

**Proposed Assessment of the Existing Enclosure Campground Development
Water Supply Source Assessment
Step One Application**

Pursuant to Section 3(5) of
The Water Quality Regulation 82-126
Clean Environment Act

1) Name of proponent: Enclosure Campground and Resort Ltd. (Enclosure).

2) Location of drill targets (including property PID) and purpose of the proposed water supply: The Enclosure Campground and Resort has been a privately-owned seasonally operated facility since the early 1990s. Prior to this time, it is understood that the campground was operated by the province since circa the 1960s. The existing campground, which is understood to be leased Crown Land, is situated on the land parcels identified as PID 40336174; PID 40336190; PID 40336125; PID 40336141; PID 40066508; PID 40336216; and PID 40336224 and located in Derby Junction, NB at the confluence of the Northwest Miramichi and Southwest Miramichi Rivers. The campground, which occupies an approximate footprint area of 26.3 ha, is bounded by predominately undeveloped treed land to the north; the Enclosure Park including Wilson's Point Historic Site to the east; Miramichi Valley Bible Camp & Conference Centre to the south; and the Enclosure Road and two residential developments including a six bed special care home to the west.

An Environmental Impact Assessment (EIA) is required to bring the existing campground and its associated groundwater supply wells into compliance with NB Regulation 87-83 (EIA regulation) under the *Clean Environment Act*. It is understood that the applicable EIA "triggers" include "all waterworks with a capacity greater than fifty cubic metres of water daily" and "all major recreational and tourism developments" as defined in Schedule A of NB Regulation 87-83.

The campground is currently serviced by three (3) active groundwater wells. Each of these wells is connected to the on-site water system(s) and will be pump tested as outlined herein. A fourth inactive on-site well completed as an open hole (i.e. no submersible pump, pitless adaptor, etc.) and reportedly not connected to the on-site water piping will be utilized as a water level observation well in conjunction with the hydrogeological pump testing program. The approximate locations of the four (4) existing on-site wells and a possible future expansion well are indicated on Figure 1. A not to scale schematic of the layout of the existing campground is attached as Figure 2. It is noted that neither test well drilling nor pump testing will occur at the identified potential future well location as part of the WSSA proposed under the current EIA. However, details concerning the potential future development of this well (i.e. anticipated required well yield and test well drilling/pump testing program) have been included in this WSSA application for information purposes to minimize EIA and other related regulatory approval requirements if the campground expansion and required additional well were to proceed as a future project.

Given the limited information available on the three existing active wells (i.e. missing well logs, etc.), a local well drilling contractor (Green's Well Drilling) was retained to conduct an assessment of the wells in the company of EXP on September 6, 2022. The purpose of the assessment was to obtain basic information on well construction (e.g. casing depth, etc.) and the existing submersible pumps, as practical. The scope of work for each well included pulling the pump and completing a video survey. Unfortunately, limited information (e.g. no information on water bearing fractures, etc.) could be obtained from the

video surveys due to the presence of turbid water and the inability to pump the wells during the survey. Summary information on each active well in addition to the existing proposed observation well based on information obtained from the Proponent and/or the results of the initial well assessment work is provided below.

Table 1 – Summary Information on Existing Wells

Well ID	Casing Depth (m btoc)	Well Depth (m btoc)	Static Water Level (m btoc)	Comments
Well 1	10.5	29.3	11.3	Reportedly drilled on PID 40336174 in the 1960s when the campground was operated by the provincial government and services camping sites 1-69 (i.e. Loops 1, 2 and 3) which includes eight sites with electrical service only (no water). It is noted that three unserviced tenting sites are also included in this portion of the campground. No well log is available for this 150 mm well. The existing 100 mm submersible pump is a 1.5 HP 16.6 lgpm pump.
Well 2	9.8	31.1	10.0	This 125 mm well, which was drilled in 2011, services Loop 4 camping sites 70-104 and is situated on PID 40336190. It is noted that twelve unserviced tenting sites are also located in the Loop 4 area. A well log for this well was provided to EXP by NBDELG. Based on air lift testing at the time of drilling, the well has an estimated yield of 10 lgpm. The existing 100 mm submersible pump is a 0.5 HP 8.3 lgpm pump.
Well 3	8.0	22.9	10.2	This 125 mm well services the on-site licensed restaurant (i.e. Flo's Hideaway) on PID 40336125 which we understand operates on an intermittent basis throughout the year for special occasions. The Owner does not have a well log for this well; however, NBDELG located an additional stratigraphic log for the campground for a 125 mm well with an estimated yield of 10 lgpm that was drilled in 1991 which is suspected to be the restaurant well. However, this cannot be definitively confirmed as no Well Tag ID is provided on the well log.
Well 4	12.1	37.8	9.1	The Owners provided a well log for this 150 mm well which has an estimated yield of 20 lgpm based on air lift testing at the time of drilling. The well was drilled by Green's Well Drilling in 2020 on PID 40336174. We understand that a pump was never installed in this well and that it was never utilized by the Owners.

Concerning the proposed well indicated on Figure 1 and situated on PID 40336174, it is noted that this well would service the camping sites associated with a possible future expansion of the campground. This well is located approximately 170 m northwest of Well 2. It is estimated that the future campground expansion, if completed, would include the development of 30 new serviced lots; however, the precise number of lots to be serviced by the new well would need to be confirmed at the time of the completion of the work.

The study area is serviced by a few private potable water wells which are located within 500 m of the

campground. The approximate locations of these off-site wells are indicated on Figure 1. As indicated, the off-site wells nearest the existing campground wells service the residential dwellings along the Enclosure Road and the Miramichi Bible Camp which adjoins the south side of the subject property. The estimated nearest distance between these off-site wells and the campground wells is approximately 130 m and 195 m, respectively.

