

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)

NRCB USE ONLY	Application number	Legal land description
<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Registration <input type="checkbox"/> Authorization <input type="checkbox"/> Amendment	<u>RA04009D</u>	<u>sw 21-33-23-w4</u>

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.

Apr. 10 / 19.
Date of signing

D. Kniewel
Signature

Kniewel Farms Ltd.
Corporate name (if applicable)

Debbie Kniewel
Print name

GENERAL INFORMATION REQUIREMENTS

Proposed facilities. List all proposed confined feeding operation facilities and their measurements, including if it is an addition to an existing facility (attach additional pages if needed)

Proposed manure collection areas & manure storage facilities	Dimensions (m)
<u>N/A.</u>	

Existing facilities. List ALL existing confined feeding operation facilities and their measurements (use additional pages if needed)

Existing barns, manure collection areas & manure storage facility	Dimensions (m)	NRCB USE ONLY
<u>Layer Barn #1</u>	<u>12.2m X 38.1m.</u>	
<u>Layer Barn #2</u>	<u>12.2m X 33.5m.</u>	
<u>Pullet Barn.</u>	<u>11m X 31.1m.</u>	

NRCB USE ONLY



234

Image © 2019 DigitalGlobe

⊗ Water well





Water Well Drilling Report

House

View in Imperial Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 141619
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1949/08/04

GOWN ID

Well Identification and Location						Measurement in Metric	
Owner Name KNIEVEL, A.	Address TROCHU		Town	Province	Country	Postal Code	
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block
SW	21	33	23	4			
Measured from Boundary of			GPS Coordinates in Decimal Degrees (NAD 83)			Elevation	
_____ m from _____			Latitude <u>51.841928</u> Longitude <u>-113.211501</u>			_____ 867.16 m	
_____ m from _____			How Location Obtained _____			How Elevation Obtained _____	
			Map _____			Estimated _____	

Drilling Information	
Method of Drilling Drilled	Type of Work Federal Well Survey
Proposed Well Use Domestic & Stock	

Formation Log		Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary			Measurement in Metric
Recommended Pump Rate	0.00 L/min		
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1949/08/04		5.49	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
18.29 m				
Borehole				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	18.29		
Surface Casing (if applicable)		Well Casing/Liner		
Unknown				
Size OD :	15.24 cm	Size OD :	0.00 cm	
Wall Thickness :	0.000 cm	Wall Thickness :	0.000 cm	
Bottom at :	0.00 m	Top at :	0.00 m	
		Bottom at :	0.00 m	
Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
Perforated by _____				
Annular Seal				
Placed from 0.00 m to 0.00 m				
Amount _____				
Other Seals				
Type		At (m)		
Screen Type				
Size OD : 0.00 cm				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Fittings		Bottom Fittings		
Pack				
Type		Grain Size		
Amount _____				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name UNKNOWN DRILLER	Copy of Well report provided to owner Date approval holder signed



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 141619

GoA Well Tag No.

Drilling Company Well ID

Date Report Received 1949/08/04

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name KNIEVEL, A.		Address TROCHU			Town		Province		Country		Postal Code
Location	1/4 or LSD SW	SEC 21	TWP 33	RGE 23	W of MER 4	Lot	Block	Plan	Additional Description		
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)						
_____ m from _____					Latitude <u>51.841928</u> Longitude <u>-113.211501</u>					Elevation <u>867.16 m</u>	
_____ m from _____					How Location Obtained					How Elevation Obtained	
					Map					Estimated	

Additional Information										Measurement in Metric	
Distance From Top of Casing to Ground Level _____ cm											
Is Artesian Flow _____					Is Flow Control Installed _____						
Rate _____ L/min					Describe _____						
Recommended Pump Rate _____ 0.00 L/min					Pump Installed Yes _____					Depth _____ m	
Recommended Pump Intake Depth (From TOC) _____ 0.00 m					Type FORCE _____					Make _____ H.P. _____	
										Model (Output Rating) _____	
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____				
Gas _____					Depth _____ m		Geophysical Log Taken _____				
										Submitted to ESRD _____	
Additional Comments on Well										Sample Collected for Potability _____	Submitted to ESRD _____
OWNER REPORTS CLEAR, MED-HARD WATER											

