StockAnalysis

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By Peter Strachan

Hot Topics

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Indices and Prices	
All Ordinaries	5,675.00
Energy Index	9,091.50
Brent AU$/bbl	73.399
AUS$/US$	0.7584
Live Gold/AU$	1,599.03
As at close 31 January 2017	

In This Issue

Market Moves

Tale of the Tab

StockAnalysis has hit the ground running this year with a couple of its early recommendations trading well and StockAnalysis believes offering more upside.

So far in January, StockAnalysis' selections have averaged a 20% return, which works out at an annualised 367%. Sale of stocks at their highs post recommendation would have yielded a 28% return. Meanwhile, the All Ords and Energy Indices have fallen by 2.5% and 2% respectively so far this year.

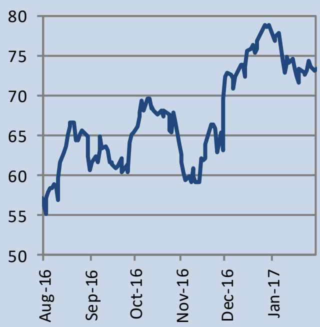
Summary from-to		Move %		
11-Jan-17	31-Jan-17	Total	annualised	At High
StockAnalysis		20%	367%	28%
All Ords		-2.5%	-45%	0%
Energy Index		-2.0%	-36%	2%

Gold Live AU$

All Ordinaries

S&P ASX 200 Energy Index

Brent Crude Oil $AU/barrel



AU$/US$

StockAnalysis is confident that laggards, Independence Gp and Western Areas will recover when the market realises that Indonesia's moves to allow some nickel laterite exports will have next to zero impact on metal supply and demand balance this year.

Code	Stock	Date Reco	Share Price Reco	Share Price At High	Share Price 31-Jan-17	Change %	annual %	To High %
ADX	ADX	11-Jan-17	$ 0.01	$ 0.019	$ 0.018	125%	2281%	138%
HAV	Havilah	18-Jan-17	$ 0.659	$ 0.730	$ 0.700	6%	175%	11%
SGC	Sacgasco	18-Jan-17	$ 0.073	$ 0.081	$ 0.075	3%	77%	11%
IGO	Independence	18-Jan-17	$ 4.120	$ 4.180	$ 3.770	-8%	-239%	1%
WSA	Western Areas	18-Jan-17	$ 2.690	$ 2.770	$ 2.450	-9%	-251%	3%
FAR	FAR	25-Jan-17	$ 0.078	$ 0.082	$ 0.080	3%	156%	5%

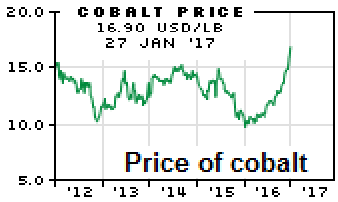
Sacgasco (SGC: ASX) has given Bombora Natural Energy an additional week to sort out funding that should enable it to exercise an option to take up an additional 10% working interest in the Dempsey drilling campaign in California, planned for April this year.

With a market capitalisation of just $12.3 million and a very tight share register, Sacgasco remains highly leveraged to success.

The company has also finalised purchase of an additional 35% in the Dempsey and Alvares prospects by issuing 32 million shares to the previous partner Peregrine. This, along with early exercise of 7.6 million options at 3 cents each, raises total shares on issue to a very modest 170.4 million and puts $228K in the bank. The company has also issued 22 million optimistically priced December 2019 options to Directors and consultants exercisable at 15 cents, which would raise a very handy $3.3 million when exercised.

Sacgasco remains a speculative buy ahead of finalising funding for this year's exploration programme and the drilling of a high impact well in California, where success could be worth more than 50 cents per share for a 320 Bcf discovery.

Spare cash will be applied to acquiring leases at modest cost over recently identified leads in the Northern Sacramento Basin, ahead of finalising additional farm-in and other funding arrangements for the drilling of the Dempsey prospect and a possible well integrity test at Alvares ahead of deepening, recompleting and flow testing or twinning that well.



