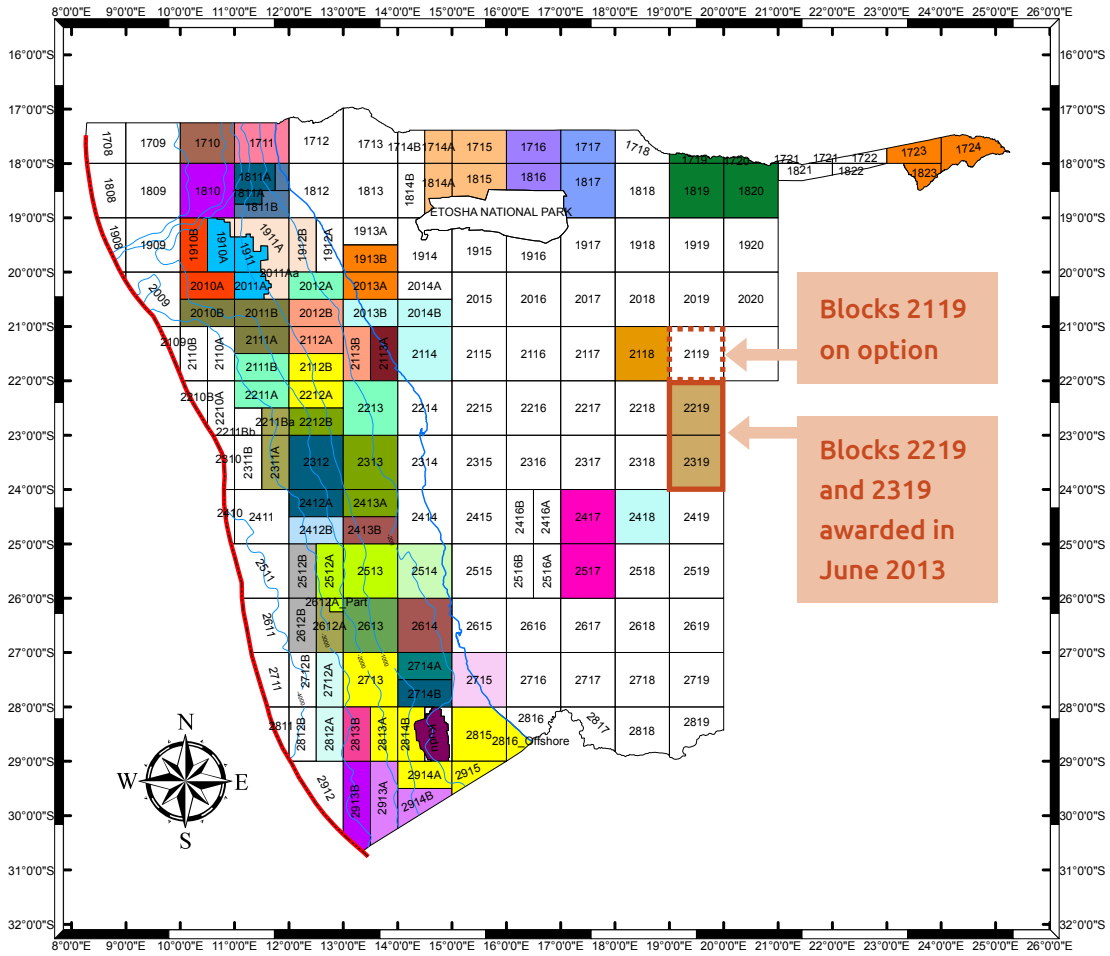
AfricaNewEnergies

Update on Africa New Energies

Licence

The two concession blocks in Namibia came up for renewal this year. As we have struggled to find the necessary funding to start exploration and drilling, we were facing the prospect of losing 50% as part of the original contract – a "use it or lose it" deal. However, after consideration and with help from one of the community advisors, the Namibian government renewed 100% of the territory. The licence has now been paid for a further 2 years on the existing blocks and we have an option on block 2119.

Hydrocarbon Licence Map of Namibia



For further information:

www.namcor.com.na
www.mme.gov.na

Updated: 25 July 2013

NAMCOR

0 55 110 220 Nautical Miles

0 125 250 500 Kilometers

Successful fundraising this year

Africa New Energies (ANE) was able to generate useful revenues early this year from consulting fees for technical assistance to a Venture Capital Company based in South Africa.

