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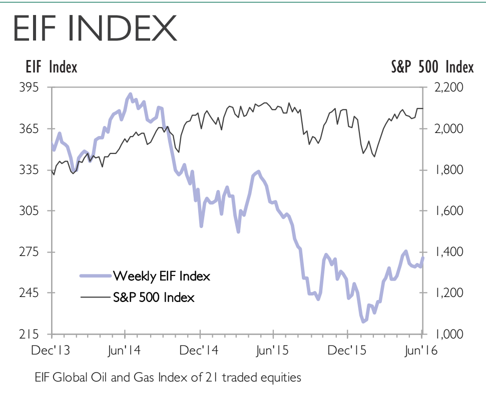
EIF INDEX



EIF Global Oil and Gas Index of 21 traded equities

Issue Highlights

- A $3.5 billion commitment to app-based ride-sharing service Uber signals that Saudi Arabia is serious about turning its low-profile Public Investment Fund into a dynamic global investor. p2

- EI Finance talks to Premier Oil CEO Tony Durrant about the company's response to low commodity prices and its operations in the North Sea and the Falkland Islands. p3

- Dong Energy's transformation from oil and gas producer to offshore wind power leader won't provide a surefire blueprint for other energy companies looking to shift to a greener business model. p4

EDITORIAL

Shell Game

Widespread defaults and bankruptcies mean the US shale sector gets all the headlines, but problematic debt can be found across the oil sector. Total debt is at record levels for majors, independent refiners and oil services companies. Many national oil companies, including Brazil's Petrobras — which carries the most at $126 billion — Russia's Rosneft and Venezuela's PDV, are likewise grappling with enormous debts. According to Oppenheimer & Co., six of the world's largest majors — Exxon Mobil, Royal Dutch Shell, Chevron, Total, BP and Eni — are carrying record total debt of $302 billion, up 60% from 2011. Independent refiners' total debt of $33 billion and oil services companies' total debt of $56 billion are up 131% and 78%, respectively, from 2011. At the same time, Oppenheimer notes that cash reserves for these groups have essentially remained unchanged. Rising debt not only reflects the "$100 oil forever" attitude that many companies — and investors — took before oil prices began falling in mid-2014, but also presents a huge challenge they must now overcome in a volatile, "lower for longer" price environment. The need to reduce debt and keep leverage metrics in check will greatly impact the sector's capacity to invest and pay dividends in the coming years (EIF Feb.3'16).

Shell is a prime example. It has $81 billion of debt following its acquisition of BG and a net debt ratio of 26%. That compares to the majors' current average of 21%, which is well above the average of 12% from 2011-15. For Shell to reduce its gearing to its targeted 20% it would have to pay off $15 billion of borrowing. Credit ratings are likely safe for now after ratings agencies took the knife to them earlier this year, but the sector is by no means out of the woods, despite oil's recent push to around $50 per barrel. Shell's cash priorities are reducing debt and paying dividends, followed by capital investment. When setting the dividend — the main thing that attracts investors to the majors — Shell's board looks at a range of factors, including the macro environment, the balance sheet and future investment plans. "Following an acquisition with an enterprise value of $67 billion, and in a low oil price world, clearly these metrics are different from our recent history and as we expected," Shell Chief Financial Officer Simon Henry said recently (EIF May11'16). But there was a whiff of desperation when Shell, facing a grim buyer's market for assets, said its plan to divest $30 billion in assets in 2016-18 could morph into a $40 billion stock market spin-off of noncore assets. So intense is pressure to reduce debt that an initial public offering of unwanted assets is under consideration.

To deal with record debt and weak cash generation while sustaining robust dividends, look for the majors to take the ax to capital spending again. All of them have announced capex "guidance" ranges for the coming years, and without higher oil prices, actual spending is likely to come in at the bottom of these ranges as they strive for cash neutrality. Shell's capex guidance is $25 billion to $30 billion for 2017-20. "If we need to go lower, we will," says Henry, adding that deferring or canceling projects beyond the $45 billion already shelved since 2014 is possible. However, such cuts are likely to hurt future production and reserves — as well as cash flow. Prices remain the biggest wild card: a $10/bbl move in oil prices equates to around $5 billion of annual cash flow for Shell. ■

BRIEFING

Big Changes Afoot for Saudi Public Investment Fund

For all of its great wealth — and in contrast to some of its hydrocarbon-rich neighbors — Saudi Arabia has not hit the headlines much during the past few decades by splurging petrodollars on trophy investments. The kingdom's global investment activity was mostly executed by its central bank, the Saudi Arabian Monetary Agency (Sama). Money was put to work quietly and the investments were typically conservative and low-risk. However, all that changed abruptly earlier this month with the announcement that the country's Public Investment Fund had invested about $3.5 billion in San Francisco-based ride-hailing service Uber — one of the hottest names in the new app-driven economy. It was the largest-ever single investment in a start-up and a clear signal that the fund intends to be a major international investor going forward.

Earlier this year Saudi Arabia announced an ambitious plan known as Vision 2030 that seeks to end the kingdom's economic and fiscal dependence on oil (EIF May4'16). In addition to diversifying the largest economy in the Middle East, Riyadh plans to overhaul how it invests the wealth that oil has created over the decades. The reforms are being driven by the kingdom's powerful, young deputy crown prince, Mohammed bin Salman, who oversees economic policy. One of the cornerstones of the grand plan is to turn the Public Investment Fund (PIF) into a major sovereign wealth fund that invests around the world, much like similar institutions in neighboring Gulf states like Abu Dhabi, Qatar and Kuwait. "The $3.5 billion for Uber is a very big investment and does seem to be a showy gesture of intent," David Evans of the London-based Sovereign Wealth Center told *EI Finance.*

Key Holdings of Saudi Arabia's Public Investment Fund

Company	Stake (%)
Gulf International Bank	97.20%
National Commercial Bank	69.29
Riyad Bank	21.75
Samba Financial Group	22.91
Sanabil Investments	100.00
Saudi Arabia Mining Co. (Ma'aden)	49.99
Saudi Basic Industries Corp.	70.00
Saudi Ceramics Co.	5.40
Saudi Telecom Co.	70.00
Tadawul (stock exchange)	100.00
Taqnia (technology development)	100.00%

Source: Mubasher, Gulfbase

Founded in 1971, the PIF was given a remit to fund strategic projects and invest in Saudi companies to help develop the national economy. Currently headed by Yasir Alrumayyan, a former CEO at investment bank Saudi Fransi Capital, the fund says it has a diverse portfolio of about 200 investments. Its holdings include about 20 companies listed on the Saudi stock exchange, Tadawul. It operates under the supervision of the finance ministry and has stakes in locally listed companies that are active across the country's entire economy. Individual holdings range from the kingdom's largest bank by assets, National Commercial Bank, to former telecom monopoly Saudi Telecom and global petrochemicals giant Saudi Basic Industries Corp. (Sabic).

