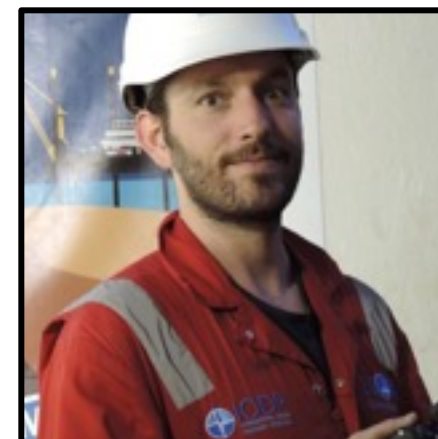
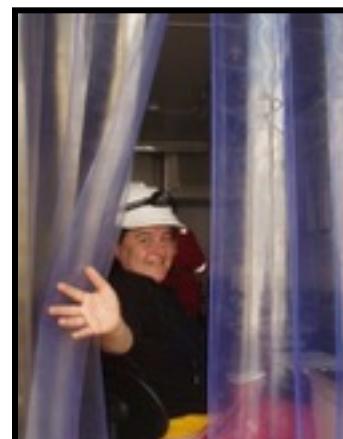




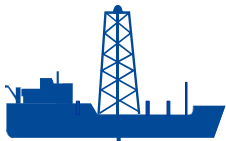
Downhole logging and core petrophysics



Sarah Davies

ESO logging and core petrophysics

sjd27@le.ac.uk



Petrophysics Staff Scientists & Petrophysicists

Expertise in downhole logging & core petrophysics programs

Dedicated equipment for core logging & discrete measurements

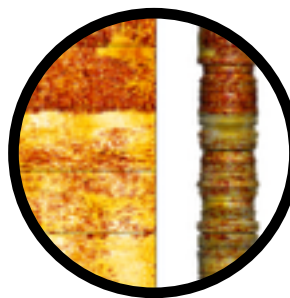
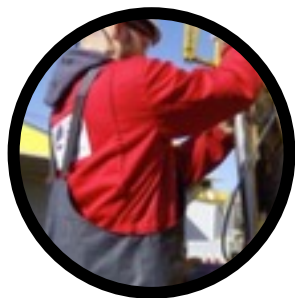
Data calibration & quality control

Evaluation & interpretation of these data



EPC activities as part of the ECORD Science Operator

- Preparation for upcoming expeditions
- Post-expedition activities
- Capability development and training for IODP MSP Expeditions
- Other key activities, including education & training





