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The musings of the Edison Oil and Gas team since March 2015

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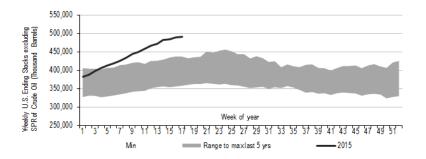
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Review of US onshore - Inventories, rig productivity and production rates

by Will Forbes 30 April 2015

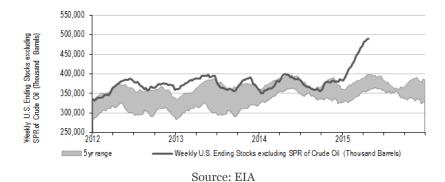
Stocks

The slow-down in the growth of US crude inventories has continued this week, with stocks starting to flatten out. At some point the sharp cut in rig count was going to have an effect, and this is now actually starting to be felt.

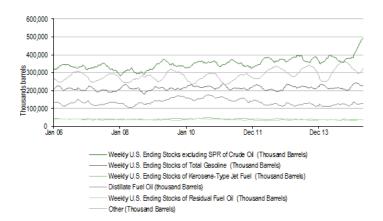


Source: EIA

The crude stocks are still at record highs though.



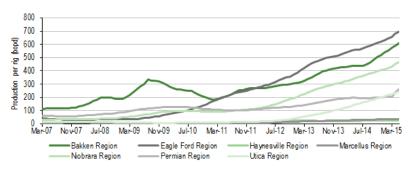
Crude stocks levels are not paralleled by inventories of gasoline, distillate or other products. Gasoline and distillate are very close to 5-year average ranges for this time of year.



Rig productivity and outlook for oil production

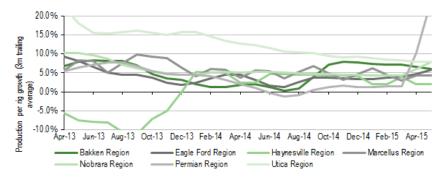
While the rig count has fallen, rig productivity has increased markedly. Notably, the Permian region has seen a spike in the rates in April and May, with rates increasing from 200bopd in January to 265bopd in May. We will watch the next few data points in coming months to see how this develops. The Permian currently accounts for

2.0mmbd or about 36% of US onshore production so this is not an immaterial data point.



Source: DPR

Elsewhere, the rate of increase in rig productivity is now normalising with average increases of c.5% (per month) across the regions. It is not hard to appreciate that growth rates of 5% per month have had a significant offsetting effect despite the drastic reduction in rig count since late 2014.

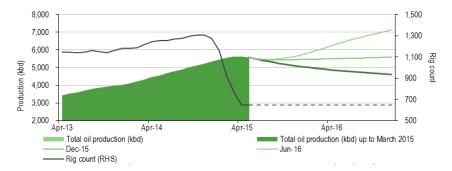


Source: DPR

How much of this growth rate is due to better completion techniques, or increased concentration on sweet spot areas need to be better understood, but at some point these growth rates will slow and eventually flatten out. How long this takes makes a significant difference to the overall production story.

Effect on US production

Our current model assumes a fade of rig productivity over time (applying the most recent rig counts). The three scenarios laid out below assume that the growth rate in production per rig fade to 0% by the dates given (from current growth rates). We can see how different fades will affect headline production.



The results imply that US crude production is likely to at least flatline unless rig count continues to decline or rig productivity growth rates lessen quickly.

Shell posts a blowout quarter in downstream

By Kim Fustier 30 April 2015

Shell beat consensus expectations by ~30% in 1Q thanks to a blowout quarter in refining & marketing (where BP and Total also beat on Tuesday). Its downstream division posted the best quarterly earnings since the 'golden age of refining' in 2006-07. R&M profits were buoyed by strong global refining margins, cost savings initiatives and a healthy contribution from trading. Other majors with high exposure to downstream such as Exxon should also benefit from the current favourable refining environment, highlighting the value of integration.

Shell's Upstream performance was far less stellar, due to lower oil & gas prices and FX movements. Upstream Americas made its biggest quarterly loss in at least a decade.

Having previously guided to flat y/y capex of \$35bn in 2015, Shell is now pointing to a \$2bn reduction vs last year's levels, reflecting delays to project sanctions. This does not come as a huge surprise as oilfield service costs continue to fall, giving majors opportunities to lower their project breakevens.

BP's 1Q results show refining strength + tax one-offs

By Kim Fustier 29 April 2015

BP's first-quarter results came in slightly better than expected; however this was largely thanks to one-off positive UK tax effects (as BP booked the benefit of the North Sea tax reduction in the quarter) rather than stronger underlying performance.

BP's upstream profits were hit by lower oil and gas prices as well as break fees for two deepwater rig contracts in the US Gulf of Mexico, which sent BP's US upstream business into a loss. Rig cancellation costs are likely to show up in other majors' results this quarter, as all majors rein in offshore drilling activity.

