

NOBLE ENERGY

OIL & GAS

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COMPANY REPORT

07 JAN 2016

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Volatility in commodity markets not holding Noble Energy back.

Noble Energy targeting increased production.

- Israel provide government approval to allow Tamar expansion and development of Leviathan. Production set to increase over the next 5 years in the region with attractive long term potential.
- Gulf of Mexico - Rio Grande project operating better than expected. Both Big Bend and Dantzler registering maximum output. 2016 offshore exploration expected to be concentrated in this region.
- Rosetta assets expected to generate > 15% YoY growth, Noble Energy target production estimates above 100 Mboe/day by 2018.
- A number of key development projects lined up through to 2017 for DJ Basin.
- Marcellus Shale continues to register high production despite drilling being pulled back. Record volumes observed in 3Q'2015.

Company description

Noble Energy is a Houston based independent oil & natural gas E&P company operating both domestically and internationally.

Recommendation: BUY

Price Target FY16 USD 42.52

Price (as of 8-Jan-16) USD 30.89

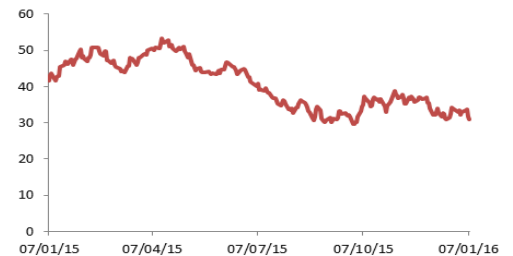
Reuters: NBL.N, Bloomberg: NBL:US

52-week range USD 29.13-53.68

Market Cap (\$m) 13,238

Outstanding Shares (m) 429

Source: Bloomberg



Source: Bloomberg

| (Values in \$ millions) | 2014 | 2015E | 2016F |
|-------------------------|--------|--------|--------|
| Revenues | 5101 | 3763 | 5110 |
| EBITDAX | 3747 | 2132 | 3575 |
| Net Profit | 1214 | -516 | 127 |
| Basic EPS | 3.36 | -1.21 | 0.30 |
| RNOA | 2.58% | -1.43% | 1.86% |
| ROCE | 12.02% | -4.17% | 1.03% |
| Net Debt : EBITDAX | 1.33 | 3.34 | 2.17 |
| Financial Leverage | 48.20% | 57.55% | 63.08% |

Source: Company Data and Analyst Estimates

THIS REPORT WAS PREPARED BY NATHAN PARKASH, A MASTERS IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS, EXCLUSIVELY FOR ACADEMIC PURPOSES. THIS REPORT WAS SUPERVISED BY ROSÁRIO ANDRÉ WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (SEE DISCLOSURES AND DISCLAIMERS AT END OF DOCUMENT)

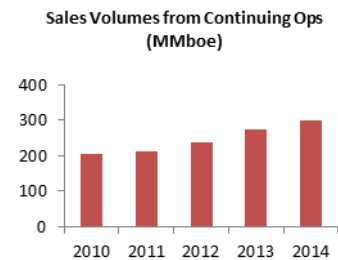
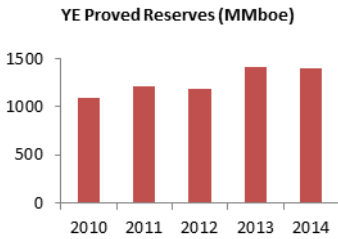
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Company Overview

Company Description

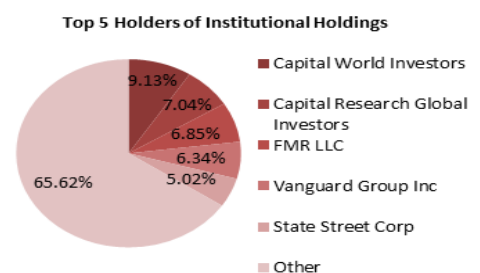
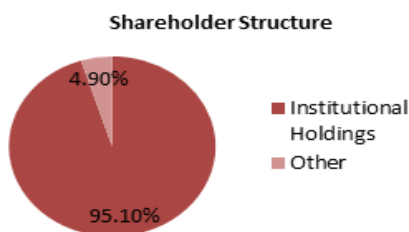
Headquartered in Houston, Texas, Noble Energy has evolved from a regional oil & gas producer to a worldwide E&P company. Attaining continued growth in value and cash flow through exploration successes and development of a diversified asset base underlines Noble Energy's strategic operation. Successful exploration alongside development CAPEX in the United States, West Africa and Eastern Mediterranean has seen Noble Energy cultivate a number of significant development projects that will maximise long-term future reserves, production and cash flow growth. Periodically, Noble Energy executes strategic acquisitions alongside non-core asset divestment in order to maintain and develop a diversified asset base. In 2014, more than \$4.8b worth of PP&E additions were made by Noble Energy, whilst assets in China were sold off. Core operations include: Onshore US (Marcellus Shale, DJ Basin), Offshore US (Deep-water Gulf of Mexico), Equatorial Guinea (Alba, Alen, Aseng), Israel (Tamar). Noble Energy's global production is almost entirely derived from the aforementioned core asset areas.



| YE 2014 Reserve Information | Oil + Condensate (MMBbls) | Natural Gas (Bcf) | NGLs (MMBbls) | Total (MMBoe) |
|------------------------------|---------------------------|-------------------|---------------|---------------|
| Proved Developed | | | | |
| United States | 119 | 1459 | 64 | 426 |
| Equatorial Guinea | 52 | 377 | 8 | 124 |
| Israel | 3 | 1973 | 0 | 331 |
| Proved | | | | |
| United States | 117 | 1345 | 49 | 390 |
| Equatorial Guinea | 13 | 236 | 7 | 59 |
| Israel | 0 | 443 | 0 | 74 |
| Total Proved Reserves | 304 | 5833 | 128 | 1404 |

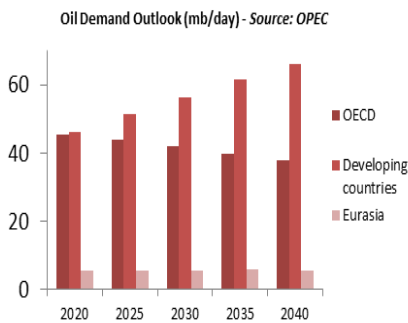
On 20th July, 2015, Noble Energy closed out the 100% financed stock acquisition of Rosetta Resources, an independent E&P US company with oil & gas properties in the Permian and Eagle Ford basins.