The **price of cobalt** has gone ballistic and there seems to be no stopping it here. Supply from the Democratic Republic of Congo (a complete contradiction in terms if ever there was one) and neighbouring Zambia has become ever more insecure. Global electronics firms are reluctant to source cobalt from places like the DRC, where children are exploited to mine the stuff. Meanwhile cobalt demand from Li-ion battery makers keeps rising.

	Company	Size (Mt)	Co (%)	Co metal (kt)	Project	Mineralisation style
1	**Ardea Resources**	**805**	**0.05%**	**386.4**	**Kalgoorlie Nickel Project, WA**	**Laterite Ni-Co**
2	CleanTeq Holdings	109	0.10%	114	Syerston, NSW	Laterite Ni-Co-Sc
3	GME Resources	108	0.06%	65.1	NiWest Project, WA	Laterite Ni-Co
4	**Ardea Resources**	**50**	**0.12%**	**59.6**	**KNP Cobalt Zone, WA**	**Laterite Co-Ni-Mn**
5	Conico Limited	32	0.12%	39.3	Mt Thirsty, WA	Laterite Ni-Co
6	Cobalt Blue Hlding	36	0.08%	30.0	Broken Hill, NSW	Co sulphide
7	Regal Resources	4	0.72%	29.1	Kalongwe, DRC	Cu-Co sulphide
8	Havilah Resources	18	0.10%	17.5	Mutooroo, NSW	Cu-Co sulphide
9	CuDeco Limited	57	0.03%	16.7	Rocklands, Qld	Cu-Au-Co sulphide
10	Mithril Resources	27	0.05%	13.4	Leaky Bore, NT	Cu-Co sulphide
11	Platina Resources	9	0.15%	12.6	Owendale, NSW	Laterite Ni-Co-Sc
12	Independence Gp	14	0.08%	11.4	Nova-Bollinger, WA	Ni-Cu-Co sulphide
13	Augur Resources	16	0.05%	8.2	Homeville, NSW	Laterite Ni-Co
14	Cougar Metals	10	0.07%	7.1	Pyke Hill, WA	Laterite Ni-Co
15	Hammer Metals	6	0.11%	6.5	Millenium, Qld	Cu-Au-Co sulphide

Source: Ardea

A number of nimble smaller companies are reacting swiftly. **Aus Tin Mining** (ANW: ASX) raised $1.6 million at 1.1 cents per share to spend on its Mt Cobalt project, where recent drilling has shown some nice Co grades along with nickel. **Broken Hill Prospect** (BPL: ASX) has spun off **Cobalt Blue**, which will list shortly, with funds directed at its Thakaringa cobalt project, where Resources amount to 35 mt grading 0.08% Co, containing about 66,000 tonnes of cobalt, worth a cool A$2.8 billion if it can be mined and processed commercially.

Most cobalt is found either in combination with nickel or copper in sulphide ore. Havilah's Mutooroo deposit is a fine example of a sulphide source, holding 17,000 tonnes of cobalt in combination with copper. Cobalt is often found as a by-product in low grade oxide or laterite deposits, like those of Heron's spin-off, **Ardea Resources** that will list on the 9th of February, with ownership of the Kalgoorlie Nickel Project which has 380,000 tonnes of contained cobalt in 805 mt of low grade material. Importantly, the Ardea project has 49.7 mt of high grade mineralisation grading 0.12% Co and 0.86% Ni, containing 59,640 tonnes of cobalt.

Just as we have seen previously in graphite, rare earths and lithium, there will no doubt be a new wave of speculative fever in the cobalt sector. Just wait until EFT's get formed to follow it!

Laterite deposits tend to be multi hundred million or even billion dollar projects that require several years to design and construct. The present low price of nickel will hamper newcomers, so existing projects like Independence's Nova, will benefit from by-product credits.

