APPENDIX A

Figures

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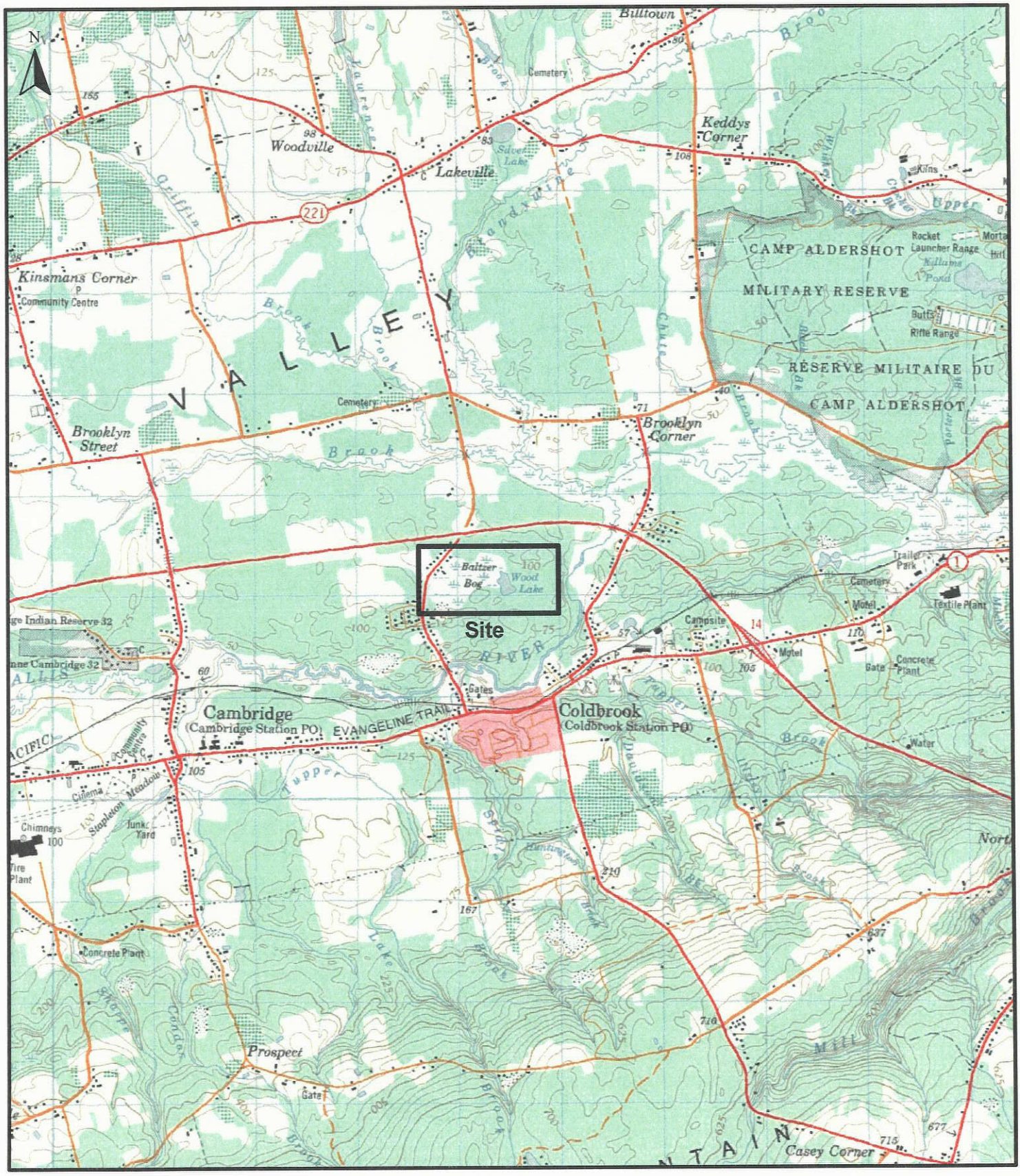

Figure 1

Site Location and Topography

Scale 1:50,000
Date: April 26, 2005
Project: NSD19570

0 0.5 1 1.5 2 2.5 3 Kilometers

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NOVA SCOTIA
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Figure 2

Site Plan & Monitoring Locations

Legend

- Water Level Guage (WL)
- Monitoring Well (MW6D)
- Flow Station (STA1)
- Water Points (WP)
- Control Point
- Local Road
- Track
- Elevation Contour (5m)
- Artificial Drainage Ditch
- Cross Section
- Waterbody
- Wetland

0 15 30 60 90 120 150
Meters

Map Parameters
Projection: UTM, NAD83, Zone 20
Scale 1:3,000
Date: April 29, 2005
Project No.: NSD19570

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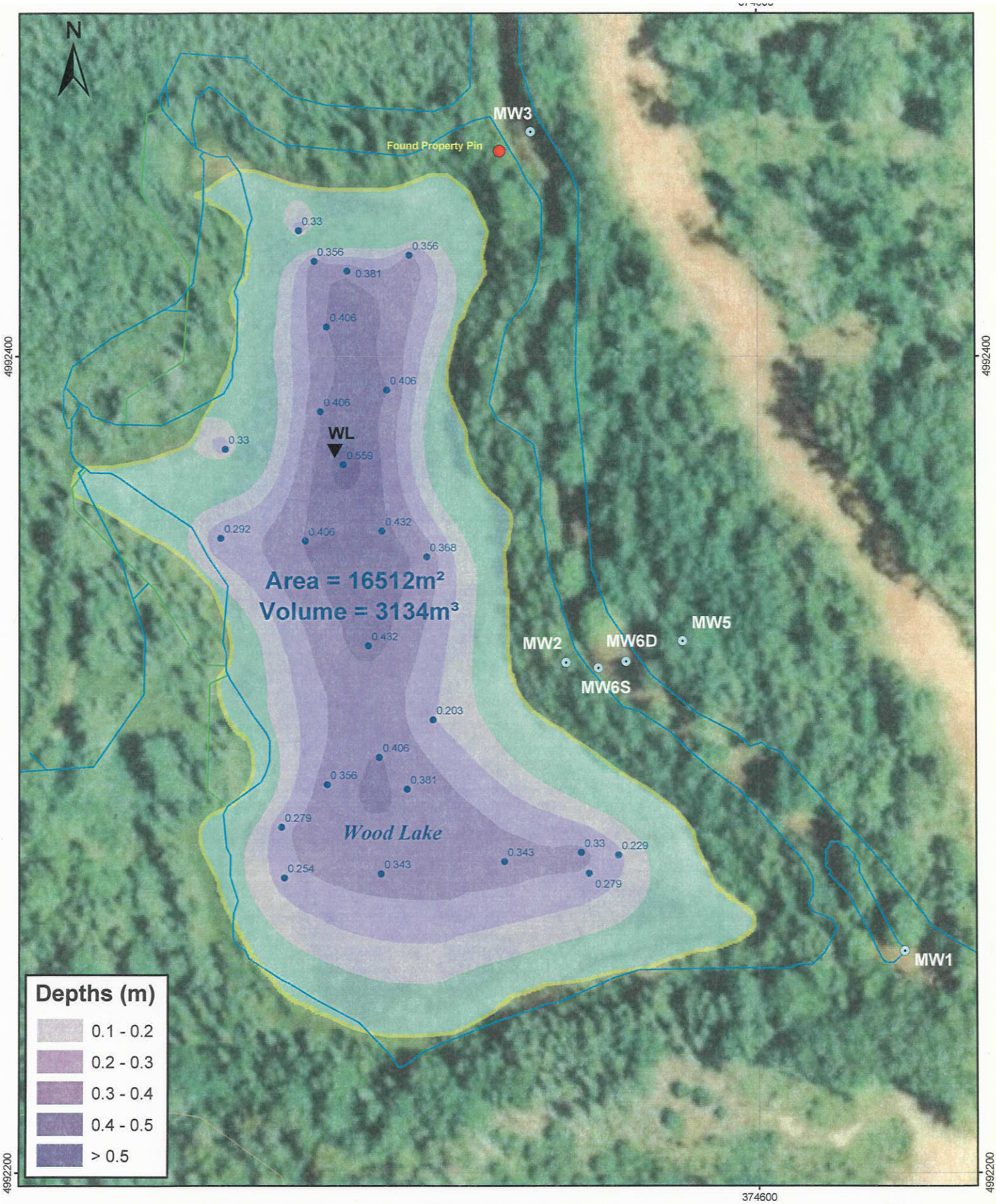

Map Parameters
Projection: UTM, NAD83, Zone 20
Scale 1:1,200
Date: April 262, 2005
Project No.: NSD19570

Figure 3
Wood Lake Bathymetry

0 10 20 40 60 80 100
Meters

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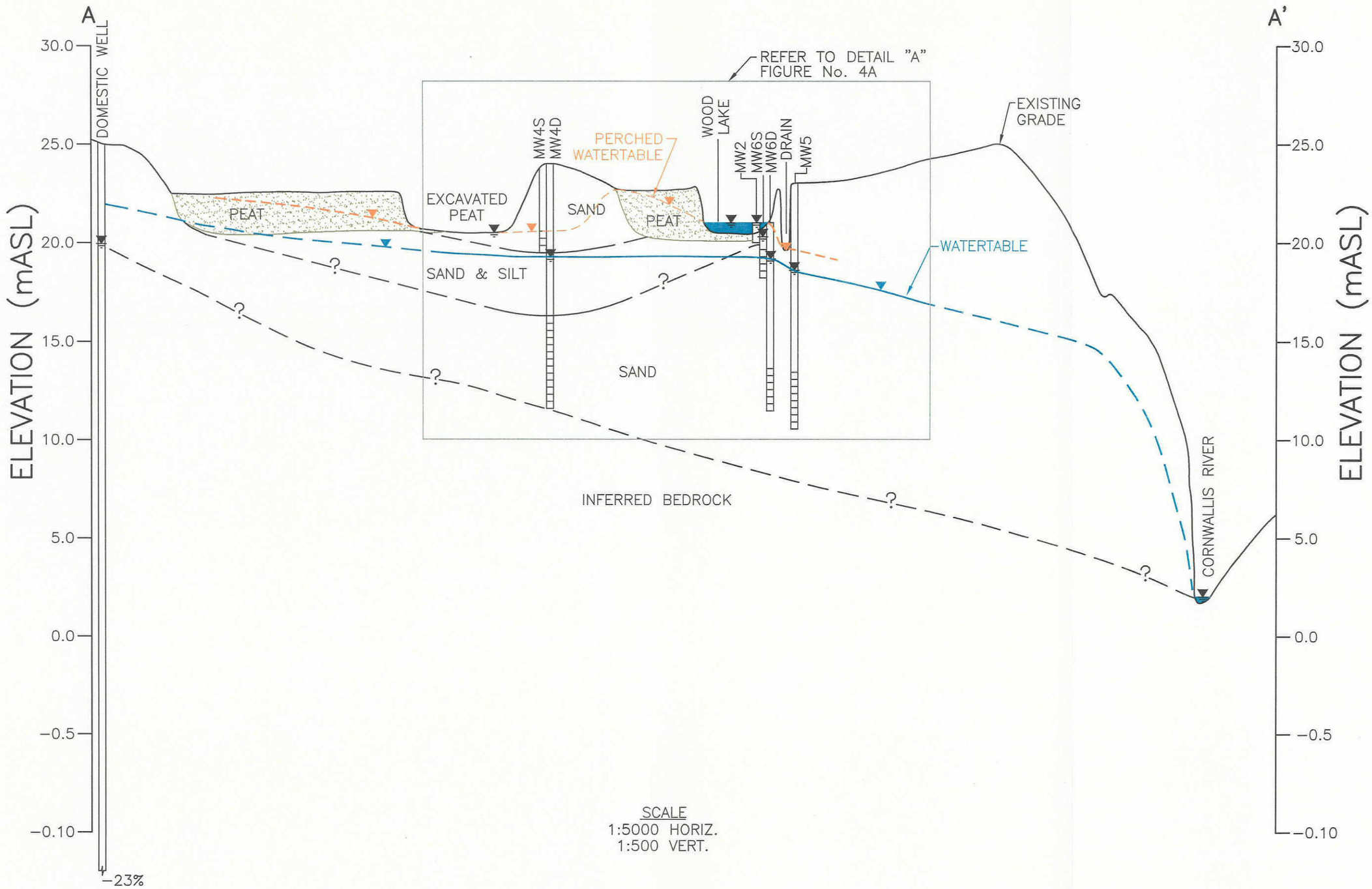


SCALE
1:5000 HORIZ.
1:500 VERT.

CROSS–SECTION A–A'

AS NOTED

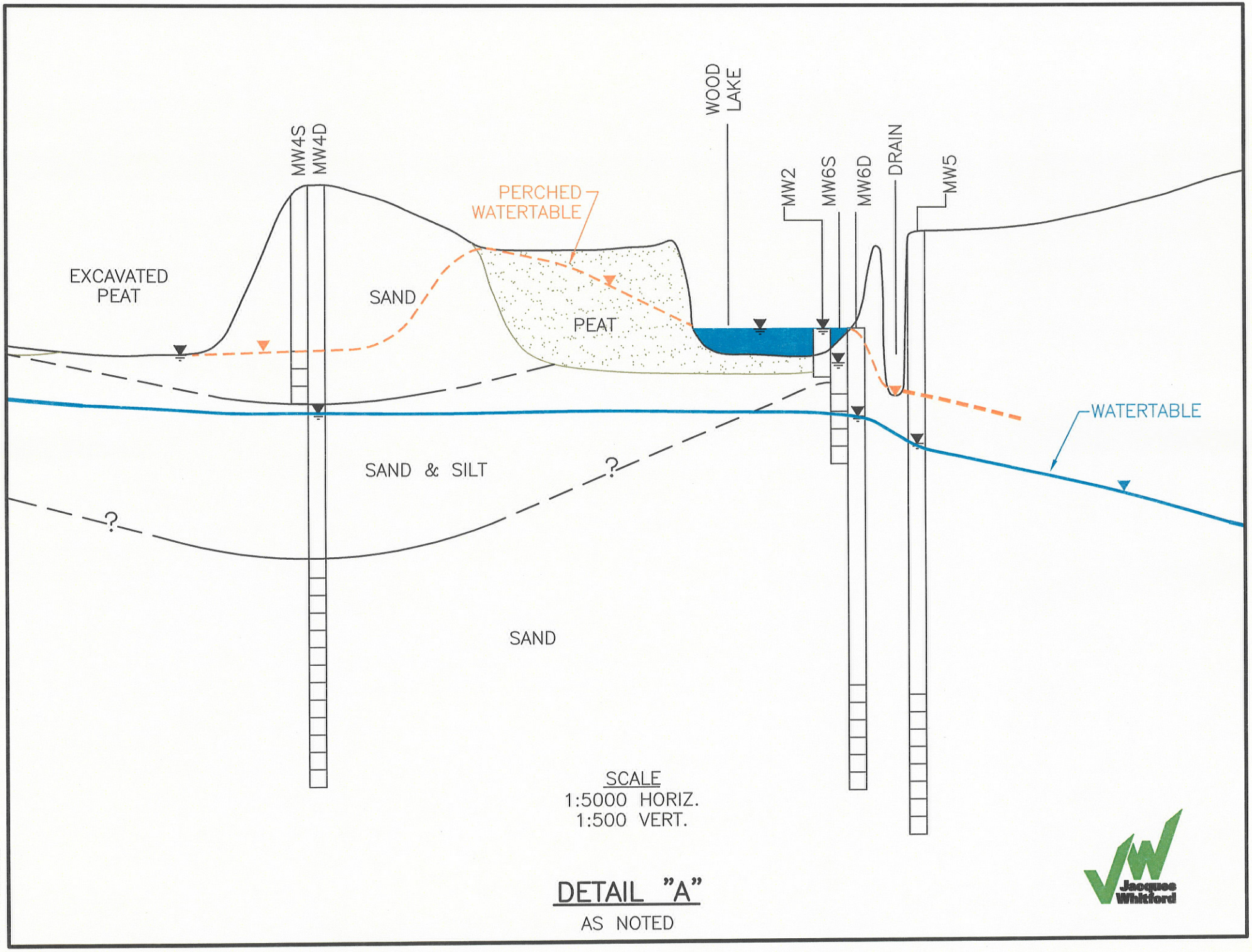
APP'D_____ H:\19XXX\NSD19570 COLDBROOK\NSD19570 FIG4.dwg 2005/05/30 – 10:00am stsoo