Logging activities for Mission Specific Expeditions

Time

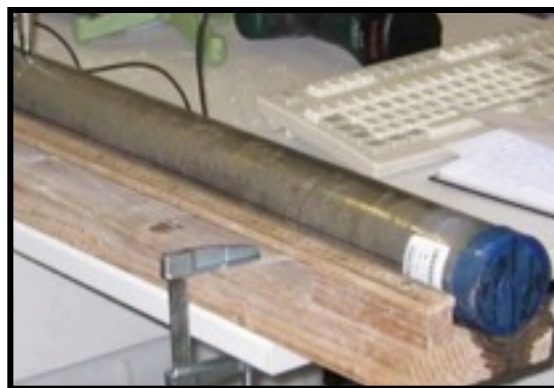
Expedition Planning

Offshore Expedition

Pre-
Onshore

Onshore
Expedition

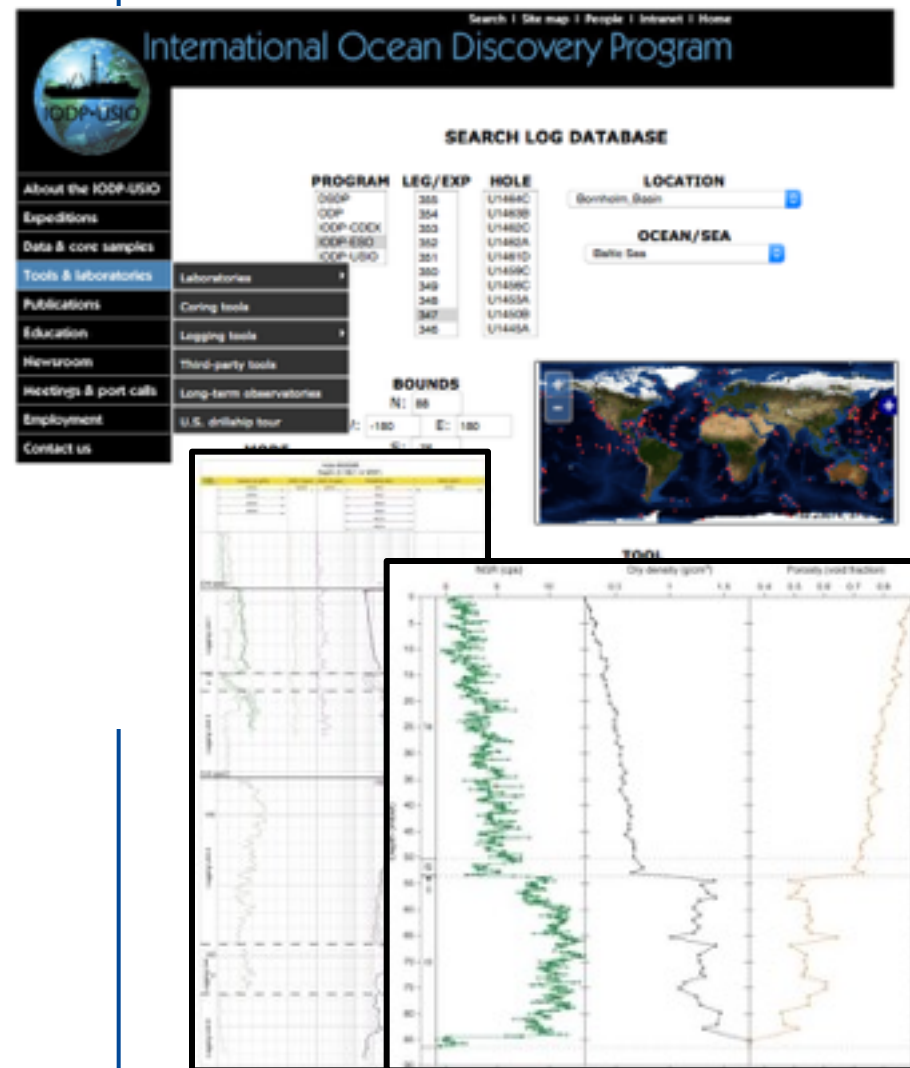
Post-
expedition
follow up



Volker Diekamp/MARUM

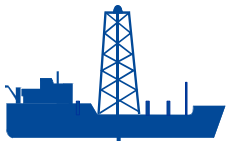


Expedition 347 – Baltic Sea Palaeoenvironment

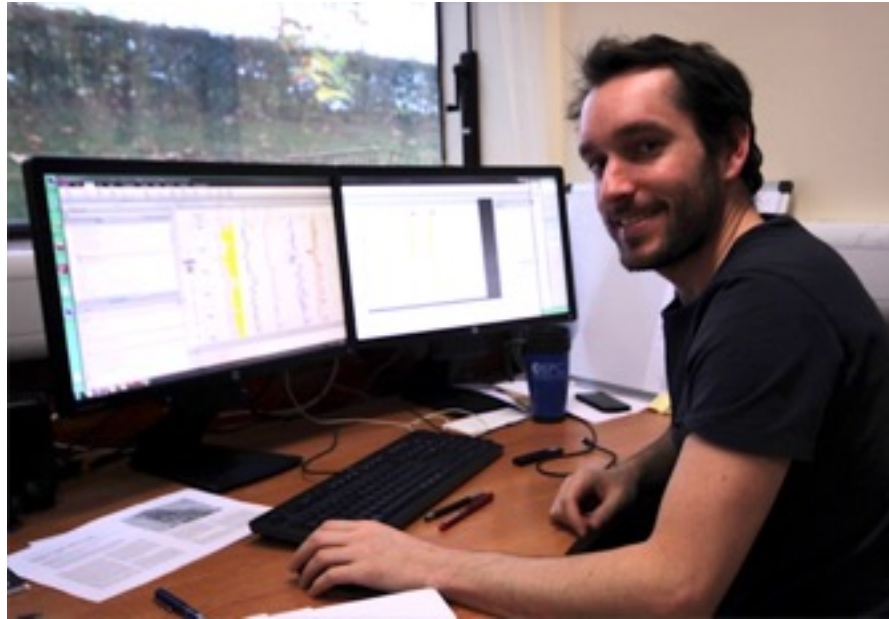


- EPC staff prepared expedition logging data for archiving in the IODP legacy database hosted by the Lamont Doherty Earth-Observatory

