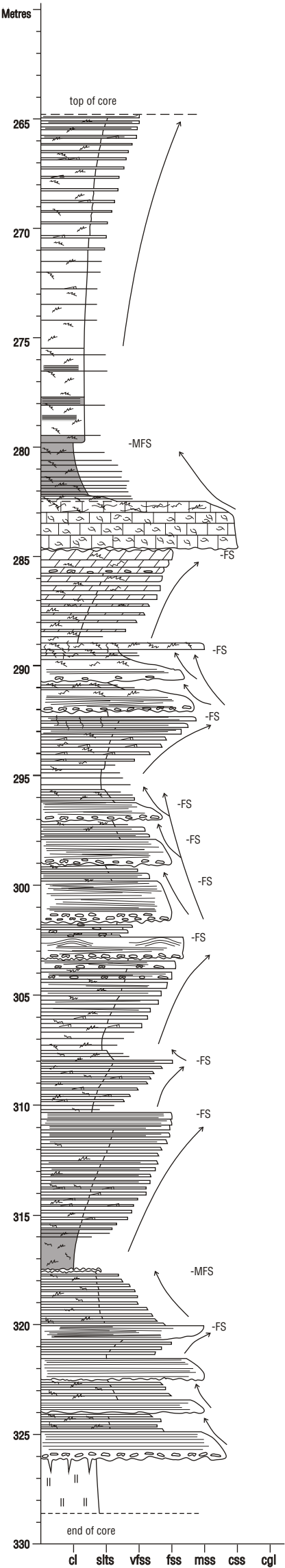


LOWER SILURIAN - SOUTHERN ONTARIO
QUEENSTON/WHIRLPOOL/CABOT HEAD/GRIMSBY/THOROLD/REYNALES/IRONDEQUOIT/ROCHESTER FMS
Anschutz Lake Erie 22-S-4, Haldimand Co., Lake Erie (1974) 12 km SE of Dunnville
Block 22, tract S, quarter 4
Lat. 42°45'N Long. 79°30'W
[porosity (φ) and permeability (K) from Core Laboratories Canada Ltd.]



- slightly c-up sequence grey bioturbated silty mudstone and thin sharp-based siltstone to very fine-grained sandstone beds, bioturbation, few fossils, horizontal lamination and rxl, ss:sfts=1:8 at base, 1:5 at top.

- grey to dark grey silty mudstone, partly thin laminated, mostly bioturbated, with few very thin sharp-based calcisiltite beds with horizontal lamination, sfts:mud=1:10.

- f-up sequence dark greenish grey bioturbated mudstone with thin sharp-based bioclastic limestone beds, abundant burrows and fossil fragments.

IRONDEQUOIT

- buff coarse crystalline limestone, bioclastic, well sorted, vuggy, stylolites throughout, erosional base, slightly f-up at top, burrowed petroliferous partings at top, grades up into greenish grey burrowed mudstone, φ=3-7%, K=0-1.6 mD

REYNALES

- c-up sequence thinly interbedded greenish grey mudstone and grey fine crystalline dolostone, thick bedded dolostone at top, bioturbated, sharp top with topography with thin brown mudstone parting, φ=0, K=0.

THOROLD

- two stacked f-up sequences of pale grey fine- to medium-grained sandstone grading up into green burrowed sandy siltstone, capped by thin heavily burrowed medium-grained sandstone, erosional bases with green shale rip-ups, low-angle lamination, burrowing throughout including *Teichichnus* at top, φ=7-9%, K=0.3-0.4 mD

- c-up sequence thinly interbedded red siltstone and pale grey fine- to medium-grained sandstone, beds up to 30 cm, sharp based with rip-ups, low-angle lamination and rxl, minor vertical and horizontal burrowing, greenish siltstone at top, φ=8-9%, K=0.3 mD

- red siltstone, thinly laminated, few thin very fine-grained sandstone beds with rxl, no burrows.

- three stacked f-up sequences of grey to reddish grey very fine to fine-grained sandstone with silty partings, sharp erosional bases with rip-ups, fine-grained sandstone, well sorted with horizontal and low-angle lamination, upper parts are reddish/greenish mottled and burrowed, φ=6-9%, K=0-0.3 mD

GRIMSBY

- red thin bedded sandy siltstone to silty very fine-grained sandstone, green shale rip-ups.

- c-up sequence red thinly interbedded siltstone and fine-grained sandstone, sandstone beds up to 1 m with sharp bases and green shale rip ups, horizontal lamination and HCS at top, burrowed siltstone at base, ss:sfts=1:10 at base, 3:1 at top, φ=6-9%, K=0-0.1 mD

- slightly c-up sequence thinly interbedded greenish grey siltstone and grey fine-grained sandstone, sharp bases, rip-ups, horizontal burrows, horizontal lamination and rxl, upper 50 cm is moresilty.

CABOT HEAD

- c-up sequence interbedded siltstone and fine-grained sandstone, from dark greenish grey bioturbated mudstone, to thinly interbedded siltstone and very fine-grained sandstone with sharp bases, rxl, and burrows, to pale grey fine-grained sandstone with horizontal and low-angle lamination, silty partings and burrows, ss:sfts=3:1 at top, φ=3-7%, K=0-0.2 mD

- thinly interbedded greenish siltstone and pale grey fine-grained sandstone, slightly f-up, abundant burrowing, sharp bases and tops, horizontal lamination and rxl, sharp cemented top.

WHIRLPOOL

- c-up sequence interbedded greenish grey siltstone and pale grey medium-grained sandstone, horizontal to low-angle lamination.

- pale grey medium-grained sandstone, well sorted, slightly f-up, horizontal lamination, φ=4-7%, K=0.1 mD

- thinly interbedded green siltstone and grey fine-grained sandstone, burrowed.

- pale grey medium-grained sandstone, well sorted, slightly f-up, horizontal lamination, φ=4-7%, K=0-0.3 mD

- thinly interbedded greenish grey siltstone and grey fine-grained sandstone, sharp bases and tops, abundant horizontal *Planolites* burrows, φ=12-18%, K=0-0.73 mD

QUEENSTON

- pale grey medium- to coarse-grained sandstone, well sorted, very quartzose and uniform, sharp erosional base with green shale rip-ups and desiccation cracks, slightly f-up, horizontal lamination, φ=12-18%, K=0-0.73 mD

- red pedogenic siltstone, very uniform, blocky, micaceous, slickensides, upper 20 cm is green claystone with deep desiccation cracks filled with overlying sandstone, φ=6.2%, K=0.1 mD