NSD19570

FIGURE 4

APP'D_____ H:\19XXX\NSD19570 COLDBROOK\NSD19570 FIG4A.dwg 2005/05/30 – 10:00am stsoo

NSD19570



DETAIL "A"

AS NOTED

FIGURE 4A

NOVA SCOTIA
Environment and Labour

Figure 5
Groundwater & Surface Water Flow Directions (SAND)

Legend

- Water Level Guage
- Monitoring Well
- Flow Station
- Water Points
- Control Point
- Local Road
- Track
- Elevation Contour (5m)
- Artificial Drainage Ditch
- Groundwater Contours (Sand)
- Groundwater Flow Direction
- (18.0) Water Table Elevation
- Waterbody
- Wetland

0 10 20 40 60 80 100
Meters

Map Parameters
Projection: UTM, NAD83, Zone 20
Scale 1:3,000
Date: April 29, 2005
Project No.: NSD19570
Note: Water Levels - April 20, 2005

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NOVA SCOTIA
Environment and Labour

Figure 6
Groundwater & Surface Water Flow Directions (SHALLOW)

Legend

- Water Level Guage
- Monitoring Well
- Flow Station
- Water Points
- Control Point
- Local Road
- Track
- Elevation Contour (5m)
- Artificial Drainage Ditch
- Groundwater Contours (Shallow
- Groundwater Flow Direction
- (18.0) Water Table Elevation
- Waterbody
- Wetland

0 10 20 40 60 80 100
Meters

Map Parameters
Projection: UTM, NAD83, Zone 20
Scale 1:3,000
Date: April 29, 2005
Project No.: NSD19570
Note: Water Levels - April 20, 2005

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APPENDIX B

Meterological Data

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Table B.1 Precipitation Data

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1913-01	1913	1		
1913-02	1913	2		
1913-03	1913	3		
1913-04	1913	4	5.5	108.7
1913-05	1913	5	7.8	80.5
1913-06	1913	6	13.8	31.2
1913-07	1913	7	18.6	94.5
1913-08	1913	8	17.5	43.2
1913-09	1913	9	12.5	64.8
1913-10	1913	10	13.7	243.8
1913-11	1913	11	3.7	50
1913-12	1913	12	-3	112.8
1914-01	1914	1	-6.9	71.4
1914-02	1914	2	-9.9	65.8
1914-03	1914	3	-0.7	95
1914-04	1914	4	2.7	59.2
1914-05	1914	5	10.4	37.1
1914-06	1914	6	13.5	109
1914-07	1914	7	17.2	36.8
1914-08	1914	8	17.3	65.5
1914-09	1914	9	14.3	92.7
1914-10	1914	10	9.2	48.3
1914-11	1914	11	2.4	81.8
1914-12	1914	12	-5	65.8
1915-01	1915	1	-5.1	120.9
1915-02	1915	2	-3.5	32.3
1915-03	1915	3	-2.9	24.9
1915-04	1915	4	4.1	43.2
1915-05	1915	5	7.9	63.5
1915-06	1915	6	13.8	61.7
1915-07	1915	7	17.8	38.6
1915-08	1915	8	17.7	97.5
1915-09	1915	9	14.1	21.6
1915-10	1915	10	9.5	98.6
1915-11	1915	11	4	71.4
1915-12	1915	12	-1.6	98.8
1916-01	1916	1	-5.4	47
1916-02	1916	2	-7.4	106.4
1916-03	1916	3	-5.5	75.9
1916-04	1916	4	4.4	59.4
1916-05	1916	5	9.8	45.2
1916-06	1916	6	15.2	93.7
1916-07	1916	7	18.9	67.6
1916-08	1916	8	18.3	21.8
1916-09	1916	9	15	44.2
1916-10	1916	10	9.4	136.7
1916-11	1916	11	2.2	88.4
1916-12	1916	12	-2.4	114.3
1917-01	1917	1	-7.3	99.8
1917-02	1917	2	-7.6	93.7
1917-03	1917	3	-2	76.5
1917-04	1917	4	3.6	111.5
1917-05	1917	5	6.5	74.2
1917-06	1917	6	15.7	74.4
1917-07	1917	7	18.8	92.7
1917-08	1917	8	19.8	130.8
1917-09	1917	9	12.2	69.1
1917-10	1917	10	9.3	216.9
1917-11	1917	11	0.6	77.2
1917-12	1917	12	-6.9	114.3
1918-01	1918	1	-7.7	55.4
1918-02	1918	2	-7.6	87.6
1918-03	1918	3	-4.2	55.1
1918-04	1918	4	3.8	36.3
1918-05	1918	5	12.2	30.7
1918-06	1918	6	14.2	58.4
1918-07	1918	7	18.6	124.5
1918-08	1918	8	16.6	43.7

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1918-09	1918	9	14.8	204.7
1918-10	1918	10	9.3	110.7
1918-11	1918	11	2.2	105.2
1918-12	1918	12	-2.6	82.6
1919-01	1919	1	-4.3	120.1
1919-02	1919	2	-3.7	49.3
1919-03	1919	3	0.7	60.5
1919-04	1919	4	4.7	83.3
1919-05	1919	5	9.9	63
1919-06	1919	6	15.3	57.2
1919-07	1919	7	18.4	70.4
1919-08	1919	8	17.4	56.1
1919-09	1919	9	14.4	79.5
1919-10	1919	10	7.4	99.8
1919-11	1919	11	3	184.7
1919-12	1919	12	-6.2	90.4
1920-01	1920	1	-12.2	73.9
1920-02	1920	2	-5.7	122.7
1920-03	1920	3	-0.5	78
1920-04	1920	4	3.4	93.2
1920-05	1920	5	9.3	43.2
1920-06	1920	6	14.5	75.7
1920-07	1920	7	19	68.6
1920-08	1920	8	20	90.9
1920-09	1920	9	14.8	75.9
1920-10	1920	10	10.5	17.5
1920-11	1920	11	1.1	76.2
1920-12	1920	12	-2.7	99.3
1921-01	1921	1	-5.9	51.6
1921-02	1921	2	-7.6	107.7
1921-03	1921	3	2.2	77.2
1921-04	1921	4	6.4	99.6
1921-05	1921	5	10.7	48.5
1921-06	1921	6	14.9	49
1921-07	1921	7	20.7	51.8
1921-08	1921	8	16.8	23.6
1921-09	1921	9	15.2	46.2
1921-10	1921	10	9.5	78.7
1921-11	1921	11	1	173.5
1921-12	1921	12	-4.4	83.3
1922-01	1922	1	-7.7	81
1922-02	1922	2	-6.8	75.4
1922-03	1922	3	-0.6	59.7
1922-04	1922	4	4.4	62.5
1922-05	1922	5	10.6	38.4
1922-06	1922	6	17.7	63
1922-07	1922	7	18.4	143
1922-08	1922	8	19.3	141.2
1922-09	1922	9	13.5	68.8
1922-10	1922	10	8.5	149.4
1922-11	1922	11	1.2	60.5
1922-12	1922	12	-5.7	122.7
1923-01	1923	1	-8.6	149.6
1923-02	1923	2	-11.8	54.1
1923-03	1923	3	-6.3	97.3
1923-04	1923	4	2.6	82.3
1923-05	1923	5	9.7	59.4
1923-06	1923	6	14.3	89.9
1923-07	1923	7	17.3	58.9
1923-08	1923	8	15.9	102.4
1923-09	1923	9	13.6	99.8
1923-10	1923	10	9.1	77.5
1923-11	1923	11	4.6	142.2
1923-12	1923	12	-0.5	121.2
1924-01	1924	1	-5.4	128.8
1924-02	1924	2	-8.2	34.5
1924-03	1924	3	-0.8	42.2
1924-04	1924	4	2.9	74.4
1924-05	1924	5	10.6	17
1924-06	1924	6	14.9	112.8
1924-07	1924	7	19.7	32.8
1924-08	1924	8	18.3	161.5

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1924-09	1924	9	13.3	51.3
1924-10	1924	10	8.6	76.2
1924-11	1924	11	3.7	69.9
1924-12	1924	12	-5.1	71.6
1925-01	1925	1	-10.5	78.5
1925-02	1925	2	-2.6	54.4
1925-03	1925	3	1.2	77.5
1925-04	1925	4	3.8	50.5
1925-05	1925	5	9.7	60.2
1925-06	1925	6	16.2	126.2
1925-07	1925	7	18.7	84.8
1925-08	1925	8	18.2	36.1
1925-09	1925	9	12.6	53.6
1925-10	1925	10	5.2	163.6
1925-11	1925	11	2.2	89.9
1925-12	1925	12	-4.7	45.2
1926-01	1926	1	-6.1	120.9
1926-02	1926	2	-8.2	166.9
1926-03	1926	3	-4.4	96.8
1926-04	1926	4	1.6	94.5
1926-05	1926	5	8.5	95.3
1926-06	1926	6	15	84.6
1926-07	1926	7	18	75.7
1926-08	1926	8	17.5	47
1926-09	1926	9	12.6	25.4
1926-10	1926	10	8.9	117.6
1926-11	1926	11	3.7	70.4
1926-12	1926	12	-4.7	122.4
1927-01	1927	1	-2.8	112.8
1927-02	1927	2	-8	89.2
1927-03	1927	3	-1.5	62.7
1927-04	1927	4	3.9	85.6
1927-05	1927	5	9.5	94.7
1927-06	1927	6	14.3	32.3
1927-07	1927	7	20.3	141.7
1927-08	1927	8	17.5	238.5
1927-09	1927	9	14.5	52.6
1927-10	1927	10	10.6	132.8
1927-11	1927	11	5.6	60.5
1927-12	1927	12	-1.2	111.8
1928-01	1928	1	-5.5	107.7
1928-02	1928	2	-7.1	75.9
1928-03	1928	3	-2.1	78
1928-04	1928	4	5.1	55.4
1928-05	1928	5	10.9	80.3
1928-06	1928	6	14.7	47.8
1928-07	1928	7	20	84.3
1928-08	1928	8	19.2	25.9
1928-09	1928	9	13	70.1
1928-10	1928	10	8.5	79.2
1928-11	1928	11	1.8	81.5
1928-12	1928	12	-0.3	132.8
1929-01	1929	1	-6.1	127.5
1929-02	1929	2	-6	94.7
1929-03	1929	3	-0.8	70.9
1929-04	1929	4	3.7	70.9
1929-05	1929	5	10.9	165.6
1929-06	1929	6	15.7	58.4
1929-07	1929	7	18.9	40.6
1929-08	1929	8	17.6	58.9
1929-09	1929	9	15.4	113.3
1929-10	1929	10	8.4	61
1929-11	1929	11	2.3	92.7
1929-12	1929	12	-5.4	103.4
1930-01	1930	1	-5.5	79.8
1930-02	1930	2	-5.8	90.9
1930-03	1930	3	-0.5	94.7
1930-04	1930	4	3.8	40.6
1930-05	1930	5	9.8	40.9
1930-06	1930	6	20.8	43.4
1930-07	1930	7	19.6	94.2
1930-08	1930	8	18	52.6

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1930-09	1930	9	15.3	23.4
1930-10	1930	10	9.5	84.6
1930-11	1930	11	3	44.5
1930-12	1930	12	-3.3	126.5
1931-01	1931	1	-5.8	94
1931-02	1931	2	-4.5	79.2
1931-03	1931	3	0.6	77
1931-04	1931	4	6.4	96.8
1931-05	1931	5	11.7	65.8
1931-06	1931	6	15	116.1
1931-07	1931	7	21	54.6
1931-08	1931	8	18.9	89.9
1931-09	1931	9	14.1	122.2
1931-10	1931	10	9.9	54.9
1931-11	1931	11	6.1	47.5
1931-12	1931	12	-2.6	103.1
1932-01	1932	1	-2.7	100.3
1932-02	1932	2	-7.7	62.7
1932-03	1932	3	-1.8	81.5
1932-04	1932	4	4.5	70.1
1932-05	1932	5	10.9	33
1932-06	1932	6	15.3	53.8
1932-07	1932	7	18.5	88.1
1932-08	1932	8	19.2	82.8
1932-09	1932	9	15.3	100.3
1932-10	1932	10	10.6	82
1932-11	1932	11	2.9	111.8
1932-12	1932	12	-0.9	77.5
1933-01	1933	1	-2.2	123.4
1933-02	1933	2	-2.8	95.8
1933-03	1933	3	-2.5	115.8
1933-04	1933	4	4.6	72.9
1933-05	1933	5	10.9	58.9
1933-06	1933	6	16.1	79.8
1933-07	1933	7	18	52.3
1933-08	1933	8	18.8	133.1
1933-09	1933	9	14.9	147.1
1933-10	1933	10	9.5	296.9
1933-11	1933	11	-1.2	161.5
1933-12	1933	12	-7.9	94.2
1934-01	1934	1	-8.6	72.1
1934-02	1934	2	-10.3	148.6
1934-03	1934	3	-1.8	89.4
1934-04	1934	4	6.6	74.9
1934-05	1934	5	11.4	39.9
1934-06	1934	6	14.6	30.2
1934-07	1934	7	19.4	140.2
1934-08	1934	8	17.6	13.2
1934-09	1934	9	17.4	81.5
1934-10	1934	10	8.4	84.8
1934-11	1934	11	4.5	195.8
1934-12	1934	12	-6.1	143
1935-01	1935	1	-7.9	220.7
1935-02	1935	2	-8	79.2
1935-03	1935	3	-3.1	73.4
1935-04	1935	4	4	46.5
1935-05	1935	5	9.9	37.3
1935-06	1935	6	16.7	70.1
1935-07	1935	7	20.5	63.2
1935-08	1935	8	19.7	114.8
1935-09	1935	9	13.3	120.1
1935-10	1935	10	8.4	66.3
1935-11	1935	11	5.7	100.3
1935-12	1935	12	-3.7	111.8
1936-01	1936	1	-5.4	143.3
1936-02	1936	2	-8.1	30.7
1936-03	1936	3	3.8	110.5
1936-04	1936	4	4.7	76.2
1936-05	1936	5	11	106.2
1936-06	1936	6	17.2	70.6
1936-07	1936	7	17.8	54.9
1936-08	1936	8	18	74.7

