

# Seismic reflections

## Confidence in Kurdistan grows

Iraq, including the autonomous Kurdistan region, probably has the world's largest concentration of untapped, easily recoverable oil reserves. Pioneering moves were made into Kurdistan in the 2000s by the likes of Gulf Keystone and Hunt Oil, with considerable drill-bit success. In late July, two important Kurdistan exploration and development deals were announced. These involve Afren acquiring interests in two PSCs with sizeable contingent reserves and a Hess-Petroceltic partnership signing two PSCs for exploration purposes. With increasing production and improving relations between the regional and Iraqi federal governments, these deals reflect growing confidence in Kurdistan's potential as a major new petroleum province.

### Anatomy of the Kurdistan oil province

Kurdistan is located in the North Arabian basin and is on same fairway as the prolific oilfields of Saudi Arabia's Eastern Province, Kuwait, southern Iraq and Syria. The geological backdrop to Kurdistan tends to be simple and is characterised by large anticlinal structures, deep organic-rich sediments and carbonate reservoirs mainly of Jurassic to Cretaceous age. Drilling commenced in the region in 2006. So far, 28 wells have been drilled, of which 20 have been discoveries, resulting in estimated reserves of over 5.8bn boe. Industry sources point to the potential for another 40-70bn of recoverable reserves, which compares with Iraq's proved reserves of 115bn barrels. Production in Kurdistan commenced in 2009. After running at about 50m bbl/d in 2010, production, according to IEA, climbed to 175m bbl/d in June and is expected to reach 250m bbl/d in July. By 2015 Kurdistan production is forecast to exceed 1m m bbl/d. Around 40% of Kurdish oil is processed locally with the balance exported through the Kirkuk-Ceyhan pipeline. Presently, there are three major Kurdistan fields: Shaikan (Gulf Keystone), Tawke (DNO) and Taq Taq (Addax/Sinopec). Importantly, Kurdistan development and operating costs are very low internationally at \$2.5-4.0/barrel and \$4.0-5.0/barrel respectively, according to Afren.

#### Afren's acquisitions

Afren's two PSCs are contiguous and located to the south of GKP's Shaikan block. Contingent 2C resources are put at 890.4m m bbls net with Barda Rash (60% WPI) accounting for 882m m bbls and Ain Sifni (20% non-operated WPI) the balance. Ain Sifni is also assigned mid-case prospective resources of 183.4m m bbls net.

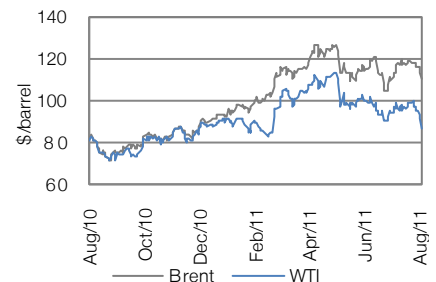
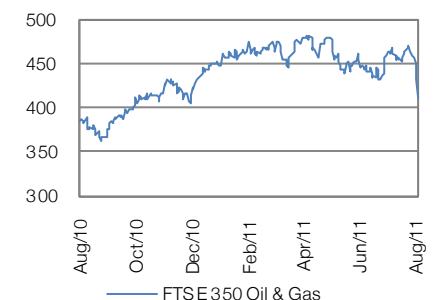
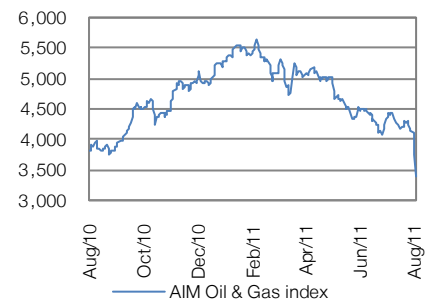
Production at Barda Rash is expected to commence in 2012 at about 5m bbl/d net and is planned to reach 75m bbl/d net by 2017. The consideration of \$588m equates to an exceptionally low \$0.66/barrel of 2C resources.



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**Exhibit 1: Best and worst performers**

		1 week			
No.	Best performers	% change	No.	Worst performers	% change
1	GREEN DRAGON GAS	10.2%	1	BOWLEVEN PLC	(46.5%)
2	PETRONFT RESOURCES	9.8%	2	RANGE RESOURCES	(33.9%)
3	RESACA EXPLOITATION INC	1.6%	3	ENEGI OIL	(31.9%)
4	FORTUNE OIL	1.1%	4	DESIRE PETROLEUM	(31.5%)
5	GREAT EASTERN ENERGY CORP	0.6%	5	CHARIOT OIL AND GAS	(31.1%)

		1 month			
No.	Best performers	% change	No.	Worst performers	% change
1	DOMINION PETROLEUM	14%	1	BOWLEVEN PLC	(58.2%)
2	GLOBAL ENERGY DEVELOPMENT	11%	2	KEA PETROLEUM PLC	(53.6%)
3	COASTAL ENERGY COMPANY	10%	3	SOUND OIL	(48.3%)
4	PETRONFT RESOURCES	9%	4	PETROCELTIC INTERNATIONAL	(41.0%)
5	FRONTERA RESOURCES CORPORATION	9%	5	XCITE ENERGY	(40.5%)