On a positive note, BP appears successful at cutting costs as it took a number of simplification and efficiency measures early and aggressively, but this is not yet enough to offset the weaker macro.

Results were also boosted by a buoyant downstream, once again demonstrating the value of integration. Majors with high downstream exposure such as Shell, Total or Exxon should benefit from the strong global refining environment, which BP expects to last into the second quarter.

A look at sentiment

By Will Forbes 16 April 2015

Investors in E&Ps have suffered over the last few years as poor exploration success has exacerbated reducing returns (caused by increased capex and higher costs of capital). Sentiment in the sector has fallen, but is this measurable?

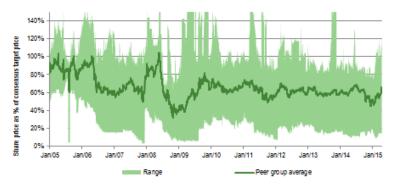
We think not, but there are some indicators that may be weak proxies.

Percentage discount of oil shares to estimated value (consensus analyst value)

We start by making the bold assumption that an approximation to the value of the company is the average target price as published by stock analysts.

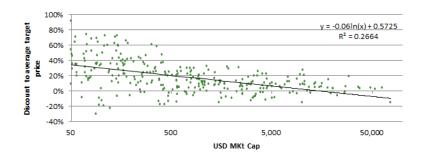
Taking an index of London-based E&P companies over time and comparing the analyst valuations with actual share prices shows that the market-applied discount to E&Ps has changed little since January 2012. The apparent discount that the market applies is around 40%.

Recent movements (such as Dec 2014-Feb 2014) are more likely the lag of analysts updating models than an actual move in sentiment (shares prices more quickly reflected the oil price falls than analysts).



Source: Bloomberg, Edison Investment Research

When examining individual companies, it is important to note the size effect. As companies become larger, more investors and analysts cover the company and we believe this is why we see the correlation between market cap and discount to consensus target price, as below. This view of an efficient market hypothesis would also explain why the range of uncertainty decreases with size as companies grow in market cap.



Source: Bloomberg, Edison Investment Research

It is also true that the smaller E&Ps are those with the greatest uncertainty in outcomes - this is perhaps the result of having fewer exploration targets, which does not mesh particularly well with the application of probabilistic CoS in general use.

Given this, one would assume it fair that this uncertainty would give rise to a greater discount to target prices, which tend to use consistent principles across the space.

Objections to this approach

Readers can very easily raise objections to this approach. Consensus target prices will be affected by the analyst's over-riding macro assumptions (assume \$80/bbl or \$100/bbl for long-term oil prices) and risk application (how

is the level of exploration value to apply calculated). For example, in the boom years of mid 2000's, analysts and investors were more likely to include more exploration value, whereas it is our impression that inclusion of longer-dated exploration is less likely now.

Without a full database of analyst models/notes, it is not possible to separate out these effects.

If this is true, it is up to the analysts to adapt their approaches to take this into account. We will expand on this theme in later blog posts.

First Falklands well in two years looks positive

By Elaine Reynolds 7 April 2015

An oil discovery at the 14/5b-5 well is a successful start to the four well North Falkland Basin campaign for Rockhopper (RKH 24%), Premier Oil (PMO 36%) and Falkland Oil & Gas (FOGL 40%). The well sits immediately to the south of Sea Lion in PLoo4b and was testing the extension of the F2 sands that represent the existing discovered resources at Sea Lion, as well as the the deeper untested F3 sands. All seven predicted reservoirs were encountered with oil in the primary target, Zebedee, and gas in the shallower Hector target. Good oil shows were recorded in the F3 targets, but the sands were not well developed at this location.

Of the targets encountered, pre-drill chances of success were highest at Zebedee (52%) and Hector (27%) so it is perhaps not a surprise that these are the two zones that have been most successful. However, even at these confidence levels there was a decent chance that the well could have failed, so we consider these results to be broadly positive.

The Zebedee fan encountered 25.3m of net oil pay with reservoir quality among the best found in the region to date. Pre drill resource estimates for all the targets ranged between 165mmbbls (PMO) and 281/282mmbbls (RKH/FOGL) with the Zebedee fan expected to contribute in the region of 50mmbbls. Of particular interest we note that FOGL believes that the Zebedee fan is in communication with Sea Lion based on pressure measurements. This would potentially impact FOGL's share of Sea Lion itself once unitisation discussions get underway at some point in the future.

The rig will now move some 40km to the south of Sea Lion to drill Isobel Deep. This well is higher risk than Zebedee and is only targeting the F3 sands. The F3 oil shows in Zebedee have demonstrated their potential to be hydrocarbon bearing, but better developed sands will need to be present here for the well to be successful.

