Rhino Oil & Gas Exploration
South Africa (Pty) Ltd.

Proposed exploration activities in 12/3/291 ER (Kwa-Zulu Natal)

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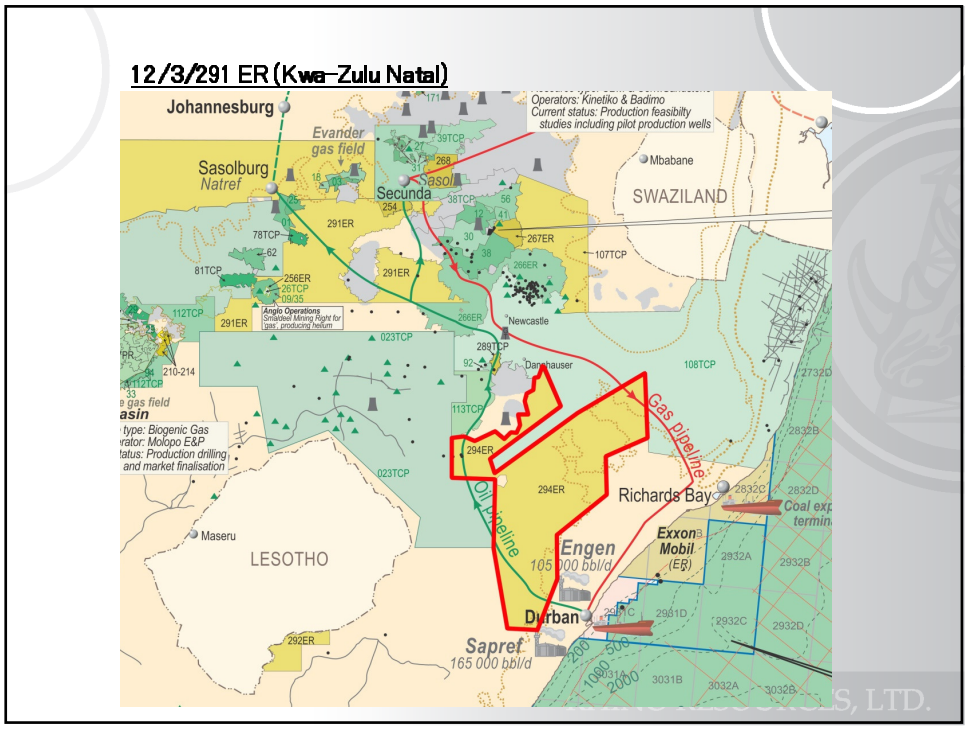


South Africa Shallow and Deep Offshore Exploration Projects

Contents:

Company Background:

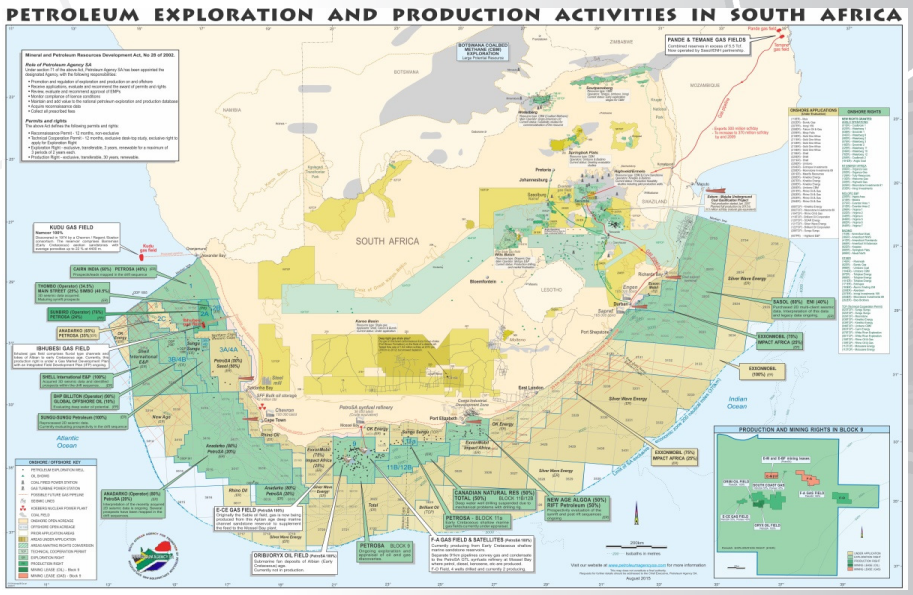
- **Rhino Resources Ltd** is an independent oil and gas exploration and development company focused on Africa.
- **Rhino Resources Ltd** has a portfolio oil & gas assets with a primary focus on West Africa, East Africa, and Southern Africa.
- **Rhino Resources Ltd**'s goal is to develop the natural resources of Africa and provide enhanced prosperity for our host countries and local communities.
- **Rhino Resources Ltd** operates as Rhino Oil and Gas Exploration South Africa (Pty) Ltd.

