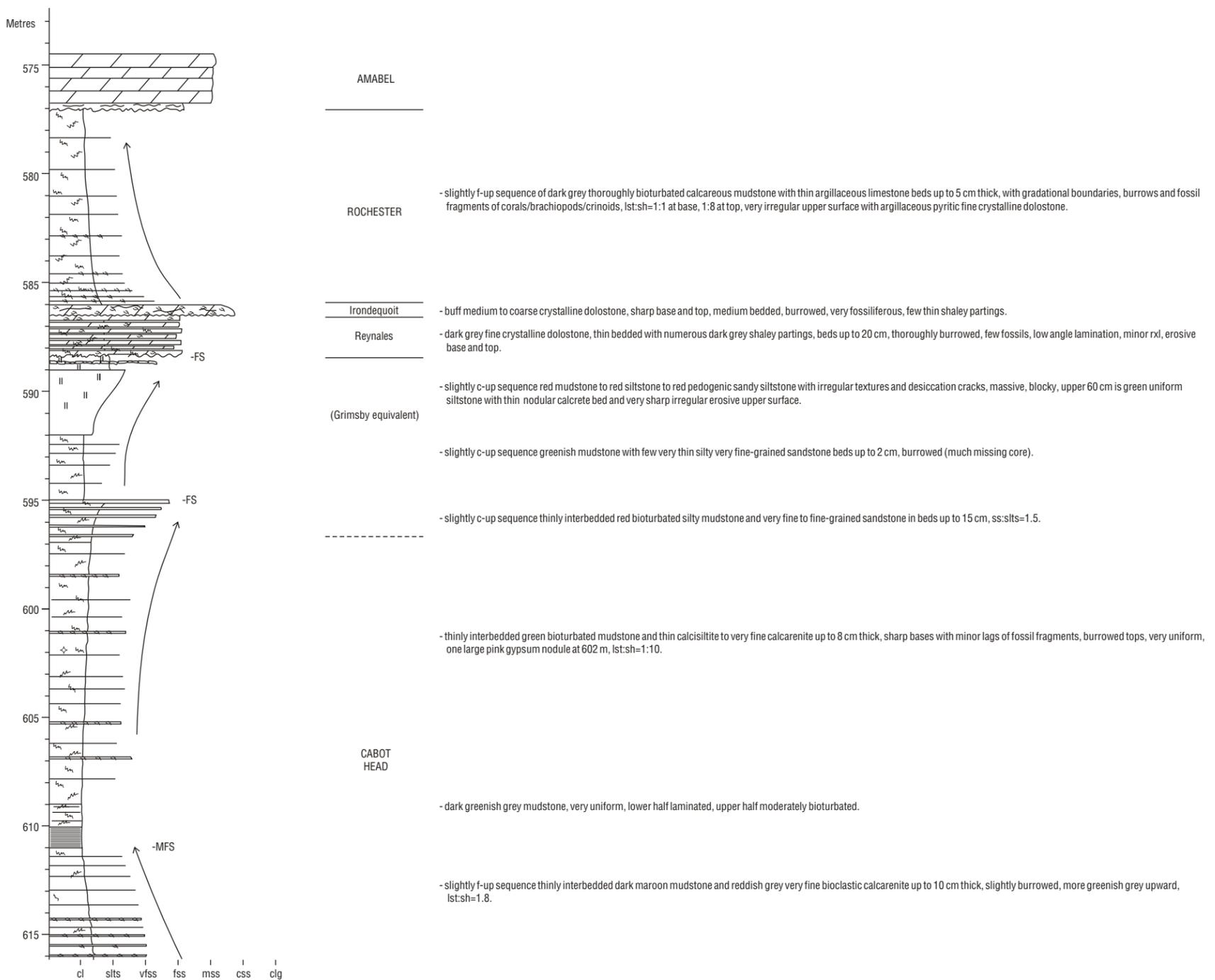
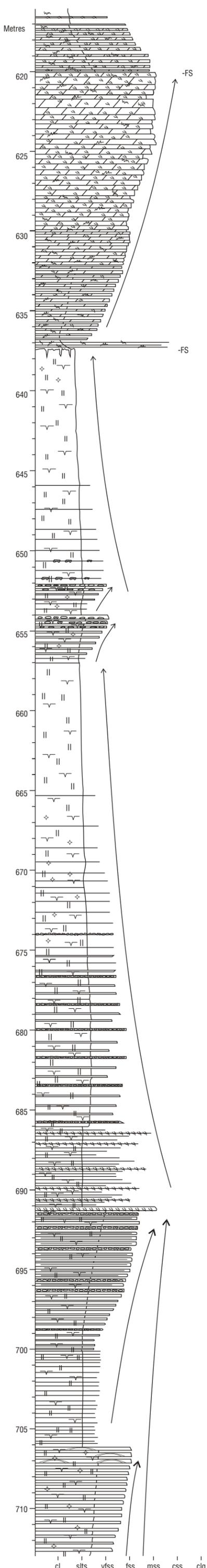


