to the instructions given to Kala by the Client, communications between Kala and the Client, and to any other reports prepared by Kala for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in the report, reference must be made to the whole of the report. Kala cannot be responsible for use by any party of portions of the report without reference to the whole report.

Interpretation of the Report

(a) *Nature and Exactness of Soil Description:* Classification and identification of soils, rocks and geologic units have been based upon commonly accepted methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from these systems have been used, they are specifically mentioned. Classification and identification of the type and condition of soils, rocks and geologic units are judgmental in nature. Accordingly, Kala cannot warrant or guarantee the exactness of the description of insitu ground conditions set forth in the report.

(b) *Logs of Test Holes, Pits, Trenches etc.:* The test hole logs are a record of information obtained from field observations and laboratory testing of selected samples as well as an interpretation of the likely subsurface stratigraphy at the test hole sites. In some instances normal sampling procedures do not recover a complete sample. Soil, rock or geologic zones have been interpreted from the available data. The change from one zone to another, indicated on the logs as a distinct line, may be transitional. The same limitations apply to test pit and other logs.

(c) *Stratigraphic and Geologic Sections:* The stratigraphic and geologic sections indicated on drawings contained in this report are interpreted from logs of test holes, test pits or other available information. Stratigraphy is inferred only at the locations of the test holes or pits to the extent indicated by items (a) and (b) above. The actual geology and stratigraphy, particularly between these locations, may vary considerably from that shown on the drawings. Since natural variations in geologic conditions are inherent and a function of the historic site environment, Kala does not represent or warrant that the conditions illustrated are exact and the user of the report should recognize that variations may exist.

(d) *Groundwater Conditions:* Groundwater conditions shown on logs of test holes and test pits, and/or given within the text of this report, record the observed conditions at the time of their measurement. Groundwater conditions may vary between test hole and test pit locations and can be affected by annual, seasonal and special meteorological conditions, or by tidal conditions for sites near the seas. Groundwater conditions can also be altered by construction activities. These types of variations need to be considered in design and construction.

Samples

Kala normally disposes of all unused soil, rock, and sediment or water samples after 90 days of completing the testing program for which the samples were obtained. Further storage or transfer of samples can be made at the owner’s expense upon written request.

Alternate Report Format

When Kala submits both electronic file and hard copies of reports, drawings and other documents and deliverables, the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by Kala shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancy, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by Kala shall be deemed to be the overall original for the project.

The Client agrees that both electronic file and hard copy versions shall not, under any circumstances, no matter who owns or uses them, be altered by any party except Kala. The Client warrants that Kala's report will be used only and exactly as submitted by Kala.

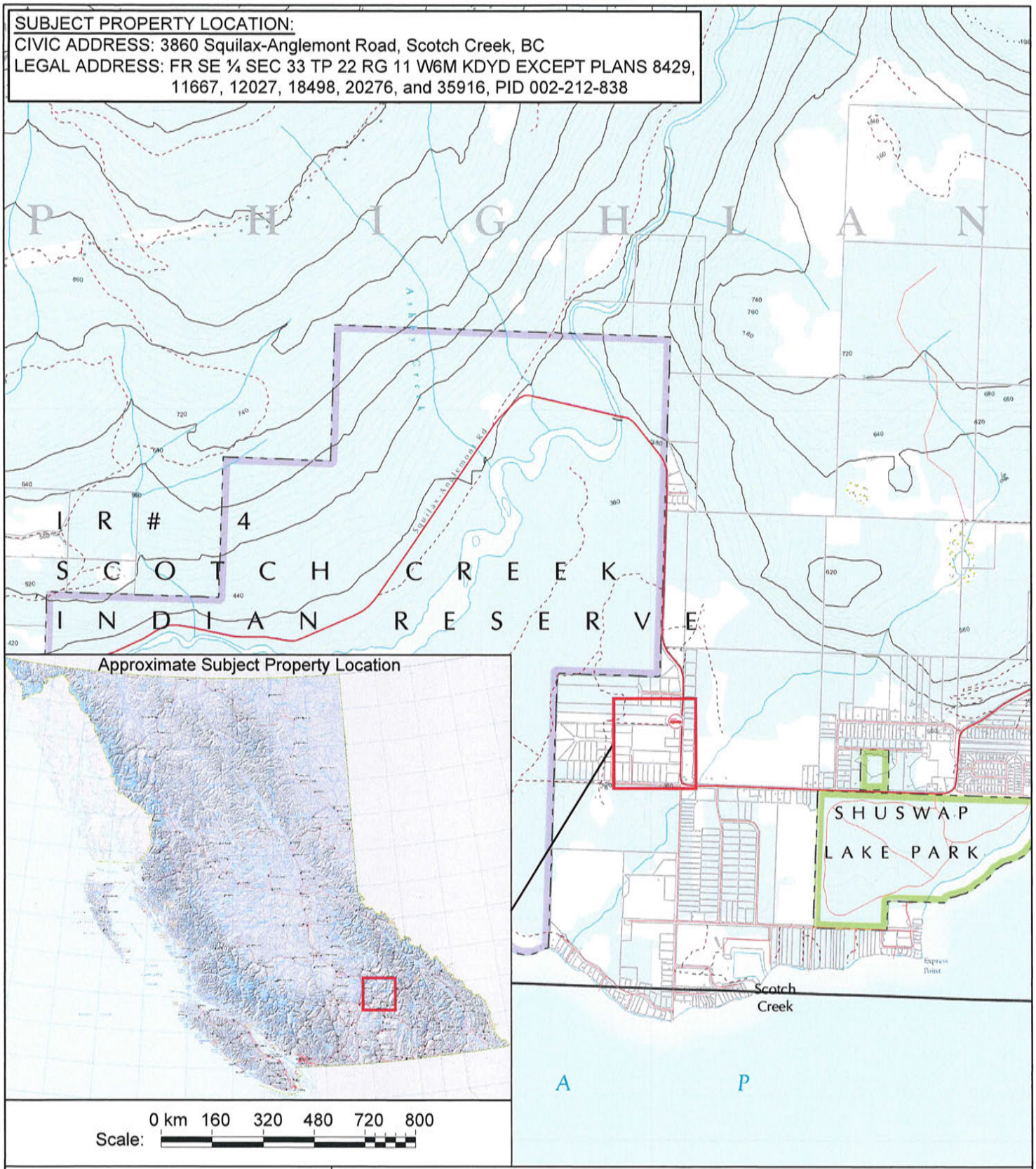
The Client recognizes and agrees that electronic files submitted by Kala have been prepared and submitted using specific software and hardware systems. Kala makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

FIGURES

APPENDICES

FIGURES

SUBJECT PROPERTY LOCATION:
CIVIC ADDRESS: 3860 Squilax-Anglemont Road, Scotch Creek, BC
LEGAL ADDRESS: FR SE ¼ SEC 33 TP 22 RG 11 W6M KDYD EXCEPT PLANS 8429, 11667, 12027, 18498, 20276, and 35916, PID 002-212-838



Scale: 0 km 160 320 480 720 800

KALA GEOSCIENCES LTD.
Groundwater • Wastewater • Environmental

Legend:
Approximate Subject Property Location

Drawing References:
Province of British Columbia

Scale: 0 m 300 600 900 1200 1500

Project #:	25050
Figure #:	1
Drawing #:	25050.1
Design By:	YY
Drawing By:	JB
Rev'd By:	YY
Date:	May 2025

Client: Dave Cunliffe
Project: Proof of Water
3860 Squilax-Anglemont Road
Scotch Creek, BC