History of Exploration and Production in South Africa

The first organised search for hydrocarbons in South Africa was undertaken by the Geological Survey of South Africa in the 1940's. In 1965 Soekor (Pty) Ltd was formed by the government and began its search in the onshore areas of the Karoo, Algoa and Zululand Basins. Private companies also began searching.

Despite various encouraging discoveries, both onshore and offshore, international companies gradually withdrew. This was largely as a result of political sanctions against South Africa. Thus from the mid 1970's to the late 1980's Soekor, the State owned oil and gas exploration company, was the sole explorer. Soekor operations were largely focussed on offshore area of South Africa with no further work being done onshore.

In 1999 the Petroleum Agency SA was established and in 2001 a new State oil company, PetroSA, was formed by the merger of Soekor and Mossgas.



- **Exploration for oil and gas is currently being undertaken in a number of licence blocks onshore South Africa.**

Project Background:

- In 2014/2015 Rhino conducted a Technical Study to assess petroleum potential the onshore basins in South Africa for gas and other hydrocarbons.
- This study used existing data available from PASA and public sources (seismic surveys and data from existing exploration wells).
- The study indicated there may be a possibility to discover oil or gas reservoirs in this area.
- Rhino subsequently applied for Exploration Rights over the areas. A technical geological and geophysical work programme is planned over a three year period.
- No permeability or pressure testing is planned in this process

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Exploration Work Programme:

YEAR 1

- IMPROVED MAPPING OF SUBSURFACE STRUCTURE AND STRATIGRAPHY
- DETECTION OF STRUCTURAL FEATURES AND TRAPS
- ENHANCE SOURCE ROCK GEOCHEMISTRY DATABASE

YEAR 2

- GEOCHEM DATABASE COMPILATION
- APATITE FISSION TRACK ANALYSIS

Desktop Studies

YEAR 2/3

- FULL TENSOR GRADIOMETRY GRAVITY SURVEY (DEPENDENT UPON AREA)
  The planned total survey size will remain 4000 square kilometers
- DRILL SHALLOW TESTS ON IDENTIFIED STRUCTURES
  10 Core Holes per area

YEAR 3

- PURCHASE EXISTING SEISMIC DATA
- SEISMIC ACQUISITION
  A new 2D seismic acquisition program – up to125 line kilometers possible depending on results of reprocessing & definition of prospective areas

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Full Tensor Gravity Gradiometry (FTG)

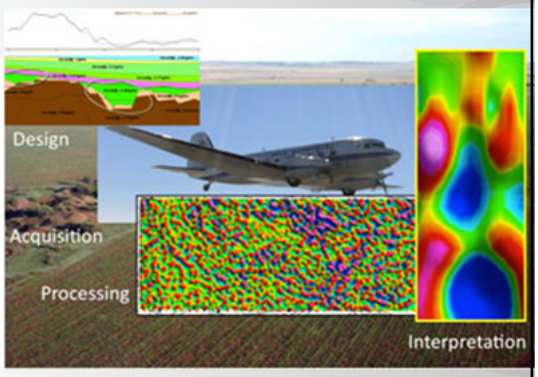
FTG data is typically acquired from an airborne platform. Airborne acquisition neutralises any access and terrain issues associated with ice, jungles, swamps or land.

FTG surveys measure minute variations in the Earth's gravitational field to help image subsurface structures. From these surveys, a detailed interpretation of the subsurface geology can focus future exploration objectives.