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1936-09	1936	9	13.8	175.5
1936-10	1936	10	8.5	160.5
1936-11	1936	11	2	108
1936-12	1936	12	-2.4	127.8
1937-01	1937	1	-3.1	90.7
1937-02	1937	2	-3.6	66.8
1937-03	1937	3	-2	68.6
1937-04	1937	4	4.4	57.7
1937-05	1937	5	12.2	82.6
1937-06	1937	6	16.9	122.4
1937-07	1937	7	20.4	17
1937-08	1937	8	21.1	109.7
1937-09	1937	9	15.1	107.2
1937-10	1937	10	8.6	99.3
1937-11	1937	11	3.3	87.1
1937-12	1937	12	-2.9	114.3
1938-01	1938	1	-6	73.9
1938-02	1938	2	-7.9	114.8
1938-03	1938	3	-3.6	64.5
1938-04	1938	4	5.8	62
1938-05	1938	5	9.6	56.4
1938-06	1938	6	17.7	118.6
1938-07	1938	7	19.5	170.7
1938-08	1938	8	19.7	108
1938-09	1938	9	14.4	107.2
1938-10	1938	10	9.7	58.7
1938-11	1938	11	4.3	119.9
1938-12	1938	12	-2	85.3
1939-01	1939	1	-6.1	93
1939-02	1939	2	-5.8	70.4
1939-03	1939	3	-4.2	115.3
1939-04	1939	4	2.8	114.6
1939-05	1939	5	9	99.8
1939-06	1939	6	14.6	30
1939-07	1939	7	19.3	66.8
1939-08	1939	8	20.4	48.5
1939-09	1939	9	14.8	64.3
1939-10	1939	10	9.4	127.5
1939-11	1939	11	1.3	29
1939-12	1939	12	-2.7	97.3
1940-01	1940	1	-8.6	56.9
1940-02	1940	2	-6.3	50.5
1940-03	1940	3	-1.9	120.4
1940-04	1940	4	3.2	70.6
1940-05	1940	5	10.8	62.5
1940-06	1940	6	14.5	71.1
1940-07	1940	7	19.1	54.9
1940-08	1940	8	17.4	42.2
1940-09	1940	9	15	169.2
1940-10	1940	10	6.8	69.6
1940-11	1940	11	3.3	140.7
1940-12	1940	12	-3.5	122.2
1941-01	1941	1	-7.9	114.6
1941-02	1941	2	-5	50.3
1941-03	1941	3	-3.6	123.2
1941-04	1941	4	4.9	50.5
1941-05	1941	5	9.5	148.1
1941-06	1941	6	14.8	67.3
1941-07	1941	7	19.5	54.6
1941-08	1941	8	16.5	96.5
1941-09	1941	9	13.4	50.8
1941-10	1941	10	8.3	130
1941-11	1941	11	3.5	118.4
1941-12	1941	12	-2.9	110.7
1942-01	1942	1	-6.6	133.9
1942-02	1942	2	-6.4	70.6
1942-03	1942	3	1	103.9
1942-04	1942	4	5.1	57.7
1942-05	1942	5	12.4	52.6
1942-06	1942	6	15.6	40.1
1942-07	1942	7	19.4	50.8
1942-08	1942	8	18.7	53.6

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1942-09	1942	9	16.2	268.7
1942-10	1942	10	9.3	148.6
1942-11	1942	11	1.8	103.9
1942-12	1942	12	-6.2	95.3
1943-01	1943	1	-9.2	40.9
1943-02	1943	2	-3.9	101.1
1943-03	1943	3	-1.8	91.2
1943-04	1943	4	2.9	41.7
1943-05	1943	5	9.7	104.4
1943-06	1943	6	13.4	116.6
1943-07	1943	7	18.8	140.2
1943-08	1943	8	17.1	167.6
1943-09	1943	9	14.6	68.8
1943-10	1943	10	9.8	104.4
1943-11	1943	11	3.9	155.2
1943-12	1943	12	-5	38.4
1944-01	1944	1	-5.2	33
1944-02	1944	2	-7.2	140
1944-03	1944	3	-3.5	51.8
1944-04	1944	4	3	64.5
1944-05	1944	5	12	5.6
1944-06	1944	6	15.5	73.2
1944-07	1944	7	19.3	58.4
1944-08	1944	8	20.3	76.7
1944-09	1944	9	15.2	84.6
1944-10	1944	10	8.9	109.5
1944-11	1944	11	4.1	123.2
1944-12	1944	12	-3	98.8
1945-01	1945	1	-5.6	126.2
1945-02	1945	2	-6.1	93.7
1945-03	1945	3	0.8	41.9
1945-04	1945	4	6.8	48
1945-05	1945	5	9.5	194.6
1945-06	1945	6	13.8	160.5
1945-07	1945	7	19.7	37.6
1945-08	1945	8	18.8	55.4
1945-09	1945	9	15.7	45
1945-10	1945	10	8.5	147.6
1945-11	1945	11	3.3	179.1
1945-12	1945	12	-4.4	92.7
1946-01	1946	1	-5.9	103.4
1946-02	1946	2	-7.2	107.4
1946-03	1946	3	1.9	28.2
1946-04	1946	4	2.9	125.7
1946-05	1946	5	11.1	65.3
1946-06	1946	6	14.8	26.2
1946-07	1946	7	18.1	49.3
1946-08	1946	8	17.9	90.4
1946-09	1946	9	15.1	73.9
1946-10	1946	10	9.7	63.5
1946-11	1946	11	2.7	55.4
1946-12	1946	12	-3.7	127
1947-01	1947	1	-5.7	119.6
1947-02	1947	2	-3.4	110
1947-03	1947	3	-0.6	48.8
1947-04	1947	4	3.7	67.3
1947-05	1947	5	11.4	108.2
1947-06	1947	6	14.2	93
1947-07	1947	7	22	108
1947-08	1947	8	18.7	21.8
1947-09	1947	9	15.1	118.6
1947-10	1947	10	10.3	10.2
1947-11	1947	11	3.5	86.6
1947-12	1947	12	-4.2	139.2
1948-01	1948	1	-6.6	167.6
1948-02	1948	2	-9.1	46.5
1948-03	1948	3	-3.7	145
1948-04	1948	4	3.3	69.9
1948-05	1948	5	9.8	169.2
1948-06	1948	6	14.2	94.7
1948-07	1948	7	18.8	64
1948-08	1948	8	18.8	63

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1948-09	1948	9	14	49.5
1948-10	1948	10	8.6	59.4
1948-11	1948	11	5.1	101.3
1948-12	1948	12	-1.2	115.1
1949-01	1949	1	-4	54.4
1949-02	1949	2	-4.5	78.5
1949-03	1949	3	-0.2	130.3
1949-04	1949	4	5.8	75.2
1949-05	1949	5	10.2	63.2
1949-06	1949	6	16.9	61.5
1949-07	1949	7	20.2	12.2
1949-08	1949	8	19.4	114.6
1949-09	1949	9	14.4	87.9
1949-10	1949	10	9.9	35.8
1949-11	1949	11	3.1	119.6
1949-12	1949	12	-0.2	69.3
1950-01	1950	1	-4.1	85.1
1950-02	1950	2	-8	82.6
1950-03	1950	3	-3.2	83.6
1950-04	1950	4	3.5	64
1950-05	1950	5	9.2	23.9
1950-06	1950	6	14.9	68.8
1950-07	1950	7	18	77.2
1950-08	1950	8	17.3	162.3
1950-09	1950	9	11.9	42.7
1950-10	1950	10	8.2	54.1
1950-11	1950	11	6.2	110.7
1950-12	1950	12	1.1	138.4
1951-01	1951	1	-2.9	99.8
1951-02	1951	2	-2.8	76.7
1951-03	1951	3	0.7	55.9
1951-04	1951	4	6.7	94.7
1951-05	1951	5	10.8	83.1
1951-06	1951	6	14.4	30.5
1951-07	1951	7	19.5	74.7
1951-08	1951	8	18.6	121.7
1951-09	1951	9	15.1	95.3
1951-10	1951	10	8.9	37.3
1951-11	1951	11	4	90.9
1951-12	1951	12	-2.9	154.4
1952-01	1952	1	-4.3	175.5
1952-02	1952	2	-3.6	125.2
1952-03	1952	3	-1.2	81.3
1952-04	1952	4	6	42.4
1952-05	1952	5	8.9	62
1952-06	1952	6	15.5	55.6
1952-07	1952	7	20.5	39.4
1952-08	1952	8	19.1	132.3
1952-09	1952	9	14	64
1952-10	1952	10	8.3	35.8
1952-11	1952	11	3.5	58.4
1952-12	1952	12	-1.6	74.9
1953-01	1953	1	-2	55.1
1953-02	1953	2	-2.4	112.8
1953-03	1953	3	0.5	50.8
1953-04	1953	4	6.9	58.9
1953-05	1953	5	10.1	72.6
1953-06	1953	6	15.8	37.6
1953-07	1953	7	19.1	77.5
1953-08	1953	8	17.4	126.7
1953-09	1953	9	15.1	96.5
1953-10	1953	10	9.4	92.5
1953-11	1953	11	5.8	55.4
1953-12	1953	12	1.3	102.1
1954-01	1954	1	-6.2	152.1
1954-02	1954	2	-1.6	172.2
1954-03	1954	3	-0.6	70.4
1954-04	1954	4	4.4	
1954-05	1954	5	9.8	66.5
1954-06	1954	6	15.9	74.7
1954-07	1954	7	18	43.4
1954-08	1954	8	16.8	94.5

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1954-09	1954	9	13.9	37.6
1954-10	1954	10	10.3	103.6
1954-11	1954	11	4	93.7
1954-12	1954	12	0.9	116.3
1955-01	1955	1	-3.9	125.7
1955-02	1955	2	-4.1	67.3
1955-03	1955	3	-1.2	86.9
1955-04	1955	4	4.1	49.8
1955-05	1955	5	10.7	44.5
1955-06	1955	6	15.3	41.1
1955-07	1955	7	19.5	37.8
1955-08	1955	8	19.3	98.8
1955-09	1955	9	13.6	55.9
1955-10	1955	10	8.9	39.9
1955-11	1955	11	3	89.2
1955-12	1955	12	-5.3	67.3
1956-01	1956	1	-1.1	259.1
1956-02	1956	2	-5.4	119.4
1956-03	1956	3	-4.6	149.1
1956-04	1956	4	3.3	65.8
1956-05	1956	5	7.9	58.7
1956-06	1956	6	16	47.5
1956-07	1956	7	17.4	48.5
1956-08	1956	8	16.3	43.7
1956-09	1956	9	12.7	71.4
1956-10	1956	10	8.4	28.4
1956-11	1956	11	4.2	106.4
1956-12	1956	12	-2.2	98
1957-01	1957	1	-9.3	172.7
1957-02	1957	2	-4	80.5
1957-03	1957	3	-0.6	101.9
1957-04	1957	4	4.5	113.5
1957-05	1957	5	10.3	54.4
1957-06	1957	6	16.3	40.4
1957-07	1957	7	17.8	42.7
1957-08	1957	8	16.8	79
1957-09	1957	9	15.1	76.7
1957-10	1957	10	9.6	55.4
1957-11	1957	11	5.7	183.4
1957-12	1957	12	1.8	114
1958-01	1958	1	-1.2	236.2
1958-02	1958	2	-4.9	113.5
1958-03	1958	3	1.2	108.2
1958-04	1958	4	6.7	81.8
1958-05	1958	5	10.5	62.5
1958-06	1958	6	14.1	63.5
1958-07	1958	7	18.9	55.9
1958-08	1958	8	18.7	125
1958-09	1958	9	14.1	140.2
1958-10	1958	10	7.8	67.6
1958-11	1958	11	3.5	164.3
1958-12	1958	12	-7.6	127.3
1959-01	1959	1	-5.9	119.9
1959-02	1959	2	-8.7	98
1959-03	1959	3	-1.7	134.9
1959-04	1959	4	5	64.5
1959-05	1959	5	11.3	52.6
1959-06	1959	6	14.3	161.3
1959-07	1959	7	20.3	60.5
1959-08	1959	8	18.6	92.2
1959-09	1959	9	15.5	94
1959-10	1959	10	8.9	252
1959-11	1959	11	5.4	206.2
1959-12	1959	12	-1.1	95
1960-01	1960	1	-5.1	131.8
1960-02	1960	2	-1.2	142
1960-03	1960	3	-1.8	155.2
1960-04	1960	4	4.8	67.3
1960-05	1960	5	13.1	59.7
1960-06	1960	6	17.2	67.8
1960-07	1960	7	19.4	39.4
1960-08	1960	8	19.6	51.3

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1960-09	1960	9	15.1	63.2
1960-10	1960	10	8.1	84.8
1960-11	1960	11	4.9	52.8
1960-12	1960	12	-2.4	127
1961-01	1961	1	-7.8	126.2
1961-02	1961	2	-6.3	91.2
1961-03	1961	3	-3.1	78.7
1961-04	1961	4	2.9	95
1961-05	1961	5	10.7	132.6
1961-06	1961	6	16.8	129.8
1961-07	1961	7	18.4	25.1
1961-08	1961	8	18.9	101.9
1961-09	1961	9	16.9	61
1961-10	1961	10	11.1	179.6
1961-11	1961	11	5.5	149.4
1961-12	1961	12	-0.6	139.7
1962-01	1962	1	-5.2	
1962-02	1962	2	-9	111.3
1962-03	1962	3	-0.5	83.8
1962-04	1962	4	5.1	172
1962-05	1962	5	9.9	24.4
1962-06	1962	6	15.6	79
1962-07	1962	7	16.3	130.6
1962-08	1962	8	18.1	162.1
1962-09	1962	9	13.6	161.8
1962-10	1962	10	9.3	88.6
1962-11	1962	11	4	
1962-12	1962	12	-2.4	104.1
1963-01	1963	1	-2.8	174.8
1963-02	1963	2	-6.6	147.3
1963-03	1963	3	-2.2	65.8
1963-04	1963	4	2.8	145.3
1963-05	1963	5	10.7	66.3
1963-06	1963	6	15.8	43.9
1963-07	1963	7	20.6	57.7
1963-08	1963	8	17.3	182.4
1963-09	1963	9	13	93.5
1963-10	1963	10	10.5	127.3
1963-11	1963	11	5.6	157.2
1963-12	1963	12	-7	151.9
1964-01	1964	1	-4.7	91.4
1964-02	1964	2	-5	182.6
1964-03	1964	3	-1.7	81.5
1964-04	1964	4	3.8	87.1
1964-05	1964	5	11.1	55.1
1964-06	1964	6	14.9	69.9
1964-07	1964	7	18.6	68.6
1964-08	1964	8	16.8	132.6
1964-09	1964	9	13.2	91.4
1964-10	1964	10	9.2	75.7
1964-11	1964	11	2.2	161
1964-12	1964	12	-1.9	204
1965-01	1965	1	-6.5	93.7
1965-02	1965	2	-5.9	84.3
1965-03	1965	3	-1.9	25.4
1965-04	1965	4	2.8	56.6
1965-05	1965	5	9.4	48.3
1965-06	1965	6	15.7	79.2
1965-07	1965	7	18.8	41.1
1965-08	1965	8	18.7	66.8
1965-09	1965	9	13.7	14.2
1965-10	1965	10	8.6	99.3
1965-11	1965	11	2.1	71.9
1965-12	1965	12	-2.9	69.9
1966-01	1966	1	-3.4	118.6
1966-02	1966	2	-4.9	80
1966-03	1966	3	0.9	90.4
1966-04	1966	4	3.4	29.2
1966-05	1966	5	9.8	94.2
1966-06	1966	6	16.2	43.4
1966-07	1966	7	18.9	52.8
1966-08	1966	8	18.7	33.8

