Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

NRCB USE ONLY	Application number	Legal land description
☑ Approval ☐ Registration ☐ Authorization ☐ Amendment	RA23029	N1/2 10-35-8 W4M

APPLICATION DISCLOSURE

This information is collected under the authority of the *Agricultural Operation Practices Act* (AOPA), and is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This information is public unless the NRCB grants a written request that certain sections remain private.

Any construction prior to obtaining an NRCB permit is an offence and is subject to enforcement action, including prosecution.

I, the applicant, or applicant's agent, have read and understand the statements above, and I acknowledge that the information provided in this application is true to the best of my knowledge.

Jan 26, 2025
Date of signing

[redacted]
Signature

Schetzsle Marketing Corp.
Corporate name (if applicable)

GRAHAM SCHETZSLE
Print name

GENERAL INFORMATION REQUIREMENTS

Proposed facilities: list all proposed confined feeding operation facilities and their dimensions. Indicate whether any of the proposed facilities are additions to existing facilities. (attach additional pages if needed)

Proposed facilities	Dimensions (m) (length, width, and depth)
~~Pen 6 (2004 capacity)~~	~~61m long x 52m wide.~~
~~Pen 7 (3,~~ 450 ~~capacity)~~ Applicant decided to no longer propose these pens	~~111m wide x 61m long.~~
Catch Basin (directly south of pen 5)	55m long x 35m wide x 2m deep.

Existing facilities: list **ALL** existing confined feeding operation facilities and their dimensions

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Pen 2 (~~275~~ 250 hd capacity)	76m long x 48m wide	
Pen 3 (~~375~~ 400 hd capacity)	81m long x 69m wide.	

NRCB USE ONLY

Pens 2 and 3 were formerly cow-calf pens that the applicant wishes to permit as CFO faciliites

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Existing facilities continued	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Pen 4 (~~275~~ 250 hd capacity)	70m long x 6/m wide	
Pen 5 (200 hd capacity)	52m long x 6/m wide.	
Pens 4 and 5 were formerly used as seasonal pens that the applicant wishes to permit as CFO facilities		
Pen 1 (far west pen) will stay as a cow-calf pen, and therefore will not need to be permitted.		

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If a new facility is replacing an old facility, please explain what will happen to the old facility and when. ☐ N/A

Construction completion date for proposed facilities late summer 2025 OR summer 2026.

Additional information

There is one pen (far west), pen 1, that will used either for breeding beef purposes, or else not at all.
Pen 2, built 2007, pen 3, built 2018, pens 4 & 5, built 2022, and proposed pens 6 & 7 (2026?) will be graded and sloped, so all runoff fills into the catch basin (~~proposed~~ proposed 2025?), located straight south of pen 4.

Livestock numbers: Complete only if livestock numbers are different from what was identified in the Part 1 application. Note: if livestock numbers increase in your Part 2 application, a new Part 1 application must be submitted which may result in a loss of priority for minimum distance separation (MDS).

Livestock category and type (Available in the Schedule 2 of the Part 2 Matters Regulation)	**Permitted number**	**Proposed increase or decrease in number (if applicable)**	**Total**
Backgrounder steer calves for grass (Beef feeders)	~~1750~~ 0 currently	1750 hd	1750 hd.

Part 2 — Technical Requirements

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING *WATER ACT* LICENCE
issued by Alberta Environment and Protected Areas (EPA) for a confined feeding operation (CFO)
Date and sign one of the following four options

OPTION 1: Applying through the NRCB for both the AOPA permit and the *Water Act* licence

I **DO** want my water licence application coupled to my AOPA permit application.

Signed this ____day of _____, 20____. _____
Signature of Applicant or Agent

OPTION 2: Processing the AOPA permit and *Water Act* licence separately

1. I (we) acknowledge that the CFO will need a new water licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant the *Water Act* licence application.
5. I (we) acknowledge that any such construction or livestock populating will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide:** Water licence application number(s) in progress

Signed this 26 day of ~~December~~ January, 20~~24~~ 25. [redacted]
Signature of Applicant or Agent

OPTION 3: Additional water licence not required

1. I (we) declare that the CFO will not need a new licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. **Provide**: Water license number(s) or water conveyance agreement details _____

Signed this ____ day of _____, 20___. _____
Signature of Applicant or Agent

OPTION 4: Uncertain if *Water Act* licence is needed; acknowledgement of risk (for existing CFOs only)

1. At this time, I (we) do not know whether a new water licence is needed from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. If a new *Water Act* licence is needed, I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with additional livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant my *Water Act* licence application, if a new water licence is needed.
5. I (we) acknowledge that any such construction or livestock increase will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide**: Water license number(s) or water conveyance agreement details _____

Signed this ____ day of _____, 20____. _____

Signature of Applicant or Agent

Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

GENERAL ENVIRONMENTAL INFORMATION

(complete this section for the worst case of the existing facility which is the closest to water bodies or water wells and for each of the proposed facilities)

Facility description / name *(as indicated on site plan)*

Existing: Pen 2, 3, 4 + 5 **Proposed 1:** catch basin.

