Monday, 18 March 2013

TomCo Energy

Speculative Buy

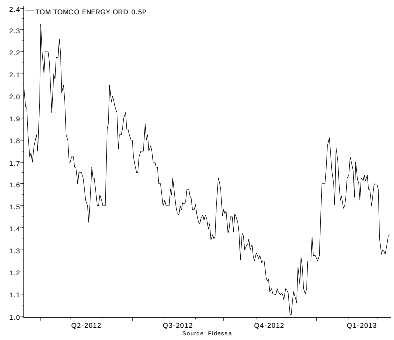
Current Price: 1.36p

Price Target: 3.00p

AIM: TOM

Sector: Oil & Gas Producers

Share price performance



Source: Fidessa

Key Data

Nomad:	*Numis*
Brokers	*Numis, Fox-Davies*
Website:	*tomcoenergy.uk.com*
12m high-low	*2.32p – 1.00p*
Mkt. Cap:	*£25.4m:*
No .of issued Shares:	*1,869m*
Fully diluted shares:	*1,935m*

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Oil Shale – The Next Game Changer

Oil Shale is the next potential game changer for the global energy markets. 75% of the world's 2.8 trillion identified barrels of oil presently locked in oil shale is in the United States. An investment in TomCo is a play on both its vast surface mineable JORC measured resource in the US and Red Leaf's EcoShale In-capsule technology. With oil giant Total funding Red Leaf's Early Production System JV, a major de-risking over the next 12 months should make TomCo's 2016 target for 9,800 bopd based on breakeven cash flow of US$50/bbl a very real possibility. Risks remain but there is light at the end of the tunnel and the scale of potential rewards is positively breathtaking. Price targeted at 3p/share, although a discounted NPV suggests a significant multiple of this.

- *TomCo has licensed Red Leaf Resources' EcoShale technology to exploit its near-3,000 acre licenses held on the highly prospective oil shale of the Green River Formation in Utah, USA. TomCo achieved an AIM quotation in July 2011, raising £3.5m through a Placing and Open Offer in order to fund its early stage development.*

- *The 'Holliday Block' alone is considered by SRK to hold some 126m barrels of contained oil. This places a valuation of just US$0.34/boe on Tomco, compared with a peer group comparison (unconventional oils) of US$2.19/boe and a Red Leaf-Total JV implied valuation of US$640m. TomCo's own internally projected net present value is US$500m, rising to US$1bn on production.*

- *In the same way that shale gas has demonstrated the potential to unlock huge energy production from home grown technology, shale oil techniques are widely expected to result in a leap in domestic US hydrocarbon output over the next few years. As the USA imports almost half of its energy from overseas, the directors see a continuing internal lobby for development of previously untapped national resources. TomCo's plan is to develop a 9,800 barrels of oil per day production facility with a 21-year life. First oil is slated for 2016, although this remains highly dependent on progress and recovery derived from commercial usage of Red Leaf's technology.*

- *EcoShale is said to offer an efficient solution for the extraction of shale oil in an environmentally responsible manner. There are competing technologies, some being used by the majors (surface retorts, in-situ retorts), but TomCo believes EcoShale is the most appropriate for its target resources. The technology which is now being funded by Total, has been rigorously lab tested. Low overburden stripping suggests minimal initial capital costs of US$5/bbl while being capable of yielding 21 gallons of oil/ton of shale.*

- *The share placing successfully completed earlier this month raised £1.781 million before expenses through an offering of 148,406,526 new 0.5p ordinary shares at a price of 1.2p each. Major holder (26.4%), Kenglo One did not participate, although it was supported by a number of new institutions and existing shareholders. The proceeds will be used to advance permitting required for commercial production and general working capital. TomCo has stated it will burn some US$6m to take it to the Red Leaf/Total final investment decision (say, early 2015), so there may be a further modest equity fund raise between now and then, or possibly a partial disposal of their direct US$5m investment is Red Leaf stock.*