This has enabled us to take on key staff and ramp up our fund raising and exploration activities, adding significant impetus to our previously stretched internal finances. It was particularly satisfying as we did not need to go to the market and sell more shares and dilute existing shareholders.

What is a Venture Capital Company (VCC)?

A Venture Capital Company, or VCC, is a South African company designed to provide investors with access to a range of investment companies which have the potential for large growth but need funds to unlock their potential. The VCC deploys investment into a range of start-up companies, providing investors with an element of diversification. They make use of Section 12J of the South African Income Tax Act, offering tax relief to investors in a similar way to how SEIS/EIS works in the UK. Section 12J represents an important step towards stimulating the supply of private sector venture funding by incentivising investors through tax deductions. The legislation is based on the success of the Venture Capital Trusts implemented in the United Kingdom more than a decade ago.

More information: http://www.invest12j.co.za/faq.php

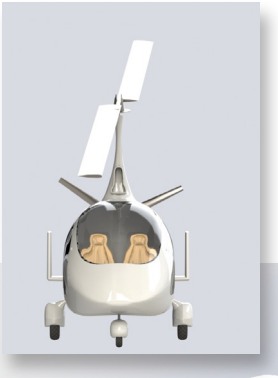
This fund raising permitted the recruitment additional staff to enable us to upscale and internationalise our fundraising.

New team members

Chris Dorrington, an experienced project manager has joined us as Chief Operations Officer. Robert Pyke, formerly a senior finance executive in Unilever, has provided valuable commercial support in his role as Aziza Coin CEO.

Working closely with the Aziza Project, which is raising funds for ANE, has given us a busy and well-orchestrated international foot-print with sufficient and able hands to push our programme forward.

As well as this, we have engineers and interns working on the gyrocopter and remote sensing algorithm.



AutoGyro's Cavalon gyrocopter

AutoGyro's modified Cavalon gyrocopter fitted with a sensory boom

Exploration

Airborne

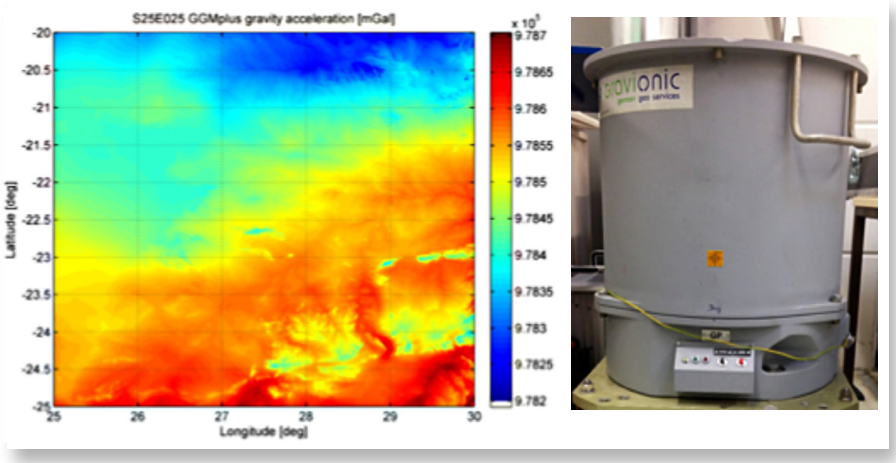
For some time ANE has been working with both AutoGyro, the manufacturer of the Cavalon gyrocopter, and Gravionic, a German company specialising in geophysical and geodetic services. Our aim was to link the two companies to enable ANE to carry out the gravimetry surveying on our concession in Namibia.

AutoGyro, with input from ANE, has designed a modified gyrocopter to suit ANE's exploration needs. It will be fitted with a sensory boom, which can accommodate the equipment needed for airborne surveying. As it is lighter and more fuel efficient, it is cheaper to use than conventional aerial surveying aircraft. It also has the advantage of vertical take-off and landing.

Gravionic has recently received a grant from the German government to install exploration instrumentation, including a gravimeter, on a Cavalon gyrocopter and fly it out to Namibia[1].