Shareholder Structure



Macroeconomics

A significant transition in OPEC strategy & unconventional plays in the US, among other factors, have continued to apply downward pressure of oil prices since June, 2014. Supply continues to exceed demand. Global oil demand in 2016 is expected to increase to 94.13 Mb/day (+1.25mb/day)¹; buoyed by 3.4% forecasted global economic growth. Non-OPEC oil supply is expected to reduce to 380 Mb/day, with lower production expected to be observed across US, Russia, Mexico, Kazakhstan, UK and Azerbaijan. OECD Americas demand for oil is expected to grow 0.29 Mb/day on 2015, while in Europe, demand expectations for 2016 are weaker due to doubt surrounding the economic development of certain nations, in addition to the high tax policies on oil usage predominantly by private consumers. Across the Middle East, political instabilities drive uncertainty, although oil demand is expected to grow in Saudi Arabia, Iran, Qatar and United Arab Emirates. According to OPEC, transition towards oil production in more costly areas will increase long term oil prices. Nominal prices are expected to reach \$80/b in 2020, \$123/b by 2030 and >\$160/b by 2040.



Long term natural gas prices are expected increase. Heightened demand will necessitate production of more costly resources. Reference case Henry Hub estimates for 2020 are \$4.88/Mbtu and \$7.85/Mbtu in 2040². Increased demand will force a faster well completions. As we move into 2016, a modest increase in natural gas prices is expected.

Implications of the Iran nuclear agreement in July 2015, could however spell further downward pressure on commodities. Iran holds 9.3% of the world's proved oil reserves³. Existing sanctions are currently restricting Iranian crude oil exports to 1.1mb/day. Sanctions are to be lifted following implementation of the new agreement expected in first-half 2016. Following this, Iranian crude oil production could increase by 0.5-0.7 Mb/d, possibly realising pre-sanction levels of ~4 Mb/d. Moreover, Iran holds the 18.2% of the world's proved natural gas reserves, more than any other country. Gas may be used to assist oil production, while the possibility of natural gas export may also be explored.

¹ OPEC Monthly Oil Market Report 10th December.

² US Energy Information – Annual Energy Outlook 2015 with projections to 2040

³ World Bank

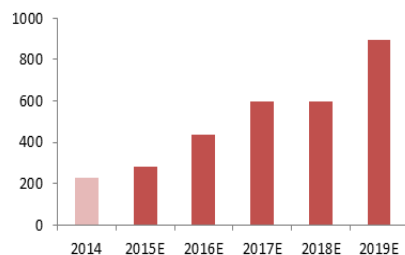
Investment Thesis (Noble Energy Legacy Assets)

PRODUCTION

ISRAEL:

Noble Energy operates with a 36% working interest in Tamar. The Ashdod Onshore Terminal Compression project was completed during 2Q'15, lifting maximum gross natural gas deliverability at Tamar to 1.2 Bcf/day. Gross output at Tamar reached 1.0 Bcf/day in August (83% of Maximum Capacity). During the 3rd quarter, Noble Energy gained government approval to expand Tamar. The expansion can boost gross natural gas output to 2.1 Bcf/day (756 Mmcf/day net). While global commodity prices remain at low levels, Noble Energy seek to increase production in Israel where it is realising significantly higher natural gas selling prices compared to other regions (see 'Price Deck'). Also in the 3rd quarter, development of Leviathan was given the green light, where Noble Energy holds a 39.66% working interest. Leviathan is the company's largest exploration find, and represents a significant growth opportunity. The field contains 22 Tcf of natural gas and production is on target to begin in 2018/19.

Natural Gas Daily Sales Volume Estimate
(Mmcf/day)



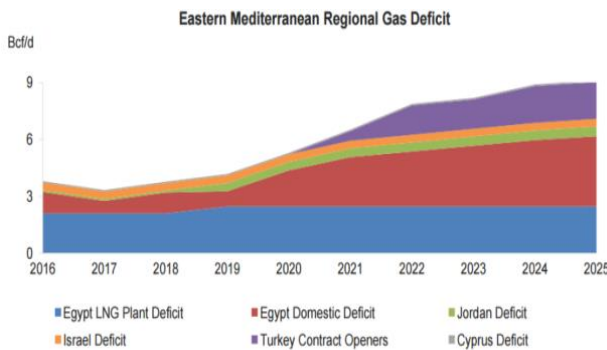
The government regulatory framework includes the following:

- 1) Leviathan developers; Noble Energy (39.66% working interest) & Delek Drilling (45.34% working interest) must commit to an investment of \$1.5Bn over 2016-17.
- 2) Requirement to divest Tanin & Karish assets (currently held for sale) as well as lowering ownership in Tamar from 36% to 25% within 6 years.
- 3) Future natural gas selling prices are to be linked to current domestic or export contracts.

The main drawback for Noble Energy to the deal is reducing ownership in Tamar. The deal could be considered successful if Leviathan is online within 6 years (production targeted for 2018/19) and generating cash flows that exceed the sacrificed Tamar cash flows. Noble Energy will seek to decrease its stake in Tamar as late as possible. Given that the company expects first production from Leviathan in 2018/19, Noble Energy has a 2 year cushion before it reaches the 6 year mark to ensure the assets are generating attractive cash flows offsetting the reduced Tamar ownership.

The outlook for Noble Energy in the region is optimistic. The government of Egypt recently expressed desire of purchasing Israeli gas. The Tamar expansion will allow for regional export and with a widening regional gas deficit developing in the Eastern Mediterranean, Noble Energy is in place to become a key natural gas player in Israel in the years to come that will see it generate substantial cash flows.

Source: Noble Energy



Sales Estimates:

2015: Ashdod compression project raises max capacity to 432Mmcfd/day net. Recall in August, actual output = 83.33% of max capacity. We consider a 4Q estimate of 83.33% of max capacity.

2016: See 2017 notes.

