Application for Consent to conduct
Marine Scientific Research

Date: 27.08.2016 – 09.09.2016

1. General Information

1.1 Cruise name and/or number:
POS 504

1.2 Sponsoring Institution(s):	
Name:	GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel
Address:	Wischhofstraße 1-3 24148 Kiel
Name of Director:	Prof. Dr. Peter M. Herzig

1.3 Scientist in charge of the Project:	
Name:	Schneider von Deimling, Jens
Country:	Germany
Affiliation:	University Kiel
Address:	Otto Hahn Platz 1
Telephone:	+49 880 5790
Fax:	+49-431-880-4432
Email:	jschneider@geophysik.uni-kiel.de
Website (for CV and photo):	http://www.ifg.uni-kiel.de/1717.html

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	
Affiliation:	
Address:	
Telephone:	
Fax:	
Email:	
Website (for CV and photo):	
We have contacted Dr. Alan Judd as a senior geoscience consultant, but not yet received an answer Alan Judd Partnership, High Mickley, Northumberland NE43 7LU, UK alan.judd@icloud.com	

2. Description of Project

2.1 Nature and objectives of the project:
We applied for ship time for a research cruise to learn more about natural and anthropogenic gas seepage sites in the North Sea and potentially to study environmental impact on the seabed. Therefore we want to apply modern hydro-acoustic equipment to achieve the respective goals and want to deploy an ROV for video survey and sampling. The work is a follow up on intense research that has been conducted at the abandoned gas well 22/4b-4 in the British sector.

2.2 If designated as part of a larger scale project, then provide the name of the project and the Organisation responsible for coordinating the project:
SUGARTEC (GEOMAR)

2.3 Relevant previous or future research projects:
SUGAR (GEOMAR), ECO2 (GEOMAR) COMET METROL GQ2

2.4 Previous publications relating to the project:
Ira Leifer, Alan Judd, The UK22/4b blowout 20 years on: Investigations of continuing methane emissions from sub-seabed to the atmosphere in a North Sea context, Marine and Petroleum Geology, Volume 68, Part B, December 2015, Pages 706-717, ISSN 0264-8172, http://dx.doi.org/10.1016/j.marpetgeo.2015.11.012 J. Schneider von Deimling, P. Linke, M. Schmidt, G. Rehder, Ongoing methane discharge at well site 22/4b (North Sea) and discovery of a spiral vortex bubble plume motion, Marine and Petroleum Geology, Volume 68, Part B, December 2015, Pages 718-730, ISSN 0264-8172, http://dx.doi.org/10.1016/j.marpetgeo.2015.07.026. Schneider von Deimling, J., Brockhoff, J., & Greinert, J. (2007). Flare imaging with multibeam systems: data processing for bubble detection at seeps. Geochemistry, Geophysics, Geosystems, 8(6).

3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet.
Area of research is a rectangle with the following boundaries:

Rectangle around the 22/4b-4 well site with corner co-ordinates:

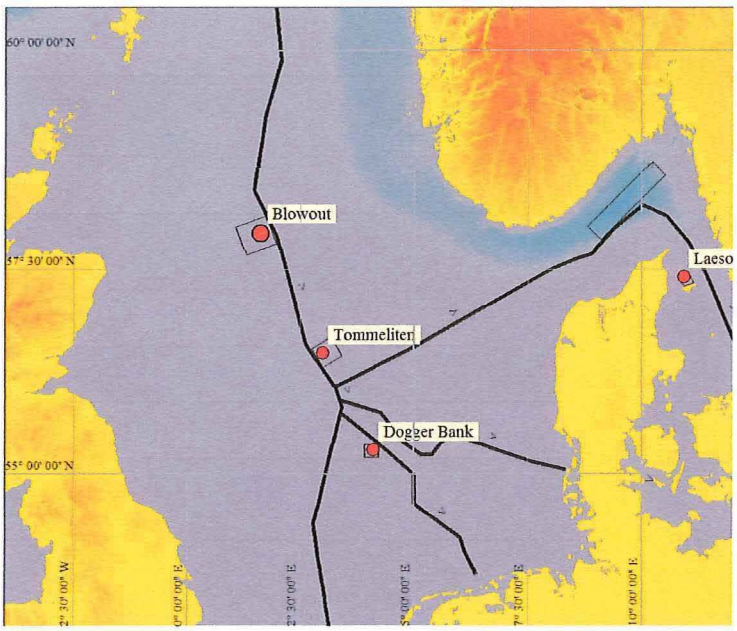
58.00387° N
1.07399° E

58.13184° N
1.73751° E

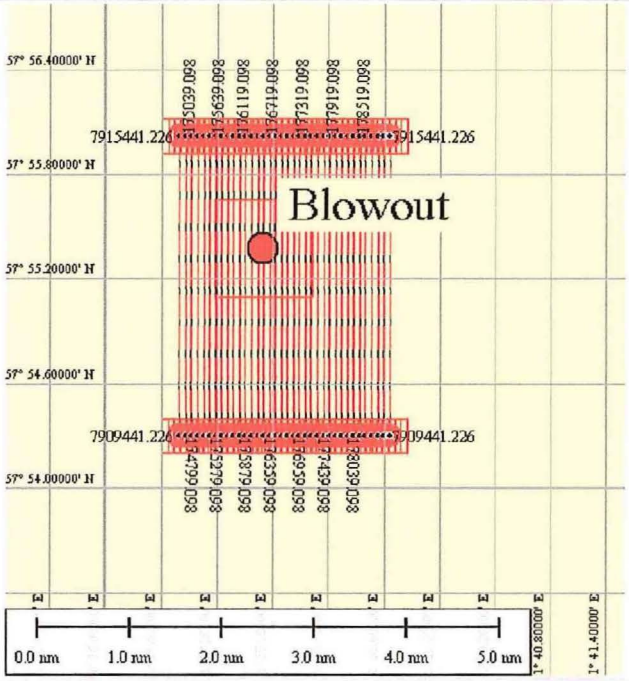
57.80719° N
1.95988° E

57.67805° N
1.29636° E

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment.