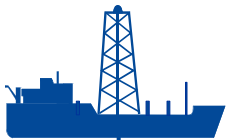
- Petrophysics Staff Scientist attended second post-cruise meeting, September 2015



Preparation for IODP MSP Operations



- Bespoke Techlog training from Schlumberger
- Software training in fundamentals of Petrel
- EPC Logging deployment training, Montpellier
- Offshore survival training
- MSCL training at Geotek Ltd
- Radiation safety training



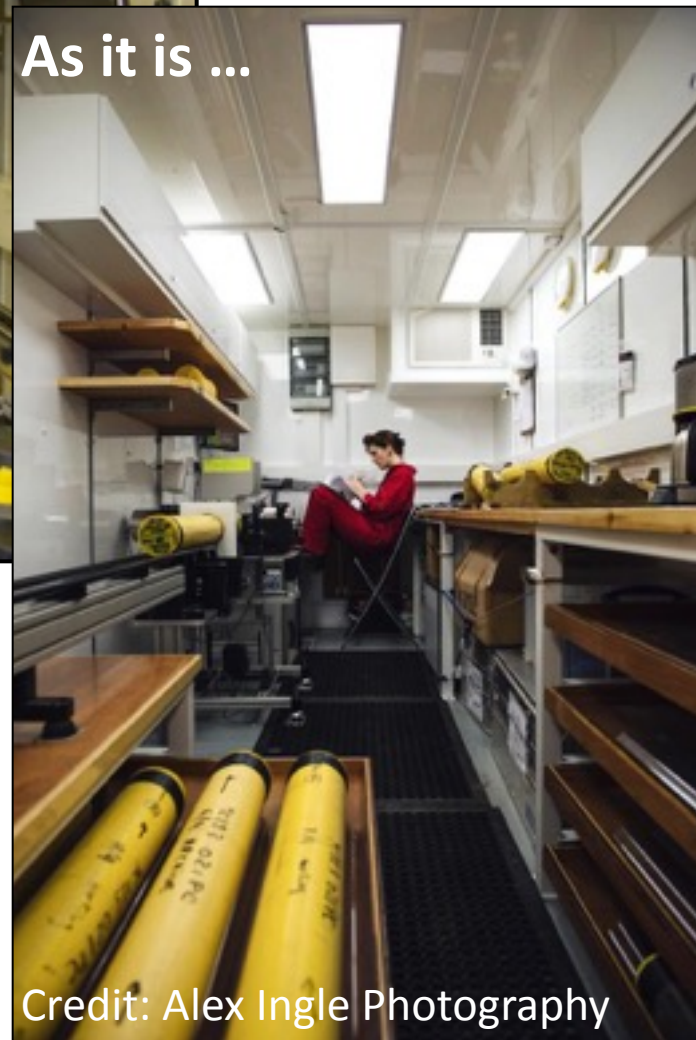
Capability development

Refurbishment Offshore Petrophysics Container

As it was

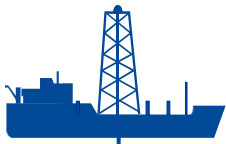


As it is ...