Yield Test				Taken From Ground Level			Measurement in Metric
				Depth to water level			
Test Date	Start Time	Static Water Level					
1949/08/04	12:00 AM	5.49 m					
				Pumping (m)	Elapsed Time	Recovery (m)	
					Minutes:Sec		
Method of Water Removal							
Type Pump _____							
Removal Rate _____ L/min							
Depth Withdrawn From _____ 0.00 m							
If water removal period was < 2 hours, explain why							

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well	Certification No
UNKNOWN NA DRILLER	1
Company Name	Copy of Well report provided to owner
UNKNOWN DRILLER	Date approval holder signed

Barn original



Water Well Drilling Report

View in Imperial **Export to Excel**

GIC Well ID 141621
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received 1982/01/18

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric		
Owner Name KNEIVEL, PHILIP		Address P.O. BOX 126 TROCHU			Town		Province		Country		Postal Code	
Location	1/4 or LSD SW	SEC 21	TWP 33	RGE 23	W of MER 4	Lot	Block	Plan	Additional Description			
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation _____ m		
_____ m from					Latitude <u>51.834654</u> Longitude <u>-113.211663</u>					How Elevation Obtained		
_____ m from					How Location Obtained					Not Obtained		
					Map							

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
8.23		Brown Clay & Rocks	
9.45		Blue Clay & Rocks	
17.98		Brown Soft Sandstone	
18.29		Hard Formation	
21.95		Brown Sandstone	
22.25		Hard Formation	
36.58		Gray Sandstone	

Yield Test Summary			Measurement in Metric
Recommended Pump Rate			45.46 L/min
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1981/11/25	68.19	12.80	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
36.58 m		1981/11/23	1981/11/25	
Borehole				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	36.58		
Surface Casing (if applicable)		Well Casing/Liner		
		Steel		
Size OD :	0.00 cm	Size OD :	12.70 cm	
Wall Thickness :	0.000 cm	Wall Thickness :	0.396 cm	
Bottom at :	0.00 m	Top at :	0.00 m	
		Bottom at :	32.31 m	
Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
23.16	32.31	0.318		76.20
Perforated by Torch				
Annular Seal Puddled Clay				
Placed from 0.00 m to 0.00 m				
Amount _____				
Other Seals				
Type		At (m)		
Screen Type				
Size OD : 0.00 cm				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Fittings _____		Bottom Fittings _____		
Pack				
Type _____		Grain Size _____		
Amount _____				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name PRAIRIE TO PINE	Copy of Well report provided to owner Date approval holder signed



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 141621
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/01/18

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric
Owner Name KNEVEL, PHILIP	Address P.O. BOX 126 TROCHU			Town	Province	Country	Postal Code			
Location	1/4 or LSD SW	SEC 21	TWP 33	RGE 23	W of MER 4	Lot	Block	Plan	Additional Description	
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					
_____ m from _____					Latitude <u>51.834654</u> Longitude <u>-113.211663</u>			Elevation _____ m		
_____ m from _____					How Location Obtained			How Elevation Obtained		
Map					Not Obtained					

Additional Information										Measurement in Metric	
Distance From Top of Casing to Ground Level _____ cm					Is Artesian Flow _____					Is Flow Control Installed _____	
Rate _____ L/min					Describe _____						
Recommended Pump Rate _____ 45.46 L/min					Pump Installed _____					Depth _____ m	
Recommended Pump Intake Depth (From TOC) _____ 27.43 m					Type _____					Make _____	H.P. _____
					Model (Output Rating) _____						
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____				
Gas _____					Depth _____ m		Geophysical Log Taken _____				
					Submitted to ESRD _____						
Additional Comments on Well					Sample Collected for Potability _____		Submitted to ESRD _____				
DRILLER REPORTS MED-HARD WATER											