Havilah is exploring ways to effectively capture the value of copper, nickel, sulphur and iron in its Mutooroo project in South Australia (not NSW as stated in the data from Ardea above).

3D Oil regains 100% of its Otway gas play

Code	TDO
Shares	237.5 m.
Options	1.0 @ 10 cts
Price	$ 0.045
Market Cap	$ 10.7 m.
Cash (est)	$ 3.0 m.

***Recommendation:* As a result of Beach Energy's surprise withdrawal from permit T-49-P, there may be some share price weakness for 3D Oil. StockAnalysis believes that with its 100% retained interest in T-49-P, 3D Oil is now in a stronger position to conduct farm-out negotiations over the project in which it might retain a higher ultimate interest. Assuming NOPTA's approval to delay drilling, TDO will have plenty of time to run a methodical approach to attract the right partner to fund drilling.**

The stock remains a speculative buy on any market weakness. Investors will need to ride through a possible new equity issue and hold for up to a two year time frame.

Beach Energy (BPT: ASX) provided funding of $8 million towards a 3D seismic survey over the Flanagan prospect in T-49-P in order to earn a 30% interest. 3D Oil has now reclaimed 100% control of its flagship exploration permit in the Otway Basin, following a surprise withdrawal by Beach Energy.

TDO Valuation	$m	$/shr
Net cash	3	0.009
New equity (est)	5	0.014
Corporate	-7	-0.021
Options	0.1	0.000
Sub-total	1	0.003
Flanagan	37	0.107
Risked Exp'n	7	0.020
Total risked	45	0.129

Source: Strachan Corporate

3D Oil is the operator of the T-49-P permit and it remains in discussion with several potential partners on a confidential basis, with the aim of funding drilling on one or more of the main targets in the permit. Beach, which has had four Managing Directors over a two year period, has its own strategic issues to resolve. Technical merit and project continuity may have been blurred at Beach over this opportunity as the company works to improve its operating cash flow, including by prioritising existing operating projects over exploration with little or no regard to their technical merit. Under normal oilfield practice, TDO as operator would keep the identity of any parties in the T-49-P data room confidential from non-operating partners, so Beach should not have known the credentials of potential partners with whom TDO is in discussion.

Taking the long view, Beach's withdrawal is a huge overall win for TDO.

The energy market in Eastern Australia is seeing a strongly rising gas price trend as CSG to LNG projects in Gladstone scoop up all available gas, pushing domestic gas prices higher.

Drilling costs and equipment options are likely to improve into 2018. Several companies are looking to drill appraisal and exploration wells in the Otway, Bass and Gippsland Basins in 2018, including AWE and Origin at BassGas and AWE around Vic-P-44's Casino project in the Otway. Timing for exploration drilling in TDO's permits may prove to be fortuitous as a multi well programme would reduce costs and possibly enable a multi-well option over T-49-P. An incoming partner will have time to gather additional 3D seismic data and may find lower risk targets further south from the Flanagan prospect.

StockAnalysis calculates discovery of 1.38 Tcf of gas at the Flanagan prospect would be worth 47 cps to TDO if the company retains a 25% interest and gas has an insitu value of 80 cents per Gj.

TDO is reviewing data on its 24.9% held VIC-P-57 permit, where it has technical oversight. Deep gas targets may be matured for drilling along with smaller oil targets that could also be slotted in for drilling alongside a programme on T-49-P.

TDO has significant leverage to what it sees as Prospective targets totalling 7 Tcf of gas.

AWE in transition

Capital Structure	
Code	**AWE**
Shares	526.7 m.
Perf Rts	7.0 m.
Share Price	$ 0.580
Market Cap'n	$ 305 m.
Net cash (est)	$ 10 m.
EV	$ 295 m.
EV/BOE 2P	$ 4.20
EV/BOE 2P+2C	$ 1.82

Recommendation: By most measures, AWE looks cheap, trading with an EV of A$4.20 per BOE of 2P Reserves and A$1.82 per BOE of 2P plus 2C Reserves and Resources.