The association of these companies will allow ANE to carry out Gravimetry surveying, Aeromagnetic Surveying and Radiometric Surveying over the Namibian concession.

Gravimetry Surveying



The image on the left shows gravitational data readings from a Southern African concession. The image on the right shows the Gravimeter which ANE has access to through its partnership with Rolf Heyen.

Gravimetry surveying was one of the first geophysical methods to be used in hydrocarbon exploration. As the name suggests, this method uses accurate measurements of the Earth's gravitational field to locate horizontal and vertical variations in the density of subsurface rocks. Much like aeromagnetic surveying, an aircraft fitted with a gravimeter flies in a grid-like pattern over the area of interest, measuring and recording the Earth's gravitational pull.

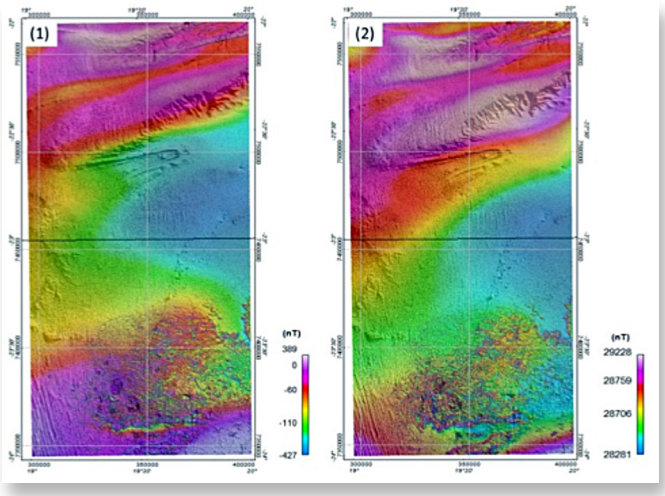
Because different rock types and mass quantities differ in their gravitational pull, the gravitational data can also be processed to create a visualisation of the geological composition of the upper crust.

ANE has partnered up with Rolf Heyen, head of the Institute of Flight Guidance at the University of Braunsweig in Germany, to conduct gravimetry in tandem with aeromagnetic surveys from the modified gyrocopter. ANE believes that analysis of data from both surveying techniques is necessary to create a highly accurate visualisation of the subterranean geology

Aeromagnetic Surveying

Aeromagnetic surveys are conducted to detect variations in the earth's magnetic field. In this surveying technique, an aircraft equipped with a magnetometer flies in a grid-like pattern over an area of interest. As the aircraft flies, the magnetometer measures and records the intensity of the magnetic field at the sensor.

1. http://m.engineeringnews.co.za/article/german-funding-to-back-oil-gas-exploration-in-namibia-2018-07-05



Aeromagnetic survey of the Namibian concession.

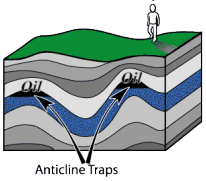
ANE commissioned an analysis of aeromagnetic survey data collected by the Namibian government. This has improved our understanding of the concession's subsurface geology by providing a 3D model of the basement rock's formation. The data ANE now has on the basement has furnished us with three valuable insights. Firstly, a number of steep and well defined anticlinal structures are visible, creating the possibility that the correct geology has formed above for hydrocarbons to migrate towards the surface and become trapped. Secondly, it gives an indication of fault lines which could produce hydrocarbon traps. Finally, a better understanding of the subsurface geology has allowed us to anticipate potential drilling complications.

Basement rock:

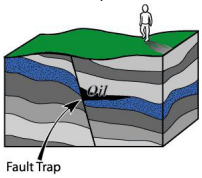
Basement rock is the thick foundation of ancient, and oldest metamorphic and igneous rock that forms the crust of continents, often in the form of granite. Basement rock is contrasted to overlying sedimentary rocks which are laid down on top of the basement rocks after the continent was formed, such as sandstone and limestone.

