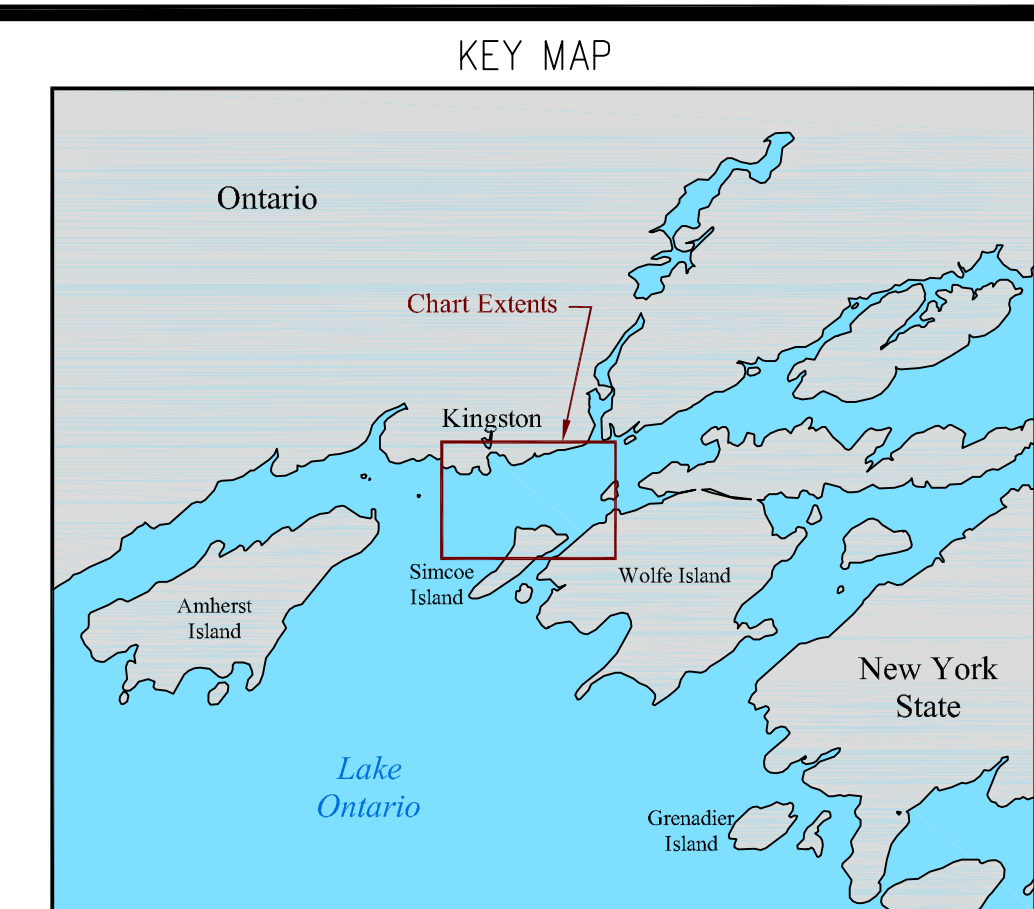
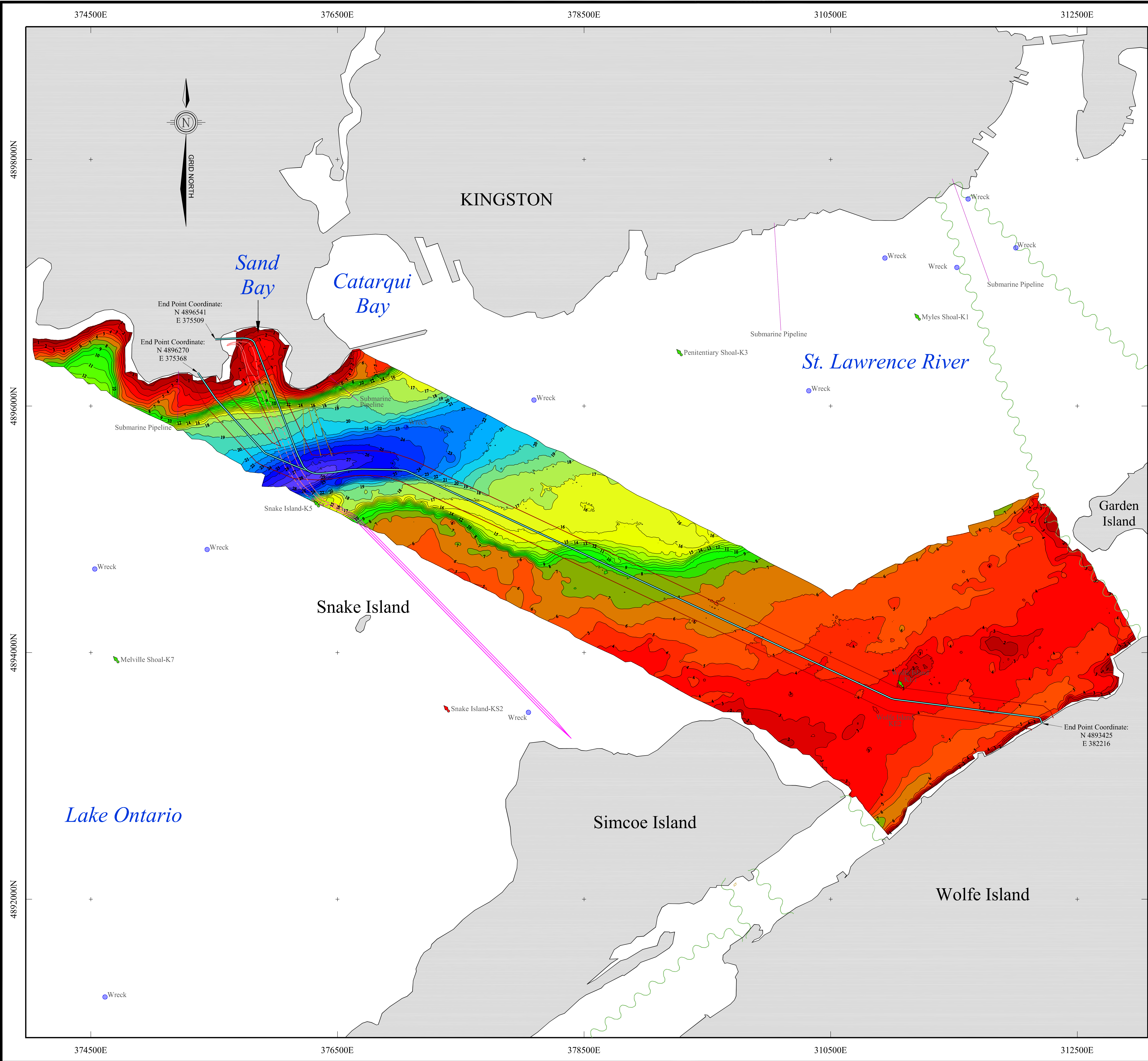
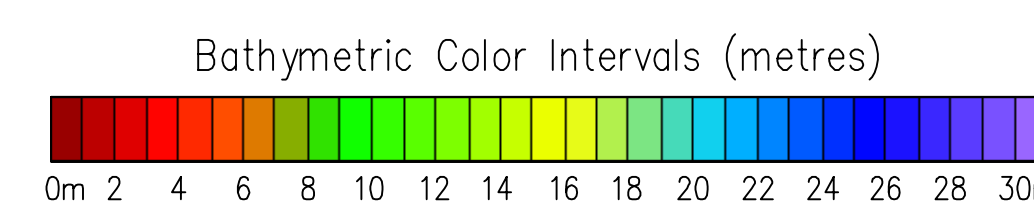