While most of the PIF's investments have been made at home, it has also invested globally in the past — both directly and via its international arm Sanabil al-Saudia, which was set up in 2008 with an initial 20 billion riyals ($5.3 billion) of capital. For example, the PIF did a couple of overseas deals last year that mostly went unreported. It agreed to set up a $10 billion joint venture with the Russian Direct Investment Fund to invest in Russian infrastructure and also decided to invest some $1.1 billion in Posco Engineering & Construction, a unit of South Korean steel-maker Posco. The establishment of Sanabil in 2008 had been intended to make the PIF a more active investor outside Saudi Arabia's borders. However given the limited funds with which it had to work, the PIF has remained a relatively small international investor compared to other sovereign wealth funds.

Details about the size of the PIF's total assets under management are scarce. Earlier this year Prince Mohammed said the PIF's assets were worth some $200 billion and that the fund was set to become the world's largest of its kind. Other estimates put the number closer to $100 billion at the end of 2014. In any case, it is set to rise significantly once the Saudi government starts transferring more of its assets to the fund and goes ahead with a planned initial public offering (IPO) of up to 5% of the shares in state oil giant Saudi Aramco — a key part of the Vision 2030 plan. As long it remains unlisted it is difficult to put a value on Aramco, although Prince Mohammed has suggested it is worth $2 trillion to $3 trillion. It seems safe to assume that the sale of a 5% stake to outside investors would raise tens of billions of dollars and possibly more than $100 billion if the prince's valuation is close to the mark.

The proceeds from the Aramco IPO are to be transferred to the PIF, which would then start to act as a sovereign wealth fund, investing outside the oil industry both inside and outside the kingdom to help with the goal of diversifying the Saudi economy, according to sources familiar with the matter. "The strategy of the kingdom — Vision 2030 — is clear that part of the diversification of the kingdom will be to invest abroad and in Saudi Arabia ... more liquidity from Saudi Aramco, both through the initial IPO proceeds and dividends thereafter, will help the PIF grow," Khalid al-Falih, Aramco's chairman said in Vienna recently. In addition to his position at Aramco, al-Falih was also recently appointed minister of energy, industry and mineral resources, placing him in charge of a new "superministry."

In early April Bloomberg quoted the PIF's Alrumayyan as saying that the plan is to raise the fund's foreign investments to 50% of its portfolio by as early as 2020 from a recent level of around 5%. Industry observers say that investing such a large portion of its wealth abroad would represent a huge strategic shift for the PIF and would require bringing in new expertise and thinking. It is understood that some efforts have already been undertaken to recruit foreign investment managers to work at the PIF, but few details are known at this point. PIF officials could not be reached for comment for this article. Some say the Saudis might be trying to move too hastily to transform the fund into a different kind of institution. "The issue might be that they try to make the PIF run before it can walk. They're drastically overhauling the fund's foreign investment strategy and giving it a central role in an ambitious economic reform program at the same time," said Evans. "Generally sovereign wealth funds develop and bring in expertise, and add economic benefits over a period of decades rather than years." ■

Q&A

Premier CEO Bullish About Falklands Oil

EI Finance talked recently with Tony Durrant, chief executive of Premier Oil, about its response to low commodity prices and its operations in the North Sea and the Falkland Islands. The UK-based exploration and production company produced just under 60,000 barrels of oil equivalent per day last year and has a current market capitalization of about $520 million.

Q: How has the big drop in oil prices impacted Premier?

A: The oil price has been low enough for long enough now that we need to think about the strategy of the company in a low oil price world ... [That] probably means no more than $50 per barrel. We had to take a long hard look at our cost base and we had to cut back future investment plans to minimum committed capital expenditure and that is what we are doing today ... We have to run a business and prepare for a number of scenarios and we must have a business plan that works at sub-$50/bbl. And we have that.

Q: So what are your capital spending plans for this year?

A: The best way to talk about it is in terms of projects. The number that we've put out to the external market is $730 million. But effectively what we've got is two ongoing development projects. There's the Solan field, West of Shetland, which actually started up in April this year. We have some remaining capex on that field. And there's the Catcher field, also in the UK, which will come on stream next year. Those are our two committed capital projects and we're going to finish those. We're not spending very much money on other future development projects or on exploration. Although, we have them in our portfolio and we could develop them if we see a better oil price going forward.

Q: What steps has Premier taken in response to the downturn?

A: Our operating costs were down 30% last year compared to 2014. And we set a tight budget for 2016, but again we are 20% under budget for this year as well ... Our G&A [general and administrative] costs have come down from $300 million in 2014 to $230 million in 2015. The budget we set for 2016 was $180 million ... and again we're running under budget year to date ... We're still trying to grow in all of this. Our production is still rising and we have new projects coming on ... Our production was 57,000 boe/d last year. It will be somewhere in the 75,000 boe/d area this year and it will be more than that next year.

Q: There has been a lot of talk about better collaboration between oil companies and service firms. What initiatives is Premier taking in this respect?