FTG surveys provide a less invasive alternative to acquiring land-based data. This is an advantage when surveying environmentally sensitive areas and when trying to acquire onshore data where extensive permitting permission is required.

Source, ARKEX

Full Tensor Gravity Gradiometry (FTG)



The Full Tensor Gravity Gradiometer and control cabinet. Source, ARKEX

Full Tensor Gravity Gradiometry (FTG)

Source, ARKEX

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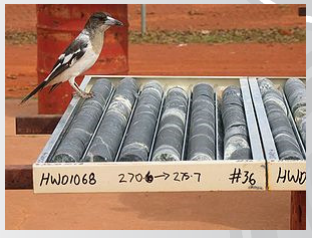
Core Hole Sample Drilling:



Sources: Pinnacle Drilling

- A core sample is a cylindrical section of (usually) a naturally occurring substance. Most core samples are obtained by drilling with special drills into the substance, for example sediment or rock, with a hollow steel tube called a core drill.
- In the coring process, the sample is pushed more or less intact into the tube. Removed from the tube in the laboratory, it is inspected and analysed by different techniques and equipment depending on the type of data desired.

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Core Hole Sample Drilling:

Sources: Pinnacle Driling

Core Hole Sample Drilling:

Core Hole Sample Drilling

- Exploration diamond drilling is commonly used in the mining industry to probe the contents of known ore deposits and potential sites. By withdrawing a small diameter core of rock from the orebody, geologists can analyse the core and conduct petrologic, structural and mineralogical studies of the rock.

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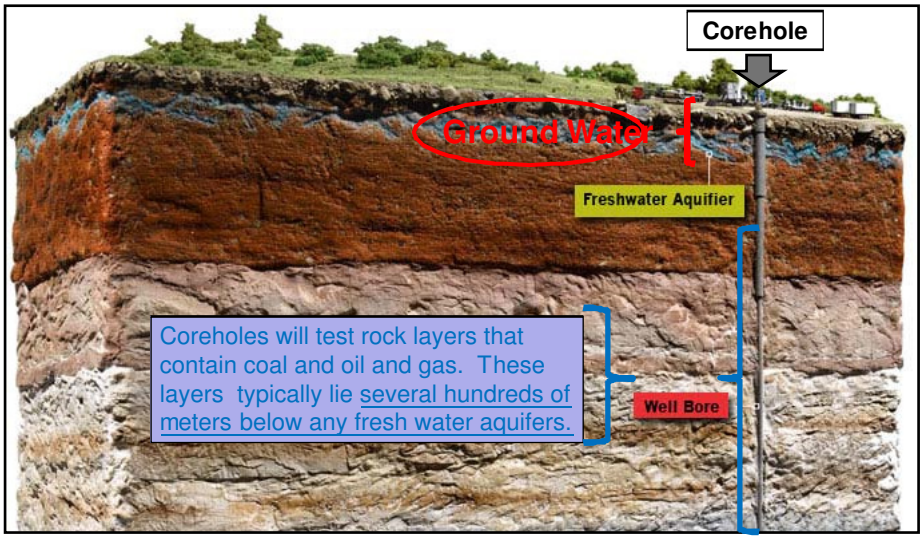
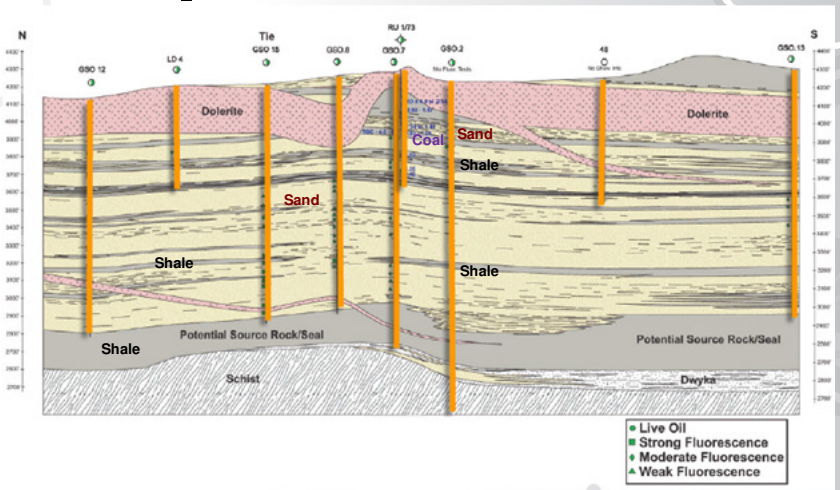


Core Hole Drilling: Example Geological Cross Section Showing Subsurface Stratigraphy



The core hole well drilling is used to determine subsurface rock composition and rock properties. This enables us to draw a regional subsurface stratigraphy map, enabling us to plan seismic and FTG surveys should the data be encouraging. Above is an example of a Cross-Section Subsurface Stratigraphy graph.