3) Required water quantity (in m³/day) and/or required pumping rate: Unfortunately, no information is available on the existing water usage at the campground or the pumping rates of the three (3) existing active wells to be pump tested. Furthermore, the potential sustainable yield of two of these wells cannot be confirmed as the water well logs for these wells are either unavailable or have not been definitively identified as discussed above. As such, EXP has necessarily estimated the average daily water demand of the campground as outlined below. However, it must be appreciated that the existing well pumps and water system infrastructure are understood to have been in place for many years and have accommodated the actual water demand in a satisfactory manner. Furthermore, the campground's water requirements have been met in a sustainable manner, as it is our understanding that there have neither been any significant water shortages nor complaints from neighboring well users over the operational period. Therefore, the primary purpose of proposed WSSA outlined herein is to formally collect the hydrogeological pump test data required to confirm the sustainable abstraction of groundwater from the underlying fractured bedrock and thereby bring the existing campground into regulatory compliance.

With reference to Figure 2, it is noted that the existing campground is comprised of 119 sites/lots which may be broken down as 96 lots with water and/or sewer service; eight lots with electrical service only (i.e. no water); and fifteen unserviced lots (i.e. tenting sites). Other facilities include a small administrative office with limited laundry facilities; a swimming pool; three miniature rental cabins each with no dedicated bathroom/shower; three male/female public bathroom/shower facilities; and an on-site restaurant (Flo's Hideaway) which operates on an intermittent basis for special events a few times per year. It is noted that the restaurant typically seats up to 100 guests which are serviced by 8 staff members. However, it is understood that the restaurant is licensed to accommodate up to 250 guests.

The average daily water demand of the facility during its five-month duration (i.e. May to October) seasonal operation was conservatively estimated based on peak daily domestic wastewater flow estimates provided in Appendix B of the provincial technical guidelines for on-site sewage disposal systems (NBDOH, 2020). The following wastewater flow estimates were employed:

- Recreational Vehicle (RV) Park – unserviced lots with comfort stations - 200 L/day.space
- Recreational Vehicle (RV) Park – with water and/or sewer - 450 L/day.space
- Restaurant – not open 24-hrs – 125 L/day.seat + 75 L/day.staff

Based on the above-described campground facilities and peak daily wastewater flow estimates, the average daily water demand of the existing campground was conservatively estimated to be 61.0 m³/day (9.3 Igpm). The breakdown of the total estimated average daily demand (ADD) would include 47.8 m³/day (7.3 Igpm) for the campground (i.e. 96 serviced and 23 unserviced lots) and 13.2 m³/day (2 Igpm) for the restaurant (when operational). It is noted that the estimated ADD of the existing campground based on the conservatively assumed water usage is less than 50 m³/day (7.6 Igpm). Peak demand would be met through on-site storage (e.g. pressure tanks, etc.), as and if required.

As indicated under our response to Question 2 above, the approximate location of an additional future well which may service a future expansion of the existing campground has been included in this EIA/WSSA

for screening purposes only (i.e. no test well drilling/pump testing to be completed at this time). Although the details of the potential future expansion outlined herein have not finalized, at this time it is expected that fifteen additional serviced lots (assumed to be the current unserviced tenting sites) would be added in the existing developed portion of the campground and that thirty new serviced lots and related supporting infrastructure (i.e. access roads, water system, etc.) would be constructed to the north of the existing Loop 4 within the present leased-land boundary.

Based on the above discussion, conservative water usage estimates and the number of camping sites serviced, the estimated current and potential future ADD of each of the three existing wells and the estimated future ADD of the potential additional well are outlined below in Table 2.

Table 2 – Estimated Current and Future ADD of On-site Wells

Well ID	Estimated ADD (m ³ /day)	Estimated ADD (lgpm)	Comments
Estimated Water Usage based on the Existing Facility			
Well 1	29.5	4.5	-Based on 61 serviced and 11 unserviced lots.
Well 2	18.3	2.8	-Based on 35 serviced and 12 unserviced lots.
Well 3	13.1	2.0	-Based on 100 seats and 8 staff.
Total	60.9	9.3	
Estimated Water Usage based on a Potential Future Expansion of the Facility			
Well 1	30.1	4.6	-Based on 64 serviced and 8 unserviced lots.
Well 2	21.0	3.2	-Based on 47 serviced and 0 unserviced lots.
Well 3	32.1	4.9	-Based on 250 seats and 15 staff.
Future Well	13.8	2.1	-Based on 30 new serviced lots.
Total	96.9	14.8	

As previously indicated, the above noted water demand estimates (i.e. *average daily demand*) were conservatively estimated based on *peak daily domestic wastewater flow estimates* provided in the provincial technical guidelines for on-site sewage disposal systems (NBDOH, 2020). As such, the actual existing and potential future water demand of the facility is expected to be much less than the estimated values provided in the above table. Furthermore, it is anticipated that the post-EIA operational monitoring program which will likely include flow monitoring requirements will confirm that the actual existing combined ADD of the campground and restaurant is less than 50 m³/day (7.6 lgpm).

In accordance with typical practice and subject to the approval of the existing campground under the EIA process, it is assumed that the conditions of approval will be based upon the actual measured water consumption and the recommendations provided in the Step 2 WSSA report.

4) List alternate water supply sources in the area (including municipal systems): Properties in the study area, which comprise portions of the Local Service Districts (LSDs) of South Esk and Derby, rely upon individual groundwater wells for water supply. The closest existing municipal water system services the City of Miramichi and is situated across the Northwest Miramichi River from the subject property. However, it would not be economically viable to connect to the Miramichi municipal water system due to the small number of potential end users and the requirement to cross the Northwest Miramichi River. Similarly, it would not be economically viable to utilize a surface water source (e.g. Northwest Miramichi River) given the small number of potential end users; the seasonal nature of the business; and the

extensive and expensive regulatory, engineering and treatment requirements associated with a surface water supply.

5) Discuss area hydrogeology as it relates to the project requirements: A review of regional scale geological mapping indicates that the portion of the study area in close proximity to the Miramichi River system is typically underlain by 0.5 m to 3 m thick blankets and plains comprised of sand, silt, some gravel and clay (Rampton et al., 1988). Inland areas are mapped as being underlain by a 0.5 m to 3 m thick blanket of loamy lodgment till, minor ablation till, silt, sand, gravel and rubble (Rampton et al., 1984). The till layer is, in turn, overlain by a thin discontinuous veneer of sand, some gravel and silt are rare clay. Where present, the latter layer is generally <0.5 m thick.