UPPER ORDOVICIAN/LOWER SILURIAN - SOUTHERN ONTARIO  
 LINDSAY/COLLINGWOOD/BLUE MOUNTAIN/GEORGIAN BAY/QUEENSTON/MANITOULIN/CABOT HEAD/REYNALES/IRONDEQUOIT/ROCHESTER  
 OGS Chatham 82-2 (1983)  
 Lot 25, conc I ERC, tract 1, Harwich Twp, Kent Co.  
 Lat. 43°20'N Long. 82°05'W





CABOT HEAD

- f-up sequence thinly interbedded greenish grey bioturbated mudstone and grey fossiliferous fine to medium crystalline dolostone, well burrowed, beds are sharp based and bioclastic with fragments of coral/bryozoans/brachiopods, thin cap bed of fine-grained sandstone 5 cm thick.

- grey fossiliferous fine to medium crystalline dolostone, fossiliferous, thin bedded, argillaceous, up to 20 cm thick, separated by thin greenish burrowed mudstone partings, most beds sharp based and bioclastic with transported fossil fragments of brachiopods/trilobites/corals/bryozoans, abundant burrowing.

MANITOULIN

- c-up sequence thinly interbedded greenish argillaceous calcareous mudstone and grey fossiliferous fine crystalline dolostone, beds up to 10 cm, thoroughly bioturbated, sharp boundaries, dark grey shale partings, nodular textures, dol:sh=1:1 at base, 10:1 at top.

WHIRLPOOL

- thinly interbedded bright green claystone and grey medium to coarse sandstone with sharp erosive bases, vertical burrows and black phosphatic grains, all thoroughly bioturbated.

- f-up red pedogenic muddy siltstone, massive, uniform, blocky, with few very thin greenish siltstone to very fine-grained sandstone beds up to 5 cm thick with gradational boundaries, rip-up lags, deep desiccation cracks, some gypsum nodules near top, very sharp top with complex network of deep and wide desiccation cracks up to 15 cm deep filled with grey medium- to coarse-grained sandstone.

- 2 stacked c-up sequences of thinly interbedded red pedogenic siltstone and green very fine-grained sandstone with sharp bases, tip-up lags, deep desiccation cracks, few gypsum nodules, sandstone in lower sequence up to 15 cm thick.

- slightly f-up red pedogenic siltstone, massive, uniform, blocky with gypsum nodules near base and greenish silty very fine-grained sandstone beds near base which have gradational boundaries, deep desiccation cracks, coating of gypsum on surface of core.

QUEENSTON

- slightly f-up sequence red pedogenic sandy siltstone and thin greenish very fine to fine-grained sandstone beds with sharp bases, rip-up lags, deep desiccation cracks, siltstone are blocky and massive with a few gypsum nodules, ss:slts=1:4 at base, 1:8 at top.

- red pedogenic sandy siltstone with thin beds of very fine to fine-grained sandstone with sharp bases and abundant rip up breccia horizons, desiccation cracks, ss:slts=1:4, blocky uniform, massive.

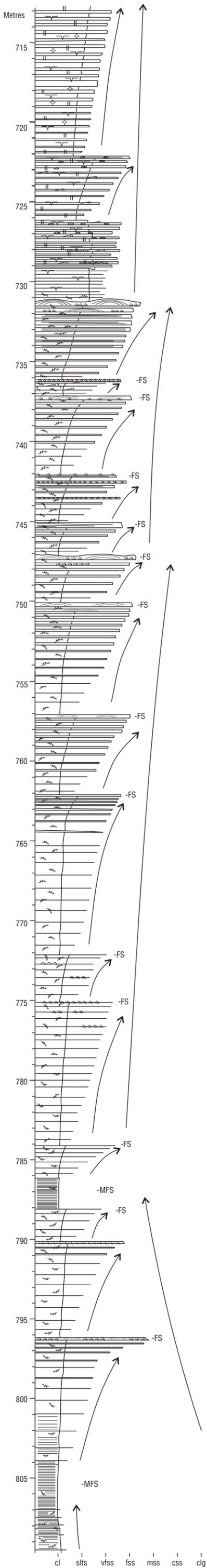
- thinly interbedded red pedogenic mudcrack-brecciated siltstone and green bioclastic very fine- to medium-grained sandstone in beds up to 5 cm, abundant desiccation cracks and red shale rip-ups, minor horizontal lamination, ss:slts=2:1.