However, earnings will be restricted until oil and gas prices recover in 2018 and until new project development at the Waitsia gas project in 2021 and at the AAL oilfield beyond 2019 begin to impact the bottom line.

AWE's quarterly report reveals a company in transition. Legacy assets in the Perth Basin at Cliff Head, in the Taranaki at Tui and in Indonesia at the Bulu PSC have all been sold. The company currently has net debt of $20 million, but its hedge book is worth about $10 million and completion of asset sales should add about $30 million to cash once the sales are finalised.

AWE is well-capitalised with substantial undrawn debt capacity and a strong petroleum Resource base. Cash flow will be supported by expanding production out of BassGas as compression installation kicks in by June, as well as from its Otway gas project and developing Stage I Waitsia gas project. The company offers leverage to project developments at the AAL oilfield in Indonesia and Stages II & III at the large Waitsia gas project onshore WA.

The company's 50% owned flagship Waitsia gas development is presently running at around 8.5 Tj of gas per day or ~1,400 boepd. Initial gas production flow from the Kingia and High Cliff Sandstone formations has performed better than anticipated, demonstrating a better sustainable flow that is likely to reduce capital development costs and possibly increase recoverable reserves. Further appraisal and development drilling is planned for H1 2017, as part of a Stage II development of conventional gas reserves.

Market interest in Perth Basin gas has been strong, with bids received for gas volumes that totalled twice the project's current 2P Reserves. AWE plans to bring Stage II into production in 2020 at a rate of 100 Tj per day, equivalent to 16,666 boepd. Such a project should generate revenue of about A$140 million pa to AWE, resulting in earnings of at least 10 cps in full production.

The company's 50% held AAL project was strengthened by results of appraisal drilling last year. This work expanded deeper oil Reserves and improved the quality of known oil. The AAL development will not be a low cost operation. AWE's partner Santos does not have the financial capacity to move forward with development of what might end up being an initial +US$500 million project to produce ~40,000 bbls of oil per day. Santos may prefer to sell down or stall the project until it has visibility to an oil price of +US$70/bbl, which may suit AWE, given its focus on a more tangible and immediate Waitsia development.

AWE Valuation	$ m	$ ps	%
BassGas	65	$0.12	11%
Bass Exploration	137	$0.26	23%
Perth Basin	199	$0.38	34%
Otway Basin	73	$0.14	12%
Indonesia (AAL)	160	$0.30	27%
Net cash (est)	10	$0.02	2%
Corporate	(60)	-$0.11	-10%
TOTAL	**583**	**$1.11**	**100%**

Source: Strachan Corporate

On the horizon, AWE plans to drill exploration targets in the Taranaki, the Bass Basin and the Otway in 2018 and beyond.

Ducks slowly in a row for Redflow

Capital Structure	
Code	**RFX**
Shares (est)	394.7 m.
ITM Options	2.5 m. Av $0.19
Price	$ 0.215
Market Cap	$ 85 m.
Cash (est @ Jan '17)	$ 5 m.

Recommendation: Weak communication with the market on its product sales progress and finance updates, along with the normal rollout issues concerning sales channel integrity and manufacturing process, has seen Redflow hammered in the market.

Despite growing competition from other flow battery technologies and multiple lithium-ion battery products, StockAnalysis places trust in management and sees a bright future for Redflow.

During late 2016, process optimisation at the Mexican factory of its manufacturing partner FLEX saw changes that will boost production to meet demand during 2017. After producing 84 batteries during the last quarter of 2016, Redflow has cranked up production of its ZCell battery to 90 per month.

The current production line has capacity to deliver as many as 2,000 units per annum, but Redflow plans to increase supply to meet its estimated product demand and is actively planning additional scale-up options beyond existing capacity.

