**Location Info:**

- **Nearest City/Town:** Carnarvon, ON
- **Latitude:** 45°02'43"N
- **Longitude:** 78°41'53"W
- **Elevation (above sea level):** 1,090'

**Lake Info:**

- **Lake Bed:** Sand
- **Obstructions:** None
- **4' water depth:** 110' from shoreline
- **10' water depth:** 150' from shoreline
- **20' water depth:** 170' -180' from shoreline

**Property Info:**

- **Elevation (above lake level):** 30’ – 40’
- **Terrain:** Rock
- **Shoreline:** Rock

**Product Info:**

- **Product:** CARAPACE®, 1” Rural (ID controlled), 240 volt, 5w@50°F
- **System Length:** 270’ (90’ on land, 180’ into the lake)
- **Pipe Insulation on land:** Yes (90’)
- **Pipe Insulation in lake:** None
- **Ground Coverage:** None (could not bury)
- **Thermostat:** Yes
- **Thermostat Setting:** 50°F (10°C)
- **Sensor Location:** 45’ from building on pipe under insulation (coldest spot)

**Test Results:**

CARAPACE® was powered on Nov 10’07.

CARAPACE® was shut down on April 25’08

70 Days of Recorded Temperatures from Nov 10’07 to April 25’08

- **Coldest Recorded Temperature:** -27.4°F (-33°C)
- **Warmest Recorded Temperature:** 48.2°F (9°C)
- **Average Temperature:** 17.7°F (-8°C)
- **Kilowatt usage:** 1,821 kw/h
- **Price per kw/h (April 2008):** $0.05
- **Cost for entire CARAPACE® operation:** $91.05

**Disclaimer:**

Energy consumption will change depending on product selection, application, location and climate. This case study should be used as an example only.