



Collaboration to Characterize the Quaternary and Cretaceous Deposits in Saskatchewan

Geographical location

Saskatchewan

When it began or was completed

From prior to 1975 to 2001

Why a Canadian geotechnical achievement?

The quarter century of collaborative work between E.A. (Earl) Christiansen, and E.K. (Karl) Sauer (1929-2001) is legendary in the Canadian geotechnical field. Christiansen was a Quaternary geologist who worked initially with the Saskatchewan Research Council and later as an independent consultant. Sauer was a civil/geotechnical engineer who worked initially with Saskatchewan Highways, then on the faculty of the University of Saskatchewan and later as an independent consultant.

Their characterization of the Quaternary and Cretaceous deposits in the prairies, created an invaluable geologic framework that has supported investment and regulation in Saskatchewan. The results of their work continue to be routinely applied throughout the province to fields as diverse as: development of major transportation corridors; groundwater management; and development of mines. The exploration and mapping techniques they developed together have been adopted as standard practice by other agencies and institutions in Canada and internationally.

A few examples of publications by Earl Christiansen (EAC), Karl Sauer (EKS) and others, in the Canadian Geotechnical Journal (CGJ) and the Canadian Journal of Earth Sciences (CJES) are shown to the right.

Submitted by

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Example Publications

Eckel, BF, **EKS**, and **EAC**. 1987. **The Petrofka landslide, SK**. CGJ, Vol 24, pp 81-99.

EAC and **EKS**. 1988. **Age of the Frenchman Valley and associated drift south of the Cypress Hills, SK**. CJES, Vol 25, pp 1703-1708.

Labossiere, JL, **EKS** and **EAC**. 1989. **Postfailure analysis: Tramping Lake causeway, SK**. CGJ, Vol 26, pp 687-704.

Misfeldt, GS, **EKS** and **EAC**. 1991. **The Hepburn landslide: an interactive slope-stability and seepage analysis**. CGJ, Vol 28, pp 556-573.

EKS, Egeland, AE and **EAC**. 1993. **Compression characteristics and index properties of tills and intertill clays in southern SK**. CGJ, Vol 30, pp 257-275.

EKS, Egeland, AE and **EAC**. 1993. **Preconsolidation of tills and intertill clays by glacial loading in southern SK**, CJES, Vol 30, pp 420-433.

Kelly, AJ, **EKS**, Barbour, SL, **EAC**, Widger, RA. 1995. **Deformation of the Deer Creek bridge by an active landslide in clay shale**. CGJ, Vol 32, pp 701-724.

EAC and **EKS**. 2001. **Stratigraphy and structure of a Late Wisconsinian salt collapse in the Saskatoon Low, south of Saskatoon, SK, an update**. CJES, Vol 38, pp 1601-1613.

EAC and **EKS**. 2002. **Stratigraphy and structure of Pleistocene collapse in the Regina Low, SK**, CJES Vol 39, pp 1411-1423.

Photographs



E.A. (Earl) Christiansen (left) and E.K. (Karl) Sauer (right)