Redflow has commissioned a business review by an independent party that will be delivered in March '17. This plan will outline strategy and make recommendations concerning:

- ✓ Market development for the battery product
- ✓ Competitor products
- ✓ Manufacturing and supply process and logistics
- ✓ Pathways to market for the product in different environments, e.g. through direct marketing, via industry intermediaries, power systems integrators or some other model
- ✓ Finance and organisation structure requirements, including Board skill set.

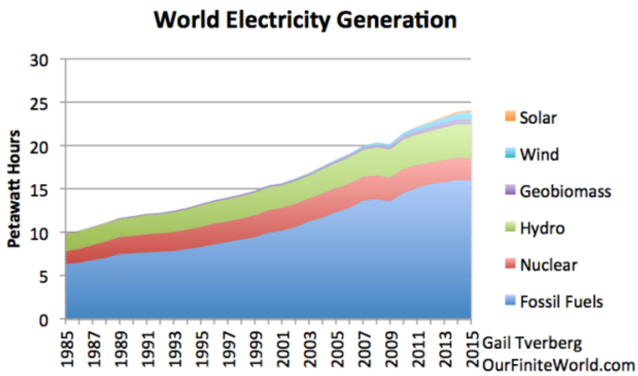
StockAnalysis believes that this process will see some Board renewal by mid-year, after which a favoured further funding option for working capital will be revealed.

The ZCell battery product continues to be sold and tested widely. Product evaluation is being paid for by parties in Singapore, Thailand and the Philippines while the product is also under evaluation in some European nations as well as India. Redflow has built a relationship around combining ZCell batteries with the Victron inverter/charger hardware. This product, combined with an improved Battery Management System that will allow further software upgrades, should extend product life and negate any fears about product obsolescence. To this end, the product now comes with a 10 year or 35,500 Kwh warranty and it has been rated for fire safety with a very low compliance burden, giving it a clear competitive advantage against some competing products.

Y/E June 30		2017	2018	2019	2020	2021	2022	2023	2024	2025
Sales										
single units @ $ each	$12,000	550	1,080	2,000	2,600	3,640	5,096	7,134	9,275	12,057
Large scale @$ each	$730,263	2	4	6	20	35	70	98	137	192
Revenue	$m.	$8	$16	$28	$46	$69	$112	$157	$211	$285
Operating Margin		12%	15%	30%	30%	30%	30%	30%	30%	30%
Operating cash flow		$1.0	$2.4	$8.5	$13.7	$20.8	$33.7	$47.2	$63.4	$85.5
R&D expense		-$3.5	-$4.0	-$3.0	-$3.2	-$3.4	-$3.5	-$3.6	-$3.8	-$3.9
Administration		-$4.5	-$4.5	-$5.0	-$5.4	-$5.6	-$5.8	-$5.9	-$6.1	-$6.3
Corporate cash flow		-$7.0	-$6.1	$0.6	$5.1	$11.7	$24.4	$37.6	$53.6	$75.3
Tax	27%							-$10.1	-$14.5	-$20.3
Net cash		-$7.0	-$6.1	$0.6	$5.1	$11.7	$24.4	$27.4	$39.1	$55.0
NPV	10%	$238 million								
		$0.53 per share								
Source: Strachan Corporate										

StockAnalysis has upgraded its model, boosting expected sales for FY 2017 by 150 units and lifting sales to over 1,000 units in FY 2018. A much faster roll out is possible, driven by sales demand. StockAnalysis believes that Redflow could be delivering over 2,000 units next year and that sales could grow much more rapidly, depending on the availability of working capital and progress of process upgrades with FLEX.

Soapbox



There is something wrong with this analysis which does not take into consideration the environmental costs of each type of energy supply. Looking at the issue in pure monetary terms without costing the long term impact of emissions seems wrong to me, but Gail's work is always well worth reading.

"The "Wind and solar will save us" story is based on a long list of misunderstandings and apples to oranges comparisons. Somehow, people seem to believe that our economy of 7.5 billion people can get along with a very short list of energy supplies."

https://ourfiniteworld.com/2017/01/30/the-wind-and-solar-will-save-us-delusion/

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