A: The easy thing for the oil sector to do when the oil price collapse came was to squeeze out suppliers ... Once that was done, the next phase was to look at ourselves and our fellow upstream companies and see if we can collaborate and make ourselves more efficient ... We're talking to [fellow North Sea operators] Apache, EnQuest, Taqa, Maersk — all those companies ... The sort of thing we're talking about is sharing helicopters, pooling of procurement ... We've been looking at the abandonment area in particular as that's a topic that we will all have to deal with over time and its probably more efficient for us to join with other companies ... We're working our way through that and there are some good things happening. ... [Costs] in the North Sea are coming down, people used to talk about operating costs per barrel of around $30/bbl in the North Sea and now most people are talking about somewhere in the $20-$25/bbl range.

Q: Premier recently sold assets in Norway and acquired E.On's UK North Sea assets. What was the rationale behind those deals?

A: One of the features of the downturn is that we ended up focusing on our most advantaged positions. We're very well-established in the UK and we have a big tax loss position, so any barrels that we can add in the UK are tax-advantaged. I would have loved to have built a business in Norway because it's a natural market for UK independents but it was consuming capital at a time when we haven't got a surplus of capital and we were some way from having a material business in Norway. We sold our assets in Norway to one of our partners and it worked on both sides. The E.On opportunity in the UK was one that we had been looking at for a while. Premier has a history of making acquisitions at the bottom of the market, which is a good time to buy, when prices are cheap ... so we had long discussions with shareholders and banks about the acquisition and they supported us, which is great. But it's not easy to do acquisitions when the oil price is at $27/bbl because investors and lenders question what you are doing.

Q: How do you see the outlook for further M&A in the North Sea?

A: The North Sea is still going through a phase where the bigger companies are trying to get out and there are medium-size companies that will carry the North Sea forward. I think there will be more activity. Of course the big companies — [Royal Dutch] Shell etc. — are not forced sellers, so they don't have to sell at low prices and that has been an issue ... So we haven't seen a lot of activity. For companies of our size getting access to capital for acquisitions is not straightforward at the moment. There are some barriers to activity but if you stand back from it all, the North Sea is at a stage where the majors are not going to be investing in the UK. Independents like ourselves still view it as an interesting opportunity, so that's the natural movement of assets from the majors' hands to the independents ... We want to continue building in the UK. We see that there are still opportunities for companies of our size and we have an advantaged tax position where we're not going to pay tax effectively going forward because of losses and allowances that we've built up in the past.

Q: Do you have any plans to farm out stakes in any of your assets?

A: It doesn't make sense to sell producing assets at the moment ... Why would you sell production at the bottom of the market? So, we're not in any hurry ... We do have two fields in the UK with 100% ownership [Solan and Huntingdon]. I think at some point, with a better market and a better oil price, it probably makes sense to bring in partners for one or both of those fields, but now is not the right time.

Q: Where do things stand with regard to development of the Sea Lion discovery off the Falkland Islands?

A: We've found 1 billion barrels of oil in the North Falkland Basin. It's a new basin, it's an attractive basin because it's not deepwater, and the fiscal terms in the Falklands are attractive. It's a basin that will get developed. In the current cost environment, our estimate for Sea Lion and other future developments in the Falklands are coming down all the time and they're getting to the point that even with low oil prices it

(See Q&A, page 7)

Danish Firm Shifts From Oil and Gas to Offshore Wind

Denmark's Dong Energy started out as an upstream oil and gas company in the 1970s but has transformed itself over the last 10 years or so into the world's biggest developer of offshore wind farms (EIF Sep.10'14). It would be premature at this point to hold the company up as a successful model for other energy companies that are looking to shift to a greener business model. The company has placed a big bet on offshore wind power and analysts say it is by no means certain that it will pay off. On the other hand, the company was finally able to celebrate a successful initial public offering (IPO) last week after the disappointment of three aborted efforts in 2006-08. In fact its IPO was the largest in the world so far this year, raising some $2.6 billion for existing shareholders led by the Danish government and Wall Street investment bank Goldman Sachs. Both sold a portion of their shares and will see their stakes fall to 50.4% and 14.7% respectively. The IPO price of 235 kroner per share gave the company a market value of around $15 billion and Dong's share price has risen since trading started in Copenhagen last Thursday.

Dong started branching out into electricity generation and distribution in the 2000s, but as late as 2005, upstream oil and gas still generated the vast majority of Dong's earnings, with hardly any contribution from electricity or renewables. In 2014 its oil and gas business generated revenues of 14 billion kroner ($2.1 billion) and an operating loss of 3.4 billion kroner. But by 2015 oil and gas revenues had fallen to 12.8 billion kroner while the operating loss widened to 15.8 billion kroner as a result of heavy impairment charges. Offshore wind energy generated revenues of 16.5 billion kroner last year and an operating profit of 2.5 billion kroner. Dong had been hoping to sell off its upstream oil and gas unit before the IPO went ahead, but was unable to find a buyer. Chief Executive Henrik Poulsen says that in future the business will be "managed for cash" with the aim of generating positive cash flow again from next year, and reinvesting the money in renewables. Paulsen says oil and gas exploration and appraisal investments will be minimized. No new development projects will be undertaken and significant efforts are being made to reduce costs at existing operations. In March, Dong said it was terminating the contract to build a production platform for the Hejre oil and gas field, putting the development of one of the largest discoveries in the Danish section of the North Sea on indefinite hold.

The company's power generation business was once heavily dependent on coal, but renewables now account for 55% of its electricity and heat production. The company is the world's largest offshore wind player, with 1.7 gigawatts of installed capacity and a further 3.3 gigawatts under construction. At the end of last year about 75% of total capital employed was tied up in offshore wind projects and by 2020, that figure is projected to rise to 80%. The company has focused on offshore wind farms because they tend to trigger less public opposition than onshore turbines in densely populated Europe. Goldman Sachs and a group of Danish pension funds were brought in as investors in Dong in early 2014 to provide fresh capital and help the company move forward with its ambitious plans for further expansion in offshore wind. The government was reluctant to sink more money into the company at the time and there was also little appetite among other private-sector investors. However, the sale of a large stake to the US bank was controversial in Denmark and ultimately led to the collapse of the coalition government.

