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

Date: April 8, 2025
Ref.: L24164

Yucwmenlúcwu (Caretakers Of The Land) LLP
Splatsin First Nation
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V0E 1V3

Via Email: Jeromy Schuetze (Jeromy.schuetze@splatsindc.com)

Attn: Jeromy Schuetze, A. ScT
Senior Project Manager, Civil Construction

Re: **SPLATSIN FIRST NATION**
YUCWMENLÚCWU (*CARETAKERS OF THE LAND*) LLP
GROUNDWATER POTENTIAL EVALUATION (GPE) AND
PRELIMINARY WASTEWATER TO GROUND CONSIDERATIONS
MABEL LAKE ROAD, KINGFISHER, BC
DISTRICT LOT 2415, ODYD, EXC PL 2024 & KAP81665, PID: 011-808-241
LETTER REPORT OF FINDINGS

1.0 INTRODUCTION

Kala Geosciences Ltd. (Kala) was retained by Yucwmenlúcwu (*Caretakers of the Land*) LLP, a division of the Splatsin First Nation (SFN) (the "Client) to complete a Groundwater Potential Evaluation (GPE) study and Onsite Wastewater to Ground overview for a lot located on Mabel Lake Road, Kingfisher, BC and legally described as District Lot 2415, Osoyoos Div of Yale Land District (ODYD), Except Plan KAP2024 & KAP81665, Parcel Identifier (PID): 011-808-241 (the "Subject Property"). The Subject Property occurs at central Universal Transverse Mercator (UTM) coordinates of Zone 11 N, 376987 m E, 5607279 m N.

The Client proposes the development of a campground with amenities for seasonal use only at the Subject Property. The maximum daily water demand (MDD) is understood to be approximately 0.59 L/s (51,145 L/d) according to Lawson Engineering Ltd.[1] The objective of the GPE was to assess the hydrogeology of the Subject Property and indicate whether groundwater extraction at the desired flow rate was likely within the Subject Property, and detail those areas deemed by Kala to be most favorable for groundwater development. In addition, Kala was to review site conditions for the general suitability of receiving treated domestic wastewater to ground.

Authorization for this project was provided by Mr. Jeromy Schuetze, AScT via Kala engagement contract (KEC) KEC-P24183 dated December 17, 2024. Sections 2.0 and 3.0 of this following report provide background information, Section 4.0 provides a discussion of the findings of the desktop study and Section 5.0 provides conclusions and recommendations. Figures append the text. Appendix A provides copy of well logs of registered wells in the Subject Property area.

The client proposes the development of the Parkway Campground located at 3400 Parkway Road, Kingfisher BC. Development may include a thirty (30) person cabin resort, twenty-two (22) pad RV park, small office/amenity building and a pool. The site comprises approximately 4.0 ha of flat lying river bench.

2.0 BACKGROUND

2.1 Scope of Services

This GPE involved an investigation of the Subject Property and immediately adjacent areas. The scope of services included but was not limited to the following tasks and/or items:

- Desktop review of hydrogeological and bedrock/surficial geological reports and mapping;
- Water well inventory pertinent to the Subject Property;
- Assessment of groundwater development potential for the local area;
- Recommendations for solutions and areas of potential groundwater development; and
- Assessment of local groundwater quality and impacts of groundwater development on surrounding water wells and surface water.

For groundwater development programs Kala adheres to the BC Water Sustainability Act, and the subordinate BC Groundwater Protection Regulation. The onsite wastewater disposal system (OWDS) assessment comprises a review of background information and site reconnaissance. This document is provided to comply with the auspices of:

- “Regional District of North Okanagan Subdivision Servicing Bylaw No. 2600, 2013” dated 2013 and produced by the RDNO,

The compliance standard for the OWDS assessment was the BC Sewerage System Regulation (SSR) and subordinate documents for proposed discharges of less than 22,700 L/d and the BC Municipal Wastewater Regulation (MWR) for discharges greater than 22,700 L/d. The project might also be milestones whereby the SSR is used at such time that the actual wastewater flowrates exceed 22,700 L/d. The client may also elect to design and construct the required wastewater systems in clusters each having discharge no greater than 22,700 L/d, to keep the development under the SSR and not the MWR.

The civil engineering firm for this project is Lawson Engineering Ltd (LEL) of Salmon Arm BC. LEL has estimated a full build out wastewater daily design flow 9DDf) of 42,720 L/d and a water flow of 51,145 L/d. The proposed build out wastewater flow rate to ground would be adjudicated under the BC MWR.

2.2 Method of Investigation

The purpose of the GPE program was to determine the occurrence and distribution of groundwater resources within the Subject Property and adjacent areas. Potential groundwater resources are not amenable to direct observation; Kala applies conventional hydrogeological interpretative practices to provide a professional opinion as to the likely presence or absence of groundwater resources within a specific area based on a review of existing Subject Property conditions and available information.

This review includes the collection and analysis of the following:

a) Hydrogeological and bedrock/surficial geological reports and mapping;
b) Aerial photographs;
c) Soils and biogeoclimatic mapping;
d) Topographic and survey information;
e) Discussion with drilling contractors;
f) All water wells within a 500 m radius of the Subject Project;
g) BC Ministry of Environment & Climate Change Strategy (BCECCS) aquifer classification mapping system; and
h) In-house Kala files.

The OWDS suitability assessment includes reviewing the above documents in a context towards understanding subsurface conditions for wastewater disposal and completing a site visit to verify local soils conditions.

2.3 Physiography

The Subject Property is located at Kingfisher, BC, at the outlet of Mabel Lake, approximately 35 km east of Enderby by road (Figure 1). Access to the Subject Property is made via Parkway Road. The Subject Property is adjacent to Mabel Lake to the south and Shuswap River to the west. The Subject Property is situated at a raised bench having a ground elevation of approximately 434 m above sea level (ASL), approximately 40 m higher than the Mabel Lake elevation of 394 m ASL. The Subject Property is flat, except the south and west edges, where ground raises 40 m in elevation within approximately 80 m.

The site occurs on a raised alluvial/fluvial bench with a central elevation of 435 m. The nearby Salmon River occurs at an elevation of approximately 395 m ASL, a difference of approximately 40 m.

The Subject Property is located near the biogeoclimatic boundary of the Interior Douglas-Fir Zone and the Interior Cedar–Hemlock Zone.[2] Altitude and physiography determines local climate. Winters are cool and wet and summers generally hot and dry. The study area receives approximately 653.6 mm of precipitation annually based on 30-year normal at Salmon Arm Station (Table 1).[3] Average temperature of the coldest month is -2.6°C in January and the average temperature of the warmest month is 20.6°C in July. The study area has had a reported moisture deficit of 850 mm/year based on Salmon Arm ECCC Station data.[4]

2.4 Geology and Soils

The bedrock underlying the Subject Property comprises Shuswap Assemblage Group of metamorphic rocks originally from undivided quartzofeldspathic gneiss, biotite-quartz schist, amphibolite, quartzite, marble, calc-silicate rock and skarn; abundant and locally dominant pegmatite, muscovite granite, granod. It is Proterozoic to Paleozoic in age.[5] Bedrock is not exposed at the site.

The surficial materials found in the Mabel Lake area are predominantly derived from the events of the last glaciation (the Fraser Glaciation).[6] The unconsolidated deposits at the Subject Property are fluvial deposits. The thickness of the unconsolidated deposits underlying the Subject Property is likely greater than 100 m based on well record at the south end of Mabel Lake (WIN27791).[5] Figure 2 provides bedrock and surficial geology.

Shallow soil (2.4m) comprises a fine to coarse sand with little fines and little gravel. The soil texture is single grain with a small coarse fraction. The soil comprises alluvial sediments related to historic outflow deposition associated with the Salmon River from Mabel Lake. The groundwater table is anticipated to occur within 5.0 m of surface but may be deeper.

3.0 HYDROGEOLOGICAL SETTING AND WATER WELLS

The aquifer underlying the Subject Property has been mapped and classified and is referred to as Aquifer 806 in BC Water Resources Atla (WRA) database.[5] Aquifer 806 is a sand and gravel partially confined aquifer. Aquifer 806 has a classification of IIIB, indicating a low development level and a moderate vulnerability to surface borne contaminations. Aquifer 806 has a moderate productivity. Aquifer 806 has an area of 1.6 km^2, which is small in size. Fact sheet of Aquifer 806 is attached (Appendix A).

There are eleven (11) water wells within a 1,000 m radius of the Subject Property in the BC Water Resources Atlas (WRA).[5] Among the eleven (11) water wells, one (1) is completed in bedrock aquifer (WTN83503) and ten (10) of them are completed in surficial aquifer (WTN62529, WTN62530, WTN85578, WTN85579, WTN85580, WTN85581, WTN85582, WTN85583, WTN62525 and WTN83502) (Table 2). Among the ten (10) overburden wells, well depths are between 10.4 m and 48.8 m. Well capacities are in the ranges of 0.32 to 1.89 L/s (Table 2). Static water level was in the range of 4.6 to 26.8 mbgs.

WTN83503 intercepted bedrock at the depth of 15.8 m while other two (2) wells, WTN62529 and WTN62530, which are located at the north and south of WTN83503, did not intercept bedrock to the drilling depth of 27.4 m and 10.4 m, respectively. Drilling lithology at these three (3) water wells suggests that bedrock is shallower in the west portion and deeper in the east portion in this specific location. WTN83502 is located only 360 m north of the Subject Property with a ground elevation of approximately 10 m lower than the Subject Property. Hydrogeology at the Subject Property is more similar to that at WTN83502 than at other wells.

4.0 OCCURRENCE OF GROUNDWATER AND GROUNDWATER SUPPLY OPTION

Groundwater potential areas are based on the interpretation of surface topography, surficial geology, bedrock geology, existing well log data and general accessibility. The Subject Property occurs in a raised fluvial bench. Unconsolidated deposits are dominated with fluvial sediments. Since the Subject Property is located at the outlet of Mabel Lake, fluvial sediments are generally fine, which is evident by stratigraphy intercepted and screen slot sizes (Appendix A).

Areas with fluvial unconsolidated deposits are generally suitable for groundwater development, though challenge exists at the Subject Property, owing to fine texture of the sediment, which is demonstrated by stratigraphy encountered at WTN85579. Given the low water demand of 0.59 L/s, the potential to intercept favorable conditions to meet the water demand is good at the Subject Property. It is the professional opinion of Kala that a single 152 mm diameter well capable of delivering 51,145 L/d of water (0.59 L/s) is good in the Subject Property. Groundwater depth at the Subject Property would be in the order of 40 m. Therefore, proposed drilling depth should be 76 m (250 ft) or 1.5 m into bedrocks.

Kala suspects the septic field of the onsite wastewater disposal system (OWDS) at neighbouring property of 3460 Parkway Road is located at the south end of the property. New water well should be at least 30 m away from this OWDS per setback requirement specified in the BC Sewage System Regulation (SSR) Standard Practice Manual, Version 3 (SPM-V3) (Table II-19 of SPM),[7] ideally 90 m or further away since it is not certain if the aquifer underlying the Subject Property is confined or unconfined. Sample drilling location has been provided in Figure 3.

The preliminary cost estimate for a test well construction and evaluation is as follows:

Well drilling:	$35,500.00
Pumping test:	$18,000.00
Water quality:	$ 1,200.00
Engineering Consulting:	$15,900.00
Total Estimate:	**$70,600.00**

The above is a preliminary estimate only; if desired, Kala can provide a detailed fee proposal/terms of reference for the completion of a test well drilling program.

Since the Subject Property is situated at the outlet of Mabel Lake, groundwater recharge is abundant. It is anticipated that operation at the proposed water well at a rate of 0.59 L/s will have minimal impact on neighbouring wells and surface water bodies.

Shuswap River and Mabel Lake are located within 30 m of the Subject Property in the west and the south directions. The proposed water well is a bank infiltration water well. Available well records suggest that the unconsolidated deposits are fine in texture. It is anticipated that adequate filtration will be achieved when groundwater flows towards the proposed water well. Groundwater would meet the Canadian Drinking Water Standards without or with minimal treatment in the study area. Elevated mineralization such as total iron may be encountered.

5.0 ONSITE WASTEWATER DISPOSAL SYSTEMS

The site covers 4.0 ha of flat lying raised river bench. As noted, the proposed build out may include a wastewater DDF of 42,720 L/d which is within the purvey of the MWR, however the client may desire to design and construct wastewater systems in a cluster layout, thus avoiding the MWR and staying within the SSR.

Subsurface conditions are anticipated to comprise greater than 3.0 m of unsaturated sandy soils. The soil type is suitable for larger wastewater discharges to ground and vertical separation is not likely to be a concern. Based on a field review of soils conditions Kala anticipates the near surface soils would comprise a favorable single grain soil of compact to loose relative density. Using an estimated KFS of 3000 mm/d Kala would pressure a Type 1 OWDS hydraulic loading rate of 40 L/d/m^2 and a Type 2 loading rate of 60 L/d/m^2. Given the proximity of the site to the river and lake Kala would recommend Type 2 discharge.

If we use Table III-1 of the SSR BC Standard Practice manual (SPM) a cabin resort has a flowrate of 225 per/person, estimating a maximum of 30 persons the flowrate is 6,750 L/d. The RV park would comprise 170 L/pad for a total of 3,740 L/d and the small office amenity building would comprise 250 L/d. For Type 2 effluent to ground 45/45 mg/l TSS/Bod the dispersion field sizing for the cabins may be in the order of 110 m^2 and 66 m^2 for the RV Park combined with the central office building. If a sani-dump is considered it should receive separate OWDS.

Kala recommends that all minimum horizontal separation listed within the SPM, be adhered to.

6.0 CONCLUSIONS

Based on the Kala desktop study, conducted in accordance with generally accepted hydrogeologic practices and the scope of services detailed herein, Kala provides the following conclusions and recommendations for Client consideration:

a) The Subject Property is situated at a raised fluvial bench, near the outlet of Mabel Lake;

b) Unconsolidated deposits underlying the Subject Property are dominated with fluvial sediments with a medium sand texture;

c) The potential to intercept favorable conditions to construct a 152 mm well capable of delivering 0.59 L/s of water is good at the Subject Property;

d) Proposed water well should be located sufficient distance away from existing OWDSs at neighbouring properties. Proposed drilling depth is 76 m or 1.5 m into bedrocks;

e) Groundwater recharge is likely abundant at the raised fluvial bench. The proposed water well will have a minimal impact on surrounding wells and surface water bodies;

f) Groundwater would meet the Canadian Drinking Water Standards without or with minimal treatment in the Subject Property;

g) Kala considered the site to be very good for the proposed discharge of treated wastewater effluent to ground;

h) It is the opinion of Kala that in comparison to RDNO subdivision bylaws, the site is suitable from groundwater development and wastewater to ground perspective; and

i) All water well and OWDS design and construction works should adhere to provincial regulatory standards of care.

7.0 RECOMMENDATIONS

Based on the above conclusions Kala provides the following recommendations:

a) A groundwater test/production well drilling program should be undertaken. A 152 mm diameter by up to 60 m deep water well should be drilled, tested, sampled, and reported on; and

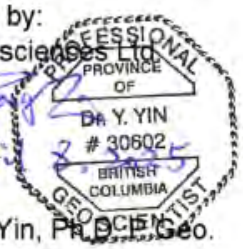
b) Kala recommends a onsite wastewater to ground feasibility/predesign study directed at verifying the assertions of the desktop/site reconnaissance report. The program would comprise 8-10 soil testpits to 2.4 m below surface, soil permeameter testing and limited materials testing. A covering report would conclude locations and OWDS sizing considerations.

8.0 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 there are questions regarding this document please contact our Kamloops office at your convenience.

Prepared by:
Kala Geosciences Ltd.



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REFERENCES

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

1. Lawson Engineering Ltd., January 14, 2025. Mabel Lake Campground Water & Sanitary Demand Calculations.
2. British Columbia Ministry of Forests and Range, Forest Science Program Bio-geoclimatic Ecosystems Classification. Retrieved from: https://www.for.gov.bc.ca/ftp/hre/external/!publish/becmaps/PaperMaps/BGCzones.8x11.pdf
3. Government of Canada, Canadian Climate Normals, 1991-2020. https://climate.weather.gc.ca/climate_normals/index_e.html
4. Pacific Field Corn Association. Farmwest. Retrieved on November 27, 2024 from: https://farmwest.com/climate/calculators/evapotranspiration/
5. BC Ministry of Environment (BCE), BC Water Resources Atlas.
6. Fulton, R. J. and G. W. Smith (1978). Late Pleistocene Stratigraphy of South-Central British Columbia, Canadian Journal of Earth Sciences, v. 15, p. 971-980.
7. BC ministry of Health, Health Protection Branch, 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.

