Cambridge Carbonates Ltd
Expertise in carbonate and evaporite systems

Well name: HEU-01 | Date: 23 January 2019 | Scale: 1:200

Formation: Schouwen Member | Logging Team: Peter GUTTERIDGE/ Alberto RIVA

Carbonates:

Sedimentary Structures:
- parallel lamination
- Structureless
- slumped bedding

Components:
- intraclast
- bivalve debris
- crinoids
- Bunnian - general

Lithology:
- Mudstone/Shale
- Argillaceous limestone
- Calcareous mudstone
- No core
- Argillaceous Limestone

Diagenetic features:
- open fracture
- cemented fracture
- Pathfinder
- horizontal stylolithe
- subvertical stylolithe

Karst features:

Karst association:

Main cement type:

Depositional Environment:
- Inferred basinal
- Basinal
- Troughdominated and slumped carbonic

Bed contacts:

Fracture:
- Open fracture
- Cemented fracture

Clastics:

Sedimentary Structures:

Components:

Thin sections | Core depth m | Clastic sedimentary structures | Dolomite Crystal Size | Grain Size | Clastic allochems | Lithology | Carbonate sedimentary structures | Carbonate texture | Carbonate components | Thin section texture | KARST | Karst Fracture | Karst Fabric | Karst Matrix | Karst Features | Karst Association | Karst-Cement Type | Diagenetic Features | Fracturing | Structure | Dip | Porosity Comment | Visible Porosity | Plug porosity (%) | Plug permeability (mD) | Colour | Depositional Environment | Member | Formation | Comments

Comments:

- 128–146: White very fine grained non-calcareous mudstone, siliceous, non-fissile, no bedding, lamination or visible allochems. Very low density, highly microporous.
- 146–196: White very fine grained non-calcareous, siliceous, mudstone, non-fissile, no bedding, lamination or visible allochems. Very low density, highly microporous.
- 196–216: White with occasional brick red stained layers. Very fine grained non-calcareous, siliceous, mudstone, non-fissile, no bedding, lamination or visible allochems.Very low density, highly microporous.
- 216–286: Very dark grey with occasional white mottles in very fine grained, uniform, powdery, siliceous, non-calcareous mudstone, non-fissile, no bedding, lamination or visible allochems. Very low density, highly microporous.
- 286–310: From publication: clay mineral assemblage comprises illite and kaolinite
Up to 5 wt % TOC
Organic matter types 1 and 2, mixture of algal and lacustrine.
- 310–330: Very dark grey with occasional white patches, very fine grained, powdery, siliceous, non-calcareous mudstone, non-fissile, no bedding, lamination or visible allochems, Very low density, highly microporous.
- 330–360: Very dark grey, very fine grained, powdery, siliceous, non-calcareous mudstone, non-fissile, no bedding, lamination or visible allochems. Very low density, highly microporous.
- 360–364: Very dark grey, very fine grained, powdery, siliceous, non-calcareous mudstone, non-fissile, no bedding, lamination or visible allochems. Very low density, highly microporous.
- 310–312: Very thinly-bedded sorted bioclast grainstone/packstone with scoured bases, Coarse sand- to granule-sized bioclasts. Oblique and anastomosing stylolitewidth dark mudstone residue cut by oblique fractures filled by calcite spar.
- 312–318: Convoluted bedding comprises admixture of fine bioclastic sediment injected into argillaceous carbonate mudstone. top contact of convoluted interval is erosional.
- 318–320: Convoluted lamination in bioclastic packstone/grainstone. Basal contacts of convoluted intervals are slump planes.
- 320–322: Oblique hairline fractures infilled by calcite spar.
- 322–324: Planar laminated fine bioclastic packstone/grainstone.
- 326–328: Laminated packstone/grainstone with sharp base compomsed of very finely comminuted bioclasts.
- 330–334: Rounded clasts of cobble-sized laminates carbonate mudstone surrounded by very fine bioclast packstone/grainstone in interval of convoluted bedding.
- 334–336: Laminated packstone/grainstone with very finely comminuted bioclasts.
- 336–338: Matrix-supported debris flow with mudstone intraclasts.
- 338–340: Very argillaceous carbonate mudstone.
- 340–344: Closely-spaced parallel set of oblique- to sub-vertical open fractures with upto 5mm aperture. Set of short, sub-horizontal fractures connecting the vertical fractures. Fracture set is infilled by dark grey non-calcareous powdery mudstone.
- 344–348: Laminated very finely comminuted bioclastic packstone/grainstone interbedded with argillaceous carbonate mudstone.
- 348–350: Matrix-supported debris flow with medium sand-sized tabular lithoclasts of dark mudstone.
- 350–352: Very fine-grained organic-rich dolomudstone.
- 352–354: Hairline fracture cemented by calcite.
- 354–358: Graded bed of laminated packstone/grainstone with very finely comminuted bioclasts. Some internal erosional surfaces.
- 358–360: Interbedded very dark grey mottled carbonate mudstone with possible bioturbation.
- 360–364: Finely laminated grainstone/packstone with very finely comminuted bioclasts, layers have slight grading and scoured bases.
- Irregular sub-vertical fractures.
- Sub-horizontal calcite veins.