Nigerian elections

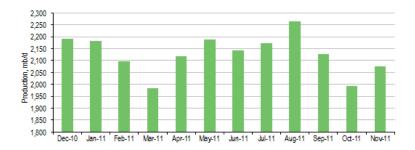
by Will Forbes 26 March 2015

Nigeria turns out to vote in the 2015 Presidential election on Saturday 28 March. Incumbent President Goodluck Jonathan is campaigning against Muhammadu Buhari, a former Major General who ruled Nigeria from December 1983 to August 1985. It is a repeat of the 2011 election, in which Goodluck Jonathan won 59% of the vote. Current polling is difficult to come by, but media reports suggest a close race.

The choice left to Nigerians was characterised by the economist as between President Jonathan, "who has proved an utter failure, and the opposition leader, Muhammadu Buhari, a former military dictator with blood on his hands". The title of its article is perhaps telling... "The least awful".

The election day had been delayed (from February) due to security concerns, and the government has banned vehicle use on polling day to ensure security. Many fear that violence could follow as it did in 2011, especially as Mr Buhari has refused to condemn any violence - something the New York Times highlights as could be seen as an invitation to cause unrest.

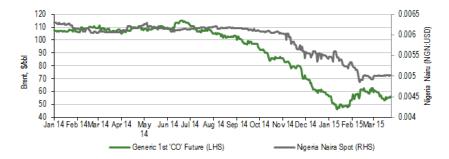
Historically, the 2011 election had little impact on production, and there are few indications so far that any major disruptions are evident in this cycle so far.



Source: OPEC. Note march 2011 dip mainly due to maintenance at the Bonga deepwater field

Major challenges await the winner

The Nairu has collapsed along with the oil price and has sent the economy into difficulties. Around 70% of GDP was related to oil in 2014 and without a clear path to stronger oil prices, Africa's largest economy will have to readjust to a new normal. Large swathes of the population live in poverty and the government will have to address this, as well as the ongoing Boko Haram violence and corruption.



Source: Bloomberg

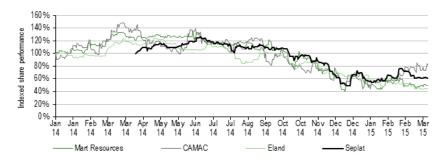
The winner should seek to pass the PIB (Petroleum Industry Bill) which has been long delayed and has contributed to reticent inward investment. Nigeria is well known as an oil-rich province and clearer, fairer regulations should encourage exploration and development.

This will, almost by necessity, require investment in underlying infrastructure that should benefit communities more widely. A fairer distribution of the proceeds of oil production is also necessary if the country is to reduce the

extensive oil theft that is leaving the country billions of dollars worse off.

Nigerian-focused companies

Unsurprisingly, Nigerian E&Ps have had a difficult time as the oil price has collapsed. Afren's difficulties may have contributed to investor skepticism about Nigeria's corruption issues making decisions to invest in Nigeria even more difficult.



Source Bloomberg, Seplat is indexed from IPO date

All of these companies have production but have declined by as much as 55% since the start of January 2014.

As an indicator of leverage to oil prices in Nigeria, Seplat indicated on its FY2014 results call that the oil price it requires to make returns is \$42-49/bbl (this is why it reduced its number of 2015 wells from 23 in previous guidance to 10 in the current environment).

And finally...

Is oil now so cheap that its not worth stealing? Wall Street Journal (paywall)

Hit guidance and stocks fly - the crazy world of junior E&Ps

By Ian McLelland 24 March 2015

Last week, EnQuest delivered some solid numbers in its 2014 results presentation. They were nothing spectacular but the company reported production, revenues and EBITDA inline or marginally above previous guidance from January.

More importantly, the long term growth drivers of the company (namely its Alma/ Galia and Kraken projects) were reported to still be on track for first oil in mid-2015 and 2017 respectively.

So you might have expected the stock to be up 2-3% maximum - and you would be wrong. In strong trading, the stock gained an impressive 15% in the first couple of hours and held firm over the next two days. We think this is noteworthy, not because EnQuest strongly beat expectations (it didn't) but because it reflects just how pessimistic investors and analysts are of E&P performance at the moment.



EnQuest has clearly suffered more than most in the market as its shares have tumbled from 200p to 35p over the last year. Its more senior creditors are also not immune, with 5.5% retail bonds still languishing at 70p in the pound, having been trading as low as 50p in January. The company is a relatively high cost producer and has sizeable capex commitments ahead, especially for Kraken, that will stress the balance sheet.

However, we were very encouraged by the news in late January that the company had agreed a relaxation of senior debt covenants (ND/EBITDA increased to 5x through to Kraken first oil). This was important news and the stock was rewarded with a 15% hike. Of note we learned that this came at the cost of a 20bps hit on the senior debt - a small price to pay for what represents valuable security for the company.

You might also have thought the Wednesday pre-election budget news would be a positive. However with EnQuest not expected to be paying any material cash tax in the UK until 2025, this is probably also off the mark.