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1966-09	1966	9	13.2	82
1966-10	1966	10	9.3	150.6
1966-11	1966	11	6.1	65.8
1966-12	1966	12	-0.4	103.4
1967-01	1967	1	-3.7	107.4
1967-02	1967	2	-7.6	121.4
1967-03	1967	3	-4.4	129.5
1967-04	1967	4	1.4	66
1967-05	1967	5	7.7	152.7
1967-06	1967	6	16.7	34.3
1967-07	1967	7	21.2	108.2
1967-08	1967	8	20.1	80.8
1967-09	1967	9	15	96.3
1967-10	1967	10	9.8	99.3
1967-11	1967	11	3.9	141.5
1967-12	1967	12	-2.1	211.1
1968-01	1968	1	-7.8	102.6
1968-02	1968	2	-7.9	79.8
1968-03	1968	3	0.1	106.2
1968-04	1968	4	5.9	51.8
1968-05	1968	5	9.3	63
1968-06	1968	6	14.6	123.4
1968-07	1968	7	20.4	20.8
1968-08	1968	8	17.4	34.5
1968-09	1968	9	15.9	69.6
1968-10	1968	10	11.6	189.2
1968-11	1968	11	2.3	200.9
1968-12	1968	12	-1.3	134.9
1969-01	1969	1	-3.2	118.9
1969-02	1969	2	-2.6	113.5
1969-03	1969	3	-0.9	87.6
1969-04	1969	4	4.7	125
1969-05	1969	5	10	81
1969-06	1969	6	16.8	34.5
1969-07	1969	7	18.2	49.5
1969-08	1969	8	19.3	66.8
1969-09	1969	9	14.8	103.9
1969-10	1969	10	8.1	65.8
1969-11	1969	11	5.5	109.7
1969-12	1969	12	0.4	124.2
1970-01	1970	1	-9	34.8
1970-02	1970	2	-4.3	66.3
1970-03	1970	3	-1.1	92.5
1970-04	1970	4	3.8	65.8
1970-05	1970	5	11.7	84.8
1970-06	1970	6	16.5	68.3
1970-07	1970	7	20	101.1
1970-08	1970	8	19.5	129.5
1970-09	1970	9	13.8	83.3
1970-10	1970	10	10.4	133.9
1970-11	1970	11	4.2	143
1970-12	1970	12	-6.1	172.2
1971-01	1971	1	-7.8	116.3
1971-02	1971	2	-4.7	109.2
1971-03	1971	3	-0.2	137.4
1971-04	1971	4	4.8	105.4
1971-05	1971	5	11.5	174.8
1971-06	1971	6	15.3	33.3
1971-07	1971	7	19.6	52.3
1971-08	1971	8	18.5	289.3
1971-09	1971	9	15.7	57.9
1971-10	1971	10	10.3	30
1971-11	1971	11	3.2	146.6
1971-12	1971	12	-3.9	104.6
1972-01	1972	1	-5.1	103.6
1972-02	1972	2	-7	165.4
1972-03	1972	3	-2.8	175
1972-04	1972	4	1.6	84.6
1972-05	1972	5	11	106.4
1972-06	1972	6	16.8	87.9
1972-07	1972	7	19.1	71.9
1972-08	1972	8	18.3	64.3

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1972-09	1972	9	14.8	85.6
1972-10	1972	10	7.5	109
1972-11	1972	11	1.8	222
1972-12	1972	12	-4.3	116.3
1973-01	1973	1	-4.6	62.7
1973-02	1973	2	-6	117.9
1973-03	1973	3	1.2	70.6
1973-04	1973	4	5	78.2
1973-05	1973	5	9.7	68.1
1973-06	1973	6	17.6	124.7
1973-07	1973	7	21.1	89.7
1973-08	1973	8	19.5	77
1973-09	1973	9	13.6	24.1
1973-10	1973	10	8.9	95.3
1973-11	1973	11	2.9	76.7
1973-12	1973	12	2.1	148.8
1974-01	1974	1	-5.5	107.7
1974-02	1974	2	-6.2	141.7
1974-03	1974	3	-1.2	77.7
1974-04	1974	4	5.2	88.1
1974-05	1974	5	7.9	86.9
1974-06	1974	6	16.1	25.4
1974-07	1974	7	17.5	71.9
1974-08	1974	8	19.1	108.7
1974-09	1974	9	14.5	149.1
1974-10	1974	10	6.4	125.2
1974-11	1974	11	4	117.6
1974-12	1974	12	-0.9	87.4
1975-01	1975	1	-4.6	206
1975-02	1975	2	-6.2	70.1
1975-03	1975	3	-2	145.8
1975-04	1975	4	2.9	76.5
1975-05	1975	5	10.5	59.2
1975-06	1975	6	15.9	51.8
1975-07	1975	7	21.3	84.3
1975-08	1975	8	18.3	18.3
1975-09	1975	9	14.5	101.9
1975-10	1975	10	8.4	116.3
1975-11	1975	11	5.5	100.6
1975-12	1975	12	-3.9	154.7
1976-01	1976	1	-5.3	161.5
1976-02	1976	2	-2.8	121.9
1976-03	1976	3	-0.6	90.9
1976-04	1976	4	5.4	94.5
1976-05	1976	5	11.6	88.9
1976-06	1976	6	17.9	48.8
1976-07	1976	7	18.9	152.1
1976-08	1976	8	19.3	59.9
1976-09	1976	9	14.5	85.3
1976-10	1976	10	8.3	145.3
1976-11	1976	11	2.5	53.3
1976-12	1976	12	-4.3	251.2
1977-01	1977	1	-7	127.5
1977-02	1977	2	-4.3	77
1977-03	1977	3	1.2	119.2
1977-04	1977	4	4.2	74.1
1977-05	1977	5	10.7	112.5
1977-06	1977	6	15	141.5
1977-07	1977	7	19.2	129
1977-08	1977	8	19	125.7
1977-09	1977	9	13.6	187.5
1977-10	1977	10	9.4	131.2
1977-11	1977	11	4.9	95.5
1977-12	1977	12	-1.9	135.9
1978-01	1978	1	-5.3	266.7
1978-02	1978	2	-6.5	39.8
1978-03	1978	3	-2.2	59.1
1978-04	1978	4	3.1	80.9
1978-05	1978	5	12	22.1
1978-06	1978	6	15.9	79.4
1978-07	1978	7	18.7	65.2
1978-08	1978	8	19.2	62.5

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1978-09	1978	9	11.8	91.5
1978-10	1978	10	8.3	74.5
1978-11	1978	11	1.4	36.9
1978-12	1978	12	-3	108.4
1979-01	1979	1	-3.4	234.5
1979-02	1979	2	-7.9	146.8
1979-03	1979	3	1.5	118.4
1979-04	1979	4	4.9	98.6
1979-05	1979	5	12.6	152.8
1979-06	1979	6	16.3	87.4
1979-07	1979	7	19.3	93.3
1979-08	1979	8	17.4	128.8
1979-09	1979	9	14.2	69.7
1979-10	1979	10	9	135
1979-11	1979	11	5.6	166.6
1979-12	1979	12	-2.3	143.7
1980-01	1980	1	-5.2	48.9
1980-02	1980	2	-6.2	30.3
1980-03	1980	3	-1.9	125
1980-04	1980	4	6.1	81.2
1980-05	1980	5	10.1	26.8
1980-06	1980	6	14.6	129.1
1980-07	1980	7	18.2	121.3
1980-08	1980	8	18.6	52.7
1980-09	1980	9	13.7	61.6
1980-10	1980	10	8.8	89.3
1980-11	1980	11	2.9	144.8
1980-12	1980	12	-5.3	167.1
1981-01	1981	1	-8	168.6
1981-02	1981	2	-0.6	59.1
1981-03	1981	3	0.8	98.8
1981-04	1981	4	6.1	64
1981-05	1981	5	12.1	121.2
1981-06	1981	6	15.9	103.6
1981-07	1981	7	18.9	83.5
1981-08	1981	8	18	51
1981-09	1981	9	14.2	144
1981-10	1981	10	8.6	156.2
1981-11	1981	11	4.2	145.3
1981-12	1981	12	1.2	163.5
1982-01	1982	1	-8	181
1982-02	1982	2	-5.3	84.7
1982-03	1982	3	-0.7	68.5
1982-04	1982	4	5.1	135.7
1982-05	1982	5	9.9	44.8
1982-06	1982	6	14.6	89.8
1982-07	1982	7	19.4	96.2
1982-08	1982	8	17	47.4
1982-09	1982	9	15.1	79.4
1982-10	1982	10	8.5	23.8
1982-11	1982	11	5.9	93.5
1982-12	1982	12	0.1	97
1983-01	1983	1	-3.2	102.8
1983-02	1983	2	-4	105.6
1983-03	1983	3	0.7	123.2
1983-04	1983	4	6.4	114.7
1983-05	1983	5	11.4	143.2
1983-06	1983	6	16.5	39
1983-07	1983	7	19.7	77.2
1983-08	1983	8	18.8	106.2
1983-09	1983	9	16.4	36.8
1983-10	1983	10	9.9	42.2
1983-11	1983	11	4.6	102.6
1983-12	1983	12	-2	120.6
1984-01	1984	1	-5.7	106
1984-02	1984	2	-0.9	117.7
1984-03	1984	3	-1.9	140.1
1984-04	1984	4	4.5	98.2
1984-05	1984	5	11.6	86.2
1984-06	1984	6	16.2	83.8
1984-07	1984	7	21.1	43.2
1984-08	1984	8	21	143.8

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1984-09	1984	9	13.8	100.4
1984-10	1984	10	9.2	48
1984-11	1984	11	4.6	28.6
1984-12	1984	12	-0.4	94.7
1985-01	1985	1	-8.1	79.5
1985-02	1985	2	-4.5	105.3
1985-03	1985	3	-1.6	102.6
1985-04	1985	4	4.1	62
1985-05	1985	5	10.4	147.3
1985-06	1985	6	15.1	234.7
1985-07	1985	7	20	47.9
1985-08	1985	8	18	121
1985-09	1985	9	15.3	20.1
1985-10	1985	10	9.2	55.8
1985-11	1985	11	3.3	98.3
1985-12	1985	12	-4.7	64.3
1986-01	1986	1	-3.4	134.5
1986-02	1986	2	-6	81.6
1986-03	1986	3	-0.6	140
1986-04	1986	4	6.8	104
1986-05	1986	5	10.6	104.2
1986-06	1986	6	15	75.6
1986-07	1986	7	17.6	172.9
1986-08	1986	8	17.4	78.7
1986-09	1986	9	12.4	104.7
1986-10	1986	10	8.3	53.7
1986-11	1986	11	2.1	90
1986-12	1986	12	-2.4	59.2
1987-01	1987	1	-6.2	153.7
1987-02	1987	2	-6.6	55.8
1987-03	1987	3	-1.7	104.6
1987-04	1987	4	6.8	76.1
1987-05	1987	5	11.3	59
1987-06	1987	6	15.6	89.1
1987-07	1987	7	19.7	36.4
1987-08	1987	8	18.2	30.6
1987-09	1987	9	14.9	132.6
1987-10	1987	10	9.9	108.7
1987-11	1987	11	2.6	182.8
1987-12	1987	12	-2.4	146
1988-01	1988	1	-5.1	69.8
1988-02	1988	2	-4.4	172.8
1988-03	1988	3	-0.4	46.7
1988-04	1988	4	4.3	141.4
1988-05	1988	5	12.3	44.2
1988-06	1988	6	14.7	84.3
1988-07	1988	7	19.8	154.5
1988-08	1988	8	19.9	81.2
1988-09	1988	9	13.1	30.2
1988-10	1988	10	8.1	180.8
1988-11	1988	11	5.3	167.2
1988-12	1988	12	-3.8	57.2
1989-01	1989	1	-4.1	57.2
1989-02	1989	2	-5.9	127.3
1989-03	1989	3	-2.7	110.4
1989-04	1989	4	4.9	57.8
1989-05	1989	5	14.2	98.4
1989-06	1989	6	16.5	100.5
1989-07	1989	7	18.5	80.2
1989-08	1989	8	19.7	51.3
1989-09	1989	9	14.8	120.6
1989-10	1989	10	8.9	85.4
1989-11	1989	11	3.3	163.8
1989-12	1989	12	-8.6	68.4
1990-01	1990	1	-1.8	99.1
1990-02	1990	2	-4.4	124
1990-03	1990	3	-0.5	69.6
1990-04	1990	4	6.1	141.5
1990-05	1990	5	9.4	188.4
1990-06	1990	6	17.3	31
1990-07	1990	7	20.6	79.2
1990-08	1990	8	20.7	31.8

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1990-09	1990	9	14.6	55.2
1990-10	1990	10	11.7	126.8
1990-11	1990	11	4.4	119.8
1990-12	1990	12	0.6	163.2
1991-01	1991	1	-6.8	113.4
1991-02	1991	2	-3.7	38
1991-03	1991	3	0.7	145.5
1991-04	1991	4	5.2	96.8
1991-05	1991	5	12.1	128.4
1991-06	1991	6	16.7	14.8
1991-07	1991	7	20	73.6
1991-08	1991	8	19.8	171.2
1991-09	1991	9	14.6	153.2
1991-10	1991	10	10.7	99.6
1991-11	1991	11	5.5	172.8
1991-12	1991	12	-3.1	107.8
1992-01	1992	1	-5.9	116.7
1992-02	1992	2	-5.7	160.6
1992-03	1992	3	-3	97.7
1992-04	1992	4	3.2	34.5
1992-05	1992	5	10.5	54.6
1992-06	1992	6	16	68.8
1992-07	1992	7	16.9	77
1992-08	1992	8	19.2	37
1992-09	1992	9	15.7	64.6
1992-10	1992	10	8.8	101.8
1992-11	1992	11	2.3	106.3
1992-12	1992	12	-1.8	103
1993-01	1993	1	-6	81.4
1993-02	1993	2	-9	102.6
1993-03	1993	3	-2.5	149.4
1993-04	1993	4	5.2	71.8
1993-05	1993	5	10.9	63
1993-06	1993	6	14.9	93.2
1993-07	1993	7	18.4	70.8
1993-08	1993	8	19.1	53.8
1993-09	1993	9	15.4	75.8
1993-10	1993	10	7.5	142
1993-11	1993	11	3.8	96.2
1993-12	1993	12	-0.9	287.3
1994-01	1994	1	-8.8	162.1
1994-02	1994	2	-7	34.6
1994-03	1994	3	-0.2	232.3
1994-04	1994	4	7.2	80.8
1994-05	1994	5	10.2	149
1994-06	1994	6	18	49.2
1994-07	1994	7	21.4	41
1994-08	1994	8	19.1	64.2
1994-09	1994	9	13.9	88.6
1994-10	1994	10	9.2	20
1994-11	1994	11	5.3	104.4
1994-12	1994	12	-2.1	156.9
1995-01	1995	1	-2.7	136.2
1995-02	1995	2	-6.3	107.9
1995-03	1995	3	-0.3	40.6
1995-04	1995	4	3.5	64
1995-05	1995	5	9.5	84
1995-06	1995	6	16.6	102.8
1995-07	1995	7	20.4	126.5
1995-08	1995	8	18.3	81.3
1995-09	1995	9	13.5	60
1995-10	1995	10	11.8	90.1
1995-11	1995	11	4	151
1995-12	1995	12	-3.8	140.7
1996-01	1996	1	-5.3	95.8
1996-02	1996	2	-3.9	142.4
1996-03	1996	3	-1.6	86.2
1996-04	1996	4	5.5	140.6
1996-05	1996	5	9.6	116.9
1996-06	1996	6	16.4	46.1
1996-07	1996	7	19.1	147.5
1996-08	1996	8	19.4	24.4

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
1996-09	1996	9	15.1	260.7
1996-10	1996	10	8	95.5
1996-11	1996	11	3	91.3
1996-12	1996	12	1.5	91.8
1997-01	1997	1	-5.2	95.9
1997-02	1997	2	-4.3	71.8
1997-03	1997	3	-2.9	95.1
1997-04	1997	4	2.9	93.4
1997-05	1997	5	10.4	72.4
1997-06	1997	6	15.7	56.6
1997-07	1997	7	20.3	22.8
1997-08	1997	8	18.6	50.7
1997-09	1997	9	15.3	58.9
1997-10	1997	10	7.5	31.8
1997-11	1997	11	2.8	132.4
1997-12	1997	12	-2.2	92.7
1998-01	1998	1	-3.1	157.8
1998-02	1998	2	-1.7	88.5
1998-03	1998	3	1.2	123
1998-04	1998	4	6.1	87.7
1998-05	1998	5	14.2	39.8
1998-06	1998	6	15.8	50.8
1998-07	1998	7	20.5	31.3
1998-08	1998	8	20.1	55.1
1998-09	1998	9	15.5	133.5
1998-10	1998	10	9.2	191.6
1998-11	1998	11	3.5	82.8
1998-12	1998	12	-0.1	45.7
1999-01	1999	1	-3.7	78.6
1999-02	1999	2	-2.2	63
1999-03	1999	3	2.9	121.3
1999-04	1999	4	5.3	0
1999-05	1999	5	13.9	0
1999-06	1999	6	18.9	35.6
1999-07	1999	7	21.2	32.5
1999-08	1999	8	19.6	114.2
1999-09	1999	9	19	213.4
1999-10	1999	10	8.4	114.9
1999-11	1999	11	6	73.7
1999-12	1999	12	0.4	108
2000-01	2000	1	-4.2	182.2
2000-02	2000	2	-2.6	10.7
2000-03	2000	3	1.6	116.4
2000-04	2000	4	6.4	89.1
2000-05	2000	5	10	58
2000-06	2000	6	16.4	46
2000-07	2000	7	18.8	72.4
2000-08	2000	8	19.2	36.6
2000-09	2000	9	14.6	58.4
2000-10	2000	10	9.9	197.6
2000-11	2000	11	4.6	98.6
2000-12	2000	12	-3.2	100.9
2001-01	2001	1	-5.9	74.8
2001-02	2001	2	-5.3	53.2
2001-03	2001	3	-1	64.9
2001-04	2001	4	3.8	77.2
2001-05	2001	5	12.3	139.5
2001-06	2001	6	18.2	80.3
2001-07	2001	7	19.1	26
2001-08	2001	8	21.3	12.3
2001-09	2001	9	16.4	78
2001-10	2001	10	11.1	
2001-11	2001	11	5.3	100.7
2001-12	2001	12	0.8	69.1
2002-01	2002	1	-3	123
2002-02	2002	2	-3.3	84.4
2002-03	2002	3	-0.1	104.8
2002-04	2002	4	5.3	104.7
2002-05	2002	5	11.2	72.7
2002-06	2002	6	14.7	45.4
2002-07	2002	7	19.3	58.1
2002-08	2002	8	20.2	40.6