Among European utilities, Germany's struggling RWE concluded long ago that it was too late to the game to become a meaningful player in offshore wind while the UK's Centrica concluded that offshore wind would be too expensive and exited the business. Others that did get involved at a relatively early stage such as E.On (Germany), Vattenfall (Sweden) and Statkraft (Norway) are way behind Dong in terms of how many turbines they have in the water. That is also true of Norwegian oil and gas producer Statoil, which is pursuing offshore wind opportunities within its newly created New Energy Solutions division (EIF Oct.21'15). Spanish oil and gas player Repsol decided to sell its UK offshore wind business earlier this year as part of a broader program of non-core asset disposals (NE Mar.3'16), while French oil major Total is focusing its renewables efforts on solar power and batteries (EIF May11'16).

Looking ahead, Dong's offshore wind plans are heavily focused on the UK and Germany but this has some analysts concerned. The UK has no firm offshore wind capacity targets beyond 2020, while Germany has trimmed its target for 2020 from 10 gigawatts to 6.5 gigawatts as it struggles to manage growth of wind and solar capacity in the country (WGI Jun.8'16). Saxo Bank analyst Peter Garnry says Dong's vision "comes with a very high execution risk and large investments." Offshore wind energy producers maintain that with strong political and regulatory support they should be able to reduce costs from roughly €120-€130 per megawatt hour now to €80 by 2025 (NE Jun.9'16). But Garnry warns that "long-term power prices could decrease due to unforeseen increases in the number of power-producing wind farms, solar energy installations or other power-producing technologies with low marginal production cost." ■

Private Equity Firm Post Oak Unfazed by Oil Slump

Oil was trading above $100 per barrel when Houston-based private equity firm Post Oak Energy Capital raised $600 million from institutional investors in early 2014. But by April of this year, when it set out to raise another $600 million for its latest oil and gas fund, prices had fallen to the $40s. Despite this, Managing Director Frost Cochran says there was no reluctance among the firm's investment partners to commit more money to the struggling North American upstream business, allowing it to wrap up the fund-raising effort in just six weeks (EIF Jun.1'16). So far this year, the private equity sector has collectively raised $2 billion for oil and gas investment across four funds, according to alternative investment data firm Preqin. That adds to $82 billion raised in the previous three years (EIF Oct.28'15).

Private equity firms and the companies they invest in are increasingly important players in the North American upstream M&A market — although Cochran believes talk of $100 billion in private equity money waiting on the sidelines is likely an overstatement (EIF Apr.13'16). "A lot of that money is already committed to drilling programs on acreage that has already

been captured, so it's not free to go out and do additional acquisitions," he told *EI Finance* in a recent interview. M&A activity for smaller assets has already picked up, he says, as buyer and seller price expectations have moved closer together. He expects the same to happen for larger assets later this year.

Some of the funds that Post Oak recently raised will end up in the M&A game, but some will fund ongoing drilling programs. Cochran says the $600 million will likely be broken down into seven to nine investments ranging from $40 million to $120 million. Typically Post Oak seeks a controlling interest of 85% to 90% in its investments, with the management teams of its portfolio companies holding the rest of the equity. Its funds — it has seeded three over the past decade — have a 10-year life span before the assets are liquidated and the proceeds are returned to investors. There are, however, options for two one-year extensions to avoid selling assets into a down market. Within that time frame, a given investment will usually be held for two to seven years, with proceeds from any sales reinvested. Often such sales are initiated by larger firms operating in the same area as a Post Oak portfolio company, Cochran says. "Most of the sales we've made have been because a large public company has approached us and said, 'Here's an offer. You're in our way, we want to buy that from you.'"

Like many of its private equity peers, Post Oak likes to fund successful management teams multiple times as they launch, develop and sell new companies. For example, Post Oak made a $150 million commitment to the fourth incarnation of PetroEdge Energy last year after previously investing in the third. More recently it committed $100 million to UpCurve Energy, a company started by former employees of ConocoPhillips that specializes in horizontal recompletions in US shale plays such as the Eagle Ford, the Haynesville and the Bakken.

Cochran has worked in the energy business since the 1980s and sees nothing exceptional in the current slump, which is now approaching the two-year mark. That said, he thought it was "stunning" how slowly public exploration and production companies laid down drilling rigs as oil prices plummeted. "When prices collapse ... the right thing to do is to respond to that and cut your capital program." But with public companies facing constant pressure from shareholders to prioritize production growth, cutting spending can be a struggle (EIF Jun.1'16). Public companies "tend to chase this growth strategy, which sometimes destroys capital rather than accretes value," Cochran argues (EIF Apr.27'16). In contrast, Post Oak and other private investment firms focus on maximizing net present value, rather than production growth and earnings. Consequently, Post Oak's portfolio companies moved relatively quickly to ramp down their combined active rig count to just one rig today from earlier peak levels of about eight to 15 (the number varies as assets are constantly bought and sold).

Despite the current protracted slump, Cochran — like many other players in the North American upstream industry — feels that the US and Canada offer the best balance of risk and reward for oil and gas investment. "There's no better place in the world to be deploying capital and generating a better risk-adjusted rate of return. Yes, there are some phenomenal resources in other parts of the world. But due to regulatory, tax or political instability, it would just be a bad allocation of capital." For that reason, he believes a large US independent such as Anadarko Petroleum, Apache or Devon Energy is likely to be taken out by an acquisition at some point in the not too distant future. "It's going to make sense for some of the majors and super-independents to engage in large-scale M&A activity ... to get inventory in the North American resource plays," he says (EIF Mar.9'16). ■

Oil Search Urges Majors to Work Together on LNG

Although it is a far smaller company, Papua New Guinea's Oil Search is hoping to persuade industry titans Exxon Mobil and Total to put their egos aside and work together to facilitate the next wave of LNG development in that country. In particular Oil Search — which has business partnerships with both majors — says Papua New Guinea (PNG) needs to avoid the costly duplication of infrastructure that has dogged the LNG industry in neighboring Australia in recent years. The company believes its recently announced $2.2 billion acquisition of New York-listed InterOil will help it to nudge Exxon and Total toward greater collaboration by strengthening its ties with the French major (EIF May25'16).

