



- FACIES**
- Multi-storey channelised sandstone
  - Mouth-bar sandstone & siltstone, often shoaling, with feeder channels
  - Heterolithic mixed facies: fractionally transported and suspension deposited - delta overbank
  - Estuarine silty-mudstone
  - Fluvial systems influenced by abandonment surfaces
  - Gastropod palaeosol on interfluvial floodplain
  - Basinal wave re-worked shoreface
  - Basinal high density turbidites
- KEY SURFACES**
- Maximum flooding surface - section datum (R2b5)
  - Flooding surface with ammonoid fauna
  - Parasequence/abandonment surface
  - Low Order sequence boundary/relative downlap surface
  - Palaeosol
- ADDITIONAL SURFACES** (Zaitlin et al., 1994)
- Initial flooding surface/estuarine-fluvial contact (sensu Zaitlin et al., 1994)
  - Transgressive surface (sensu Van Wagoner, 1988.) Zaitlin et al., 1994
  - Fluvial channel/bayhead diastem (sensu Zaitlin et al., 1994)

BGS memoir references to 'estuarine' facies

Wright et al. (1927) Rossendale memoir  
'estuarine band between Fletcher Bank Grit and Helmshore Grit with <sup>Lingula</sup>

Bromehead et al. (1933) Glossop memoir;  
'shale with estuarine characteristics'

Price et al. (1963) Preston memoir  
'estuarine parting with <sup>Lingula</sup>, <sup>Orbiculoidea</sup>, <sup>Sanguinolites</sup>, <sup>Mytiloides</sup>, fish scales'

Wray et al. (1930) Huddersfield memoir  
'shale in with estuarine characteristics'

Tidal indicators (this study)

Tidally dominated distal mouth-bar

Tidally influence in-channel bar-form

?mangrove type tree-staple dendron