

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	BA23011	NE 28-61-27 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.

2023/12/18

 Date of signing
 Yoke Farm Ltd

 Corporate name (if applicable)



 Signature
 Reint Boelman

 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)
barn for calves and replacements	44x36

Existing facilities: list ALL existing confined feeding operation facilities and their dimensions		
Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
lagoon	50x50x4	
dairy barn	108x23	
dry manure pile	22x25	

NRCB USE ONLY

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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

The old calf barn will be dismantled and the new building will be using up some of that space left by the old barn

Construction completion date for proposed facilities weather permitting Fall of 2026

Additional information

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
milking cows plus associated dries and	120	30	150
replacements			

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 Parks (AEP) 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 AEP 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 AEP'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 AEP 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 AEP'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.

Signed this ____ day of _____, 20____.

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 AEP under the *Water Act* for the development or activity proposed in this AOPA application.

Signed this 19 day of December, 2023.

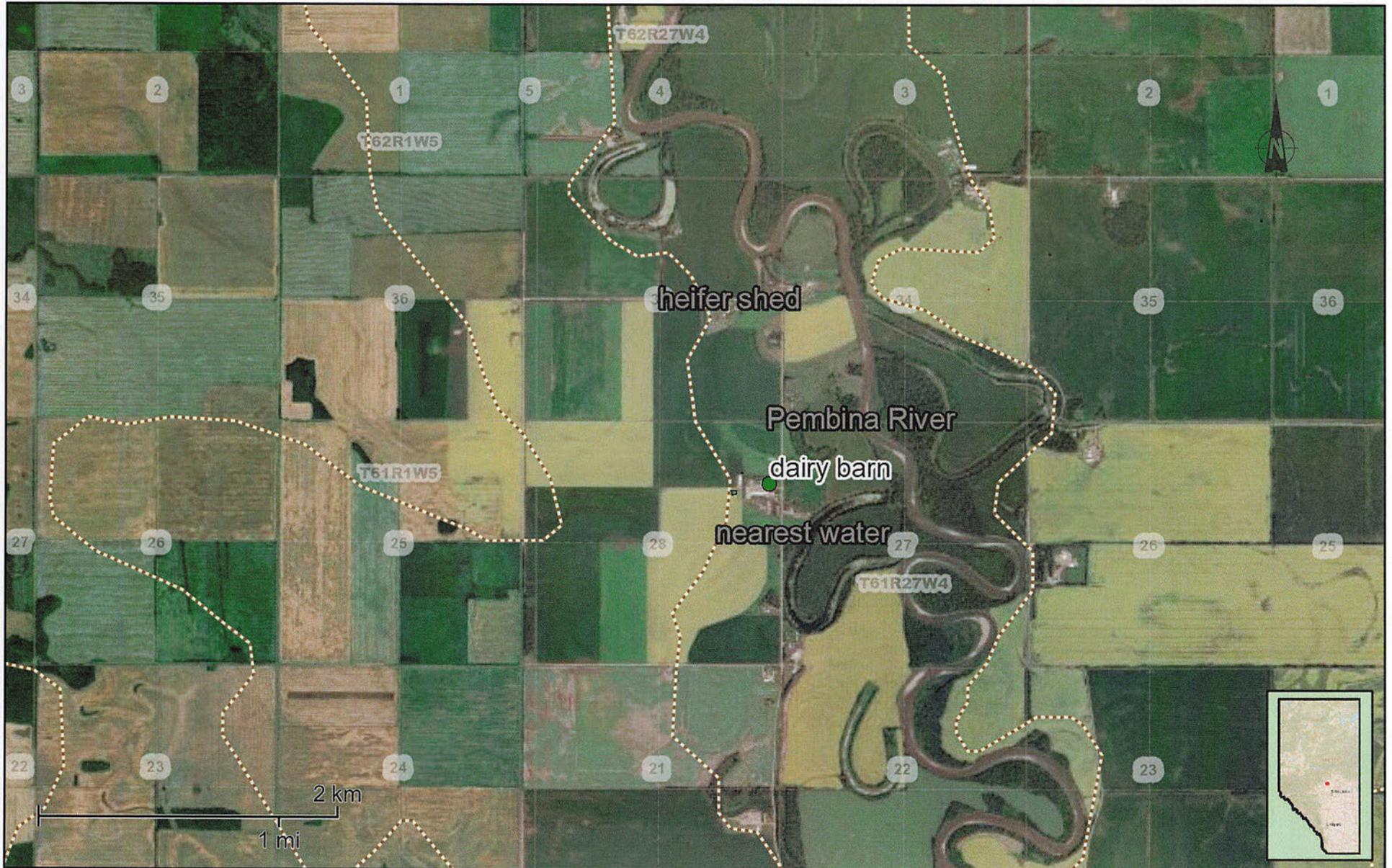
Signature of Applicant or Agent

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 AEP 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 AEP'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 AEP 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 AEP'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.

Signed this ____ day of _____, 20____.

Signature of Applicant or Agent



August 22, 2020

 Soil Landscape Polygons

Scale 1:36,112
 1 inch = 3009.33 feet
 1 cm = 361.12 metres
 Map centre at latitude +54.311°N and longitude -113.985°E

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
 Alberta Agriculture and Forestry and Agriculture and Agri-Food Canada
 Government of Alberta, Alberta Open Government Licence





December 19, 2023

 Soil Landscape Polygons

Scale 1:4,514
1 inch = 376.17 feet
1 cm = 45.14 metres
Map centre at latitude +54.307°N and longitude -113.979°E

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
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December 19, 2023

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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: dairy barn

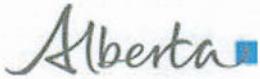
Proposed 1: new barns for replacements

Proposed 2: _____

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 height of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	<input checked="" type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
	How many springs are within 100 m of the manure storage facility or manure collection area?	none	none			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
Surface water information	How many water wells are within 100 m of the manure storage facility or manure collection area?	2 (40m,50m)	2 (40m,50 m)			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> 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)	339 m	319 m			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
Groundwater information	What is the depth to the water table?		5m			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
	What is the depth to the groundwater resource/aquifer you draw water from?	40/67/53	40/67/53			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	

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



Water Well Drilling Report

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

GIC Well ID 1630100
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2010/11/29

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 Imperial	
Owner Name YOKE FARM LTD.	Address P.O. BOX 5479		Town WESTLOCK	Province ALBERTA	Country CANADA	Postal Code T7P 2P5	
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block
	NE	28	61	27	4		
Measured from Boundary of			Quarter		GPS Coordinates in Decimal Degrees (NAD 83)		
_____ ft from _____			_____		Latitude 54.308718	Longitude -113.981790	
300.00 ft from West					Elevation _____ ft		
					How Location Obtained		
					Not Obtained		

Drilling Information	
Method of Drilling Combination	Type of Work New Well
Proposed Well Use Stock	

Formation Log			Measurement in Imperial
Depth from ground level (ft)	Water Bearing	Lithology Description	
20.00		Light Brown Clay	
60.00		Gray Soft Clay	
80.00		Gray Clay	
100.00		Gray Soft Clay	
125.00		Gray Clay	
135.00		Brown Fine Grained Sand	
165.00		Gray Soft Clay	
175.00		Brown Fine Grained Sand	
215.00		Gray Soft Clay	
220.00	Yes	Coarse Grained Sand & Gravel	
225.00		Gray Soft Clay	
230.00	Yes	Coarse Grained Sand & Gravel	
238.00		Sandy Shale	
250.00		Gray Shale	
260.00	Yes	Sandy Shale	
275.00		Greenish Gray Shale	
280.00	Yes	Sandy Shale & Sandstone	
311.00	Yes	Brown Sandstone	
335.00	Yes	Sandy Shale	
380.00	Yes	Sandstone	

Yield Test Summary			Measurement in Imperial
Recommended Pump Rate	6.00 igpm		
Test Date	Water Removal Rate (igpm)	Static Water Level (ft)	
2010/03/03	6.00	0.00	

Well Completion				Measurement in Imperial
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
380.00 ft	380.00 ft	2010/02/23	2010/03/01	
Borehole				
Diameter (in)	From (ft)	To (ft)		
6.25	0.00	240.00		
5.13	240.00	380.00		
Surface Casing (if applicable)		Well Casing/Liner		
Steel		Plastic		
Size OD :	5.56 in	Size OD :	4.50 in	
Wall Thickness :	0.188 in	Wall Thickness :	0.237 in	
Bottom at :	240.00 ft	Top at :	12.00 ft	
		Bottom at :	380.00 ft	
Perforations				
From (ft)	To (ft)	Diameter or Slot Width (in)	Slot Length (in)	Hole or Slot Interval (in)
360.00	380.00	0.020		4.00
Perforated by Machine				
Annular Seal Bentonite Slurry				
Placed from _____ ft to _____ ft				
Amount _____				
Other Seals				
Type			At (ft)	
Driven			240.00	
Screen Type				
Size OD : _____ in				
From (ft)	To (ft)	Slot Size (in)		
Attachment _____				
Top Fittings _____		Bottom Fittings _____		
Pack				
Type Artificial		Grain Size 10-20		
Amount 1400.00 Pounds				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well RENE ARTS	Certification No VC7442
Company Name RENE ARTS WATERWELL LTD.	Copy of Well report provided to owner Date approval holder signed 2010/03/03



Water Well Drilling Report

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Drilling Company Well ID
Date Report Received 2010/11/29

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Well Identification and Location										Measurement in Imperial		
Owner Name YOKE FARM LTD.		Address P.O. BOX 5479			Town WESTLOCK		Province ALBERTA		Country CANADA		Postal Code T7P 2P5	
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description			
	NE	28	61	27	4							
Measured from Boundary of			Quarter			GPS Coordinates in Decimal Degrees (NAD 83)						
_____ ft from _____			_____			Latitude 54.308718		Longitude -113.981790		Elevation _____ ft		
300.00 ft from West						How Location Obtained Not Verified						
						How Elevation Obtained Not Obtained						

Additional Information										Measurement in Imperial							
Distance From Top of Casing to Ground Level				24.00 in													
Is Artesian Flow				Yes		Is Flow Control Installed				Yes							
Rate				0.50 igpm		Describe FLOW @ <.5 GPM, FLOW CONTROL NOT REQUIRED - DAIRY USES ENOUGH WATER TO KEEP LEVEL BELOW FLOWING.											
Recommended Pump Rate				6.00 igpm		Pump Installed		Yes		Depth		240.00 ft					
Recommended Pump Intake Depth (From TOC)				240.00 ft		Type		Submersible		Make		Grundfos H.P. 0.75					
												Model (Output Rating)					
Did you Encounter Saline Water (>4000 ppm TDS)				_____		Depth		ft		Well Disinfected Upon Completion				Yes			
Gas				Yes		Depth		ft		Geophysical Log Taken				_____			
												Submitted to ESRD					
												Sample Collected for Potability		_____		Submitted to ESRD	
Additional Comments on Well																	
COMBINATION ROTARY AIR & MUD DRILLING, PROPOSED WELL USE - DAIRY FARM, ROCKS @ 97' - 98' AND 118' - 119', 250' - 260' = 1/2 GPM ALSO FINE, 275' - 280' = 1/2 GPM, 280' - 311' = 1 GPM ALSO SAND, 311' - 335' = 1 GPM, 335' - 380' = 10+ GPM, DRIVEN FROM 235' - 240', FRAC SAND FROM 20' - 380', PUMP INSTALLED = 3", WATER FOR DRILLING - ALSO DIVERTED 2000 GALLONS 2010/02/27 7:00PM																	

Yield Test			Taken From Top of Casing			Measurement in Imperial		
			Depth to water level					
Test Date	Start Time	Static Water Level						
2010/03/03	3:00 PM	0.00 ft						
Method of Water Removal			Pumping (ft)			Elapsed Time		
Type Pump						Minutes:Sec		
Removal Rate 6.00 igpm						Recovery (ft)		
Depth Withdrawn From 240.00 ft								
If water removal period was < 2 hours, explain why								
90% RECOVERY @ 60 MINUTES								
			0.00	0:00		104.17		
			7.25	1:00		93.50		
			15.13	2:00		94.25		
			24.58	3:00		76.08		
			33.00	4:00		68.42		
			40.00	5:00		62.25		
			45.75	6:00		56.67		
			51.17	7:00		51.58		
			55.50	8:00		47.50		
			59.42	9:00		43.50		
			62.75	10:00		40.08		
			68.75	12:00		34.08		
			73.58	14:00		29.25		
			77.42	16:00		24.38		
			80.38	18:00		22.29		
			82.58	20:00		19.63		
			86.67	25:00		15.08		
			89.75	30:00		12.08		
			92.58	35:00		11.67		
			94.50	40:00		11.46		
				45:00		10.33		
			96.58	50:00				
			98.04	60:00				
			98.75	75:00				
			102.42	90:00				
			103.33	105:00				
			104.17	120:00				

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

Contractor Certification			
Name of Journeyman responsible for drilling/construction of well		Certification No	
RENE ARTS		VC7442	
Company Name		Copy of Well report provided to owner	
RENE ARTS WATERWELL LTD.		Date approval holder signed	
		2010/03/03	



Water Well Drilling Report

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GIC Well ID 1630100
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2010/11/29

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GOWN ID

Well Identification and Location										Measurement in Imperial		
<i>Owner Name</i> YOKE FARM LTD.		<i>Address</i> P.O. BOX 5479			<i>Town</i> WESTLOCK		<i>Province</i> ALBERTA		<i>Country</i> CANADA		<i>Postal Code</i> T7P 2P5	
<i>Location</i>	<i>1/4 or LSD</i>	<i>SEC</i>	<i>TWP</i>	<i>RGE</i>	<i>W of MER</i>	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>			
	NE	28	61	27	4							
<i>Measured from Boundary of</i>				<i>Quarter</i>		<i>GPS Coordinates in Decimal Degrees (NAD 83)</i>				<i>Elevation</i>		
				ft from		<i>Latitude</i> 54.308718		<i>Longitude</i> -113.981790		ft		
300.00 ft from West						<i>How Location Obtained</i>				<i>How Elevation Obtained</i>		
						Not Verified				Not Obtained		
TOWN OF WESTLOCK					2000.00		ig		2010/02/23 7:00 PM			

Contractor Certification			
<i>Name of Journeyman responsible for drilling/construction of well</i> RENE ARTS		<i>Certification No</i> VC7442	
<i>Company Name</i> RENE ARTS WATERWELL LTD.		<i>Copy of Well report provided to owner</i> <i>Date approval holder signed</i> 2010/03/03	



Water Well Drilling Report

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GIC Well ID 1630275
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2018/01/28

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GOWN ID

Well Identification and Location										Measurement in Imperial	
Owner Name YOKE FARM		Address P.O. BOX 5479			Town WESTLOCK		Province ALBERTA	Country CANADA	Postal Code T7P 2P5		
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description		
	16	28	61	27	4						
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)						
_____ ft from _____					Latitude <u>54.309139</u> Longitude <u>-113.979594</u>					Elevation _____ ft	
_____ ft from _____					How Location Obtained Differential corrected handheld GPS 5-10m					How Elevation Obtained Not Obtained	

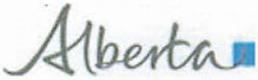
Drilling Information	
Method of Drilling Combination	Type of Work New Well
Proposed Well Use Stock	

Formation Log		Measurement in Imperial
Depth from ground level (ft)	Water Bearing	Lithology Description
2.00		Topsoil
5.00		Black Clay
18.00		Light Brown Clay
25.00		Brown Sand
30.00		Gray Soft Clay
60.00		Gray See Comments Clay
74.00		Gray See Comments Clay
80.00		Gray Sandy Clay
92.00		Gray Soft Clay
100.00		Gray See Comments Clay
120.00		Gray Soft Clay & Rocks
130.00		Dry Clay & Silt
138.00		Gray Clay
170.00		White Clean Sand
175.00	Yes	Gray Sandy Clay
180.00		Gray Soft Clay

Yield Test Summary			Measurement in Imperial
Recommended Pump Rate _____		igpm	
Test Date	Water Removal Rate (igpm)	Static Water Level (ft)	