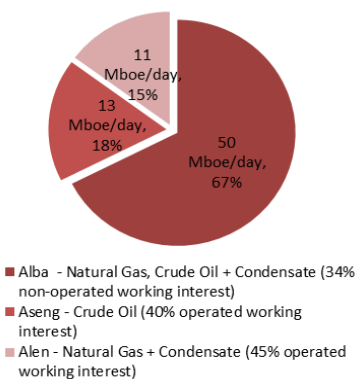
2017: We expect full effect of the Tamar expansion to be apparent in 2017. For forecasting 2017 daily output we consider an output of 83.33% (August 2015 productivity - Ashdod Project) of the new max capacity, 756 Mmcfd/day (net). We take this approach because the Tamar expansion will leverage similar infrastructures in Tamar today. For 2016 estimate we simply consider a smooth increase towards the full benefit of the Tamar expansion expected in 2017.

2018: Production from Leviathan is scheduled to begin in 2018/19. We take a conservative approach and consider first production in 2019. We consider 2018 production to have zero growth on 2017 production.

2019: Keeping in mind that development activity at Leviathan will have been active for 3 years now, we assume production will start well and consider a 50% increase on 2018 daily output to be reasonable judgement. We expect Noble Energy to reduce ownership in Tamar in 2020.

EQUATORIAL GUINAE:

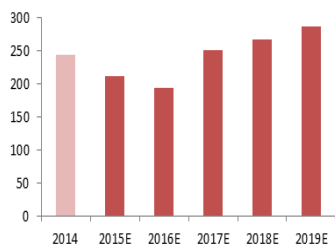
2014: Avg. Sales Volumes: 74 Mboe/day (net).



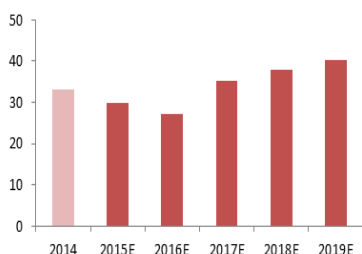
Challenges faced by Noble Energy in the region include depleted reserves and a turbulent economic outlook that will see fewer oil & gas development projects. The economy in Equatorial Guinea is expected to shrink 2% YoY from 2016 to 2020, as a result of reduced CAPEX and production⁴. Equatorial Guinea has suffered from the commodity price decline, and oil & gas activities have stagnated since 2009. The price slump has led the government of Equatorial Guinea to oversee oil & gas activities in the region. Projects approaching completion will be allowed to continue, however the economic feasibility of new projects will be reviewed thoroughly. In

⁴ IMF

Natural Gas Daily Sales Volume Estimate (Mmcf/day)



Crude Oil + Condensate Daily Sales Volume Estimate (MMbbl/day)



October 2015, Noble Energy’s development projects at Carla (oil + condensate) and Diega (oil) failed to gain government approval. The government continues to support exploration activities in the region.

The multi-year compression project at the Alba field now 80% complete will stop production temporarily during 1Q’16 for its final completion. The project is expected to be online mid-2016 and will extend life of the field by boosting falling pressures from the reservoir, thereby increasing the amount of oil & gas that can be ‘recovered’.

The region contributed 24.6% of global production in 2014. With depleting reserves and exploration activities in 2016 likely to be restricted to offshore Gulf of Mexico, we anticipate exploration activities to be stepped up in the region in 2017 & beyond to maintain this region’s revenue stream, particularly from oil sales.

| Period | Alba Sales (MMbbl/d) | Aseng Sales (MMbbl/d) | Alen Sales (MMbbl/d) | Total (Mboe/d) |
|--------|----------------------|-----------------------|----------------------|----------------|
| 1Q’15A | 41 | 14 | 13 | 68 |
| 2Q’15A | 38 | 13 | 14 | 65 |
| 3Q’15A | 46 | 13 | 14 | 73 |
| 4Q’15E | 46 | 13 | 14 | 73 |
| 2015E | 43 | 13 | 13 | 70 |
| 2016E | 37 | 13 | 13 | 64 |
| 2017E | 56 | 13 | 13 | 83 |
| 2018E | 62 | 13 | 13 | 88 |
| 2019E | 68 | 13 | 13 | 95 |

| Period | Crude Oil + Condensate | NGLs | Natural Gas |
|--------|------------------------|------|-------------|
| 1Q’15A | 42% | 8% | 50% |
| 2Q’15A | 46% | 5% | 49% |
| 3Q’15A | 40% | 8% | 52% |
| 4Q’15E | 43% | 7% | 50% |
| 2015E | 43% | 7% | 50% |
| 2016E | 43% | 7% | 50% |
| 2017E | 43% | 7% | 50% |
| 2018E | 43% | 7% | 50% |
| 2019E | 43% | 7% | 50% |

Production Mix:

We consider taking an average of the mix from the first 3 quarters for our 4Q’15 estimate and maintain this mix in future projections.

Sales Estimates:

2015: C-21 well successfully drilled at Alba field in 2Q’15 and began producing in 3Q. For our 4Q’15 Alba estimates we assume daily volumes from the field being equal to 3Q volumes. While for Aseng & Alen estimates we take an average of the volumes on the 3 prior quarters.

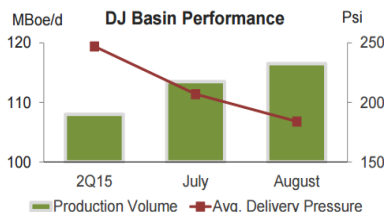
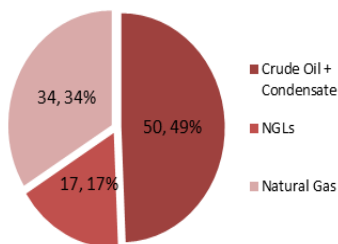
2016: Production will temporarily cease at the Alba field during 1Q, due to installation of the compression project. The project is expected to be completed mid-2016. To incorporate the closure effects, we assume a 2Q production equal to zero at the Alba field. Though, production during the following quarters is expected to compensate some of the earlier shortfall, where we incorporate a reasonable 10% increase on 4Q’15 for 3Q’16 & 4Q’16. Overall this equates to a 20% decrease for the 2016 Alba output on the estimated 4Q’15 Alba output. Production on the Aseng and Alen fields is assumed to be constant on 2015 numbers.

2017-19: We consider the positive effect of the multiyear compression project at the Alba field and apply 10% yearly growth on 4Q'16 volumes (e.g. 2017E = 51 Mboe/day +10%). Output on Aseng and Alen is held constant.