- c-up sequence thinly interbedded red pedogenic sandy siltstone and reddish to greenish very fine-grained sandstone mudcrack breccias and cap bed of fine to medium bioclastic calcarenite, well sorted, horizontal lamination, abundant desiccation and brecciation, minor rxl, abundant rip-ups, ss:slts=3:1 (represents coarsest reading on GR log).

- thinly interbedded red/green mottled siltstone and silty very fine-grained sandstone, in beds up to 5 cm, blocky, uniform, pedogenic, abundant desiccation and rip-ups, ss:slts=1:1.

- c-up sequence thinly interbedded red pedogenic sandy siltstone and green very fine to fine-grained sandstone in beds up to 20 cm, with erosive bases and abundant rip-ups, desiccation cracks, horizontal lamination, few beds with ?HCS? near top, abundant large bedding plane nodular concretions of pink/orange gypsum in siltstone, ss:slts=1:1 near base, 2:1 at top.

- cl
- slts
- vfss
- fss
- mss
- css
- clg

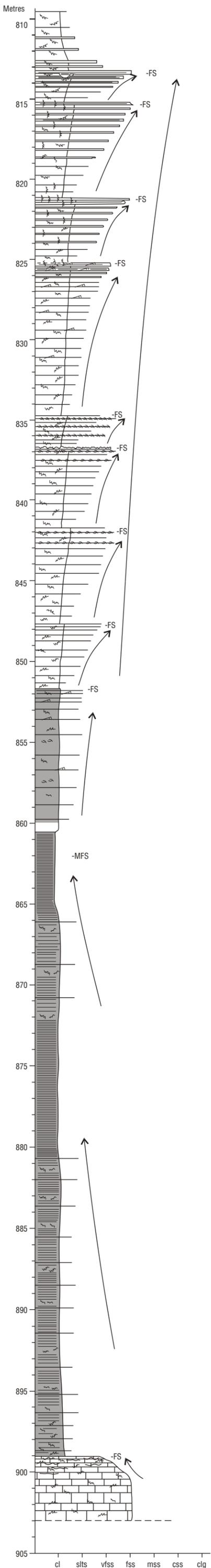


QUEENSTON

- c-up sequence thinly interbedded red sandy siltstone and very fine to fine-grained sandstone in beds up to 10 cm with sharp bases, rip-ups, desiccation cracks, horizontal lamination, rxl.
- thinly interbedded red sandy siltstone and greenish very fine to fine-grained sandstone in beds up to 10 cm, ss:slts=1:1, sandstone have erosive bases with lags of green shale rip-ups, horizontal lamination, minor rxl, deep desiccation cracks, siltstone blocky and pedogenic.
- thinly interbedded red sandy siltstone and green silty very fine-grained sandstone, beds up to 5 cm, minor burrowing, vague desiccation mud cracks, ss:slts=1:3.
- c-up sequence interbedded greenish grey muddy siltstone and grey fine calcarenite up to 40 cm thick, sharp bases, few lags of fossil fragments, low-angle lamination to HCS, abundant burrows, minor red stain in middle.
- thinly interbedded greenish grey mudstone and thin grey calcarenite, abundant vertical and horizontal burrows, rxl, bioclastic bed at top.
- c-up sequence thinly interbedded greenish grey silty mudstone and thin very fine to fine calcarenite up to 20 cm thick, sharp bases, low-angle lamination and HCS, upper bed has lag of fossil fragments and sharp top.
- c-up sequence thinly interbedded greenish grey bioturbated mudstone and thin very fine to fine calcarenite up to 10 cm thick, sharp bases, few bioclastic beds, large fossil fragments on sharp upper surface.
- c-up sequence thinly interbedded greenish grey bioturbated mudstone and thin very fine to fine calcarenite up to 20 cm thick, sharp bases, low-angle lamination.
- c-up sequence thinly interbedded greenish grey bioturbated silty mudstone and thin very fine to fine calcarenite up to 20 cm thick, with sharp bases, low-angle lamination and HCS, several beds have lags of fossil fragments.
- c-up sequence thinly interbedded greenish grey bioturbated mudstone and thin very fine to fine calcarenite up to 10 cm thick, with sharp bases and tops, horizontal to low-angle lamination and HCS.
- c-up sequence thinly interbedded greenish grey bioturbated mudstone and thin very fine to fine calcarenite up to 10 cm thick with sharp bases and tops, horizontal to low-angle lamination and HCS.
- c-up sequence thinly interbedded grey bioturbated mudstone and thin very fine calcarenite with sharp bases, ss:slts=1:8 at base, 2:1 at top.