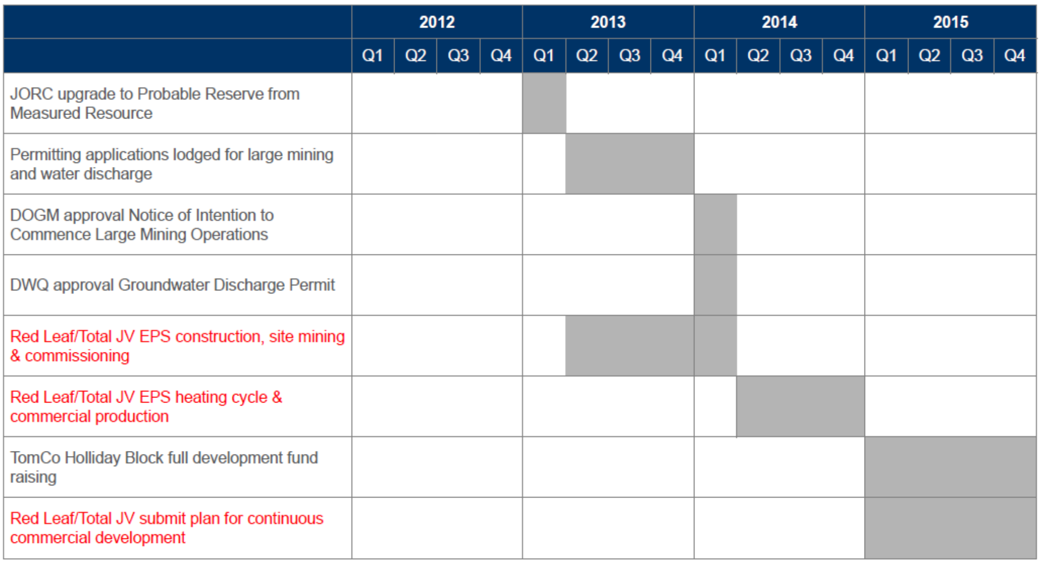
TomCo Project Summary

TomCo's resource comprises a 2,919 acre lease in Uintah County, Utah, of which 1,000 acres are the Holliday Block. These 100%-owned Utah State leases expire in December 2024.

The Green River formation, which passes through Utah, Colorado and Wyoming has an estimated 1.5tr barrels oil in place. The richest layer is in the Mahogany Zone, in which Tomco's 1,000 acre Holliday block has achieved a JORC Measured resource amounting to 126mmbbl, based on extraction of 21.0 gallons of oil/ton and a low life-of-mine stripping ratio of 0.9. This compares with Red Leaf's Seep Ridge project, which is some 15 miles away, with an estimated 90 to 119 mmbbl based on 19.9 gallons/ton.

TomCo's process technology partner is Red Leaf Inc., whose EcoShale production capsule is a low energy and environmentally friendly solution for the extraction of oil from surface mined shale. Red Leaf owns an analogous adjacent property which has signed a development JV with Total in order to prove the EcoShale technology. In turn, TomCo holds an exclusive licence with Red Leaf in respect of its current leases, which permits access to all technical reports and know-how. TomCo intends to follow Red Leaf into production immediately following deliver of first oil from its EPS capsule project, which is planned for early 2014. At this time, the JV will reach its final investment decision and commence a major capital project estimated at US$200m. In order to bring itself to a similar state of preparation, Tomco intends to gain full permitting for its own project and bring line power to site. This, along with its general working capital requirements, is expected to burn approximately US$6m over the next 21 months.

Expected TomCo* and Red Leaf Operational Steps



* *TomCo's strategy is to follow Red Leaf into production, timetable is therefore dependent on progress of Red Leaf*

Source: *Tomco Energy & Questerre Energy*

Holliday Block – Project Economics

Key metrics for TomCo's Holliday Block project are based on the following assessment. This implies an operating cost of US$37.4/bbl. Start up capital expenditure, which includes infrastructure and three ESP capsules, of US$263m. Federal taxes are high at 35%, while Utah will refund 75% of its own State tax over a 20 year LOM. As well as royalties payable to red Leaf, production royalties accrue to Utah Trust Lands Administration (SITLA), as detailed below:

Tax & Royalties	
Federal tax	*35%*
State tax	*5%*
Utah State tax refund (75% for 20 years)	
Read Leaf royality	*6%*
Production royalty (SITLA):	*5%*
Increasing after 5 years by up to 1% pa; 12.5% max; first 200,000 barrels per annum royalty free	