With headquarters in Port Moresby, Papua New Guinea, and a stock market listing in Australia, Oil Search has a market capitalization of about A$10.5 billion (US$7.7 billion). It reported production of about 85,000 barrels of oil equivalent per day for the first quarter of this year, of which about 78% was derived from its 29% stake in the Exxon-operated PNG LNG project. Oil Search also holds stakes in various oil and gas licenses, the most important of which contains the Elk-Antelope gas field, which has been selected to supply natural gas to Total's planned Papua LNG liquefaction plant. InterOil also holds an interest in the Elk-Antelope field — which is estimated to hold 6 trillion cubic feet or more of gas — and indeed that is what prompted Oil Search to make its approach. Meanwhile, Total has struck a side deal with Oil Search that would increase its own stake in the gas field once the acquisition of InterOil closes. When the dust settles Total would hold 48.1% of Elk-Antelope and Oil Search 29%.

Exxon's PNG LNG came on line as Papua New Guinea's first LNG project in 2014 and the revenue it has generated since then has led to a significant strengthening of Oil Search's financial position. In its current configuration PNG LNG has two liquefaction trains with a combined capacity of 6.9 million tons per year. Total's Papua LNG has not been built yet, but analysts believe it is looking at a two-train project with a capacity of 7 million tons/yr. Meanwhile, Exxon has also been looking at the possibility of building a third train at PNG LNG that would add a further 3.5 million tons/yr of capacity. Oil Search Managing Director Peter Botten says LNG development in Papua New Guinea represents a great opportunity for his own company as well as for Exxon and Total. But he warns that the two industry giants should look for opportunities to collaborate to drive down costs, rather than separately building everything they need and ending up with too much infrastructure. He points to Australia as a cautionary tale (EIF May4'16). "It's a fantastic industry, but has it been done efficiently? It could have been done a lot better," he said during the recent APPEA oil and gas conference in that country.

"What we are endeavoring to do with the next phase of development [in Papua New Guinea] is to learn from those lessons," Botten told reporters during a press briefing at the conference. He expressed confidence that Oil Search can help foster a more cooperative spirit between Exxon and Total by virtue of its participation in the two LNG projects. Low oil and gas prices provide an additional incentive for both companies to look at joint initiatives to cut costs, he argued. "You could say a few years ago that at $110-$115 a barrel and $15 per million Btu there wasn't quite the same desire for companies to get over their corporate egos and work together. I think at $50 and a challenging LNG market, if you can't address that in this market ... you never will." Botten estimates that a collaborative approach to the two projects could yield up to $3 billion in cost savings. "It can go from gas sales, it can go from sharing equity in trains, it can go from sharing infrastructure and operating synergies. there is a whole spectrum of how far or not this can go," he said. But Botten added that it is important to act quickly to prevent both projects advancing to a point where the door starts to close on such opportunities. The next 12-18 months would be "absolutely critical," he said.

In addition to Oil Search's potential role as a mediator between the two majors, Botten says Exxon and Total benefit from its solid reputation in its home country and its strong relationship with the government, which holds a 9.75% stake in the company. "Oil Search is an unusual company in that it does more in the social engagement space than any other resource company that I actually know," Botten told reporters. The company is the second-largest provider of health care after the government and helps build essential infrastructure such as hospitals and roads — even the national football stadium. It is also Papua New Guinea's largest investor, pumping more than $15 billion into the economy over the last 15 years. ■

Will Shortage of Workers, Rigs Slow Drilling Recovery?

With the outlook for oil and gas markets brightening by the week, many US producers are getting ready to start drilling core acreage positions again. Wood Mackenzie says the rig count has bottomed out and at least 200 additional rigs could be deployed by the end of 2017. But is that realistic? Tens of thousands of employees, from roustabouts to welders to petroleum engineers and geophysicists, have been laid off, while hundreds of rigs have been "cold-stacked" — shut down, locked away and harvested for parts. In the Bakken tight oil play alone, just eight hydraulic fracturing crews remain, down from nearly 50 in mid-2014 (EIF Jan.20'16). "They've packed their bags and many of them have gone home," Lynn Helms, director of the North Dakota Department of Mineral Resources, told the Williston Basin Petroleum Conference in May. "What will it take to attract them back? Will you be able to maintain the drilling efficiencies and the cost efficiencies and still be able to attract that workforce back? That remains to be seen."

While remote areas like the Bakken and the northern Rockies may face the most severe labor shortages due to attrition, experts say the hit is likely to be widespread. "This has been a very deep and very sustained downturn, and there is no question that it will take some time to ramp back up," Richard Hemingway, a veteran energy attorney at Thompson & Knight in Houston, told *EI Finance*. "For a lot of the younger workers, they have never been through a downturn like this before. They are gun shy. When they move on, they're gone." Hemingway said the labor woes will be less pronounced in places like Texas and Oklahoma, where the industry can tap a larger regional labor pool. Yet he suspects that a substantial percentage of blue-collar workers who lost their oil-field jobs have moved on to other manufacturing gigs where their skills are transferrable — including in the downstream energy sector that has not been hit nearly as hard. "The great unknown is, would they be willing to leave those jobs and jump back in? My hunch is that quite a few would," Hemingway said, given that oil and gas jobs tend to pay a lot more when services companies are in active recruiting mode. "There is a big difference between $40,000 a year and $75,000 a year." Nevertheless, before making that decision, workers would probably spend some time thinking about the volatile nature of the oil and gas market and the tenuous nature of the current recovery.

How quickly workers are needed will largely depend on the speed of the commodity price recovery. Hemingway and Wood Mackenzie senior analyst Ryan Duman told EIF that if prices settle in at $55 to $60 per barrel and gas at $3 per million Btu, the ramp-up would be gradual and relatively easy to manage. However, if oil were to surge to $70/bbl and producers felt compelled to seize the opportunity immediately, "that could pose some challenges," Hemingway said. Then there is the potential scarcity of rigs and other equipment. As the US rig count — oil and gas combined — has plunged from more than 1,800 at the beginning of 2015 to just 414 as of last week (EIF May18'16), drilling contractors have been forced to idle rigs at an unprecedented rate. Those rigs fall into two main categories: "warm-stacked," meaning quickly deployable (assuming a crew can be found), and cold-stacked, meaning disabled and stored wherever the owners can find space. Many of the latter end up being stripped for parts, meaning they likely never will return to service.