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Table 1 – Climate Information – Salmon Arm, 1991-2020

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation (mm)	78.1	37.3	39.4	40.5	53.4	64.3	43.0	35.2	40.8	61.1	83.1	77.5	653.6
Daily Average (°C)	-2.6	-0.9	3.9	8.9	14.1	17.3	20.6	19.7	14.5	7.7	2.2	-2.1	

Notes:
mm = millimetres
°C = degrees Celsius

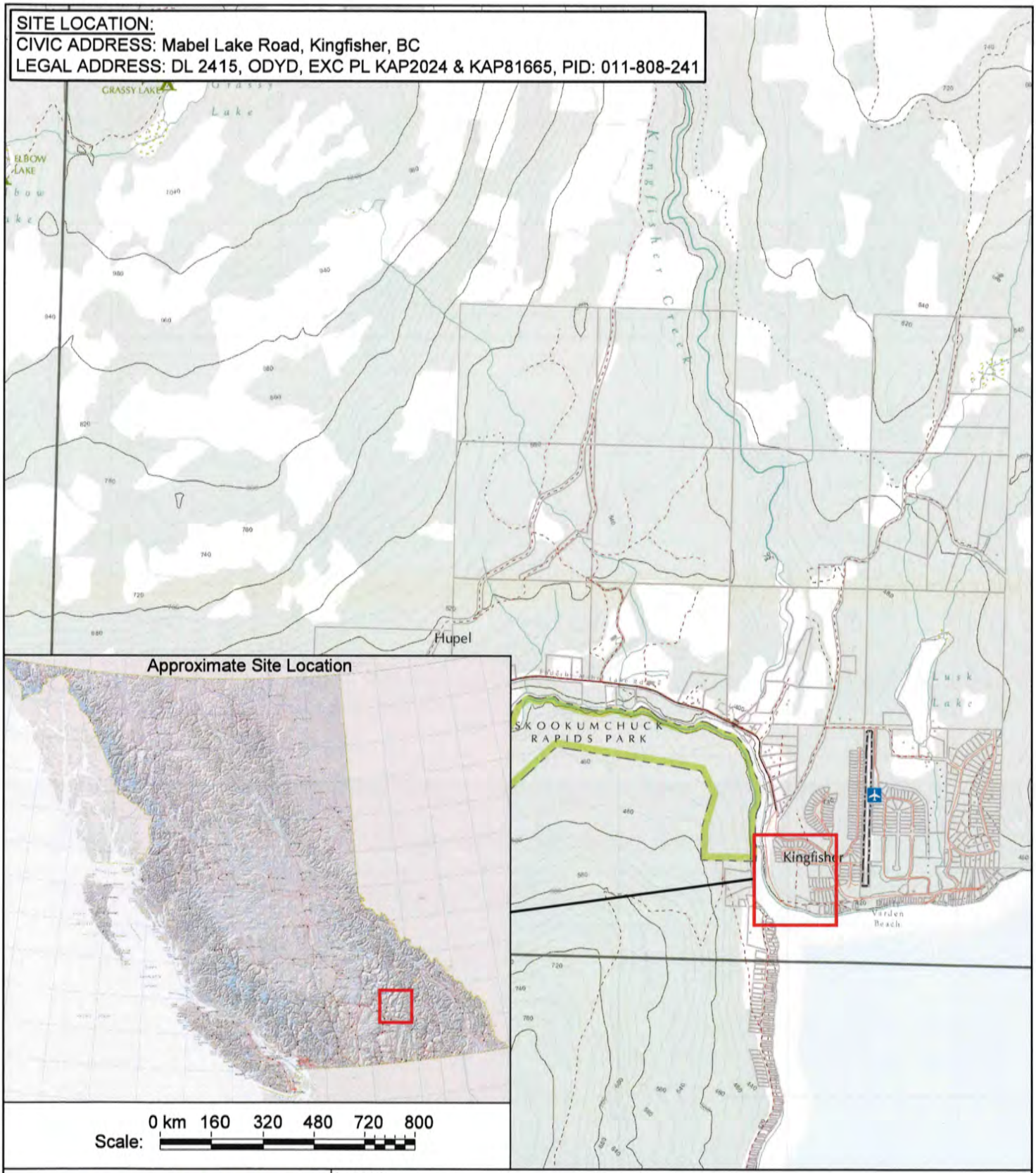
Table 2 – BCECCS Registered Water Well Inventory

Well ID	Location	Well Depth (m)	Aquifer Media	Static Water Level (mbgs)	Driller's Rating (L/s)	Completion date (yy/mm/dd)
WTN62529	Kingfisher Road	27.4	Sand & gravel	10.1	0.50	1994-09-08
WTN83503	Mabel Lake Road	152.4	Bedrock	12.5	0.50	2004-05-03
WTN62530	Kingfisher and Mabel Lake Roads	10.4	Gravel	4.6	1.26	1994-07-10
WTN85578	15 Kingfisher Road	30.5	Sand	15.2	1.26	2000-07-27
WTN85579	3533 Mabel Lake Road	27.4	Sand	15.2	0.32	2000-08-01
WTN85580	3533 Mabel Lake Road	28.3	Sand	14.9	1.89	2000-07-23
WTN85581	3533 Mabel Lake Road	30.5	Sand	15.2	1.26	2000-08-03
WTN85582	3533 Mabel Lake Road	30.5	Sand	15.2	1.26	2000-08-08
WTN85583	3533 Mabel Lake Road	42.7	Sand	-	1.26	2000-08-11
WTN62525	3377 Mabel Lake Road	27.4	Sand	18.3	0.63	1994-07-22
WTN83502	14 Beattie Rd	48.8	Sand	26.8	1.89	2004-05-10

Notes:
BCECCS = BC Ministry of Environment and Climate Change Strategy
WTN = Well tag number WIN = Well identification number m = meter
mbgs = meter below ground surface L/s = liters per second

LIST OF FIGURES

SITE LOCATION:
CIVIC ADDRESS: Mabel Lake Road, Kingfisher, BC
LEGAL ADDRESS: DL 2415, ODYD, EXC PL KAP2024 & KAP81665, PID: 011-808-241



Scale: 0 km 160 320 480 720 800

KALA GEOSCIENCES LTD.
Groundwater • Wastewater • Environmental

Legend:
Approximate Site Location

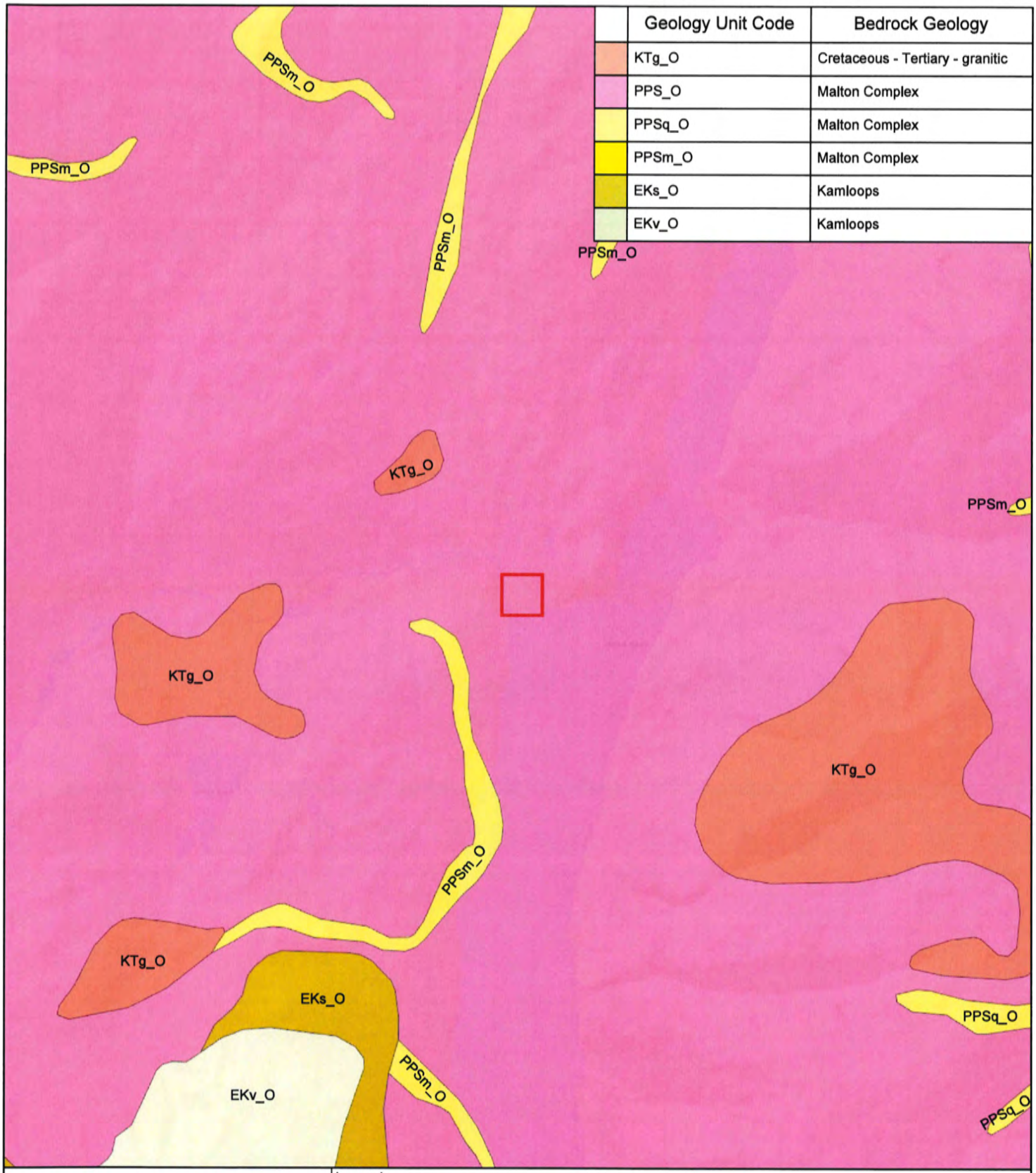
Drawing References:
Province of British Columbia

Scale: 0 m 300 600 900 1200 1500

Project #:	24164
Figure #:	1
Drawing #:	24164.1
Design By:	YY
Drawing By:	JB
Rev'd By:	YY
Date:	Jan 2025

Client: Splatsin First Nation
Project: Groundwater Potential Evaluation
Mabel Lake Road, Kingfisher, BC

Title: Site Location Diagram



	Geology Unit Code	Bedrock Geology
	KTg_O	Cretaceous - Tertiary - granitic
	PPS_O	Malton Complex
	PPSq_O	Malton Complex
	PPSm_O	Malton Complex
	EKs_O	Kamloops
	EKv_O	Kamloops

KALA GEOSCIENCES LTD.
Groundwater • Wastewater • Environmental

Legend:
Approximate Site Location

Drawing References:
BC Water Resources Atlas

Scale:
0 km 1 2 3 4 5

Project #: 24164
Figure #: 2
Drawing #: 24164.2
Design By: YY
Drawing By: JB
Rev'd By: -/-/
Date: Jan 2025

Client: Splatsin First Nation
Project: Groundwater Potential Evaluation
Mabel Lake Road, Kingfisher, BC

Title: Bedrock Geology

KALA GEOSCIENCES LTD.
Groundwater • Wastewater • Environmental

Legend:
Proposed Drilling Location

Drawing References:
Regional District of North Okanagan

Scale:
0 m 20 40 60 80 100

Project #:	24164
Figure #:	3
Drawing #:	24164.3
Design By:	YY
Drawing By:	JB
Rev'd By:	
Date:	Jan 2025

Client: Splatsin First Nation
Project: Groundwater Potential Evaluation
Mabel Lake Road, Kingfisher, BC

Title: Proposed Drilling Location Diagram

P1: Easterly adjacent development

P2: Trail at scarp looking south

P3: Roadcut - sand

P4: Roadcut - sand

P5: Close up - sand fine to medium, little fines

KALA GEOSCIENCES LTD. Groundwater • Wastewater • Environmental 1234 56th Road, Kamloops, BC • Phone: 250 372 1994	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 #: 24164 Figure: 1 Drawing #: 24164.4 Design By: YY Drawing By: JB Rev'd By: Date: Mar 2025	Client: Splatsin First Nation Project: Groundwater Potential Evaluation Mabel Lake Road, Kingfisher, BC
Drawing Reference: Scale: N/A				Title: Site Photographs

APPENDICES

Appendix A: Definition of Terms
Aquifer Factsheet
Water Well Logs

APPENDIX A

Definition of Terms
Aquifer Factsheet
Water Well Logs

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.

Aquifer #806

Legend

- Registered Water Well
- Aquifer Boundary

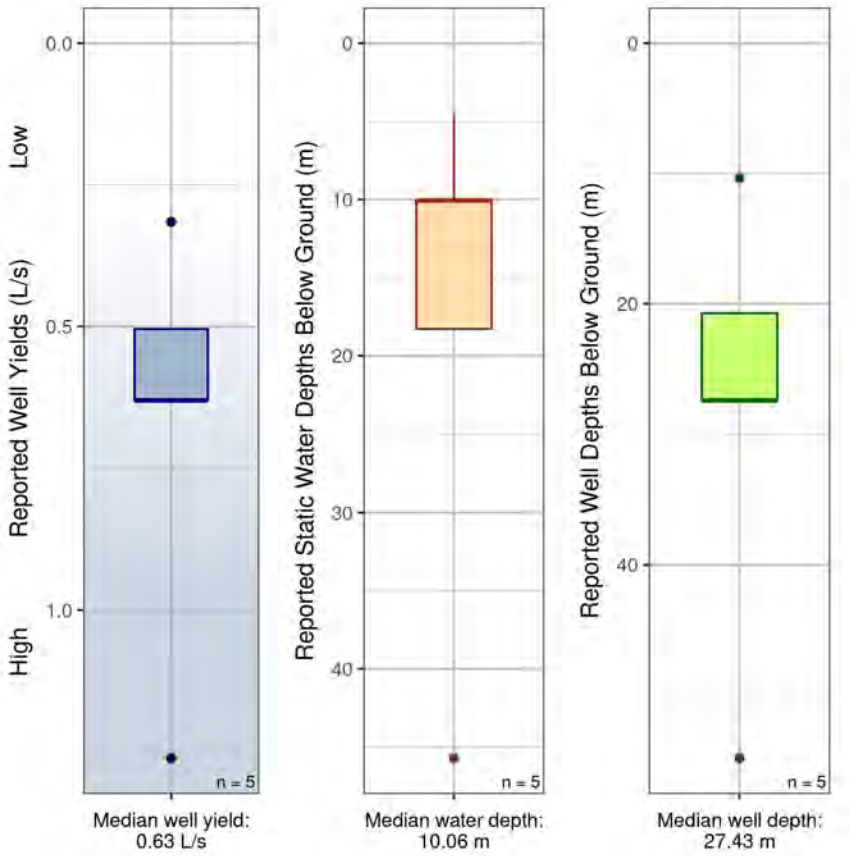
0 0.25 0.5 km

N

Aquifer Description (Mapping Report - 2006): Confined Glacio-fluvial sand and gravel aquifers underneath till, in between till layers, or underlying glacio-lacustrine deposits (subtype = 4b).

Aquifer Details	
Region	Thompson-Okanagan
Water District	Vernon
Aquifer Area	1.7 km^2
No. Wells Correlated	5
Vulnerability to Contamination	Moderate
Productivity	Moderate
Aquifer Classification	IIIB
Hydraulic Conductivity *	Unknown
Transmissivity *	Unknown
Storativity *	Unknown
No. Water Licences Issued to Wells	Unknown
Observation Wells (**Active**, Inactive)	None

* min - max
For Hydraulic Connection see guidance document



Detailed methods for all figures are described in the companion document (Aquifer Factsheet - Companion Document.pdf).
Factsheet generated: 2022-07-27. Aquifers online: https://apps.nrs.gov.bc.ca/gwells/aquifers.

