ACTIVITY

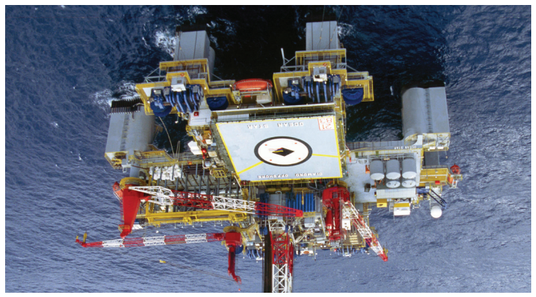
The offshore drilling exploratory campaign will be held in the Geographical Area of BM-ES-37, 38, 39, 40 and 41 Blocks, Espírito Santo Basin. This activity aims to detect the presence of oil and gas, to study whether it is interesting to produce in this site or not.

ENTREPRENEUR

The company that will perform this project is Perenco, an international Exploration and Production (E&P) Company. This is the first time the company will operate in Brazil.

DRILLING UNIT

Ocean Star, a semi-submersible anchored drilling Rig owned by Diamond Offshore Drilling.



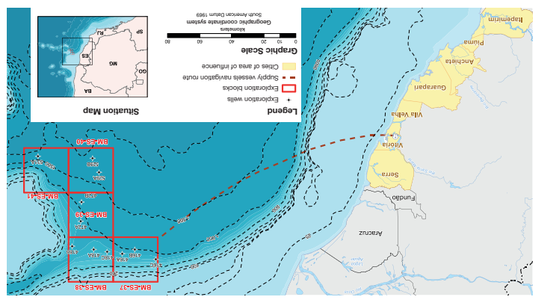
SHORE BASE

Located in Vila Velha, Espírito Santo, the Vitória Offshore Logistics – VOL will be the shore base for logistical support of the project.

SUPPLY VESSELS

The supply vessels that will support the drilling activities will be the AHTS (Anchor Handling Tug Supply) UOS Challenger and UOS Atlantis owned by United Offshore Support (UOS).

LOCATION MAP



ENVIRONMENTAL DIAGNOSIS

Physical Environment

Important Geological Formation: Abrolhos Bank and Vitória Tinidade Chain

Biota

MARINE ORGANISMS

Fish

Species of high economic value: *olho-cora, garoupa, cherne, perod branco, cioba, atum* and *dourado*.

Endangered species: *mero, pargo, cioba, caranha, donzelinha, olhacora, tubarão baleia* (shark) and *tubarão jfadalgo* (shark).

Whales and Dolphins

Boto-cinza, toninha, baleia orca, golfinho-cabeça-de-melão, baleia cachalote, baleia jubarte, among others.

Birds

Birds that reproduce in the Abrolhos Archipelago: *atobá-marrom, atobá-mascarado, fragata, rabo-de-palha-de-bico-amarelo, rabo-de-palha-de-bico-vermelho, andorinha-do-mar-preta* and *trinta-réis-das-rocas*.

Marine Turtles

All five existing species of sea turtles in Brazil, can be found in the state of Espírito Santo: *tartaruga-verde, tartaruga-cabeçuda, tartaruga-de-pente, tartaruga-oliva* and *tartaruga-de-couro*.

ENVIRONMENTAL IMPACT AND RISKS

Any interference of the drilling activity over physical, biotic and socioeconomic status is considered an environmental impact. These impacts can be both positive and negative. The negative impacts must be managed so as to mitigate their effect.

Seabirds: *albatroz-de-nariz-amarelo-do-Atlântico, albatroz-de-sobrancelha-negra, pardela-de-sobre-branco, pardela-preta*.

COASTAL ECOSYSTEMS

Sandbanks; beaches; Mangrove; Estuaries; Rocky Shores and Oceanic islands; and Coral formation and Reefs.

CONSERVATION UNITS

About 2,1% of Espírito Santo territory is covered by protected areas. 26 Conservation Units, 3 federal, 9 state and 14 municipalities, were identified in the coastal region of Espírito Santo. Among them there are: APA Conceição da Barra; Comboios Biological Reserve, and Ecological Reserve of Mangroves from Rios Piraquê-Açu and Piraquê-Mirim.

Socioeconomic Environment

In general, the natural attractions, especially the vast expanses of beaches and mangrove areas, ensure a strong calling for tourist activities.

Fishing is widely practiced in the cities in the area of influence.