Based on a review of regional scale bedrock geology mapping, the study area is underlain by red to grey sandstone, conglomerate and siltstone (Potter et al., 1968).

Regarding hydrogeology, it is noted that subject property occupies a narrow peninsula of land at the confluence of the Northwest Miramichi River and the Southwest Miramichi River. Therefore, the Miramichi River system would be expected to serve as a regional groundwater flow divide and discharge zone. As such, the regional groundwater flow would be expected to generally flow from the central portion of the peninsula to the northwest, northeast and southeast towards the adjoining rivers and coincident with local topographic conditions. Superimposed on this regional flow system would be intermediate and shallow groundwater flow systems whose character would be a function of topography, soil/bedrock type and geologic structure.

Based upon local geological conditions, it is expected that the underlying fractured bedrock would form the primary groundwater supply aquifer in the study area. Based upon a review of the regional bedrock geology, it is expected that the underlying sandstone units would have the greatest aquifer potential followed by the conglomerate units. The overburden soil would not be expected to be a viable aquifer due to its relatively high fines content (i.e. low permeability) and limited thickness.

To assist with the assessment of local hydrogeological conditions, water well records for a total of eighteen (18) wells located within approximately 750 m of PID 40336174 were obtained from the NBDELG On-line Well Log System (OWLS). A copy of these well records is provided in Attachment A. No well ownership information is provided for the logs obtained from the OWLS database in consideration of provincial privacy legislation. The well depth for these wells ranged from 14 m to 55 m with an average of 28 m. Similarly, the recorded casing depth for these wells ranged from 7 m to 30 m with an average of 14 m. Well yields estimated by the air lift method ranged from 66 m³/day (10 lgpm) to 393 m³/day (60 lgpm) with an average of 138 m³/day (21 lgpm). Based on this information, it is concluded that typical well yields in the study area are favourable for the development of a campground water supply.

6) Outline the proposed hydrogeological testing and work schedule: As previously indicated, the proposed hydrogeological testing program for the current EIA will be limited to pump testing the three (3) currently active wells identified as Well 1, Well 2 and Well 3 (i.e. no test well drilling) such that the existing campground can be approved under the EIA process. However, the proposed scope of work for the hydrogeological assessment of the “proposed well” drilling target associated with the potential future campground expansion is also outlined below to minimize future regulatory approval requirements.

For the hydrogeological pump testing programs outlined below, the manual water level readings will be supplemented with data obtained from electronic water level dataloggers.

Assessment of Existing Wells - for project cost estimating purposes, the scope of work for the hydrogeological assessment of the existing wells as outlined herein was developed in consultation with NBDELG prior to the submission of the EIA registration document. A short-term step-drawdown test consisting of three pumping steps of 30 minutes to 60 minutes duration will initially be completed on each of the three (3) existing active facility wells. The results of this testing will be utilized to identify the pumping rates for the follow-up 48-hr constant rate test. For the constant rate test, each of the three existing wells will be pumped concurrently at a constant rate to allow for the assignment of the sustainable yield of each well and estimation of the aquifer hydrogeological parameters (e.g. transmissivity, etc.). It is noted that Well 4 will be utilized as a water level observation well during the constant rate test. Water quality samples will be collected from each of the pumping wells during the test at pumping times of 24-hrs and 48-hrs and analyzed for bacteriological (total/faecal coliforms and E. coli) and inorganic (i.e. general chemistry and trace metals including fluoride/mercury) parameters.

Following the cessation of the constant rate pumping test, water level recovery measurements will be obtained for the lesser of the time required for 100% recovery or 24 hrs as per the provincial WSSA requirements.

The results of the pump testing program will be summarized in the Step 2 WSSA report. It is assumed that one report will be prepared for the three (3) existing active wells.

The schedule for the hydrogeological field testing will be dependent upon the timing of the receipt of NBDELG approval to proceed with the work. Preferably, the work would be completed in the fall of 2022 prior to the winterization of the existing water system in October 2022. If the timing of the approval to proceed does not coincide with the preferred schedule, it is anticipated that the pump testing program would be completed later in the fall of 2022 or the winter of 2023 assuming free and clear access to the well locations. However, it is noted that the work program would only be completed under this scenario (i.e. during freezing conditions) if, in the judgement of the system operator, there would be no risk of causing any significant incidental damage to the existing campground infrastructure (e.g. freezing of water lines, etc.). Otherwise, the pump testing program would need to be implemented in the spring of 2023 prior to the initiation of the 2023 camping season.

Assessment of Potential Future Expansion – In the event of a future expansion of the campground involving the construction of additional serviced lots within the existing leased boundary north of Loop 4, a well drilling contractor would be retained to drill 150 mm test wells in the vicinity of the target drilling location identified on Figure 1. One test well would be initially drilled in this area, followed by a second test well drilled in close enough proximity to the initial well such that one of the wells can be utilized as a water level observation well during the pump testing of the test well with the highest potential yield as determined by air lift testing. Assuming that a suitable well yield is identified, the drilling program would be followed by the completion of step-drawdown and follow-up 48-hr constant rate pumping tests on the proposed new well as described above. During the constant rate test, the lower yielding test well in the expansion area and Well 4 would be utilized as water level observation wells. The scope of the water quality sampling program for the proposed new well would also be as described above.

Water level recovery measurements would be recorded for the lesser of the time required for 100% recovery or 24-hrs as stipulated in the provincial WSSA guidelines.

7) Identify any existing pollution or contamination hazards within a minimum radius of 500 m from the proposed drill targets. Historical land use that might pose a contamination hazard (i.e. tannery, industrial, waste disposal, etc.) should also be discussed: The Land Gazette feature of the Service New Brunswick (SNB) real property information website was used to screen the subject property and adjoining properties for the presence of any environmental related notices to assist with the assessment of potential sources of contamination in the study area. Based on this screening exercise, no environmental notices (e.g. NBDELG petroleum storage database; NBDELG remediation database; former dumpsites; etc.) were identified.