Date/Time	Year	Month	Mean Temperature (degrees Celsius	Total Precipitation (millimetres)
2002-10	2002	10	8	87.1
2002-11	2002	11	3.3	211.3
2002-12	2002	12	-2.1	112.1
2003-01	2003	1	-7.8	69.7
2003-02	2003	2	-7.2	97.5
2003-03	2003	3	-1.6	136.1
2003-04	2003	4	3.8	82.8
2003-05	2003	5	10	57.5
2003-06	2003	6	16.8	66.2
2003-07	2003	7	21.3	78.4
2003-09	2003	9	17	92.2
2003-10	2003	10	10.3	116.5
2003-11	2003	11	5.3	68.5
2004-01	2004	1	-9.8	24.6
2004-02	2004	2	-5.2	26.4
2004-03	2004	3	-1.5	58.9
2004-04	2004	4	5.4	115.2
2004-05	2004	5	10.9	38.7
2004-06	2004	6	14.7	55.9
2004-07	2004	7	19.8	62.4
2004-08	2004	8	20.3	65.4
2004-09	2004	9	14.8	74
2004-10	2004	10	10.2	114.4
2004-11	2004	11	3.4	145.4
2004-12	2004	12	-1.6	107.6
2005-01	2005	1	-7.7	69.1
2005-02	2005	2	-4.6	41.5
2005-03	2005	3	-1.2	88.3

APPENDIX C

Monitor Well Records

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MONITOR WELL RECORD

MW1

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW1

DATES: BORING 2005/04/19 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES: TYPE	NUMBER	RECOVERY	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
	20.77	GRADE				mm								
0	20.47	Brown ORGANICS and PEAT.												
1	19.27	Brown fine SAND, some silt.												BENTONITE
2	17.72	Brown silty SAND.										▼		SLOTTED SCREEN
3		End of borehole. NOTE: No samples taken.												
4														
5														
6														
7														

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MONITOR WELL RECORD

MW2

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW2

DATES: BORING 2005/04/13 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	NUMBER	RECOVERY	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
	20.89	TOP OF LAKE BED				mm								
0		Black organics: PEAT												BENTONITE
	20.48													
		Compact, brown fine to medium SAND, some organics.		HH	1	360	-	-	-	-	W		N	NATIVE MATERIAL
	20.07													SLOTTED SCREEN
1		End of borehole. NOTE: MW2 is a 12mm diameter PVC seepage probe in the lake bottom.												
2														
3														
4														
5														
6														
7														

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MONITOR WELL RECORD

MW3

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW3

DATES: BORING 2005/04/13 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	NUMBER	RECOVERY mm	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
0	20.51	GRADE												
		Black organics: PEAT										▼		NATIVE BACKFILL
	19.67													
1	19.51	Loose, black/brown organic SAND and SILT.		HH	1	360	-	-	-	-	W		-	
	19.13	Compact, brown fine to medium SAND.		HH	2	360	-	-	-	-	W		-	SLOTTED SCREEN
		End of borehole.												
2														
3														
4														
5														
6														
7														

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MONITOR WELL RECORD

MW4D

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW4D

DATES: BORING 2005/04/15 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	NUMBER	RECOVERY mm	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
	24.01	GRADE												
0		Loose to compact, reddish brown very fine to medium silty SAND.		SS	1	500	8							
				SS	2	600	10							
1				SS	3	550	13							BENTONITE
2				SS	4	500	24							
	21.36			SS	5	500	12							
3		Compact, brown coarse to medium SAND with gravel.		SS	6	550	11							
4				SS	7	200	15							
	19.51			SS	8	500	5							
		Firm, brown very sandy SILT.										▼		
5				SS	9	600	16							
	18.61													GROUT
		Medium stiff, dark brown very sandy SILT.		SS	10	600	24							
6														
7														

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MONITOR WELL RECORD

MW4D

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW4D

DATES: BORING 2005/04/15 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	NUMBER	RECOVERY mm	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
7														
				SS	11	600	19							
8	15.91	Compact to dense, dark brown SAND.												
9				SS	12	0	41							
10				SS	13	7.3	61							
				SS	14	500	93							SLOTTED SCREEN
11														
12				SS	15	250	50/100							
	11.57	End of borehole on possible sandstone.												
13														
14														

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MONITOR WELL RECORD

MW4S

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW4S

DATES: BORING 2005/04/15 WATER LEVEL DRY (05/04/20)

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY mm	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
0	24.01	GRADE												
		Loose to compact, reddish brown very fine to medium silty SAND.												BENTONITE
	21.36													
		Compact, brown coarse to medium SAND with gravel.												SLOTTED SCREEN
	19.51													
		End of borehole. NOTE: No samples taken.												

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MONITOR WELL RECORD

MW5

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

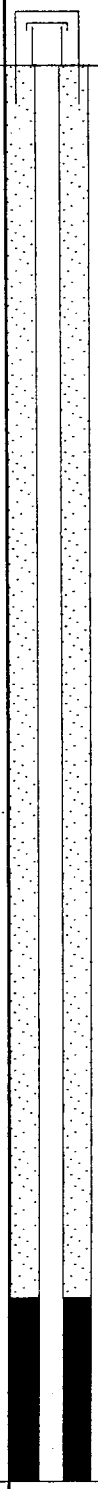
LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW5

DATES: BORING 2005/04/19 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES: TYPE	NUMBER	RECOVERY mm	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
	22.91	GRADE												
0		Brown silty SAND.												
1														
	21.41													
		Brown to light brown silty SAND.												
2														
3	19.87													
		Light brown silty SAND.												
4												▼		
	18.34													
		Very soft, light brown silty SAND.												
5														
6	16.82													
		Light brown SAND, some silt.												
7														



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MW 05/04/28

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MONITOR WELL RECORD

MW5

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW5

DATES: BORING 2005/04/19 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES: TYPE	SAMPLES: NUMBER	SAMPLES: RECOVERY (mm)	SAMPLES: N-VALUE OR RQD %	SAMPLES: OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
7	15.29													
		Coarse, silty SAND.												BENTONITE
8														
9														
10														
11														SLOTTED SCREEN
12	10.72													CAVE
		End of borehole. NOTE: No samples taken.												
13														
14														

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MW 05/04/28

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MONITOR WELL RECORD

MW6D

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW6D

DATES: BORING 2005/04/19 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	NUMBER	RECOVERY mm	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
	21.31	GRADE												
0		Loose, brown gray SAND with black organics.		SS	1	550	6/0							
	20.71	Compact, brown silty SAND.		SS	2	525	22							
1				SS	3	450	12							
2				SS	4	525	7					▼		
				SS	5	450	9							
3				SS	6	600	12							
				SS	7	550	17							
4	17.05	Compact, brown silty SAND, trace gravel.		SS	8	500	18							
	16.44	Compact, very coarse silty SAND.		SS	9	575	20							
5														
	15.31	Compact, brown silty SAND.		SS	10	-	21							
6				SS	11A	250	21							BENTONITE
				SS	11B	250	16							
7														

App'd Apr 28 2005 12:42:14

MW 05/04/28

Jacques Whitford

MONITOR WELL RECORD

MW6D

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR — PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS — Hole No. MW6D

DATES: BORING 2005/04/19 — WATER LEVEL 2005/04/20 — DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR RQD %	OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
7	14.01													
	13.41	Compact, brown silty SAND, trace gravel.		SS	12	250	17							
8		Compact, brown silty SAND.												
9				SS	13	25	12							SLOTTED SCREEN
				SS	14	-	14							
10	11.31	End of borehole.												
11														
12														
13														
14														

App'd DP Apr 28 2005 12:42:14

MW 05/04/28

Jacques Whitford

MONITOR WELL RECORD

MW6S

CLIENT NOVA SCOTIA DEPARTMENT OF ENVIRONMENT AND LABOUR

PROJECT No. NSD19570

LOCATION BALTZER'S BOG, COLDBROOK, NS

Hole No. MW6S

DATES: BORING 2005/04/19 WATER LEVEL 2005/04/20

DATUM ASSUMED

DEPTH(m)	ELEVATION(m)	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY mm	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	HYDROCARBON ODOUR	VOC ppm, (% LEL)	APPARENT MOISTURE CONTENT	WATER LEVEL	FREE HYDROCARBON	WELL CONSTRUCTION DETAILS
0	21.21	GRADE												
		PEAT.												
	20.76													
		Brown silty SAND.												BENTONITE
1														
2														SLOTTED SCREEN
3	18.16													
		End of borehole. NOTE: No samples taken.												
4														
5														
6														
7														

App'd Apr 28 2005 12:42:14

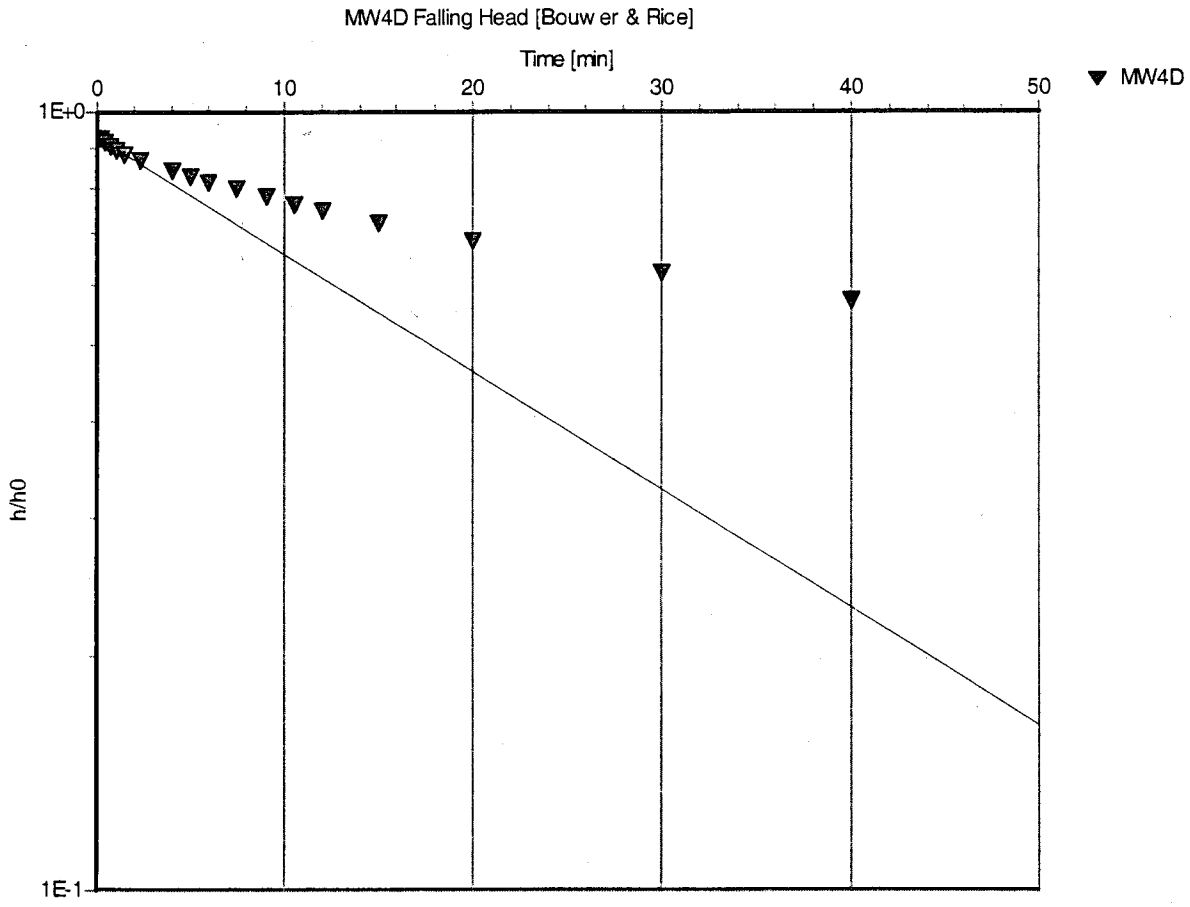
MW 05/04/28

APPENDIX D

Hydraulic Testing Data

Jacques Whitford

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW4D Falling Head**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 1.78E-5 [cm/s]

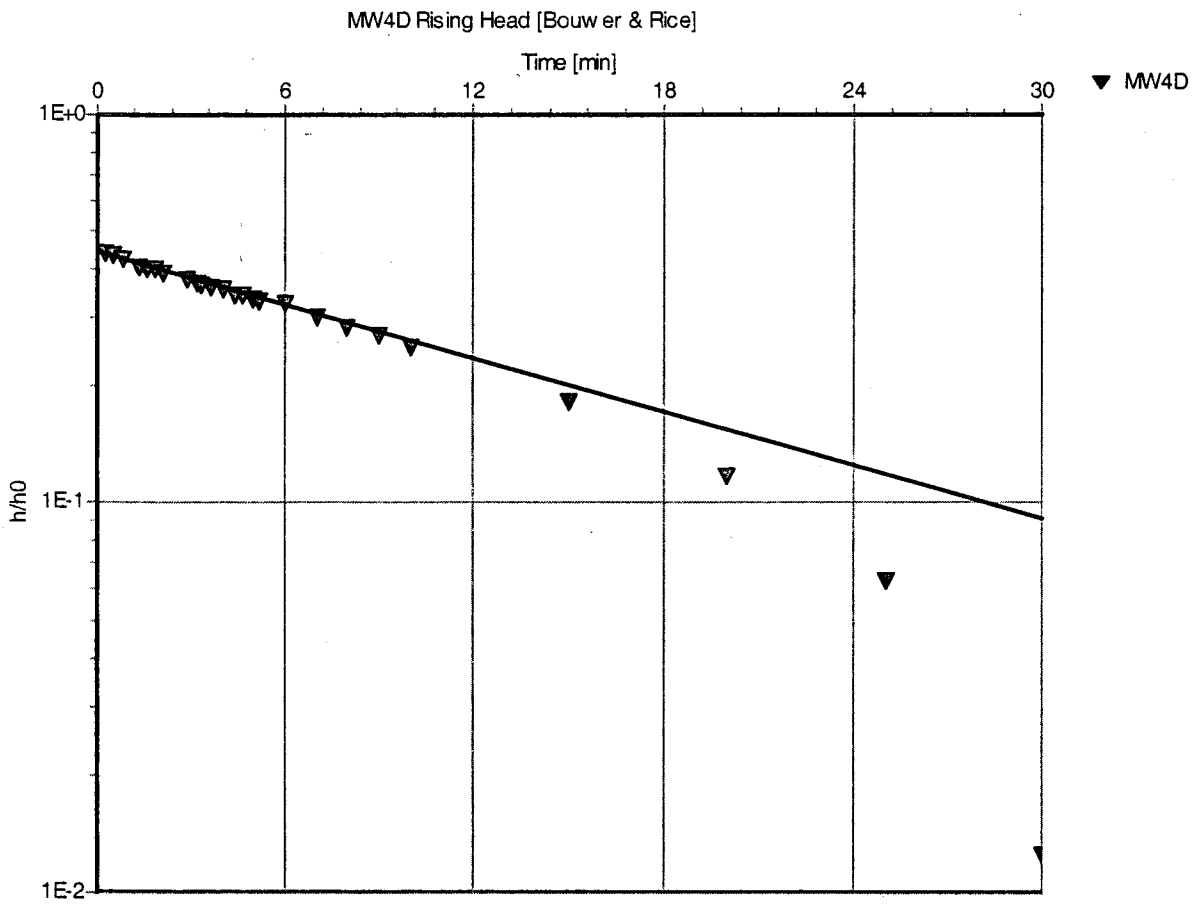
Test parameters:				
	Test Well:	MW4D	Aquifer Thickness:	7.19 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	3.3 [m]		
	Boring radius:	0.1016 [m]		
	r(eff):	0.055 [m]		