UNITED STATES:

DJ Basin: The Lucerne-2 natural gas processing plant came to effect in 2Q'2015 and is delivering more than 5 Mboe/day on pre - Lucerne-2 production. Lucerne-2 has been successfully tested to deliver 200 Mmcf/day. Compression projects completed in 2015, include, 70-Ranch Compressor Station (45 Mmcf/day max capacity), Rocky Compressor Station (100Mmcf/day max capacity) & Troutd Compressor Station (45 Mmcf/day max capacity) which have boosted production. Future infrastructure projects are also planned. Development of a fee-based low pressure gathering system (DCP Grand Parkway) by DCP Partners will reduce field pressure and allow production volumes of natural gas to increase. The project is expected to be completed in 4Q'15 or 1Q'16. Further compressor stations are anticipated to be completed and online in 2016. The Mountain View plant is expected to come online in 2017 with capacity to deliver 200 Mmcf/day.

2014: Avg. Sales Volumes (Mboe/d)



| Period | Sales (Mboe/d) | Production Mix | | |
|--------|----------------|------------------------|------|-------------|
| | | Crude Oil & Condensate | NGLs | Natural Gas |
| 1Q'15A | 116 | 50% | 14% | 36% |
| 2Q'15A | 108 | 49% | 17% | 34% |
| 3Q'15A | 116 | 50% | 17% | 33% |
| 4Q'15E | 116 | 50% | 16% | 34% |
| 2015E | 114 | 50% | 16% | 34% |
| 2016E | 125 | 50% | 16% | 34% |
| 2017E | 138 | 50% | 16% | 34% |
| 2018E | 138 | 50% | 16% | 34% |
| 2019E | 138 | 50% | 16% | 34% |

Production Mix:

Consider average of 1Q'15 to 3Q'15 mixes, and maintain mix forward.

Sales Estimates:

4Q'15: Hold 3Q'15 volumes constant. During 2Q'15, sales volumes were adversely impacted ~3 Mboe/day by weather and high line pressures.

2016: Apply 10% growth on 2015E to capture effects of additional compressor stations and Grand Parkway in early 2016. The 2015E, 114 Mboe/day, which incorporates the effects of 2015 project, is a 12.5% increase on 2014A, 101 Mboe/day; thus we consider a 10% increase on 2015E to be reasonable. Also worth mentioning, based on the first 3 quarters in 2015, it is evident that Noble Energy is responding to depressed commodity prices by raising sales volumes. Thus a future production increase is likely, based on the company's current strategy.

2017: Apply 10% increase on 2016E to capture production from Mountain View plant.

2018 – 19: Hold 2017E constant, no new project information available.

Marcellus Shale: Natural gas represents 90% of the reserve's minerals and holds 1668 Bcf. The commodity price decline has prompted Noble Energy into reducing drilling activities. In 2Q'15, the company confirmed it will close natural gas rigs in the Joint Venture it operates with CONSOL Energy. Despite this, Noble Energy saw record production levels at Marcellus Shale during 3Q'15, this occurred during a period where Noble and CONSOL averaged one horizontal drilling rig. During 3Q'15, Noble drilled 6 wells and began production on 16 operated wells, while CONSOL drilled seven wells and began production on 12 wells. According to company forecasts, Noble Energy expects to have ~80 DUC wells at the end of the year.

| Period | Output (Mmcf/day) | Mix | | |
|--------|-------------------|------------------------|------|-------------|
| | | Crude Oil & Condensate | NGLs | Natural Gas |
| 1Q'15A | 393 | 7% | 7% | 86% |
| 2Q'15A | 427 | 7% | 7% | 86% |
| 3Q'15A | 493 | 9.5% | 9.5% | 81% |
| 4Q'15E | 493 | 8% | 8% | 84% |
| 2015E | 452 | 8% | 8% | 84% |
| 2016E | 518 | 8% | 8% | 84% |
| 2017E | 544 | 8% | 8% | 84% |
| 2018E | 571 | 8% | 8% | 84% |
| 2019E | 599 | 8% | 8% | 84% |

Note: For the actual production mix in 1Q'15 to 3Q'15, the company discloses NGLs and Crude Oil + Condensate consolidated. For estimating purposes we consider a straight 50% split down the middle i.e. for 1Q'15, the company disclosed an actual mix of 86% natural gas & 14% NGLs and Crude Oil + Condensate.

Production Mix:

Consider average of 1Q'15 to 3Q'15 mixes, and maintain mix forward.

Sales Estimates:

4Q'15: Hold 3Q'15 volumes constant. 2015E represents a 54% increase on 2014A (294 Mmcf/day). Based on the first 3 quarters' numbers, it is evident that Noble Energy is responding to depressed commodity prices by raising sales volumes.

2016-19: Increment 4Q'15 output @ +5%. Consider 5% YoY growth thereafter. The reasoning behind this is that despite reduced drilling operations we expect output to increase; through improved productivity of already completed wells, conversion of DUC (drilled but uncompleted) wells to completed wells, and enhanced pipeline infrastructures in the region (midstream). We consider a 5% increase to be a reasonable estimate.

Deep-water Gulf of Mexico (GoM): A development project, 'Rio Grande', is in motion at Big Bend (54% working interest) & Dantzler (45% working interest). Big bend & Dantzler fields recorded initial production late in October 2015. Each field is delivering a maximum output of 10 Mboe/day net since late November 2015. > 85% of the production mix at Rio Grande is represented by crude oil & condensate according to company data. Noble Energy anticipates average volumes in 2016 being a 100% increase on 2015 average volumes in the GoM. Gunflint, a 2008 oil

discovery, is a sanctioned project (26% working interest). Development work continued successfully across 2015, drilling operations were concluded and activities were focused on well completion, assembly of midstream infrastructures and the installation of subsea equipment. Production is expected from the field in mid-2016. Noble Energy has experienced 72% exploration success rate in the region, and is targeting this region for future exploration after technological advances (seismic activity and deeper drilling) which have enhanced visibility. Noble Energy has stated that offshore exploration in 2016 is expected to be minimal ~5% of capital investment and indicated that this will be spent towards Gulf of Mexico exploration.

| Period | Sales (Mboe/day) | Production Mix | | |
|--------|---------------------|---------------------------|------|----------------|
| | | Crude Oil & Condensate | NGLs | Natural Gas |
| 1Q'15A | 15 | 83% | 6% | 11% |
| 2Q'15A | 12 | 75% | 8% | 17% |
| 3Q'15A | 12 | 82% | 5% | 13% |
| 4Q'15E | 24 | 85% | 5% | 10% |
| 2015E | 16 | 85% | 5% | 10% |
| 2016E | 31 | 85% | 5% | 10% |
| 2017E | 31 | 85% | 5% | 10% |
| 2018E | 31 | 85% | 5% | 10% |
| 2019E | 31 | 85% | 5% | 10% |

Production Mix:

Noble Energy say Rio Grande to be >85% crude oil + condensate. After observing prior 3 quarters production mix and taking into consideration Rio Grande project, we consider 85% crude oil + condensate, 5% NGLs and 10% Natural Gas to be a reasonable judgment.