So all told the 2014 results really held nothing particularly new or unexpected - unlike the earlier bond reset - and yet saw a similar increase in share price to this important breakthrough. Courtesy of some sensible material hedging (and a \$100m 2015 gain) the long term drivers and financial stability of EnQuest look better than they have for a while. It's just that these were largely in place on Wednesday evening before the results, making the market reaction to Thursday's news still something of a surprise.

Ophir results - Acting counter-cyclically... or not?

By Kim Fustier 19 March 2015

We attended Ophir's FY14 results presentation at 10.30am today. Surprisingly - even if Ophir was clashing with EnQuest's results at 9am - the room was only half full... (I remember a time not too long ago when people had to stand at the back of the room!)

Bottom line: 2015 looks to be a year of consolidation post Salamander acquisition, with little drilling action until 2016-17.

What is Ophir doing in the downturn?

CEO Nick Cooper talked much about Ophir being "brave" and "counter-cyclical" in this environment. Everyone knows seismic costs are down 2/3 and drilling costs are down 30% from their 2014 peak. However, Ophir's 2015 E&A activity will be mostly about 3D seismic acquisition and analysis in four countries (Gabon, Myanmar, Indonesia, Seychelles), with very little exploration drilling happening until 2016-17.

Unfortunately, without significant drilling in 2015, Ophir's "counter-cyclical" strategy is limited to seismic, which typically represents only around a fifth of total E&A spend and drilling the remaining 80%... we think rig rates are likely to remain depressed into 2016-17, when Ophir is ready to award rig contracts and go back to exploratory drilling.

With this caveat in mind, Ophir is indeed taking advantage of lower seismic rates and increasing activity rather than reducing spend too much. For instance it tripled the size of its 3D seismic survey in Myanmar in Feb 2015 for the same budget.

For 2015 Ophir only has two commitment exploration wells targeting low-cost, high-value liquids liquids in the Gulf of Thailand from the legacy Salamander portfolio.

After the extensive acreage reload of the last 12 months (doubling its exploration footprint), Ophir sits on 12 exploration plays in five countries. The majority is oil and rest "easily monetisable" gas. Everything is expected to work at \$50/boe. Ophir management's personal Top 3 plays are Myanmar, West Papua (Indonesia) and outboard Gabon, despite last year's non-commercial wells – Ophir is now interpreting 3D seismic shot in 4Q14. In 2H15 Ophir should be able to select drilling targets for 2016-17. It could drill in Gabon and the Seychelles in 2016 and in Indonesia in early 2017 (previous expectation was 2016). This is the time when it truly could go counter-cyclical.

LNG updates - pushing to the right

While plenty of LNG projects around the world have been put on hold, Ophir's big two LNG projects in Tanzania and Equatorial Guinea are making progress, with FID planned in 2017 (possibly even 2016 for EG if all goes well). Both projects could be farmed down ahead of FID - in particular EG so that it becomes self-funding. However, Tanzania appears to be delayed further and is definitely slipping behind EG in the overall timeline. Two issues in particular could be problematic to get Tanzania LNG to FID:

- elections in Tanzania could slow down the land selection process, even though the site was identified 12 months ago;
- partner alignment with the Statoil/Exxon consortium in Block 2 is less than perfect, despite what Ophir/BG are saying publicly. As a non-operated junior partner in a big LNG project, Ophir has little control on the project timeline, now more dependent than ever on Majors' top-down capital allocation decisions.

All in all, first LNG in Tanzania looks set for 2022, a whole four years after the original start-up date of 2018 tentatively given back in 2011. In our minds, this once again highlights how easy it is for big projects to be delayed.

In EG, the MoU with Excelerate in Nov 2014 for a 3mpta FLNG vessel was a major milestone. Ophir now needs to finalise chartering agreement for the FLNG vessel. It is targeting a FEED award on both upstream and midstream by end-2015, FID in 2016 or 2017 and a start-up in 2020.

EG is seen as ideal to prove up FLNG concept given dry gas (simple topsides) and good metocean conditions, leaving little technical risk in Ophir's view. \$1bn gross capex to first gas. Its landed cost of LNG in Asia is seen at \$10/mbtu, which seems very low to us.

What does it take to make an LNG project fly?

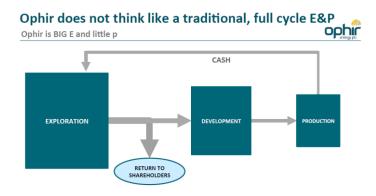
Nick Cooper gave interesting views about what it takes to get an LNG project over the line. Yes, economics and price breakevens do matter (eg US brownfield is likely cheaper than East Africa greenfield, so should move quicker in theory), but at the end of the day it's all about ticking 4 - 5 boxes:

- 1. resources,
- 2. fiscal terms,
- 3. JV partner alignment,
- 4. land/midstream...
- 5. ... so that buyers come in.
- Only item #4 (land/midstream) is missing for Tanzania and EG. Once that's agreed, buyers should
 consider the projects to be "real" rather than "possible" or "speculative", paving the way for gas
 SPAs.

