

# I Want A Fracking Future

Fracking could be the \$100-billion energy game changer that Africa needs at the risk of destroying this land. It has sparked conflict before a drill has touched the earth.

BY JAY CABOZ

It's not just a Karoo problem, says Deal.

"If fracking starts in this country and the gas reserves are there. We will see the technology of fracking march across this country just like it did in the United States. Geologically speaking the Karoo basin is where the gas bearing shale is thought to reside, and that extends into Gauteng and parts of Mpumalanga. In fact it extends out of the northern borders of South Africa."

Despite plans to halt explorations until proper research is completed, the government remains adamant it will go ahead and be a game changer.

"New regulations should be released in September, but we don't yet know what they contain. All of this has happened without consultation. It seems what will happen are inadequate regulations will be passed, with inadequate consultation. We are then faced with serious decisions where we go from there. If the regulations are unlawful, that may have to be challenged in the Constitutional Court. It seems, from the ministers announcements, hot off the heels of the new regulations will be the issuing of licenses which seems to indicate government has already taken a decision on those, which should not be granted because they don't comply with the new laws," says Light.

The impact of exploration could be catastrophic, says Deal, especially since companies refuse to disclose the chemical composition of the additives. Chemical additives make up 1% of the 20 million liters used for a well. On one pad there can be 32 wells.

"With exploration, the same risks are there, they have to frack to see if it's there. Don't come to this country and look for secrecy privileges. Don't come and try hide behind commercial interests to hide the mix of chemicals, this is not America," says Deal.

"The minute these licenses are issued, these corporates are going to carry on with what they want to do anyway. It's going to be challenged. People are well aware of it. The minute those licenses are issued, they will be challenged," says Ogilvie.

Landowners seem to be putting their money where their mouth is. One wonders what people across Africa, who don't have money will do. 

## What's The Problem?

Independent geologist, Wlady Altermann, believes fracking fears are full of hot air.



Wlady Altermann

**I**magine a rock with thousands of pockets. Then imagine you have to drill, thousands of times, to release the gas from these pockets. This is what the Karoo looks like underground and the amount of drilling needed could make fracking costly, says Wlady Altermann, a geologist at the University of Pretoria.

"All the knowledge of these compartments and the distribution of pockets are very poor. [The Karoo] would require a very good geophysical investigation. After that, the drill hole positions need to be drilled to investigate the properties of the rock, the stability of the composition and the wealth of the gas. Only after that, can a decision be made as to the wealth of the shale gas," says Altermann.

The German-born professor knows a thing or two about rocks. Apart from studying them since he was a child, Altermann spent years studying rocks from Mars. Space travel was out of the question so Altermann flew across the globe and has been studying mineral deposits in South Africa since the 1980s.

Altermann, now the Kumba-Exxaro Chair in Geodynamics of Ore Deposits at the university, believes that fracking is harmless if it's done properly.

"The misconceptions are basically based on poor information. It comes

from the direct comparison with the United States, which I think is not comparable. Secondly, it comes from the perceptions that the surface and the shallow subsurface have something to do with shale gas deposits. Shale gas deposits are much deeper."

"The fracking itself is such a tiny part of the entire process. It's not the dangerous part of the process. The dangerous part of the process is the later methods of production. Fracking itself, I think, it's the wrong discussion," says Altermann.

Water contamination by drilling through the Karoo's aquifers, 300 meters below the surface, is also unlikely says Altermann, because the distance between the underground water and the shale gas is far.

"The shale in the United States is at much shallower levels. Between 1,000-1,500 meters. The deeper you go, the less the risk of contamination. The pressure in the ceiling holds the gas better. The chance to contaminate groundwater through that type of production is so low; you really must act like an idiot to do this. It's not impossible but if it's done properly, there's no problem," he says.

The fracking process has made significant technological steps since it began 70 years ago, says Altermann.

Wells can be spaced further apart because drilling horizontally can stretch for 5 kilometers. Ten years ago, that same reach was a kilometer.

The risk lies with the waste after fracking. Companies in the US have been guilty of reusing this water to save costs, instead of disposing of it.

“This is what causes most of the problems. In other countries, it is forbidden, there are environmental laws. That should be avoided in South Africa as well, controlled in a way that you can be sure nothing happens,” says Altermann.

Natural gas is a greener fossil fuel than coal, says Altermann.

“South Africa’s energy demand is expected to increase by 60% up to 2050. Coal cannot supply it; if coal supplied it we would sit in darkness and not see our beautiful sunsets under the African sun. At today’s state of technology, the best way to mitigate climate change and CO<sub>2</sub> emissions, the cheapest thing technically is to switch from coal to gas combustion. It reduces CO<sub>2</sub> emissions by 50%. It’s a much more effective way of producing energy,” says Altermann.

“People talk about fracking and groundwater; no one realizes that actually in many areas where groundwater is scarce, where there is not enough water to supply the population, fracking is used to extract groundwater. They fracture the rocks, the aquifer, without chemicals with just water and sand and crack the rocks, so that water can flow out the cracks easier. It is used by many countries especially in sub-Saharan Africa.”

According to the professor, fracking could change the face of South Africa and not cause too much worry. **F**

# Last Gasp For Eden

It could become a fragile Garden of Eden amid the rumble of trucks. Farmers have given land in the hope it will become a peaceful buffer against fracking.

It’s a small corner of the Karoo: a corridor of private land that stretches 300,000 hectares from the Camdeboo National Park, in Graaff Reinet, east to the Mountain Zebra National Park. It took 66 farmers over three years to buy into this project that promises a Garden of Eden teeming with wildlife. It could become known as the last piece of untouched land in the Karoo if fracking begins.

“The first meeting in Graaff Reinet was a little tense. I think a lot of the landowners thought we were going to attempt a big land purchase and buy out hundreds of thousands of hectares. Also, I think they were a bit worried that we were going to tell them what they had to do on their own land. Once this was clarified, there was little problem,” says Matthew Norval, the Director of the Conservation Programme at the Wilderness Foundation.

The corridor project is the brainchild of Norval, in collaboration with South Africa National Parks (SANParks). He wants to create a reserve for future generations.

“The farmers in this area have looked after the land for many generations, some of them are third and fourth generation. The reason you can build a natural corridor in that region is because the land has been so well looked after and is still in good condition and there is a strong affinity from the farmers who own that land,” says Norval.

The application is with the Minister of Environmental Affairs, Edna Molewa.

“Fracking raised its head at almost the same time we started working in that area. There is no doubt that it influenced the way we worked and the way some of the landowners decided how to collaborate with us. I think fracking hit a lot of the landowners, sort of right between the eyes. They suddenly realized that properties that had been in their families for generations were now under threat. It was possible their land would get damaged and their children or their children’s children wouldn’t be able to make a livelihood from farming. You have to bear in mind its prime natural rangeland grazing for sheep and cattle,” says Norval.

“I think it would be near impossible to rehabilitate the Karoo after fracking. In some areas, to a layman it may look like gravel plain. Somebody that doesn’t understand the intricacies of that ecosystem might just assume you can level it and there you go. But it’s not like that.”

“This is our last gasp. Never mind rhino, we’re losing lion; we’re losing pangolin by the ton. When it comes to land, the opportunity to build corridors and create landscapes that are going to have some relevance in the future, this is our last chance.”

Over to the minister. **F**



Graaff Reinet