"Much of the idled equipment is not being maintained. We hear companies talking publicly even about cannibalizing equipment that is stacked, and that's equipment that really doesn't go back to work," Halliburton President Jeffrey Allen Miller said during the company's first-quarter earnings call last month. "It gets rained on as it sits there; it's more and more difficult to bring back. I think that is continuing all of the time." For those rigs that can be returned to the field, it will take longer for some than others, depending on where they are needed. The first equipment is expected to be deployed to the lowest-cost sweet spots, and many idled rigs are in a "respectable proximity to where there were last used," Hemingway said. But others may require long-distance transport, which means a significant one-time cost for an already strapped drilling contractor. Frost Cochran, managing director of private equity firm Post Oak Energy Capital, agreed there is "a potential for a bottleneck, depending on the speed of a recovery. Right now there is a tremendous amount of excess capacity that is perfectly well maintained and skilled labor to respond to a pickup in drilling and completion activity. But if the rig count were to double in a short period of time, then you'd have an issue." However, Cochran stressed that he is not particularly worried and believes "the industry will be able to respond just fine." ■

NEWS ROUNDUP

BP Forms New Norway E&P Firm

BP and Det Norske have joined forces to create what they say will be the largest independent Norwegian oil and gas producer. The new company, to be known as Aker BP and listed on the Oslo stock exchange, will pool the UK major's Norwegian assets with those of Det Norske. Norwegian services firm Aker — which owns 49.9% of Det Norske — will hold a 40% stake in the new company. BP will hold 30% as will the other shareholders in Det Norske. BP will also receive a cash payment of $140 million plus positive working capital adjustments. BP and Det Norske each have current production capacity of around 60,000 boe/d in Norway, giving the new company a current capacity of around 120,000 boe/d. The two companies believe Aker BP could organically grow production to more than 250,000 boe/d by the early 2020s. Det Norske has been snapping up assets as fellow independents divest interests offshore Norway in response to the slump in oil prices. UK independent Premier Oil sold its Norwegian upstream assets to Det Norske for $120 million late last year (p3). BP plans to divest $3 billion-$5 billion worth of assets this year but said the Norwegian Continental Shelf "represents a significant opportunity going forward."

Pemex Seeks Deepwater Partners

Mexican state oil producer Pemex has started the search for farm-out partners to help it conduct further exploration and development of the Trion deepwater oil field in the Perdido Fold Belt area of the Gulf of Mexico. Energy Minister Pedro Joaquin Coldwell said he expects the formal launch of the farm-out initiative before the end of next month. Upstream regulator CNH would then hold a public tender to select Pemex's partners, with the award to be made on Dec. 5. That is the same day that the CNH plans to award blocks in a separate auction for 10 deepwater exploration blocks in the Gulf of Mexico (EIF Dec.23'15). The minister said the government will work on setting the terms of the farm-out license over the next several weeks. Gonzalez Anaya said the Trion field already has certified proved, probable and possible (3P) reserves of 480 million boe — mostly light crude. Trion became Pemex's first-ever deepwater oil find in 2012 (EIF Sep.5'12). However, the state-owned company lacks the technical expertise and financial resources to conduct additional work on it. Gonzalez Anaya estimated that further exploration and development of Trion would require $11 billion in investments over 15 years.

Iraq Pays Down Some Oil Debt

Iraq has made major inroads into repaying the debt it owes to foreign oil investors as part of an International Monetary Fund (IMF) loan and restructuring program, according to senior oil executives, IMF officials and shipping data. Things were looking grim for Iraq's oil sector less than three months ago. The Opec member's debt to oil firms had ballooned to $4.8 billion at the end of March, from $3.6 billion at the end of 2015, sources say. At the time several upstream operators had frozen further investment at Baghdad's request and Adel Abdul Mahdi had just resigned as oil minister. But since then, the Iraqis "have made significant progress paying back their debt," according to an executive at one major investor in the country. A rally in crude prices toward $50/bbl over the same period will no doubt have helped. BP, lead partner at the 1.45 million b/d Rumaila project, was owed about $2 billion at the end of March, while Russia's Lukoil, which operates the 400,000 b/d West Qurna-2 project, was second on the list, according to industry sources. Repayments to those companies and to Petronas and Shell appear to have been prioritized by Baghdad (EIF Jul.15'15).

Q&A *(Continued from page 3)*

looks like a sanctionable project. I don't have any doubt that the North Falklands Basin will become an oil province over the next 10 years. Premier has to think about the extent to which we participate, how much investment it will require and the size of our equity interest in that field. Currently we're the largest player and we have 60% of the Sea Lion area and we're the operator. That's probably too big an investment for Premier in the current environment. Over time we will bring in partners in the Falklands.

Q: What is the latest budget estimate for the project and what kind of break-even oil price do you need for Sea Lion to work?

A: The original estimate of the Sea Lion development costs was $2 billion. Those costs are coming down. It would be nice to think of $1.5 billion, we're still doing the engineering work to justify that. In terms of break-even [pricing], at the end of 2015 it was $55/bbl, but costs have continued to come down. I'm pushing our project management team to get the project down to somewhere around the $45/bbl area and we are still finding opportunities to cut cost estimates ... depending on the oil price we will make a final investment [decision], probably next year. However, at these oil prices, we can't fund the project from our balance sheet so we would need to look at alternative ways of funding it if we are going to sanction the project. We are not committed to it yet. We need to bring in partners that lower our stake and we're looking at that a lot. We don't have our foot firmly down on the accelerator at the moment because the oil price has been in the doldrums and projects like that work much better at higher oil prices.

Q: Are you actively looking for partners?

