

# Namibian Deepwater Orange Basin

## Petroleum Exploration Licence (PEL) 39

Impact Assessment (IA) Update  
Background Information Document (BID)  
June 2014

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### Background

Shell Namibia Upstream BV (Shell) has acquired a 90% controlling interest in Petroleum Exploration Licence 39 (PEL 39) located offshore Namibia. The licence area covers blocks 2913A and 2914B and measures 12,299km<sup>2</sup>.

Baseline scientific studies and full Environmental Impact Assessments (EIAs) for proposed seismic activities were conducted over the full licence area. These studies and the EIAs were conducted for Signet Petroleum Ltd (December 2011) and Spectrum (December 2013). Both these applications to proceed with the seismic surveys were approved by the Ministry of Mines and Energy (MME).

Shell is proposing to conduct a 3D seismic survey in the north-eastern portion of the licence area approximately 250km offshore of the Namibian coast. The survey is planned to commence in November 2014 and last for approximately 50 days. The survey start and end dates are not fixed because it depends on the availability of a survey vessel as well as possible downtime of the operations due to adverse sea state conditions. The planning for the seismic survey will take account of fishing activities and the presence of marine animals. The survey would cover approximately 2,500km<sup>2</sup>. Water depths in the survey area range from 1300m to 2500m (refer to the shaded area in **Figure 1**).

Environmental Resources Management Southern Africa (Pty) Ltd (ERM) has been appointed by Shell to undertake a full Impact Assessment (IA) and update the existing baseline studies. The IA Update process will include input from marine faunal and fisheries specialist studies. The studies will undergo specialist peer review, while the Impact Assessment Report and accompanying Mitigation and Management Plan will be subjected to independent external peer review by a local Namibian expert. The objective of

the peer reviews is to ensure that the reports are objective, scientifically valid and consistent with best practice.

### Stakeholder Engagement

To inform the IA Update this Background Information Document (BID) is being distributed to stakeholders for an initial 21-day registration and comment period from 24 June 2014 to 14 July 2014. The registration and comment period is also being advertised in *The Namibian* and *Die Republikein* newspapers. Comments received during this time will inform the IA Update process.

In addition, the draft IA Update report will be disclosed to stakeholders for a 21-day comment period. This is planned for public release in July or August 2014. Comments will be responded to when finalising the IA Update report prior to submission to authorities.

The final IA Report Update will be submitted to the Ministry of Mines and Energy (MME) in August 2014.

### Proposed Activities

Shell's proposed 3D seismic survey is programmed for a 50 day period.

Seismic surveys are an important part of oil and gas exploration activities. The purpose of a seismic survey is to produce detailed images of rock formations to determine the location and size of oil and gas reservoirs. During seismic surveys, high-level, low frequency sounds are directed towards the seabed from near-surface sound sources towed by a seismic vessel. The sound waves that bounce off subsea rock formations are recorded by hydrophones. These are towed in a multiple streamer (see **Figure 1.3**) configuration, consisting of 8 to 10 streamers of 8km length at a spacing of around 200m. Analyses of the returned signals allow for interpretation and visualisation of subsea geological formations.

### Potential Benefits

Shell is at the early stages of exploration activities and it can take many years to determine if there are sufficient reserves to progress to an oil and gas production stage. Significant future direct benefits to Namibia could arise if sizable discoveries are made. Potential future benefits in the event of a field development include the security of energy supply, job creation, skills transfer, and economic development.

### Environmental Protection

The oil and gas industry has demonstrated the ability to operate seismic survey exploration activities in a manner that protects marine life. Comprehensive impact assessments and management plans are prepared to ensure offshore operations are conducted safely and responsibly. Marine seismic survey exploration is regulated by government and managed by the operator to avoid impacts to marine animals and avoid disruption to other marine users.

The environment and any potential harm from the survey will be carefully studied and internationally standards will be adopted to ensure the protection of Namibia's marine resources and to avoid or mitigate effects on other marine users. The objectives of applying these standards include:

- Applying internationally-recognised protection measures
- Taking into account periods of greater environmental sensitivity (e.g. peak whale presence)
- Monitoring the survey area for the presence of marine mammal species and stopping operations, if necessary, to avoid interaction
- Working cooperatively with the fishing industry and other marine users to avoid disruption to their activities and damage to fishing gear



**Figure 1.1:** Proposed 3D seismic survey gathers information using sound waves to map rock formations below the seafloor.