Province of British Columbia

BC Environment

Water Management Division

WATER WELL RECORD

Date 1940722 (YR MO DY)

NTS MAP | WELL No. | ELEV | Location Accuracy

UTM Z | E | N | UTM Date 19__ | Well Type

Owners Name & Address: Don Brooks

Legal Description & Address: Lot 3 Plan 5245 Sec 14 Twp 19 RG W6

Descriptive Location: Box 824 Enderby. V0E-1V0 838-6236

1. TYPE OF WORK 1 ☐ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☐ Rotary a ☐ mud b ☐ air c ☐ reverse ☐ Other

3. WATER WELL USE 1 ☐ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other

4. DRILLING ADDITIVES

5. MEASUREMENTS from 1 ☐ ground level 2 ☐ top of casing

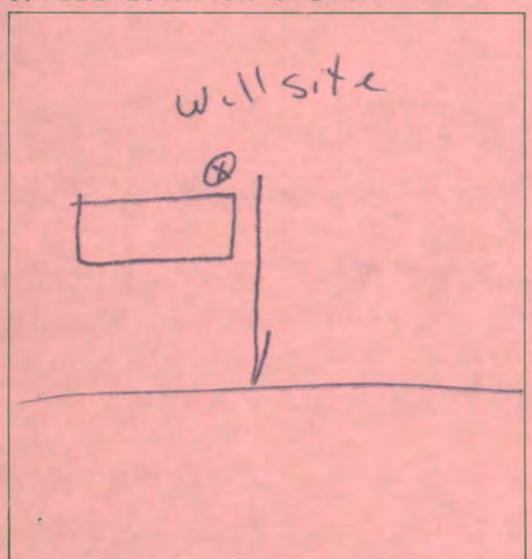
casing height above ground level _____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	28	Ground - Blackish water	22
28	43	Silt - clay.	
43	67	Sand. Dirty.	
67	83	Silty Sand. wet.	
83	90	Sand.	

7. CONSULTANT

Address

8. WELL LOCATION SKETCH



9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other

							units
Hole Diameter							ins
Diameter	6"						ins
from	0						ft
to	86						ft
Thickness	250						ins
Weight	16						lb/ft

Pitless unit _____ ft 1 ☐ above 2 ☑ below ground level

1 ☑ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☑ New 2 ☐ Used

Perforations:

Shoe(s): Welded Drive Shoe

Open hole, from _____ to _____ ft Diameter _____ ins

Grout:

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☑ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other

Material 1 ☑ Stainless Steel 2 ☐ Plastic ☐ Other

Set from _____ to _____ ft below ground level

RISER, SCREEN & BLANKS							units
Length	4'						ft
Diam. I D	5½"						ins
Slot Size	.015						ins
from	84						ft
to	40						ft

Fittings, top Packer bottom Bail

Gravel Pack

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☐ Pumping ☐ Other

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☑ Air Date (YR MO DY)

Rate 10 USgpm Temp ____ °C SWL before test ____ ft

Water Level 60 ft after test of ____ hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING ft	RECOMMENDED PUMPING RATE USgpm

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour Clear smell No ; gas 1 ☐ yes 2 ☑ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date (YR MO DY)

SITE I D No _____

16. FINAL WELL COMPLETION DATA

Well Depth 90 ft Well Yield ____ US gpm

Static Water Level 60 ft Artesian Flow ____ US gpm Pressure Head ____ ft

Back filled

Well Head Completion Welded Cap

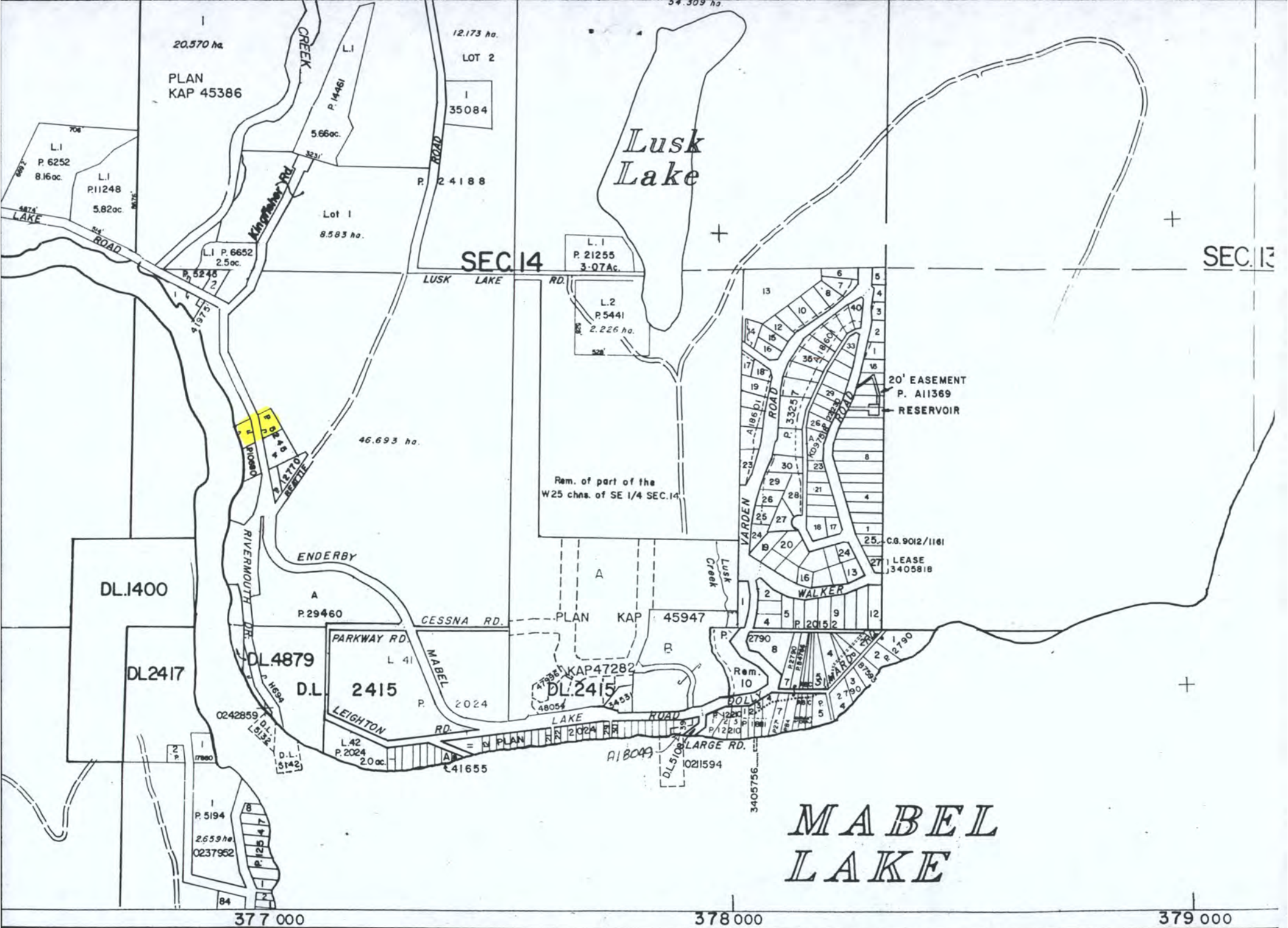
17. DRILLER PLEASE PRINT SURNAME MacKenzie FIRST NAME Carl

Signature Carl MacKenzie

18. CONTRACTOR

Address Thornton Drilling Ltd 460 Hartman Road Kelowna BC V1X 2Z1

Member, BCWWDA ☑ yes ☐ no ;



NORTH OKANAGAN

RDNO

BCGS MAP 082L • 067 • 1 • 2 • 1 WTN 62525 #2 WELL NO. 001

WATER WELL RECORD

MINISTRY OF ENVIRONMENT WATER MANAGEMENT DIVISION VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 3 SEC. 14 TP. 19 R. 6 D.L. ___ LAND DISTRICT KD4D PLAN 5245

DESCRIPTIVE LOCATION ENDERBY-MABEL LAKE RD, ENDERBY LICENCE NO. ___ DATE ___

Z ___ WELL NO. ___

___ E

___ N

Z X Y NO.

NAT. TOPO. SHEET NO. ___

OWNER'S NAME Don Brookes ADDRESS Enderby

DRILLER'S NAME ___ ADDRESS ___ DATE COMPLETED ___

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

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 ___ ☐ 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 ___ 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 (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 ___

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ___

SOURCES OF INFORMATION ___

LITHOLOGY

FROM	TO	DESCRIPTION

NORTH

WEST

EAST

SOUTH

CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

97941

ENV 1995

Province of British Columbia Ministry of Environment Water Management Branch

WATER WELL RECORD

Date 94 09 08 (YR MO DY)

NTS MAP | WELL No. | ELEV | Location Accuracy

UTM Z | E | N | UTM Date 19 | Well Type

Owners Name & Address Clark.

Legal Description & Address

Descriptive Location #33 Kingfisher Rd. Mabel Lk.

1. TYPE OF WORK 1 ☐ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☑ Rotary a ☑ mud b ☐ air c ☐ reverse ☐ Other

3. WATER WELL USE 1 ☑ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other

4. DRILLING ADDITIVES bentonite

5. MEASUREMENTS from 1 ☐ ground level 2 ☐ top of casing

casing height above ground level 1.1 ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	50	sand, clay layers. boulders	
50	92	layers of sand & gravel between clay bands	33
		tested 50-54' 59'-63' 74-78' inadequate	
		90 @ $25.00/ft = $2250.00	
		screen 500	
		$ 2750.00	
		G.S.T. 192.50	
		$2942.50	
		please make cheque payable to: Bruce Stewart Box 1672 Salmon Arm V1E 4P7	

7. CONSULTANT

Address

8. WELL LOCATION SKETCH

9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other

							units
Hole Diameter	5"						ins
Diameter	4"						ins
from	0						ft
to	86						ft
Thickness							ins
Weight							lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☐ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☐ New 2 ☐ Used

Perforations:

Shoe (s):

Open hole, from ____ to ____ ft Diameter ____ ins

Grout:

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☑ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other

Material 1 ☑ Stainless Steel 2 ☐ Plastic ☐ Other

Set from 86 to 90 ft below ground level

RISER, SCREEN & BLANKS							units
Length	4'						ft
Diam. I D	4"						ins
Slot Size	10/1000"						ins
from	86						ft
to	90						ft

Fittings, top coupler bottom plug

Gravel Pack

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☐ Pumping ☐ Other

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☐ Air Date 94 09 13 (YR MO DY)

Rate 8 USgpm Temp ____ °C SWL before test 33 ft

Water Level ____ ft after test of ____ hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
sub jet	75-80 ft	up to 8 USgpm

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour ____ smell ____ ; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR MO DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 90 ft Well Yield 8 US gpm

Static Water Level 33 ft Artesian Flow ____ US gpm Pressure Head ____ ft

Back filled

Well Head Completion welded

17. DRILLER PLEASE PRINT SURNAME Stewart FIRST NAME Bruce

Signature Bruce Stewart

18. CONTRACTOR,

Address

Member, BCWWDA ☐ yes ☐ no ;

Well owners Name Clark

Telephone

Area Mabel Lk (Enderby)

Legal Description: Lot Plan

District Lot Land District

Township Range Section

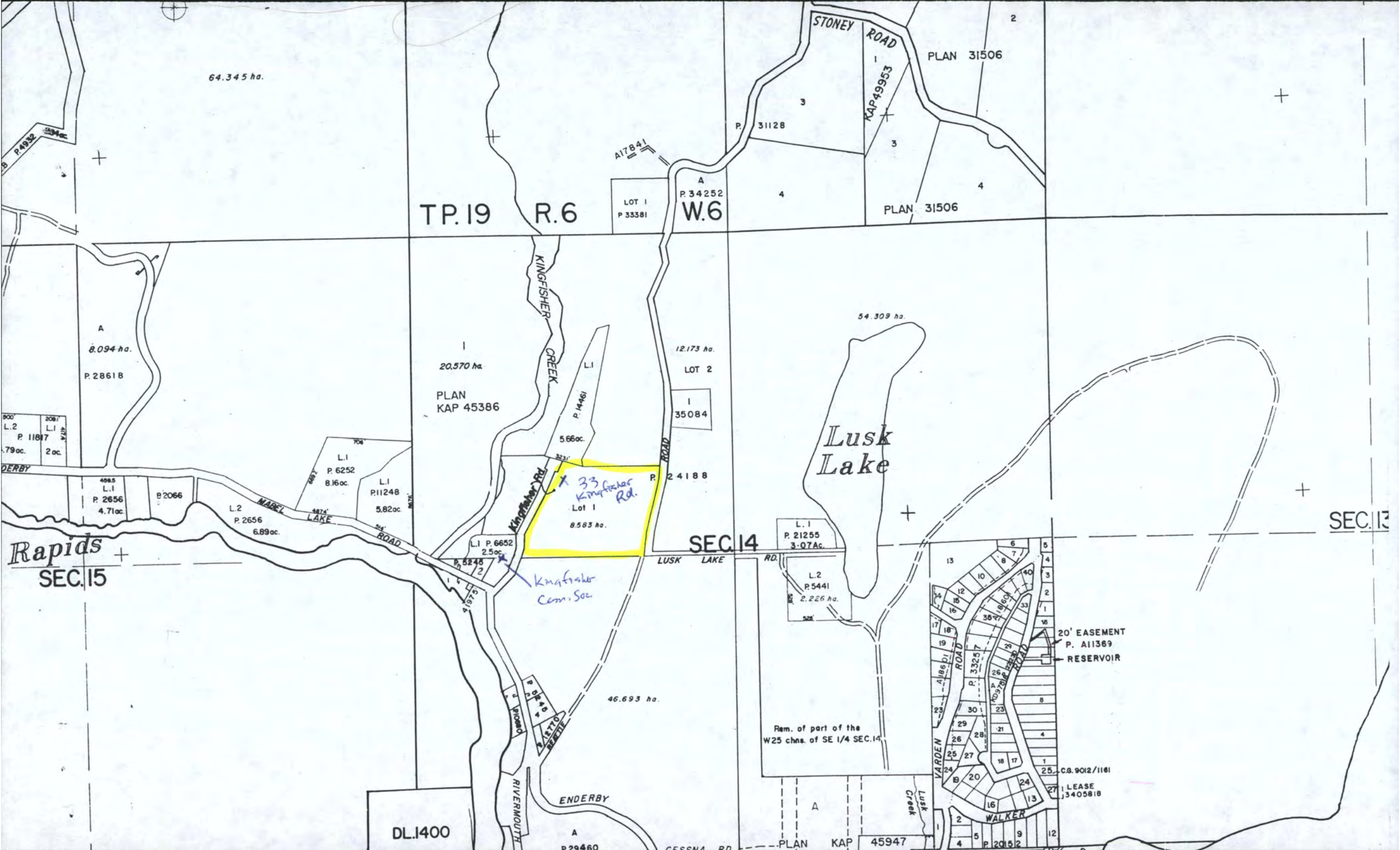
Type of Well Domestic ☑

Irrigation ☐

Waterworks ☐

Location Sketch

Any problems with the well?


TP. 19 R.6 W.6
STONEY ROAD
PLAN 31506
KAP49953
P. 31128
A17841
LOT 1 P 33381
A P. 34252
64.345 ha.
KINGFISHER CREEK
Kingfisher Rd.
33 Kingfisher Rd.
Lot 1
8.583 ha.
P. 24188
ROAD
LOT 2
I 35084
12.173 ha.
I 20.570 ha.
PLAN KAP 45386
L.1 P. 14461
5.66ac.
A 8.094 ha.
P. 28618
L.1 P. 11817 .79ac.
L.2 2ac.
L.1 P. 6252 8.16ac.
L.1 P.11248 5.82ac.
L.1 P. 2656 4.71ac.
L.2 P. 2656 6.89ac.
B2066
MABEL LAKE ROAD
ENDERBY
Rapids
SEC.15
SEC.14
SEC.13
L.1 P. 6652 2.5ac.
P. 5248
Kingfisher Comm. Soc.
LUSK LAKE RD.
L.1 P. 21255 3.07Ac.
L.2 P.5441 2.226 ha.
54.309 ha.
Lusk Lake
46.693 ha.
Rem. of part of the W25 chns. of SE 1/4 SEC.14
20' EASEMENT P. A11369
RESERVOIR
VARDEN ROAD
WALKER ROAD
P. 33257
P. 20152
C.G. 9012/1161
LEASE J405818
Lusk Creek
RIVERMOUTH
DL.1400
A P.29460
PLAN KAP 45947

Done

BCGS MAP 082L • 067 • 1 • 2 • 3

WTN 62529

WELL NO. 006

WATER WELL RECORD

MINISTRY OF ENVIRONMENT WATER MANAGEMENT DIVISION KDD VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 1 SEC. 14 TP. 19 R. 6 D.L. ___ LAND DISTRICT ___ PLAN 24188

DESCRIPTIVE LOCATION 33 King Fisher Rd, ENDERBY LICENCE NO. ___ DATE ___

Z ___ WELL NO. ___

___ E

___ N

Z X Y NO.