Proposed 2: ~~Pen 6 + 7~~ **Proposed 3:**

Facility and environmental risk information		Facilities				NRCB USE ONLY	
		Existing	Proposed 1	Proposed 2	Proposed 3	Meets requirements	Comments
Flood plain information	What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	☑ >1 m ☐ ≤ 1 m	☑ >1 m ☐ ≤ 1 m	☑ >1 m ☐ ≤ 1 m	☐ > 1 m ☐ ≤ 1 m	☐ YES ☐ NO ☐ YES with exemption	
Surface water information	How many springs are within 100 m of the manure storage facility or manure collection area?	0	0	0		☐ YES ☐ NO ☐ YES with exemption	
	How many water wells are within 100 m of the manure storage facility or manure collection area?	2	2	2		☐ YES ☐ NO ☐ YES with exemption	
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)		± 50m	± 50m.		☐ YES ☐ NO ☐ YES with exemption	
Groundwater information	What is the depth to the water table?	>5m	>5m	>5m		☐ YES ☐ NO ☐ YES with exemption	
	What is the depth to the groundwater resource/aquifer you draw water from?	± 80m	± 80m	± 80m		☐ YES ☐ NO ☐ YES with exemption	

Additional information (attach supporting information, e.g. borehole logs, records, etc. you consider relevant to your application)

Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

DISTANCE OF ANY MANURE STORAGE FACILITY (EXISTING OR PROPOSED) TO NEIGHBOURING RESIDENCES

Neighbour name(s)	Legal land description	Distance (m)	NRCB USE ONLY: Zoning (LUB) category	MDS category (1-4)	Distance (m)	Waiver attached (if required)	Meets regulations
Danny + Lisa Price	SE 16-35-8 W4	1300 m.					
David + Gayle Gorcak (unoccupied)	NE 9-35-8 W4	1250 m					

LAND BASE FOR MANURE AND COMPOST APPLICATION (complete only if an increase in livestock or manure production will occur)

Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	NRCB USE ONLY: Usable area (ha)	Agreement attached (if required)
Schieteske Marketing Corp.	NE 10-35-8	30 ha.	Brown(?)		
" "	SE 10-35-8	32 ha.	Brown		
" "	SW 10-35-8	53 ha	Brown.		
" " ALL	~~SW~~ SEC 3-35-8	182 ha	Brown.		
			Total		

* If you are **not** the registered landowner, you must attach copies of land use agreements signed by all landowners.

** Available manure spreading area (excluding setback areas from residences, common bodies of water, water wells, etc. as identified in Agdex 096-5 Manure Spreading Regulations)

*** Brown, dark brown, black, grey wooded, or irrigated

Additional information (attach any additional information as required)

Part 2 — Technical Requirements

NRCB | Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

RUNOFF CONTROL CATCH BASIN: Naturally occurring protective layer

*(complete a copy of this section for **EACH proposed** runoff control catch basin with a naturally occurring protective layer)*

Facility description / name *(as indicated on site plan)*

1. SMC Catch Basin (CB)
2. _____
3. _____

Determination of runoff area

Provide a plan and show how you calculated the area contributing to runoff for each catch basin

Requested space of pens 2-7 consists of ± 27000 m^2. Requires approx ± 1350 m^3 catch basin. Liner is an alternative, in order to dig deeper. OR install above ground level berm, clay.

Catch basin capacity

	Length (m)	Width (m)	Total depth (m)	Depth below ground level (m)	Slope run:rise: Inside end walls	Slope run:rise: Inside side walls	Slope run:rise: Outside walls	NRCB USE ONLY: Calculated storage capacity (excl. 0.5 m freeboard) (m^3)
1.	~~70~~ 55	~~30~~ 35	2	1.0	3	3		
2.								
3.								
							TOTAL CAPACITY	

Naturally occurring protective layer details

Thickness of naturally occurring protective layer	1.4 (m)	Provide details (as required) new soil test between 651 and 655 may be required. Liner is also an option for basin.	
Soil texture	30 % sand	28 % silt	42. % clay
Hydraulic conductivity - naturally occurring protective layer	Depth and type of soil tested ?	Hydraulic conductivity (cm/s) ?	Describe test standard used ?