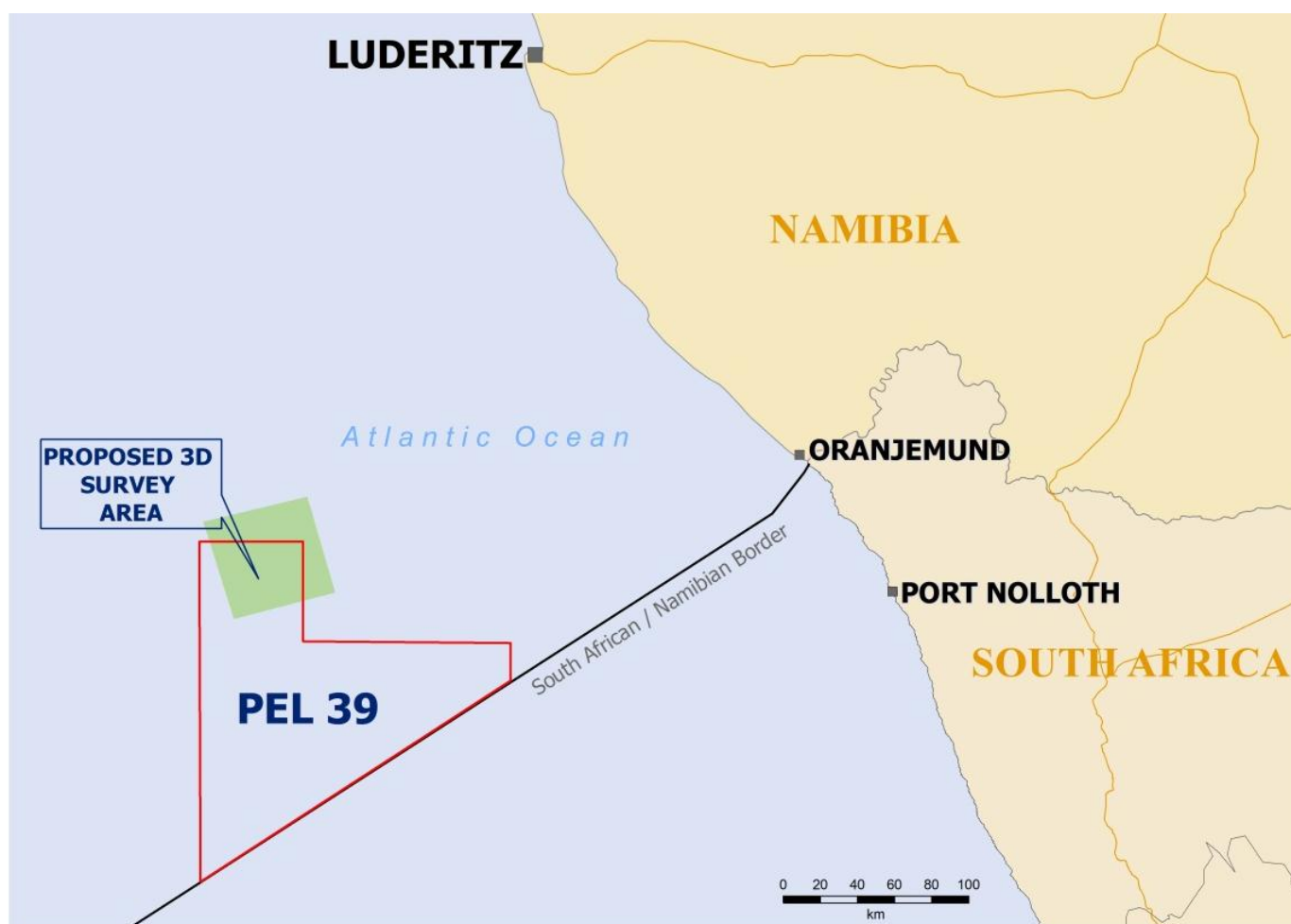
**Figure 1.2:** Airguns on-board a seismic vessel prior to deployment. These are the sound sources that develop the signals directed to the sea-floor.



**Figure 1.3:** A typical streamer containing hydrophones ready to be deployed. These are towed behind the seismic vessel to record returning sound signals.



**Figure 1.4:** Loading of Supplies onto a Seismic Vessel.



**Figure 1:** Location of PEL 39 area and proposed 3D survey area (green shading – notional outline)

## HOW TO SUBMIT COMMENTS

To submit questions and comments please contact:

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Hardcopies of the Updated IA Report will be available at the following public libraries from 16 July till 5 August:

Windhoek	Swakopmund	Luderitz	Walvis Bay
Windhoek Public Library	Sam Cohen Library	Lüderitz Public Library	Walvis Bay Public Library
Tel. 061-22-4899	Tel. 064-40-2695	Tel. 063-31-2444	Tel. 064-20-5981