NAT. TOPO. SHEET NO. ___

OWNER'S NAME ~~Clark~~ ADDRESS Mabel Lk. Enderby

DRILLER'S NAME ___ ADDRESS ___ DATE COMPLETED ___

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

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 ___ ☐ 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 ___ 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 (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 ___

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ___

SOURCES OF INFORMATION ___

LITHOLOGY

FROM	TO	DESCRIPTION

NORTH

WEST

EAST

SOUTH

CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

97941

ENV 1995

Province of British Columbia

BC Environment

Water Management Division

WATER WELL RECORD

Date 94 07 14 (YR MO DY)

NTS MAP | WELL No. | ELEV | Location Accuracy

UTM Z | E | N | UTM | Date 19__ | Well Type

Owners Name & Address: Ringfisher Comunitt. Societt, Mata Lake

Legal Description & Address: 4qtr 2 Dlot 8245 ODYD
DL C8163 SE 16 Township 19 Range 6 - Meridian 6

Descriptive Location:

1. TYPE OF WORK: 1 ☑ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD: 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☑ Rotary a ☐ mud b ☑ air c ☐ reverse ☐ Other

3. WATER WELL USE: 1 ☐ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other town hall.

4. DRILLING ADDITIVES

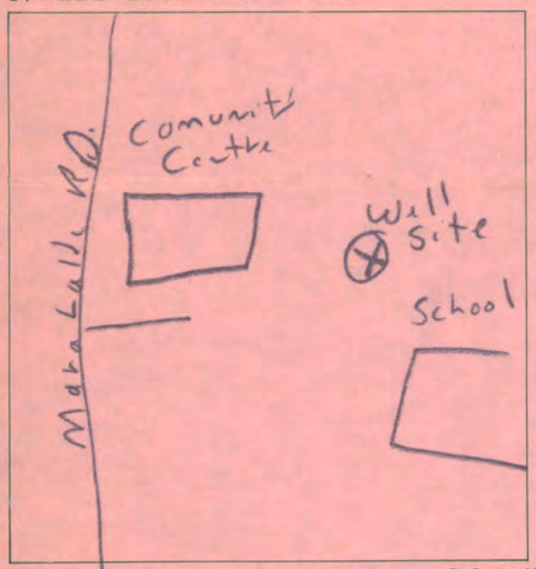
5. MEASUREMENTS from 1 ☑ ground level 2 ☐ top of casing
casing height above ground level ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	34	Gravel.	15'
34	40	@ Silt.	

7. CONSULTANT

Address

8. WELL LOCATION SKETCH



9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other

Hole Diameter							units
Diameter	6"						ins
from	0						ft
to	30						ft
Thickness	250						ins
Weight	16						lb/ft

Pitless unit ft 1 ☐ above 2 ☐ below ground level
1 ☑ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☑ New 2 ☐ Used

Perforations:

Shoe(s): Welded Dhive

Open hole, from to ft Diameter ins

Grout:

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size
Type 1 ☑ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other
Material 1 ☑ Stainless Steel 2 ☐ Plastic ☐ Other
Set from to ft below ground level

RISER, SCREEN & BLANKS							units
Length	4						ft
Diam. I D	5½						ins
Slot Size	.025						ins
from	30						ft
to	34						ft

Fittings, top 12 Packer bottom Bail

Gravel Pack

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☐ Pumping ☐ Other

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☑ Air Date (YR MO DY)
Rate USgpm Temp °C SWL before test ft
Water Level ft after test of hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
	30' ft	20 USgpm

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy
colour Clear smell NO ; gas 1 ☐ yes 2 ☑ no

15. WATER ANALYSIS: 1 Hardness mg/L 2 Iron mg/L 3 Chloride mg/L 4 pH Field Date Lab Date (YR MO DY)

SITE I D No

16. FINAL WELL COMPLETION DATA
Well Depth 34 ft Well Yield 20 US gpm
Static Water Level 15 ft Artesian Flow US gpm Pressure Head ft
Back filled
Well Head Completion welded cap

17. DRILLER PLEASE PRINT SURNAME MacKenzie FIRST NAME Carl
Signature

18. CONTRACTOR
Address Thornton Drilling Ltd
460 Hartman Road Kelowna
BC V1X 2n1

Member, BCWWDA ☑ yes ☐ no ;

Well owner's Name King Fisher Community

Telephone Area

Legal Description: Lot 1 Plan 6652

District Lot Land District

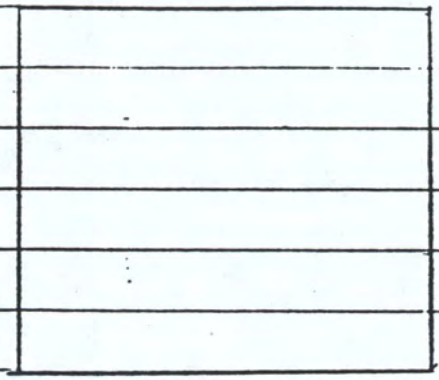
Township 19 Range 6 Section 14

Type of Well Domestic ☐

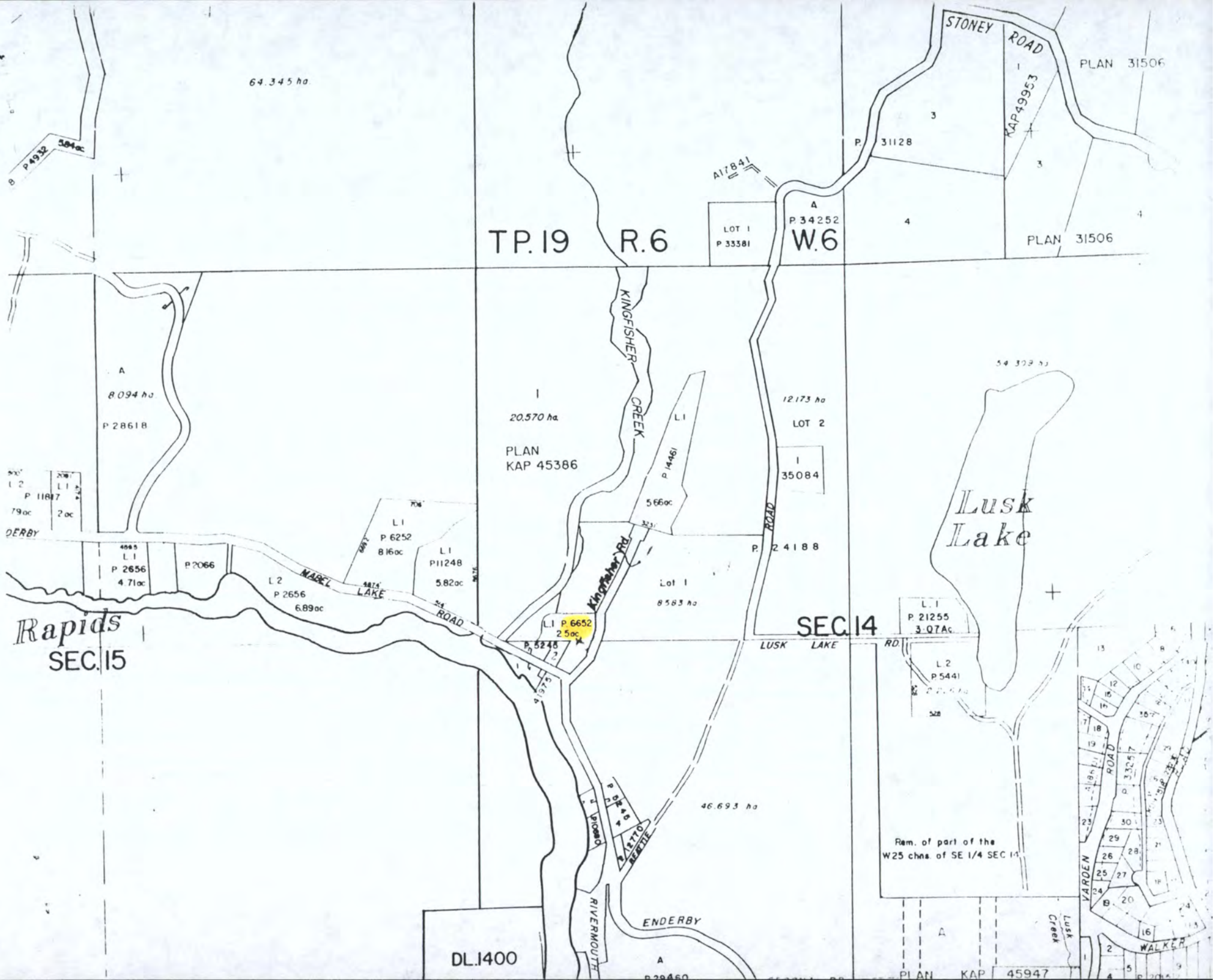
Irrigation ☐

Waterworks ☐

Location Sketch



Any problems with the well?


TP. 19
R.6
W.6
STONEY
ROAD
PLAN 31506
KAP49953
P. 31128
A17841
LOT 1
P 33381
A
P 34252
PLAN 31506
64.345 ha
P 4932
5.84ac
KINGFISHER CREEK
A
8.094 ha
P 28618
1
20.570 ha
PLAN
KAP 45386
12.173 ha
LOT 2
1
35084
L1
P 14461
5.66ac
P 24188
Lusk
Lake
L 2
P 11887
7.9ac
2ac
DERBY
L1
P 6252
8.16ac
L1
P11248
5.82ac
L1
P 2656
4.71ac
P 2066
L 2
P 2656
6.89ac
MABEL LAKE ROAD
Kingfisher Rd
Lot 1
8.583 ha
Rapids
SEC. 15
L1 P 6652
2.5ac
P 5248
SEC. 14
LUSK LAKE RD.
L1
P 21255
3.07Ac
L 2
P 5441
46.693 ha
P 6845
A 2770
BEETLE
Rem. of part of the
W25 chns. of SE 1/4 SEC 14
RIVERMOUTH
ENDERBY
DL.1400
A
P 29460
PLAN KAP 45947
Lusk Creek
YARDEN ROAD
WALKER

Done

BCGS MAP 082L • 067 • 1 • 2 • 3

WTN 62530

WELL NO. 007

WATER WELL RECORD

MINISTRY OF ENVIRONMENT WATER MANAGEMENT DIVISION VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 1 SEC. 14 TP. 19 R. 6 D.L. ___ LAND DISTRICT KDYD PLAN 6652

DESCRIPTIVE LOCATION Kingfisher Rd, ENDERBY LICENCE NO. ___ DATE ___

Z ___ WELL NO. ___

___ E

___ N

Z X Y NO.

NAT. TOPO. SHEET NO. ___

OWNER'S NAME Kingfisher Community Society ADDRESS Mara Lake Mable Lk.

DRILLER'S NAME ___ ADDRESS ___ DATE COMPLETED ___

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

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 ___ ☐ 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 ___ 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 (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 ___

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ___

SOURCES OF INFORMATION ___

LITHOLOGY

FROM	TO	DESCRIPTION

NORTH

WEST

EAST

SOUTH

CARD BY_____ DATE_____

ADDITIONAL DATA ADDED BY_____

REMARKS

97941

ENV 1995

0821067121

WTN 83502

BRITISH COLUMBIA — BC Environment — Water Management Division

WATER WELL RECORD

Date 04 05 10 (YR MO DY)

NTS MAP ____ WELL No. ____ ELEV ____ Location Accuracy ____

UTM Z ____ E ____ N ____ UTM Date 19__ Well Type ____

Owners Name & Address DON BROOKES 24 RIVERMOUTH RD. ENDERBY B.C. V0E 1V5

Legal Description & Address LOT 2 PL. 12270 K.D.Y.D. SEC. 14 TWP. 19 RG. 6

Descriptive Location 14 BEATTIE RD. ENDERBY B.C.

1. TYPE OF WORK: 1 ☑ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD: 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☑ Rotary a ☐ mud b ☑ air c ☐ reverse ☐ Other ____

3. WATER WELL USE: 1 ☑ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other ____

4. DRILLING ADDITIVES —

5. MEASUREMENTS from 1 ☑ ground level 2 ☐ top of casing

casing height above ground level ____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	6	BROWN SAND, GRAVEL & COBBLES	
6	22	BROWN SAND WITH ROCKS	
22	50	BROWN SILTY SAND	
50	73	BROWN CLAY & ROCKS	
73	96	BROWN SILTY SAND & CLAY	
96	145	GREY SILTY SAND (FINE)	
145	160	GREY SAND (FINE)	88

7. CONSULTANT ____

Address ____

8. WELL LOCATION SKETCH

9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other ____

							units
Hole Diameter							ins
Diameter	6						ins
from	0						ft
to	150						ft
Thickness	.188						ins
Weight	12.92						lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☑ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☑ New 2 ☐ Used

Perforations: ____

Shoe (s): YES

Open hole, from ____ to ____ ft Diameter ____ ins

Grout: ____

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☑ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other ____

Material 1 ☑ Stainless Steel 2 ☐ Plastic ☐ Other ____

Set from 150.5 to 159 ft below ground level

RISER, SCREEN & BLANKS							units
Length	2.5	4	4				ft
Diam. I D	5	5	5				ins
Slot Size	RISER	.010	.010				ins
from	148	150.5	154.75				ft
to	150.5	154.75	159				ft

Fittings, top K PACKER bottom PLATE

Gravel Pack ____

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☐ Pumping ☐ Other ____

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☑ Air Date 04 05 10 (YR MO DY)

Rate ≈30 USgpm Temp ____ °C SWL before test 88 ft

Water Level 88 ft after test of 1 hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
SUBMERSIBLE	140 ft	APROX. 30 USgpm

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour ____ smell ____ ; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR MO DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 159 ft Well Yield EST. 30+ US gpm

Static Water Level 88 ft Artesian Flow ____ US gpm Pressure Head ____ ft

Back filled ____

Well Head Completion CAPPED

17. DRILLER (PLEASE PRINT) SURNAME SCHIBLI FIRST NAME DAVID

Signature David Schibli

18. CONTRACTOR, Address SCHIBLI DRILLING BOX 729 LUMBY B.C. V0E 2G0

Member, BCWWDA ☑ yes ☐ no ; ____

50

BCGS MAP 082L.067.1.2.1 WTN 83502 WELL NO. 008

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 2 SEC. 14 TP. 19 R. 6 D.L. ____ LAND DISTRICT ____ PLAN 12270

DESCRIPTIVE LOCATION 14 Beattie Road ENDERBY BC LICENCE NO. ____ DATE ____

Z ____ WELL NO. ____

____ E

____ N

Z X Y NO.

NAT. TOPO. SHEET NO. ____

OWNER'S NAME DON Brookes ADDRESS ____

DRILLER'S NAME Schibli Drilling ADDRESS ____ DATE COMPLETED ____

DEPTH 159ft ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6 LENGTH ____

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 ____ ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

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 (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 ____

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____

LITHOLOGY

FROM	TO	DESCRIPTION

NORTH

WEST

EAST

SOUTH

CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

97941

ENV 1995

BRITISH COLUMBIA

BC Environment

082L067123 WTN 83503

Water Management Division

WATER WELL RECORD

Date 04 05 03 (YR MO DY)

NTS MAP | WELL No. | ELEV | Location Accuracy

UTM Z 11 | 376917E | 5608285N 6 | UTM | Date 19__ | Well Type

Owners Name & Address 69130 B.C. LTD. 830 KALAVISTA DRIVE VERNON, BC, V1B 1K4

Legal Description & Address

Descriptive Location WELL #1 KINGFISHER ON MABEL LK. RD.

