

NOTIFICATION OF PROPOSED RESEARCH CRUISE

## 1. PART B: DETAILS

1. NAME OF RESEARCH SHIP: **R.V. MARIA S. MERIAN**      CRUISE NO.: MSM63
2. DATES OF CRUISE                      From Southampton 30 April 2017    to Southampton 25 May 2017

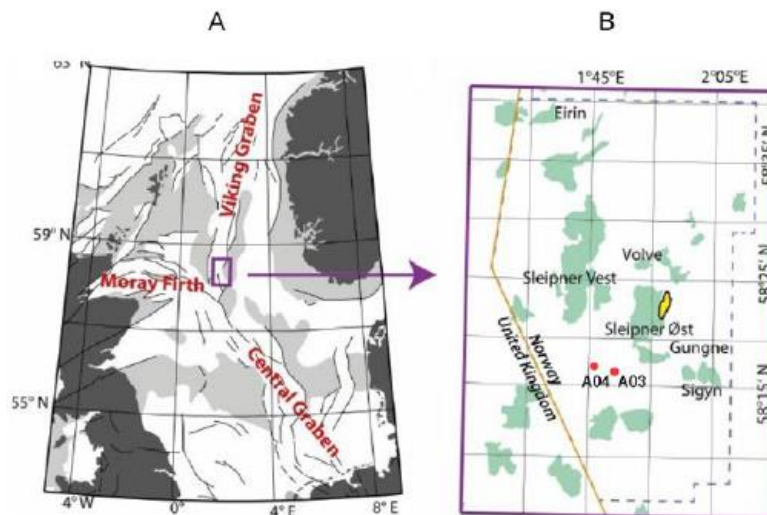
3. a) PURPOSE OF RESEARCH

The purpose of the cruise is to investigate fluid flow pathways and to model the permeability in the marine sedimentary basin of the SVG, North Sea. Within the specialisation of marine geophysics we intend to apply equipment in the research disciplines of active source seismology, electromagnetics and seabed coring to investigate fluid flow pathways in marine sedimentary basins.

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

During the cruise we intend to operate the 3D high-resolution P-Cable, sediment echosounder (SES), 20 ocean bottom seismometers (12 OBSs from Geomar and eight OBSs from the National Oceanography Centre, Southampton), 8 ocean-bottom electromagnetic (OBEM) receivers, the electromagnetic (EM) source DASI and towed EM receiver Vulcan and we further propose to core at 2 sites with the British Geological Survey remotely operated seabed RockDrill2 (RD2). The seismic reflection streamers of the P-Cable system can be rearranged to survey 2D seismic lines, to back up the surveying.

4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished



*Fig. 1: A) Map of the North Sea. B) The Sleipner are in the Southern Viking Graben with major hydrocarbon fields (green), the Sleipner CO<sub>2</sub> plume (yellow) and our selected demonstration seismic chimney structure named A04 and A03 (red).*