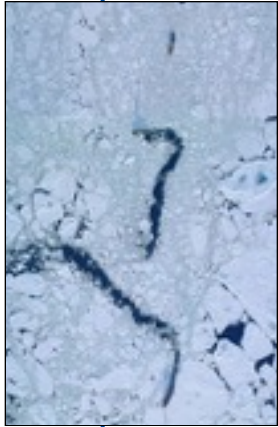


- Extended Standard MSCL-capability
- Maintains option for second 'fast-track' MSCL (MSCL-152)

Credit: Alex Ingle Photography



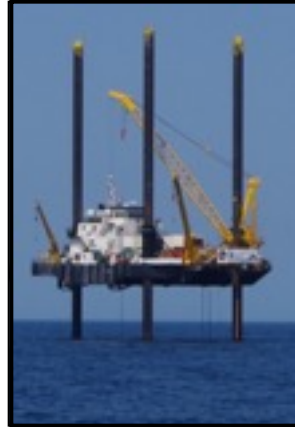
Mission Specific Expeditions



ACEX
Exp 302



Tahiti
Exp 310



New Jersey
Exp 313
Chicxulub
Exp 364



GBREC
Exp 325



Baltic
Exp 347



Atlantis
Exp 357

Schlumberger





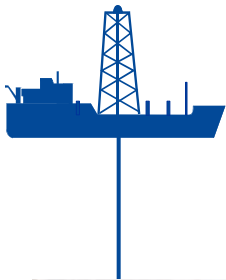
Expedition 357 – Atlantis Massif



- EPC worked closely + BGS & MARUM for downhole logging tools development for seabed rockdrill deployment
- EPC logging engineer for the RD2 test cruise (August 2015) offshore West of Scotland.
- Two training sessions for ANTARES tools, Bremen (May & September, 2015)



ANTARES logging tool test deployments from RD2 at test BGS borehole, Edinburgh (October 2015)



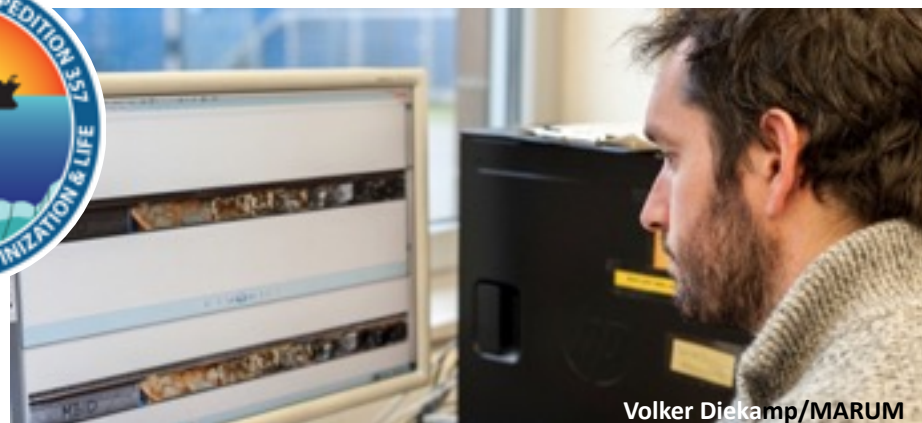
Expedition 357 – Atlantis Massif



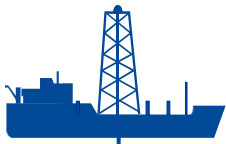
Volker Diekamp/MARUM



- Petrophysics Staff Scientist: Offshore (logging & MSCL)
 - Standard MSCL and 'fast-track' deployed
- Pre-onshore phase: NGR & through-liner 360-degree digital line scans
- Onshore Science Party IODP measurements



Volker Diekamp/MARUM



Expedition 364: Chicxulub K-Pg Impact Crater



- ESO Petrophysics Staff Scientist attended Merida Meeting, Mexico
- EPC personnel developed logging requirements with the ESO operations manager, co-chiefs & logging/VSP partners
- Permitting for the radioactive source for the Standard MSCL was ongoing throughout 2015-2016
- Shipping and mobilisation