As previously indicated, it is understood based on interviews with the proponent and review of selected historical aerial photographs that the existing campground was acquired by the current owners in the early-1990s and that, prior to this time, the campground had been operated by the provincial government since circa the 1960s.

Existing land use in the study area is interpreted to be predominately residential or undeveloped woodland. As indicated in the response to Question 2, the subject property is bounded by predominately undeveloped treed land to the north; the Enclosure Park including Wilson's Point Historic Site to the east; Miramichi Valley Bible Camp & Conference Centre to the south; and the Enclosure Road and two private residences to the west.

A 500 m radius from each of the four existing campground wells in addition to a potential future well location is shown on Figure 1 (see below). As indicated on this figure, no potential sources of water supply contamination were identified within 500 m of the existing and proposed wells.

8) Identify any groundwater use problems (quantity or quality) that have occurred in the area: None currently known. As outlined below, expected well yields are adequate for the existing and proposed future development and the anticipated water quality is generally similar to that typically encountered in fractured bedrock aquifers at other locations in the province, with occasional iron and/or manganese exceedances interpreted to be related to natural background water quality.

Based on the review of data in the NBDELG OWLS Database for eighteen (18) wells located within about 750 m of the subject property as previously detailed in Question 5, the average well yield was 138 m³/day (21 l/gpm) which is more than adequate for residential developments. Furthermore, this "typical" well yield also suggests generally favourable conditions for campground developments, as evidenced by the presence of the existing facility and the adjoining Miramichi Bible Camp and Conference Centre development.

Utilizing the NBDELG OWLS Database, inorganic water quality results were obtained for eighteen (18) samples collected from selected wells within 1 km of the subject property. Bacteriological results were also obtained for sixteen (16) samples. Based on a review of this data, concentrations in excess of the New Brunswick Department of Health (NBDOH) Drinking Water Guidelines were identified for ≥15% of samples for manganese (78%) and turbidity (33%). Concerning bacteriological water quality, total coliforms were identified in 38% of samples but no E. coli detections were observed.

It is noted that the water quality results in the provincial water well database are typically reflective of samples collected at or shortly after the time of drilling and prior to adequate well disinfection and/or well development. As such, this can lead to elevated turbidity levels and total coliform detections that are not necessarily representative of the quality of the raw groundwater source.

9) Identify any watercourse(s) (stream, brook, river, wetland, etc.) within 60 m of the proposed drill targets: There are no watercourses or wetlands located within 60 m of the four existing on-site wells or the proposed future target drilling location based on an on-line review of study area mapping on GeoNB Mapviewer. As previously indicated, the subject property is located on a peninsula situated at the confluence of the Northwest Miramichi River and the Southwest Miramichi River. It is noted that the Northwest Miramichi River is situated approximately 185 m north-northwest of Well 4 and that the Southwest Miramichi River is located about 245 m southeast of Well 2. The latter watercourses flow to the northeast past the peninsula and discharge to the Miramichi River situated at the northeastern tip of the peninsula.

10) Identify site supervisory personnel involved in the source development (municipal officials, consultants and drillers): The following persons will be involved in the supervision of the proposed groundwater supply investigation:

Tracey Clark	- Owner/Administrator, Enclosure Campground (506-627-6480)
Mark Lebel	- Maintenance and Operations Manager, Enclosure Campground (506-871-4044)
Katie Gillis	- Project Manager, Hive Engineering (506-386-4897)
Robert Gallagher	- Project Hydrogeologist – EXP Services Inc. (506-857-8889)
Andy Green	- Licensed Well Driller, Green’s Well Drilling Ltd. (506-262-9355)

11) Attach a 1:10,000 map and/or recent air photo clearly identifying the following: proposed location of drill targets and property PID; domestic or production wells within a 500 m radius of the drill target(s); any potential hazards identified in Question 7: See attached Figure 1.

12) Attach a land use/ zoning map of the area (if any). Superimpose drill targets on this map: The subject property is situated within the boundaries of the LSDs of South Esk and Derby within the administrative boundaries of the Greater Miramichi Regional Service Commission (GMRSC) – Planning and Building Services division. As noted on the GMRSC website, zoning maps are not available for the LSDs.

13) Contingency plan for open loop earth energy systems: Not applicable.

References

New Brunswick Department of Health, 2020. New Brunswick Technical Guidelines for On-site Sewage Disposal Systems, Version 6, April 2020.

Potter, R. R., E. V. Jackson and J. L. Davies, 1968. Geological Map of New Brunswick, Map Number N.R.-1.

Rampton, V. N., R. C. Gauthier, J. Thibault and A. A. Seaman, 1984. Quaternary Geology of New Brunswick, Geological Survey of Canada, Memoir 416.


E:\MONIMON-22020597-A0\60 EXECUTION\65 DRAWINGS\FIGURE

SCOTT WELLS

9/8/2022 9:47 AM



No.	Issue	Date

LEGEND		
—	SUBJECT PROPERTY	
—	EXISTING PROPERTY	
	APPROXIMATE LOCATION OF SUBJECT WELL	
●	APPROXIMATE LOCATION OF OFF-SITE WELL	

No.	Revision	Date

INFORMATION ONLY

Drawn By:	SW
Dwg Standards Ckd By:	
Designed By:	RG
Design Checked By:	
Scale:	1:10 000