Catch Basin – Design and management requirements can be found in Technical Guideline Agdex 096-101

If soil info differs per facility include additional soils page.

NRCB USE ONLY

Requirements met: ☐ YES ☐ NO

Condition required: ☐ YES ☐ NO

Report attached: ☐ YES ☐ NO

Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Naturally occurring protective layer

*(complete a copy of this section for **EACH** barn, feedlot, and storage facility for solid manure, composting materials, or compost with a naturally occurring protective layer for the liner)*

Facility description / name *(as indicated on site plan)*

1. Pen 6
2. ~~Pen 7~~

Pens 2, 3, 4 and 5 are proposed with the naturally occurring protective layer

Manure storage capacity

	Length (m)	Width (m)	Depth below ground level (m)	NRCB USE ONLY Estimated storage capacity (m^3)
1.	~~61m~~	~~52m~~	~~0~~	
2.	~~61m~~	~~114m~~	~~0~~	
			TOTAL CAPACITY	

Dimensions pens 2, 3, 4 and 5 are listed bottom of page. All are at 0 m below ground level.

☑ I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. (The AOPA requirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet.

Surface water control systems

Describe the run-on and runoff control system

Naturally occurring protective layer details

Thickness of naturally occurring protective layer	see attached _____(m)	Provide details (as required)	
Soil texture	_____% sand	_____% silt	_____% clay
Hydraulic conductivity - naturally occurring protective layer	Depth and type of soil tested	Hydraulic conductivity (cm/s)	Describe test standard used

Additional information *(attach copies of soil test reports)*

	(length, width, and depth)
Pen 2 (~~275~~ 250 hd capacity)	76m long x 48m wide
Pen 3 (~~375~~ 400 hd capacity)	81m long x 69m wide.

	(length, width, and depth)
Pen 4 (~~275~~ 250 hd capacity)	70m long x 61m wide
Pen 5 (200 hd capacity)	52m long x 61m wide.

NRCB USE ONLY

Requirements met: ☐ YES ☐ NO

Condition required: ☐ YES ☐ NO

Report attached: ☐ YES ☐ NO


12
Applicant not permitting pens 6 and 7 in this application
Google Earth
2
3
4
5
6
7
N
00 m

J Lobbezoo Engineering & Consulting Services Ltd.
PO Box 96, Monarch, AB T0L1M0

1 May 2024

JLECS File: P24009

Schetzsle Marketing Corp.
PO Box 618, 8245 Highway 12
Veteran, Alberta T0C2S0

Attention: Mr. Graham Schetzsle

Re: Geotechnical Review and Evaluation
NRCB Permitting of Proposed Feedlot Pens and Catch Basin
NE-10-035-08-W4M, near Veteran, Alberta

As requested, J Lobbezoo Engineering & Consulting Services Ltd. (JLECS) has carried out a geotechnical review and evaluation of the above-captioned site relative to the required protection of the groundwater resource, as required by the Agricultural Operation Practices Act, AB Reg. 267/2001 (hereinafter referred to as "AOPA"). This letter describes site soil conditions to support a permit application related to proposed feedlot pens and a catch basin to be located in the northwest corner area of NE-10-035-08-W4M (refer to Figure 1, attached).

In order to demonstrate the suitability of the naturally existing soils for consideration as a naturally occurring protective layer to the groundwater, six boreholes were advanced at the site on October 16, 2023. The boreholes were advanced at the approximate locations denoted as GS1-23 to GS6-23 on Figure 1, attached.

The boreholes were advanced by a truck-mounted drill rig owned and operated by Chilako Drilling Services and extended to depths ranging between 3.0 m and 4.5 m below existing grades. The boreholes were logged by Larry Delong of Chilako Drilling Services.

In general, the natural mineral soils encountered in the boreholes consisted of a 1.2 m to 2.1 m thick layer of medium to high plastic clay till overlying bedrock. The bedrock was described as a complex of sandstone, siltstone and mudstone. In the upper tableland / proposed pen area (i.e., boreholes GS1-23 to GS4-23), no evidence of free groundwater or a groundwater resource (as defined by the AOPA) was identified within the 4.5 m investigation depth. However, in the lower bench / proposed catch basin area (i.e., boreholes GS5-23 and GS6-23), groundwater was contacted in sandstone bedrock below about 3.9 m depth, and hydrostatic pressure to approximately 1.2 m depth was observed in the two boreholes.

