24 June 2011

Seismic reflections

US shale oil: An exciting investment story

US shale oil projects are red hot. Indicative of this is Marathon's recent $3.5bn acquisition of Hilcorp Resources, the owner of some prime acreage in the Eagle Ford play in South Texas. The deal values Hilcorp at an unprecedented $25,000/acre and the potential resources at $8/barrel. We believe US shale oil is one of the most exciting investment stories in oil and gas presently by virtue of the scale, quality and location of the resources available and the potential returns available at current prices.

Eagle Ford play

The Eagle Ford is the number two US shale oil play in terms of production after the Bakken/Three Forks formation in North Dakota and Montana. The oil window in the play is about 25 miles wide and extends for 120 miles between the South Texas counties of La Salle and Gonzales. Recoverable reserves have yet to be defined, but cursory analysis based on estimates made by major players such as EOG (largest EF acreage holder and producer), Petrohawk and now Marathon would suggest well over 5bnboe. Hilcorp's net risked reserves are estimated by Marathon at 400-500mmboe, while EOG's reserve position is put at 900mmboe. Significantly, EOG believes that the Eagle Ford is the largest Lower-48 oil play to have been identified in the past 40 years. A particularly important feature of the Eagle Ford formation is that it is a borderline carbonate reservoir. As a result, permeability and hence recovery rates tend to be higher than with other shale plays. We believe production in the Eagle Ford oil window is currently running at c 50,000boe/d, but over the next year or so could easily top 100,000boe/d, such is the pace of development. EOG has recently been producing at 23,000boe/d while Hilcorp's production in May was 7,000boe/d. Hilcorp is planning to boost production to 12,000boe/d by end 2011 and 80,000b/d by 2016.

Economics and development potential

The key operators in the Eagle Ford are now completing wells in the Eagle Ford with a high degree of repeatability using horizontal drilling and multi-stage fracking. Completed well costs are typically $6.5m to $8.5m, which translates into $17/barrel. Based on WTI at $90/barrel the netback, after allowing for finding/development and operational costs plus royalties and severance tax, is perhaps $35/barrel. A key question now is to what extent success in the Bakken and Eagle Ford plays can be replicated elsewhere. We believe the outlook is positive given the widespread existence of large-scale shale zones in the Mid-Continent. Emerging plays exist in the Denver and Powder River Basins and in the Tuscaloosa marine shale zone of Louisiana/Mississippi. Interestingly, EOG sees the potential to boost US oil production by 1.5mmb/d by shale development by 2015.

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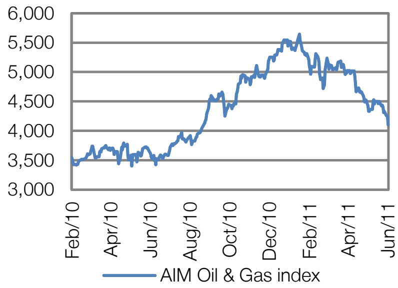