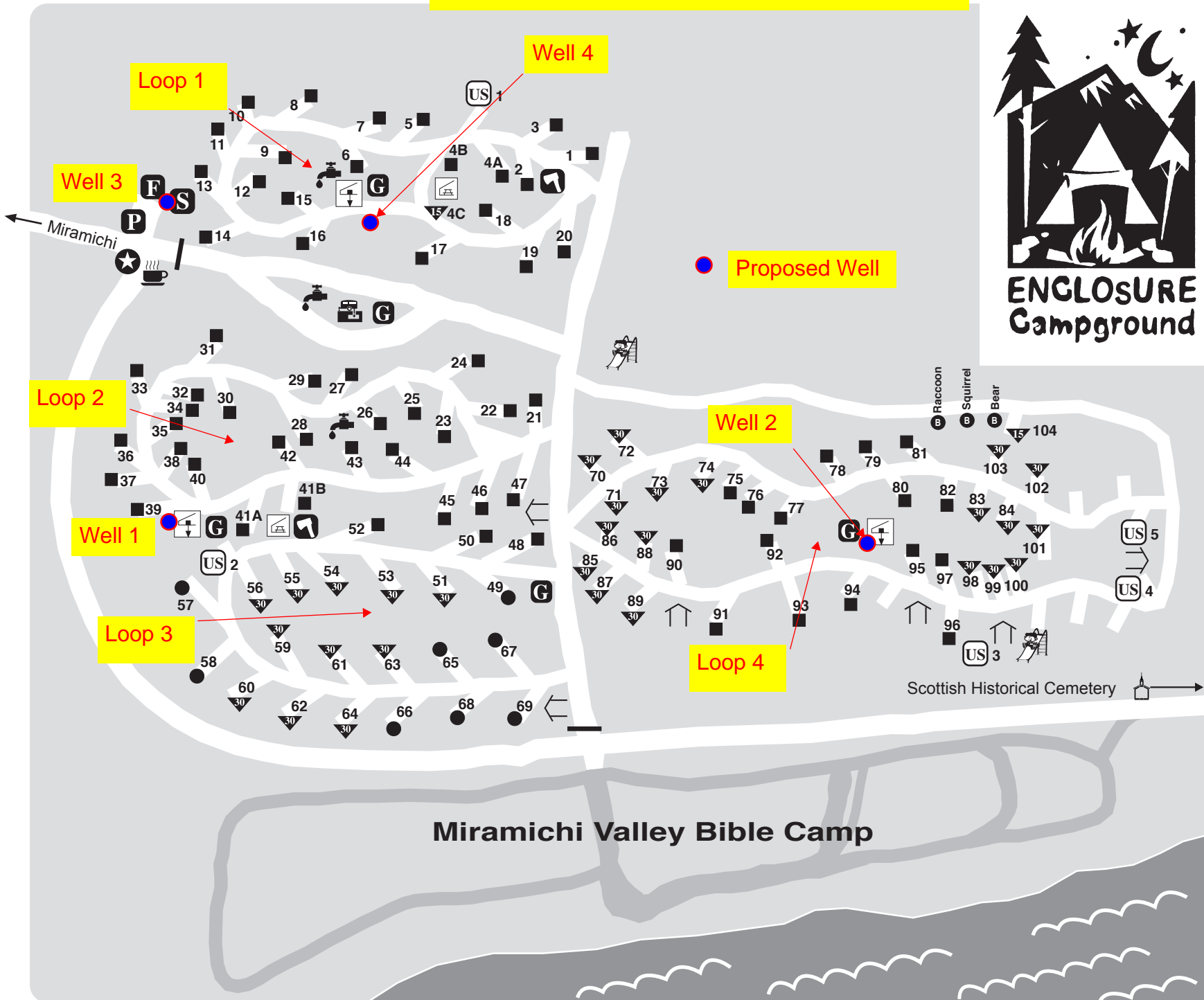
Project Title **WATER SUPPLY
 SOURCE ASSESSMENT -
 ENCLOSURE
 CAMPGROUND, DERBY
 JUNCTION, NB**

Dwg. Title

WELL LOCATION PLAN

Project No.	MON-22020597-A0	
Dwg. No.	FIG. 1	Rev. No.

Figure 2 - Schematic Layout of Existing Campground



LEGEND / LÉGENDE

- Office Bureau
- 30 AMP & Water / 30 AMP et Eau
- 15 AMP & Water / 15 AMP et Eau
- Full Service Avec Service
- Electrical Outlet / Prise de courant
- Water / Eau
- Kitchen Shelter / Cuisine couverte
- Canteen / Cantine
- Swimming Pool / Piscinél
- Washroom & Showers / Toilette et Douce
- Playground / Terrain de jeux
- Garbage Bins / Poubelle
- Wood Supply / Bois de chauffage
- Trailer Sewage Disposal / Egouts des roulottes
- Canopy / Abri
- Flo's Hide-A-Way / Licensed Restaurant
- Gate / Porte
- Parking Lot
- Bunkies
- Unserviced



Not to scale - Well Locations are Approximate

Attachment A

NBDELG Water Well Records within 750 m of PID 40336174

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Work Type	Drill Method	Work Completed
Well Use Drinking Water, Domestic	New Well	Rotary	10/30/2004

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
6608	Steel	6 inch	0ft	35ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	13ft	0 igpm	0hr	40ft	40 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
Foam	N/A	N/A
	Qty 0 ig	Intake Setting (BTC) 45ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
6608	34ft	48ft	Brown	Sandstone
6608	0ft	7ft	Brown	Sand and Shale
6608	7ft	14ft	Mix	Gravel
6608	14ft	34ft	Brown	Clay
6608	48ft	60ft	Grey	Sandstone

Overall Well Depth
60ft

Bedrock Level
34ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
6608	50ft	40 igpm
6608	45ft	10 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	10/26/2009

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
25201	Steel	5 inch	0ft	50ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	20ft	10 igpm	1hr	20ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
25201	Clay(cuttings)	5ft	50ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 60ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
25201	0ft	2ft	Brown	Topsoil
25201	2ft	12ft	Red	Clay
25201	12ft	48ft	Brown	Clay
25201	48ft	85ft	Grey	Sandstone

Overall Well Depth
85ft
Bedrock Level
48ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
25201	61ft	1 igpm
25201	82ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
25201	50ft	Septic Tank
25201	76ft	Leach Field
25201	40ft	Right of any Public Way Road