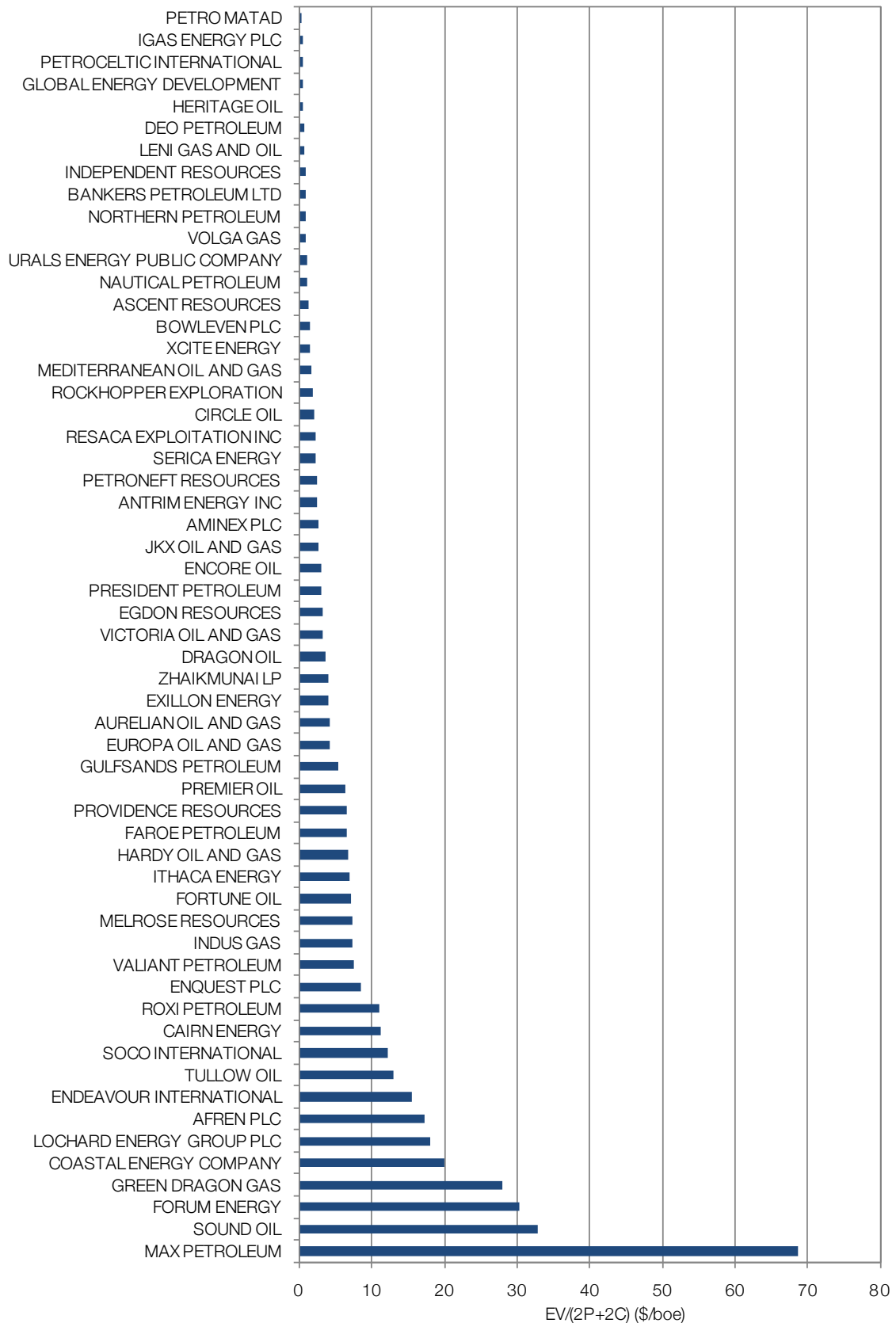
		3 months			
No.	Best performers	% change	No.	Worst performers	% change
1	COASTAL ENERGY COMPANY	62.5%	1	SOUND OIL	(60.9%)
2	GLOBAL ENERGY DEVELOPMENT	16.5%	2	XCITE ENERGY	(59.2%)
3	PRESIDENT PETROLEUM	10.7%	3	KEA PETROLEUM PLC	(55.7%)
4	MEDITERRANEAN OIL AND GAS	7.1%	4	PETRO MATAD	(55.1%)
5	DESIRE PETROLEUM	2.0%	5	EUROPA OIL AND GAS	(46.5%)

		6 months			
No.	Best performers	% change	No.	Worst performers	% change
1	HARDY OIL AND GAS	42.1%	1	ENCORE OIL	(68.5%)
2	COASTAL ENERGY COMPANY	21.8%	2	EUROPA OIL AND GAS	(68.2%)
3	RANGE RESOURCES	13.4%	3	DESIRE PETROLEUM	(67.1%)
4	GREAT EASTERN ENERGY CORP	9.6%	4	ASCENT RESOURCES	(66.9%)
5	EXILLON ENERGY	6.3%	5	XCITE ENERGY	(65.5%)

		1 year			
No.	Best performers	% change	No.	Worst performers	% change
1	BPC LIMITED	178.5%	1	DESIRE PETROLEUM	(87.9%)
2	EXILLON ENERGY	132.4%	2	NIGHTHAWK ENERGY	(82.2%)
3	LOCHARD ENERGY GROUP PLC	107.1%	3	KEA PETROLEUM PLC	(69.1%)
4	GREEN DRAGON GAS	100.9%	4	SERICA ENERGY	(68.3%)
5	CADOGAN PETROLEUM	100.0%	5	FALKLAND OIL AND GAS	(60.0%)

Source: Bloomberg

**Exhibit 2: EV/2P + 2C rankings**



Source: Bloomberg, company releases, Edison Investment Research

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