Big "E", small "P" - is this a sustainable business model?

Ophir's thinking and strategy is quite similar to Tullow (at least up until recently): producing assets' raison d'être is to generate OpCFs that are reinvested into the E&A business.

The Salamander acquisition, completed in March 2015, was essentially a (late) recognition from Ophir management that Ophir needed to own producing assets to move towards a more sustainable, self-financing business model, as the company can't solely rely on farm-downs/disposals to fund its E&A programme. This is all very sensible in light of the countless farm-out delays and number of upstream assets for sale these days, making a purely disposals-driven funding model unsustainable in our view.



Source: Ophir

Having said that, Ophir remains mostly about "E" rather than "P". Its overarching goal is to avoid development capex, hence why there is very little focus at Ophir on production targets.

Indeed group production is seen down to 10-12kbd in 2015, down from 14.2kbd in 2014. Ooops. Part of the reason is that the Kerendan (Indonesia) operated gas development delayed from 2015 to 2H 2016 - this was known pre-Salamander acquisition and outside of company control.

Salamander assets are expected to generate c \$150m of cash in 2015 from the non-operated Sinphyhorm gas field and the operated Bualuang oil field in Thailand. Nice but still well below a reduced 2015 capex budget. Salamander assets are seen as low-cost with a \$15/bbl break-even.

In line with Ophir's focus on the "exploration" part of the E&P lifecycle, the company is looking to farm down assets. Four assets could be candidates: Kerendan (development) and Bualuang (producing – Salamander previously received buyer interest), or its 2 LNG projects ahead of FID.

Conversely, Ophir says it is unlikely to farm into further assets in 2015 given substantial acreage reload over the last 12 months and the Salamander acquisition.

Cutting capex and costs, like everyone else...

2015 capex guidance cut by another 15% from previous guidance to \$250-300m, down >50% y/y from \$580m in 2014. Previous guidance from Nov 2014 was \$300-350m.

Within this, only \$35m is committed exploration capex (with a similar run-rate in 2016-17). The remainder is discretionary seismic capex. Ophir could shift seismic spend from one country to another, but overall 2015 budget shouldn't move much from here. This means Ophir can cherry-pick the best opportunities.

New \$250m cost savings target over 2015-16 split between capex, overheads and acquisition synergies

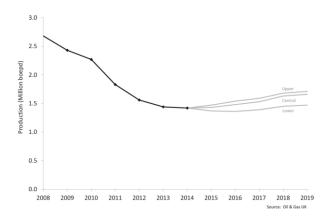
UK Election Budget: Impact on the UK oil & gas industry

By Ian McLelland 18 March 2015

So we had an interesting budget at last for the North Sea as Osborne finally puts back taxes to where they were pre-2011 when he massively shook up the market with increases to the supplementary charge. Reducing the supplementary charge and PRT to 20% and 35% respectively may just arrest the dramatic underlying flight we have seen from the industry in recent years.

The OBR assessment that production will be boosted by 15% by the end of the decade is nothing transformational – Oil & Gas UK had already predicted this as its "central" forecast in its most recent 2015 industry outlook.

Oil & Gas UK activity survey 2015: Production Forecast for the UK Continental Shelf



Sustaining the growth however is going to require a mixture of strengthening oil prices and confidence that taxes are not going to rise once again.

The big unknown at this stage is what form the "single, simple and generous tax allowance" will take next month and how this could affect many of the companies with projects still awaiting final investment decisions. Hopefully the government has thought through all the unintended consequences before it confirms the new allowances – its track record of this over the last five years is hardly auspicious.

Reserves - better not blink or they could be gone

By Ian McLelland 13 March

In a week of carnage among the UK listed E&P mid-caps, one of the more puzzling big fallers is Soco International. At the time of writing the stock is down nearly 40% from the start of the week as investors get to grips with a spectacular drop in 2P reserves, from 130mmboe to 41mmboe. However, this reeks of a potential over-reaction and a lack of understanding among much of the analyst community as to what reserves actually mean. We therefore think it is worth considering in this post what companies and independents auditors actually mean by the simple words "reserves".

Reserves Definition

Although there are variations by jurisdiction, most reserves auditors follow or align their codes with the industry standard of the "Petroleum Resources Management System" as laid out by the Society of Petroleum Engineers (SPE). Anyone with even a passing interest in the E&P sector should bookmark both the guidelines and the PRMS on their web browser using the links below:

SPE PRMS Guidelines November 2011

SPE Petroleum Resources Management

In here there are some magic words about what defines "reserves" over the other industry standards or contingent and prospective resources. The golden rules to define reserves (taken from 2.1.2 of the PRMS) are as follows:

"Evidence to support a reasonable timetable for development

- \cdot A reasonable assessment of the future economics of such development projects meeting defined investment and operating criteria
- · A reasonable expectation that there will be a market for all or at least the expected sales quantities of production required to justify development
- · Evidence that the necessary production and transportation facilities are available or can be made available
- · Evidence that legal, contractual, environmental and other social and economic concerns will allow for the actual implementation of the recovery project being evaluated."