Title: Subject Property Location Diagram

KALA GEOSCIENCES LTD.
Groundwater • Wastewater • Environmental

Legend:
Subject Property Line
Water Well

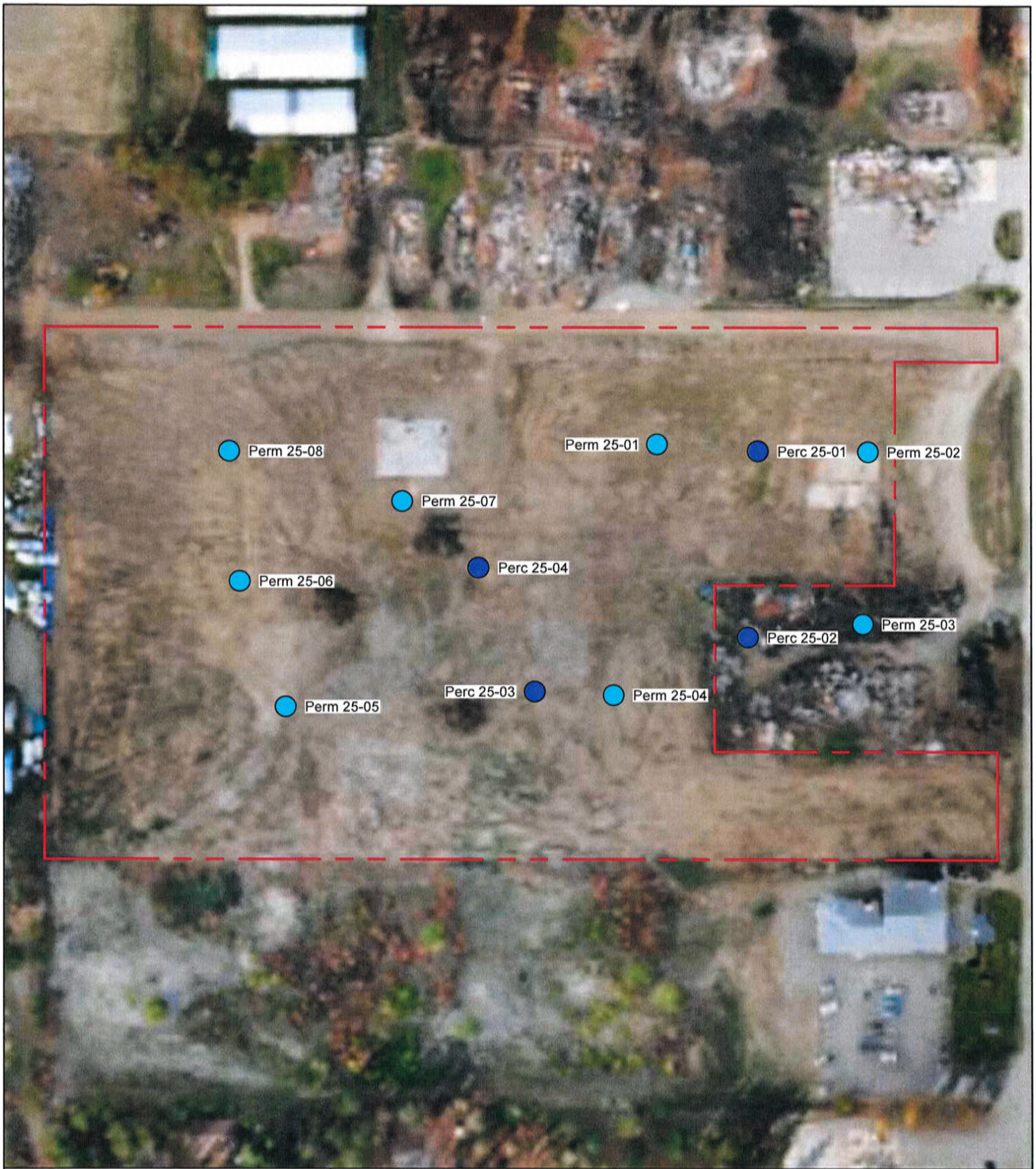
Drawing References:
Columbia Shuswap Regional District

Scale:
0 m 20 40 60 80 100

Project #:	25050
Figure #:	2
Drawing #:	25050.2
Design By:	YY
Drawing By:	JB
Rev'd By:	YY
Date:	May 2025

Client: Dave Cunliffe
Project: Proof of Water
3860 Squilax-Anglemont Road
Scotch Creek, BC

Title: Water Well Location Diagram



KALA GEOSCIENCES LTD.
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Legend:
- Subject Property Line
- Permeameter Test
- Percolation Test

Drawing References:
Columbia Shuswap Regional District

Scale:
0 m 15 30 45 60 75

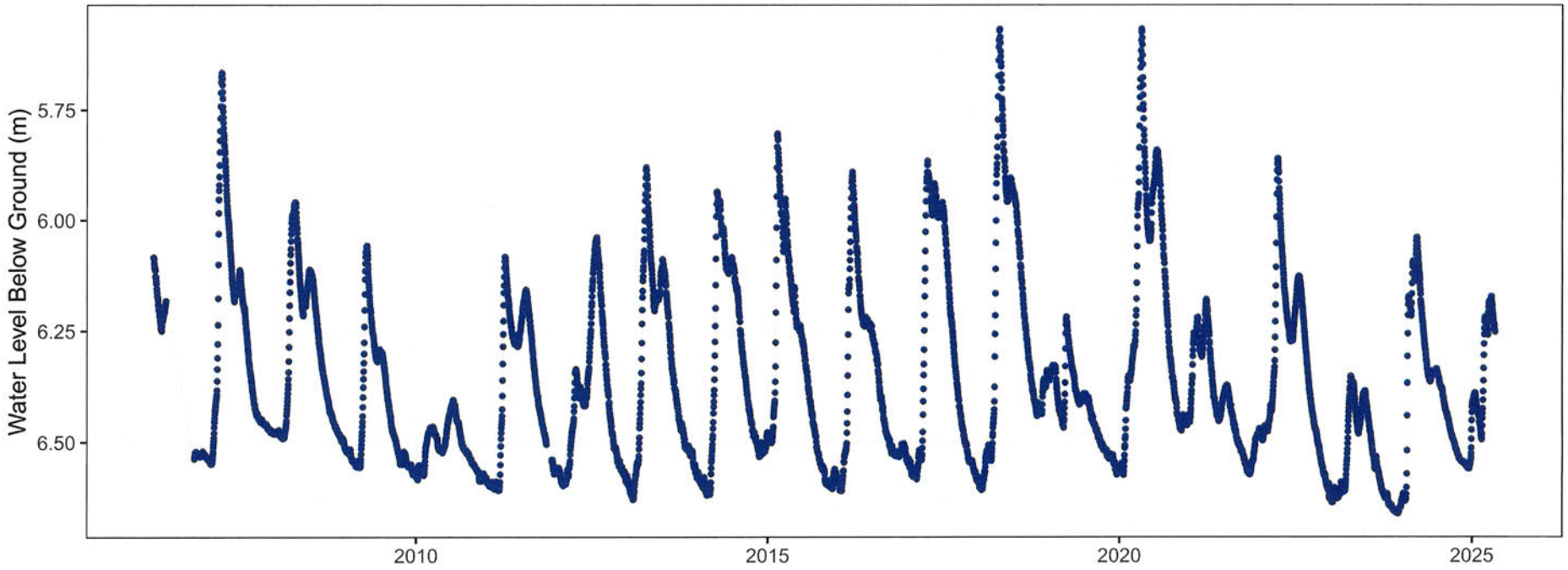
Project #:	25050
Figure #:	3
Drawing #:	25050.3
Design By:	YY
Drawing By:	JB
Rev'd By:	
Date:	Jun 2025

Client: Dave Cunliffe
Project: Proof of Water
3860 Squilax-Anglemont Road
Scotch Creek, BC

Title: Permeameter Test and Percolation Test Location Diagram

OBS WELL 365

Water Level Snapshot



Note: True data are marked with a dot, the thin line connecting points is a visual aid only and does not represent true observations.
The full data set can be downloaded via the BC Data Catalogue or the BC Real-time Water Data tool.

BRITISH COLUMBIA

KALA GEOSCIENCES LTD. Groundwater • Wastewater • Environmental Drawing Reference: Province of British Columbia Scale: N/A	Legend:	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 #: 25050 Figure: 1 Drawing #: 25050.1 Design By: YY Drawing By: JB Rev'd By: YY Date: Jun 2025	Client: Dave Cunliffe Project: Proof of Water 3860 Squilax-Anglemont Road Scotch Creek, BC Title: Long-Term Groundwater Level at OBS365

APPENDICES

APPENDIX A

Driller’s Well Log

Stewart Drilling Ltd.

BOX 302 — SALMON ARM, B.C.

Date MAY 31/76

Owner's Name [redacted]

Address [redacted]

Location SPOTTH CREEK (Adjacent to Co-op)

Hole # ONE

0 - 35	Rock & Gravel
35 - 50	and some Rock

Total Depth 58 Ft.