Expedition 364: Chicxulub K-Pg Impact Crater



INSTITUTE FOR GEOPHYSICS
Understanding How Worlds Work



ECORD
Science Operator



Downhole Logging



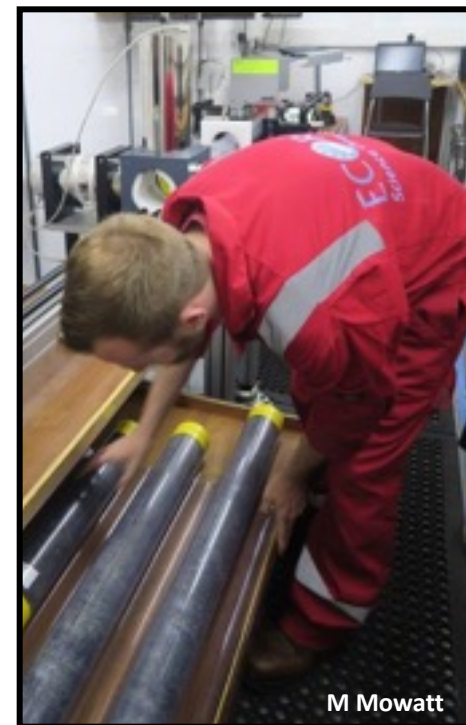
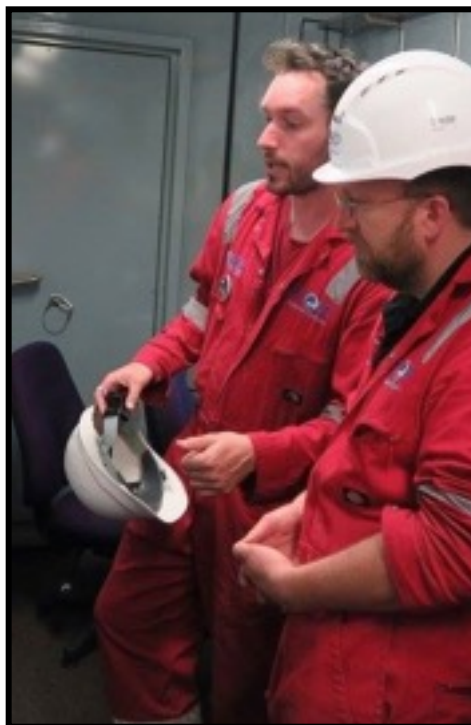
- ***A first:*** EPC's stackable ultra-slimline tools used on IODP MSP expedition
- 5.8 km high-quality wireline open hole log data collected
- 3 phases of logging & VSP experiments






Multi-Sensor Core Logger (MSCL)

- Ephemeral properties (magnetic susceptibility, resistivity & density)
- ***A first:*** EPC took natural gamma radiation measurements offshore using extended capabilities





Education, Training & Outreach



University of
Leicester

Department of Geology

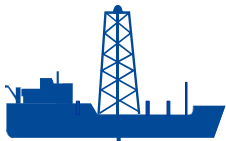
ECORD Distinguished Lecturer Programme

**Reconstructing Palaeo-Circulation:
Reading sediment drifts
with the aid of IODP information**

Tuesday 5 May 2015, 4.00 pm

Dr. Gabriele Uenzelmann-Neben





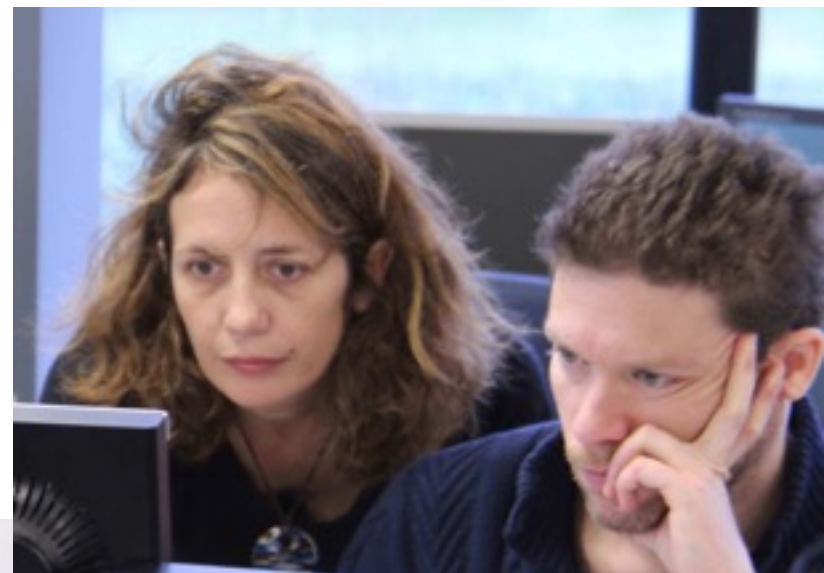
BSRG Petrophysics Weekend



Sponsored by



Petrophysics Teaching





First ECORD Summer School in Petrophysics



- June 26 - July 1, 2016
- Staff from EPC, wider international logging consortium & industry
- EPC Leicester lead successful bid
- 30 participants from institutions in 11 countries