Yield Test				Taken From Ground Level	Measurement in Metric
				Depth to water level	
Test Date 1981/11/25	Start Time 12:00 AM	Static Water Level 12.80 m		Drawdown (m)	Recovery (m)
				Elapsed Time Minutes:Sec	
Method of Water Removal					
Type <u>Pump</u>					
Removal Rate <u>68.19 L/min</u>					
Depth Withdrawn From <u>32.31 m</u>					
If water removal period was < 2 hours, explain why					

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name PRAIRIE TO PINE	Copy of Well report provided to owner Date approval holder signed

Bam deepened.



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 141620
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/02/21

GOWN ID

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

Well Identification and Location										Measurement in Metric		
Owner Name KNEVEL, PHILIP		Address TROCHU			Town		Province		Country		Postal Code	
Location	1/4 or LSD SW	SEC 21	TWP 33	RGE 23	W of MER 4	Lot	Block	Plan	Additional Description			
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)							
_____ m from					Latitude <u>51.834654</u> Longitude <u>-113.211663</u>					Elevation _____ m		
_____ m from					How Location Obtained					How Elevation Obtained		
					Map					Not Obtained		

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic & Stock	

Formation Log		Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description
7.62		Brown Sandy Till & Clay
9.14		Gray Clayey Till
24.99		Brown Sandstone
33.83		Gray Sandstone
37.19		Gray Shale
38.40		Gray Sandy Shale
47.85		Gray Sandy Shale
49.99		Coal
51.82		Gray Shale
54.86		Gray Shale
68.58		Gray Sandy Shale
78.94		Gray Sandstone
81.99		Gray Shale
96.32		Gray Shale
96.62		Gray Hard Sandstone
99.67		Gray Sandy Shale
100.58		Gray Sandstone
102.41		Gray Shale
102.72		Gray Sandstone
114.91		Gray Sandstone
115.82		Gray Hard Sandstone
119.79		Gray Sandstone
121.92		Gray Shale

Yield Test Summary			Measurement in Metric
Recommended Pump Rate			18.18 L/min
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1983/01/12	15.91	15.15	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
121.92 m			1983/01/12	
Borehole				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	121.92		
Surface Casing (if applicable)		Well Casing/Liner		
Steel		Plastic		
Size OD :	13.97 cm	Size OD :	11.43 cm	
Wall Thickness :	0.620 cm	Wall Thickness :	0.000 cm	
Bottom at :	36.88 m	Top at :	0.00 m	
		Bottom at :	121.92 m	
Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
54.86	121.92	0.635		20.32
Perforated by Machine				
Annular Seal Driven				
Placed from 0.00 m to 0.00 m				
Amount _____				
Other Seals				
Type		At (m)		
Screen Type				
Size OD : 0.00 cm				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Fittings _____		Bottom Fittings _____		
Pack				
Type _____		Grain Size _____		
Amount _____				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name LOUSANA WATER WELLS (1987) LTD.	Copy of Well report provided to owner Date approval holder signed



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 141620
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/02/21

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric
Owner Name KNIEVEL, PHILIP	Address TROCHU			Town		Province		Country		Postal Code
Location	1/4 or LSD SW	SEC 21	TWP 33	RGE 23	W of MER 4	Lot	Block	Plan	Additional Description	
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					
_____ m from _____					Latitude <u>51.834654</u> Longitude <u>-113.211663</u>			Elevation _____ m		
_____ m from _____					How Location Obtained			How Elevation Obtained		
					Map			Not Obtained		