Sales Estimates:

4Q'15: Ex Rio Grande - consider average of prior 3 quarters. With Rio Grande - Online late October, consider each field operating at 50% of max capacity for 3 weeks and operating at 100% for 5 weeks.

2016: Gunflint to come online. Noble Energy expects 100% increase on 2015 volumes.

2017-19: Hold output constant.

Legacy Assets Consolidated Estimates:

| Average Daily Oil-Equivalent Production (MBOE) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| United States | 120 | 118 | 138 | 152 | 177 | 205 | 243 | 260 | 264 | 269 |
| Equatorial Guinea | 49 | 55 | 72 | 74 | 74 | 65 | 59 | 77 | 82 | 88 |
| Israel | 22 | 29 | 17 | 35 | 39 | 47 | 73 | 100 | 100 | 149 |
| Other International | 8 | 4 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 |
| Equity investees | 7 | 7 | 7 | 8 | 7 | 7 | 6 | 8 | 8 | 9 |
| Total | 198 | 205 | 238 | 273 | 298 | 323 | 376 | 437 | 446 | 507 |

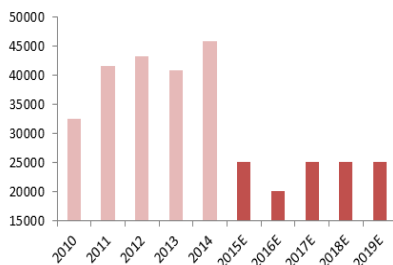
CAPITAL INVESTMENT

Depressed commodity prices have seen Noble Energy reduce their capital investment budget for 2015 to \$2.9Bn. The company stated early in 2015, that they seek to be in a cash neutral position, where CAPEX = Operational Cash flows. Noble Energy indicated that further commodity price declines could see future CAPEX budgets tightened. Oil & Gas E&P companies tend to be heavier on capital expenditures than other companies outside this industry and thus a reasonable and accurate forecast of CAPEX becomes even more important for valuation purposes. Ultimately, capital expenditures are necessary to develop existing reserves as well as replacing reserves. Curbing CAPEX restricts the ability to do either of these. Noble Energy expects to spend \$2.2bn in 2015, \$1.8bn in 2016 and \$1.7bn in 2017 in developing proved undeveloped (PUD) reserves⁵. All existing PUD reserves are expected to be converted to proved developed reserves before the end of 2019⁶. In the short run it is possible to limit CAPEX especially with the size of its existing proved developed reserve base. Assuming conversion of PUDs in 2015 and beyond, the first reserve to be depleted considering our forecasted production levels is crude oil & condensate in Equatorial Guinae in 2021. Our production estimates are held constant beyond 2019 until reserve depletion when later calculating NPV of Proved Reserves.

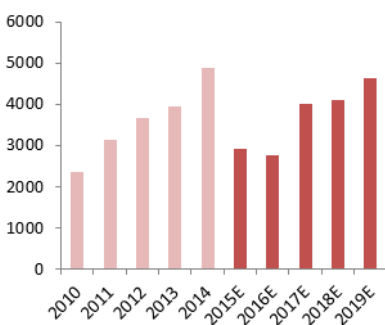
We do anticipate Noble Energy to reduce CAPEX further in 2016 as it continues to adjust to weak commodity prices, and we apply a 5% reduction on the 2015 budget for 2016 estimated capital investment. For projecting CAPEX beyond 2016, we consider analysing historically the level of CAPEX (additions to PP&E and asset acquisitions) required for the production of 1 Mboe⁷, since continued production necessitates reserve development & replenishment.

Considering that over 2010 to 2014 commodity prices were significantly higher, we would expect it to be cheaper to make additions and acquisitions under weaker commodity prices. Based on Noble Energy's 2015 budgeted capital investment program, under our forecasted production for 2015, we find that CAPEX per Mboe of production = \$25,102.25. In 2016, the ratio we obtain based on a 5% YoY CAPEX reduction and 2016 forecasted production, is \$20,145.6. In projecting CAPEX, in 2017-19 we consider \$25,102.25 CAPEX / Mboe of production to be the going rate, since commodity prices although expected to gradually increase do not return to pre-2015 levels and CAPEX should remain on the 'cheap' side.

Ratio of Capital Investment to 1 Mboe of production (\$)



Capital Investment (\$m)



⁵ 10-K SEC filing.

⁶ 10-K SEC filing.

⁷ Ratio = CAPEX / Total Annual Mboe Production

PRICE DECKS

Crude Oil & Condensate:

United States: For 2015, we consider the 6 months ended June 30, 2015 realised sales price⁸. For 2016-19, the model employs consensus median Nymex WTI estimates⁹.

Equatorial Guinae (EG): Historical (2010-14) avg. realised sales prices/barrel in EG have been on average 10.16% higher than US avg. realised sales prices. We layer a 10.16% increase on Nymex WTI estimates for 2016-19, whilst holding the 6 months ended June 30, 2015 realised sales price for the 2015 estimate.

Equity Investees: Historical (2010-14) avg. realised sales prices/barrel from Equity Investees have been on average 9.1% higher than US avg. realised sales prices. We layer a 9.1% increase on Nymex WTI estimates for 2016-19, whilst holding the 6 months ended June 30, 2015 realised sales price for the 2015 estimate.

Natural Gas:

United States: For 2015, we consider the 6 months ended June 30, 2015 realised sales price. The model employs consensus median Nymex Henry Hub estimates for 2016-19, adjusted for Mcf (1 Mcf = 1.027 MMBtu).