Casing Size 4½" Type black Set From 0 - 53 To

Screen 53 Length 5 Ft. Slot 35

Set [redacted] From 53 To 58

Static Water Level

Pump Tested 15 GPM Draw Down

Recommended Pumping Rate - 5 - 15

Pump Set at 50 FGL Ft.

E Logged File # 4706

Total Cost of Well $

Received Cash Paid in full $

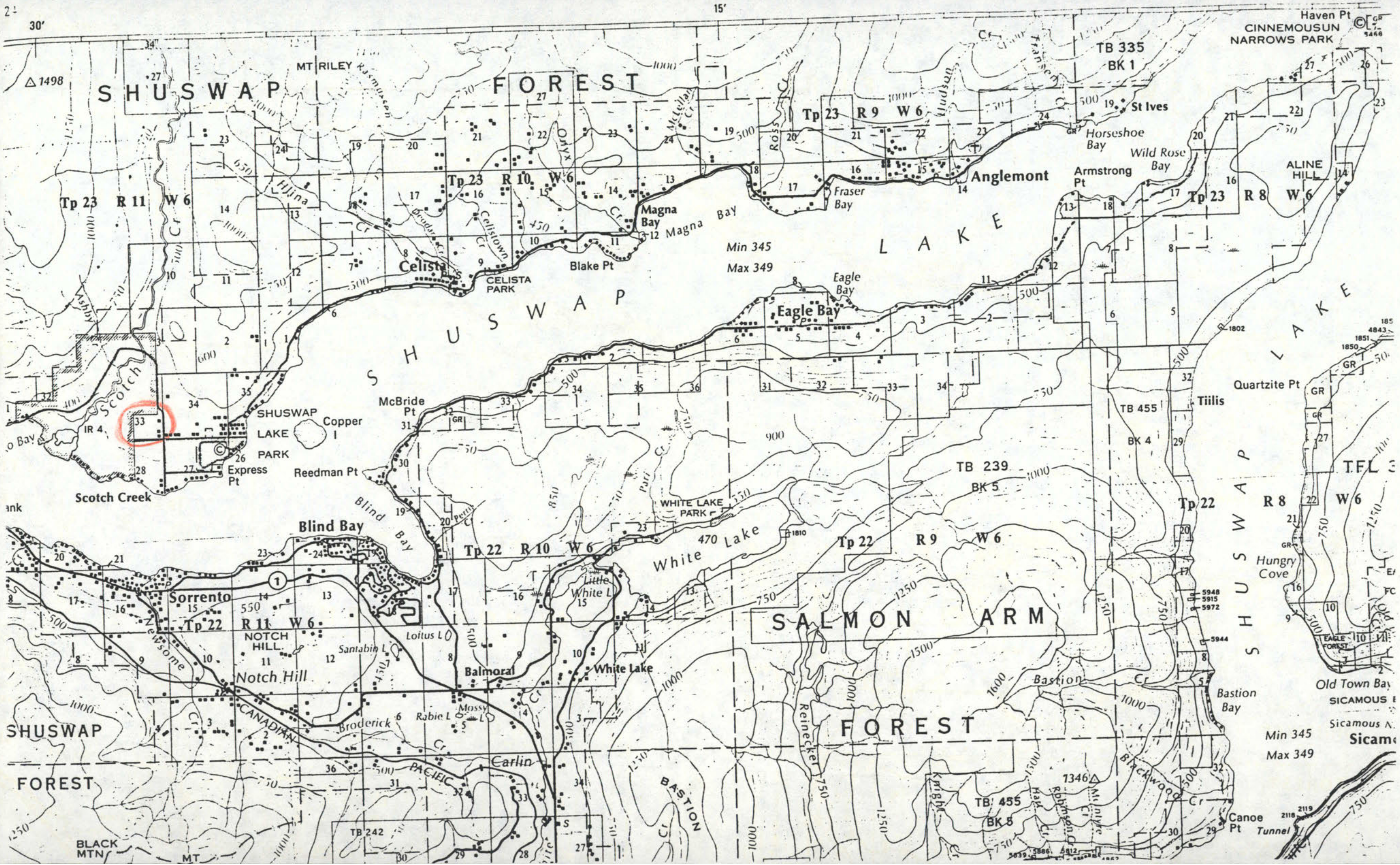
Balance $

[redacted]

Owner's Signature

STEWART DRILLING LTD.

Per



SHUSWAP FOREST
MT RILEY
Tp 23 R 11 W 6
Tp 23 R 10 W 6
Tp 23 R 9 W 6
Tp 23 R 8 W 6
TB 335
BK 1
Haven Pt
CINNEMOUSUN NARROWS PARK
St Ives
Horseshoe Bay
Wild Rose Bay
Armstrong Pt
Anglemont
Fraser Bay
ALINE HILL
Magna Bay
Celista
CELISTA PARK
Blake Pt
Min 345
Max 349
Eagle Bay
SHUSWAP LAKE
Scotch Cr
IR 4
Scotch Creek
SHUSWAP LAKE PARK
Copper I
Express Pt
Reedman Pt
McBride Pt
Blind Bay
Quartzite Pt
Tiilis
TB 455
BK 4
TB 239
BK 5
TFL
Tp 22 R 8 W 6
Tp 22 R 9 W 6
Tp 22 R 10 W 6
Tp 22 R 11 W 6
WHITE LAKE PARK
White Lake
Little White L
Hungry Cove
Sorrento
NOTCH HILL
Notch Hill
Santabin L
Loitus L
Balmoral
White Lake
SALMON ARM FOREST
Bastion Cr
Bastion Bay
Old Town Bay
SICAMOUS
Sicamous
Canoe Pt
Tunnel
Broderick Cr
Rabie L
Mossy L
Carlin
CANADIAN PACIFIC
Newsome Cr
BASTION
Reinecker
Blackwood Cr
TB 455
BK 8
TB 242
SHUSWAP FOREST
BLACK MTN

No. 4

PLAN 8598

2 | 3 | 4 | 5

PLAN 8598

6

SEC. 33

SEC. 34, TP. 22, R. II

82 L/4.E · 18 19 · 22 · 23

1" = 400'

2 PLAN 8429

8 | 7 | 6 | 5 | 4 | 3 | 2 PLAN | 1

9795

1 PLAN 8429

1 PLAN 12027 2

1 PLAN 11667

2

SEC. 33, TP. 22, R. II

6 P.

1 P. | 2 19020 | 3 | 1 P. | 20276

3 P. | 2 | 1 30305 | A P. 23830 | 20276 3 | 4 | 5 Coop | 4 P. 19020

SEC. 28, TP. 22, R. II

C P. 18038 | 3 P. 27626

D P. 18038

TP. 22, R. II

082L.093.2.1.X4 WTN 36448 TP 22 Rg 11 Sec. 33 77

WATER WELL RECORD

DEPT. OF ENVIRONMENT, WATER RESOURCES SERVICE, WATER INVESTIGATIONS BRANCH VICTORIA, BRITISH COLUMBIA

Z WELL NO. 24

E

N

LEGAL DESCRIPTION: LOT 6 SEC. 33 TP. 22 R. 11 D.L. ____ MERG LAND DISTRICT 25 KAMLOOPS PLAN 20276

DESCRIPTIVE LOCATION BESIDE SCOTCH CREEK CO-OP LICENCE NO. ____ DATE ____

Tp 22 Rge 11 Sec 33 No. 7
Z X Y NO.

OWNER'S NAME [redacted] ADDRESS [redacted]

DRILLER'S NAME STEWART DRILLING (30) ADDRESS BOX 302, SALMON ARM DATE COMPLETED ____

NAT. TOPO. SHEET NO. MAP SHEET 42

DEPTH 58' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 4½" LENGTH 0-53'

METHOD OF CONSTRUCTION DRILLED CASING DIAM ____ LENGTH ____

SCREEN LOCATION 53'-58' SCREEN ☒ SIZE 35 slot LENGTH 5' TYPE SS.