Samples of soil collected from the screened zone of borehole GS4-23 and a composite sample from the upper 1.2 m at borehole GS5-23 were subjected to textural analyses, which was carried out by Down to Earth Laboratories in Lethbridge, Alberta. The results indicate a textural breakdown of:

Table 1: Soil Textural Analyses

Borehole/Depth	% Sand	% Silt	% Clay
GS4-23 / 1.0-1.5m	24	29	47
GS5-23 / 0-1.2m	30	28	42

To measure the *in situ* permeability of the subsurface soils in the upper tableland / proposed pen area, a 50 mm diameter PVC monitoring well was constructed in borehole GS4-23. The test well was screened from 1.0 m to 2.2 m depth. Well saturation of the 50 mm diameter monitoring well was carried out by filling the monitoring well to the top for several consecutive days. After several days of testing, a 24-hour water drop of 0.31 m was determined at GS3-23.

To calculate the permeability of the screened portion of the clay till strata at the test well location, a modified falling head test (as outlined in the USBR Engineering Geology Field Manual Volume 2 [2001]) was used. The input variables and output data are outlined on the attached In Situ Permeability Test report. The results of the permeability testing indicate an *in situ* hydraulic conductivity, k_s, of 8.6×10^{-8} cm/s at GS4-23.

Using the measured permeability of the clay stratum, the 1.2 m of clay screened at GS4-23 is estimated to represent the equivalent of approximately 14 m of naturally occurring materials having a hydraulic conductivity of 1×10^{-6} cm/s (the reference standard in AOPA). This represents natural material protection in excess of the minimum requirements outlined by the AOPA for solid manure storage (minimum 2 m, Section 9.5-c, and catch basins (minimum 5 m, Section 9.5-b).

Proposed Catch Basin

The proposed catch basin location is located at the base of a slope, at a location adjacent to an intermittent creek. As there is only about 1.2 m of clay overburden at the proposed catch basin location, the catch basin would need to be built up above the existing grade, and separated from the intermittent creek with a suitable berm in order to maintain the AOPA-mandated separation requirement from a *common body of water*, as outlined in Section 7.1-c) or Section 7.3-b of the AOPA. In this case, the existing near surface clay soil is considered suitable for construction of the earthen berm, or the lining of an above-ground catch basin, though further laboratory permeability testing would be required to support this approach.

Alternatively, consideration can also be given to the construction of a shallow excavated catch basin located closer to the feedlot pens at the crest of the slope. For consideration of a *naturally occurring liner*, the depth of the excavated catch basin should be limited to 1 m, and confirmatory test pits should be excavated at the determined catch basin location to confirm the additional presence of a minimum of 0.5 m of clay till below the base of the catch basin excavation. If necessary, a perimeter berm can be constructed along the south side of the catch basin using the excavated clay till soils to reduce the excavation depth of the new catch basin.

JLECS

Conclusion

Based on the results of the current investigation, permeability testing, and our understanding of the site and proposed development at the site, it is JLECS's opinion that the naturally occurring materials within the upper tableland area satisfy the AOPA requirements for permitting the proposed pens (solid manure storage) and catch basin at this location.

Further, while it may be more difficult to suitably site the catch basin on the lower bench near the intermittent creek, it is expected that the near surface clay till will be suitable for use as a compacted clay liner. In this case, further laboratory permeability testing of the clay soil would be required to support the NRCB permit application for the catch basin. JLECS can provide this testing upon request.

We trust that this report satisfies your present requirements. Should you have any questions, please contact the undersigned at your convenience.

Yours truly,

J Lobbezoo Engineering & Consulting Services Ltd.

PROFESSION[redacted] ALBERTA
[redacted]
1 May 2024

John Lobbezoo, P.Eng.
Principal Geotechnical Engineer

PERMI[redacted]RACTICE
J LOBBE[redacted]INEERING &
CONSUL[redacted]RVICES LTD.
RM SIGNATURE: [redacted]
RM APEGA ID #: 110450
DATE: 1 May 2024
PERMIT NUMBER: P016456
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Attachments
- Figure 1 Borehole Locations
- In Situ Permeability Test Calculations
- Soil Profile and Parent Material Description, Chilako Drilling Services