1. TYPE OF WORK: 1 ☑ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD: 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☑ Rotary a ☐ mud b ☑ air c ☐ reverse ☐ Other

3. WATER WELL USE: 1 ☑ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other

4. DRILLING ADDITIVES —

5. MEASUREMENTS from 1 ☑ ground level 2 ☐ top of casing

casing height above ground level ____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	47	BROWN SAND, GRAVEL + COBBLES	
47	52	GREY SAND, GRAVEL & COBBLES	
52	56	GREY WEATHERED GRANITE	
56	500	GREY GRANITE WITH QUARTZ LAYERS	41

7. CONSULTANT ____

Address ____

8. WELL LOCATION SKETCH

9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other ____

							units
Hole Diameter							ins
Diameter	6						ins
from	0						ft
to	56						ft
Thickness	.188						ins
Weight	12.92						lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☑ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☑ New 2 ☐ Used

Perforations: ____

Shoe(s): YES

Open hole, from 56 to 500 ft Diameter 6 ins

Grout: ____

10. SCREEN: 1 ☐ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☐ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other ____

Material 1 ☐ Stainless Steel 2 ☐ Plastic ☐ Other ____

Set from ____ to ____ ft below ground level

RISER, SCREEN & BLANKS							units
Length							ft
Diam. I D							ins
Slot Size							ins
from							ft
to							ft

Fittings, top ____ bottom ____

Gravel Pack ____

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☐ Pumping ☐ Other ____

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☑ Air Date 04 04 29 (YR MO DY)

Rate 8 USgpm Temp ____ °C SWL before test 41 ft

Water Level ____ ft after test of 1 hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
SUBMERSIBLE	~~480~~ 250 ft	APROX. 8 USgpm

14. WATER TYPE: 1 ☑ Fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour ____ smell ____ ; gas 1 ☐ yes 2 ☑ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR MO DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 500 ft Well Yield EST. 8 US gpm

Static Water Level 41 ft Artesian Flow ____ US gpm Pressure Head ____ ft

Back filled ____

Well Head Completion CAPPED

4" 160 P.S.I. R.V.C. LINER INSTALLED FROM 28 FT. TO 500 FT.

17. DRILLER PLEASE PRINT SURNAME SCHIBLI FIRST NAME DAVID

Signature David Schibli

18. CONTRACTOR, Address SCHIBLI DRILLING BOX 729 LUMBY B.C. V0E 2G0

Member, BCWWDA ☑ yes ☐ no ; ____

51

Wtn 85578

BRITISH COLUMBIA — BC Environment — Water Management Branch, Groundwater Section

WATER WELL RECORD

Date 00 10 727 (YR MO DY)

GS MAP ____ WELL No. ____ ELEV ____ Location Accuracy ____

UTM Z ____ E ____ N ____ UTM Date 19__ Well Type ____

Owners Name & Address 536091 LTD

Legal Description & Address ____

Descriptive Location Lot #1 3353 Mabel Lakeland

1. TYPE OF WORK: 1 ☑ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD: 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☑ Rotary a ☐ mud b ☑ air c ☐ reverse ☐ Other ____

3. WATER WELL USE: 1 ☑ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other ____

4. DRILLING ADDITIVES foam

5. MEASUREMENTS from 1 ☐ ground level 2 ☑ top of casing; casing height above ground level ____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	20	Sand Gravels	
20	55	Dry Sand	
55	100	wet Sand	

7. CONSULTANT ____

Address ____

8. WELL LOCATION SKETCH

9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other ____

							units
Hole Diameter							ins
Diameter	6 5/8						ins
from	0						ft
to	92						ft
Thickness	1.88						ins
Weight							lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☐ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☐ New 2 ☐ Used

Perforations: ____

Shoe(s): ____

Open hole, from ____ to ____ ft Diameter ____ ins

Grout: ____

10. SCREEN: 1 ☐ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☐ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other ____

Material 1 ☐ Stainless Steel 2 ☐ Plastic ☐ Other ____

Set from ____ to ____ ft below ground level

RISER, SCREEN & BLANKS							units
Length	4		2 ft				ft
Diam. ID	4 in		Blank				ins
Slot Size	15						ins
from	92						ft
to	96						ft

Fittings, top Knocker bottom Plug

Gravel Pack ____

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☑ Pumping ☐ Other ____

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☑ Air Date 00 10 727 (YR MO DY)

Rate ____ USgpm Temp ____ °C SWL before test ____ ft

Water Level 50 ft after test of 3 hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13. RECOMMENDED PUMP TYPE 506 | RECOMMENDED PUMP SETTING [redacted] 90 ft | RECOMMENDED PUMPING RATE [redacted] 5-10 USgpm

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour clear smell ____; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR MO DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 96 ft Well Yield 20 US gpm

Static Water Level 50 ft Artesian Flow ____ US gpm Pressure Head ____

Back filled Sand

Well Head Completion Plug

17. DRILLER PLEASE PRINT SURNAME Conley FIRST NAME Peter

Signature Peter Conley

18. CONTRACTOR,

Address STEWART Drilling Box 828 Enderby BC

Member, B C G W A ☐ yes ☐ no ; ____

NOHR
North Okanagan Health Region

ENVIRONMENTAL HEALTH

SUBDIVISION RESPONSE SUMMARY

To: Ministry of Highways, Vernon
Regional District of North Okanagan
R.N. Shortt
T. Laursen – 3514 Enderby Mable Lake Road, Enderby, B.C. V0E 1V0

Your File#: 02-013-16051

Applicant/Agent: T. Laursen/R. Shortt

Date: July 27, 2000

scription: Part of Remainder S.W. ¼, Section 14

Site Location: Mable Lake Road/King Fisher Road, Enderby

# of Lots: Six + Remainder

Recommendations:

The granting of this recommendation is based on the proposed subdivision being in compliance with B.C. Regulation 411/85, Sewage Disposal Regulation and B.C. Regulation 262/70, Subdivision Regulations.

☒ appears to meet the requirements of the North Okanagan Health Region

☐ *does not* appear to meet the requirements of the North Okanagan Health Region

☐ requires additional supporting documentation as noted below

Open ditching system must be maintained to ensure proper surface/subsurface drainage through the site.

(Plan attached showing well locations.)

Environmental Health Officer

HEAD OFFICE:
1440-14th Ave., Vernon BC V1B 2T1 (250) 549-5700 (FAX 549-5582)

BRANCH OFFICES:
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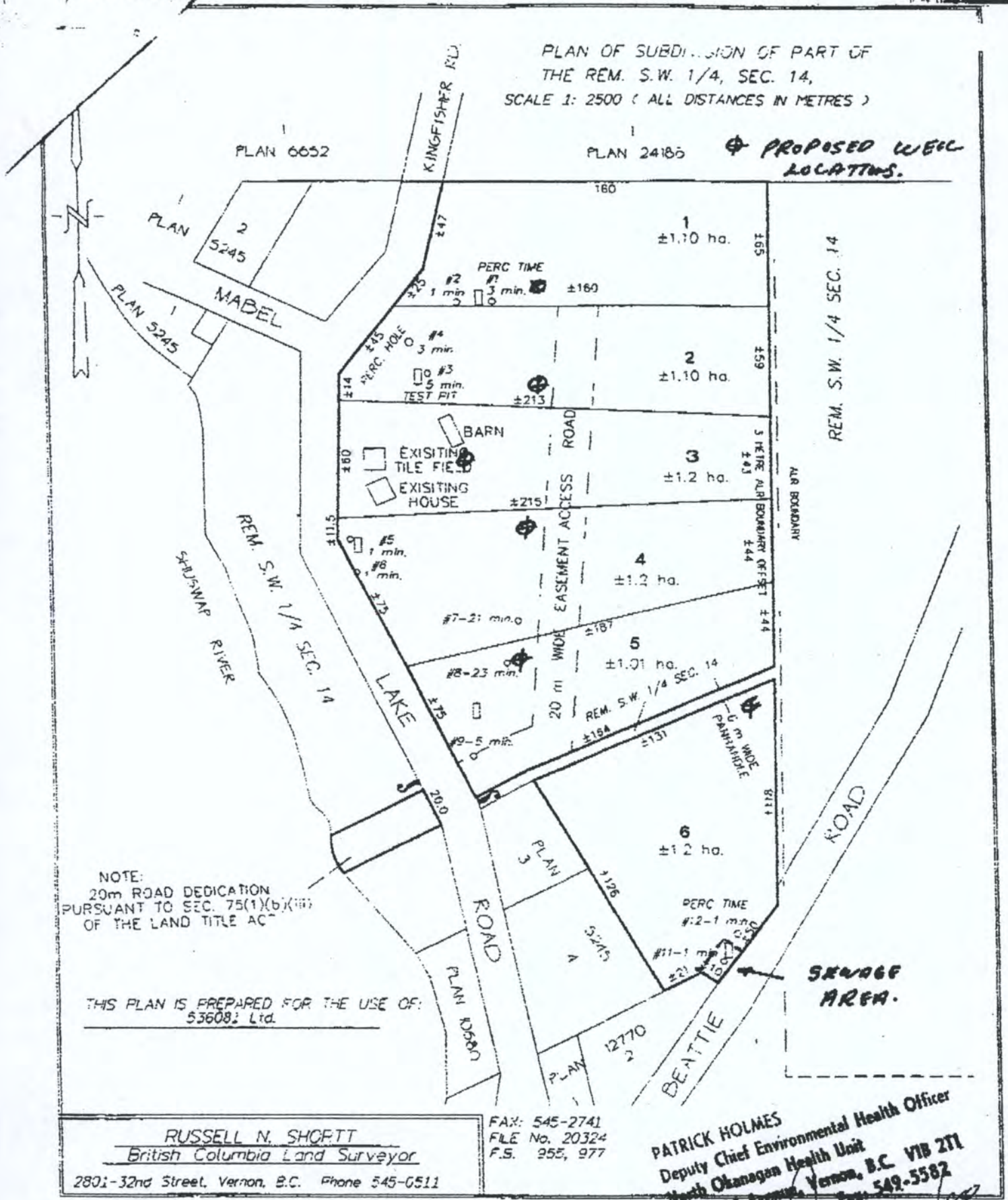
Box 520, Lumby BC V0E 2G0 (250) 547-2184
Box 100, Stn. Main, Salmon Arm BC V1E 4S4 (250) 833-4100 (FAX 832-1714)
Box 269, Revelstoke BC V0E 2S0 (250) 837-7877 (FAX 837-7696)
Box 710, Sicamous BC V0E 2V0 (250) 836-4835 (FAX 836-3166)



RUSSELL N. SHORTT
British Columbia Land Surveyor
2801-32nd Street, Vernon, B.C. Phone 545-0511
FAX: 545-2741
FILE No. 20324
F.S. 255, 977

PATRICK HOLMES
Deputy Chief Environmental Health Officer
North Okanagan Health Unit
1440 - 14 Avenue, Vernon, B.C. V1B 2T1
Phone: 549-5714 Fax: 549-5582

July 27/01

BCGS MAP 082L•067•1•2•1 WTN 0000085578 WELL NO. 002

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 1 SEC. ____ TP. 19 R. 6 D.L. ____ LAND DISTRICT KDYD PLAN ____

DESCRIPTIVE LOCATION Mabel Lake - Enderby LICENCE NO. ____ DATE ____

OWNER'S NAME 536081 LTD. ADDRESS 3253 Mabel Lake Road

DRILLER'S NAME Stewart Drilling ADDRESS Enderby DATE COMPLETED ____

DEPTH 96' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH ____

METHOD OF CONSTRUCTION Air Rotary 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 50' ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

Z ☐☐ WELL NO. ☐☐☐

☐☐☐☐☐☐☐ E

☐☐☐☐☐☐☐ 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 (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	20	Sand + Boulders
20	55	Dry sand
55	100	Wet sand

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____

NORTH

WEST

EAST

SOUTH

CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

Geographic location Estimated
with plan of BC Water Resource
Atlas.
118° 44' 21.7" W
50° 36' 42.7" N

ENV 1995

97941

wtn 85579

BRITISH COLUMBIA

BC Environment

Water Management Branch, Groundwater Section

WATER WELL RECORD

Date 00 08 01 (YR MO DY)

BCGS MAP ____ WELL No. ____ ELEV ____ Location Accuracy ____

UTM Z ____ E ____ N ____ UTM Date 19__ Well Type ____

Owners Name & Address 536081 LTD Mabel lake Enderby BC

Legal Description & Address

NOHR
North Okanagan Health Region

ENVIRONMENTAL HEALTH

SUBDIVISION RESPONSE SUMMARY

To: Ministry of Highways, Vernon
Regional District of North Okanagan
R.N. Shortt
T. Laursen – 3514 Enderby Mable Lake Road, Enderby, B.C. V0E 1V0

Your File#: 02-013-16051

Applicant/Agent: T. Laursen/R. Shortt

Date: July 27, 2000

scription: Part of Remainder S.W. ¼, Section 14

Site Location: Mable Lake Road/King Fisher Road, Enderby

# of Lots: Six + Remainder

Recommendations:

The granting of this recommendation is based on the proposed subdivision being in compliance with B.C. Regulation 411/85, Sewage Disposal Regulation and B.C. Regulation 262/70, Subdivision Regulations.

☒ appears to meet the requirements of the North Okanagan Health Region

☐ *does not* appear to meet the requirements of the North Okanagan Health Region

☐ requires additional supporting documentation as noted below

Open ditching system must be maintained to ensure proper surface/subsurface drainage through the site.

(Plan attached showing well locations.)

Environmental Health Officer

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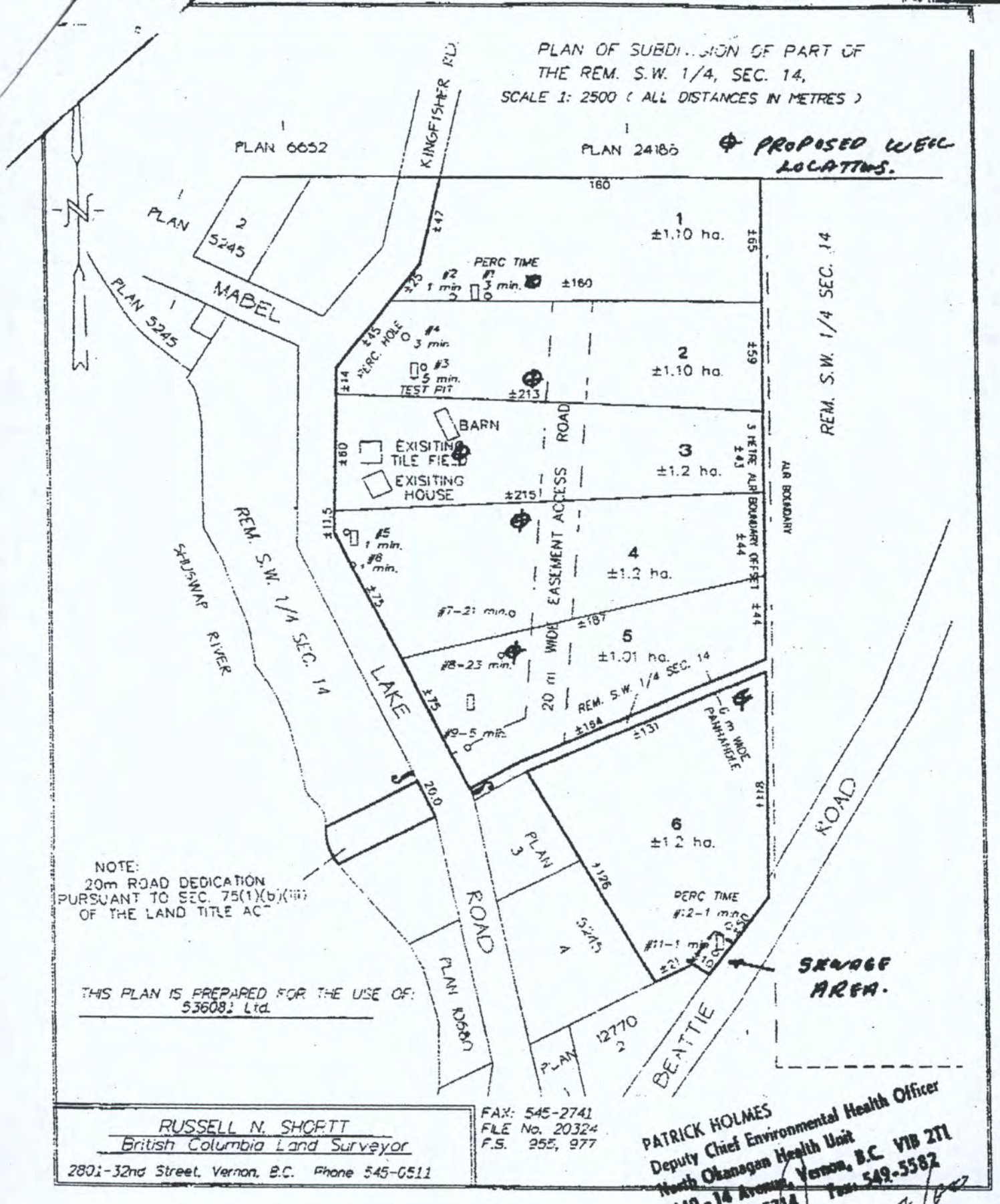
Box 520, Lumby BC V0E 2G0 (250) 547-2164
Box 100, Stn. Main, Salmon Arm BC V1E 4S4 (250) 833-4100 (FAX 832-1714)
Box 269, Revelstoke BC V0E 2S0 (250) 837-7677 (FAX 837-7696)
Box 710, Sicamous BC V0E 2V0 (250) 836-4835 (FAX 836-3166)



RUSSELL N. SHORTT
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F.S. 955, 977

PATRICK HOLMES
Deputy Chief Environmental Health Officer
North Okanagan Health Unit
1440 - 14 Avenue, Vernon, B.C. V1B 2T1
Phone: 549-5714 Fax: 549-5582

July 27/01

BCGS MAP 082L•067•1•2•1 WTN 000008557 9 WELL NO. 003

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 2 SEC. ____ TP. 19 R. 6 D.L. ____ LAND DISTRICT KDYD PLAN ____

DESCRIPTIVE LOCATION Mabel Lake - Enderby LICENCE NO. ____ DATE ____

Z ____ WELL NO. ____

____ E

____ N

Z X Y NO.