GEORGIAN BAY

- slightly c-up sequence thinly interbedded grey mudstone and thin very fine calcarenite with sharp bases and few minor shelly lags, bioturbation.
- slightly c-up sequence thinly interbedded dark grey mudstone and thin very fine calcarenite with sharp bases and lags of fossil fragments, bioturbation.
- c-up sequence thinly interbedded greenish grey bioturbated mudstone and thin very fine calcarenite beds up to 5 cm, sharp bases, gradational tops, ss:slts=1:8 at base, 1:5 at top.
- dark grey mudstone, laminated, very uniform, no bioclastic or calcarenite beds, no burrowing.
- slightly c-up greenish grey mudstone with very thin very fine calcarenite beds up to 2 cm thick, no bioclastic beds, burrowed.
- c-up sequence thinly interbedded greenish grey mudstone and thin grey siltstone to very fine calcarenite, cap bed is 5 cm bioclastic calcarenite, bioturbated.
- slightly c-up sequence thinly interbedded dark grey mudstone and thin siltstone to very fine calcarenite, burrowing increases upward, few scattered fossils in mudstone, cap bed is 10 cm fine to medium bioclastic calcarenite with sharp base and HCS.
- dark grey mudstone, laminated, uniform, minor bioturbation, slightly f-up, rare threads of calcisiltite near base.
- f-up sequence thinly interbedded greenish grey bioturbated mudstone and very fine calcarenite, with sharp bases and horizontal lamination, mudstone darker upward.



- GEORGIAN BAY**
- c-up sequence thinly interbedded greenish grey bioturbated silty mudstone and grey very fine to fine calcarenite up to 10 cm, with sharp bases, horizontal lamination, one has deeply erosional gutter scour on base.
  - c-up sequence thinly interbedded greenish grey bioturbated silty mudstone and grey very fine to fine calcarenite, up to 10.5 cm, with sharp bases, horizontal lamination, and abundant large mud-filled vertical burrows.
  - c-up sequence thinly interbedded greenish grey bioturbated silty mudstone and grey very fine to fine calcarenite, up to 5 cm, with sharp bases, horizontal lamination, abundant large mud-filled vertical burrows.
  - c-up sequence thinly interbedded greenish grey bioturbated mudstone and grey siltstone to very fine calcarenite, up to 8 cm thick, with sharp bases, horizontal lamination and rxl, gradational burrowed top.
  - slightly c-up sequence thinly interbedded greenish grey bioturbated mudstone and grey siltstone to very fine-grained sandstone, with numerous thin bioclastic beds 2 cm thick.
  - c-up sequence thinly interbedded greenish grey mudstone and grey siltstone to very fine-grained sandstone, up to 5 cm thick, with sharp bases and horizontal lamination, bioturbated, several thin bioclastic beds near top, very sharp irregular top.
  - c-up sequence thinly interbedded greenish grey mudstone and grey siltstone to very fine-grained sandstone, up to 5 cm thick, with sharp bases and horizontal lamination, bioturbated, several thin bioclastic beds near top.
  - c-up sequence thinly interbedded greenish grey mudstone and grey siltstone to very fine-grained sandstone, up to 3 cm thick, with sharp bases and horizontal lamination, bioturbated, ss:slts=1:10 at base, 1:5 at top.
- BLUE MOUNTAIN**
- dark greenish grey mudstone with few grey siltstone beds up to 2 cm thick with sharp bases, horizontal lamination rxl, minor burrowing, at top are more siltstone beds, few fossils scattered through mudstone.
- ?COLLINGWOOD/  
BLUE MOUNTAIN?**
- dark grey to black mudstone, noncalcareous, very uniform, somewhat petroliferous, laminated, minor burrowing, no obvious fossils, especially black and petroliferous in upper 5 m, rest has very thin delicate threads of grey siltstone with sharp bases.
- LINDSAY**
- grey fine crystalline limestone, fossiliferous, burrowed, numerous dark grey mudstone partings especially in upper 1 m, very sharp top.

cl slts vfss fss mss css clg