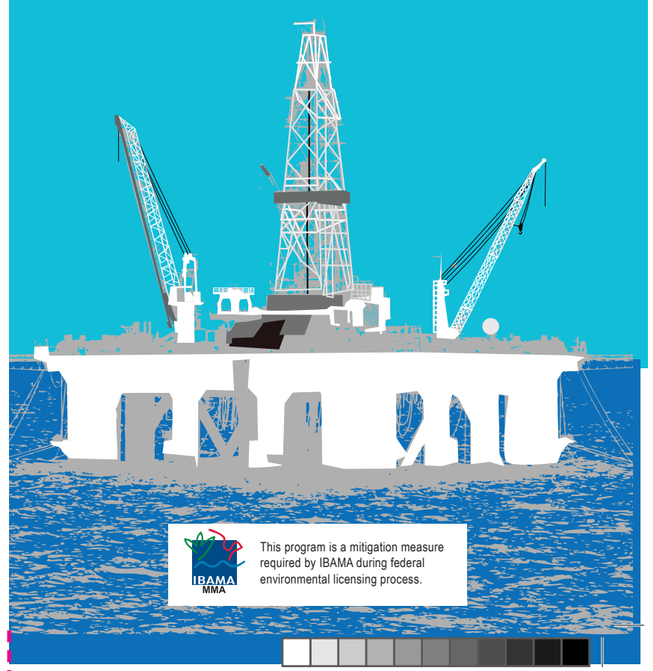
EFFECTIVE IMPACT				
Environmental Factor	Environmental Aspect	Impact	Mitigation Measures	Qualification
PHYSICAL ENVIRONMENT				
Bottom Sediment	Dispose of cuttings and drilling fluid; Positioning and deactivation of the platform.	Revolving and modification of chemical characteristics and composition of the sediment.	Control the volume of gravel and fluid discharged. Separation of the fluid for disposal of gravel.	Negative
Water	Dispose of cuttings and drilling fluid; Positioning and deactivation of the platform. Discharge of grinded food, deck water and treated sewage.	Changing the chemical and physical characteristics of water. Revolving of sediments and consequent water turbidity.	Control the volume of gravel and fluid discharged. Separation of the fluid for disposal of gravel. Maintenance and monitoring of effluent treatment equipment.	Negative
Air	Combustion of fuel by power generators and diesel engines. Formation test emissions.	Emission of air pollutants.	Maintenance of power generators and diesel engines.	Negative
BIOTA				
Turtles/ Marine Mammals/ Fishes/ Plankton	Noise Production; Presence of the maritime unit; Disposal of grinded organic waste.	Disruption of organisms; attractive effect; collision with maritime units.	Guidance to workers about the presence and importance of these organisms. Monitoring the presence of animals. Grinding organic waste before disposal.	Negative
Benthos	Dispose of cuttings and drilling fluid; Positioning and deactivation of the platform.	Burial and contamination of organisms.	Testing of metal concentration and toxicity in the drilling fluid.	Negative
SOCIOECONOMIC ENVIRONMENT				
Fishery	Use of maritime space.	Exclusion of fishing areas.	Dissemination of information and awareness. Project for Fishing Monitoring; project of Environmental Education	Negative
Trade/ Services/ Workforce	Procurement of materials, equipments, supplies and services.	Generation of specialized job, income and tax revenue.	N/A	Positive

POTENTIAL IMPACTS		
Impact	Control Measures	Response Measures
SPILL OF DIESEL OIL; CHEMICAL PRODUCTS AND CRUDE OIL		
Change in water and air quality, contamination and death of marine organisms; Contamination of coasts and death of birds and animals; Changes in fishery and tourist activities.	Inspection and maintenance of equipments and security and emergency systems; execution of drills.	Activation of the PEI

Spill of diesel oil, chemical products and crude oil have low probability of occurrence, however can be quite severe depending on the environment and the amount spilled into sea.

PERENCO

PROGRAM FOR ENVIRONMENTAL EDUCATION OF WORKERS



IBAMA MMA

This program is a mitigation measure required by IBAMA during federal environmental licensing process.

ENVIRONMENTAL LEGISLATION

The offshore drilling activities are regulated by national and international legal requirements. Perenco is committed to always act in accordance with applicable legislation.

ENVIRONMENTAL PROJECTS

Environmental Projects aim to contribute to the conservation of the environment of the Area of Influence of the activity.

Project for Fishing Monitoring

Its purpose is to provide tools to better understand the relationship between the drilling activities and the fishing productivity.

This Project consists in gathering information regarding the fishing communities in the area of influence.

Risk Management Plan - PGR

Aims to ensure a safety operation, keep the previously identified environmental risks at acceptable levels and perform permanent efforts for reducing these risks.

Project of Environmental Monitoring - PMA

Aims to monitor and evaluate the physical, chemical and biological characteristics in Areas of Influence of the activity.

PMA will consist of five subprojects: Identification and Registration of Local Marine Life; Visual Inspection in the Location of Wells; Monitoring of Drilling Fluids and Cuttings; Monitoring of Sediment; and Reinforcement of Projects for Rehabilitation and Release of Seabirds.

IMMEDIATELY REPORT TO YOUR SUPERVISOR IN CASE YOU SEE ANY ANIMAL IN THE WATER.

Pollution Control Project – PCP

Its purpose is to control, quantify and register the entire generation of treated and discharged wastewater, emission of pollutants to the atmosphere and solid wastes generated during the activities.

The goals of this Project are: destine the largest possible amount of waste for recycling; register 100% of the waste generated during the activity; provide appropriate treatment to wastewater, sewage, oily water and drilling fluids.

Waste Segregation

A correct segregation is vital for the correct disposal of waste.

