

RECORD DRILLING RESEARCH WELLS IN THE KAROO BASIN

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ABSTRACT

With funding from South Africa's Centre of Excellence for Integrated Mineral and Energy Resource Analysis (CIMERA) and multiple international industry sponsors, the Karoo Research Initiative (KARIN) operated and successfully delivered two core research wells in the Tankwa Karoo (depth 670 meters) and Willowvale (depth 2380 meters) area.

Prior to a costly drilling program including potential hydraulic fracturing, explorers need to determine whether the organic rich shale's in the Karoo may have produced gas and if this gas is trapped and can it be produced.

Ideally, this first exploration project could be executed by South African Geologists from local Universities and other institutions; that was the main reason why international sponsors supported the KARIN Research Project.

In order to analyse core samples, exploration drilling is required; the KARIN Research Project wanted this also be done by South African drilling companies.

The main purpose of drilling these wells was to demonstrate the latest state of core drilling process, with regards to Quality, Safety and Environmental Management, and to provide Geoscience researchers in South Africa with fresh rock samples for further analysis.

The second objective of the campaign was to prove the technical capabilities of South African drilling contractors for the execution of such a project to the level of international standards

These capabilities were known for decades in igneous and hard rock geology of the Witwatersrand. However, in the sedimentary formation of the Karoo Basin very important choices had to be made in terms of well design, drilling and hardware selection, mud system type, safety and environmental procedures.