Application for Consent to conduct Marine Scientific Research

Date: July the 28th 2014

1. General Information

1.1 Cruise name and/or number:	
	GEOTREF

1.2 Sponsoring Institution(s):	
Name:	University of Antilles and Guyane
Address:	Campus de Fouillole – Pointe à Pitre 97159 CEDEX Guadeloupe (FWI)
Name of Director:	Madame Corinne Mencé-Caster

1.3 Scientist in charge of the Project:	
Name:	Pr. Jean-Frédéric Lebrun
Country:	France
Affiliation:	University of Antilles and Guyane
Address:	Campus de Fouillole – Pointe à Pitre
	97159 CEDEX Guadeloupe (FWI)
Telephone:	+590 590 48 30 94
Fax:	+590 590 48 30 94
Email:	jflebrun@univ-ag.fr
Website (for CV and photo):	http://www.univ-ag.fr

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:		
Name:	At the discretion of the authorities	
Affiliation:		
Address:		
Telephone:		
Fax:		
Email:		
Website (for CV and photo):		

2. Description of Project

2.1 Nature and objectives of the project:

The cruise aims at collecting rock samples on the flank of submarine volcanoes located to the south of Montserrat.

The project GEOTREF intends to study the geothermal potential in the lesser Antilles. This necessitates a better knowledge of the arc volcanism. The onshore structure of volcanoes have been intensely studied and monitored in contrast with the offshore and submarine structure that remains deeply unknown. Bathymetric charts from previous cruises along the lesser Antilles arc revealed the presence of many submarine volcanoes, some of them with a well preserved morphology. These volcanoes still raise series of unanswered questions : What is the petrologic nature of the submarine volcanoes? Are they petrologically related to onshore volcanoes? What is the age of these volcanoes? Are they recent and/or active? Why do they develop within tectonic grabben between Montserrat and Guadeloupe? What is the structural control on the volcano development?

Sampling the volcanoes flanks with trailing dredges will allow recovering enough fresh rocks to realise petrological and geochemical analyses and also to date them using radiochronological methods when possible. These analyses will permit to answer most of the above question. 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:

Project named GEOTREF - coordinated by Teranove SA.

2.3 Relevant previous or future research projects: **NONE**

2.4 Previous publications relating to the project:

NONE

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.

Dredging will be conducted along underwater volcanoes located SE of Montserrat at

 16°31'N 62°03'W
 ~500m

 16°3x'N 62°41'W
 ~500m

 16°3x'N 62°52'W
 ~500m

No survey lines... the ship will reach the dredging point without acquiring geophysical data through the shortest way from Guadeloupe.



4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	ANTEA
Type/Class:	Catamaran
Nationality (Flag State):	French
Identification Number (IMO/Lloyds No.):	9128506
Owner:	IRD (Institute of Research of the Development)
Operator:	GENAVIR
Overall length (meters):	34.95 m
Maximum draught:	3.323 m
Displacement/Gross Tonnage:	67.8 T
Propulsion:	2 Volvo engines (2x 660CV) base Mitsubishi type D25-MS 970 Kw at 1650 t/mn
Cruising & maximum speed:	9 and 11 knots
Call sign:	FNUR
INMARSAT number and method and capability of communication (including emergency frequencies):	an.commandant@antea.ird.fr (F77) +870 7 645 446 88 Telex Inmarsat C 0584 4 228 111 xx (xx = 10 or 11)
Name of Master:	Not known at this date
Number of Crew:	13
Number of Scientists on board:	10

4.2 Particulars of Aircraft:		
Name:	None	
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:	None	
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:

None

4.5 Particulars of methods and full description of scientific instruments to be used(for fishing			
gear specify type and dimension)			
Types of samples and	Methods to be used:	Instruments to be used:	
Measurements:			
Rock and sediment samples	Trailing dredge	Rock dredge	

4.6 Indicate nature and quantity of substances to be released into the marine environment: **None**

4.7 Indicate whether drilling will be carried out. If yes, please specify:

No

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:

None

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):

Photograph of the kind of dredge that will be used. Trailing will be as short as possible and damaged on the sea floor will not exceed few tenth of meters long and few decimetres wide.



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:

12 March 2015 - 20 March 2015

6.2 Indicate if multiple entries are expected:

None

7. Port Calls

7.1 Dates and Names of intended ports of call: No port calls

7.2 Any special logistical requirements at ports of call:

7.3 Name/Address/Telephone of shipping agent (if available):

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:

1 observer, representative of the coastal state will be welcome onboard

8.2 Proposed dates and ports for embarkation/disembarkation:

Pointe à Pitre (Guadeloupe) 12 March – 20 March

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:

Six month after the end of cruise (i.e. by October 2014)

9.2 Anticipated dates of submission to the coastal State of the final report: Six month after the end of cruise (i.e. by October 2014)

9.3 Proposed means for access by coastal State to data (including format) and samples:

Samples will be visible on request at the university of Antilles Guyane in Pointe à Pitre – Dpt of Geology – resp. JF Lebrun.

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:

Macroscopic description of rock samples realised on board by the costal state observer or with photographs in the cruise report. A piece of the sampled rocks could be provided on request of a scientist from the coastal state.

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:

Collaboration with Montserrat scientists on request.

9.6 Proposed means of making results internationally available: Scientific publication in dedicated revues.

10. Other permits Submitted

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

NONE

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.: NONE

Signature:

Yves GOURIOU Centre IRD de Bretagne BP 70 - 29280 PLOUZANE Tél. 02 98 22 45 07 Fax 02 98 33 45 14

Contact information of the focal point:

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List scientific work by function	Water colum including sediment sampling of the seabed	Fisheries research within fishing limits	Research concerning the natural resources of the continental shelf or its physical characteristics	Distance from coast
Trawling	Yes – sediment sampling using a rock dredge	No	No	Within 12 nm ⁽¹⁾ : Yes Between 12-200 nm : Yes Beyond 200 nm : No
Towed instruments	No	No	No	Within 12 nm ⁽¹⁾ : No Between 12-200 nm : No Beyond 200 nm : No
Echo sounding	No	No	No	Within 12 nm ⁽¹⁾ : No Between 12-200 nm : No Beyond 200 nm : No
Samples with a larval net	No	No	No	Within 12 nm ⁽¹⁾ : No Between 12-200 nm : No Beyond 200 nm : No
Seabed photos	No	No	No	Within 12 nm ⁽¹⁾ : No Between 12-200 nm : No Beyond 200 nm : No