sarily have to be post-Cretaceous in age. The fact that the val
have survived to the present probably favours the assumption that t
were formed during the period immediately preceding the Pleistoc
possibly, as suggested by Spencer, during a pre-Glacial uplift of
plateau.

Overdeepening of the Timiskaming Trench.

It was concluded in the previous discussion of the age of the lir
valleys that they were pre-Glacial in their origin. From this, it wo
follow presumably that they had been carved out, in the main, by
normal process of stream erosion. Valleys formed in this way, howe
have graded bottoms, whereas the Timiskaming trench is apparer
cut off by a rock barrier in the lower part of its course.

The Timiskaming trench proper extends from the north end
lake Timiskaming to the village of Mattawa, Ontario, a distance of c
100 miles, and is occupied by lake Timiskaming in only its upper p
Between the lower end of lake Timiskaming and Mattawa there is
interval about 35 miles in length, in which numerous rapids occur,
first of which, known as the Long Sault, is 6 miles in length, and conn
lake Timiskaming with a long stretch of almost currentless water, ab
16 miles long, called Seven League lake. Between Seven League l
and Mattawa there are three abrupt descents in the water course kno
as Mountain, Les Erable, and Cave rapids respectively. Of the
lakes occupying the depression, Timiskaming has a surface elevation
approximately 580 feet above sea-level, and a maximum depth of
feet,[1] while Seven League lake has a surface elevation of approximat
530 feet and a maximum depth of 397 feet[2]—that is the bottom of l
Timiskaming has an elevation of 110 and the bottom of Seven Lea
lake an elevation of 137 feet above sea-level. These elevations
probably considerably higher than the actual elevation of the r
bottom of the trench, however, for it has been partly filled both by po
Glacial lacustrine clay and by glacial drift. The obstruction wh
separates lake Timiskaming from Seven League lake and over which
Long Sault rapids[3] descend is composed of glacial drift so that the tre
in reality maintains its great depth continuously from lake Timiskam
to Seven League lake. The barrier below Seven League lake, on
other hand, apparently consists of solid rock, the river descending "throu
a narrow channel, obstructed by rocky reefs and islets."[4] Since
elevation of the bedrock surface at Mountain rapids is about 425 f

[1] Barlow, A. E., Geol. Surv., Can., Ann. Rept., vol. X, pt. 1, 1897, p. 165.
[2] Guerin, Thos., Ann. Rept., Minister of Public Works, Canada, 1884-85, pp. 106-107.
[3] Rep. of Prog., Ottawa River Storage, Dept. of Pub. Works, 1909-10, p. 85.
[4] Barlow, A. E., Geol. Surv., Can., Ann. Rept., vol. X, pt. 1, 1897, p. 170.