



Environmental Impact Assessment

Seismic Project – 2007

The Geophysical Institute of Israel



The Environmental policy

- ◆ It is the policy of the Geophysical Institute of Israel (GII) to keep and preserve as far as reasonably practicable the Environment of the project area.
- ◆ Further, the company is committed to act in a manner which results in the minimum practicable impact on the environment.



GII's commitments are:

- ◆ That protection of the environment is primarily "Line Management" responsibilities.
- ◆ That our Sub-contractors have a system in place to make the personnel involved and aware of risks to the environment.
- ◆ To achieve zero environmental damage in operational areas.



Environmental Objectives

The aim for the project is to prevent damage and disturbance to the environment resulting from crew activities.

To achieve this, the crew will adhere to:

- ◆ strict line and access discipline to minimize environmental damage by **line clearing**
- ◆ **vehicle operations** shall be restricted to existing roads and tracks and lines cleared by bulldozer and front end loader for vibrator access.
- ◆ **restitution** of camps and seismic lines and reinstatement of any damage and disturbance to the environment and property
- ◆ **waste management** to ensure no littering on line and that all wastes are disposed of correctly at accommodation bases, staging area and magazines



Flora

- ◆ Jungle vegetation in places, usually very dense and need clearance in order to enable the seismic activity.
- ◆ Though most of the area is a Savanna type; high (2 meters) grass, easy for 4X4 vehicle transportation.



Hand Cutting crews

- ◆ To be managed to avoid unnecessary disturbance to major trees and cultivated areas.
- ◆ Lines must be cleared adequately to allow safe access without undue trip hazards, or sharp stakes on the ground or possible hazard.
- ◆ The line opening to be executed with mechanical chain saw will be restricted to 2 m. wide
- ◆ Hand hold posts or bridging to be installed at any steep slope or wet area likely to be a hazard but which can be avoided.



Clearing in a meandering fashion

Use of the Front End Loader is to be managed to minimize disturbance in savannah areas by:

- ◆ Front End Loader to weave around survey flagging to keep line meandering and avoid line of sight.
- ◆ Blade depth to be kept at just above ground where possible to remove vegetation without disturbing the ground to the point of promoting erosion
- ◆ Front End Loader operation to be supervised by GII surveyor with good communications



Use of bulldozers

- ◆ GPS control on the bulldozer to weave around larger trees and denser vegetation.
- ◆ Bulldozer to cease operations at the point where GPS reception is poor due to canopy cover or where there is steep slope .
- ◆ Blade depth to be kept at just above ground where possible to remove vegetation without disturbing the ground to the point of promoting erosion
- ◆ Bulldozer operation to be supervised by GII surveyor with good communications



Wild Animals

- ◆ The most dangerous are the snakes which are common in the savanna and the Jungle (Green Mamba, Cobra, Python, Gabon Viper and others), some are poisoning and an intensive care is needed to avoid fatality.
- ◆ Also there are bees, scorpions, ants and spiders.
- ◆ No hunting is permitted.



Plants

- ◆ In very restricted areas farmers are growing Manioc. Special care will be taken not to harm any of the natural fruit tree; Palm, Pineapple, Banana, Papaya, Mango etc.



Fire

- ◆ There is a high risk of fires in the Savanna area. The fire can happen either spontaneously or by the local farmers; as part of their traditional way of fertilization.
- ◆ It seems that it might be very difficult to prevent and we should focus on the control



Waste Disposal

- ◆ Waste disposal is to be given high priority.
- ◆ Waste disposal procedures in the accommodation area should be well defined
- ◆ At the Staging Area, special care will be taken of any kind of hazardous material; oil, rubber, used batteries, metal etc.
- ◆ A waste register will be maintained by the Chief Mechanic.
- ◆ All sections are to bring all rubbish and waste back from the line for disposal at the Staging Area. No rubbish is to be disposed of on the seismic lines.



Prevention of oil seepage to the sub-surface in the staging area



Restoration of Lines and Staging Area

A clean-up crew will ensure that all waste from the operation is recovered and any damage to property during operations is rectified, such as:

- ◆ Removal of all rubbish from seismic lines
- ◆ Windrows left on the edges of seismic lines
- ◆ Drainage control measures on steep slopes
- ◆ Damage to pipes, drains, culverts, bridges, fences and gates
- ◆ Excessive wheel ruts
- ◆ Artesian shot holes
- ◆ Restore and plug shot holes to accepted industry standards
- ◆ Remove all pegs or other equipment
- ◆ Make safe any accumulated vegetation/timber from clearing operation
- ◆ Restrict access for vehicles post-survey, as necessary