Metal
Iron, Steel, or aluminum materials, such as: scrap, metal parts, soda cans and rusty material; but only if they are not contaminated by oil or chemical products.

Glass
Glass wich is not contaminated by oil, chemical products or organic waste.

Plastic
Clean plastic bottles, yogurt packages, disposable plastic glasses and any other plastic, as long as if it is not contaminated by oil, organic waste or chemical product.

Paper/Cardboard
Draft and Office papers, cardboard boxes and any other non contaminated (food leftover, chemical products, or oil) paper. Used Napkins should NOT be disposed on this collector

Wood
Non used Pallets, wooden braces, sawdust and any clean , non contaminated wood.

Organic Waste
Fruit peels, or any other food leftover.

Hazardous Waste
Empty paint and solvent cans, contaminated absorbent material, used oil filters, gravels and contaminated sediments, PPE's and the other material contaminated by oil and/or chemical products. Fluorescent lamps and batteries are also hazardous waste, but they have to be disposed separately, in specific collectors for each of them.

Non Recyclable Waste
General mixed waste, contaminated, or non recyclable. On this collector you can dispose used napkins, candy and cookies packages, and any other material contaminated by organic waste.

Medical Waste
Waste from ambulatory and hospital care, such as: used cotton, bandage, gauze, syringe and others.

The 3 "R's": Reduce, Reuse, Recycle

Reduce the need
Reuse as much as possible.
Recycle!

Recycling is to give "new life" to materials starting from the reuse of its raw materials to manufacture new products.

Social Communication Project - PCS

Aims to divulge the activity to the communities living in the Area of Influence, presenting the impacts related to it and the respective actions to be taken.

IMMEDIATELY REPORT TO YOUR SUPERVISOR IF CASE YOU SEE ANY FISHING BOAT CLOSE TO THE RIG.

IBAMA:
Linha Verde: 0800-618080

For more information about the drilling activity, make a collect call to the following number:

90 (xx) 21 2547-7541
faleconosco@perenco.com

Environmental Education Project - PEA

Evaluate, in a participative way with the artesian fisherman communities of the Area of Influence, which educative and competence actions would increase the hability to manage local projects.

Program for Environmental Education of Workers - PEAT

The goal of this Project is to inform the workers involved in the project, in the drilling unit, vessels and shore base, on the activity's pollution potential and their role in reducing the enviromental impacts of this activity.

Project for Characterization of Mesoscale Circulation

This project aims to assist with understanding the pattern of local circulation, with special emphasis on the Vortex of Vitória, considered a major oceanographic phenomenon in the Espírito Santo Basin.

Individual Emergency Plan - PEI

This plan has as objective to minimize the damage caused by possible accidents of oil pollution at sea establishing procedures for an effective answer.

Communication of Spill

Perenco will report any oil spill incident immediately to IBAMA, the Port Authority and ANP

Response Equipment

- Oil spill on board the Drilling Unit

Ocean Star Platform has 07 kits for containment and cleanup of oil spills on board (SOPEP).

- Oil spill at sea

The supply and dedicated vessels will contain equipments and materials for the response to an oil spill.

Perenco has an Individual Emergency Plan in which are described the response procedures.

OceanPact, a company specialized in emergency response services, was contracted by Perenco to be responsible for the preparation and execution of this plan.

TIPS

HOW CAN YOU REDUCE ENERGY CONSUMPTION AND FIGHT AGAINST GLOBAL WARMING?

- Adjust the temperature of your air conditioner ;
- Use energy saving lightbulbs;
- Stop appliances from standing by;
- Say no to plastic bags;
- Buy locally produced products;
- Avoid using disposable cups, take your mug;
- Use public transportation;
- Ride a bike;
- Take short showers;
- Plant a tree.

BASIC TIPS FOR HEALTH AND SAFETY:

- Eat healthy, maintaining a balanced diet;
- Drink plenty of fluids;
- Use sunscreen;
- Watch your posture;
- Take care of personal hygiene;
- Make regular check-ups and consult a doctor if you notice something wrong;
- Use proper PPE;
- Obey safety signs;
- Keep the workplace organized and clean;
- Find out about any chemicals that will handle (FISPQ/MSDS);
- Attention when operating machinery and equipment, especially to moving parts;
- Obey permit to work (PTW) for activities such as: confined space entry; working at height; hot work; working with electricity;
- When in doubt, stop, look and ask;
- When observing a risky situation immediately notify your supervisor and fill a Risk Observation Card;
- Always stay alert, pay attention, hurry or neglect.

TIPS FOR A HEALTHY SOCIAL LIFE:

- Try to communicate clearly and objectively;
- Avoid making crude jokes or pranks;
- Avoid discussion about politics, religion and sports;
- Avoid gossip;
- Try not to make noise in the corridors of cabins. Remember that people from the other shift are sleeping;
- Keep the workplace and accommodations clean and organized;
- Try to maintain a good relationship with everyone on board and with the crews of other units;
- Respect the social, ethnic and cultural differences;
- Be tolerant and supportive.