Comments:

Evaluated by: DCP/DSM

Evaluation Date: 4/28/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW4D Rising Head**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 2.70E-5 [cm/s]

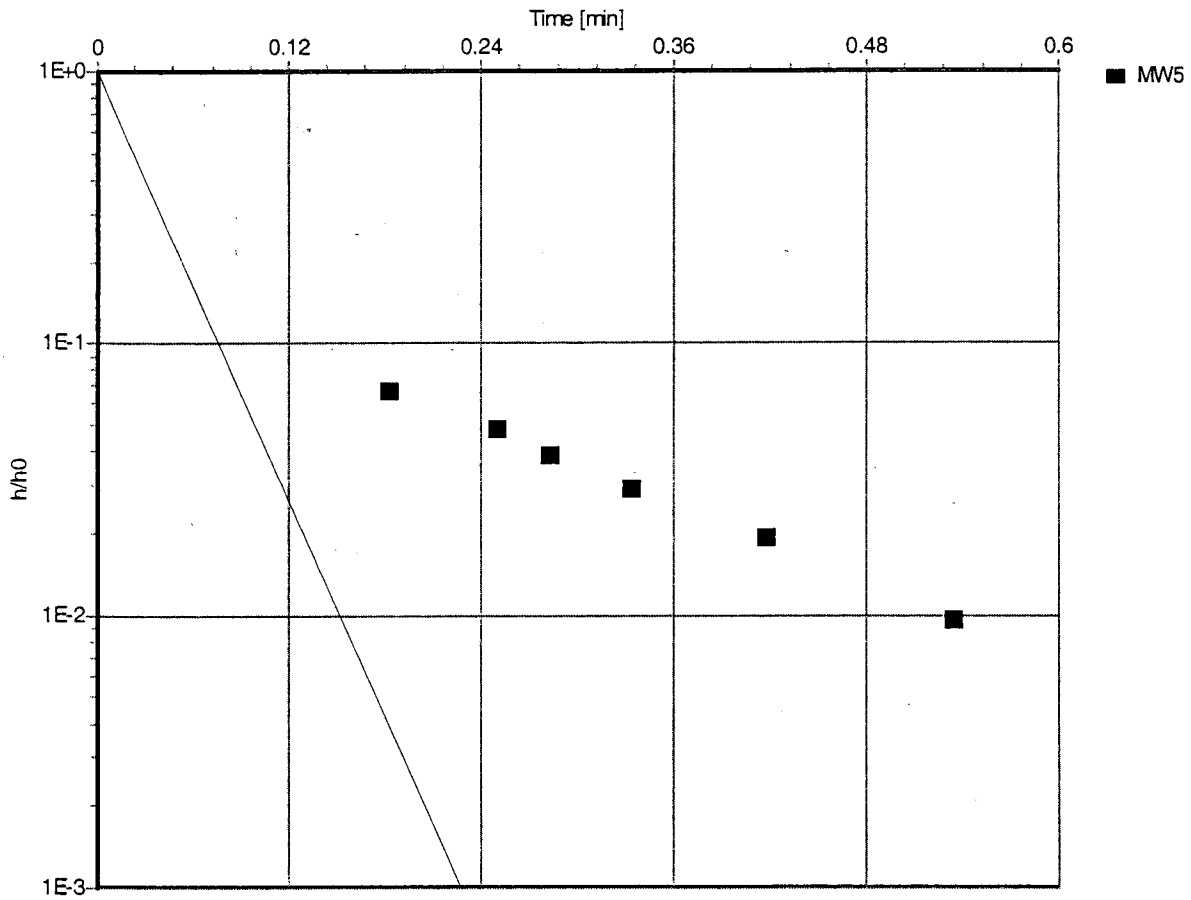
Test parameters:				
	Test Well:	MW4D	Aquifer Thickness:	7.19 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	3.3 [m]		
	Boring radius:	0.1016 [m]		
	r(eff):	0.055 [m]		

Comments:

Evaluated by: DCP/DSM

Evaluation Date: 4/28/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW5 Falling Head**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 2.00E-2 [cm/s]

Test parameters:				
	Test Well:	MW5	Aquifer Thickness:	8 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	3 [m]		
	Boring radius:	0.05715 [m]		
	r(eff):	0.036 [m]		

Comments: Quick recovery (93 % in 11 seconds)

T00 fast to measure; est. 5 x 10-2 cm/s

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

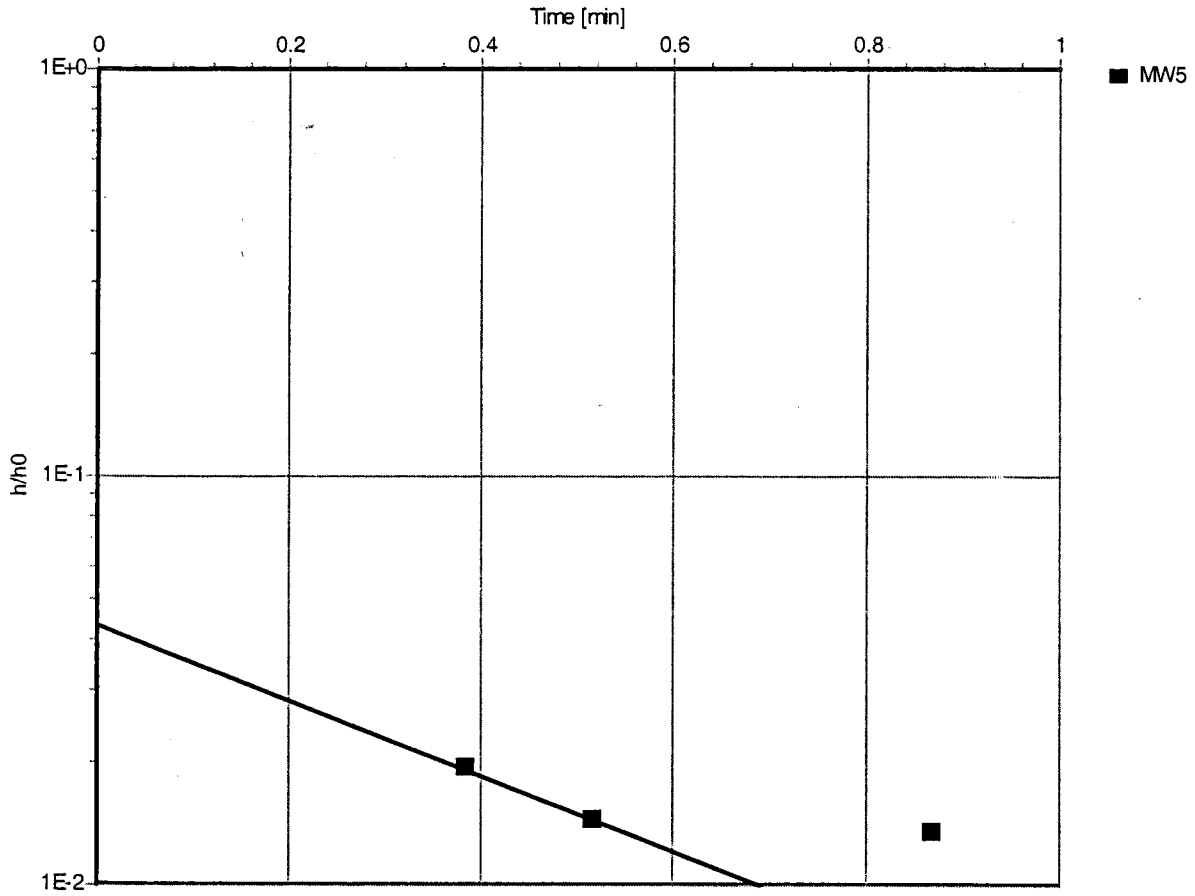
Jacques Whitford
3 Spectacle Lake Drive
Dartmouth, Nova Scotia
www.jacqueswhitford.com

Slug Test Analysis Report

Project: Baltzer s Bog, Coldbrook, NS

Number: NSD19570

Client: NSDEL



Slug Test: **MW5 Rising Head**

Analysis Method: **Bouwer & Rice**

Analysis Results:

Conductivity: 1.39E-3 [cm/s]

Test parameters:

Test Well:	MW5	Aquifer Thickness:	8 [m]
Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
Screen length:	3 [m]		
Boring radius:	0.05715 [m]		
r(eff):	0.036 [m]		

Comments:

Quick recovery (98 % in 22 sec)
Too fast to measure

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

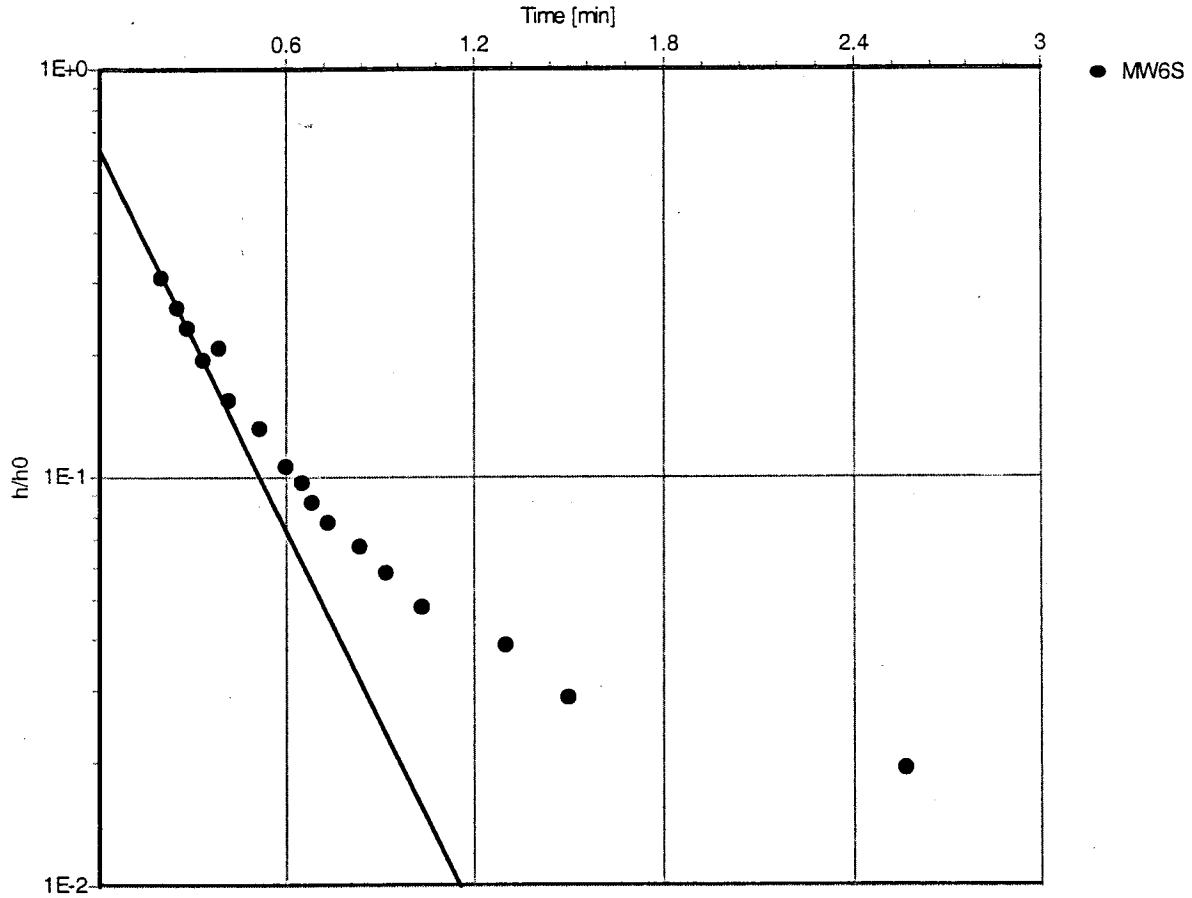
Jacques Whitford
3 Spectacle Lake Drive
Dartmouth, Nova Scotia
www.jacqueswhitford.com

Slug Test Analysis Report

Project: Baltzer s Bog, Coldbrook, NS

Number: NSD19570

Client: NSDEL



Slug Test: **MW6S Falling Head**

Analysis Method: **Bouwer & Rice**

Analysis Results:

Conductivity: 2.54E-3 [cm/s]

Test parameters:

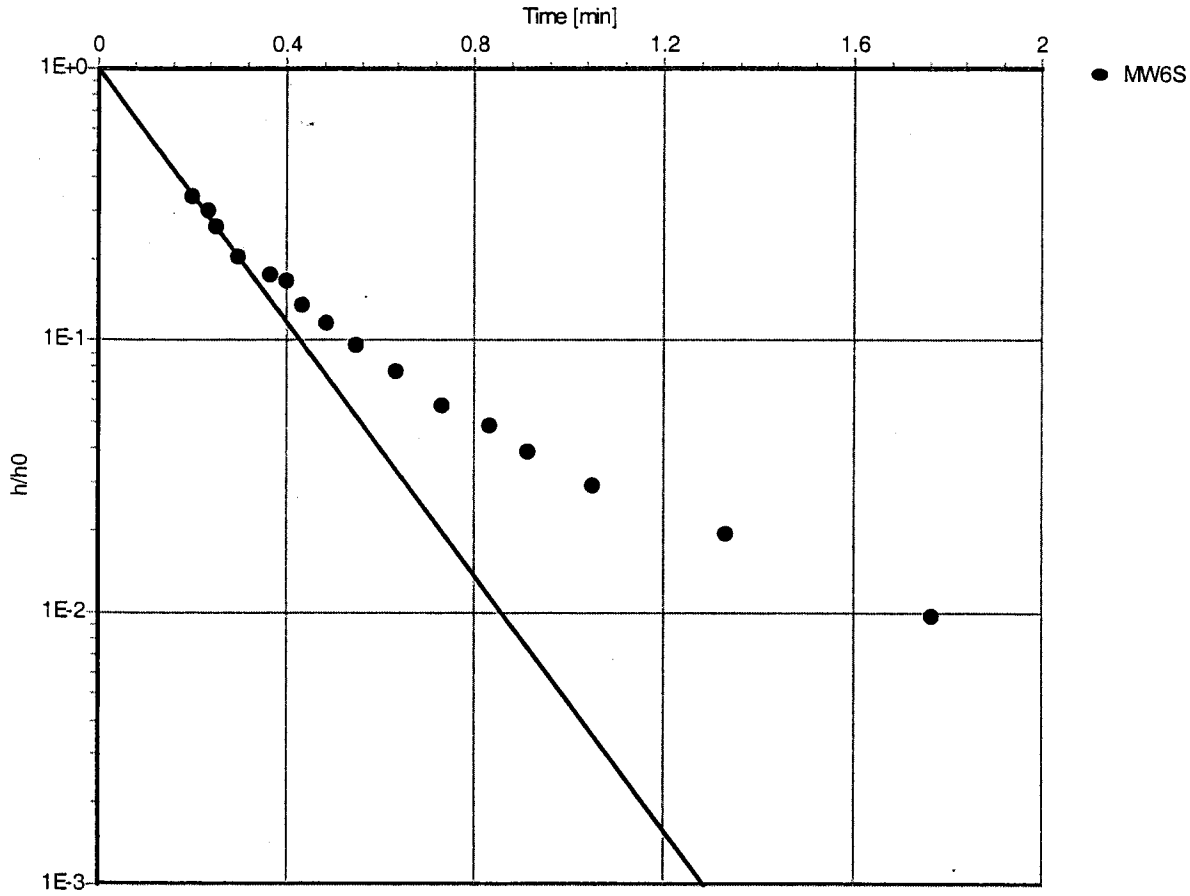
Test Well:	MW6S	Aquifer Thickness:	2.32 [m]
Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
Screen length:	2.15 [m]		
Boring radius:	0.05715 [m]		
r(eff):	0.036 [m]		

