

Seismic reflections

Enormous North American potential

A recent National Petroleum Council study on behalf of the US Department of Energy points to the enormous potential of North America's hydrocarbon resources. The study highlights the now well understood scale of the continent's natural gas resources in the wake of shale gas development and draws attention to the potential for a substantial boost in oil production. A key conclusion is that North American oil production could conceivably reach 22.5mmb/d by 2035. This is not only twice current levels but exceeds 2010 consumption of 21.4mmb/d. However, the achievement of the production indicated assumes a benign environment in terms of access to reserves and regulation. In other words, production is more a question of politics than the availability of reserves or technology.

Sources of growth

The NPC has identified six key sources of oil production growth in North America comprising the Alberta oil sands, US offshore, onshore tight oil (shale oil), enhanced oil recovery, Arctic exploration and oil shale.

The Alberta oil sands potentially constitute the largest source of new production in the near to medium term. Recoverable resources are put at up to 310bn barrels, one of the world's largest sources of hydrocarbons. Development could boost production from 1.5mmb/d currently to over 5mmb/d by 2030.

US offshore potential in the near to medium term revolves around the GOM, where production is running at 1.5mmb/d, but could be increased to 3mmb/d.

Development of tight oil plays, notably the Bakken/Three Forks and the Eagle Ford, has been undertaken in earnest over the past five years or so. Production of oil from such plays now exceeds 0.4mmb/d. According to the NPC, tight oil plays could yield 2-3mmb/d by 2035.

Onshore conventional oil production in the US and Canada is expected to benefit from the application of enhanced oil recovery using CO₂ while the opening up of land currently off-limits to exploration could provide a further boost. These factors are thought capable of increasing onshore conventional production by 0.6mmb/d.

Arctic waters are believed to contain recoverable resources of up to 100bn barrels. However, access, is a major issue for exploration activity.

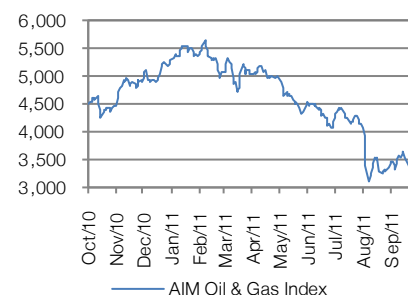
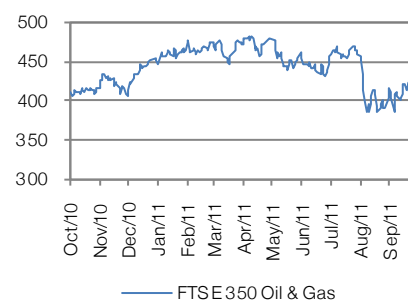
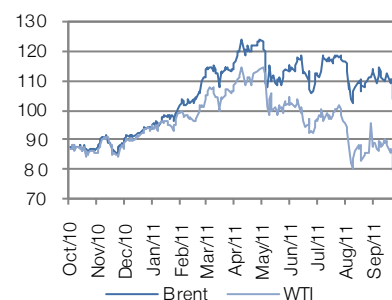
Oil shale (no relation to shale oil) development based on the huge kerogen-bearing sedimentary deposits of Colorado and Utah is a long-term undertaking. Several oil shale research projects have been undertaken over the past 30 years or so, but as yet there has been no commercial production from this source. The NPC has suggested up to 1mmb/d may be possible by 2035. North American production in 2035 on the NPC's constrained development scenario is only 8-9mmb/d.



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Exhibit 1: Best and worst performers

1 week					
No.	Best performers	% change	No.	Worst performers	% change
1	URALS ENERGY PUBLIC COMPAN	13.8%	1	GREEN DRAGON GAS	(23.0%)
2	ENCORE OIL	12.7%	2	EXILLON ENERGY	(20.4%)
3	CADOGAN PETROLEUM	12.3%	3	ROXI PETROLEUM	(16.0%)
4	KEA PETROLEUM PLC	10.5%	4	HARDY OIL AND GAS	(14.2%)
5	PRESIDENT PETROLEUM	9.5%	5	PETRONEFT RESOURCES	(14.1%)

1 month					
No.	Best performers	% change	No.	Worst performers	% change
1	TULLOW OIL	22%	1	AURELIAN OIL AND GAS	(57.8%)
2	GULFSANDS PETROLEUM	21%	2	LENI GAS AND OIL	(34.3%)
3	KEA PETROLEUM PLC	20%	3	FRONTERA RESOURCES CORPORATION	(33.7%)
4	NORTHERN PETROLEUM	19%	4	PETRO MATAD	(33.0%)
5	COVE ENERGY PLC	15%	5	PETRONEFT RESOURCES	(31.3%)

