

Seismic reflections

East Africa: More to explore?

The East African Rift System (EARS) is rapidly emerging as a major new petroleum province. The most recent manifestation of this was Tullow's announcement of a major discovery at its Ngamia-1 well in Kenya. This follows the large scale discoveries made in the Albertine Basin since 2005, which are now pointing to reserves of over 2.5bn barrels. The EARS is one of the world's most prospective, yet lightly-explored onshore rift plays. The scope for giant finds is excellent.

Why is the EARS interesting?

Rift systems (large fractures in the Earth's surface bounded by steeply dipping faulting) provide some of the world's most prolific petroleum producing regions. Significantly, they have the potential for multiple sedimentation and burial phases and structural traps. The EARS is the world's most defined continental rift system. It stretches from the Red Sea in the north through Sudan and Ethiopia where it splits. A western arm extends into the Great Lakes region of central Africa and contains the Albertine Basin, while an eastern arm proceeds south through central Kenya before ending in Tanzania. The Albertine Basin is the source of Tullow's Ugandan discoveries and the Turkana Basin on the eastern arm is the location of the Ngamia-1 discovery. To the north of the main EARS in South Sudan/Sudan are the Muglad and Melut rift Basins, which have reserves of about 6bn barrels and to the north-east is the Cretaceous/Jurassic rift play in Yemen and its Puntland-Somalia analogue in the Horn of Africa. Horn Petroleum recently announced encouraging hydrocarbon shows at its Shabeel-1 well in Puntland.

How much oil might there be?

Using a broad definition of the EARS, discoveries have already amounted to 14.5bn barrels. Along with Tullow, Africa Oil has the greatest exposure to the region and has pointed to gross un-risked prospective resources of 11.5bn barrels across its seven projects in Kenya, Ethiopia and Puntland. The key issue now concerns the scale of the Ngamia-1 discovery and more generally the resource base of Block 10BB in Kenya. According to Africa Oil, Block 10BB has gross prospective resources of 2.1bn barrels but comments by the Kenyan Energy Minister have suggested more than the Albertine Basin's reserves. Significantly, the Turkana blocks lie in the path of a proposed pipeline from South Sudan to a new export facility at Lamu on the northern Kenyan coast.

EARS plays

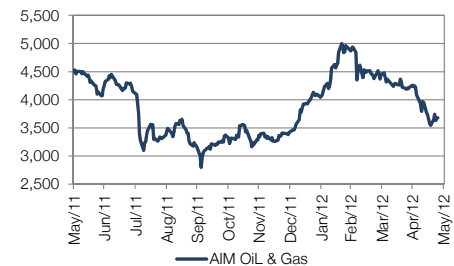
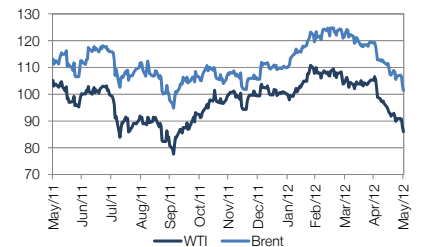
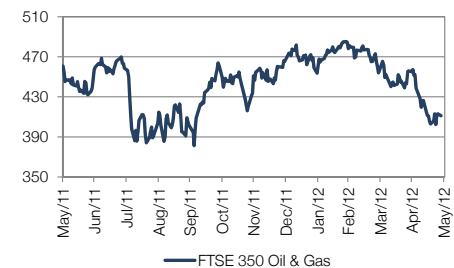
EARS exploration has very much been led by the juniors and mid-tier independents. Pride of place arguably has to go to Africa Oil, which made the theoretical case for the EARS before forming a joint venture with Tullow, in 2010. Among the ASX/AIM listed juniors, Range Resources and Red Emperor Resources both have Puntland exposure as does the TSX-listed and Africa Oil spin-off, Horn Petroleum. Afren has two blocks in Kenya and TSX-V-listed Simba Energy has acreage in Kenya and Ethiopia.



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Exhibit 1: Best and worst performers

1 week					
No.	Best performers	% change	No.	Worst performers	% change
1	ANTRIM ENERGY INC	39.6%	1	PETRO MATAD LTD	-40.8%
2	FORUM ENERGY PLC	21.2%	2	ITHACA ENERGY INC	-34.6%
3	DEO PETROLEUM PLC	21.1%	3	FRONTERA RESOURCES CORP	-16.6%
4	MEDITERRANEAN OIL & GAS PLC	15.4%	4	ENEGI OIL PLC	-13.9%
5	BORDERS & SOUTHERN PETROLEUM	13.8%	5	VALIANT PETROLEUM PLC	-12.0%

1 month					
No.	Best performers	% change	No.	Worst performers	% change
1	GASOL PLC	54.7%	1	PETRO MATAD LTD	-57.2%
2	COVE ENERGY PLC	14.6%	2	ENDEAVOUR INTERNATIONAL CORP	-52.8%
3	KEA PETROLEUM PLC	10.3%	3	CHARIOT OIL & GAS LTD	-52.7%
4	ROXI PETROLEUM PLC	8.0%	4	BANKERS PETROLEUM LTD	-42.7%
5	ANTRIM ENERGY INC	7.4%	5	ITHACA ENERGY INC	-38.7%