Additional Information										Measurement in Metric
Distance From Top of Casing to Ground Level _____ cm										
Is Artesian Flow _____					Is Flow Control Installed _____					
Rate _____ L/min					Describe _____					
Recommended Pump Rate _____ 18.18 L/min					Pump Installed _____		Depth _____ m			
Recommended Pump Intake Depth (From TOC) _____ 106.68 m					Type _____		Make _____		H.P. _____	
										Model (Output Rating) _____
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____			
Gas _____					Depth _____ m		Geophysical Log Taken _____			
										Submitted to ESRD _____
Additional Comments on Well										Sample Collected for Potability _____
DRILLER REPORTS SOFT WATER										Submitted to ESRD _____

Yield Test			Taken From Ground Level		Measurement in Metric
			Depth to water level		
Test Date 1983/01/12	Start Time 12:00 AM	Static Water Level 15.15 m			
			Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
Method of Water Removal					
Type <u>Pump</u>					
Removal Rate <u>15.91 L/min</u>					
Depth Withdrawn From <u>30.48 m</u>					
If water removal period was < 2 hours, explain why					

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name LOUSANA WATER WELLS (1987) LTD.	Copy of Well report provided to owner Date approval holder signed

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)

GENERAL WATER INFORMATION – EXISTING Use the existing manure storage facility that is closest to a common body of water or water well			NRCB USE ONLY	
			Comments	Meets regulations
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?	>5 (m)	<input checked="" type="checkbox"/> Estimated <input type="checkbox"/> From records		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
Springs, wells, and surface water information				<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
a. How many springs are within 100 m of manure storage facilities or manure collection areas?		0		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
b. How many water wells are within 100 m of the manure storage facilities or manure collection areas?		2		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
c. What is the shortest distance from an manure collection or storage facility to a surface water body? (ie, lake, creek, slough, seasonal, etc.)		none		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
Groundwater information				
a. What is the depth to bedrock?	33.8 (m)	<input type="checkbox"/> Estimated <input type="checkbox"/> Measured <input checked="" type="checkbox"/> Drilling reports	N/A	
c. What is the shallowest depth to the uppermost groundwater resource?	22.25 (m)	<input type="checkbox"/> Estimated <input type="checkbox"/> Measured <input checked="" type="checkbox"/> Drilling reports		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption

Additional information: (attach borehole logs and records, as required)

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)

SOLID MANURE, COMPOST & COMPOSTING MATERIALS: Barns, feedlots & storage facilities - Concrete liner

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

Facility description / name (as indicated on site plan)

1. Layer Barn #1

2. Layer Barn #2

3. Pullet Barn.

Manure storage capacity

	Length (m)	Width (m)	Estimated storage capacity (m ³)	Depth below grade to the bottom of the liner (m)
1.	12.2	38.1		0
2.	12.2	33.5		0
3.	11.0	31.1		0

NRCB USE ONLY

Depth to water table: _____ Requirements met: YES NO

Depth to UGR: _____ Requirements met: YES NO

ERST completed: YES NO

Groundwater risk level: _____ Surface Water risk level: _____

UGR: Uppermost Groundwater Resource as defined under AOPA's *Standards and Administration Regulation*.

Surface water control systems

- Under roof: Surface water will be controlled by the walls and roof of the building and by the finished landscaping.
- Outdoor: Describe the run-on and runoff control system proposed for feedlots and outdoor manure storage facilities

NRCB USE ONLY

Requirements met: YES NO

Details/comments:

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)

SOLID MANURE, COMPOST & COMPOSTING MATERIALS: Barns, feedlots & storage facilities - Concrete liner (cont.)

Concrete liner details

Concrete thickness 5"	Provide details:
Concrete strength 25mpa 28day.	Provide details:
Method of sulphate protection Type 50 or Equiv.	Provide details:
Concrete reinforcement size and spacing wire mesh.	Provide details:

Additional information:

NRCB USE ONLY

Technical guideline requirements met: YES NO

Construction plans approved by professional engineer: YES NO Condition required: YES NO

Comments: