

Appendix H
Logs for Wells 101877 and 653274

This information was not previously submitted as part of the Enbridge Energy, Limited Partnership Application for a Pipeline Routing Permit on April 24, 2015.

County Clearwater
Quad Gonvick
Quad ID 332A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 1031

Entry Date 04/07/1988
Update Date
Received Date 02/14/2014

101877

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Name</td> <td>Township</td> <td>Range</td> <td>Dir Section</td> <td>Subsection</td> </tr> <tr> <td>JOHNSON,</td> <td>149</td> <td>38</td> <td>W 14</td> <td>AAC</td> </tr> <tr> <td>Elevation</td> <td>1277</td> <td>Elev. 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Address					Contact GONVICK MN					Stratigraphy Information					Geological Material	From	To (ft.)	Color	Hardness	LOAM	0	1	BLACK	SOFT	CLAY	1	19	YELLOW	SOFT	CLAY	19	65	BLUE	SOFT	SANDY CLAY	65	93	BLUE	SOFT	SANDY & STONEY	93	124	BLUE	SOFT	SAND & SONEY	124	145	GRAY	SOFT	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Depth</td> <td>Depth Completed</td> <td>Date Well Completed</td> </tr> <tr> <td>145 ft.</td> <td>145 ft.</td> <td>07/12/1977</td> </tr> <tr> <td>Drill Method</td> <td>Jetted</td> <td>Drill Fluid</td> </tr> <tr> <td>Use</td> <td>Domestic</td> <td>Status Active</td> </tr> <tr> <td>Well Hydrofractured?</td> <td>Yes <input type="checkbox"/> No <input type="checkbox"/></td> <td>From To</td> </tr> <tr> <td>Casing Type</td> <td>Single casing</td> <td>Joint Threaded</td> </tr> <tr> <td>Drive Shoe?</td> <td>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Above/Below 1 ft.</td> </tr> <tr> <td>Casing Diameter</td> <td colspan="2">Weight</td> </tr> <tr> <td>2 in. 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To 145 ft.	Screen? <input type="checkbox"/>	Type	Make	Static Water Level			18 ft.	Land surface	Measure 07/12/1977	Pumping Level (below land surface)			ft.	hrs Pumping	15 g.p.m.	Wellhead Completion			Pitless adapter manufacturer		Model	<input type="checkbox"/> Casing Protection	<input checked="" type="checkbox"/> 12 in. above grade		<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)			Grouting Information	Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Specified		Nearest Known Source of Contamination			feet	Direction	Type	Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Pump <input checked="" type="checkbox"/>	Not Installed	Date Installed	Manufacturer's name			Model Number	HP	Volt	Length of drop pipe	ft Capacity	g.p. 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Remarks
 1/8 MI W. NOT LISTED IN DRILLERS LOCATION IN PLAT BOOK.
 JOHNSON'S LAND, PG 25, PINE LAKE TNSP. 149-38-14

653274

County Hubbard
 Quad Two Inlets
 Quad ID 279C

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 01/30/2001
 Update Date
 Received Date 05/28/2015

Well Name AYERS, TROY	Township 142	Range 35	Dir Section W 29	Subsection CDCBAD	Well Depth 97 ft.	Depth Completed 97 ft.	Date Well Completed 10/17/2000
Elevation 1534.9	Elev. Method LiDAR 1m DEM (MNDNR)				Drill Method Non-specified Rotary	Drill Fluid Bentonite	
Address Well 10738 JADE ROSE DR PARK RAPIDS MN 56470					Use Abandoned	Status Sealed	
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From To	
Geological Material From To (ft.) Color Hardness					Casing Type Single casing	Joint	
TOP SOIL 0 2 BROWN SOFT					Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Above/Below	
SANDY CLAY 2 57 BROWN HARD					Casing Diameter 4 in. To 93 ft. 1 lbs./ft.	Hole Diameter 8.2 in. To 30 ft. 6.2 in. To 97 ft.	
SAND 57 64 BROWN SOFT					Open Hole From ft. To ft.		
SANDY CLAY 64 90 BROWN HARD					Screen? Diameter 4 in. Slot/Gauze 20	Type Length 4 ft.	Make Set 93 ft. COOK
SAND 90 97 BROWN SOFT					Static Water Level 40 ft. Land surface Measure 10/17/2000		
					Pumping Level (below land surface) 92 ft. 1 hrs Pumping 20 g.p.m.		
					Wellhead Completion Pitless adapter manufacturer MONITOR Model SNAPPY <input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified Material High solids bentonite Amount 3 Sacks From 0 ft. To 30 ft.		
					Nearest Known Source of Contamination 53 feet South Direction Septic tank/drain field Type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed Date Installed 10/17/2000 Manufacturer's name STA-RITE Model Number 10P4C02J HP 0.5 Volt 230 Length of drop pipe 80 ft Capacity 10 g.p. Typ Submersible		
					Abandoned Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous First Bedrock Aquifer Quat. Buried Last Strat sand-brown Depth to Bedrock ft Located by Minnesota Geological Survey Locate Method GPS SA Off (averaged) System UTM - Mad83, Zone 15, Meters X 337181 Y 521642 Unique Number Verification Tax Records Inpute Date 05/20/2015		
Remarks SEALED 10-20-2008 BY 1603. PREVIOUS USE: DO.					Angled Drill Hole		
					Well Contractor Nevis Well Drilling 29383 MIKESH, P. Licensee Business Lic. or Reg. No. Name of Driller		