Well Completion				Measurement in Imperial
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
180.00 ft	165.00 ft	2017/10/05	2017/10/13	
Borehole				
Diameter (in)	From (ft)	To (ft)		
7.88	0.00	125.00		
5.13	125.00	180.00		
Surface Casing (if applicable)		Well Casing/Liner		
Steel		Plastic		
Size OD :	<u>5.56 in</u>	Size OD :	<u>4.50 in</u>	
Wall Thickness :	<u>0.188 in</u>	Wall Thickness :	<u>0.237 in</u>	
Bottom at :	<u>135.00 ft</u>	Top at :	<u>15.00 ft</u>	
		Bottom at :	<u>155.00 ft</u>	
Perforations				
From (ft)	To (ft)	Diameter or Slot Width (in)	Slot Length (in)	Hole or Slot Interval (in)
Perforated by				
Annular Seal Bentonite Chips/Tables				
Placed from		<u>0.00 ft</u>	to	<u>125.00 ft</u>
Amount		<u>1050.00 Pounds</u>		
Other Seals				
Type				At (ft)
Driven				135.00
Driven				125.00
Screen Type Stainless Steel				
Size OD : <u>5.00 in</u>				
From (ft)	To (ft)	Slot Size (in)		
155.00	165.00	0.010		
Attachment <u>Telescoped</u>				
Top Fittings <u>Coupler</u>		Bottom Fittings <u>Washdown</u>		
Pack				
Type	<u>Frac Sand</u>	Grain Size	<u>10-20</u>	
Amount	<u>750.00 Pounds</u>			

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well RENE ARTS	Certification No VC7442
Company Name RENE ARTS WATERWELL LTD.	Copy of Well report provided to owner Date approval holder signed Yes 2017/10/13



Water Well Drilling Report

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

GIC Well ID 1630275
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2018/01/28

GOWN ID

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Well Identification and Location										Measurement in Imperial		
Owner Name YOKE FARM		Address P.O. BOX 5479			Town WESTLOCK		Province ALBERTA		Country CANADA		Postal Code T7P 2P5	
Location	<i>1/4 or LSD</i>	<i>SEC</i>	<i>TWP</i>	<i>RGE</i>	<i>W of MER</i>	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>			
	16	28	61	27	4							
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)							
_____ ft from _____					Latitude <u>54.309139</u> Longitude <u>-113.979594</u>					Elevation _____ ft		
_____ ft from _____					How Location Obtained Differential corrected handheld GPS 5-10m					How Elevation Obtained Not Obtained		

Additional Information										Measurement in Imperial	
Distance From Top of Casing to Ground Level _____ 30.00 in											
Is Artesian Flow <u>Yes</u>					Is Flow Control Installed <u>Yes</u>						
Rate _____ 3.00 igpm					Describe <u>WELL BUSTER FLOWING WELL SEAL INSTALLED, WELL WILL FLOW INTO CISTERN WITH NO OVERFLOW NECESSARY.</u>						
Recommended Pump Rate _____ igpm					Pump Installed _____		Depth _____ ft				
Recommended Pump Intake Depth (From TOC) _____ ft					Type _____		Make _____		H.P. _____		
										Model (Output Rating) _____	
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ ft		Well Disinfected Upon Completion <u>Yes</u>				
Gas _____					Depth _____ ft		Geophysical Log Taken _____				
										Submitted to ESRD _____	
										Sample Collected for Potability _____ Submitted to ESRD _____	
Additional Comments on Well											
LITHOLOGY COMMENTS: 30-60'- GREY CLAY WITH STONES, 60-74'- SOFT GREY CLAY WITH MUD RINGS, 92-100'- HARD GREY CLAY WITH ROCKS & MUD RINGS.											
OTHER NOTES: AIR TESTED @ OVER 20 IMP GPM, WELL WILL FLOW 3 GPM @ +3 FT. WELL BUSTER FLOWING WELL SEAL INSTALLED.											
WELL FLOW WILL BE DIRECTED WITH PITLESS INTO CISTERN WITH NO OVERFLOW NECESSARY AT A LATER DATE.											

Yield Test			Taken From Ground Level		Measurement in Imperial	
Test Date	Start Time	Static Water Level				
		ft				
Method of Water Removal						
Type _____						
Removal Rate _____ igpm						
Depth Withdrawn From _____ ft						
If water removal period was < 2 hours, explain why _____						

Water Diverted for Drilling			
Water Source	Amount Taken	Diversion Date & Time	
SW-15-60-26-W4M	2000.00 ig	2017/10/05 8:00 AM	

Contractor Certification			
Name of Journeyman responsible for drilling/construction of well		Certification No	
RENE ARTS		VC7442	
Company Name		Copy of Well report provided to owner	
RENE ARTS WATERWELL LTD.		Date approval holder signed	
		Yes 2017/10/13	

Government of Alberta Water Well Drilling Report

[View in Metric](#)

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 243684
GoA Well Tag No.
Date Report Received

