1. Temperature either rises or falls. Those are your only two choices. It never remains flat;
2. Temperature maximum for prior cycles were approximately 2 to 3 degrees Celsius higher than today;
3. Temperature curve is asymmetric, with rapid temperature rise out of the ice ages;
4. At the onset of temperature fall, temperature declines at the same rate as the related temperature rise;
5. The rate of temperature rise (calculated from these data) often exceeds the measured rate of rise from years 1980 to 2000;
6. Assuming five temperature maximum are related to the 1st Order 100,000 year Milankovitch cycles, CO2 had little effect in maintaining the high temperatures. As seen in Cycle 4, even though CO2 levels were at maximum 299 ppmv CO2, temperature did not continue to increase, but actually made a abrupt reversal. Therefore it appears that the mechanical temperature rise & fall associated with 1st order Milankovitch cycles appear to overwhelm any warming effect associated with CO2, for CO2 levels below 299 ppmv;
7. A 3 degree C rise in temperature either did not release significant methane from gas hydrates, or if released, this methane appears to have had little effect on maintaining temperature maximum.
8. Temperature sampling frequency begins at least 20 year intervals but exceeds over 600 year intervals at the bottom of the core.

3. Type Curve

The Type Curve is the average temperature and CO2 calculated from Cycles 2, 3 and 4. The Vostok data was resampled on 10 year increments, then summed together by hanging each Cycle on its Temperature Maxima point.

At 12,000 YBP, 2/3rds of Canada was covered with ice.

VOSTOK ICE CORE OBSERVATIONS

VOSTOK ICE CORE (CO2 & Temp Variation over Time)
Last 400,000 Years

VOSTOK ICE CORE (CO2 & Temp Variation over Time)
Last 20,000 Years

LOCATION MAP

Antarctica with Lake Vostok Circled

Schematic Diagram Showing ice Movement

DATING CORES

Before means these fragments of cores is longer than the present life length of the original ancient fragments. Each fragment of core represents a small portion of earth history, or a small portion of the life span of the ancient core. The number of individual years between these dates is dependent on the length of the core fragment. At the moment of the first ice core fragment, the earth is at the beginning of another 100,000 year cycle. In essence, the age of the earth is just another cycle in the earth’s history.