Drilled by	Work Type	Drill Method	Work Completed
Well Use Drinking Water, Domestic	New Well	Cable Tool	10/26/2009

Casing Information		Casing above ground		Drive Shoe Used?	
Well Log	Casing Type	Diameter	From	End	Slotted?
25201	Steel	5 inch	0ft	50ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	20ft	10 igpm	1hr	20ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
25201	Clay(cuttings)	5ft	50ft

Drilling Fluids Used None	Disinfectant Bleach (Javex)	Pump Installed N/A
	Qty 0 ig	Intake Setting (BTC) 60ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
25201	0ft	2ft	Brown	Topsoil
25201	2ft	12ft	Red	Clay
25201	12ft	48ft	Brown	Clay
25201	48ft	85ft	Grey	Sandstone

Overall Well Depth
85ft

Bedrock Level
48ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
25201	61ft	1 igpm
25201	82ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
25201	50ft	Septic Tank
25201	76ft	Leach Field
25201	40ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	05/05/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
25223	Steel	5 1/2 Inch	0ft	26ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	8ft	10 igpm	1hr	8ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 50ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
25223	0ft	2ft	Brown	Soil
25223	2ft	8ft	Grey	Clay
25223	8ft	12ft	Grey	Sand
25223	12ft	24ft	Grey	Clay
25223	24ft	75ft	Grey	Sandstone

Overall Well Depth
75ft
Bedrock Level
8ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
25223	40ft	2 igpm
25223	72ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
25223	50ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/20/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
25770	Steel	6 inch	0ft	34ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	15ft	40 igpm	1hr	15ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	Foam	N/A	N/A
		Qty 0 ig	Intake Setting (BTC) 34ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
25770	0ft	3ft	Brown	Fill Shale
25770	3ft	13ft	Brown	Clay
25770	13ft	15ft	Mix	Gravel
25770	15ft	23ft	Red	Clay
25770	23ft	31ft	Mix	Gravel
25770	31ft	33ft	Brown	Soft Sandstone
25770	33ft	46ft	Brown	Sandstone

Overall Well Depth
46ft

Bedrock Level
33ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
25770	38ft	7 igpm
25770	45ft	40 igpm

Setbacks		
Well Log	Distance	Setback From
25770	67ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	12/03/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
26087	Steel	5 inch	0ft	22ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	16ft	10 igpm	1hr	16ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
26087	Clay(cuttings)	5ft	22ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 50ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
26087	0ft	2ft	Brown	Topsoil
26087	2ft	8ft	Brown	Clay
26087	8ft	19ft	Grey	Clay
26087	19ft	62ft	Grey	Sandstone

Overall Well Depth
62ft
Bedrock Level
19ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
26087	42ft	2 igpm
26087	60ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
26087	30ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	06/02/2011

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
26097	Steel	5 inch	0ft	32ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
	27ft	10 igpm	1hr 27min	27ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
26097	Clay(cuttings)	5ft	32ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 70ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
26097	26ft	30ft	Brown	Sandstone
26097	0ft	2ft	Brown	Topsoil
26097	2ft	12ft	Brown	Clay
26097	12ft	26ft	Grey	Clay
26097	30ft	102ft	Grey	Sandstone

Overall Well Depth
102ft
Bedrock Level
26ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
26097	102ft	10 igpm
26097	70ft	2 igpm

Setbacks		
Well Log	Distance	Setback From
26097	50ft	Septic Tank
26097	80ft	Leach Field

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	08/28/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
26123	Steel	5 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	9ft	10 igpm	1hr	9ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
26123	Clay(cuttings)	5ft	40ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 60ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
26123	16ft	36ft	Grey	Clay
26123	0ft	2ft	Red	Topsoil
26123	2ft	16ft	Red	Clay
26123	36ft	82ft	Grey	Sandstone

Overall Well Depth
82ft
Bedrock Level
36ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
26123	55ft	2 igpm
26123	78ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
26123	189ft	Right of any Public Way Road
Setbacks measured 39 (New Construction)		

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/21/2013

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
29539	Steel	6 inch	0ft	60ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	30ft	40 igpm	1hr	30ft	40 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	12% NaOCI	Submersible
	Qty 0 ig	Intake Setting (BTC) 50ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
29539	0ft	5ft	Grey	Gravel
29539	5ft	15ft	Grey	Gravel
29539	15ft	52ft	Grey	Clay
29539	52ft	105ft	Grey	Sandstone

Overall Well Depth
105ft

Bedrock Level
52ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
29539	82ft	10 igpm
29539	95ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
29539	80ft	Septic Tank
29539	95ft	Leach Field
29539	400ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/14/2014

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
31961	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	16ft	15 igpm	0hr	16ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	12% NaOCl	Jet
	Qty 0 ig	Intake Setting (BTC) 65ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
31961	0ft	31ft	Brown	Clay and Sand
31961	31ft	82ft	Grey	Sandstone

Overall Well Depth
82ft
Bedrock Level
31ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
31961	70ft	15 igpm

Setbacks		
Well Log	Distance	Setback From
31961	95ft	Center of road
31961	65ft	Septic Tank
31961	85ft	Leach Field

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	07/05/2013

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
32764	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	19ft	15 igpm	1hr	19ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
Foam	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 90ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
32764	16ft	21ft	Brown	Sandstone
32764	0ft	11ft	Brown	Sand and Gravel
32764	11ft	14ft	Brown	Clay
32764	14ft	16ft	Grey	Mud
32764	21ft	27ft	Grey	Granite
32764	27ft	28ft	Brown	Clay
32764	28ft	31ft	Grey	Granite
32764	31ft	37ft	Grey	Clay
32764	37ft	102ft	Grey	Sandstone

Overall Well Depth
102ft

Bedrock Level
16ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
32764	46ft	3 igpm
32764	81ft	10 igpm
32764	98ft	15 igpm

Setbacks		
Well Log	Distance	Setback From
32764	172ft	Center of road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/17/2012