1. Well Identification and Location										Measurement in Imperial	
Owner Name BOELMAN, R		Address PIBROCH			Town		Province		Postal Code T0C 1V0		
Location	1/4 or LSD NE	SEC 28	TWP 061	RGE 27	W of MER 4	Lot	Block	Plan	Additional Description		
Measured from Boundary of _____ ft from _____ _____ ft from _____				GPS Coordinates in Decimal Degrees (NAD 83) Latitude <u>54.308720</u> Longitude <u>-113.981807</u> How Location Obtained Map				Elevation <u>2006.00</u> ft How Elevation Obtained Estimated			

2. Drilling Information		
Method of Drilling Unknown	Type of Work Chemistry	Proposed Well Use Domestic

3. Formation Log			Measurement in Imperial
Depth from ground level (ft)	Water Bearing	Lithology Description	

4. Well Completion				Measurement in Imperial
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
0.00 ft			1980/05/21	
Borehole				
Diameter (in)	From (ft)	To (ft)		
0.00	0.00	0.00		
Surface Casing (if applicable)		Well Casing/Liner		
Size OD :	<u>0.00</u> in	Size OD :	<u>0.00</u> in	
Wall Thickness :	<u>0.000</u> in	Wall Thickness :	<u>0.000</u> in	
Bottom at :	<u>0.00</u> ft	Top at :	<u>0.00</u> ft	
		Bottom at :	<u>0.00</u> ft	
Perforations				
From (ft)	To (ft)	Diameter (in)	Interval (in)	
Perforated by _____				
Annular Seal				
Placed from	<u>0.00</u> ft	to	<u>0.00</u> ft	
Amount	_____			
Other Seals				
Type	At (ft)			
Screen Type				
Size OD :	<u>0.00</u> in			
From (ft)	To (ft)	Slot Size (in)		
Attachment _____				
Top Fittings	_____	Bottom Fittings	_____	
Pack				
Type	_____	Grain Size	_____	
Amount	_____			

7. 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

Government of Alberta Water Well Drilling Report

[View in Metric](#)

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GIC Well ID 243684
GoA Well Tag No.
Date Report Received

1. Well Identification and Location										Measurement in Imperial	
Owner Name BOELMAN, R		Address PIBROCH			Town		Province		Postal Code T0C 1V0		
Location	1/4 or LSD NE	SEC 28	TWP 061	RGE 27	W of MER 4	Lot	Block	Plan	Additional Description		
Measured from Boundary of _____ ft from _____ _____ ft from _____				GPS Coordinates in Decimal Degrees (NAD 83) Latitude <u>54.308720</u> Longitude <u>-113.981807</u> How Location Obtained Map				Elevation <u>2006.00</u> ft How Elevation Obtained Estimated			

Additional Information										Measurement in Imperial	
Distance From Top of Casing to Ground Level _____ in					Is Artesian Flow <u>Yes</u>					Is Flow Control Installed _____	
Rate _____ igpm					Describe _____						
Recommended Pump Rate _____ igpm					Pump Installed _____					Depth _____ ft	
Recommended Pump Intake Depth (From TOC) _____ ft					Type _____					Model _____ H.P. _____	
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ ft					Well Disinfected Upon Completion _____	
Gas _____					Depth _____ ft					Geophysical Log Taken _____	
Additional Comments on Well _____					Submitted to GIC _____					Sample Collected for Potability _____ Result Attached _____	

5. Yield Test			Measurement in Imperial	Taken From Ground Level
Test Date	Start Time	Static Water Level	ft	

Method of Water Removal				
Type _____				
Removal Rate _____ igpm				
Depth Withdrawn From _____ ft				
If water removal period was < 2 hours, explain why _____				

6. Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	ig	

7. 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

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)

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
Rick and Sandi Johnston	SW 27-61-27-W4	1090					
Arnold Schlayer	NE 21-61-27-W4	1165					
Desi Graf	SW 34-61-27-W4	600					
Rick and Matti Graf	NW 34-67-27-W4	1340					
John and Janice Borst	NE 33-61-27-W4	1850					

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)
Reint and Maaïke Boelman	NE 28-61-27-W4	53	black		
Reint and Maaïke Boelman	SE 33-61-27-W4	59	black		
Reint and Maaïke Boelman	SW 33-61-27-W4	64	black		
Reint and Maaïke Boelman	NW 28-61-27-W4	64	black		
Reint and Kirstin Boelman	SE 28-61-27-W4	62	black		
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)