SANITARY SEAL YES ☐ NO ☐ SCREEN ☐ SIZE ____ LENGTH ____ TYPE ____

PERFORATED CASING ☐ LENGTH ____ PERFORATIONS FROM ____ TO ____

GRAVEL PACK ☐ LENGTH ____ DIAM. ____ SIZE GRAVEL, ETC. ____

DISTANCE TO WATER ____ ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE ____

PRODUCTION TEST SUMMARY

DATE ____

TEST BY ____

BAIL TEST ☐ PUMP TEST ☒ DURATION OF TEST ____

RATE 15 GPM DRAWDOWN ____

WATER LEVEL AT COMPLETION OF TEST ____

AVAILABLE DRAWDOWN ____ SPECIFIC CAPACITY ____

PERMEABILITY ____ STORAGE COEFF. ____

TRANSMISSIVITY ____

RECOMMENDED PUMPING RATE 5-15 GPM

RECOMMENDED PUMP SETTING 50'

CHEMISTRY

TEST BY ____ DATE ____

TOTAL DISSOLVED SOLIDS ____ mg/l TEMPERATURE ____ °C pH ____ SILICA (SiO_2) ____ mg/l

CONDUCTANCE ____ μmhos/cm AT 25°C TOTAL IRON (Fe) ____ mg/l TOTAL HARDNESS ($CaCO_3$) ____ mg/l

TOTAL ALKALINITY ($CaCO_3$) ____ mg/l PHEN. ALKALINITY ($Ca\ CO_3$) ____ mg/l MANGANESE (Mn) ____ mg/l

COLOUR ____ ODOUR ____ TURBIDITY ____

ANIONS	mg/l	epm	CATIONS	mg/l	epm
CARBONATE (CO_3)			CALCIUM (Ca)		
BICARBONATE (HCO_3)			MAGNESIUM (Mg)		
SULPHATE (SO_4)			SODIUM (Na)		
CHLORIDE (Cl)			POTASSIUM (K)		
$NO_2 + NO_3$ (NITROGEN)			IRON (DISSOLVED)		
* TKN. (NITROGEN)					
PHOSPHORUS (P)					

* TKN = TOTAL KJELDAHL NITROGEN CHEMISTRY SITE NO. ____

NO_2 = NITRITE NO_3 = NITRATE

CHEMISTRY FIELD TESTS

TEST BY ____ DATE ____ EQUIPMENT USED ____

LITHOLOGY

FROM	TO	DESCRIPTION
0	35'	ROCK AND GRAVEL
35'	50'	SAND SOME ROCK
MER 77 BM 85		AA 20 JUR 789 AR. 10644.000 - LT 6 SEC 33 TP 22 RG 11 M6 PL 20276 LD 25 (5.00 Ac) LRO: KS120F MHP # AQ 3133

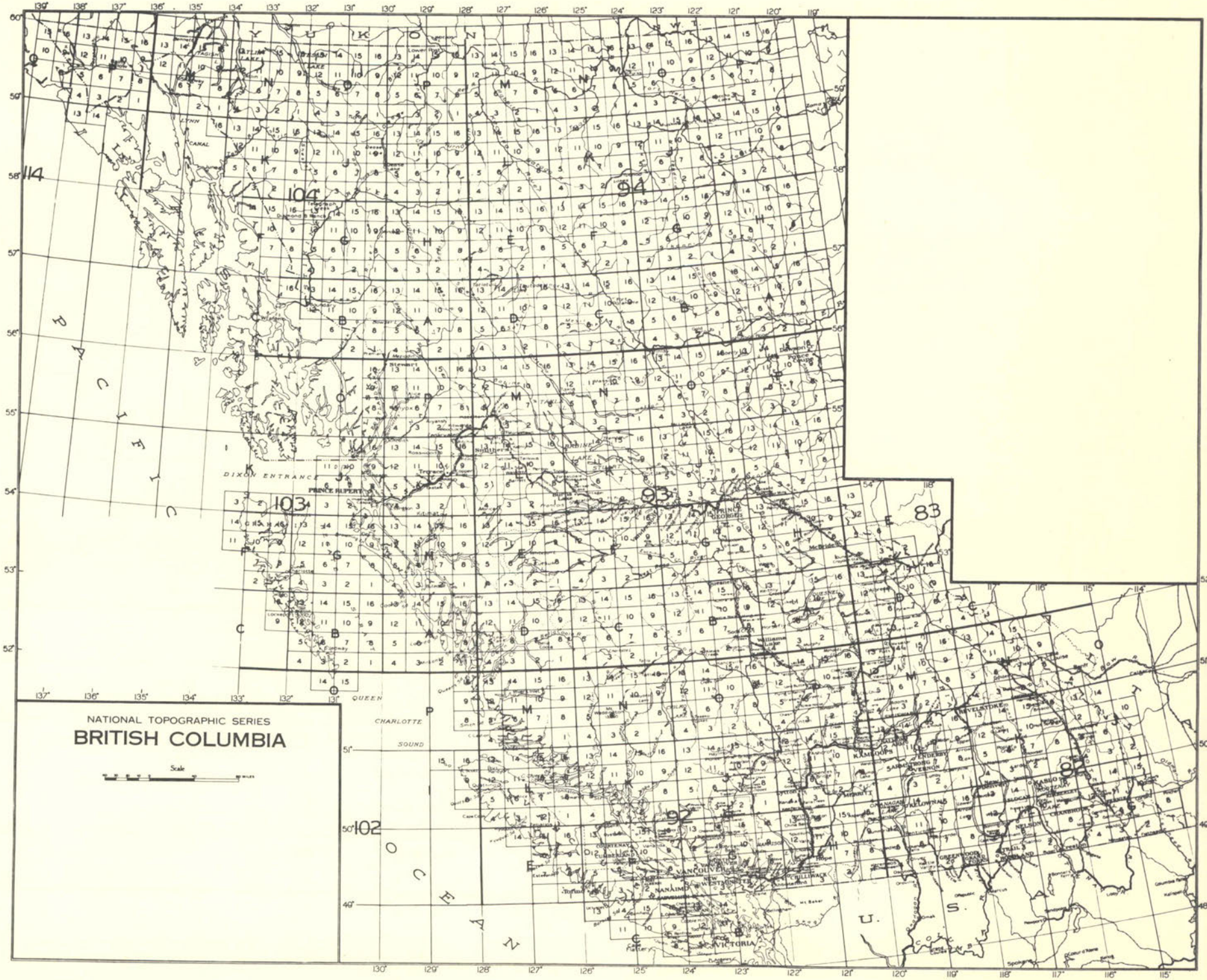
CONTENTS OF FOLDER

☒ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER AA. 20

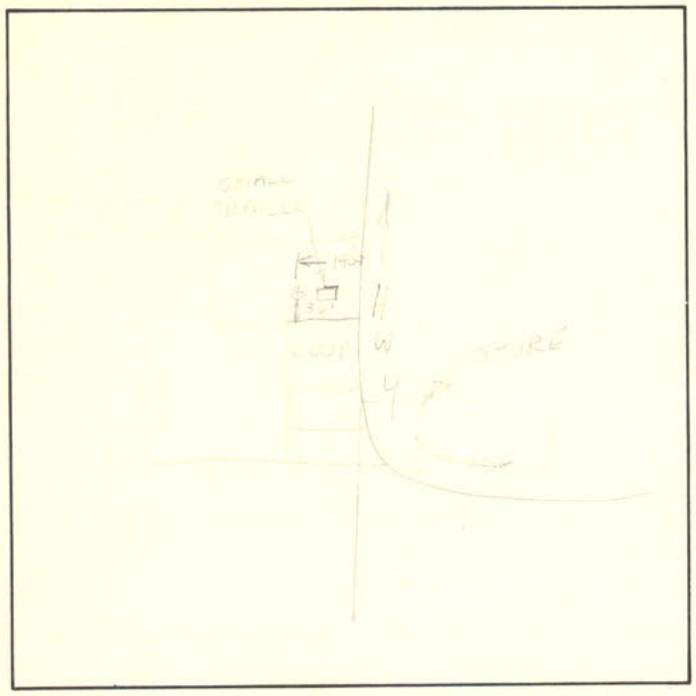
SOURCES OF INFORMATION DRILLER


NATIONAL TOPOGRAPHIC SERIES
BRITISH COLUMBIA
Scale
114
104
94
103
93
83
102
92
82
PACIFIC
OCEAN
DIXON ENTRANCE
PRINCE RUPERT
QUEEN CHARLOTTE SOUND
VANCOUVER
VICTORIA
NANAIMO
KAMLOOPS
PRINCE GEORGE
U.S.