A: The oil industry loves a new basin, so if you pitch up and talk to another company in the industry and say we've got 60% of a new basin they rub their hands and say "we will have a look at that" — just to see what it's all about. There's no shortage of people that would love to see the data. But it's difficult with the oil price having done what it has done to crystallize that into firm investment. ■

Hunt Gets Private Equity Funds

Privately held Hunt Oil has received a $400 million commitment to develop its assets in the Midland Basin of West Texas from TSSP, an affiliate of private equity giant TPG Capital. The funds will be allocated to Hunt's 18,000 net acres in the Midland — a sub-play of the larger Permian Basin. The acreage in question lies in Martin, Glasscock, Midland and Upton counties. The funds are expected to be deployed over three years. "This partnership will provide strategic capital to efficiently develop a premier asset position in a world-class basin," said Hunt Senior Vice President Travis Armayor. Hunt is one of the largest private companies in the US and has oil and gas operations all over the world. *Forbes* magazine estimated the combined revenues of Hunt Oil and Hunt Consolidated at $4.5 billion in 2014. In addition to the Permian, the company holds positions in the Bakken tight oil play in North Dakota, the South Texas Eagle Ford Shale, and the Marcellus and Utica Shales in the US Northeast. Jefferies Managing Director Bill Marko recently estimated that roughly $100 billion in private equity funds will trickle into the market at a rate of $5 billion to $10 billion per year (p4). ■

ENERGY AND EQUITY MARKET DATA

For the week ended Jun 10, 2016

EIF Global Index Components*

	Close Jun 10	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
Rosneft (micex)	5.27	+0.47	+9.76	+18.29	+51.67
PetroChina-H (sehk)	0.74	+0.04	+6.39	-36.16	+12.21
Petrobras-4 (spse)	2.57	+0.14	+5.63	-38.49	+51.82
Petrobras-3 (spse)	3.23	+0.16	+5.21	-29.05	+49.11
Royal Dutch Shell-B (lse)	25.54	+1.13	+4.64	-12.85	+11.99
Ecopetrol (bvc)	0.47	+0.02	+4.60	-33.04	+35.54
Sinopec-H (sehk)	0.73	+0.03	+4.51	-12.78	+20.80
Royal Dutch Shell-A (lse)	25.38	+0.93	+3.82	-12.19	+12.83
ONGC (bse)	3.26	+0.10	+3.12	-30.56	-10.36
Exxon Mobil (nyse)	90.67	+2.30	+2.60	+7.91	+16.32
Statoil (osl)	16.51	+0.40	+2.51	-10.60	+18.01
Lukoil (mm)	40.41	+0.98	+2.48	-11.21	+25.65
CNOOC (sehk)	1.26	+0.03	+2.38	-16.76	+20.63
Chevron (nyse)	102.81	+2.15	+2.14	+2.94	+14.28
Reliance Industries (bse)	14.57	+0.30	+2.11	+4.69	-4.47
ENI (mise)	15.49	+0.24	+1.56	-14.30	+3.36
BP (lse)	5.29	+0.04	+0.71	-22.49	+1.31
Total (par)	48.20	+0.13	+0.27	-4.01	+7.55
Sinopec-S (sesh)	0.94	-0.00	-0.41	-37.80	-5.60
PetroChina-S (sesh)	1.11	-0.01	-0.74	-46.69	-13.47
Suncor (tse)	26.90	-0.63	-2.30	-4.79	+4.20
EIF Global Index	**270.35**	**+5.83**	**+2.21**	**-13.31**	**+10.10**

*Converted US$/Share

Indexes

	Close Jun 10	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
Equity Indexes					
DJIA	17,985.19	+178.13	+1.00	+0.48	+3.21
S&P 500	2,096.07	-3.06	-0.15	+0.09	+2.55
FTSE 100	6,115.76	-93.87	-1.51	-9.86	-2.03
FTSE All-World	470.57	-3.10	-0.65	-6.20	+0.64
EIF Global	270.35	+5.83	+2.21	-13.31	+10.10
S&P Global Oil	1,598.99	+25.01	+1.59	-12.92	+12.65
FT Oil & Gas	6,470.52	+325.18	+5.29	-6.01	+14.28
TSE Oil & Gas	2,414.47	-48.22	-1.96	-9.14	+14.24
Emerging Markets					
Hang Seng Energy (HK)	14,189.01	+394.79	+2.86	-24.53	+13.47
BSE Oil & Gas (India)	9,403.83	+4.59	+0.05	+0.12	-1.59
RTS Oil & Gas (Russia)	151.51	+8.77	+6.14	-0.22	+24.12

Commodity Prices

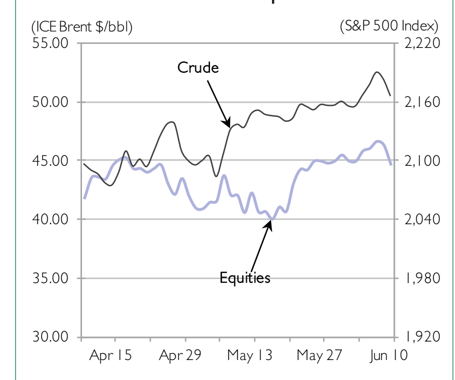
	Close Jun 10	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
Equity Indexes					
Dated Brent	49.28	+0.74	+1.52	-21.43	+33.48
Brent 1st ICE	50.54	+0.90	+1.81	-20.87	+35.57
WTI 1st (Nymex)	49.07	+0.17	+0.35	-18.13	+33.23
Oman 1st (DME)	47.44	+1.19	+2.57	-23.48	+52.00
RBOB (Nymex)	1.56	-0.05	-3.38	-26.34	+24.02
Heating Oil (Nymex)	1.52	+0.03	+1.69	-19.59	+38.52
Gas Oil (ICE)	451.50	+8.75	+1.98	-22.36	+35.59
Henry Hub (Nymex)	2.56	+0.16	+6.59	-7.53	+8.77
Henry Hub (Cash)	2.46	+0.16	+6.91	-14.49	+7.94
UK NBP (Cash)	32.90	-1.80	-5.19	-23.22	+1.08