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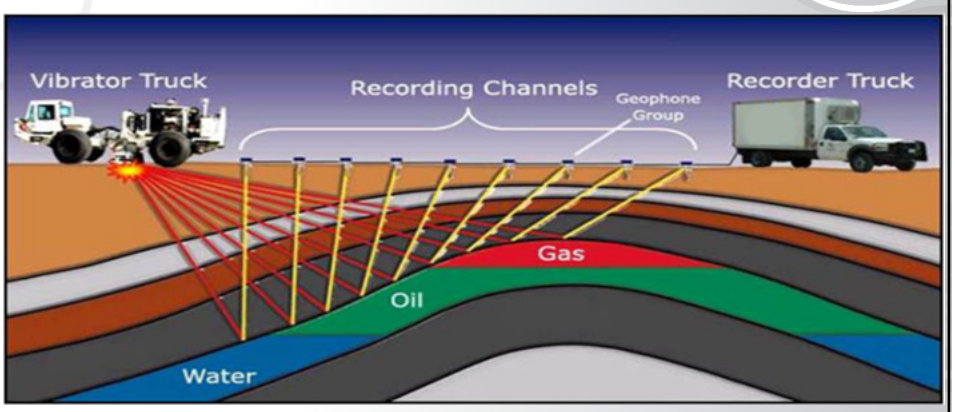
Typical Corehole Drilling Equipment

Seismic Surveys on land:



- **Scientists analyse the collected data and use it to create maps of geological structures that could contain hydrocarbon resources beneath the surface of the land.**

Seismic Surveys on land:

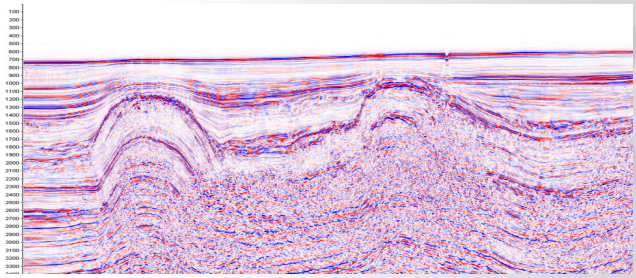
- As the name suggests, seismic examines surface-induced seismic pulses to image subsurface formations. Basically, a seismic wave is generated underneath the earth's surface, and then picked up by sensors called "geophones" as the waves bounce off subsurface formations - that is, layers of rock beneath the surface.
- There are two primary means of generating these waves: by setting a charge or with a process called vibroseis.
- Dyanamite is the simpler and generally preferred source, but for several reasons it is limited to open areas, such as fields and farmlands. Dynamite is also easier to use in remote areas as the equipment is more portable. Quite simply, a charge is buried in a shot-hole and then set off.
- The resulting charges generate the requisite underground reverberation, which is then relayed via geophones to a special recording truck.

Seismic Surveys on land:

- The other common method, more frequently seen in populous areas or places in which dynamite is impractical, is vibroseis.
- Vibroseis uses large, purpose-built trucks as the source of the seismic waves. Five or six trucks are commonly used to create enough energy for the procedure. Simultaneously, these trucks then begin to generate energy of increasing frequency over the period of several seconds.
- Like with the dynamite method, the resulting reverberations are measured by geophones, with the data being sent to a recording truck.
- The rough signal is then filtered and processed to edit out background noise and produce a clean, sharp final signal.

Seismic Surveys: Representation Data Examples

2D Seismic



2D Seismic sample line (Sources spectrumgeo.com)

Provides a two-dimensional cross section image of the subsurface of the earth.

Seismic Surveys on land

Seismic Surveys on land

THANK YOU

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