The precise locations of track lines and sampling stations have to be defined during the cruise within the research area (s. chart).



4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	**POSEIDON**
Type/Class:	RV
Nationality (Flag State):	German
Identification Number (IMO/Lloyds No.):	7427518
Owner:	Ministerium für Wissenschaft und Wirtschaft des Landes Schleswig-Holstein vertreten durch das GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel Wischhofstraße 1-3 24148 Kiel
Operator:	GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel Wischhofstraße 1-3 24148 Kiel
Overall length (meters):	60,80 m
Maximum draught:	04,90 m
Displacement/Gross Tonnage:	1105 BRZ
Propulsion:	Diesel Electric
Cruising & maximum speed:	9 kn, max.10 kn
Call sign:	DBKV
INMARSAT number and method and capability of communication (including emergency frequencies):	**Telephone: 00870761651773** Telefax: 00870600273636 Mobile GSM: 0049 1716070932
Name of Master:	Matthias Günther
Number of Crew:	15
Number of Scientists on board:	11

4.2 Particulars of Aircraft:	
Name:	
Make/Model:	

Nationality (flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall Length (meters):	
Propulsion:	
Cruising & Maximum speed:	
Registration No.:	
Call Sign:	
Method and capability of communication (including emergency frequencies):	
Name of Pilot:	
Number of crew:	
Number of scientists on board:	
Details of sensor packages:	
Other relevant information:	

4.3 Particulars of Autonomous Underwater Vehicle (AUV):	
Name:	
Manufacturer and make/model:	
Nationality (Flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall length (meters):	
Displacement/Gross tonnage:	
Cruising & Maximum speed:	
Range/Endurance:	
Method and capability of communication (including emergency frequencies):	
Details of sensor packages:	
Other relevant information:	

4.4 other craft in the project, including its use:
work class ROV Phoca with cable connection to the mother ship

4.5 Particulars of methods, full description of scientific instruments to be used (for fishing gear specify type and dimension) and location			
Types of samples and Measurements:	Methods to be used:	Instruments to be used:	To be carried out within 12nm (yes or no):
Hydroacoustics	Multibeam	ELAC SB3050	no
Hydroacoustics	Sediment profiler	INNOMAR	no
Hydroacoustics	Imaging	CODAECHOSCOPE	no
Water column sampling	CTD	Seabird	no
Video Survey	Video seabed survey	OFOS, ROV	no
Seafloor sampling	Surface sampling	Push core (1mbsf)	no
Current	ADCP	RDI 300kHz, 75kHz	no

4.6 Indicate nature and quantity of substances to be released into the marine environment:
500 g of fluorescine colorant tracer

4.7 Indicate whether drilling will be carried out. If yes, please specify:
Only surface coring up to 1m below the seafloor

4.8 Indicate whether explosives will be used. If yes, please specify type and trade name, Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude:
no

5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements):
An upward looking ADCP mooring will be deployed in approximately 90 m water depth by the ROV in the vicinity of the abandoned gas well 22/4b-4. The mooring is less than 1 m tall and equipped with a sonar beacon. No rope or surface buoy is attached to the mooring. Approximate time of deploament is 5 days with subsequent recovery by the ROV.

6. Dates

6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms:
First entry 28 August 2016 Departure 08th September 2016
6.2 Indicate if multiple entries are expected:
Depending on the weather multiple entries may be necessary within the above given period

7. Port Calls

7.1 Dates and Names of intended ports of call:
No intermediate port call is planned

7.2 Any special logistical requirements at ports of call:
No

7.3 Name/Address/Telephone of shipping agent (if available):
GEOMAR Dr. Klas Lackschewitz Telefon: 0431 600-2132 Telefax: 0431 600-2680 klackschewitz@geomar.de

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research Project:
One place on bord is reserved for an observer. Note we do not plan an intermediate port call during the cruise

8.2 Proposed dates and ports for embarkation/disembarkation:
Embarkation 26th August 2016 Kiel/Germany Disembarkation 10th September 2016 Kiel/Germany

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include The expected dates of submission of the data and research results:
No preliminary report is expected to be written. However, if required, we could supply such a report 3 months after the cruise

9.2 Anticipated dates of submission to the coastal State of the final report:
6 months after the cruise a full cruise report will be supplied

9.3 Proposed means for access by coastal State to data (including format) and samples:
Data will be available via DVD 3 months after the cruise and shipped over

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
Data and results will be stored at BSH and CAU in Germany and is accessible through the research stuff members of the cruise

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:
Assistance in assessment or interpretation of data will possible via the staff members of the cruise hosted at University Kiel

9.6 Proposed means of making results internationally available:
The cruise report will be published

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):
Norway, Netherlands, Denmark

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:

Signature:

Dr. Klas S. Lackschewitz
GEOMAR
Helmholtz-Zentrum
für Ozeanforschung Kiel
Forschungsschiffe/Research Vessels
Wischhofstraße 1-3
24148 Kiel

Contact information of the focal point:
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