- LEGEND**
- Proposed Cable Route
  - Survey Corridor (200m wide)
  - As-Found Location of Hydro One Submarine Power Cable
  - Interpolated Location of Hydro One Submarine Power Cable
  - As-Planned Location of Hydro One Submarine Power Cable
  - As-Found Submarine Intake Pipes
  - Chart Location of Submarine Pipeline (CHS Chart 2017)
  - Chart Location of Submarine Cable (CHS Chart 2017)
  - Wreck (known Shipwreck)
  - Port-Hand Navigational Marker
  - Starboard-Hand Navigational Marker
  - UTM Graticule



**FIELD SURVEY**  
The survey was conducted by Canadian Seabed Research Ltd. between June 29 and May 21, 2007.

**SURVEY VESSEL AND EQUIPMENT**  
Party Chief: Blaine Carr  
Vessel: "Seastar"  
Positioning System: Differential GPS  
Survey Navigation Software: Hypack Max  
Echo Sounder: Odom C33 (33 & 200 kHz)  
Side Scan Sonar: Klein 595 (500 kHz)  
Sub-bottom Profiler: Klein 3.5 kHz  
Digital Acquisition System: CODA DA-100

**BASEMAP**  
Projection: Universal Transverse Mercator (Zone 18)  
Meridian of Origin: 75° West of Greenwich  
Latitude of Origin: Equator  
False Co-ords of Origin: 500,000m East  
Horizontal Datum: North American Datum of 1983 (NAD83)  
Vertical Datum: Chart Datum (74.2 metres above I.G.L.D. 1985)  
Scale: 1:10000  
Units: Metres

**BATHYMETRY**  
Soundings were recorded continuously along each survey line using an Odom Echotrac C33 dual frequency echosounder.

