

POSTER SESSION ABSTRACTS

**THE DEPOSITIONAL ENVIRONMENT OF THE
FALHER MEMBER OF THE
SPIRIT RIVER FORMATION**

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The Lower Cretaceous Falher Member of the Spirit River Formation is a major gas producing horizon in the Deep Basin of northwestern Alberta. During the summer of 1981, subsurface mapping of the Falher Member in an area of approximately 900,000 hectares was conducted, centred roughly at Township 69, Range 10, West of the 6th Meridian.

The net clastics isopach map of the upper clastics package of the Falher Member shows that the deposits in the area consist of a series of parallel northwest-southeast trending accumulations of coarse grained sediment. These coarse grained accumulations consist of matrix supported and grain supported orthoquartzitic conglomerates separated by sandstones, shales and coals.

On the basis of geometry, sedimentary structures and the vertical variations in grain size of the upper clastics package, I conclude that the sediment represents deposition within a barrier island environment. There are two coarsening-upward sequences formed by barrier island regressions separated by a marine transgression which shows a fining-upward sequence. The paleo-strandline has a dominant strike of northwest to southeast with subtle changes in this trend occurring within each genetic sequence.