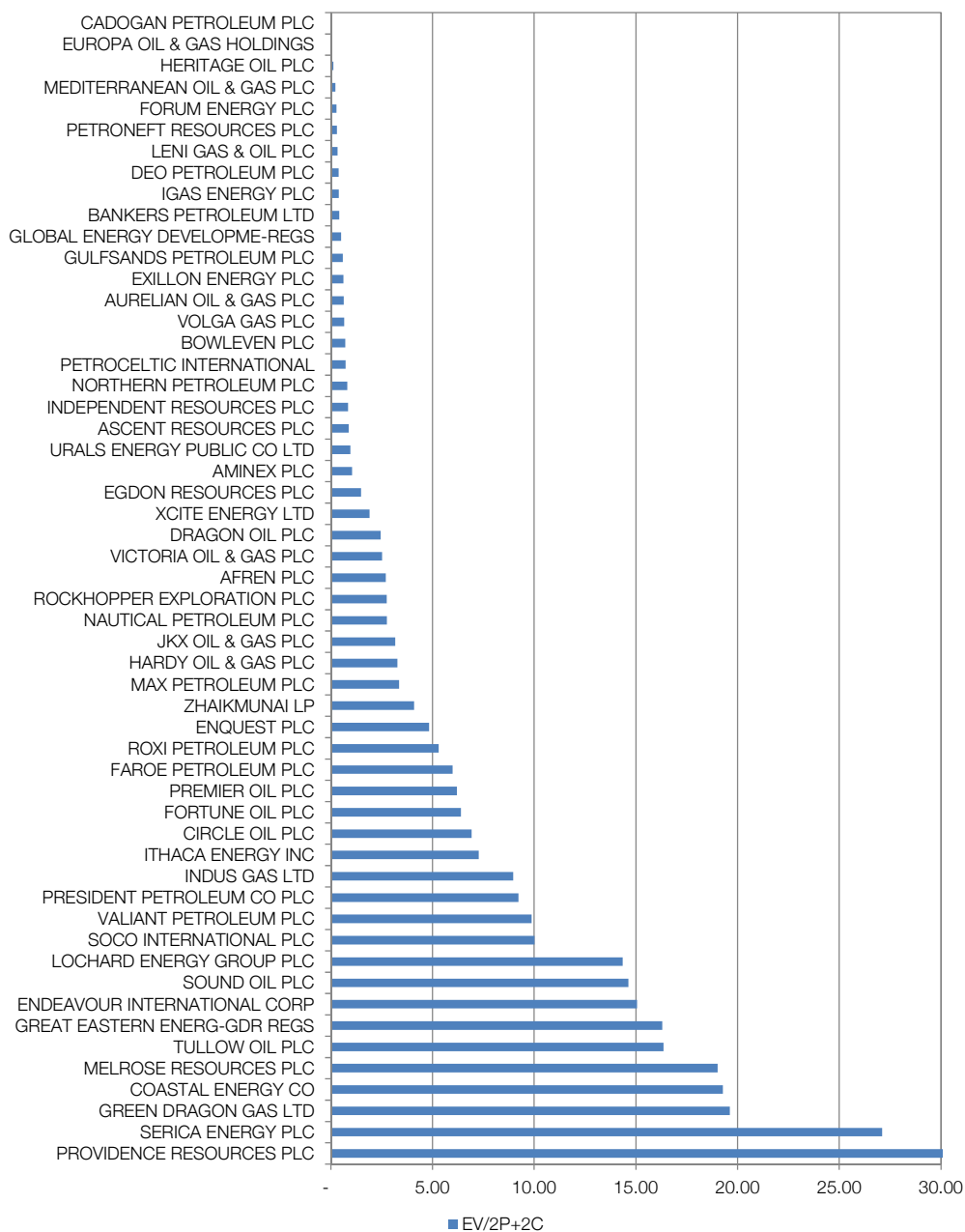
3 months					
No.	Best performers	% change	No.	Worst performers	% change
1	FORUM ENERGY PLC	133.3%	1	PETRO MATAD LTD	-62.4%
2	PROVIDENCE RESOURCES PLC	45.2%	2	BANKERS PETROLEUM LTD	-59.5%
3	FALKLAND OIL & GAS LTD	40.1%	3	EXILLON ENERGY PLC	-58.9%
4	GEOPARK HOLDINGS LTD	34.3%	4	LENI GAS & OIL PLC	-53.2%
5	GASOL PLC	24.7%	5	CHARIOT OIL & GAS LTD	-50.7%

6 months					
No.	Best performers	% change	No.	Worst performers	% change
1	FORUM ENERGY PLC	189.0%	1	EXILLON ENERGY PLC	-66.1%
2	COVE ENERGY PLC	173.9%	2	PETRONEFT RESOURCES PLC	-64.5%
3	PROVIDENCE RESOURCES PLC	152.6%	3	BANKERS PETROLEUM LTD	-58.2%
4	KEA PETROLEUM PLC	127.1%	4	GULFSANDS PETROLEUM PLC	-57.6%
5	FALKLAND OIL & GAS LTD	82.3%	5	PETRO MATAD LTD	-50.6%

1 year					
No.	Best performers	% change	No.	Worst performers	% change
1	FORUM ENERGY PLC	253.9%	1	PETRO MATAD LTD	-94.3%
2	COVE ENERGY PLC	200.0%	2	PETRONEFT RESOURCES PLC	-87.2%
3	COASTAL ENERGY CO	114.1%	3	FRONTERA RESOURCES CORP	-86.9%
4	PROVIDENCE RESOURCES PLC	113.6%	4	BOWLEVEN PLC	-80.0%
5	DESIRE PETROLEUM PLC	96.0%	5	EXILLON ENERGY PLC	-78.5%

Source: Bloomberg

Exhibit 2: EV/2P + 2C rankings



Source: Bloomberg, company releases, Edison Investment Research

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