Share Prices in Local Currency†

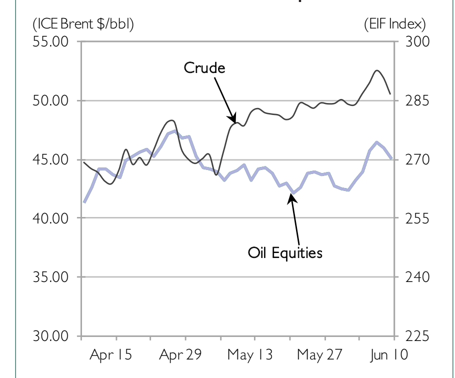
	Close Jun 10	1-Wk Chg.	% Chg. 1-Wk	% Chg. 52-Wk	% Chg. YTD
NOCs					
Rosneft (micex)	343.50	+28.75	+9.13	+40.09	+35.64
PetroChina-H (sehk)	5.72	+0.34	+6.32	-36.09	+11.28
Sinopec-H (sehk)	5.65	+0.24	+4.44	-12.67	+19.96
Kazmunaigas (kase)	15,500.00	+600.00	+4.03	+24.50	+14.44
Statoil (osl)	136.60	+4.90	+3.72	-4.48	+10.43
ONGC (bse)	218.05	+6.45	+3.05	-27.47	-9.01
Ecopetrol (bvc)	1,410.00	+40.00	+2.92	-21.23	+24.78
Petrobras-4 (spse)	8.78	+0.21	+2.45	-32.57	+31.04
CNOOC (sehk)	9.75	+0.22	+2.31	-16.67	+19.19
PTTEP (set)	82.00	+1.25	+1.55	-25.11	+43.23
Gazprom (micex)	144.98	+1.57	+1.09	-0.29	+5.45
India Oil Company (bse)	409.85	-12.95	-3.06	+17.10	-3.70
Majors					
Royal Dutch Shell-B (lse)	1,791.50	+110.51	+6.57	-4.91	+14.55
Royal Dutch Shell-A (lse)	1,780.00	+96.55	+5.74	-4.20	+15.06
Exxon Mobil (nyse)	90.67	+2.30	+2.60	+7.91	+16.32
BP (lse)	370.75	+9.27	+2.56	-15.44	+4.39
Chevron (nyse)	102.81	+2.15	+2.14	+2.94	+14.28
Total (par)	42.05	-0.23	-0.55	-5.65	+1.83
Refiners (Primary Business)					
JX Holdings (tyo)	445.00	+20.40	+4.80	-19.18	-12.69
Reliance Industries (bse)	975.65	+19.50	+2.04	+9.35	-3.40
Phillips66 (nyse)	81.13	+1.00	+1.25	+4.48	-0.82
Valero (nyse)	53.81	-1.34	-2.43	-8.56	-23.90
Exploration & Production					
Chesapeake (nyse)	4.42	+0.33	+8.07	-63.92	-1.78
EOG Resources (nyse)	84.58	+4.87	+6.11	+45.38	+19.48
Anadarko (nyse)	54.48	+3.04	+5.91	-34.46	+12.14
BHP Billiton (asx)	19.61	+1.08	+5.83	-29.71	+8.40
ConocoPhillips (nyse)	46.57	+2.39	+5.41	-26.67	-0.26
Devon Energy (nyse)	37.45	+1.53	+4.26	-39.47	+17.03
Apache (nyse)	55.83	+1.25	+2.29	-4.04	+25.55
Occidental (nyse)	75.45	+0.62	+0.83	-3.00	+11.60
Encana (tsx)	10.27	-0.17	-1.63	-30.61	+46.09
Oil Service Firms					
Transocean (nyse)	11.47	+1.73	+17.76	-35.45	-7.35
Weatherford (nyse)	6.58	+0.46	+7.52	-51.79	-21.57
Halliburton (nyse)	45.50	+2.65	+6.18	+0.04	+33.67
Schlumberger (nyse)	79.96	+4.33	+5.73	-11.30	+14.64
Baker Hughes (nyse)	47.55	+1.31	+2.83	-25.85	+3.03
Engineering, Procurement, Construction					
WorleyParsons (asx)	7.95	+0.75	+10.42	-25.49	+67.02
Technip (par)	49.46	+1.51	+3.15	-16.19	+6.16
Fluor (nyse)	52.11	-0.30	-0.57	-5.36	+10.36
Petrofac (lse)	725.50	-33.62	-4.43	-20.14	-9.08
Midstream					
Williams (nyse)	23.28	+0.45	+1.97	-50.46	-9.42
Enbridge (tsx)	53.47	+0.34	+0.64	-4.09	+16.24
Transcanada (tsx)	54.64	-0.94	-1.69	+5.87	+20.91

†set=Thailand; sehk=Hong Kong; osl=Oslo; bvc=Colombia; micex=Moscow; spse=Sao Paulo; bse=Mumbai; par=Paris; nyse=New York; lse=London; krx=Korea; tyo=Tokyo; tsx=Toronto; asx=Australia

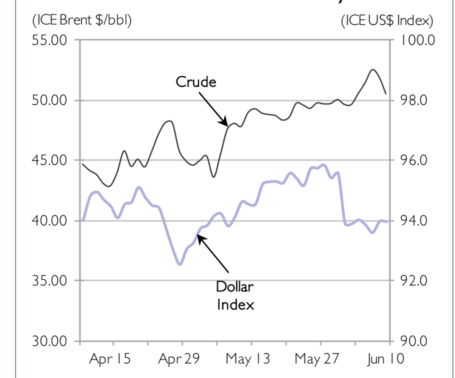
Crude vs. Equities



Crude vs. Oil Equities



Crude vs. Currency



EIF Index based on share prices of the 21 equities listed under EIF components, adjusted for US$ market capitalization. All equities listed are ordered by percentage change over the previous week. Local share prices are shown in local currency. Crude prices in $/bbl; Nymex oil products prices in $/gallon; ICE gas oil in $/ton; Henry Hub natural gas prices in $/MMBtu; UK NBP natural gas prices in pence/therm.

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