ECORD Summer School Petrophysics 26 June to 1 July 2016, Leicester, UK

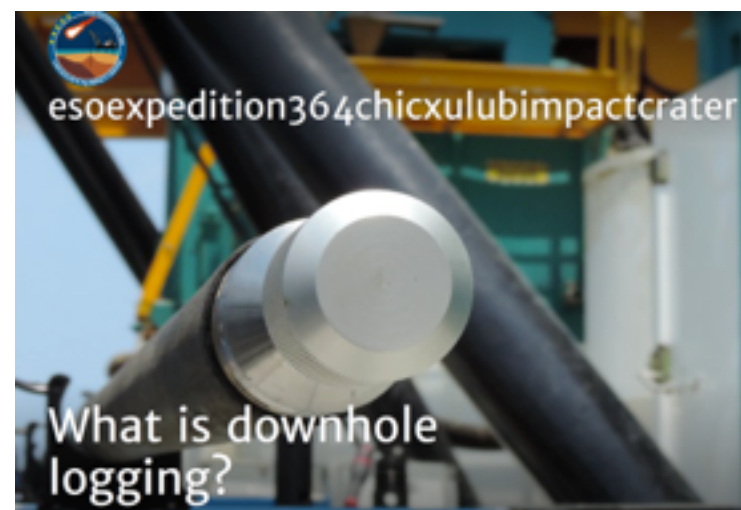
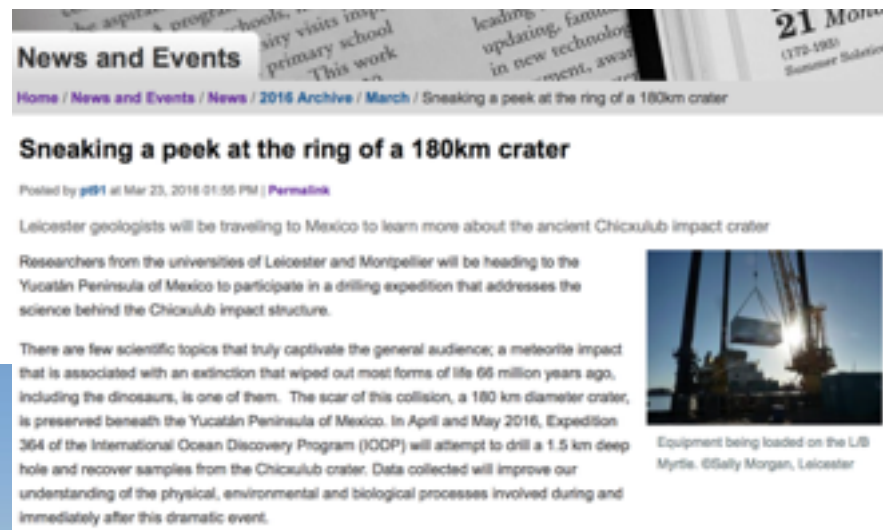