Furthermore, there is a clause in there about internal and external approvals that is particularly relevant to Soco.

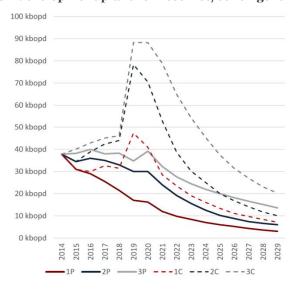
· "There must be a reasonable expectation that all required internal and external approvals will be forthcoming, and there is evidence of firm intention to proceed with development within a reasonable time frame"

Implications for Soco

So what's happening over at Soco? Like all companies Soco is assessing its options as it comes to grips with a different macro oil price and cost environment. At the same time, it's working through an optimised development plans to maximise recovery at its flagship TGT block in Vietnam - with its partners (PetroVietnam and PTTEP). This follows two years of work by ERC Equipoise to update reservoir models, work that continues to develop. While none of this work necessarily points to a fundamental difference in understanding of the TGT reservoir where net 2P reserves were previously 117mmboe (including CNV), the fact that things are up for review and local partners are not yet aligned on development plans has triggered the criteria that has moved a large chunk of TGT out of reserves and into resources.

The oil is still there, the economics should remain sound (Soco quotes breakeven development economics of \$55/bbl) – it's just a case of recoverable oil (possibly temporarily) being moved out of the reserves categorisation. Soco's TGT development plans for contingent resources (gross production for each of the reserves/ resources cases as below taken from 2014 results presentation) show the oil is still there.

Soco's TGT development plans for reserves/contingent resources

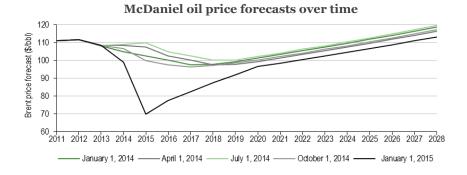


Source: Soco

Who else could be affected?

Investors are prone to treat reserves in a black and white manner when in fact their definition can often be far less clear. There are therefore investment opportunities for those who can anticipate reserves downgrades/upgrades due to any of the criteria above, even if there is little change in the underlying economics or development concept.

Where things get interesting is when considering operator and partner alignment for developments and how these can be affected by the current macro environment. Long term, we do not anticipate most reserves auditors to be changing economics for reserves classification – Canadian auditors generally use McDaniel & Associates price forecasts (McDaniel forecasts) and these indicated only a modest reduction of c \$3-5/bbl in long range price outlook in its most recent forecasts (from January 2015 over 2014). We have plotted the last five quarters Brent outlooks from McDaniel to show how little long range forecasts are actually moving in the long term, even when short term prices are clearly well down.



Source: MacDaniel

What investors need to ask though is - Are there are projects out there with evolving development plans, where reserves have been booked, funding is tight and/or where partners may not be in alignment over potential development plans? This could be the trigger to precipitate material downgrades in reserves, even if only temporarily.

Omne trium perfectum

by Will Forbes 13 March

Everything comes in threes

This week was not a good one. It has seen three major announcements by well-known London-listed oilers, resulting in week-to-date share prices falls of 20% for Cairn, 38% for Soco and 12% for Afren.

For **Cairn**, a tax bill of more than your market cap is not the best news in the world, especially when it comes unexpectedly during the day of your full year results. See a blog post earlier this week from Kim Fustier (<u>link</u>)

Soco's downgrade of 2P reserves from 130.1 to 40.8mmboe. This triggers a useful recap of exactly what constitutes resources and resources - see a lengthy blog post from Ian McLelland.

Are **Afren's** woes now over?

In all likelihood, the refinancing announced this morning will result in existing shareholders holding just 11% of the fully diluted shares of Afren. This may provide a near-term solution to financing requirements and stave of a complete write-off of investors' cash but a number of questions still remain that an incoming CEO and management will need to address.

- How does Afren move forward with its relationship with Oriental and AMNI (partners in Ebok and Okoro respectively)? These fields accounted for 95% of Afren's 2014 production;
- What should Afren do with Barda Rash, where 2P +2C reserves were downgraded from 1,400 to 250mmbbls in January 2014?

ORIGINAL TEXT

OPHELIA

Oh, what a noble mind is here o'erthrown!—
The courtier's, soldier's, scholar's, eye, tongue, sword,

Th' expectancy and rose of the fair state,
The glass of fashion and the mould of form,
Th' observed of all observers, quite, quite down!
And I, of ladies most deject and wretched,
That sucked the honey of his music vows,
Now see that noble and most sovereign reason
Like sweet bells jangled, out of tune and harsh;
That unmatched form and feature of blown youth
Blasted with ecstasy. Oh, woe is me,
T' have seen what I have seen, see what I see!