Comments: Early Data Analysed

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW6S Rising Head**

Analysis Method: **Bouwer & Rice**

Analysis Results:

Conductivity: 3.80E-3 [cm/s]

Test parameters:

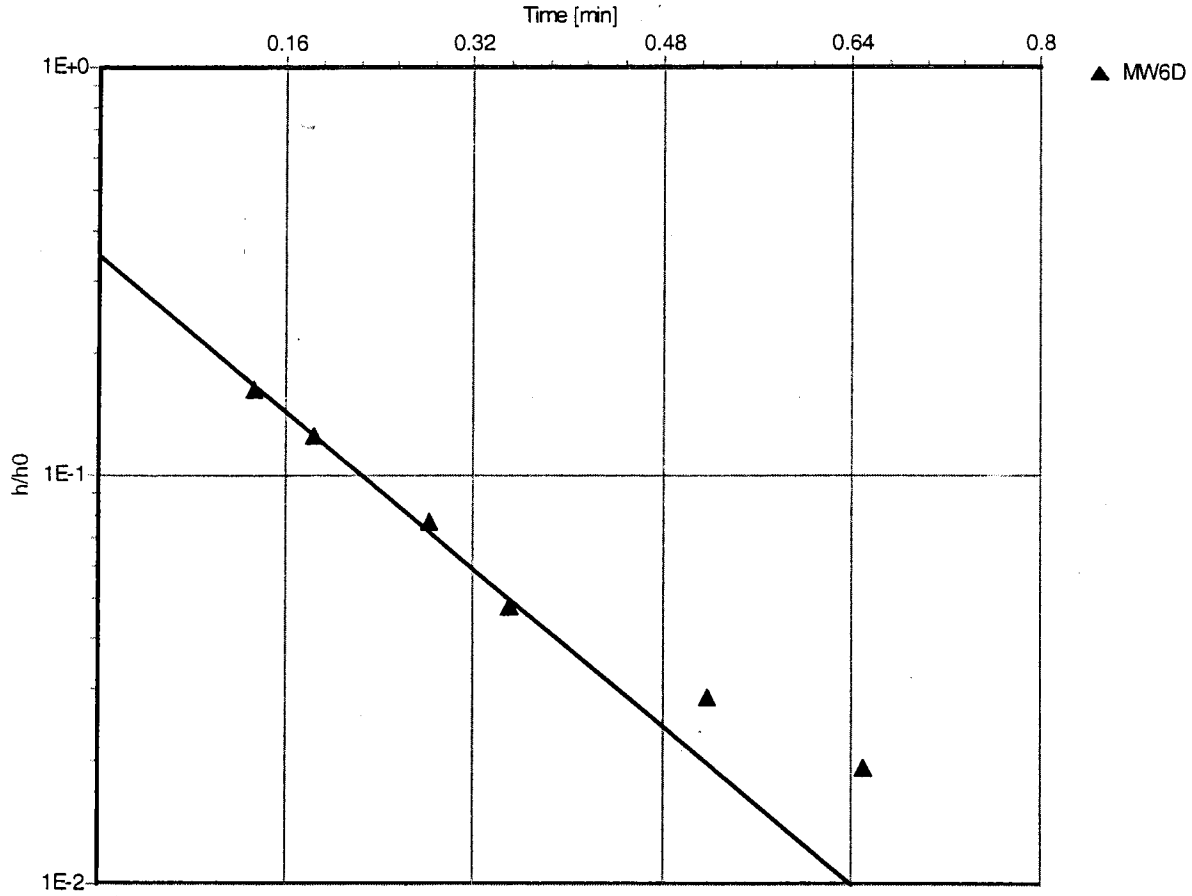
Test Well:	MW6S	Aquifer Thickness:	2.32 [m]
Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
Screen length:	2.15 [m]		
Boring radius:	0.05715 [m]		
r(eff):	0.036 [m]		

Comments: Early Data Analysed

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW6D Falling Head Test 1**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 1.45E-3 [cm/s]

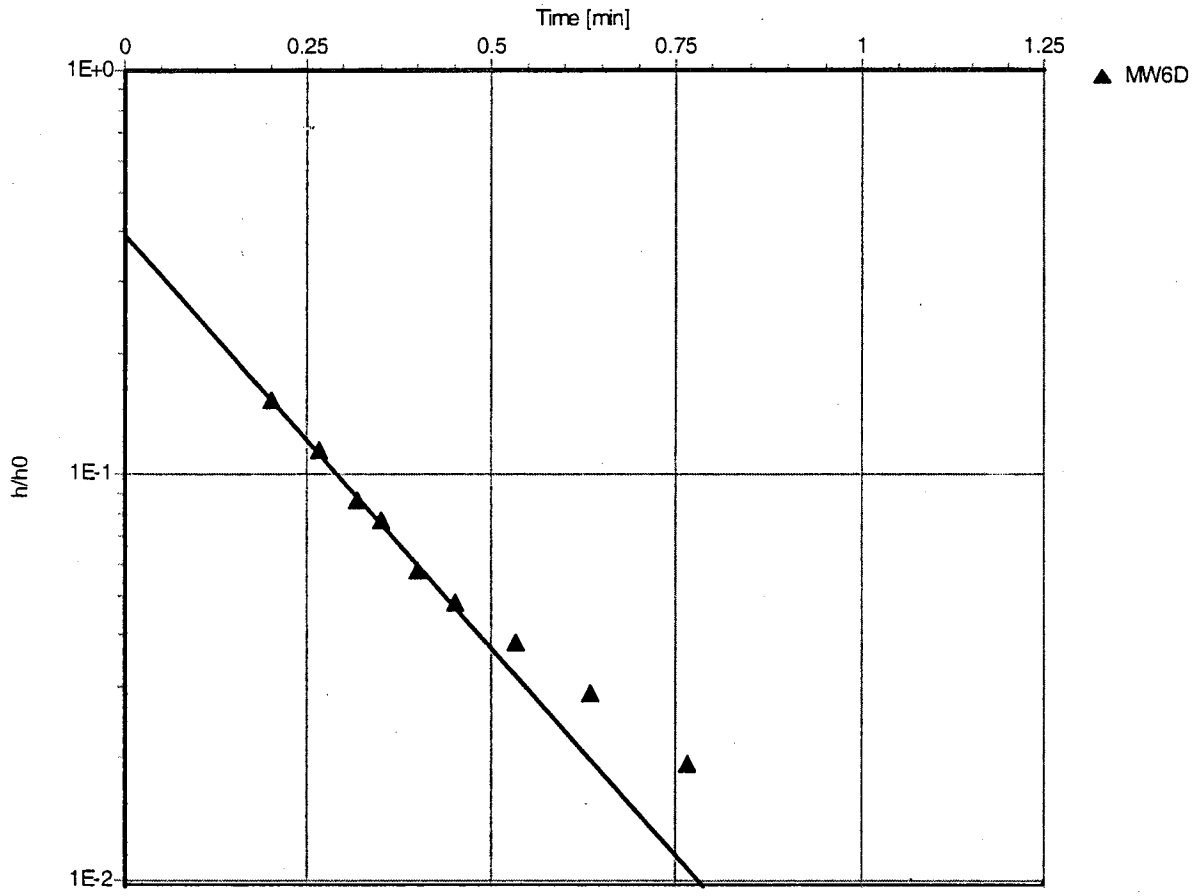
Test parameters:				
	Test Well:	MW6D	Aquifer Thickness:	7.9 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	7.9 [m]		
	Boring radius:	0.05715 [m]		
	r(eff):	0.036 [m]		

Comments: Quick Recovery - Forced data through origin

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW6D Falling Head Test 2**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 1.23E-3 [cm/s]

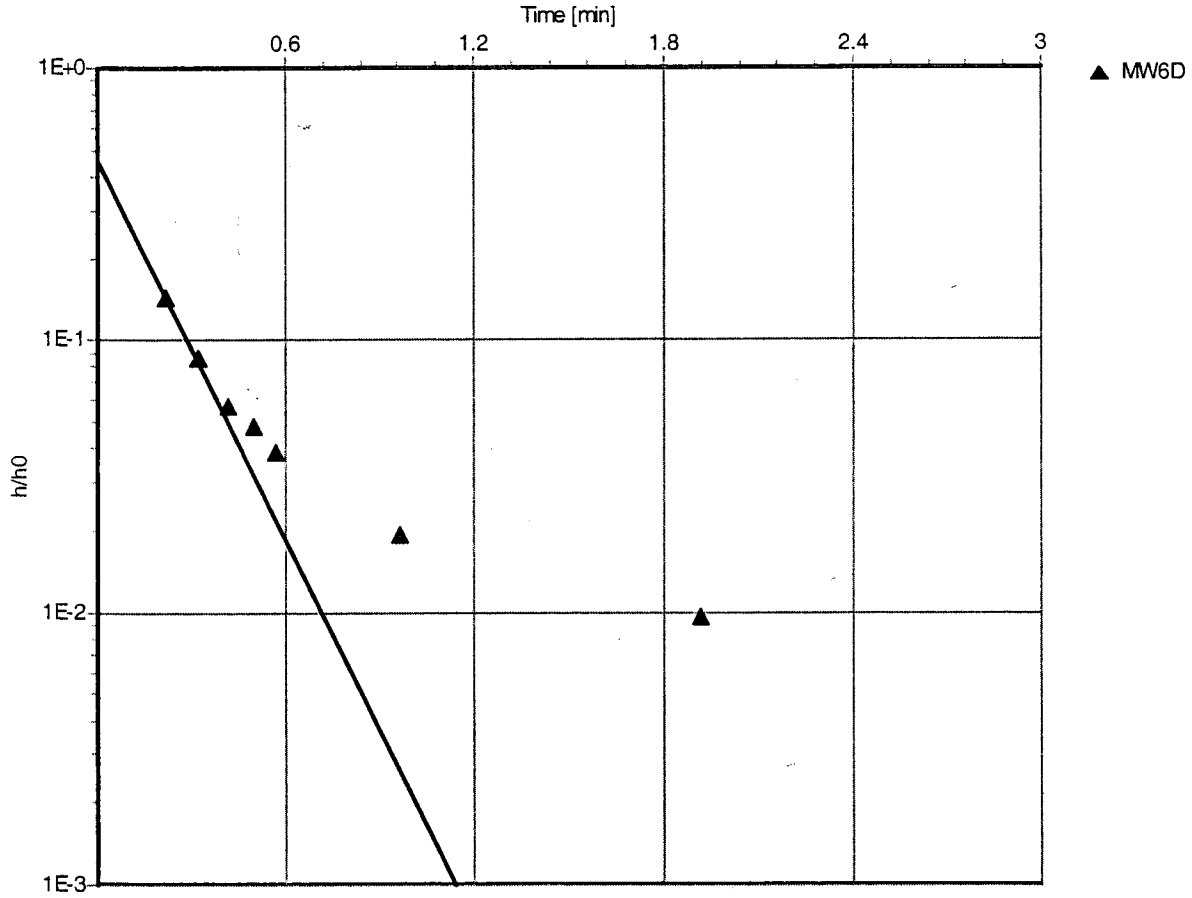
Test parameters:				
	Test Well:	MW6D	Aquifer Thickness:	7.9 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	7.9 [m]		
	Boring radius:	0.05715 [m]		
	r(eff):	0.036 [m]		

Comments: Quick Recovery

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW6D Rising Head Test 1**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 1.40E-3 [cm/s]

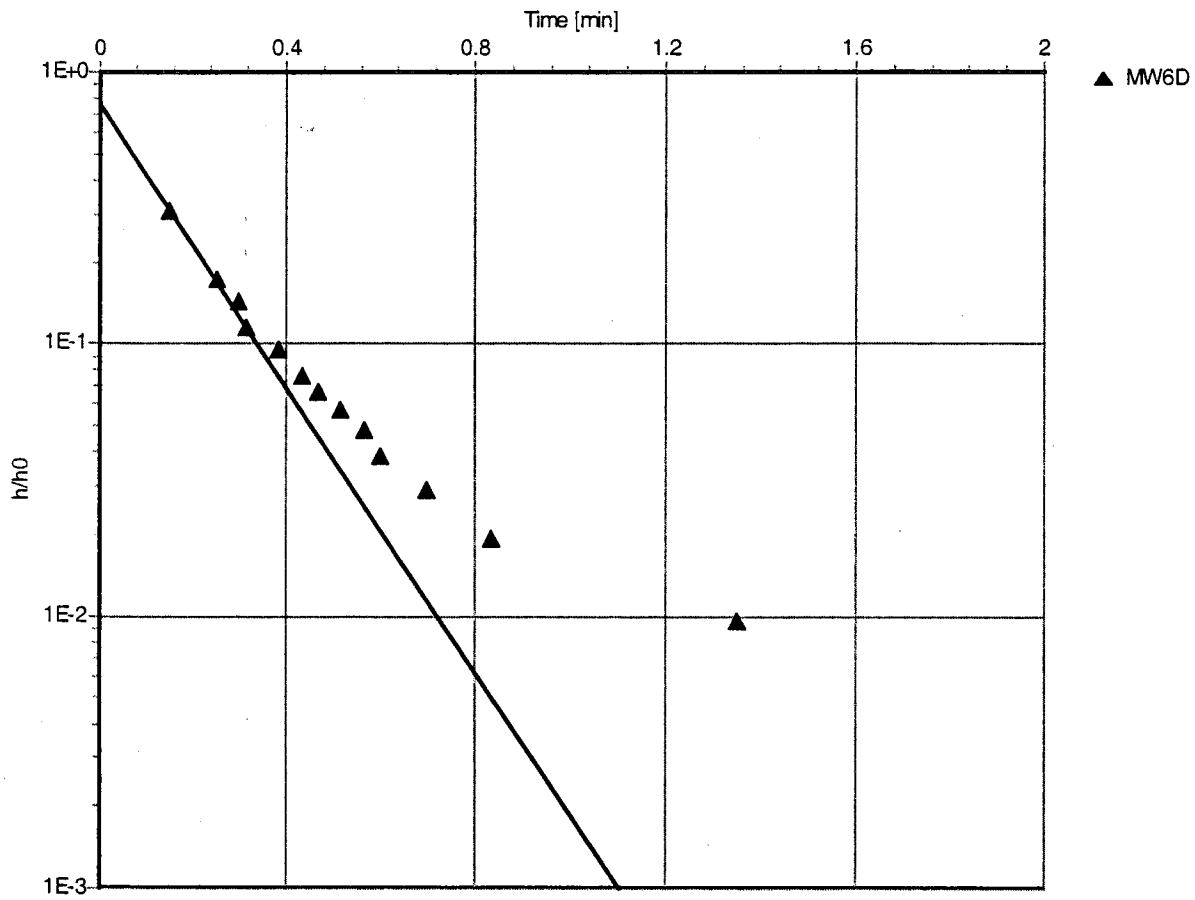
Test parameters:				
	Test Well:	MW6D	Aquifer Thickness:	7.9 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	7.9 [m]		
	Boring radius:	0.05715 [m]		
	r(eff):	0.036 [m]		