LAND DISTRICTS
N.W.T.
YUKON
Atlin
Cassiar
Liard R.
PEACE RIVER
CASSIAR
Stikine R.
Finlay R.
Fort St. John
Peace R.
Dawson Creek
Parsnip R.
Stewart
Nass R.
Smithers
Babine Lake
Terrace
Skeena R.
Prince Rupert
COAST RANGE 5
Kitimat
PRINCE GEORGE
CARIBOO
Quesnel
COAST RANGE 4
COAST RANGE 3
Williams Lake
ALBERTA
Columbia R.
PACIFIC OCEAN
QUEEN CHARLOTTE
Queen Charlotte Sound
COAST RANGE 2
LILLOOET
Fraser R.
KAMLOOPS DIV. OF YALE
Thompson R.
Kamloops
OSOYOOS
Vernon
DIV. OF YALE
KOOTENAY
Kootenay Lake
Kootenay R.
Port Hardy
RUPERT
COAST RANGE 1
Kelowna
NEW WESTMINSTER
YALE
SIMILKAMEEN DIV. OF YALE
Penticton
Nelson
Cranbrook
Trail
VANCOUVER
DIV. OF YALE
NANAIMO
VICTORIA
50 0 50 100 150 Miles
LAND DISTRICTS IN THIS AREA NOT SHOWN DUE TO SMALL AREA OF MAP.

NORTH

WEST



EAST

SOUTH

SM JUN 78

CARD BY SM DATE JUN 78

ADDITIONAL DATA ADDED BY

REMARKS

20 789

[redacted]

10644.000

13467.000

LOT 6 PL 20276 SEC 33

TWP 22 RGE 11 MER 6

LD 25 RDY MHP

5.00 Ac

[redacted]

APPENDIX B

Definition of Terms
Yield 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)

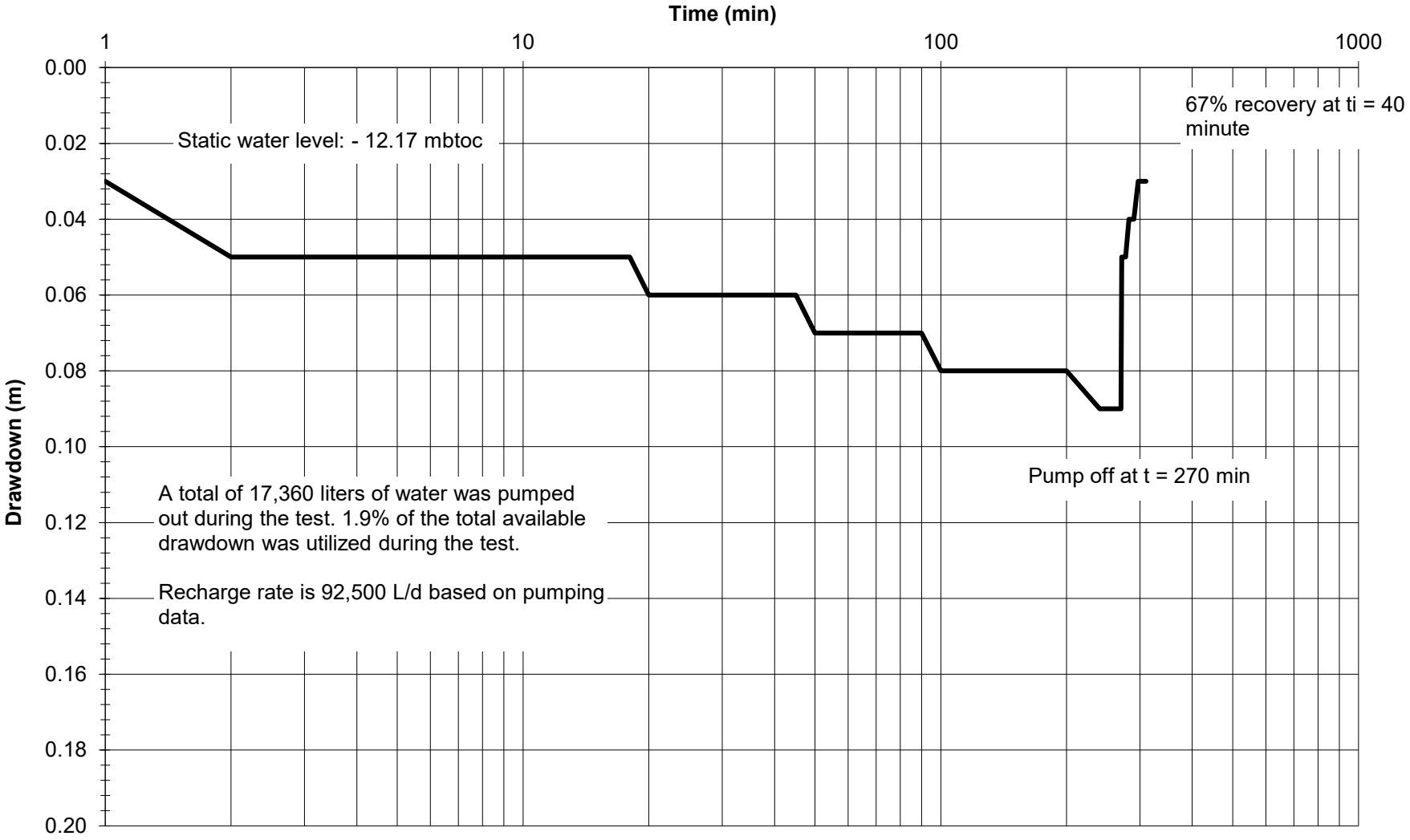
Storage Coefficient: volume of water released from aquifer storage over a unit decline in head.

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 - WTN36448 PUMPING TEST, 3860 SQUILAX-ANGLEMONT ROAD SCOTCH CREEK, BC (64.3 L/min April 30, 2025)



SUMMARY OF PUMPING TEST DATA
AT PUMPING WELL WTN36448 (April 30, 2025)

ELAPSED TIME	PUMPING TIME		RECOVERY TIME	ELAPSED TIME / RECOVERY TIME	Water Level	Drawdown	Discharge Rate	COMMENTS
[min]	[min]	[days]	[min]	[-]	[mbtoc]	[m]	[L/min]	
0	0	0.0000			12.17	0.00		SWL
1	1	0.0007			12.20	0.03	64.30	
2	2	0.0014			12.22	0.05	64.30	
3	3	0.0021			12.22	0.05	64.30	
4	4	0.0028			12.22	0.05	64.30	
5	5	0.0035			12.22	0.05	64.30	
6	6	0.0042			12.22	0.05	64.30	
7	7	0.0049			12.22	0.05	64.30	
8	8	0.0056			12.22	0.05	64.30	
9	9	0.0063			12.22	0.05	64.30	
10	10	0.0069			12.22	0.05	64.30	
12	12	0.0083			12.22	0.05	64.30	
14	14	0.0097			12.22	0.05	64.30	
16	16	0.0111			12.22	0.05	64.30	
18	18	0.0125			12.22	0.05	64.30	
20	20	0.0139			12.23	0.06	64.30	
25	25	0.0174			12.23	0.06	64.30	
30	30	0.0208			12.23	0.06	64.30	
35	35	0.0243			12.23	0.06	64.30	
40	40	0.0278			12.23	0.06	64.30	
45	45	0.0313			12.23	0.06	64.30	
50	50	0.0347			12.24	0.07	64.30	
60	60	0.0417			12.24	0.07	64.30	
70	70	0.0486			12.24	0.07	64.30	
80	80	0.0556			12.24	0.07	64.30	
90	90	0.0625			12.24	0.07	64.30	
100	100	0.0694			12.25	0.08	64.30	
120	120	0.0833			12.25	0.08	64.30	
140	140	0.0972			12.25	0.08	64.30	
160	160	0.1111			12.25	0.08	64.30	
180	180	0.1250			12.25	0.08	64.30	
200	200	0.1389			12.25	0.08	64.30	
240	240	0.1667			12.26	0.09	64.30	
270	270	0.1875			12.26	0.09	64.30	Pump off
271			1	271.0000	12.22	0.05		Recovery
272			2	136.0000	12.22	0.05		
273			3	91.0000	12.22	0.05		
274			4	68.5000	12.22	0.05		
275			5	55.0000	12.22	0.05		
276			6	46.0000	12.22	0.05		
277			7	39.5714	12.22	0.05		
282			12	23.5000	12.21	0.04		
284			14	20.2857	12.21	0.04		
288			18	16.0000	12.21	0.04		
290			20	14.5000	12.21	0.04		
297			27	11.0000	12.20	0.03		
300			30	10.0000	12.20	0.03		
305			35	8.7143	12.20	0.03		
310			40	7.7500	12.20	0.03		

NOTES

1. mbtoc = meters below top of casing.