MODERN TEXT

OPHELIA

Oh, how noble his mind used to be, and how lost he is now! He used to have a gentleman's grace, a scholar's wit, and a soldier's strength. He used to be the jewel of our country, the obvious heir to the throne, the one everyone admired and imitated. And now he has fallen so low! And of all the miserable women who once enjoyed hearing his sweet, seductive words, I am the most miserable. A mind that used to sing so sweetly is now completely out of tune, making harsh sounds instead of fine notes. The unparalleled appearance and nobility he had in the full bloom of his youth has been ruined by madness. O, how miserable I am to see Hamlet now and know what he was before!

Hat tip to Spark notes - Spark notes link

Thoughts post Cairn FY14 results & India tax update

by Kim Fustier 10 March

Since we posted our blog about Cairn's results presentation, the company has released material news on the Cairn India tax situation. It confirmed that it has received from the Indian income tax department a draft assessment order quantifying the tax claim for the 2006-07 fiscal year at \$1.6bn, plus any applicable interest and penalties. Cairn had not previously given guidance on the Indian tax assessment.

When the dispute was first announced, the shares dropped by around \$400m over four days. Whether anymore of the claimed liability will be priced in, time will tell.

It is worth noting that Cairn has not made nor intends to make accounting provisions to reflect the Indian tax claim, indicating its level of confidence in resolving the issue to its advantage.

Cairn's FY14 results presentation brought useful colour on Senegal, while unsurprisingly little new news came out on its non-operated North Sea developments Catcher and Kraken, and on the Indian tax issue.

Senegal (40% WI – op, COP 35%, FAR 15% and Petrosen 10%):

In a year when many companies are pulling back from exploration, Cairn is ramping up activity in Senegal after the H214 discoveries, with a busy appraisal and exploration programme in H2 2015. Interestingly, CNE plans to appraise existing discoveries from the FAN-1 and SNE-1 wells in order to bring them into production as quickly as possible, rather than target new hydrocarbon accumulations in the rest of its acreage.

While appraisal activity is critical to determine commerciality, it tends to typically be less NAV-accretive or share price accretive than wildcat exploration or even development.

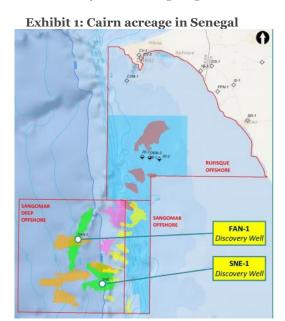
Next steps: The evaluation programme is being prepared and will be submitted in early May. Cairn is planning a total of 3 firm wells in Senegal.

Two appraisal wells on the shelf-edge SNE-1 discovery, including coring and testing of the reservoir – should narrow the P10-P90 range of currently 150-670mmbbls with the P50 at 330mmbbls. CNE says the reservoir quality was better than expected – according to African Petroleum, CNE must have done a mini-DST or MDT to make that statement.

There will be **1 firm exploration well**, likely on a new play. No colour was provided on the location of the well. In addition there could be another **3 contingent wells**, of which **1-2** appraisal wells on the deepwater FAN-1 discovery, and **1-2** contingent exploration wells.

On FAN-1, CNE needs more appraisal (notably need to get to the OWC) to assess the recovery factor. FAN-1 is a more complicated structure than SNE-1 as it's deepwater, with higher pressure, stacked reservoirs and different oil qualities.

CNE is also planning another 3D seismic survey to refine the geological model and identify new prospects.



Source: Cairn

Development concept:

- If all goes to plan, CNE could start its appraisal programme in H215 and determine commerciality (not yet FID) by end 2016. The commerciality threshold for a standalone FPSO development is seen at c 200mmbbls gross (which CNE are very confident they can firm up), and could allow for tie-backs within a 25km radius of >75mmbbls.
- The development concept will include gas reinjection and waterflood. CNE didn't provide a good answer to the question "what happens if you get too much gas and need to export it back to shore" relevant especially in light of the delays to the Jubilee ramp-up...
- Given size of resources and relatively vanilla nature of the development, the breakeven price is seen in the \$40/bbl's to get a 10% IRR.
- COP have the option to become operator in Senegal in the development phase, and are "very excited" about what they see there...



Source: Cairn

More detail to come at a Capital Markets Day on Senegal on 11 May 2015.

Other tidbits:

- Catcher and Kraken are on time and budget. First oil in 2017.
- Morocco: Cap Boujdour (Kosmos-op): CNE haven't given up hope, now incorporating results of non-commercial well into geological model. CNE hopes the play works better elsewhere. There are no more well obligations, so CNE will take their time to study the play.
- Spanish Point well delayed beyond 2016
- 30% cut to SG&A in 2015 following 40% headcount reductions
- No progress to announce on Cairn India tax situation.
- RBL of \$575m in middle of review. Should drop slightly to reflect 10% sale of Catcher to Dyas, but bulk will remain available.