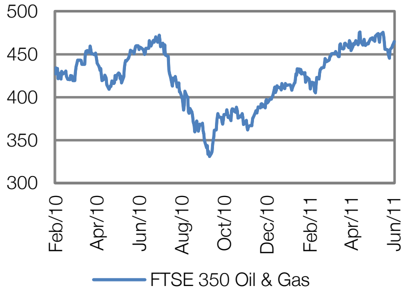

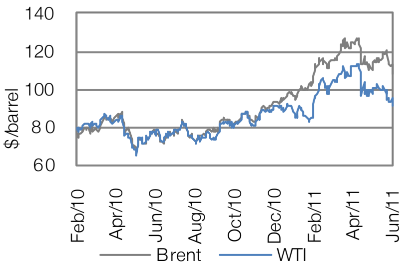

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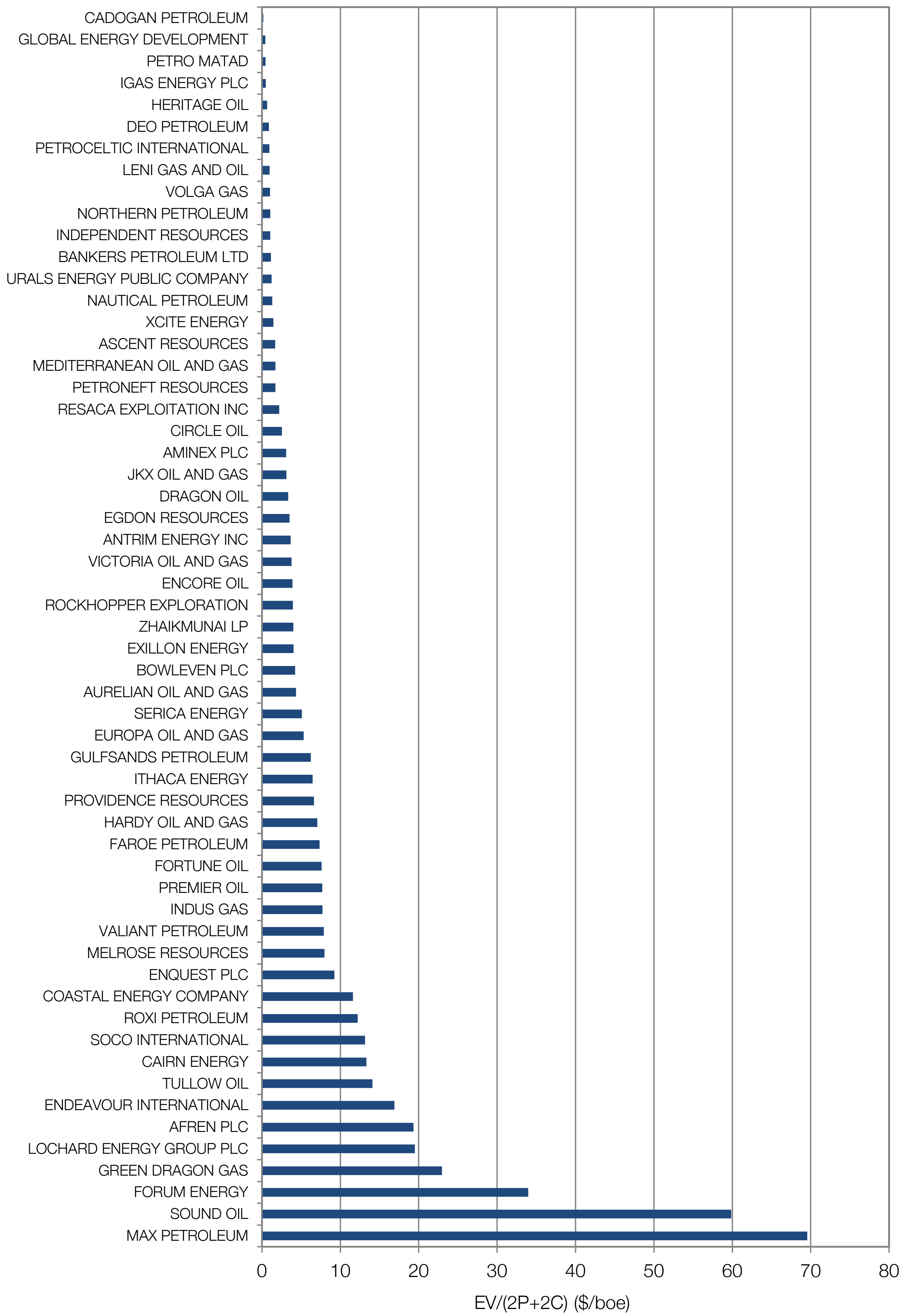
Exhibit 1: Best and worst performers

No.	Best performers	% change	No.	Worst performers	% change
		1 week			
No.	Best performers	% change	No.	Worst performers	% change
1	INDEPENDENT RESOURCES	53.5%	1	PETRONEFT RESOURCES	(33.7%)
2	FRONTERA RESOURCES CORPORATION	17.1%	2	PETRO MATAD	(27.4%)
3	PETREL RESOURCES	15.8%	3	CHARIOT OIL AND GAS	(26.7%)
4	PRESIDENT PETROLEUM	13.0%	4	GREEN DRAGON GAS	(23.1%)
5	HARDY OIL AND GAS	9.5%	5	SOUND OIL	(15.8%)
		1 month			
No.	Best performers	% change	No.	Worst performers	% change
1	DESIRE PETROLEUM	38%	1	PETRONEFT RESOURCES	(55.1%)
2	GLOBAL ENERGY DEVELOPMENT	28%	2	EUROPA OIL AND GAS	(36.2%)
3	INDEPENDENT RESOURCES	27%	3	CHARIOT OIL AND GAS	(33.4%)
4	ROCKHOPPER EXPLORATION	25%	4	NORTHERN PETROLEUM	(30.9%)
5	PRESIDENT PETROLEUM	20%	5	GREEN DRAGON GAS	(26.9%)
		3 months			
No.	Best performers	% change	No.	Worst performers	% change
1	HARDY OIL AND GAS	32.1%	1	XCITE ENERGY	(61.1%)
2	GASOL PLC	18.8%	2	DESIRE PETROLEUM	(56.7%)
3	INDEPENDENT RESOURCES	17.1%	3	EUROPA OIL AND GAS	(55.6%)
4	ENDEAVOUR INTERNATIONAL	16.5%	4	PETRONEFT RESOURCES	(49.1%)
5	VOLGA GAS	10.1%	5	CHARIOT OIL AND GAS	(48.8%)
		6 months			
No.	Best performers	% change	No.	Worst performers	% change
1	SOUND OIL	137.0%	1	DESIRE PETROLEUM	(73.0%)
2	RANGE RESOURCES	120.9%	2	PRESIDENT PETROLEUM	(70.9%)
3	CADOGAN PETROLEUM	72.4%	3	XCITE ENERGY	(64.9%)
4	VOLGA GAS	56.8%	4	ASCENT RESOURCES	(62.8%)
5	GLOBAL PETROLEUM	39.2%	5	PETRONEFT RESOURCES	(59.6%)
		1 year			
No.	Best performers	% change	No.	Worst performers	% change
1	BPC LIMITED	377.7%	1	DESIRE PETROLEUM	(81.6%)
2	TOWER RESOURCES	238.8%	2	NIGHTHAWK ENERGY	(76.3%)
3	RANGE RESOURCES	207.0%	3	FALKLAND OIL AND GAS	(71.0%)
4	SOUND OIL	146.2%	4	SERICA ENERGY	(68.2%)
5	BOWLEVEN PLC	143.9%	5	MEDITERRANEAN OIL AND GAS	(65.8%)

Source: Bloomberg

Exhibit 2: EV/2P + 2C rankings



Source: Bloomberg, Company releases, Edison Investment Research