Source: *Tomco Energy*

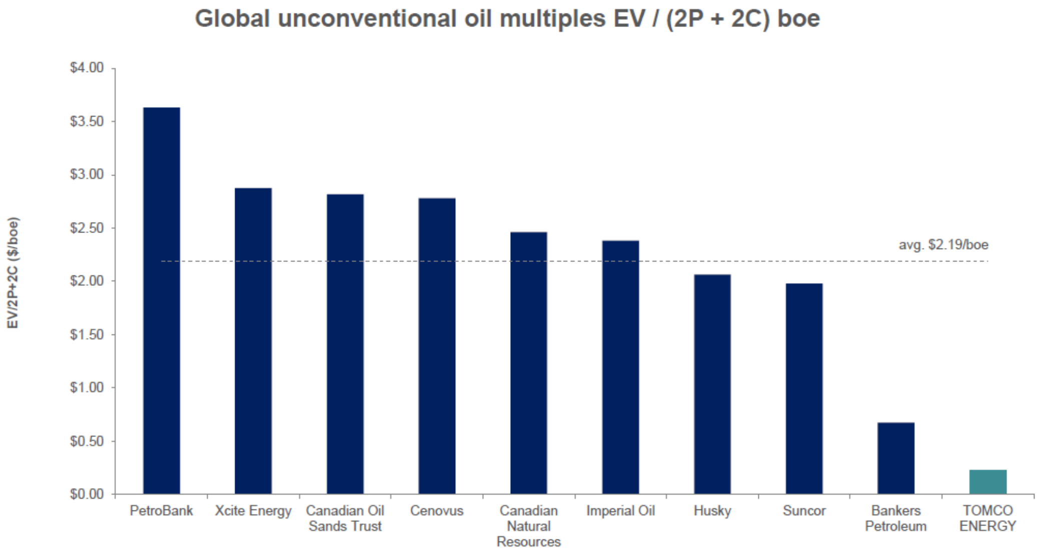
Expected CAPEX and OPEX	
Start-up Capex (Infrastructure & 3 capsules)	*$263m*
Ongoing Opex:	
Mining, stacking and construction	*$12.4 / bbl*
Transportation	*$9.0 / bbl*
Oil collection	*$5.2 / bbl*
Input fuels	*$5.8 / bbl*
Other	*$5.0 / bbl*
Total	*$37.4 / bbl*

Source: *Tomco Energy*

TomCo Valuation

Stock markets tend to over discount uncertainty with respect to developing technologies. Red Leaf's EPS capsule technology has been extensively tested in laboratory conditions, which means that the market is placing a right risk its ability to be sustainably operated on a commercial scale.

The bar chart below demonstrated that TomCo's relative valuation compared with other global unconventional oil players, based on multiples of enterprise value to 2P plus 2C barrels of oil is particularly low. The next 12 months will see this considerably de-risked and the gap potentially significantly narrow. An elementary cash flow model, discounted at 35% and assuming a 21 year LOM, stripping at 0.9, recovery at 80% and extraction at 21 gallon/ton, suggests TomCo should achieve an EV/2P +2C in excess of US$0. 75/boe right now. This could potentially be multiplied by a factor of 5 upon Red Leaf and Total announcing a positive Final Investment Decision ('FID') end - 2014/early 2015.



Source: *Bloomberg and Tomco Energy*

The Red Leaf/Total Joint Venture – EPS Capsule Technology

The Joint venture requires Total to pay 80% of the first US$400m spent to commercially develop Red Leaf's existing surface mineable Utah assets in exchange for a 50% participating interest. The JV will invest US$200m in an Early Production System ('EPS') to prove the commercial scalability of red Leaf's EcoShale process before the final investment decision on the remaining US$200m. Total also invested a further US$25m in Red Leaf equity as part of the latter's US$100m fund raise. TomCo invested US$5m in Red Leaf's offering.

Total's financial commitment provides an important third-party validation of the technology. In exchange, Total also gains exclusive rights amongst the majors for use of the technology.

TomCo - Background

TomCo Energy was first admitted to AIM in 1995 as Manx & Overseas, and in its early years, it focused on internet technology. This followed a reverse takeover of a private company involved in website content management software, and its re-naming as Netcentric.