Finite storage capacity could call time on the financial demand currently supporting oil prices

By Peter Lynch 5 March

Did you know the Baker Hughes rig count is falling? Of course you did, it's the equivalent to talking about house prices in oil circles. Yet US production growth hasn't so much as stuttered since the Saudi's decided US shale should just settle down, why? We think readily available storage, both fixed and floating, is supporting spot oil prices beyond the fundamentals as traders profit from the 'contango' in the oil futures market, buying spot, adding to storage and selling forward ~ VLCC tanker rates have reached levels not seen since 2008 as traders build a flotilla of floating crude storage.

Time though, could be running out for this trade as global oil stocks progress towards capacity limits both in Europe and the US. We suggest a growing lack of available storage capacity could call time on the recent financial life support in the oil markets, leaving spot prices to reflect weak underlying demand and a burgeoning overhang in storage. As a result we would caution buying the recent equity rally in oils, fuelled by pricing recovering to over \$60/bbl, we would also recommend exposure to oil storage capacity and crude tanker rates, either through derivatives or direct equity in VLCC tanker operators.



Brent futures curve ~ steep contango encourages adding to storage

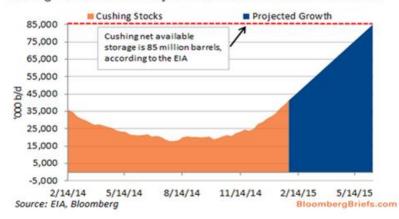
Source: Bloomberg

Available storage supporting spot prices for oil

We see storage as acting as life support for near-term oil prices since the precipitous collapse in late 2014. Despite spot prices having traded below \$50/bbl the futures strip has remained in steep contango....with forward prices two years out being sustained in the \$70-\$80/bbl range....supported by the oil industry acting in unison to announce capex cuts in response to low pricing. As a commodity trader, If I'm buying spot and selling forward on the same day, effectively taking no risk and booking the spread, I'm hugely dependent on available storage to execute this trade. Hence when storage capacity is full...no more traders buying spot.....spot falls to the level of fundamental demand, not to mention prices reflecting the physical overhang of stocks being full at that point....ouch.

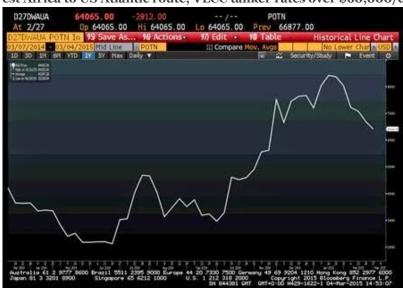
US Crude oil stocks continue to build aggressively

Storage Could Be Full by End of 2Q as Demand Pulls Back



Rising VLLC tanker rates likely to indicate storage is filling in Europe

On the basis of the chart extrapolating the build in US stocks shown below, the hard limit of US storage may be approaching, note WTI now trades at a \$10 discount to Brent at c\$50/bbl reflecting a relative oversupply in the US market. In Europe, stock levels are more opaque, added to this availability of floating storagei.e. the number of tankers available to sit idle on the water holding crude...hence timing the crunch point is even harder to call than in the US. Whilst forecasting the point at which stocks in Europe reach capacity may be harder than in the US, signs that stocks are filling should be clear to see, falling spot prices for Brent will be an indication the process adding to storage is becoming more difficult, though an earlier indication is likely to come in the form of rising VLCC tanker rates, as tankers are removed from the fleet to sit idle holding crude, squeezing rates at the margin. According to Teekay shipping, VLCC (Very Large Crude Carrier) rates are now at their highest since 2008, with 30 vessels moving onto time charter with storage in January, this looks set to continue.



West Africa to US Atlantic route, VLCC tanker rates over \$60,000/day

Source: Bloomberg

Hard limits on storage to withdraw financial demand for crude

Storage levels continue to build on both sides of the Atlantic whilst VLCC tanker rates have reached levels not seen since 2008. We suggest the lack of available storage capacity could be about to call time on the recent financial life support at play in the oil markets. As a result we would caution buying the recent equity rally on the back of recovering oil prices, we'd also recommend gaining exposure to available oil storage capacity or even

better, VLCC tanker rates, either through derivatives on tanker rates, or direct equity in VLCC tanker operators, as storage is likely to trade at an increasing premium the closer to capacity we get.

What happens with worldwide crude stocks at capacity?

Another storage mechanism in the US marked by its absence from current debate is the US strategic petroleum reserve (SPR). My outside bet is if conventional and floating storage fills to capacity, and spot prices crater as a result, the US government could justify stepping in to add to its reserve....again supporting the market and its own shale industry.