

**BIO-PHYSICAL AND SOCIAL IMPACT ASSESSMENT
OF PROPOSED SEISMIC EXPLORATION ACTIVITIES IN
BARAN BLOCK SINDH/BALUCHISTAN, PAKISTAN**



By

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ABBREVIATIONS

| | |
|--------|---------------------------------------|
| ASTM | American Society of Testing Materials |
| BOD | Bio-chemical Oxygen Demand |
| BDL | Below Detection Limit |
| BHU | Basic Health Unit |
| OC | Degree Centigrade |
| CC | Construction Contractor |
| CO | Carbon Monoxide |
| COD | Chemical Oxygen Demand |
| dB (A) | Decibel |
| DCR | District Census Report |
| DC | Design Consultant |
| EA | Environmental Assessment |
| EE | Environmental Engineer |
| EMC | Environmental Management Consultants |
| EIA | Environmental Impact Assessment |
| EPA | Environment Protection Agency |
| EPD | Environment Protection Department |
| EPO | Environmental Protection Ordinance |
| ESR | Environmental Sensitive Receiver |
| GHG | Green House Gases |
| GOP | Government of Pakistan |
| IEE | Initial Environmental Examination |

| | |
|-------|-----------------------------------------------|
| Km | kilometer |
| NEQS | National Environmental Quality Standards |
| NOx | Nitrogen Oxides |
| NGO | Non Governmental Organization |
| NSR | Noise Sensitive Receiver |
| NSL | Natural Surface Level |
| OGIL | Oil and Gas Investment Limited |
| OSHA | Occupational Safety and Health Administration |
| PAPs | Project Affected Persons |
| PEPA | Pakistan Environmental Protection Act |
| PNCS | Pakistan National Conservation Strategy |
| PM | Particulate Matter |
| PPC | Pakistan Penal Code |
| ROW | Right of Way |
| SC | Supervision Consultant |
| SOx | Sulfur Oxides |
| TA | Technical Assistance |
| TSS | Total Suspended Solids |
| UC | Union Council |
| USEPA | United States Environmental Protection Agency |
| WHO | World Health Organization |

ABSTRACT

OGIL was granted Baran Block for the purpose of oil and gas exploration. It intends to perform seismic activities in the block. Baran Block lies in Kirthar thrust and fold-belt of lower Indus Basin in the districts of Dadu (Sindh) & Lasbela (Baluchistan) covering an area of 2475.26 sq. km. The nearest major city is Dadu which is about 20km to the east of Baran Block. The Baran Block is surrounded by major gas producing fields. The area in which the seismic survey will be conducted hereinafter referred to as the “project area”. In pursuance to the requirements of the exploration license with the Government of Pakistan, OGIL is planning to acquire seismic data in project area.

The proposed exploration activities include the acquisition of approximately 400 line km of 2D and 100 sq. km of 3D seismic survey in the Baran block. The seismic data acquisition will be carried out using a combination of vibroseis and dynamite technologies. The 2D and 3D seismic operation is estimated to span over a period of 4 months for both 2D and 3D seismic surveys. The objective of the seismic survey is to explore the subsurface in the area to identify hydrocarbon laden formations. For seismic survey a base camp with fly camp (if required) will be established to house the seismic crew.

Baseline environmental and socioeconomic information was collected from a variety of sources, including published literature and field surveys. The information collected was used to compose profiles of the natural and socioeconomic environments likely to be affected by the project.

Information for the section describing the project came mainly from OGIL. An assessment was then made of the potential impacts of the described project on the area’s natural and socioeconomic environments, using both qualitative and quantitative assessment methods.

The impacts of seismic survey in most of the project area will be insignificant, provided the generic mitigation measures proposed in this report are implemented. In

areas where seismic survey may have a significant impact, additional mitigation measures are given to reduce impacts to as low as reasonably possible.

After assessing the proposed project activities and investigating the project area, the environmental consultants, EMC Pakistan, have concluded that, if the activities are undertaken as proposed and described in this report, and the recommended mitigation and environmental management measures are adopted, the project will not result in any long-term or significant impacts on the local community or the environment.

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