Raw Soundings were collected in digital format. Raw digital soundings were post processed, and reduced to Chart Datum (74.2 metres above I.G.L.D. 1985) with hourly observed water level data from the CHS Kingston water level station (13985).

Additional sounding data was digitized from CHS Field Sheets 8078 (1981[sounding in metres]) and 3664 (1970 [soundings in feet]). Soundings were spaced approximately 50 to 100 metres apart on both field sheets. Since the soundings obtained from Field Sheet 3664 were in feet, a conversion to metres was performed. The projection of both field sheets was UTM (Zone18) NAD83 with the Chart Datum of 74.000m above I.G.L.D. 1985. The soundings obtained from the field sheets were then shifted so that the data was projected in UTM (Zone18) NAD83. In addition, these soundings were adjusted vertically so that the data would be represented in the more recent Chart Datum of 74.2m above I.G.L.D. 1985. This data set was combined with the processed sounding data collected in 2005 and 2007 by CSR. The combined data set was then further processed in the following manner.

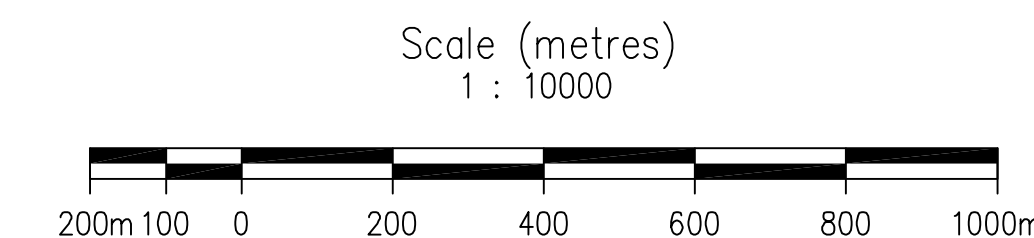
The data set was imported into Surfer, a surface modelling package, to create 10 metre by 10 metre grid cells based on a kriging interpolation algorithm. Contours were generated at 1 metre intervals based on the grid data.

The survey was conducted using a primary bathymetric line spacing of 10m. Bathymetric contours found on this map were interpolated between adjacent survey lines and between adjacent soundings obtained from the field sheets.

**NAVIGATION HAZARDS**  
The positions for the navigation buoys were obtained from the Fisheries and Oceans Canada, Notice to Mariners, Inland Waters - List of lights, Buoys and Fog Signals January 2006 ([www.notmar.gc.ca](http://www.notmar.gc.ca)). Navigation hazards such as shipwreck positions, submarine cables and pipelines were digitized from Canadian Hydrographic Service Chart 2017, April 29, 2005 and U.S. Department of Commerce, National Oceanic and Atmospheric Administration Chart 14802, 31st ed. October, 2005. Additional submarine pipelines, submarine cables and wrecks may exist within the area and not indicated on the chart.

**COASTLINE**  
The Shoreline was obtained from a NOAA Website (<http://nauticalcharts.noaa.gov/mca/Raster/index.htm>) and should be considered approximate.

Note: This chart is not for navigational purposes.



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| ENGINEERING & ENVIRONMENTAL GEOPHYSICS                                                  |               |         |                         |            |
|-----------------------------------------------------------------------------------------|---------------|---------|-------------------------|------------|
| Wolfe Island Cable Route Survey<br>Kingston, Ontario<br>Bathymetry Chart<br>Enclosure 1 |               |         |                         |            |
| REV                                                                                     | DATE          | REMARKS | INTERPRETED BY          | CHECKED BY |
| 0                                                                                       | June 13, 2007 | Draft   | MR                      | GG         |
| 1                                                                                       | June 09, 2007 | Final   | MR                      | GG         |
|                                                                                         |               |         |                         |            |
|                                                                                         |               |         |                         |            |
| SCALE: 1:10000                                                                          |               |         | PROJECTION: UTM Zone 18 |            |
| CSR PROJECT #: 0716                                                                     |               |         | FILE: 0716E01_Bathy.dwg |            |