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
33660	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	12ft	80 igpm	1hr	12ft	60 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
Foam	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC) 40ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
33660	12ft	32ft	Brown	Clay
33660	0ft	7ft	Mix	Fill
33660	7ft	10ft	Brown	Soil
33660	10ft	12ft	Mix	Gravel
33660	32ft	36ft	Brown	Sandstone
33660	36ft	37ft	Brown	Clay
33660	37ft	46ft	Brown	Sandstone
33660	46ft	98ft	Grey	Sandstone

Overall Well Depth
98ft
Bedrock Level
32ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
33660	56ft	3 igpm
33660	76ft	10 igpm
33660	96ft	80 igpm

Setbacks		
Well Log	Distance	Setback From
33660	92ft	Center of road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37197	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	40ft	30 igpm	1hr	40ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible
	Qty 0 ig	Intake Setting (BTC) 80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37197	120ft	140ft	Brown	Clay
37197	0ft	18ft	Grey	Sandstone
37197	18ft	65ft	Brown	Clay
37197	65ft	120ft	Grey	Sandstone

Overall Well Depth
140ft

Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37197	120ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
37197	60ft	Septic Tank
37197	80ft	Leach Field
37197	75ft	Right of any Public Way Road
37197	80ft	Center of road

Drilled by	Work Type	Drill Method	Work Completed
Well Use Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37197	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	40ft	30 igpm	1hr	40ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible
	Qty 0 ig	Intake Setting (BTC) 80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37197	120ft	140ft	Brown	Clay
37197	0ft	18ft	Grey	Sandstone
37197	18ft	65ft	Brown	Clay
37197	65ft	120ft	Grey	Sandstone

Overall Well Depth
140ft

Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37197	120ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
37197	60ft	Septic Tank
37197	80ft	Leach Field
37197	75ft	Right of any Public Way Road
37197	80ft	Center of road

Drilled by	Work Type	Drill Method	Work Completed
Well Use Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37197	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	40ft	30 igpm	1hr	40ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible
	Qty 0 ig	Intake Setting (BTC) 80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37197	120ft	140ft	Brown	Clay
37197	0ft	18ft	Grey	Sandstone
37197	18ft	65ft	Brown	Clay
37197	65ft	120ft	Grey	Sandstone

Overall Well Depth
140ft

Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37197	120ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
37197	60ft	Septic Tank
37197	80ft	Leach Field
37197	75ft	Right of any Public Way Road
37197	80ft	Center of road

Drilled by	Work Type	Drill Method	Work Completed
Well Use Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37197	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	40ft	30 igpm	1hr	40ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible
	Qty 0 ig	Intake Setting (BTC) 80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37197	120ft	140ft	Brown	Clay
37197	0ft	18ft	Grey	Sandstone
37197	18ft	65ft	Brown	Clay
37197	65ft	120ft	Grey	Sandstone

Overall Well Depth
140ft

Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37197	120ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
37197	60ft	Septic Tank
37197	80ft	Leach Field
37197	75ft	Right of any Public Way Road
37197	80ft	Center of road

Drilled by	Work Type	Drill Method	Work Completed
Well Use Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground		Drive Shoe Used?	
Well Log	Casing Type	Diameter	From	End	Slotted?
37197	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	40ft	30 igpm	1hr	40ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible
	Qty 0 ig	Intake Setting (BTC) 80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37197	120ft	140ft	Brown	Clay
37197	0ft	18ft	Grey	Sandstone
37197	18ft	65ft	Brown	Clay
37197	65ft	120ft	Grey	Sandstone

Overall Well Depth
140ft

Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37197	120ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
37197	60ft	Septic Tank
37197	80ft	Leach Field
37197	75ft	Right of any Public Way Road
37197	80ft	Center of road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/26/2020

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
40998	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	30ft	20 igpm	1hr	30ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	Submersible
	Qty 0 ig	Intake Setting (BTC) 110ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
40998	55ft	118ft	Grey	Sandstone
40998	0ft	7ft	Brown	Sand
40998	7ft	25ft	Grey	Clay
40998	25ft	55ft	Brown	Sandstone
40998	118ft	124ft	Red	Claystone

Overall Well Depth
124ft

Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
40998	70ft	10 igpm
40998	105ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
40998	2000ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/12/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
42692	Steel	6 inch	0ft	58ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	19ft	59 igpm	1hr 30min	19ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
42692	25ft	33ft	Brown	Clay
42692	0ft	6ft	Brown	Fill Shale
42692	6ft	22ft	Red	Clay
42692	22ft	25ft	Brown	Sandstone
42692	33ft	40ft	Grey	Sandstone
42692	40ft	51ft	Red	Clay
42692	51ft	55ft	Grey	Sandstone
42692	55ft	56ft	Red	Clay
42692	56ft	78ft	Grey	Sandstone

Overall Well Depth
78ft
Bedrock Level
22ft

Water Bearing Fracture Zone
Well Log Depth Rate
42692 74ft 59 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Non-Drinking Water, Industrial	New Well	Rotary	11/03/2020

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
44938	Steel	6 inch	0ft	100ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	18ft	28 igpm	1hr	18ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	Submersible
	Qty 0 ig	Intake Setting (BTC) 100ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
44938	30ft	35ft	Dark brown	Soil
44938	0ft	12ft	Mix	Fill
44938	12ft	19ft	Red	Clay
44938	19ft	30ft	Brown	Sandstone
44938	35ft	45ft	Grey	Sandstone
44938	45ft	50ft	Brown	Sandstone
44938	50ft	78ft	Grey	Sandstone
44938	78ft	95ft	Red	Clay
44938	95ft	205ft	Grey	Sandstone

Overall Well Depth
205ft

Bedrock Level
19ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
44938	138ft	4 igpm
44938	182ft	8 igpm
44938	202ft	28 igpm

Setbacks		
Well Log	Distance	Setback From
44938	66ft	Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Non-Drinking Water, Industrial	New Well	Rotary	11/04/2020