Israel: For our estimates through to 2019, we consider the 6 months ended June 30, 2015 realized sales price to be consistent with the govt. approved regulatory framework, which requires future prices to be linked to existing prices.

Equatorial Guinae: Based on Noble Energy operational guidance released in Feb, 2015, we take \$0.27/Mcf as our estimate. This price has not deviated since 2010 and we continue this forward.

Natural Gas Liquids (NGLs):

Equity Investees: For 2015 estimate, we consider the 6 months ended June 30th, 2015 realised sales price. Between 2010 and 2014, historical realized sales prices for NGLs from Equity Investees have been on average 66.86% of historical realised crude oil & condensate sales prices from equity investees and we consider applying this % for our 2016-19 price estimates.

United States: For 2015 estimate, we consider the 6 months ended June 30, 2015 realised sales price. Between 2010 and 2014, historical realised sales

⁸ 10-Q SEC filing 3Q considers Rosetta assets. So in order to be truly independent, consider 10-Q SEC filing for 2Q.

⁹ Bloomberg

prices for US NGLs as a % of historical US realised crude oil & condensate sales prices have decreased consistently. Our 2015 US NGL price estimate is 24.9% of the 2015 US crude oil & condensate price estimate. We consider holding this % and applying this forward for our 2016-19 US NGL price estimates.

| | \$ | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|-------------------------------|----|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| Oil + Condensate / Bbl | | | | | | | | | | | |
| United States | | 75.03 | 95.19 | 94.69 | 96.53 | 89.60 | 48.20 | 53.00 | 60.00 | 66.00 | 66.00 |
| Equatorial Guinea | | 78.44 | 107.57 | 110.14 | 107.48 | 94.61 | 54.97 | 58.39 | 66.10 | 72.71 | 72.71 |
| Equity Investees | | 77.98 | 108.76 | 104.56 | 105.37 | 96.53 | 51.86 | 57.82 | 65.46 | 72.01 | 72.01 |
| Natural Gas / Mcf | | | | | | | | | | | |
| United States | | 4.17 | 3.90 | 2.61 | 3.54 | 3.86 | 2.31 | 3.16 | 3.34 | 3.41 | 3.42 |
| Equatorial Guinea | | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 |
| Israel | | 4.03 | 4.86 | 4.85 | 5.02 | 5.57 | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| NGLs / Bbl | | | | | | | | | | | |
| United States | | 41.21 | 48.35 | 35.36 | 35.53 | 32.04 | 12.00 | 13.20 | 14.94 | 16.43 | 16.43 |
| Equity Investees | | 53.68 | 72.71 | 69.14 | 68.12 | 62.89 | 31.27 | 38.66 | 43.77 | 48.15 | 48.15 |

EXPENSES (Production linked)

| | \$ | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|---|----|-------|-------|-------|-------|-------|--------------|-------------|-------------|-------------|-------------|
| Lease Operating Expense / Boe | | | | | | | | | | | |
| United States | | 5.91 | 5.91 | 5.70 | 6.17 | 5.47 | 5.08 | 4.00 | 4.00 | 4.00 | 4.00 |
| Equatorial Guinea | | 2.42 | 2.65 | 3.38 | 3.92 | 5.48 | 5.86 | 4.00 | 4.00 | 4.00 | 4.00 |
| Israel | | 1.14 | 1.14 | 3.26 | 3.78 | 3.84 | 3.63 | 2.50 | 2.50 | 2.50 | 2.50 |
| Production & Ad Valorem Taxes / Boe | | | | | | | | | | | |
| United States | | 2.36 | 2.37 | 2.24 | 2.77 | 2.56 | 1.60 | 1.83 | 2.16 | 2.30 | 2.53 |
| Transportation & Gas Gathering Expense / Boe | | | | | | | | | | | |
| United States | | 1.35 | 1.47 | 1.73 | 2.32 | 2.60 | 2.93 | 2.10 | 2.55 | 2.90 | 2.70 |
| Total Production Expense / Boe | | | | | | | | | | | |
| United States | | | | | | | 9.60 | 7.93 | 8.71 | 9.20 | 9.23 |
| Equatorial Guinea | | | | | | | 5.86 | 4.00 | 4.00 | 4.00 | 4.00 |
| Israel | | | | | | | 3.63 | 2.50 | 2.50 | 2.50 | 2.50 |
| Consolidated | | | | | | | 7.96* | 6.25 | 6.46 | 6.75 | 6.34 |
| DD&A Expense / Boe | | | | | | | | | | | |
| | | 10.94 | 11.32 | 16.16 | 16.18 | 16.55 | 15.90 | 15.40 | 15.00 | 14.75 | 14.50 |
| G&A Expense / Boe | | | | | | | | | | | |
| | | 3.65 | 4.37 | 4.53 | 4.47 | 4.73 | 3.50 | 2.80 | 2.80 | 2.80 | 2.80 |
| Exploration Expense / Boe | | | | | | | | | | | |
| | | 3.47 | 3.83 | 4.85 | 4.29 | 4.68 | 2.42 | 2.78 | 3.02 | 3.20 | 3.16 |

Note: Non-recurring items (e.g. asset impairments & gain on divestitures) are forecasted as zero.

- **7.96** = $[9.6 \times \text{US production estimate} + 5.86 \times \text{EG production estimate} + 3.63 \times \text{Israel production estimate}] \div \text{total production estimate}$.

Lease Operating: 2015 estimate considers 6 month ended June 30, 2015 cost. We anticipate cost reductions in 2016 whilst taking into account the minimum operating lease obligations (2015: \$49m, 2016: \$40m, 2017: \$40m, 2018: \$31m, 2019: \$18m).