In March 2006, Howard Crosby was appointed to the Board following his acquisition of 29.9% of the then issued share capital, and the business changed its investment focus to US-based natural resources. Accordingly, the Company acquired The Oil Mining Company Inc in January 2007, bringing in the oil shale leases still owned today. The leases, ML 49570 and ML 49571 cover an aggregate 2,918.8 acres and are valid to the end of 2024. The rent is US$1 per acre per annum, payable to the state of Utah.

The name TomCo simply derives from The Oil Mining Company, describing the company's principal activity of extracting rock which contains oil, and processing it thereafter. One of TomCo's founders, John Ryan, worked closely with Howard Crosby at Cadence Resources, which rose in value from US$1m in 2001 to over US$450m in 2006, and he remains a substantial investor in the company. Despite its pedigree and valiant attempts to grow the TomCo business with new acreage in the US, the company became bogged down in the subsequent market malaise of 2008 and beyond, in particular suffering from an ill-fated venture with Avenue Group Inc to acquire 50% of the Heletz-Kokhav oil field in Israel. The problems ultimately saw TomCo cancel its AIM listing in August 2009. The Israeli venture failed over contractual difficulties, which led to legal claim and counterclaim, ultimately resulting in a compromise agreement in late 2010. This compromise saw TomCo relinquish its claims over the Israeli assets in return for a 10% holding in the local operator, Avenue Energy, and an indemnity from Avenue's parent to cover losses directly suffered by the Group in relation to this issue. For the purpose of this communication, we are not considering any value that may come from this interest.

Investment from Kenglo One in December 2009 provided the necessary finance to give the Group the basis for a new start and prepare for a return to AIM. At this stage, Messrs. Crosby, Ryan and Thompson left the board and Kenglo's nominee, Sir Nicholas Bonsor, joined as Chairman. TomCo made its return to the public markets in July 2011, following a successful IPO placing and open offer.

Current Board of Directors	
Sir Nicholas Bonsor Bt DL	***Non-Executive Chairman***
Paul Rankine	***Chief Executive Officer***
Miikka Haromo	***Finance Director***

Source: *Tomco Energy*

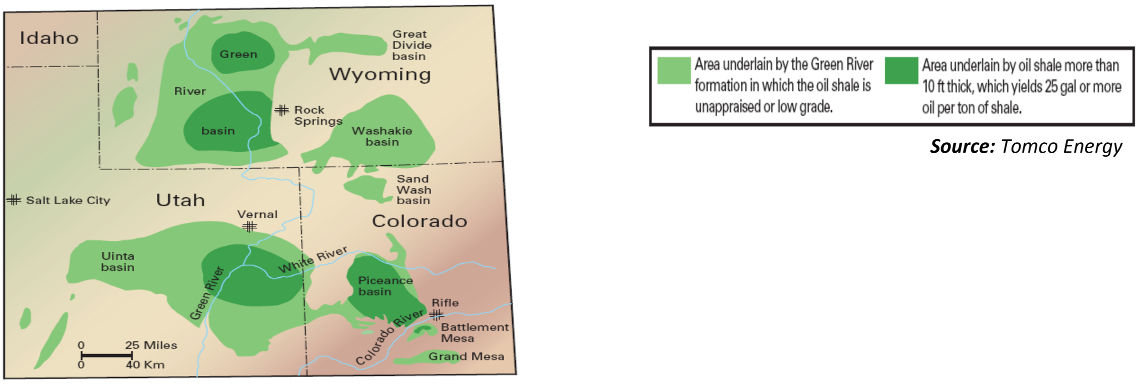
The Shale Oil Opportunity

Shale oil is synthetic oil produced from oil shale rocks through pyrolysis. Kerogen, the base material for much conventional oil, is trapped within sedimentary rock such as shale, and by heating it can be freed and extracted for commercial use. Conventional oil plays usually occur in areas where kerogen has been in place and under pressure for many millions of years, whereas 'unconventional resources' like oil shale tend to be younger in geological terms and in lower pressure environments. As pyrolysis involves heating tons of rock for a number of hours or even several weeks at temperatures of between 400°F and 900°F, it is inevitably an expensive process.