MDS



August 22, 2020

 Soil Landscape Polygons

Scale 1:36,112
1 inch = 3009.33 feet
1 cm = 361.12 metres
Map centre at latitude +54.311°N and longitude -114.003°E

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Alberta Agriculture and Forestry and Agriculture and Agri-Food Canada
Government of Alberta, Alberta Open Government Licence

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.** barn _____
2. see attached plan for details _____

Manure storage capacity

	Length (m)	Width (m)	Depth below grade to the bottom of the liner (m)	NRCB USE ONLY Estimated storage capacity (m ³)
1.	44	36	0	
2.				
TOTAL CAPACITY				

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 under the roof and landscaped around building

Liner protection

Describe how the physical integrity of the liner will be maintained monitor for breaking and cracking, repair if needed

NRCB USE ONLY
 Requirements met: YES NO

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 6"	Method of sulphate protection: type 50
Concrete strength 25 mpa	Concrete reinforcement size and spacing 12" spacing

Concrete requirements can be found in Technical Guideline Agdex 096-93

Guideline minimums:
Solid manure: 25MPa (D)
Solid manure (wet): 30MPa (C)
Method of sulphate protection:
Type 50 or Type 10 with fly ash or equivalent

NRCB USE ONLY

Requirements met: YES NO
Condition required: YES NO
Report attached: YES NO

Additional information *(attach as required)*

NRCB USE ONLY

Nine month manure storage volume requirements met YES YES With STMS NO

Depth to water table: _____ Requirements met: YES NO

Depth to Uppermost groundwater resource: _____ Requirements met: YES NO

ERST completed: see ERST page for details

Surface water control systems

Requirements met: YES NO Details/comments:

Concrete liner details

Leakage detection system required: YES NO If yes, please explain why.

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)

LIQUID MANURE COLLECTION AND/OR STORAGE: In-barn - Concrete liner

(complete a copy of this section for **EACH** proposed in-barn liquid manure storage facility with a concrete liner)

Facility description / name (as indicated on site plan)

1. receiving pit _____
2. north alley _____
3. south alley _____

Manure storage capacity (use one row in the table for **EACH** in-barn storage. Attach additional pages if you require more rows)

	Length (m)	Width (m)	Total depth (m)	Depth below ground level (m)	NRCB USE ONLY Calculated storage capacity (m ³)
1.	4	4	5	5	
2.	36	3	0	0	
3.	16	3	0	0	
TOTAL CAPACITY					

Concrete liner details

Scrape alleys or unslatted portions of barn floors (if applicable)	Concrete thickness 15 cm (6")		Method of sulphate protection type 50		
	Concrete strength 32mpa		Concrete reinforcement size and spacing 10mm rebar on 12" spacing		
In-barn manure pit floors	Concrete thickness 6"		Method of sulphate protection type 50		
	Concrete strength 32 mpa		Concrete reinforcement size and spacing 10mm rebar on 12 " spacing		
In-barn manure pit walls	Concrete thickness 8"		Method of sulphate protection type 50		
	Concrete strength 32 mpa	Horizontal reinforcement size and spacing 10 mm, 24"	Vertical reinforcement size and spacing 10 mm, 16"		

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)

LIQUID MANURE COLLECTION AND/OR STORAGE: In-barn - Concrete liner (cont.)

Describe how the joints at the junction of the pit walls, pit floors and any other joints will be sealed
all poured in place, no joints

Describe sealing practices for piping, etc. that penetrates the liner
piping goes out the top and doesn't penetrate the liner

Concrete requirements can be found in Technical Guideline Agdex 096-93
Guideline minimums:
 Solid manure: 25MPa (D)
 Solid manure (wet): 30MPa (C)
 Liquid manure: 32MPa (B)
 Category A is required to be engineered
 Method of sulphate protection:
 Type 50 or Type 10 with fly ash or equivalent

NRCB USE ONLY

Requirements met: YES NO
 Condition required: YES NO

Additional information

NRCB USE ONLY

Liquid manure storage volume calculator attached: YES NO

Depth to water table: _____ Requirements met: YES NO

Depth to uppermost groundwater resource: _____ Requirements met: YES NO

ERST completed: see ERST page for details

Concrete liner requirements

Leakage detection system required: YES NO If yes, please explain why

