higher than the lake level when it was made. It runs in a nearly due north course, parallel with the well developed McCauleyville beach ridges which lie a half to two thirds of a mile farther west. Continuing northward through Liberty and Onstad townships and the southern two thirds of Kertsonville, the Campbell shore is almost continuously a terrace cut in the till, having a descent of 10 to 30 feet within as many rods. Numerous boulders, remaining from the wave erosion, are strewn on a narrow belt below the terrace. The erosion was in progress along the greater part of this terrace during both the upper and lower Campbell stages of the lake; but a beach ridge of gravel and sand, which was accumulated along its base during the lower stage, extends through section 5, Onstad, and into the adjoining sections.

From the southeast part of section 9, Kertsonville, the Campbell shore takes a north-northeastward course for the next ten miles to the southwest corner of the township of Red Lake Falls and to the Red Lake River. Along this extent it bears a conspicuous beach deposit, on which several farmhouses are built, their cellars being dug to the depth of six or eight feet in gravel and sand, while the surface on each side of the shore line is till. For the greater part of this distance there are two parallel beach ridges, usually occupying together a width of about fifty rods. The crest of the eastern and higher beach is 1,012 to 1,015 feet above the sea, and that of the lower beach about 1,000 feet, varying from this only one or two feet. Each ridge has a descent of four to six feet toward the east, and their western bases are respectively at 995 and 985 feet, approximately. The upper and lower Campbell levels of Lake Agassiz, which heaped up these beaches by their waves, were very nearly at 1,000 and 990 feet.

Several much later and lower stages of this ancient ice-dammed lake, after it had ceased to outflow at Brown's Valley, are represented by beach ridges traced in nearly parallel south to north courses through Crookston, Parnell, Belgium, Euclid, Angus, and adjoining townships. The lowest beach observed in this county, passing through sections 10 and 15, Tabor, is referred to the Gladstone stage of the lake, named from Gladstone in Manitoba. The southern end of the waning Lake Agassiz had then receded from Brown's Valley to the vicinity of the mouth of Sand Hill River, and its depth of water above the present Lake Winnipeg was reduced to less than 200 feet.

Two relatively small deltas were formed in the east edge of the lake by the Buffalo and Sand Hill rivers, while its west edge received four deltas, each much larger in both area and thickness, namely the Sheyenne, Elk Valley, Pembina, and Assiniboine deltas. All of these remarkable tributary sand and gravel deposits were brought by inflowing streams during the earliest and highest Herman stages of the lake, though each was considerably channeled and in part borne farther and to lower levels during the later and lower stages. In every instance the delta formations were supplied mainly by drainage from neighboring portions of the melting and departing ice-sheet. Alike on the east and west sides of the Red River Valley, the retreating border of the continental glacier nearly adjoined the ancient lake, being melted back from south to north as fast as the lake grew northward and made its earliest beaches.

Above the Sand Hill delta, southeastern Polk County was yet covered by the ice, melting fast away every summer, when its drift supplied the sand beds of the delta. Not far distant northward, the front of the ice-sheet stretched across the valley, but it was gradually yielding its place to the great glacial lake. Soon the originally smooth delta expanse, laid bare by the land uplift and the declining lake levels, was partly blown by the winds into high and picturesque sand hills, before protecting vegetation could overspread the surface.