SUMMARY OF DRAWDOWN
AT MONITORING WELL WTN76359 (April 30, 2025)

ELAPSED TIME [min]	PUMPING TIME [min]	RECOVERY TIME [min]	r = 106 m		COMMENTS
			Water Level [mbtoc]	Drawdown [m]	
0	0		11.16	0.00	SWL
5	5		11.16	0.00	
10	10		11.16	0.00	
15	15		11.16	0.00	
20	20		11.16	0.00	
25	25		11.16	0.00	
30	30		11.16	0.00	
35	35		11.16	0.00	
40	40		11.16	0.00	
50	50		11.16	0.00	
60	60		11.16	0.00	
80	80		11.16	0.00	
100	100		11.16	0.00	
120	120		11.16	0.00	
150	150		11.16	0.00	
180	180		11.16	0.00	
210	210		11.16	0.00	
240	240		11.16	0.00	
270	270		11.16	0.00	Pump off
275		5	11.16	0.00	Recovery
280		10	11.16	0.00	
285		15	11.16	0.00	
290		20	11.16	0.00	
300		30	11.16	0.00	
310		40	11.16	0.00	

NOTES

1. mbtoc = meters below top of casing.

APPENDIX C

Certificates of Analytical Chemistry

CERTIFICATE OF ANALYSIS

REPORTED TO	Kala Geosciences Ltd. 1314 M[redacted]Rd. Kamloops, BC V2C 6N6		
ATTENTION	General	**WORK ORDER**	25E0187
PO NUMBER	25050	**RECEIVED / TEMP**	2025-05-01 14:22 / 8.6°C
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40
PROJECT INFO	Kala Basic Domestic Potability	**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: N/A

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

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO Kala Geosciences Ltd.
PROJECT 25050 - [redacted] - K4 Adventures

WORK ORDER 25E0187
REPORTED 2025-05-08 15:40

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Win 36448 (25E0187-01) | Matrix: Drinking Water | Sampled: 2025-04-30 14:30						
Anions						
Chloride	**0.94**	AO ≤ 250	0.10	mg/L	2025-05-03	
Fluoride	< 0.10	MAC = 1.5	0.10	mg/L	2025-05-03	
Nitrate (as N)	**0.321**	MAC = 10	0.010	mg/L	2025-05-03	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2025-05-03	
Sulfate	**10.0**	AO ≤ 500	1.0	mg/L	2025-05-03	
Calculated Parameters						
Hardness, Dissolved (as CaCO3)	**174**	N/A	0.500	mg/L	N/A	
Nitrate+Nitrite (as N)	**0.321**	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	2025-05-06	
Antimony, dissolved	< 0.00020	N/A	0.00020	mg/L	2025-05-06	
Arsenic, dissolved	< 0.00050	N/A	0.00050	mg/L	2025-05-06	
Barium, dissolved	**0.0799**	N/A	0.0050	mg/L	2025-05-06	
Beryllium, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-05-06	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-05-06	
Boron, dissolved	< 0.0500	N/A	0.0500	mg/L	2025-05-06	
Cadmium, dissolved	< 0.000010	N/A	0.000010	mg/L	2025-05-06	
Calcium, dissolved	**58.4**	N/A	0.20	mg/L	2025-05-06	
Chromium, dissolved	**0.00061**	N/A	0.00050	mg/L	2025-05-06	
Cobalt, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-05-06	
Copper, dissolved	< 0.00040	N/A	0.00040	mg/L	2025-05-06	
Iron, dissolved	< 0.010	N/A	0.010	mg/L	2025-05-06	
Lead, dissolved	< 0.00020	N/A	0.00020	mg/L	2025-05-06	
Lithium, dissolved	**0.00174**	N/A	0.00010	mg/L	2025-05-06	
Magnesium, dissolved	**6.86**	N/A	0.010	mg/L	2025-05-06	
Manganese, dissolved	**0.00085**	N/A	0.00020	mg/L	2025-05-06	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2025-05-04	
Molybdenum, dissolved	**0.00046**	N/A	0.00010	mg/L	2025-05-06	
Nickel, dissolved	< 0.00040	N/A	0.00040	mg/L	2025-05-06	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2025-05-06	
Potassium, dissolved	**1.47**	N/A	0.10	mg/L	2025-05-06	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2025-05-06	
Silicon, dissolved	**5.5**	N/A	1.0	mg/L	2025-05-06	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2025-05-06	
Sodium, dissolved	**1.93**	N/A	0.10	mg/L	2025-05-06	
Strontium, dissolved	**0.346**	N/A	0.0010	mg/L	2025-05-06	
Sulfur, dissolved	**3.6**	N/A	3.0	mg/L	2025-05-06	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2025-05-06	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2025-05-06	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-05-06	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2025-05-06	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO Kala Geosciences Ltd.
PROJECT 25050 - [redacted] - K4 Adventures

WORK ORDER 25E0187
REPORTED 2025-05-08 15:40

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Win 36448 (25E0187-01) | Matrix: Drinking Water | Sampled: 2025-04-30 14:30, Continued						
Dissolved Metals, Continued						
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2025-05-06	
Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2025-05-06	
Uranium, dissolved	**0.000771**	N/A	0.000020	mg/L	2025-05-06	
Vanadium, dissolved	< 0.0050	N/A	0.0050	mg/L	2025-05-06	
Zinc, dissolved	< 0.0040	N/A	0.0040	mg/L	2025-05-06	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2025-05-06	
General Parameters						
Alkalinity, Total (as CaCO3)	**146**	N/A	1.0	mg/L	2025-05-03	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2025-05-03	
Alkalinity, Bicarbonate (as CaCO3)	**146**	N/A	1.0	mg/L	2025-05-03	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2025-05-03	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2025-05-03	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2025-05-05	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2025-05-02	
Conductivity (EC)	**323**	N/A	2.0	µS/cm	2025-05-03	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2025-05-06	
pH	**7.87**	7.0-10.5	0.10	pH units	2025-05-03	HT2
Solids, Total Dissolved	**200**	AO ≤ 500	15	mg/L	2025-05-02	
Turbidity	**0.18**	OG < 1	0.10	NTU	2025-05-03	
Microbiological Parameters						
Coliforms, Total	**1**	MAC = 0	1	CFU/100 mL	2025-05-01	
Background Colonies	**5**	N/A	1	CFU/100 mL	2025-05-01	
Coliforms, Fecal	< 1	N/A	1	CFU/100 mL	2025-05-01	
Heterotrophic Plate Count	**6**	N/A	5	CFU/mL	2025-05-01	HT1
E. coli	< 1	MAC = 0	1	CFU/100 mL	2025-05-01	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2025-05-05	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-05-05	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050	mg/L	2025-05-05	
Barium, total	**0.0801**	MAC = 2	0.0050	mg/L	2025-05-05	
Beryllium, total	< 0.00010	N/A	0.00010	mg/L	2025-05-05	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2025-05-05	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-05-05	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-05-05	
Calcium, total	**53.9**	None Required	0.20	mg/L	2025-05-05	
Chromium, total	**0.00064**	MAC = 0.05	0.00050	mg/L	2025-05-05	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2025-05-05	
Copper, total	< 0.00040	MAC = 2	0.00040	mg/L	2025-05-05	
Iron, total	**0.025**	AO ≤ 0.1	0.010	mg/L	2025-05-05	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2025-05-05	
Lithium, total	**0.00170**	N/A	0.00010	mg/L	2025-05-05	