NAT. TOPO. SHEET NO. ____

OWNER'S NAME 536681 LTD ADDRESS 3353 Mabel Lake Road

DRILLER'S NAME ____ ADDRESS ____ DATE COMPLETED 2000/08/01

DEPTH 90' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH ____

METHOD OF CONSTRUCTION Air rotary 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 50' ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

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 (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	20	SAND + BOULDERS.
20	55	SAND GRAVEL
55	90	WET SAND.

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____

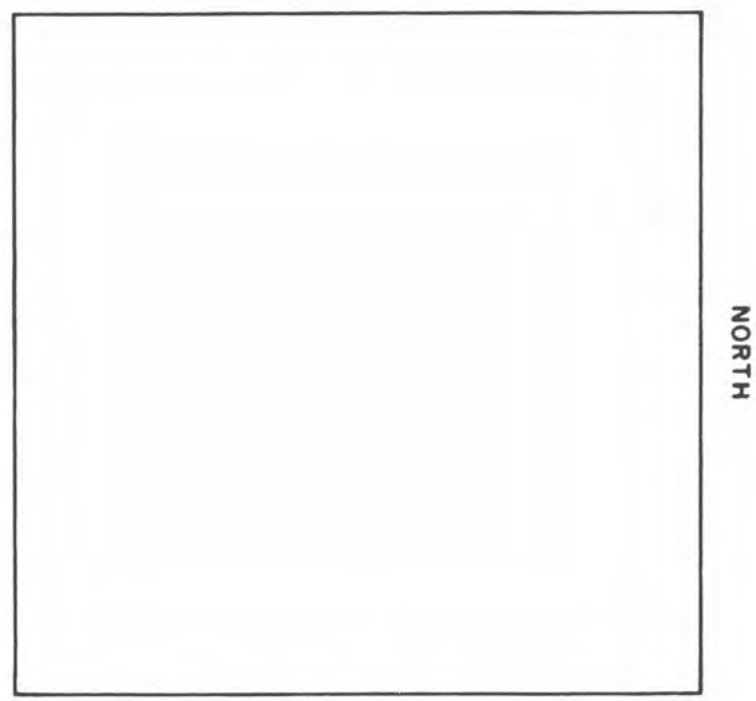
REMARKS

Geographic Location estimated with plan sketch & BC Water Resource Atlas.
118°44' 21.8" W
50°36' 41.0" N

CARD BY _____

ADDITIONAL DATA ADDED BY _____

DATE _____



Wtn 85580.

BRITISH COLUMBIA

BC Environment

Water Management Branch, Groundwater Section

WATER WELL RECORD

Date 000725 (YR MO DY)

BCGS MAP ______ WELL No. ______ ELEV ______ Location Accuracy ______

UTM Z ______ E ______ N ______ UTM Date 19__ Well Type ______

Owners Name & Address: ROBERT GROEHMAL
Legal Description & Address: 3353 MABEL LAKE RD. RR2 ENDERBY BC V0E1..
B... ... RR2 ENDERBY BC V0E 1V0
Descriptive Location: Next to old shed

1. TYPE OF WORK: 1 [x] New Well 2 [ ] Reconditioned 3 [ ] Deepened 4 [ ] Abandoned

2. WORK METHOD: 1 [ ] Cable tool 2 [ ] Bored 3 [ ] Jetted 4 [x] Rotary a [ ] mud b [x] air c [ ] reverse [ ] Other

3. WATER WELL USE: 1 [x] Domestic 2 [ ] Municipal 3 [ ] Irrigation 4 [ ] Comm. & Ind. [ ] Other

4. DRILLING ADDITIVES: foam

5. MEASUREMENTS from 1 [ ] ground level 2 [x] top of casing
casing height above ground level 1.5 ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	20	Sand and boulders	
20	55	gravel (dry)	
55	93	Sand	

Argued upon price

Sub 2250
GST 157.50
Total 2407.5

Pd 6/... chq # 7737

Paid full

Thanks Peter Corley

7. CONSULTANT ______
Address ______

8. WELL LOCATION SKETCH

9. CASING: Materials 1 [x] Steel 2 [ ] Galvanized 3 [ ] Wood 4 [ ] Plastic 5 [ ] Concrete [ ] Other

		units
Hole Diameter	6 5/8	ins
Diameter	6 5/8	ins
from	0	ft
to	93	ft
Thickness	1.88	ins
Weight	19 per ft	lb/ft

Pitless unit ______ ft 1 [ ] above 2 [ ] below ground level
1 [x] Welded 2 [ ] Cemented 3 [ ] Threaded | 1 [ ] New 2 [ ] Used
Perforations: NO
Shoe(s): YES
Open hole, from ______ to ______ ft Diameter ______
Grout: ______

10. SCREEN: 1 [x] Nominal (Telescope) 2 [ ] Pipe Size
Type 1 [x] Continuous Slot 2 [ ] Perforated 3 [ ] Louvre [ ] Other
Material 1 [x] Stainless Steel 2 [ ] Plastic [ ] Other
Set from 89 to 93 ft below ground level

RISER, SCREEN & BLANKS				unit
Length	4		Blank 5	ft
Diam. I.D.	6		6	ins
Slot Size	15/1000			ins
from	89			ft
to	93			ft

Fittings, top K-Packer bottom plug
Gravel Pack: Natural

11. DEVELOPED BY: 1 [ ] Surging 2 [ ] Jetting 3 [x] Air 4 [ ] Bailing 5 [ ] Pumping [ ] Other

12. TEST 1 [ ] Pump 2 [ ] Bail 3 [x] Air Date 000725
Rate ______ USgpm Temp ______ °C SWL before test 49
Water Level 49 ft after test of 2 hrs

DRAWDOWN in ft				RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13. RECOMMENDED PUMP TYPE: Sub | RECOMMENDED PUMP SETTING: 80 ft | RECOMMENDED PUMPING RATE: 8-10 US

14. WATER TYPE: 1 [x] fresh 2 [ ] salty 3 [x] clear 4 [ ] cloudy
colour ______ smell ______; gas 1 [ ] yes 2 [ ] no

15. WATER ANALYSIS: 1 Hardness ______ mg/L 2 Iron ______ mg/L 3 Chloride ______ mg/L 4 pH ______
Field Date ______ Lab Date ______

SITE I.D. No. ______

16. FINAL WELL COMPLETION DATA
Well Depth 93 ft Well Yield 30+ US gpm
Static Water Level 49 ft Artesian Flow ______ US gpm Pressure Head ______
Back filled: Sand
Well Head Completion: welded cap

17. DRILLER (PLEASE PRINT) SURNAME: Corley FIRST NAME: Peter
Signature: Peter Corley

18. CONTRACTOR, Address: Stewart Drilling

NQHR
North Okanagan Health Region

ENVIRONMENTAL HEALTH

SUBDIVISION RESPONSE SUMMARY

To: Ministry of Highways, Vernon
Regional District of North Okanagan
R.N. Shortt
T. Laursen – 3514 Enderby Mable Lake Road, Enderby, B.C. V0E 1V0

Your File#: 02-013-16051

Applicant/Agent: T. Laursen/R. Shortt

Date: July 27, 2000

scription: Part of Remainder S.W. ¼, Section 14

Site Location: Mable Lake Road/King Fisher Road, Enderby

# of Lots: Six + Remainder

Recommendations:

The granting of this recommendation is based on the proposed subdivision being in compliance with B.C. Regulation 411/85, Sewage Disposal Regulation and B.C. Regulation 262/70, Subdivision Regulations.

☒ appears to meet the requirements of the North Okanagan Health Region

☐ *does not* appear to meet the requirements of the North Okanagan Health Region

☐ requires additional supporting documentation as noted below

Open ditching system must be maintained to ensure proper surface/subsurface drainage through the site.

(Plan attached showing well locations.)

Environmental Health Officer

\\MS-SERVER\SHARED\VPH\VPH_eho\FORMS\subresp2.doc
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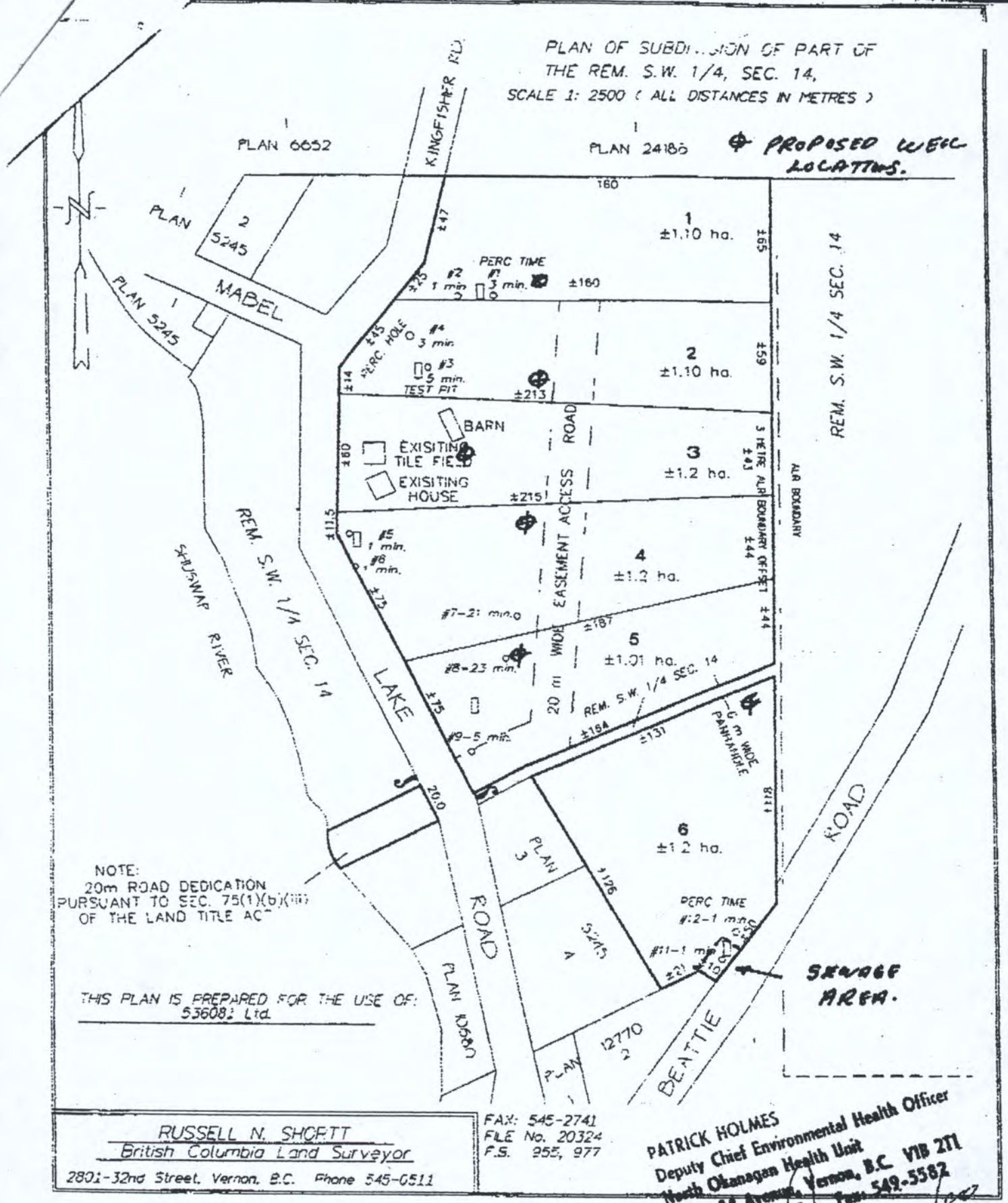

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PATRICK HOLMES
Deputy Chief Environmental Health Officer
North Okanagan Health Unit
1440 - 14 Avenue, Vernon, B.C. V1B 2T1
Phone: 549-5714 Fax: 549-5582

July 27/01

BCGS MAP 082L•067•1•2•1 WTN 0000085580 WELL NO. 004

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 3 (?) SEC. ____ TP. 19 R. 6 D.L. ____ LAND DISTRICT KDYD. PLAN ____

DESCRIPTIVE LOCATION Mabel Lake - Enderby LICENCE NO. ____ DATE ____

Z ____ WELL NO. ____

____ E

____ N

Z X Y NO.

NAT. TOPO. SHEET NO. ____

OWNER'S NAME ROBERT GROCHMAL ADDRESS 3353 Mabel Lake Road

DRILLER'S NAME Stewart Drilling ADDRESS Enderby DATE COMPLETED 2000/07/23

DEPTH 93' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH ____

METHOD OF CONSTRUCTION Air Rotary. 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 49' ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

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 (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	20	SAND + BOULDERS
20	55	GRAVEL (DRY).
55	93	SAND.

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____

REMARKS

Geographic location Estimated with use of plan sketch + BC Water Resource Atlas.
118° 44' 23.1" W
50° 36' 39.2" N

Believe that this well log is for lot 3 but it is not certain. The actual water well record does not say which lot it is. I assumed lot 3 by process of elimination. There are 6 lots + 6 well logs. 5 of the well logs specified the lot #. This record is the only one that doesn't say so it must be lot 3.