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
44939	Steel	6 inch	0ft	48ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	28ft	30 igpm	1hr	28ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	Submersible
	Qty 0 ig	Intake Setting (BTC) 55ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
44939	0ft	13ft	Mix	Fill
44939	13ft	18ft	Red	Clay
44939	18ft	30ft	Brown	Sandstone
44939	30ft	35ft	Dark brown	Soil
44939	35ft	42ft	Brown	Sandstone
44939	42ft	46ft	Dark brown	Soil
44939	46ft	55ft	Brown	Sandstone
44939	55ft	62ft	Grey	Sandstone

Overall Well Depth
62ft

Bedrock Level
18ft

Water Bearing Fracture Zone
Well Log Depth Rate
44939 61ft 30 igpm

Setbacks
Well Log Distance Setback From
44939 86ft Right of any Public Way Road

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Cable Tool (CABLE TOOL)	06/18/1998
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91141400	Steel	5 inch	0ft	26ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	25ft	12 igpm	1hr	25ft	12 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC)
		60ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91141400	24ft	84ft	Grey	Sandstone
91141400	0ft	4ft	Brown	Fill
91141400	4ft	18ft	Brown	Sand
91141400	18ft	24ft	Brown	Sandstone

Overall Well Depth
84ft

Bedrock Level
22ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91141400	80ft	12 igpm
91141400	48ft	2 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed **9/16/2022**

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Cable Tool (CABLE TOOL)	02/26/1999
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91496900	Steel	5 inch	0ft	46ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	22ft	10 igpm	1hr	22ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
91496900	Clay(cuttings)	0ft	46ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0.5 ig	Intake Setting (BTC) 80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91496900	22ft	26ft	Brown	Sand
91496900	0ft	2ft	Brown	Topsoil
91496900	2ft	14ft	Brown	Clay
91496900	14ft	22ft	Red	Clay
91496900	26ft	41ft	Brown	Sandstone
91496900	41ft	94ft	Grey	Sandstone

Overall Well Depth
94ft

Bedrock Level
26ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91496900	62ft	2 igpm
91496900	90ft	10 igpm

Setbacks
There is no Setback information.

Sample Information

ALK_T(mg/L)	Al(mg/L)	As(µg/L)	B(mg/L)	Ba(mg/L)	Br(mg/L)	COND(µSIE/cm)	Ca(mg/L)	Cd(µg/L)	Cl(mg/L)	Cr(µg/L)	Cu(µg/L)	F(mg/L)	Fe(mg/L)	HARD(mg/L)	K(mg/L)	Mg(mg/L)	Mn(mg/L)	NO2(mg/L)	NO3(mg/L)	NOX(mg/L)	Na(mg/L)	Pb(µg/L)	SO4(mg/L)	Sb(µg/L)	Se(µg/L)	TURB(NTU)	Tl(µg/L)	U(µg/L)	Zn(µg/L)	pH(pH)	P =COND(µSIE/cm)	P =TDS(mg/L)	P @B(no units)	P @C(no units)	P AN(Epm)	P CAT(Epm)	P CO3(mg/L)	P DIFB(%)	P DIFC(%)	P HCO3(mg/L)	P OH(mg/L)	P SIN(no units)	E.coli P/A(P/A)	TC-P/A(P/A)
120	< 0.0250	< 1.50	0.0320	0.25	< 0.10	279	26.50	< 0.50	11	< 10	< 10	0.2750	0.0220	80.40	1.60	3.45	0.0390	< 0.05	< 0.05	< 0.05	23.60	< 1	9.79	< 1	< 1.50	* 5.44	< 1	< 0.50	< 5	8.13	254.9550	148.5380	1.67	1.63	2.9320	2.6790	0	4.51	4.5030	120	0	0.17		
28.80	< 0.0250	< 1.50	0.0230	0.1160	< 0.10	468	20.90	< 0.50	117	< 10	69	< 0.10	* 1.73	69.60	3.90	4.26	0.0890	< 0.05	1.50	1.60	60.60	1.70	10.10	< 1	< 1.50	* 11	< 1	< 0.50	20	6.48	441.8620	243.2630	0.09	1.0850	4.2470	4.2310	0	0.1820	2.8730	28.80	0	-2.0540	Ab	Pr
99.20	< 0.0250	< 1.50	0.0330	0.1420	0.1140	235	28.50	< 0.50	2.18	< 10	< 10	0.13	0.0430	80.70	1	2.34	0.76	< 0.05	< 0.05	< 0.05	18.80	< 1	12.20	< 1	< 1.50	0.31	< 1	< 0.50	< 5	8.10	211.24	125.85	-1.27	1.8910	2.3110	2.4910	1.20	-3.7640	5.3250	98	0.10	0.2670	Ab	Ab
101	< 0.0250	< 1.50	0.0390	0.14	< 0.10	229	25.50	< 0.50	1.83	< 10	< 10	0.1990	< 0.01	73	1.20	2.24	* 0.61	< 0.05	< 0.05	< 0.05	22.40	< 1	11.80	< 1	< 1.50	0.41	< 1	< 0.50	< 5	8.03	210.0910	126.7510	-1.09	1.5120	2.3320	2.4880	1	-3.2380	4.3060	99.90	0.10	0.1580	Ab	Pr
91.60	< 0.0250	< 1.50	< 0.01	0.1610	< 0.10	485	58.10	< 0.50	81	< 10	27	< 0.10	< 0.01	183	1.40	9.12	< 0.0050	< 0.05	0.13	0.18	18.90	< 1	8.32	< 1	< 1.50	< 0.20	< 1	< 0.50	20	7.54	434.9270	232.8850	-1.16	2.1090	4.3120	4.5130	0.30	-2.2710	5.4430	91.30	0	-0.0660	Ab	Ab
108	< 0.0250	< 1.50	0.0470	0.1530	< 0.10	246	23.70	< 0.50	3.17	< 10	< 10	0.2010	0.1660	74.50	1.90	3.73	* 0.13	< 0.05	< 0.05	< 0.05	26.80	< 1	9.92	< 1	< 1.50	* 1.40	< 1	< 0.50	< 5	8.21	225.26	134.8790	-1.73	1.5640	2.47	2.7210	1.60	-4.8240	4.4010	106.30	0.10	0.3310	Ab	Ab