TEST RESULTS

REPORTED TO	Kala Geosciences Ltd.	**WORK ORDER**	25E0187
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Win 36448 (25E0187-01) | Matrix: Drinking Water | Sampled: 2025-04-30 14:30, Continued						
Total Metals, Continued						
Magnesium, total	**7.11**	None Required	0.010	mg/L	2025-05-05	
Manganese, total	**0.00100**	MAC = 0.12	0.00020	mg/L	2025-05-05	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2025-05-05	
Molybdenum, total	**0.00046**	N/A	0.00010	mg/L	2025-05-05	
Nickel, total	< 0.00040	N/A	0.00040	mg/L	2025-05-05	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2025-05-05	
Potassium, total	**1.48**	N/A	0.10	mg/L	2025-05-05	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-05-05	
Silicon, total	**5.4**	N/A	1.0	mg/L	2025-05-05	
Silver, total	< 0.000050	None Required	0.000050	mg/L	2025-05-05	
Sodium, total	**1.88**	AO ≤ 200	0.10	mg/L	2025-05-05	
Strontium, total	**0.359**	MAC = 7	0.0010	mg/L	2025-05-05	
Sulfur, total	**3.4**	N/A	3.0	mg/L	2025-05-05	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2025-05-05	
Thallium, total	< 0.000020	N/A	0.000020	mg/L	2025-05-05	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2025-05-05	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2025-05-05	
Titanium, total	< 0.0050	N/A	0.0050	mg/L	2025-05-05	
Tungsten, total	< 0.0010	N/A	0.0010	mg/L	2025-05-05	
Uranium, total	**0.000796**	MAC = 0.02	0.000020	mg/L	2025-05-05	
Vanadium, total	< 0.0050	N/A	0.0050	mg/L	2025-05-05	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2025-05-05	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2025-05-05	

Sample Qualifiers:

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.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Kala Geosciences Ltd.	**WORK ORDER**	25E0187
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40

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
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
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
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
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

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
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
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Kala Geosciences Ltd.	**WORK ORDER**	25E0187
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40

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

REPORTED TO	Kala Geosciences Ltd.	**WORK ORDER**	25E0187
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40

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
Anions, Batch B5E1891										
Blank (B5E1891-BLK1)				Prepared: 2025-05-02, Analyzed: 2025-05-02						
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 (B5E1891-BLK2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
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 (B5E1891-BS1)				Prepared: 2025-05-02, Analyzed: 2025-05-02						
Chloride	16.1	0.10	mg/L	16.0		101	90-110			
Fluoride	4.17	0.10	mg/L	4.00		104	88-108			
Nitrate (as N)	4.09	0.010	mg/L	4.00		102	90-110			
Nitrite (as N)	2.01	0.010	mg/L	2.00		100	85-115			
Sulfate	16.5	1.0	mg/L	16.0		103	90-110			
LCS (B5E1891-BS2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Chloride	15.7	0.10	mg/L	16.0		98	90-110			
Fluoride	4.10	0.10	mg/L	4.00		103	88-108			
Nitrate (as N)	4.11	0.010	mg/L	4.00		103	90-110			
Nitrite (as N)	2.01	0.010	mg/L	2.00		101	85-115			
Sulfate	16.1	1.0	mg/L	16.0		101	90-110			
Dissolved Metals, Batch B5E2019										
Blank (B5E2019-BLK1)				Prepared: 2025-05-04, Analyzed: 2025-05-04						
Mercury, dissolved	< 0.000010	0.000010	mg/L							
Blank (B5E2019-BLK2)				Prepared: 2025-05-04, Analyzed: 2025-05-04						
Mercury, dissolved	< 0.000010	0.000010	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO Kala Geosciences Ltd.
PROJECT 25050 - [redacted] - K4 Adventures

WORK ORDER 25E0187
REPORTED 2025-05-08 15:40

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B5E2019, Continued										
LCS (B5E2019-BS1)				Prepared: 2025-05-04, Analyzed: 2025-05-04						
Mercury, dissolved	0.00278	0.000010	mg/L	0.00250		111	80-120			
LCS (B5E2019-BS2)				Prepared: 2025-05-04, Analyzed: 2025-05-04						
Mercury, dissolved	0.00274	0.000010	mg/L	0.00250		110	80-120			
Dissolved Metals, Batch B5E2214										
Blank (B5E2214-BLK1)				Prepared: 2025-05-06, Analyzed: 2025-05-06						
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 (B5E2214-BS1)				Prepared: 2025-05-06, Analyzed: 2025-05-06						
Aluminum, dissolved	3.95	0.0050	mg/L	4.00		99	80-120			
Antimony, dissolved	0.0407	0.00020	mg/L	0.0400		102	80-120			
Arsenic, dissolved	0.392	0.00050	mg/L	0.400		98	80-120			
Barium, dissolved	0.0408	0.0050	mg/L	0.0400		102	80-120			
Beryllium, dissolved	0.0409	0.00010	mg/L	0.0400		102	80-120			
Bismuth, dissolved	0.0388	0.00010	mg/L	0.0400		97	80-120			
Boron, dissolved	0.398	0.0500	mg/L	0.400		99	80-120			
Cadmium, dissolved	0.0408	0.000010	mg/L	0.0400		102	80-120			
Calcium, dissolved	4.19	0.20	mg/L	4.00		105	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Kala Geosciences Ltd.	**WORK ORDER**	25E0187
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B5E2214, Continued										
LCS (B5E2214-BS1), Continued				Prepared: 2025-05-06, Analyzed: 2025-05-06						
Chromium, dissolved	0.0399	0.00050	mg/L	0.0400		100	80-120			
Cobalt, dissolved	0.0396	0.00010	mg/L	0.0400		99	80-120			
Copper, dissolved	0.0396	0.00040	mg/L	0.0400		99	80-120			
Iron, dissolved	3.99	0.010	mg/L	4.00		100	80-120			
Lead, dissolved	0.0390	0.00020	mg/L	0.0400		97	80-120			
Lithium, dissolved	0.0399	0.00010	mg/L	0.0400		100	80-120			
Magnesium, dissolved	3.93	0.010	mg/L	4.00		98	80-120			
Manganese, dissolved	0.0397	0.00020	mg/L	0.0400		99	80-120			
Molybdenum, dissolved	0.0403	0.00010	mg/L	0.0400		101	80-120			
Nickel, dissolved	0.0391	0.00040	mg/L	0.0400		98	80-120			
Phosphorus, dissolved	4.02	0.050	mg/L	4.00		101	80-120			
Potassium, dissolved	3.99	0.10	mg/L	4.00		100	80-120			
Selenium, dissolved	0.397	0.00050	mg/L	0.400		99	80-120			
Silicon, dissolved	3.9	1.0	mg/L	4.00		98	80-120			
Silver, dissolved	0.0402	0.000050	mg/L	0.0400		100	80-120			
Sodium, dissolved	3.95	0.10	mg/L	4.00		99	80-120			
Strontium, dissolved	0.0405	0.0010	mg/L	0.0400		101	80-120			
Sulfur, dissolved	37.9	3.0	mg/L	40.0		95	80-120			
Tellurium, dissolved	0.0393	0.00050	mg/L	0.0400		98	80-120			
Thallium, dissolved	0.0382	0.000020	mg/L	0.0400		96	80-120			
Thorium, dissolved	0.0391	0.00010	mg/L	0.0400		98	80-120			
Tin, dissolved	0.0400	0.00020	mg/L	0.0400		100	80-120			
Titanium, dissolved	0.0383	0.0050	mg/L	0.0400		96	80-120			
Tungsten, dissolved	0.0394	0.0010	mg/L	0.0400		98	80-120			
Uranium, dissolved	0.0393	0.000020	mg/L	0.0400		98	80-120			
Vanadium, dissolved	0.0391	0.0050	mg/L	0.0400		98	80-120			
Zinc, dissolved	0.395	0.0040	mg/L	0.400		99	80-120			
Zirconium, dissolved	0.0400	0.00010	mg/L	0.0400		100	80-120			
General Parameters, Batch B5E1897										
Blank (B5E1897-BLK1)				Prepared: 2025-05-02, Analyzed: 2025-05-02						
Solids, Total Dissolved	< 15	15	mg/L							
LCS (B5E1897-BS1)				Prepared: 2025-05-02, Analyzed: 2025-05-02						
Solids, Total Dissolved	219	15	mg/L	240		91	85-115			
General Parameters, Batch B5E1910										
Blank (B5E1910-BLK1)				Prepared: 2025-05-02, Analyzed: 2025-05-02						
Colour, True	< 5.0	5.0	CU							
LCS (B5E1910-BS1)				Prepared: 2025-05-02, Analyzed: 2025-05-02						
Colour, True	18	5.0	CU	20.0		89	85-115			
General Parameters, Batch B5E1952										
Blank (B5E1952-BLK1)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO Kala Geosciences Ltd. **WORK ORDER** 25E0187
PROJECT 25050 - [redacted] - K4 Adventures **REPORTED** 2025-05-08 15:40