Figure 1: Borehole Locations Proposed Feedlot Pens & Catch Basin

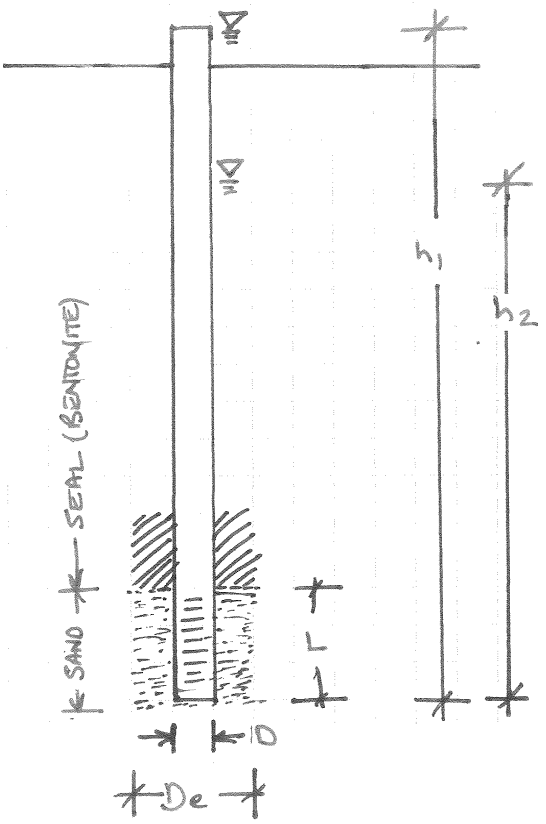
GS4-23

In Situ Permeability Test

Modified Falling Head Permeability Equation

$$K_s = \frac{r^2}{2\ell\Delta t}\left[\frac{\sinh^{-1}\frac{\ell}{r_e}}{2}\ln\left[\frac{2H_1-\ell}{2H_2-\ell}\right]-\ln\left[\frac{2H_1H_2-\ell H_2}{2H_1H_2-\ell H_1}\right]\right]$$

taken from USBR Engineering Geology Field Manual Volume 2 (2001)



GS4-23 - Schetzsle Marketing Corp.

JLECS File: P24009

INPUT VARIABLES

Terms	Value	Definition
D	0.0520	diameter of standpipe (m)
De	0.1500	diameter of borehole (m)
L	1.20	length of sand section (m)
h1	2.50	initial height of water above base of hole (m)
h2	2.19	final height of water above base of hole (m)
t	24.0	time of test (h)

k_s = 8.6E-08 cm/sec

CHILAKO DRILLING SERVICES LTD

Box 942 Coaldale, Alberta, T1M 1M8
(403) 345-3710

SOIL PROFILE AND PARENT MATERIAL DESCRIPTION

Site Location: NE10-35-8W4, Schetzsle Marketing Corp Date: 16-Oct-23

Hole #	Location	Depth	Texture	Moisture	Geological	Sample	Remarks
GS1-23	0495698	0-1.0	CL-C	SM	Till		
	5760502	1.0-1.4	CL	SM	Till		Stiff, med-high plastic
		1.4-2.1	Sandstone	SM	Bedrock		Fractured, oxidized
		2.1-4.5	Siltstone	SM	Bedrock		
GS2-23	0495691	0-1.2	CL-C	SM	Till		Stiff, med-high plastic
	5760607	1.2-2.0	CL	M	Till		
		2.0-3.0	Mudstone	SM	Bedrock		Fractured, oxidized
GS3-23	0495583	0-0.6	CL	M	Till		
	5760542	0.6-2.1	CL-C	M	Till		Mixed with sand and gravel
		2.1-3.0	Siltstone	M	Bedrock		Stiff, olive, oxidized
GS4-23	0495658	0-1.5	CL-C	M	Till	1.0-1.5	Stiff, med plastic, brown
	5760578	1.5-2.2	Mudstone	M	Bedrock	1.5-2.0	Olive
		2.2-3.0	Siltstone	M	Bedrock		
							50mm H.C. Well installed to 2.2m BGS
							Screen: 2.2-1.2m
							Sand: 2.2-1.0m
							Bentonite: 1.0-0.0m
							Stickup: 0.3m
							Hole Diameter: 0.15m
GS5-23	0495595	0-1.2	C	M	Lac	1.0-1.2	Stiff, high plastic, dark brown, bulk 0.5-1.2
	5760407	1.2-1.4	C	M	Lac		Stiff, high plastic, gray
		1.4-3.4	Mudstone	M	Bedrock		
		3.4-4.5	Sandstone	Sat	Bedrock		Sat@3.9m with artesian pressure to 1.2m
GS6-23	0495572	0-1.2	C	M	Lac		Stiff, high plastic, dark brown
	5760436	1.2-3.1	Mudstone	M	Bedrock		Soft bedrock, gray brown
		3.1-4.0	Sandstone	M	Bedrock		Soft bedrock, gray
		4.0-4.5	Sandstone	Sat	Bedrock		Soft bedrock, gray, artesian pressure @ 1.2m

Legend:
- L Loam
- C Clay
- S Sand
- Gr. Gravel
- Si Silt
- F Fine (sand)
- VF Very Fine (sand)

Eg. VFSCL = Very Fine Sandy Clay Loam