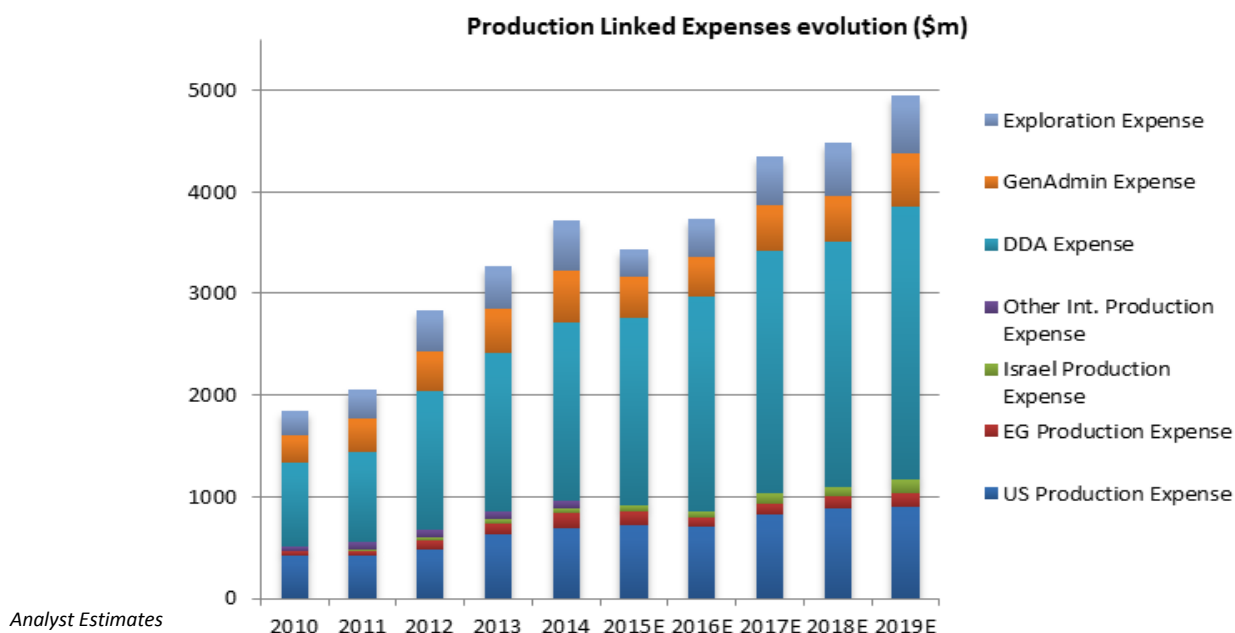
Production & Ad Valorem taxes: These are applicable only to US production. 2015 estimate considers the lower boundary from 2015 Operational Guidance¹⁰ (expense estimated to be 3.8% of oil, gas + NGL sales). We incorporate the 3.8% on future oil, gas + NGL sales to determine future estimates.

Transportation & Gas Gathering: These are applicable only to US production. 2015 estimate considers lower boundary of Noble Energy '2015 Operational Guidance'. Our estimates take into account the minimum transport & gas gathering obligations (2015: \$159m, 2016: \$185m, 2017: \$240m, 2018: \$277m, 2019: \$265m).

DD&A: 2015 estimate considers Noble Energy '2015 Operational Guidance'. We reduce the DD&A expense since under the forecasted commodity prices it will be cheaper to make additions compared to pre-2015 levels.

Exploration: 2015 estimate considers the lower boundary from 2015 Operational Guidance, as we expect to see contracted exploratory activities. The expense of \$280m equates to 8.91% of forecasted oil, natural gas + NGL sales. We apply 8.91% on our future core revenues to determine exploration expenses.

G&A: On 7th April 2015, Noble Energy announced plans for 220 job cuts, ~8% of workforce. We do expect the G&A expense / Boe for 2015 to be less than the operational guidance Noble Energy released in Feb, 2015. We expect Noble Energy to make further cuts in 2016 as it fully adjusts to a low commodity price environment.



¹⁰ Investor release, February 2015: 'Noble Energy provides 2015 Guidance'.

VALUATION

IMPORTANT – Noble Energy closed acquisition of Rosetta Resources on 20th July, 2015 (100% stock acquisition). We separately value Noble Energy legacy assets (ex. Rosetta Resources), and Rosetta Resources assets. We then add their respective 2016 Equity Values less the amount ‘paid’ by Noble Energy to Rosetta Resources divided by the current number of diluted shares outstanding under Noble Energy, which includes the stock issued to finance the acquisition of Rosetta Resources. We consider that there are few synergies from the acquisition. Oil & Gas acquisitions typically present few synergies as commodity prices are driven by market forces.

We forecast the P&L, Balance Sheet and Cash Flow Statement for Noble Energy (Legacy Assets). Our 2016 Equity Value for Noble Energy legacy assets is derived using a DCF analysis, by applying a Total Enterprise Value / Adj.-EBITDAX multiple on projected 2019 Adj.-EBITDAX¹¹ as well as considering FCFs from 2017 until 2019. In establishing our ‘exit multiple’ we consider the market value of equity immediately prior to acquisition announcement and utilise the ‘Treasury Method’ of share dilution, where we assume all in-the-money options¹² are exercised and proceeds are used to repurchase stock. In our multiple calculation, we consider the fully diluted shares outstanding immediately prior to acquisition of Rosetta Resources. Total Enterprise Value is calculated by adding Net Financial Obligations¹³ to the MV of equity. Exit multiple = pre-acquisition TEV / 2014 Adj-EBITDAX.

At minimum \$1bn of cash & cash equivalents is to be kept on the balance sheet at all times in our projection period. A deferred income tax asset is recorded on the Net Operating Loss (NOL) forecasted for 2015¹⁴. We incorporate the effects of future mandatory capital lease payments¹⁵ in our forecasts. Due to weak commodity prices forecasted, we anticipate Noble Energy to make use of the \$4b credit facility available to them to support future capital investments. We do not expect Noble Energy legacy assets to close out 2015 in a cash neutral position (operating cash flows = CAPEX). We maintain current dividends of \$0.72/share in our projections, since Noble Energy seeks to deliver competitive returns to shareholders.

¹¹ Adjusted-EBITDAX = Net Income from Continuing Operations (after-tax) + Interest + DD&A (includes Asset Retirement Accretion expense + Asset impairments (non-recurring item) – Gain on divestitures (non-recurring item) – Unrealized gain on derivatives + SBC + Other adjustments for non-cash expenses + Other non-operating expenses + Exploration Expense (Noble Energy utilises ‘successful efforts’ method of accounting, where only unsuccessful exploration is expensed).

¹² Stock Options, Restricted Stock Awards and Rabbi Trusts.

¹³ NFO = Total Debt + Asset Retirement Obligation + Pension, Restoration and Other Post Retirement Benefit Plans – Cash & Cash Equivalents – Net Fair Value of Derivatives.

¹⁴ US tax laws permit corporates to carry NOLs forward for a maximum of 20 years.