CARD BY _____

ADDITIONAL DATA ADDED BY _____

DATE _____

WEST

SOUTH

NORTH

EAST

Wtn 85581

BC Environment — Water Management Branch, Groundwater Section

BRITISH COLUMBIA WATER WELL RECORD

Date 00/08/03 (YR/MO/DY)

BCGS MAP ____ WELL No. ____ ELEV ____ Location Accuracy ____

UTM Z ____ E ____ N ____ UTM Date 19__ Well Type ____

Owners Name & Address 536081 LTD Mabel lake Enderby BC

Legal Description & Address ____

Descriptive Location Lot #4 3353 mabel lake rd

1. TYPE OF WORK: 1 ☐ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD: 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☐ Rotary a ☐ mud b ☐ air c ☐ reverse ☐ Other ____

3. WATER WELL USE: 1 ☐ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other ____

4. DRILLING ADDITIVES ____

5. MEASUREMENTS from 1 ☐ ground level 2 ☐ top of casing; casing height above ground level ____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	20	sand boulders	
20	40	clay	
40	60	Fine/guard sand	
60	100	sand	

7. CONSULTANT ____

Address ____

8. WELL LOCATION SKETCH

9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other ____

							units
Hole Diameter							ins
Diameter	6 5/8						ins
from	0						ft
to	92						ft
Thickness	1.88						ins
Weight							lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☑ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☐ New 2 ☐ Used

Perforations: ____

Shoe(s): no

Open hole, from 0 to 20 ft Diameter 7 3/8 ins

Grout: ____

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☑ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other ____

Material 1 ☑ Stainless Steel 2 ☐ Plastic ☐ Other ____

Set from ____ to ____ ft below ground level

RISER, SCREEN & BLANKS							units
Length	4'						ft
Diam. I D	4"						ins
Slot Size	15/1000						ins
from	92						ft
to	96						ft

Fittings, top K. packer bottom plug

Gravel Pack ____

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☑ Pumping ☐ Other ____

12. TEST 1 ☑ Pump 2 ☐ Bail 3 ☑ Air Date ____ (YR/MO/DY)

Rate ____ USgpm Temp ____ °C SWL before test ____ f

Water Level 50 ft after test of 5 hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
Sub	80 - 90 ft	8-10 USgpm

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour ____ smell ____ ; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR/MO/DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 96 ft Well Yield 20 US gpm

Static Water Level 50 ft Artesian Flow ____ US gpm Pressure Head ____ f

Back filled sand

Well Head Completion plug

17. DRILLER (PLEASE PRINT) SURNAME Conley FIRST NAME Peter

Signature Peter Conley

18. CONTRACTOR,

Address STEWART Drilling
Enderby BC
Box 828

Member, B C G W A ☐ yes ☐ no ; ____

NOHR
North Okanagan Health Region

ENVIRONMENTAL HEALTH

SUBDIVISION RESPONSE SUMMARY

To: Ministry of Highways, Vernon
Regional District of North Okanagan
R.N. Shortt
T. Laursen – 3514 Enderby Mable Lake Road, Enderby, B.C. V0E 1V0

Your File#: 02-013-16051

Applicant/Agent: T. Laursen/R. Shortt

Date: July 27, 2000

scription: Part of Remainder S.W. ¼, Section 14

Site Location: Mable Lake Road/King Fisher Road, Enderby

# of Lots: Six + Remainder

Recommendations:

The granting of this recommendation is based on the proposed subdivision being in compliance with B.C. Regulation 411/85, Sewage Disposal Regulation and B.C. Regulation 262/70, Subdivision Regulations.

☒ appears to meet the requirements of the North Okanagan Health Region

☐ *does not* appear to meet the requirements of the North Okanagan Health Region

☐ requires additional supporting documentation as noted below

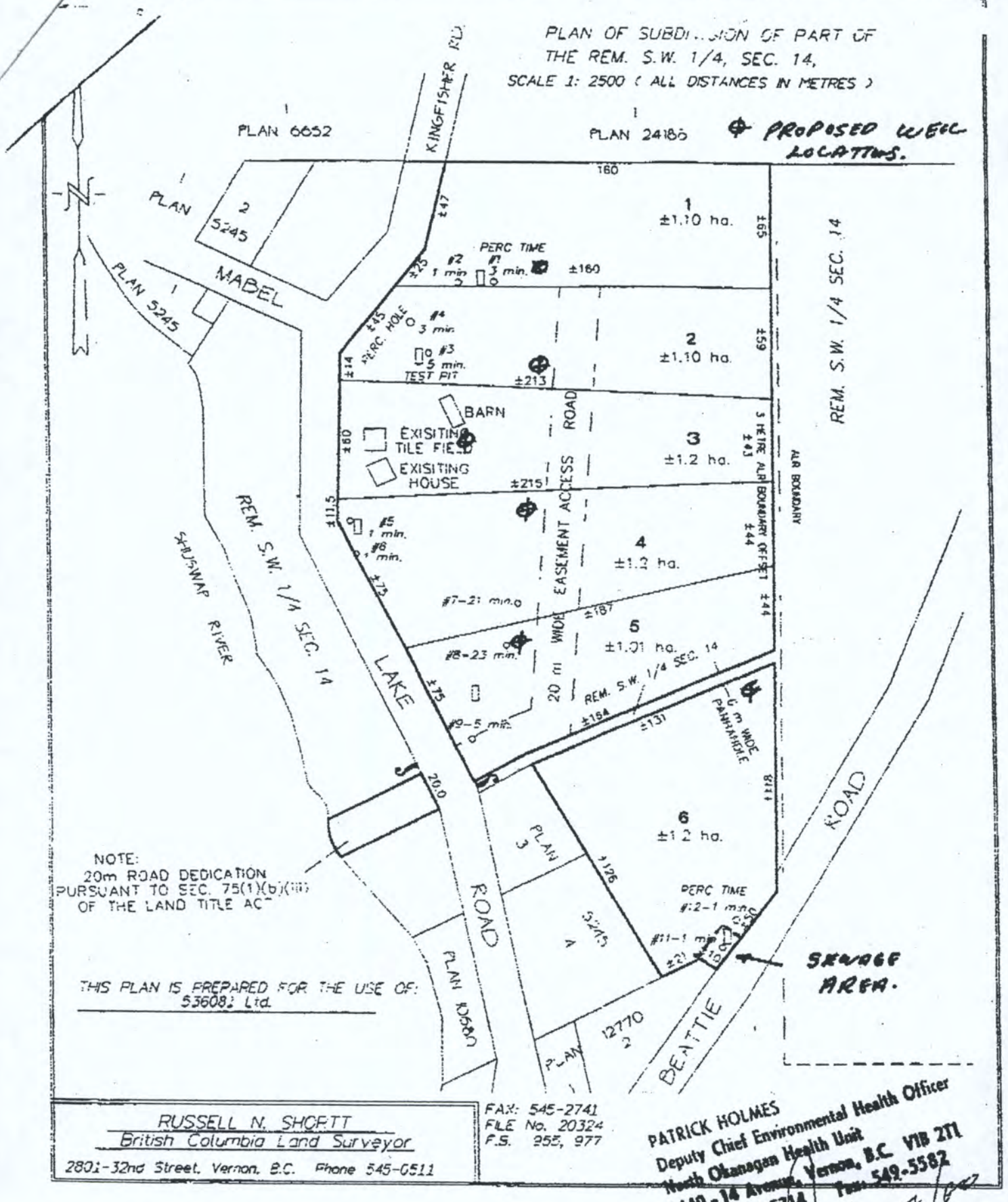
Open ditching system must be maintained to ensure proper surface/subsurface drainage through the site.

(Plan attached showing well locations.)

Environmental Health Officer

HEAD OFFICE:
1440-14th Ave., Vernon BC V1B 2T1 (250) 549-5700 (FAX 549-5582)

BRANCH OFFICES:
Box 364, Armstrong BC V0E 1B0 (250) 546-3091 (FAX 546-8821)
Box 610, Enderby BC V0E 1V0 (250) 838-7350 (FAX 838-7582)
Box 520, Lumby BC V0E 2G0 (250) 547-2164
Box 100, Stn. Main, Salmon Arm BC V1E 4S4 (250) 833-4100 (FAX 832-1714)
Box 269, Revelstoke BC V0E 2S0 (250) 837-7677 (FAX 837-7696)
Box 710, Sicamous BC V0E 2V0 (250) 836-4835 (FAX 836-3166)



RUSSELL N. SHORTT
British Columbia Land Surveyor
2801-32nd Street, Vernon, B.C. Phone 545-0511
FAX: 545-2741
FILE No. 20324
F.S. 955, 977

PATRICK HOLMES
Deputy Chief Environmental Health Officer
North Okanagan Health Unit
1440 - 14 Avenue, Vernon, B.C. V1B 2T1
Phone: 549-5714 Fax: 549-5582

July 27/01

BCGS MAP 082L•067•1•2•1 WTN 0000085581 WELL NO. 005

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 4 SEC. ____ TP. 19 R. 6 D.L. ____ LAND DISTRICT KDYD PLAN ____

DESCRIPTIVE LOCATION Mabel Lake - Enderby LICENCE NO. ____ DATE ____

Z ____ WELL NO. ____

____ E

____ N

Z X Y NO.

NAT. TOPO. SHEET NO. ____

OWNER'S NAME 536081 LTD ADDRESS 3353 Mabel Lake Rd

DRILLER'S NAME Stewart Drilling ADDRESS Enderby DATE COMPLETED 2000/08/03

DEPTH 96' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH ____

METHOD OF CONSTRUCTION Air Rotary 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 50' ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

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 (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	20	SAND BOULDERS
20	40	CLAY
40	80	FINE HARD SAND
80	100	SAND.

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____

NORTH

WEST

EAST

SOUTH

CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

Geographic location estimated using Lat sketch + BC Water Resource Atlas.
118° 44' 21.7" W
50° 36' 38.6" N

ENV 1995

97941

wtn 85582.

BRITISH COLUMBIA — Ministry of Environment

Water Management Branch, Groundwater Section

WATER WELL REC D

Date 0 0 | 0 8 | 0 8 (YR MO DY)

BCGS MAP ____ WELL No. ____ ELEV ____ Location Accuracy ____

UTM Z ____ E ____ N ____ UTM Date 19__ Well Type ____

Owners Name & Address 536081 LTD Mabel lake Enderby BC

Legal Description & Address ____

Descriptive Location lot #5 3353 mabel lake rd

1. TYPE OF WORK: 1 ☐ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD: 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☐ Rotary a ☐ mud b ☐ air c ☐ reverse ☐ Other ____

3. WATER WELL USE: 1 ☐ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other ____

4. DRILLING ADDITIVES ____

5. MEASUREMENTS from 1 ☐ ground level 2 ☐ top of casing; casing height above ground level ____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	20	Sand boulders	
20	40	clay	
40	60	hard fine sand	
60	80	hard sand	
80	100	sand	

7. CONSULTANT ____

Address ____

8. WELL LOCATION SKETCH

Gst # 105022776

9. CASING: Materials 1 ☐ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☑ Plastic 5 ☐ Concrete ☐ Other ____

								units
Hole Diameter								ins
Diameter	6 5/8	4 1/2						ins
from	0	48						ft
to	56	98						ft
Thickness	1.88							ins
Weight								lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☐ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☑ New 2 ☐ Used

Perforations: steel / Plastic

Shoe(s): no

Open hole, from ____ to ____ ft Diameter ____ in

Grout: ____

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☑ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other ____

Material 1 ☐ Stainless Steel 2 ☐ Plastic ☐ Other ____

Set from ____ to ____ ft below ground level

RISER, SCREEN & BLANKS							units
Length	10'			Plastic			ft
Diam. I D	4 1/2"						ins
Slot Size	20/1000						ins
from	88			48			ft
to	98			88			ft

Fittings, top K Packer bottom Plug

Gravel Pack Natural

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☑ Pumping ☐ Other ____

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☐ Air Date 0 0 | 0 8 | 0 8 (YR MO DY)

Rate ____ USgpm Temp ____ °C SWL before test 58

Water Level 50 ft after test of 3 hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RA
sub	78-88 ft	4-10 USgp

14. WATER TYPE: 1 ☑ fresh 2 ☐ salty 3 ☑ clear 4 ☐ cloudy

colour ____ smell ____ ; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR MO DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 98 ft Well Yield 20 US gpm

Static Water Level 50 ft Artesian Flow ____ US gpm Pressure Head ____

Back filled sand

Well Head Completion welded cap

17. DRILLER PLEASE PRINT SURNAME Corley FIRST NAME Peter

Signature Peter Corley

18. CONTRACTOR,

Address Stewart Drilling
Box 928
Enderby BC

Member, B C G W A ☐ yes ☐ no ; ____

NQHR
North Okanagan Health Region

ENVIRONMENTAL HEALTH

SUBDIVISION RESPONSE SUMMARY

To: Ministry of Highways, Vernon
Regional District of North Okanagan
R.N. Shortt
T. Laursen – 3514 Enderby Mable Lake Road, Enderby, B.C. V0E 1V0

Your File#: 02-013-16051

Applicant/Agent: T. Laursen/R. Shortt

Date: July 27, 2000

scription: Part of Remainder S.W. ¼, Section 14

Site Location: Mable Lake Road/King Fisher Road, Enderby

# of Lots: Six + Remainder

Recommendations:

The granting of this recommendation is based on the proposed subdivision being in compliance with B.C. Regulation 411/85, Sewage Disposal Regulation and B.C. Regulation 262/70, Subdivision Regulations.

☒ appears to meet the requirements of the North Okanagan Health Region

☐ *does not* appear to meet the requirements of the North Okanagan Health Region

☐ requires additional supporting documentation as noted below

Open ditching system must be maintained to ensure proper surface/subsurface drainage through the site.

(Plan attached showing well locations.)

Environmental Health Officer

HEAD OFFICE:
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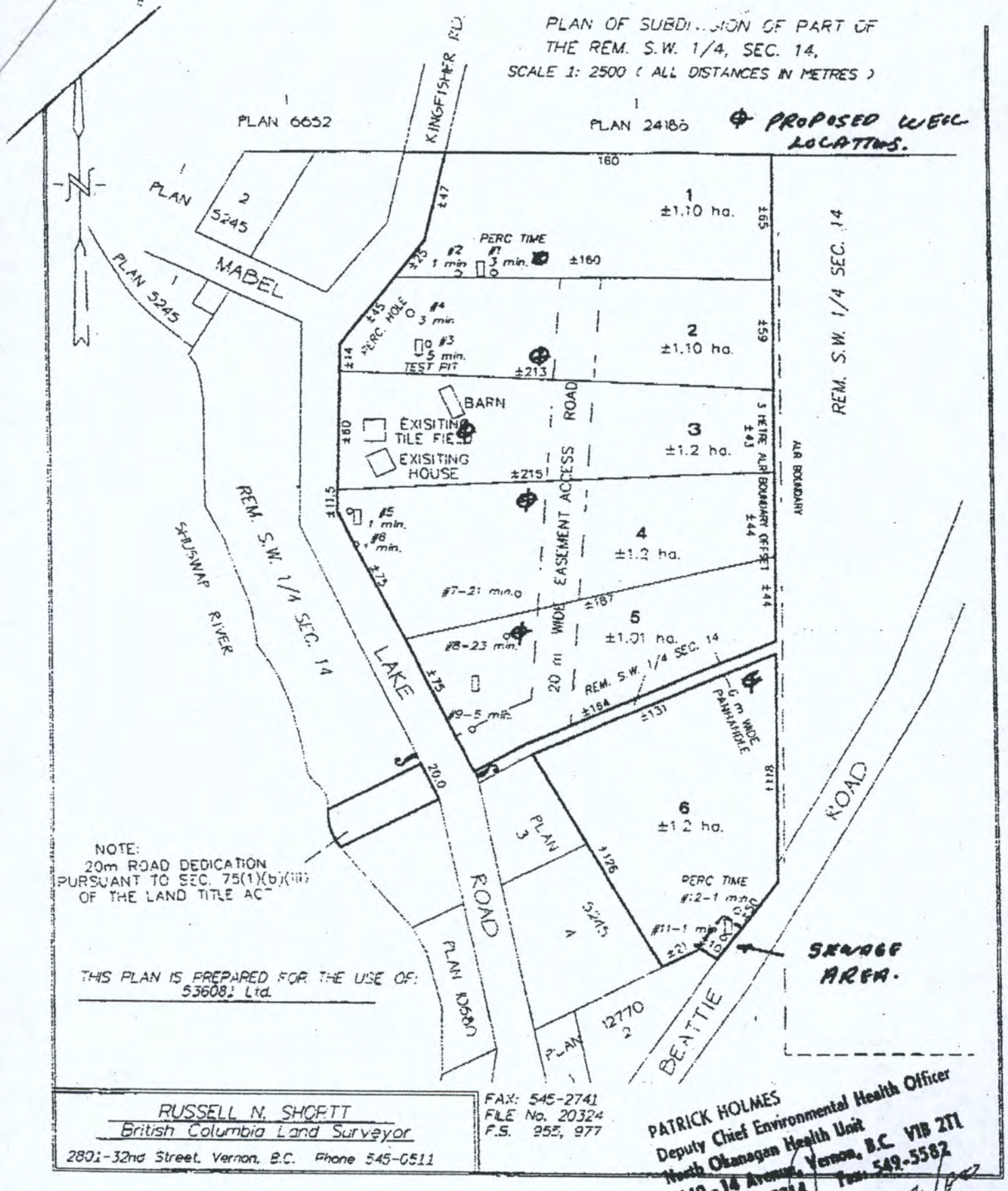
Box 520, Lumby BC V0E 2G0 (250) 547-2184
Box 100, Stn. Main, Salmon Arm BC V1E 4S4 (250) 833-4100 (FAX 832-1714)
Box 269, Revelstoke BC V0E 2S0 (250) 837-7677 (FAX 837-7696)
Box 710, Sicamous BC V0E 2V0 (250) 836-4835 (FAX 836-3166)



THIS PLAN IS PREPARED FOR THE USE OF:
536082 Ltd.

