



This Digital Core Atlas for stratigraphic well Barnicarndy 1 presents analytical results for 2680.53 m of core (SQ, PQ and HQ core size) drilled by DDH1 Drilling Ltd within the Barnicarndy Graben, Canning Basin between September– December 2019. Drilling was funded by Geoscience Australia through the Exploring for the Future (EFTF) Program and subsequent well analysis was funded by the Geological Survey of Western Australia's Exploration Incentive Scheme (EIS). The Digital Core Atlas project is a product of the Geological Survey of Western Australia (GSWA) and combines core photographs with the raw datasets from the well in one fully integrated package.

This Core Atlas is presented as an electronic flip-book with interactive links to enable the user to view the results of multiple datasets in one convenient and user-friendly location. Each core tray has a field photo and HyLogger photo, marked with depths and icons linked to each of the various analyses available for a given depth interval. These linked datasets include: biostratigraphy, geochronology, inorganic geochemistry, organic geochemistry, petrography and petrophysics. Each page shows the location of the core tray being displayed and contains a link to a detailed stratigraphic log for the interval containing that core tray.

**Datasets presented in the Barnicarndy 1, Canning Basin: Digital Core Atlas include:**

1. Biostratigraphy
  - Conodonts
  - Ichnology
  - Miscellaneous fossils (MF)
  - Palynomorphs
2. Geochronology
  - Chemical abrasion isotope dilution thermal ionization mass spectrometry (CA-IDTIMS)
  - Sensitive high-resolution ion microprobe (SHRIMP)
  - Thermochronology (TC)
3. Inorganic geochemistry
  - Inductively coupled plasma mass spectrometry (ICP-MS)
  - Multi-element geochemistry (MEG)
  - Stable isotopes (SI)
  - X-ray diffraction (XRD)
  - X-ray diffraction – in-house (XRD-IH)
4. Organic geochemistry
  - Biomarkers (BIO)
  - Chromatograms (CMS)
  - Fluid inclusion stratigraphy (FIS)
  - Gas chromatography mass spectrometry (GC-MS)
  - Total organic matter and Rock-Eval (TOC+RE)
5. Petrography
  - Cathodoluminescence (CL)
  - Fluid inclusion petrography (FIP)
  - Organic matter reflectance (OMR)
  - Scanning electron microscopy (SEM)
  - Thin sections (TS)
6. Petrophysics
  - Bulk density (BD)
  - Computed tomography (CT)
  - Magnetic susceptibility (MS)
  - Porosity and permeability (PP)
  - Rock mechanics (RM)
  - Tight rock analysis (TRA)

Data within the Core Atlas are presented in a format that has been slightly modified from the original raw data and reports. The original documents can be accessed via the Access Data tab.

**Barnicarndy 1, Canning Basin: Digital Core Atlas**

Free (online): <<https://wapims.dmp.wa.gov.au/WAPIMS/Search/CoreAtlas>>.

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