

Residents want Moroto-Kadam basin name changed

By John Odyek

Communities in the east and North Eastern Uganda want the name of the Moroto-Kadam basin changed.

Yisuf Masaba, a communications specialist with the energy ministry said it was recommended that the name of the basin should be changed from Moroto-Kadam to a more neutral name to avoid appearing as though the basin is strictly within Karamoja region for fear of the Karimojong communities claiming ownership of the basin.

"The communities proposed the name to be changed to Elgon-Kadam basin. This name would accommodate all regions within the basin," Masaba said.

The Moroto-Kadam Basin is one of the basins in Uganda identified and recommended for further exploration by the aeromagnetic surveys that were undertaken in 1992.

A report from the Ministry of Energy and Mineral Development established sediment thickness of over two kilometres in parts of the basin, implying a possibility of existence of the required conditions for hydrocarbon generation.

They recommended follow-up detailed geological, geochemical and geophysical (G&G) surveys to establish the basin's hydrocarbon potential.

SURVEY

In preparation for detailed G & G surveys, a reconnaissance survey was undertaken in 2014.

Accordingly, detailed G&G surveys started in the Moroto-Kadam Basin in August 2016.

The survey was, however, prematurely stopped by the Karimojong communities on assumption that the work was a ploy by government to survey and take away their land.

The report, titled *Report on Community Sensitisation in the Moroto-Kadam Basin on Petroleum Exploration and Related Activities*, noted the resistance of the Karimojong communities to the field surveys in the Moroto-Kadam Basin displayed evidence of misinformation or lack of knowledge on oil and gas exploration activities by the communities.

It also demonstrated the dangers of such misinformation and/or lack of information to not only the success of the oil and gas exploration campaign in the unexplored basins but also to the lives of the technical team that undertake the work in the field.

The department of petroleum exploration, development and production, therefore, found it prudent to sensitise the communities in the Moroto-Kadam Basin before undertaking the detailed follow-up G&G surveys as recommended by the aeromagnetic surveys.

Accordingly, a sensitisation campaign was organised and undertaken on petroleum exploration and related activities



Ministry officials during a sensitisation drive among communities in Moroto

in the Moroto-Kadam Basin from September 11 to 15, 2017.

It covered the districts of Nakapiripiriti, Napak, Kween, Kumi, Bulambuli, Bukedea, Katakwi and Moroto.

The launch was presided over by the Minister of State for Minerals, Peter Lokenis, in Nakapiripiriti district, with an appeal to locals to embrace the activities and hope for the best results.

Dozith Abeinomugisha, director exploration, Petroleum Authority of Uganda, said there are six sedimentary basins in Uganda. Like any sedimentary basin, they are prerequisites for the presence of oil for geologists, he said.

The basins must also be 3,000 metres deep to bury the rocks necessary to contain oil.

The five other sedimentary basins are Albertine Graben (Lake Albert Basin), Hoima Basin, Lake Kyoga Basin, Lake Wamala Basin and Lake Victoria Basin.

Abeinomugisha emphasised that the Kabam-Moroto basin in Karamoja region could have commercial deposits of oil or there could be no commercially viable deposits after thorough studies followed by drilling were done.

Similar studies were done in the Albertine Graben Lake Albert Basin, where commercial deposits of oil have been confirmed.

A sedimentary basin is a depression in the earth's surface which has trapped sediments (organic material) over millions of years.

The sediments are transformed into oil and gas because of the high levels of pressure and temperature within the subsurface over millions of years to produce hydrocarbons.

Clovice Irumba, the petroleum geochemist, directorate of petroleum, explained that having a sedimentary basin is not enough

A preliminary survey has not yet been done to document the presence of the three rocks. The survey will also look for migration pathways for the oil

to confirm the presence of oil and gas, Irumba said in the basin, geologists have to look for three types of rocks, the source rock, the reservoir rock and the cap rock.

ROCKS

A reservoir rock is a place that oil migrates to and is held underground.

Cap rock forms a barrier around the reservoir rock so that oil cannot migrate beyond the reservoir.

A source rock is rich in organic matter, which, if heated sufficiently, will generate oil or gas.

Irumba added that the energy ministry will undertake a geological mapping to confirm that the petroleum system comprising the rocks is available.

He noted that sometime back when the ministry team visited Karamoja to begin the mapping, the community did not co-operate

and were hostile, which stopped the mapping.

Irumba explained that in the ongoing sensitisation of the host communities, the ministry will determine whether there is potential for oil and gas.

"A preliminary survey has not yet been done to document the presence of the three rocks. The survey will also look for migration pathways for the oil. A migration pathway is created by faults (faults are a result of tectonic activity such as earthquakes, volcanoes and mountain building in general). A fault goes deep into the reservoir rock, where there is oil," Irumba explained.

He noted that these activities take many years to confirm the presence of oil.

"To confirm the presence of oil, it needs drilling, even if the petroleum system, the rocks are in place. Even the three rocks have to be examined in detail to see if they meet the specifications to contain oil. Without drilling it remains speculation about the presence of oil," Irumba said.

He singled out a geologic hammer, which is used to cut at least one kilogramme of outcrop rock sample from the edge of the Kadam-Moroto basin, for studies.

Irumba revealed that the Kadam-Moroto basin, the Lake Kyoga basin and Hoima basin were better ranked than Lake Wamala basin in terms of oil potential. He disclosed that the Lake Albert basin is the highest ranked because of its age and, therefore, more emphasis has been put there.

On how exploration activities begin, Irumba explained that the law requires the energy ministry to gazette a sedimentary basin before it was opened up for exploration activities.