RUSSELL N. SHORTT
British Columbia Land Surveyor
2801-32nd Street, Vernon, B.C. Phone 545-0511

FAX: 545-2741
FILE No. 20324
F.S. 955, 977

PATRICK HOLMES
Deputy Chief Environmental Health Officer
North Okanagan Health Unit
1440 - 14 Avenue, Vernon, B.C. V1B 2T1
Phone: 549-5714 Fax: 549-5582

July 27/01

BCGS MAP 082L•067•1•2•1 WTN 0000085582 WELL NO. 006

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 5 SEC. ____ TP. 19 R. 6 D.L. ____ LAND DISTRICT KDYD PLAN ____

DESCRIPTIVE LOCATION Mabel Lake - Enderby LICENCE NO. ____ DATE ____

Z ____ WELL NO. ____

____ E

____ N

Z X Y NO.

NAT. TOPO. SHEET NO. ____

OWNER'S NAME 536081 LTD ADDRESS 3353 Mabel Lake Rd.

DRILLER'S NAME Stewart Drilling ADDRESS ____ DATE COMPLETED 2000/08/08

DEPTH 98' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH ____

METHOD OF CONSTRUCTION Air Rotary 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 50' ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

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 (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	20	SAND BOULDERS
20	40	CLAY
40	60	HARD FINE SAND
60	80	HARD SAND
80	100	SAND.

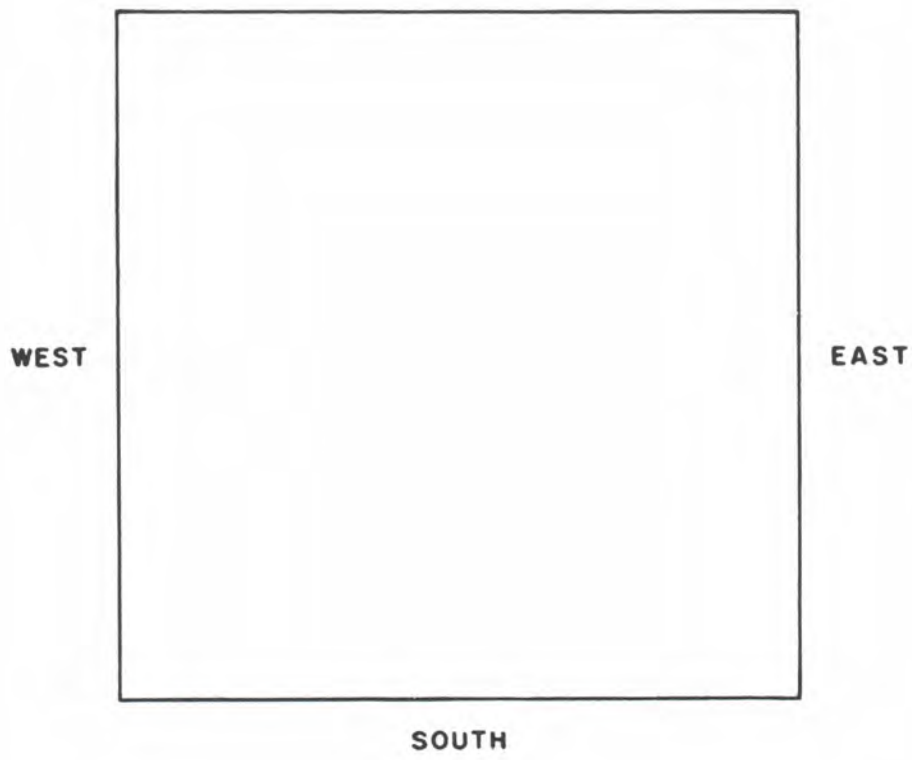
CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____



CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

Geographic location estimated using lot sketch + BC Water Resource Atlas.
118° 44' 21.8" W
50° 36' 36.9" N.

Legal confirmed through Land Title System
06/08/21

ENV 1995

97941

Wtn 85583

BC Environment — Water Management Branch, Groundwater Section

WATER WELL RECORD

Date 00/08/11 (YR/MO/DY)

BCGS MAP ____ WELL No. ____ ELEV ____ Location Accuracy ____

UTM Z ____ E ____ N ____ UTM Date 19__ Well Type ____

Owners Name & Address 536081 LTD Mabel lake Enderby BC

Legal Description & Address Lot #6

Descriptive Location 3353 Mabel lake rd

1. TYPE OF WORK 1 ☑ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD 1 ☐ Cable tool 2 ☐ Bored 3 ☑ Jetted 4 ☑ Rotary a ☐ mud b ☑ air c ☐ reverse ☐ Other ____

3. WATER WELL USE 1 ☑ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Comm. & Ind. ☐ Other ____

4. DRILLING ADDITIVES ____

5. MEASUREMENTS from 1 ☐ ground level 2 ☑ top of casing

casing height above ground level ____ ft.

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	15	Sand boulders	
15	40	clay	
40	80	fine dry sand	
80	130	fine sand	
130	140	coarse water sand	

7. CONSULTANT ____

Address ____

8. WELL LOCATION SKETCH

GST # 105022776

9. CASING: Materials 1 ☑ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete ☐ Other ____

							units
Hole Diameter	6 3/8						ins
Diameter	6 3/4						ins
from	0						ft
to	130						ft
Thickness	1.88						ins
Weight							lb/ft

Pitless unit ____ ft 1 ☐ above 2 ☐ below ground level

1 ☑ Welded 2 ☐ Cemented 3 ☐ Threaded | 1 ☑ New 2 ☐ Used

Perforations: ____

Shoe (s): ____

Open hole, from ____ to ____ ft Diameter ____ in

Grout: ____

10. SCREEN: 1 ☑ Nominal (Telescope) 2 ☐ Pipe Size

Type 1 ☐ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre ☐ Other ____

Material 1 ☐ Stainless Steel 2 ☑ Plastic ☐ Other ____

Set from 130 to 140 ft below ground level

RISER, SCREEN & BLANKS							units
Length	10'						ft
Diam. I D	4"						ins
Slot Size	20/1000						ins
from	130						ft
to	140						ft

Fittings, top K-Packer bottom plug

Gravel Pack Natural

11. DEVELOPED BY: 1 ☐ Surging 2 ☐ Jetting 3 ☑ Air 4 ☐ Bailing 5 ☑ Pumping ☐ Other ____

12. TEST 1 ☐ Pump 2 ☐ Bail 3 ☐ Air Date 00/08/11 (YR/MO/DY)

Rate ____ USgpm Temp ____ °C SWL before test 90 ft

Water Level 90 ft after test of 3 hrs

☐ DRAWDOWN in ft				☐ RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
Sub	125-130 ft	8-10 USgpm

14. WATER TYPE: 1 ☐ fresh 2 ☐ salty 3 ☐ clear 4 ☐ cloudy

colour ____ smell ____ ; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 Hardness ____ mg/L 2 Iron ____ mg/L 3 Chloride ____ mg/L 4 pH ____ Field Date ____ Lab Date ____ (YR/MO/DY)

SITE I D No ____

16. FINAL WELL COMPLETION DATA

Well Depth 140 ft Well Yield 20 US gpm

Static Water Level ____ ft Artesian Flow ____ US gpm Pressure Head ____ ft

Back filled natural sand

Well Head Completion plug

17. DRILLER PLEASE PRINT SURNAME Carlier FIRST NAME Pieter

Signature Pet Carlier

18. CONTRACTOR,

Address Stewart Drilling
Box 428
Enderby BC

Member, B C G W A ☐ yes ☐ no ; ____

NOHR
North Okanagan Health Region

ENVIRONMENTAL HEALTH

SUBDIVISION RESPONSE SUMMARY

To: Ministry of Highways, Vernon
Regional District of North Okanagan
R.N. Shortt
T. Laursen – 3514 Enderby Mable Lake Road, Enderby, B.C. V0E 1V0

Your File#: 02-013-16051

Applicant/Agent: T. Laursen/R. Shortt

Date: July 27, 2000

scription: Part of Remainder S.W. ¼, Section 14

Site Location: Mable Lake Road/King Fisher Road, Enderby

# of Lots: Six + Remainder

Recommendations:

The granting of this recommendation is based on the proposed subdivision being in compliance with B.C. Regulation 411/85, Sewage Disposal Regulation and B.C. Regulation 262/70, Subdivision Regulations.

☒ appears to meet the requirements of the North Okanagan Health Region

☐ *does not* appear to meet the requirements of the North Okanagan Health Region

☐ requires additional supporting documentation as noted below

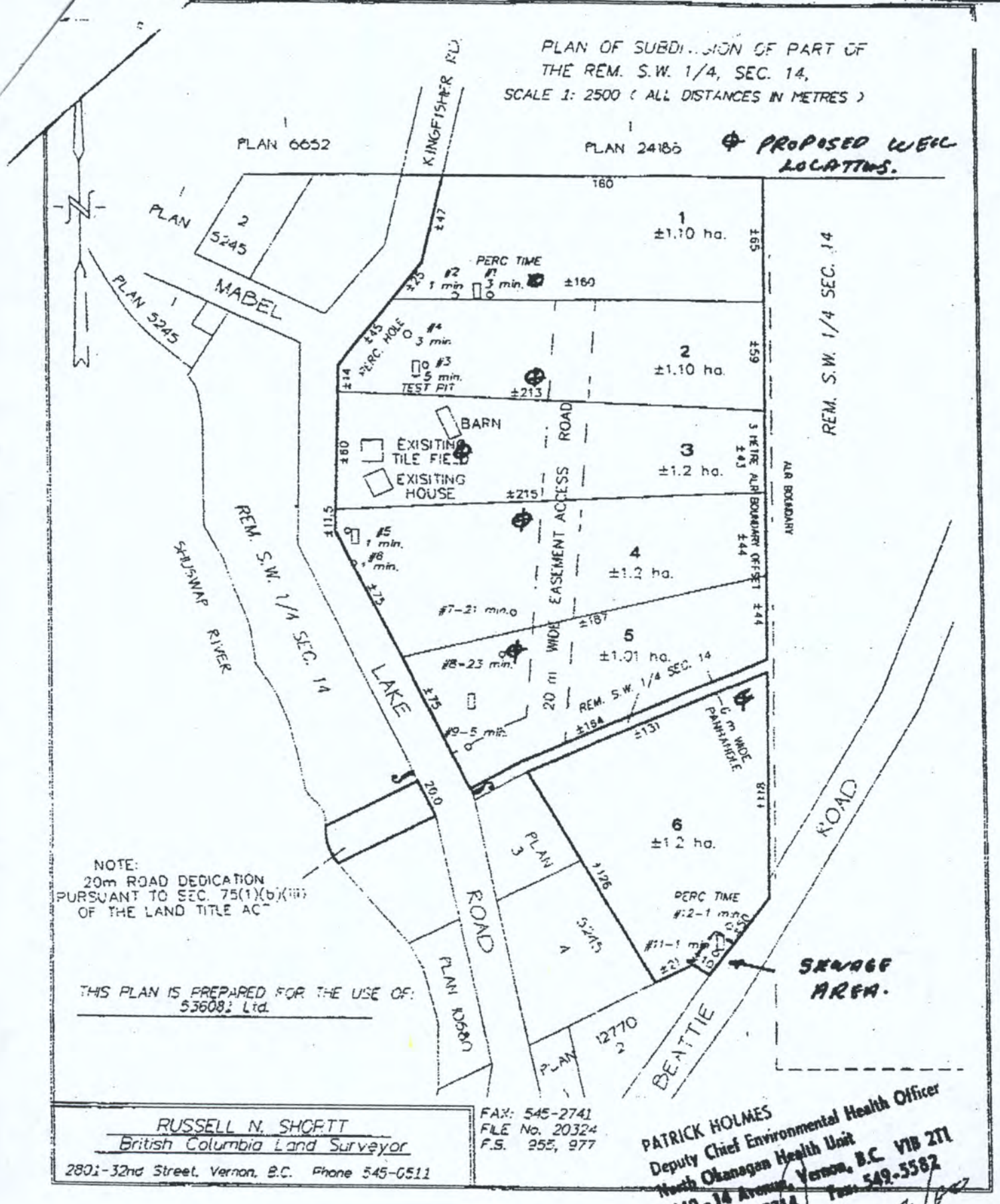
Open ditching system must be maintained to ensure proper surface/subsurface drainage through the site.

(Plan attached showing well locations.)

Environmental Health Officer

HEAD OFFICE:
1440-14th Ave., Vernon BC V1B 2T1 (250) 549-5700 (FAX 549-5582)

BRANCH OFFICES:
Box 364, Armstrong BC V0E 1B0 (250) 546-3091 (FAX 546-6821)
Box 610, Enderby BC V0E 1V0 (250) 838-7350 (FAX 838-7582)
Box 520, Lumby BC V0E 2G0 (250) 547-2164
Box 100, Stn. Main, Salmon Arm BC V1E 4S4 (250) 833-4100 (FAX 832-1714)
Box 269, Revelstoke BC V0E 2S0 (250) 837-7677 (FAX 837-7696)
Box 710, Sicamous BC V0E 2V0 (250) 836-4835 (FAX 836-3166)



RUSSELL N. SHORTT
British Columbia Land Surveyor
2801-32nd Street, Vernon, B.C. Phone 545-0511
FAX: 545-2741
FILE No. 20324
F.S. 255, 977

PATRICK HOLMES
Deputy Chief Environmental Health Officer
North Okanagan Health Unit
1440 - 14 Avenue, Vernon, B.C. V1B 2T1
Phone: 549-5714 Fax: 549-5582

July 27/01

BCGS MAP 082L•067•1•2•1 WTN 0000085583 WELL NO. 007

WATER WELL RECORD

MINISTRY OF WATER, LAND AND AIR PROTECTION — VICTORIA, BRITISH COLUMBIA

LEGAL DESCRIPTION: LOT 6 SEC. ____ TP. 19 R. 6 D.L. ____ LAND DISTRICT KDYD PLAN ____

DESCRIPTIVE LOCATION Mabel Lake - Enderby LICENCE NO. ____ DATE ____

Z ____ WELL NO. ____

____ E

____ N

Z X Y NO.

NAT. TOPO. SHEET NO. ____

OWNER'S NAME 536081 LTD ADDRESS 3353 Mabel Lake Road

DRILLER'S NAME STEWART DRILLING ADDRESS ____ DATE COMPLETED 2000/08/11

DEPTH 140' ELEVATION OF ____ ☐ ESTIMATED ☐ SURVEYED CASING DIAM. 6" LENGTH ____

METHOD OF CONSTRUCTION Air Rotary 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 90' ☐ ESTIMATED WATER LEVEL

FROM ____ ☐ MEASURED ELEVATION ____ ARTESIAN PRESSURE ____

DATE OF WATER LEVEL MEASUREMENT ____ WATER USE Domestic

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 (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	15	SAND & BOULDERS
15	40	CLAY
40	80	FINE DRY SAND.
80	130	FINE SAND
130	140	COARSE WATER SAND.

CONTENTS OF FOLDER

☐ DRILL LOG ☐ PUMP TEST DATA ☐ CHEMICAL ANALYSIS

☐ SIEVE ANALYSIS ☐ GEOPHYSICAL LOGS ☐ REPORT

OTHER ____

SOURCES OF INFORMATION ____

NORTH

WEST

EAST

SOUTH

CARD BY _____ DATE _____

ADDITIONAL DATA ADDED BY _____

REMARKS

Geographic location estimated using
Lot sketch + BC Water Resource
Atlas.
118°44' 18.4" W
50°36' 35.9" N

ENV 1995

97941