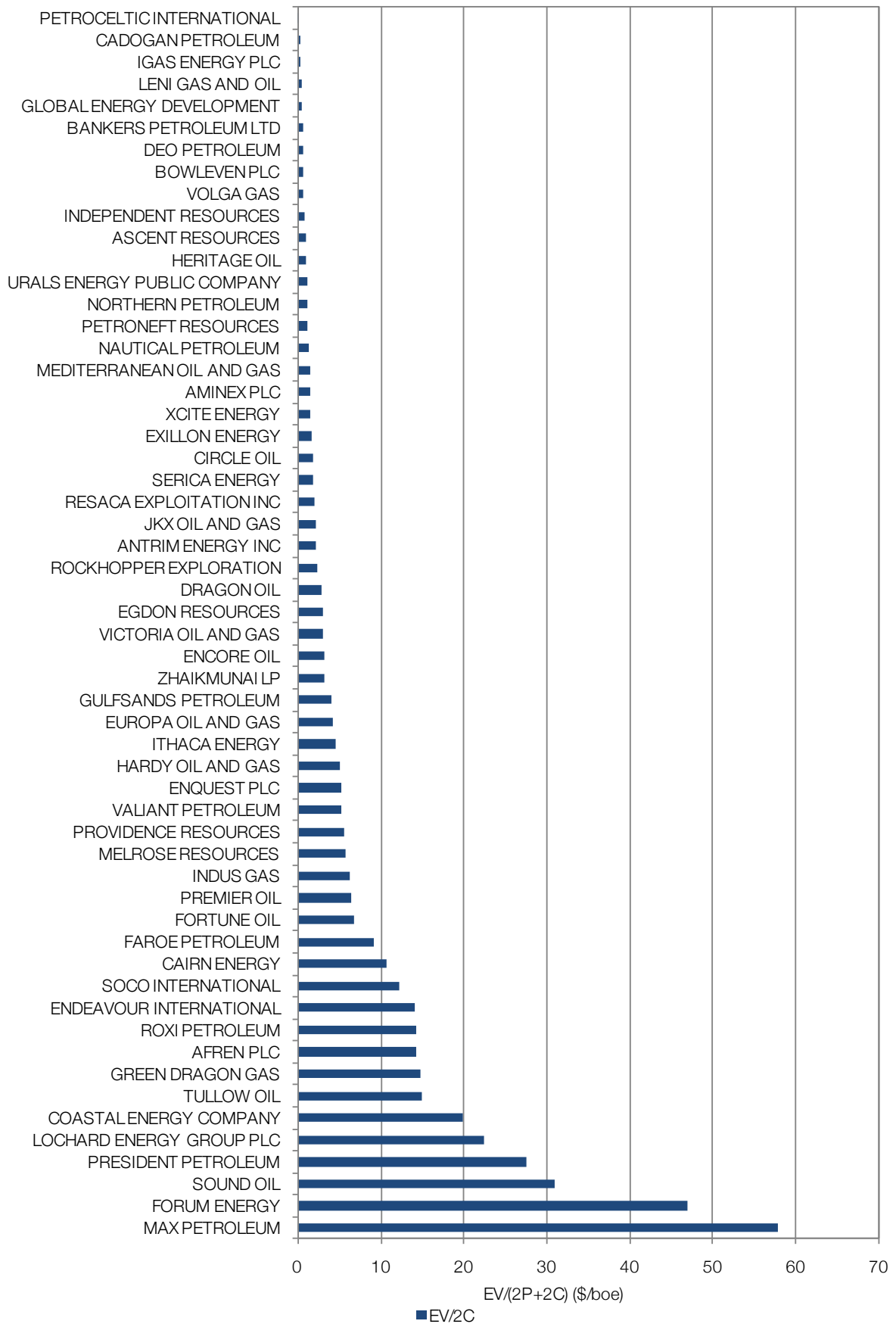
3 months					
No.	Best performers	% change	No.	Worst performers	% change
1	PRESIDENT PETROLEUM	20.6%	1	BOWLEVEN PLC	(70.4%)
2	COASTAL ENERGY COMPANY	19.4%	2	PETRO MATAD	(67.3%)
3	CADOGAN PETROLEUM	14.5%	3	AURELIAN OIL AND GAS	(65.8%)
4	LOCHARD ENERGY GROUP PLC	10.6%	4	PETROCELTIC INTERNATIONAL	(59.4%)
5	DESIRE PETROLEUM	8.7%	5	LENI GAS AND OIL	(58.3%)

6 months					
No.	Best performers	% change	No.	Worst performers	% change
1	COASTAL ENERGY COMPANY	47.4%	1	PETRO MATAD	(78.2%)
2	CADOGAN PETROLEUM	0.0%	2	FRONTERA RESOURCES CORPORATION	(75.3%)
3	GLOBAL ENERGY DEVELOPMENT	0.0%	3	BOWLEVEN PLC	(74.0%)
4	GULF KEYSTONE PETROLEUM	-1.8%	4	AURELIAN OIL AND GAS	(73.1%)
5	INDEPENDENT RESOURCES	-2.7%	5	PETREL RESOURCES	(63.1%)

1 year					
No.	Best performers	% change	No.	Worst performers	% change
1	COASTAL ENERGY COMPANY	153.0%	1	DESIRE PETROLEUM	(87.8%)
2	CADOGAN PETROLEUM	117.5%	2	FRONTERA RESOURCES CORPORATION	(82.7%)
3	BPC LIMITED	72.6%	3	PETRO MATAD	(79.6%)
4	RANGE RESOURCES	69.4%	4	NIGHTHAWK ENERGY	(73.1%)
5	SOUND OIL	61.4%	5	PETREL RESOURCES	(71.4%)

Source: Bloomberg

Exhibit 2: EV/2P + 2C rankings



Source: Bloomberg, company releases, Edison Investment Research

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