Accordingly, oil shale deposits have been largely untapped as technology has not been available to commercially exploit them. Today's high energy price environment (NYMEX crude sits at around

US$95/barrel) coupled with advances in extraction technologies mean that shale deposits (like, for example, Canada’s Alberta tar sands) are moving from being seen as future energy banks to genuine production assets. The USA’s main oil shale deposits are located in Utah, Wyoming and Colorado, where over 1.5 trillion barrels of oil (of which around 800 billion may be recoverable) are thought to be in place. Such a figure places domestic US resources way above those claimed for conventional assets in any one place elsewhere in the world. For Green River, the ‘Mahogany Zone’ is the most prolific basin holding oil shale and is so called due to the brown colour of the kerogen-rich rock when it is exposed.

Shale oil in mid-continent USA



Source: *Tomco Energy*

Oil yields can be impressive, too, with 20-40 gallons of oil per ton of rock (the rock within TomCo’s Holliday Block is considered capable of production at 22 gallons per ton). With this locked-up potential, Utah in particular has become the focus of activity surrounding the development of a new oil shale production industry and the Board believes there is strong political support for just that.

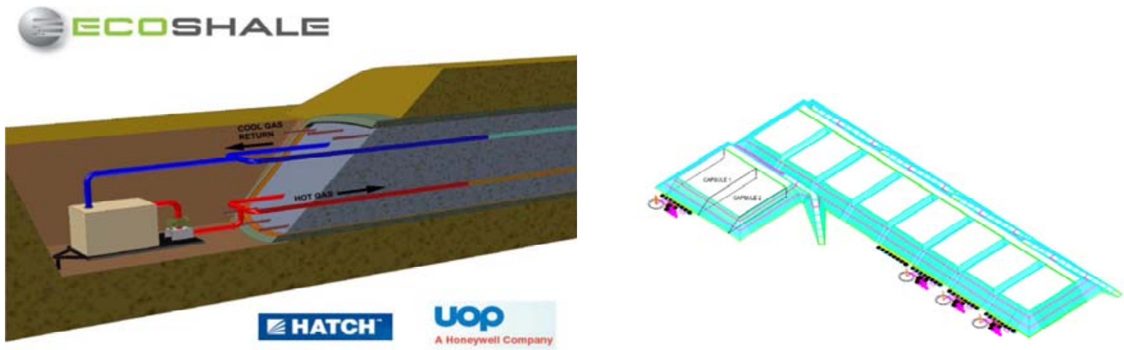
In 2011, the USA last year imported 44.8% of its oil, but this figure was over 60% as recently as 2005. It consumes some 19.5 million barrels per day, so development of a large and sustainable domestic supply is an economic priority. The US Department of Energy’s 2004 reports, "Strategic Significance of America's Oil Shale Resource" and "America's Oil Shale: A Roadmap for Federal Decision Making" both underlined proposals for a sustainable shale oil industry by 2020. These included modelling development on the public-private funding initiatives that created Canada’s tar sands industry, notwithstanding the environmental controversy surrounding it.

Where TomCo differs from its peer group in the USA is that EcoShale appears to offer a more environmentally sound development and remediation plan, with a far smaller environmental footprint than alternative technologies.

Licensed technology to exploit oil shale

Extracting oil from shale has been in practice for around 100 years, with differing levels of success, but to date no reliable and sustainable solution. Two main methods have been used so far; a “retort” process and “in-situ”. Retorts are stand-alone processing units into which open cast or underground mined oil shale stock is fed, whereas in-situ involves the extraction of hydrocarbons at source in order to be pumped to the surface through a well. EcoShale incorporates elements of both processes and is best suited to near-surface deposits of small-to-medium size, which can be easily mined.

EcoShale uses ‘capsule’ technology, whereby the source rock is first mined and then deposited in a capsule of insulating layers, which improve the efficiency of heating and prevent migration of the fluids so released. The process is effectively a hybrid of retort and in-situ methods. The technology works best for deposits where there is a low stripping ratio/overburden and as each capsule is depleted and the site remediated, a new one is formed from a previously mined site. EcoShale is considered by the directors to be unique and environmentally sensitive when compared to its competitor technologies, including those being planned and indeed deployed by certain oil majors in the region. Capsule construction is expected to comprise over 5 each year, with 3 being in heating and production phases at all times. It operates with na 210-day heating cycle, reaching temperatures of 385 celcuis, with first oil after 100 days and peak oil following after 150 days. Total production per capsule is estimated at 686,000bbl, based on 9,800 bopd and implying annual production of 3.58m bbl from 5.2 units. The capsule effectively also functions as its own waste containment vessel.