More information: https://en.wikipedia.org/wiki/Basement_(geology)

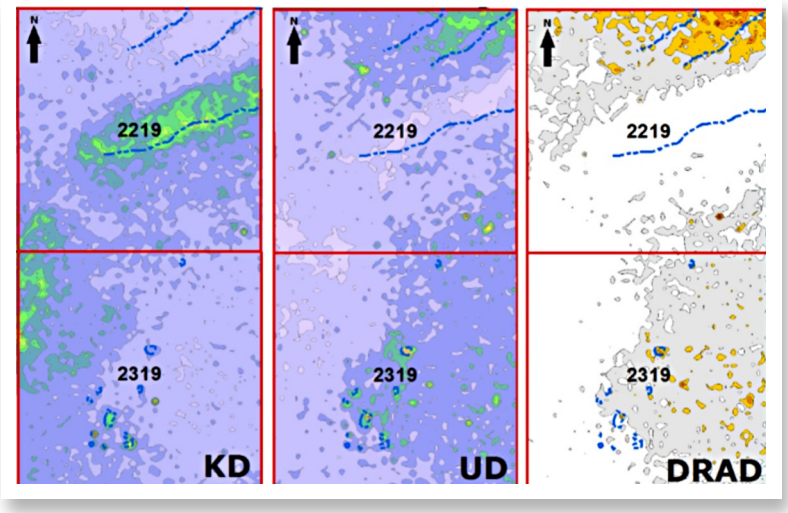
An anticlinal trap



A fault trap



Radiometric Surveying



Results from radiometric surveys conducted over ANE's Namibian concession.

Uranium and potassium occur naturally in the Earth's crust and emit highly energetic gamma rays as they slowly decay. These elements were randomly distributed throughout the Earth as it cooled during formation and contribute to the background radiation that occurs around us. Both elements are relatively immobile while they remain undisturbed in rock, however in contact with hydrocarbons an oxidization process occurs. Hydrocarbons migrating from a trap that come into contact with these elements make them water-soluble, allowing them to migrate towards the surface much more easily. Once at the surface, potassium tends to be carried further afield by wind and rain, while contact with organic material returns the uranium ion to its insoluble, and less mobile state.

ANE has flown radiometric surveys over the concession in Namibia and created a 2D map of radiation levels from uranium and potassium. A number of locations show potassium levels dropping off where uranium levels increase – characteristic of the effects hydrocarbons have on the presence of these elements. The above image shows potassium (KD) and Uranium (UD) deviation across the concession. DRAD shows the mean of the two and highlights the anomalies where low potassium and higher uranium levels occur. These anomalies have been found to correlate with those identified by satellite imaging and examination of surface geology.

Ground exploration

We discovered that a third party had performed an unapproved exploration on our block 2319, close to a reported seep.

As the tests on the sample confirmed a liquid hydrocarbon being present in the water, the potentially negative incident has been transformed into a potentially positive one. We will now drill our own water well near to the seep to get an uncontaminated sample. Confirming the seep would be very useful to our exploration efforts.

New concessions

We have set up a strategy to enable ANE to provide exploration services to South African (SA) exploration companies. ANE will be assisting those companies in raising funds though tax incentives provided by the SA government and is being marketed to SA High Net Worth individuals (HNW) who are showing interest. The bottom line is that ANE should be able to start funding its drilling programme from profits rather than direct investment.

Community relations update

Stephen Larkin with Chief Hendricks Martins of the San…

and with Councillor Peter Kamunguizi Kazongomuinja representing the Aminuis Community

ANE has honoured a commitment to ensure that the indigenous San and Herero peoples living on its 22,000 square kilometre concession in eastern Namibia receive a material stake in the fortunes of the Africa-focused oil and gas exploration company.

During an auspicious ceremony held in the Namibian capital of Windhoek in May, ANE Chief Executive Officer Stephen Larkin formally handed over share certificates to representatives of the San, the Herero and other members of the Aminuis community, which will ultimately see 15% of ANE transferred to the host community.

ANE has created two United Kingdom-based organisations – charitable status pending at the time of writing – to look after the long-term interests of the people living on the concession, ensuring that they get access to healthcare, education and employment skills, while at the same time securing additional funding to help preserve their tradition, culture and way of life.

The trusts will also ensure that no fracking takes place on the concession, which hosts the world's second largest aquifer on which 22,000 people living on the concession depend, while ensuring that the exploration and development of hydrocarbons has not impact on the environment.