In-kind contributions



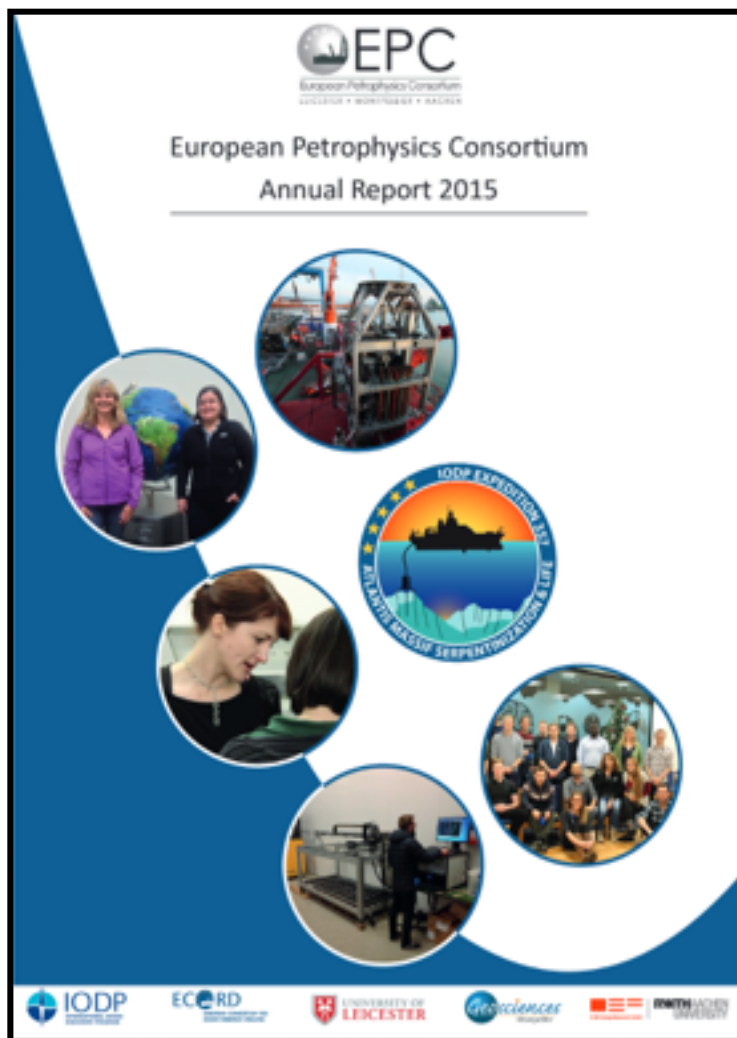


EPC: articles & social media



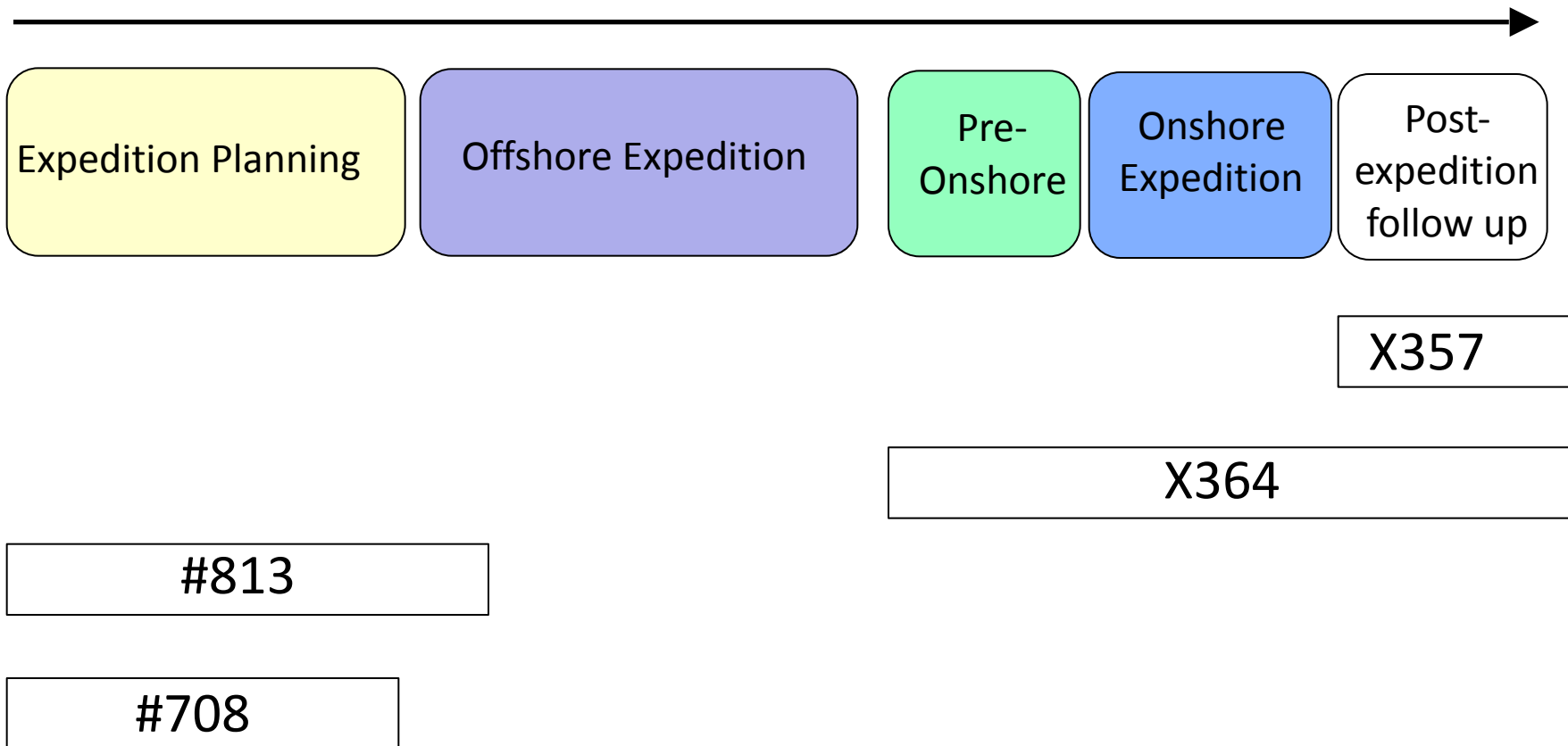