Source: *Red Leaf Resources*

In late March 2010, TomCo signed a US$2m licence agreement with Red Leaf, providing access to the EcoShale technology as it evolves, so that Red Leaf's developments can be mirrored on TomCo's acreage. In addition, TomCo will pay a 6% production royalty to Red Leaf, in addition to the State and other royalties, given ultimate ownership of the land. The Board expects development at Holliday to be around a year behind Red Leaf's plant at Seep Ridge, where it is planning a 9,800 bopd plant to be in production by 2013. The Seep Ridge pilot capsule, only 15 miles from TomCo's land, was heated for 100 days between November 2008 and February 2009, producing 300 bbl oil and 125 bbl condensate. Condensate levels were below those expected, largely due to absorption by the insulation blocks surrounding the 57,000 cu ft test shale capsule. It was found that using crushed shale in the insulation layer greatly reduced the absorption levels. The process produced a high quality product, free of fines, with a 65% paraffin and naptha mix at 29 API gravity, and about 12.6% hydrogen. The condensate had an approximate 39 API gravity, at 55% paraffin and naptha, and about 12.9% hydrogen. Red Leaf estimates that EcoShale can produce 10 times the energy consumed in production, so that for every one unit of energy used in heating the rock and in extraction, some ten units of energy are released. This ratio is improved due to lower temperature heating than competitive and historic technologies. Plant modelling and the pilot studies have led management to believe that the EcoShale process works in a pricing environment where the market price for oil is greater than US$50/bbl.

Reported Financials

Key reported financials (£000)

Year to September	*2009*	*2010*	*2011*	*2012*
Revenues	*135*	*12*	*18*	*Expected*
Admin expenses	*(970)*	*(1,017)*	*(1,687)*	*For*
Pre-tax profit (loss)	*(1,696)*	*(1,546)*	*(2,196)*	*publication*
Net profit (loss)	*(1,696)*	*(1,546)*	*(2,196)*	*Shortly*
Net cash	*(811)*	*(2,077)*	*475*	
Net Financing Activity	*-*	*3,367*	*3,090*	

Source: *Tomco Energy*

Strengths and weaknesses

Strengths	*Weaknesses*
• *TomCo is focused on the development of highly prospective shale oil and gas acreage in a stable jurisdiction;*	• *Technology is in its relative infancy and not yet proven to work on a commercial scale;*
• *Potentially 126 barrels JORC compliant Measured Resource present, providing a project NPV10 of US$500m, rising to US$1bn on production;*	• *TomCo is reliant upon Red Leaf to commercialise the technology on its land first before it can do so at Holliday*
• *Originally refinanced with backing from Kenglo One, the Jersey-based investment vehicle;*	• *The company is exposed to risks inherent within oil and gas exploration and production;*
• *A licence to deploy evolving EcoShale technology, which incorporates aspects of the two most popular shale oil extraction technologies today;*	• *Shale oil remains expensive to extract and a significant downturn in the oil price may affect project economics and sentiment*
• *Total funding to prove technology following pilot study by Red Leaf demonstrating the concept on land only 15 miles from TomCo;*	• *Although finance has been found in the past, significant further funding will be required.*
• *High energy price environment and socio-political pressures for US to develop previously untapped, but unconventional, domestic resources.*	

D

Source: *HB Markets*

Information Sources: *Company website, Company Slide Show Presentations, Industry Analysis and Sector Comparisons, Contact with TomCo Energy Board of Directors and other Executives, Petro Canada, Canadian Oil Sands Trust, Media reports, HB Market's Energy Price Forecasts, UK Oil & Gas, the London Stock Exchange, the Toronto Stock Exchange and the Ontario Securities Commission, Institute of Energy Research, Total website, Red Leaf website*

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