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5E1952, Continued										
Blank (B5E1952-BLK2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
LCS (B5E1952-BS1)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Alkalinity, Total (as CaCO3)	89.2	1.0	mg/L	100		89	80-120			
LCS (B5E1952-BS2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Conductivity (EC)	1410	2.0	µS/cm	1410		100	95-105			
LCS (B5E1952-BS3)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Alkalinity, Total (as CaCO3)	88.6	1.0	mg/L	100		89	80-120			
LCS (B5E1952-BS4)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Conductivity (EC)	1410	2.0	µS/cm	1410		100	95-105			
Reference (B5E1952-SRM1)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
pH	7.02	0.10	pH units	7.01		100	98-102			
Reference (B5E1952-SRM2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
pH	7.01	0.10	pH units	7.01		100	98-102			
General Parameters, Batch B5E1962										
Blank (B5E1962-BLK1)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Turbidity	< 0.10	0.10	NTU							
Blank (B5E1962-BLK2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Turbidity	< 0.10	0.10	NTU							
LCS (B5E1962-BS1)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Turbidity	15.8	0.10	NTU	15.8		100	90-110			
LCS (B5E1962-BS2)				Prepared: 2025-05-03, Analyzed: 2025-05-03						
Turbidity	15.8	0.10	NTU	15.8		100	90-110			
General Parameters, Batch B5E2074										
Blank (B5E2074-BLK1)				Prepared: 2025-05-05, Analyzed: 2025-05-06						
Nitrogen, Total Kjeldahl	< 0.050	0.050	mg/L							
Blank (B5E2074-BLK2)				Prepared: 2025-05-05, Analyzed: 2025-05-06						
Nitrogen, Total Kjeldahl	< 0.050	0.050	mg/L							
LCS (B5E2074-BS1)				Prepared: 2025-05-05, Analyzed: 2025-05-06						
Nitrogen, Total Kjeldahl	0.982	0.050	mg/L	1.00		98	85-115			
LCS (B5E2074-BS2)				Prepared: 2025-05-05, Analyzed: 2025-05-06						
Nitrogen, Total Kjeldahl	0.970	0.050	mg/L	1.00		97	85-115			
General Parameters, Batch B5E2077										

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO Kala Geosciences Ltd. **WORK ORDER** 25E0187
PROJECT 25050 - [redacted] - K4 Adventures **REPORTED** 2025-05-08 15:40

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5E2077, Continued										
Blank (B5E2077-BLK1)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B5E2077-BLK2)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
LCS (B5E2077-BS1)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Ammonia, Total (as N)	0.999	0.050	mg/L	1.00		100	85-115			
LCS (B5E2077-BS2)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Ammonia, Total (as N)	0.975	0.050	mg/L	1.00		98	85-115			
Microbiological Parameters, Batch B5E1759										
Blank (B5E1759-BLK1)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK2)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK3)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK4)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK5)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK6)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK7)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Blank (B5E1759-BLK8)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Total	< 1	1	CFU/100 mL							
E. coli	< 1	1	CFU/100 mL							
Microbiological Parameters, Batch B5E1805										
Blank (B5E1805-BLK1)				Prepared: 2025-05-01, Analyzed: 2025-05-01						
Coliforms, Fecal	< 1	1	CFU/100 mL							
Microbiological Parameters, Batch B5E1835										
Blank (B5E1835-BLK1)				Prepared 2025 05 01, Analyzed 2025 05 01						
Heterotrophic Plate Count	< 5	5	CFU/mL							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO Kala Geosciences Ltd.
PROJECT 25050 - [redacted] - K4 Adventures

WORK ORDER 25E0187
REPORTED 2025-05-08 15:40

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5E2005										
Blank (B5E2005-BLK1)				Prepared: 2025-05-04, Analyzed: 2025-05-04						
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							
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 (B5E2005-BS1)				Prepared: 2025-05-04, Analyzed: 2025-05-04						
Aluminum, total	3.81	0.0050	mg/L	4.00		95	80-120			
Antimony, total	0.0384	0.00020	mg/L	0.0400		96	80-120			
Arsenic, total	0.385	0.00050	mg/L	0.400		96	80-120			
Barium, total	0.0386	0.0050	mg/L	0.0400		96	80-120			
Beryllium, total	0.0390	0.00010	mg/L	0.0400		97	80-120			
Bismuth, total	0.0388	0.00010	mg/L	0.0400		97	80-120			
Boron, total	0.398	0.0500	mg/L	0.400		100	80-120			
Cadmium, total	0.0384	0.000010	mg/L	0.0400		96	80-120			
Calcium, total	4.12	0.20	mg/L	4.00		103	80-120			
Chromium, total	0.0393	0.00050	mg/L	0.0400		98	80-120			
Cobalt, total	0.0393	0.00010	mg/L	0.0400		98	80-120			
Copper, total	0.0389	0.00040	mg/L	0.0400		97	80-120			
Iron, total	3.97	0.010	mg/L	4.00		99	80-120			
Lead, total	0.0405	0.00020	mg/L	0.0400		101	80-120			
Lithium, total	0.0391	0.00010	mg/L	0.0400		98	80-120			
Magnesium, total	3.80	0.010	mg/L	4.00		95	80-120			
Manganese, total	0.0392	0.00020	mg/L	0.0400		98	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Kala Geosciences Ltd.	**WORK ORDER**	25E0187
PROJECT	25050 - [redacted] - K4 Adventures	**REPORTED**	2025-05-08 15:40

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5E2005, Continued										
LCS (B5E2005-BS1), Continued				Prepared: 2025-05-04, Analyzed: 2025-05-04						
Molybdenum, total	0.0394	0.00010	mg/L	0.0400		98	80-120			
Nickel, total	0.0399	0.00040	mg/L	0.0400		100	80-120			
Phosphorus, total	3.88	0.050	mg/L	4.00		97	80-120			
Potassium, total	3.76	0.10	mg/L	4.00		94	80-120			
Selenium, total	0.409	0.00050	mg/L	0.400		102	80-120			
Silicon, total	4.1	1.0	mg/L	4.00		103	80-120			
Silver, total	0.0387	0.000050	mg/L	0.0400		97	80-120			
Sodium, total	3.86	0.10	mg/L	4.00		97	80-120			
Strontium, total	0.0380	0.0010	mg/L	0.0400		95	80-120			
Sulfur, total	40.0	3.0	mg/L	40.0		100	80-120			
Tellurium, total	0.0386	0.00050	mg/L	0.0400		96	80-120			
Thallium, total	0.0410	0.000020	mg/L	0.0400		103	80-120			
Thorium, total	0.0416	0.00010	mg/L	0.0400		104	80-120			
Tin, total	0.0389	0.00020	mg/L	0.0400		97	80-120			
Titanium, total	0.0398	0.0050	mg/L	0.0400		100	80-120			
Tungsten, total	0.0405	0.0010	mg/L	0.0400		101	80-120			
Uranium, total	0.0411	0.000020	mg/L	0.0400		103	80-120			
Vanadium, total	0.0391	0.0050	mg/L	0.0400		98	80-120			
Zinc, total	0.381	0.0040	mg/L	0.400		95	80-120			
Zirconium, total	0.0391	0.00010	mg/L	0.0400		98	80-120			
Total Metals, Batch B5E2029										
Blank (B5E2029-BLK1)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	< 0.000010	0.000010	mg/L							
Blank (B5E2029-BLK2)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	< 0.000010	0.000010	mg/L							
Blank (B5E2029-BLK3)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	< 0.000010	0.000010	mg/L							
Blank (B5E2029-BLK4)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	< 0.000010	0.000010	mg/L							
LCS (B5E2029-BS1)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	0.00244	0.000010	mg/L	0.00250		98	80-120			
LCS (B5E2029-BS2)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	0.00244	0.000010	mg/L	0.00250		98	80-120			
LCS (B5E2029-BS3)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	0.00241	0.000010	mg/L	0.00250		96	80-120			
LCS (B5E2029-BS4)				Prepared: 2025-05-05, Analyzed: 2025-05-05						
Mercury, total	0.00243	0.000010	mg/L	0.00250		97	80-120			