www.le.ac.uk/epc



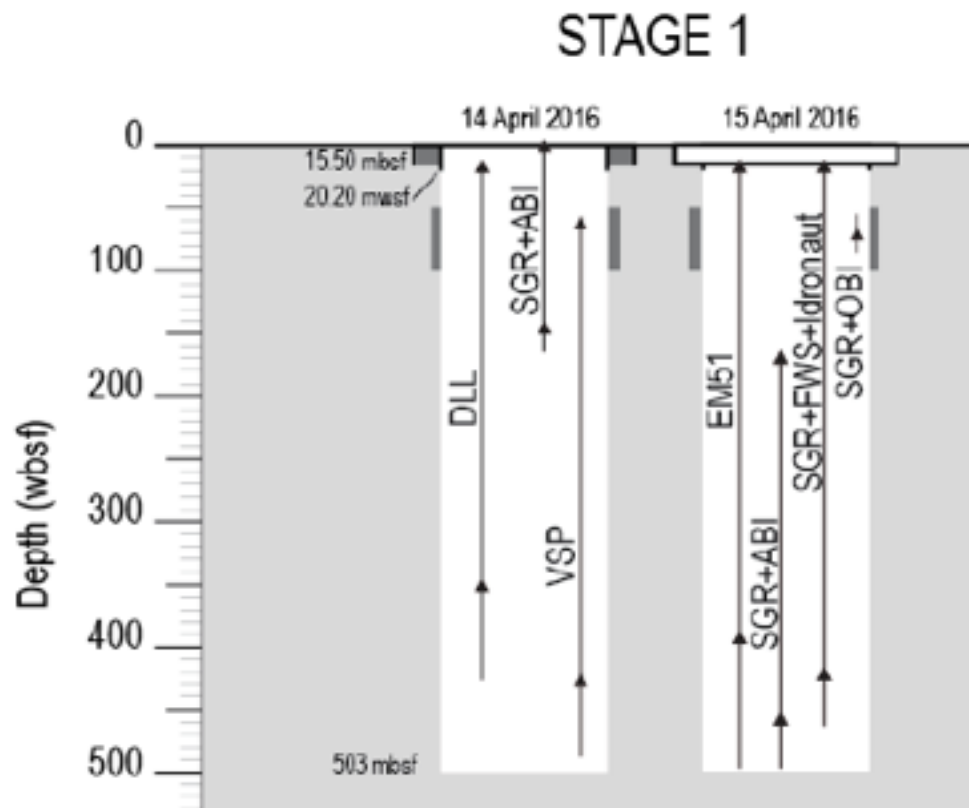


Expeditions





Logging





Logging