Comments: Quick Recovery

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Analysis Report**
	Project: Baltzer s Bog, Coldbrook, NS
	Number: NSD19570
	Client: NSDEL



Slug Test: **MW6D Rising Head Test 2**

Analysis Method: **Bouwer & Rice**

Analysis Results: Conductivity: 1.57E-3 [cm/s]

Test parameters:				
	Test Well:	MW6D	Aquifer Thickness:	7.9 [m]
	Casing radius:	0.0254 [m]	Gravel Pack Porosity (%)	25
	Screen length:	7.9 [m]		
	Boring radius:	0.05715 [m]		
	r(eff):	0.036 [m]		

Comments:

Evaluated by: DCP/DSM

Evaluation Date: 4/27/2005

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW4D**	**Slug Test:**	**MW4D Falling Head**
		Test Well:	MW4D
Depth to Static WL:	5.68 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.1016 [m]
Recorded by:	DP/PW	Screen length:	3.3 [m]
Date:	4/20/2005	Aquifer Thickness:	7.19 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.167	4.72	-0.96
2	0.417	4.73	-0.95
3	0.767	4.74	-0.94
4	1.083	4.75	-0.93
5	1.483	4.76	-0.92
6	2.383	4.78	-0.90
7	4.017	4.81	-0.88
8	5.033	4.82	-0.86
9	6	4.84	-0.84
10	7.5	4.85	-0.83
11	9	4.87	-0.81
12	10.5	4.89	-0.79
13	12	4.90	-0.78
14	15	4.93	-0.75
15	20	4.97	-0.71
16	30	5.03	-0.65
17	40	5.09	-0.59

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW4D**	**Slug Test:**	**MW4D Rising Head**
		Test Well:	MW4D
Depth to Static WL:	5.77 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.1016 [m]
Recorded by:	PW	Screen length:	3.3 [m]
Date:	4/25/2005	Aquifer Thickness:	7.19 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.233	6.23	0.46
2	0.533	6.22	0.45
3	0.817	6.21	0.44
4	1.35	6.19	0.42
5	1.6	6.19	0.42
6	1.85	6.19	0.42
7	2.117	6.18	0.41
8	2.9	6.16	0.39
9	3.2	6.16	0.39
10	3.35	6.15	0.38
11	3.667	6.15	0.38
12	4.033	6.14	0.37
13	4.433	6.13	0.36
14	4.667	6.13	0.36
15	4.967	6.12	0.35
16	5.2	6.12	0.35
17	6	6.11	0.34
18	7	6.08	0.31
19	8	6.07	0.30
20	9	6.05	0.28
21	10	6.03	0.26
22	15	5.96	0.19
23	20	5.89	0.12
24	25	5.84	0.07
25	30	5.78	0.01

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW5**	**Slug Test:**	**MW5 Falling Head**
		Test Well:	MW5
Depth to Static WL:	4.76 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	3 [m]
Date:	4/20/2005	Aquifer Thickness:	8 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0	3.72	-1.04
2	0.183	4.69	-0.07
3	0.25	4.71	-0.05
4	0.283	4.72	-0.04
5	0.333	4.73	-0.03
6	0.417	4.74	-0.02
7	0.533	4.75	-0.01

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW5**	**Slug Test:**	**MW5 Rising Head**
		Test Well:	MW5
Depth to Static WL:	4.76 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	3 [m]
Date:	4/20/2005	Aquifer Thickness:	8 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0	5.79	1.03
2	0.383	4.78	0.02
3	0.517	4.78	0.02
4	0.867	4.77	0.01

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW6S**	**Slug Test:**	**MW6S Falling Head**
		Test Well:	MW6S
Depth to Static WL:	1.45 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	2.15 [m]
Date:	4/20/2005	Aquifer Thickness:	2.32 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.2	1.13	-0.32
2	0.25	1.18	-0.27
3	0.283	1.21	-0.24
4	0.333	1.25	-0.20
5	0.383	1.24	-0.21
6	0.417	1.29	-0.16
7	0.517	1.31	-0.14
8	0.6	1.34	-0.11
9	0.65	1.35	-0.10
10	0.683	1.36	-0.09
11	0.733	1.37	-0.08
12	0.833	1.38	-0.07
13	0.917	1.39	-0.06
14	1.033	1.40	-0.05
15	1.3	1.41	-0.04
16	1.5	1.42	-0.03
17	2.567	1.43	-0.02

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW6S**	**Slug Test:**	**MW6S Rising Head**
		Test Well:	MW6S
Depth to Static WL:	1.45 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	2.15 [m]
Date:	4/20/2005	Aquifer Thickness:	2.32 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.2	1.80	0.35
2	0.233	1.76	0.31
3	0.25	1.72	0.27
4	0.3	1.66	0.21
5	0.367	1.63	0.18
6	0.4	1.62	0.17
7	0.433	1.59	0.14
8	0.483	1.57	0.12
9	0.55	1.55	0.10
10	0.633	1.53	0.08
11	0.733	1.51	0.06
12	0.833	1.50	0.05
13	0.917	1.49	0.04
14	1.05	1.48	0.03
15	1.333	1.47	0.02
16	1.767	1.46	0.01

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW6D**	**Slug Test:**	**MW6D Falling Head Test 1**
		Test Well:	MW6D
Depth to Static WL:	2.75 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	7.9 [m]
Date:	4/20/2005	Aquifer Thickness:	7.9 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.133	2.58	-0.17
2	0.183	2.62	-0.13
3	0.283	2.67	-0.08
4	0.35	2.70	-0.05
5	0.517	2.72	-0.03
6	0.65	2.73	-0.02

Jacques Whitford
3 Spectacle Lake Drive
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Slug Test Data Report

Project: Baltzer s Bog, Coldbrook, NS

Number: NSD19570

Client: NSDEL

Test Well:	**MW6D**	**Slug Test:**	**MW6D Falling Head Test 2**
		Test Well:	MW6D
Depth to Static WL:	2.75 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	7.9 [m]
Date:	4/20/2005	Aquifer Thickness:	7.9 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.2	2.59	-0.16
2	0.267	2.63	-0.12
3	0.317	2.66	-0.09
4	0.35	2.67	-0.08
5	0.4	2.69	-0.06
6	0.45	2.70	-0.05
7	0.533	2.71	-0.04
8	0.633	2.72	-0.03
9	0.767	2.73	-0.02
10	1.25	2.74	-0.01
11	1.917	2.75	0.00

Jacques Whitford 3 Spectacle Lake Drive Dartmouth, Nova Scotia www.jacqueswhitford.com	**Slug Test Data Report** Project: Baltzer s Bog, Coldbrook, NS Number: NSD19570 Client: NSDEL — Page 1

Test Well:	**MW6D**	**Slug Test:**	**MW6D Rising Head Test 1**
		Test Well:	MW6D
Depth to Static WL:	2.75 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	7.9 [m]
Date:	4/20/2005	Aquifer Thickness:	7.9 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.217	2.90	0.15
2	0.317	2.84	0.09
3	0.417	2.81	0.06
4	0.5	2.80	0.05
5	0.567	2.79	0.04
6	0.967	2.77	0.02
7	1.917	2.76	0.01

Jacques Whitford
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www.jacqueswhitford.com

Slug Test Data Report

Project: Baltzer s Bog, Coldbrook, NS

Number: NSD19570

Client: NSDEL

Test Well:	**MW6D**	**Slug Test:**	**MW6D Rising Head Test 2**
		Test Well:	MW6D
Depth to Static WL:	2.75 [m]	Casing radius:	0.0254 [m]
Location:	Coldbrook, NS	Boring radius:	0.05715 [m]
Recorded by:	DP/PW	Screen length:	7.9 [m]
Date:	4/20/2005	Aquifer Thickness:	7.9 [m]

	Time [min]	Depth to WL [m]	Drawdown [m]
1	0.15	3.07	0.32
2	0.25	2.93	0.18
3	0.3	2.90	0.15
4	0.317	2.87	0.12
5	0.383	2.85	0.10
6	0.433	2.83	0.08
7	0.467	2.82	0.07
8	0.517	2.81	0.06
9	0.567	2.80	0.05
10	0.6	2.79	0.04
11	0.7	2.78	0.03
12	0.833	2.77	0.02
13	1.35	2.76	0.01

APPENDIX E

Calculations

Jacques Whitford

Table E.1 Thornwaite's Potential Evapotranspiration

PE m = 16 * N m * [10 * T m / I] ^ a milliimetres

where PEm = potential evapotranspiration

N = mean daily duration of maximum possible sunshine hours (from U.N. 1977 Table)

N m = a monthly adjustment factor related to hours of daylight where N/12

T m = the mean monthly temperature in degrees Celsius

I = the heat index for the year given by sum of (T m/5)^1.5 for each month

a = (6.7e-7 * I ^ 3) - (7.7e-5 * I ^ 2) + (0.018 * I) + 0.49

1913-2005							
Month	Mean Temp	I m	E m	N	N m	PE m	a
April	4.5	0.85815	22.6191832	13.4	1.116667	25.26	1.009813
May	10.5	3.048389	53.0985972	14.7	1.225	65.05	1.009813
June	15.7	5.562939	79.6063867	15.4	1.283333	102.16	1.009813
July	19.3	7.565125	97.9104861	15.2	1.266667	124.02	1.009813
August	18.4	7.062592	93.4829887	14	1.166667	109.06	1.009813
September	14.3	4.852148	72.6071492	12.6	1.05	76.24	1.009813
October	9.1	2.472491	46.1173588	11	0.916667	42.27	1.009813
November	3.7	0.624827	18.2686591	9.7	0.808333	14.77	1.009813
	Total I	32.04666			Total PE	558.83	mm

2004							
Month	Mean Temp	I m	E m	N	N m	PE m	a
April	5.4	1.122369	27.5217715	13.4	1.116667	30.73	1.039475
May	10.9	3.218731	57.1150045	14.7	1.225	69.97	1.039475
June	14.7	5.04105	77.9414464	15.4	1.283333	100.02	1.039475
July	19.8	7.880301	106.223912	15.2	1.266667	134.55	1.039475
August	20.3	8.180673	109.013601	14	1.166667	127.18	1.039475
September	14.8	5.092577	78.4926642	12.6	1.05	82.42	1.039475
October	10.2	2.913703	53.3072129	11	0.916667	48.86	1.039475
November	3.4	0.560742	17.0149422	9.7	0.808333	13.75	1.039475
	Total I	34.01015			Total PE	607.49	mm

2004 Mean Temperatures

month	year	month	mean temp
2004-01	2004	1	-9.8
2004-02	2004	2	-5.2
2004-03	2004	3	-1.5
2004-04	2004	4	5.4
2004-05	2004	5	10.9
2004-06	2004	6	14.7
2004-07	2004	7	19.8
2004-08	2004	8	20.3
2004-09	2004	9	14.8
2004-10	2004	10	10.2
2004-11	2004	11	3.4
2004-12	2004	12	-1.6

Table E.2 - Maximum Potential Outflows - Wood Lake (in millimeters)

	31	28	31	30	31	30	31	31	30	31	30	31		
2004													Totals	
	January	February	March	April	May	June	July	August	September	October	November	December	2004	% of P
Monthly Precipitation				332.7	38.7	55.9	62.4	65.4	74	114.4	145.4		888.9	-
Evapotranspiration				30.7	70.0	100.0	134.6	127.2	82.4	48.9	13.8		607.49	68.3%
Direct Runoff to Drainage System	0.0	0.0	0.0	237.4	0.0	0.0	0.0	0.0	0.0	0.0	67.1	0.0	304.5	34.3%
Groundwater recharge	0	0	0	0	0	0	0	0	0	0	0		0.0	0.0%
Groundwater Discharge to Main Drainage Ditch	6.73	6.08	6.73	6.51	6.73	6.51	6.73	6.73	6.51	6.73	6.51	6.73	72.5	8.2%
Groundwater Discharge to the Cornwallis River	60.0	54.2	60.0	58.1	60.0	58.1	60.0	60.0	58.1	60.0	58.1	60.0	646.4	72.7%
1913-2005														
	January	February	March	April	May	June	July	August	September	October	November	December	1913-2005	% of P
Monthly Precipitation				486.1	77.7	73.0	73.0	83.1	88.5	101.1	110.5		1092.9	-
Evapotranspiration				25.26	65.05	102.16	124.02	109.06	76.24	42.27	14.77		558.8	51.1%
Direct Runoff to Drainage System	0.0	0.0	0.0	396.2	0.0	0.0	0.0	0.0	0.0	0.0	31.1		427.4	39.1%
Groundwater recharge	0	0	0	0	0	0	0	0	0	0	0		0.0	0.0%
Groundwater Discharge to Main Drainage Ditch	6.73	6.08	6.73	6.51	6.73	6.51	6.73	6.73	6.51	6.73	6.51	6.73	72.5	6.6%
Groundwater Discharge to the Cornwallis River	60.0	54.2	60.0	58.1	60.0	58.1	60.0	60.0	58.1	60.0	58.1	60.0	646.4	59.1%

Table E.3 Groundwater Calculations (values used highlighted)

Maximum potential groundwater flow from base of lake

Q=KIA
where Q = Discharge (cubic metres per day)
K = hydraulic conductivity (metres per day)
I = average hydraulic gradient
A = area (square metres)

K (cm/s)	K (m/d)	I	A (sq m)	Q (m3/day)	mm/day	Values Used K value	Gradient	Area
0.001527	1.319198	0.071038	562500	52713.87	93.7	average all	MW4S/D	Baltzer's Bog
2.24E-05	0.019354	0.071038	562500	773.35082	1.4	MW4D	MW4S/D	Baltzer's Bog
0.001527	1.319198	0.170397	16512	3711.6928	224.8	average all	MW6S/D	Wood Lake
0.001915	1.65456	0.170397	16512	4655.2652	281.9	MW6S	MW6S/D	Wood Lake
0.001635	1.41264	0.170397	16512	3974.5998	240.7	MW6D	MW6S/D	Wood Lake
0.002535	2.19024	0.170397	16512	6162.4529	373.2	MW5	MW6S/D	Wood Lake
2.24E-05	0.019354	0.1	16512	31.956664	1.9	MW4D	average 10%	Wood Lake
0.000153	0.13192	0.1	16512	217.82604	13.2	average all	average 10%	Wood Lake

Potential groundwater flow from lake to ditch

Dupuit-Forchheimer

Q=(K/2)*((h12-h02)/L)
where Q = Discharge (cubic metres per day)
K = hydraulic conductivity (metres per day)
h1 = initial watertable elevation above impermeable boundary (m)
h0 = final watertable elevation above impermeable boundary (m)
L = horizontal flow length (m)

K (cm/s)	K (m/d)	L (m)	h1 (m)	h2 (m)	Q (m3/day/m	Length of ditch	Total Q	Area (sq m)	mm/d (for lake)	Assumptions
2.24E-05	0.019354	20	13.5	12.05	0.01792506	200	3.58501248	16512	0.22	bedrock 7.5 m ASL, K 2.24e-5 cm/s, 10 m between ditch and lake
1.50E-04	0.1296	20	13.5	12.05	0.1200339	200	24.00678	16513	1.45	bedrock 7.5 m ASL, K 1.5e-4 cm/s, 10 m between ditch and lake
1.50E-03	1.296	20	13.5	12.05	1.200339	200	240.0678	16514	14.54	bedrock 7.5 m ASL, K 1.5e-3 cm/s, 10 m between ditch and lake
	0	20	13.5	12.05	0		0	16515	0.00	
	0	20	13.5	12.05	0		0	16516	0.00	
	0	20	13.5	12.05	0		0	16517	0.00	
	0	20	13.5	12.05	0		0	16518	0.00	
	0	20	13.5	12.05	0		0	16519	0.00	