¹⁵ Provided in 10-K filing

In forecasting interest expense, in addition to fixed coupon payments on senior notes and debentures, we consider net interest on revolver borrowing¹⁶, an interest rate of 5.085%¹⁷ on capital leases held constant, interest income on cash being linked to Eurodollar rate and finally capitalized interest. We assume that assets added by future CAPEX will qualify for capitalization of interest since CAPEX will likely be funded from our interest bearing debt including revolver borrowing. For forecasting we consider future yearly CAPEX to be spread evenly over the 12 month period in estimating our weighted average accumulated CAPEX and we apply the weighted average interest rate on debt to establish the cost that can be capitalized.

From our 5-yr projection model, unlevered FCFs and Terminal Value are discounted at the WACC to derive the Total Enterprise Value¹⁸. Cost of Equity is estimated using the CAPM¹⁹. To calculate the cost of equity, we first assess the suitability of using the 5-Yr (monthly) levered beta²⁰ of Noble Energy, rather than the median from a set of comparables (Apache, Murphy Oil, Anadarko Petroleum & Occidental Petroleum). For the levered betas of our comparable companies we set up a 95% confidence interval (CI)²¹ of levered betas. After taking into account the estimation error, we set up a 95% CI for the unlevered betas²². The median of the 95% CI of comparable companies' unlevered betas is calculated, lower boundary = 0.8, upper boundary = 1.57. The unlevered beta of Noble Energy = 0.99, calculated by applying the levering/un-levering formula, and is found to lie within the 95% CI of comparable companies' unlevered betas, thus for the cost of equity calculation it is suitable to use the levered beta of the subject company. Inputs for the CAPM: Risk-free rate = 2.63%²³, Market Risk Premium = 6.62%²⁴, Levered Beta = 0.99.

| | Noble Energy (ex. Rosetta) |
|-------------------------------|----------------------------|
| Risk free rate | 2.63% |
| MRP | 6.62% |
| Equity Beta | 1.15 |
| Cost of Equity | 10.25% |
| Cost of Equity Portion | 8.14% |
| Weighted-Avg. Yield | 5.68% |
| Cost of debt | 5.53% |
| After-Tax Cost of debt | 3.60% |
| Cost of Debt Portion | 0.74% |
| WACC | 8.88% |

For calculating the cost of debt we consider the weighted-average of current yields on all outstanding debt instruments (excluding debt absorbed by Noble Energy from Rosetta Resources²⁵), which is 5.68%. Noble Energy's unsecured senior notes and

¹⁶ Net Interest on Revolver = Interest on revolver borrowing + Facility fee. Information detailed in 10-K filing gives the following, Interest on revolver borrowing = Eurodollar rate + (100 basis points to 145 basis points), Facility fee = 0.125% to 0.3% of Maximum Revolver Borrowing \$4Bn when in drawn position. 31st Dec 2015: 1-month Eurodollar rate = 0.5%

¹⁷ Latest 10-K filing details 2015 capital lease payment equal to \$89m (net to interest) and current portion of capital lease to be paid 2016 equal to \$68m. Interest = Payment – Principal. Effective interest rate on capital lease = Interest / Beginning Lease Value. A constant interest rate on capital lease is maintained forward.

¹⁸ 2016 TEV = PV(FCF_2017) + PV(FCF_2018) + PV(FCF_2019) + PV(Terminal Value)

¹⁹ $R_e = R_f + \beta * (MRP)$

²⁰ Source: Bloomberg, 5-yr monthly beta @ day 08.05.15 (day before Rosetta acquisition was announced)

²¹ Levered Beta $\pm 1.96 * SE(\text{Beta})$

²² Unlevered beta = Levered Beta / $[(\text{Net Debt} / \text{Market Value of Equity}) * (1-t) + 1]$. MV of Equity @ pre-Rosetta announcement.

²³ 20-Yr US Treasury Bond

²⁴ Ibbotson's Long term, 20-Yr (1926-2011)

²⁵ Bloomberg now reports all debt instruments outstanding for the **consolidated** company.

debenture have been given a Baa2²⁶ rating by Moody's. The avg. cumulative issuer-weighted global default rate for companies rated Baa2 is 4.608%²⁷, whilst the avg. defaulted corporate bond & loan recovery rate on senior unsecured bonds is 45.28%²⁸. After considering these items, the after-tax cost of debt for Noble Energy is 3.60%²⁹.

| | |
|--|---------------------|
| DCF 2016 Implied Enterprise Value | \$ 23901.87m |
| Less: 2016 Net Debt | \$ 5953.39m |
| 2016 Implied Equity Value | \$ 17948.48m |

| FCF Map (\$m) - Noble Energy Legacy Assets | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|---|------------|-------------|------------|-------------|-------------|--------------|------------|-------------|-------------|-----------------|
| Adjusted EBITDAX | 1996 | 2558 | 3232 | 3799 | 3747 | 1904 | 3132 | 4044 | 4434 | 5009 |
| EBIT from Continuing Ops | 920 | 567 | 1481 | 1502 | 1920 | -253 | 585 | 1104 | 1436 | 1661 |
| Less: Notional Taxes | -322 | -198 | -518 | -526 | -672 | 89 | -205 | -386 | -502 | -581 |
| Less: Tax Adjustments | 80 | 86 | 84 | 33 | 103 | 0 | 0 | 0 | 0 | 0 |
| NOPAT from Continuing Ops | 678 | 454 | 1046 | 1010 | 1351 | -165 | 380 | 718 | 933 | 1080 |
| Plus: Non-Cash Operating Expenses/(Income) | 1063 | 1873 | 1772 | 2250 | 1880 | 1814 | 2436 | 2742 | 2701 | 3015 |
| Plus / (Less): Change in NWC | 158 | -156 | 134 | -291 | 412 | 125 | -102 | 69 | -26 | 99 |
| Less: Cash Invested in Operations | -1779 | -3113 | -2527 | -3675 | -4465 | -2900 | -2762 | -4000 | -4089 | -4642 |
| FCF | 120 | -942 | 425 | -706 | -823 | -1125 | -48 | -472 | -481 | -448 |
| Equity Financing | 68 | 158 | 101 | 141 | 198 | -833 | 279 | 279 | 279 | 279 |
| Debt Financing | 146 | -1059 | 386 | -776 | -1021 | -292 | -327 | -751 | -760 | -726 |
| Net Income from Discontinued Ops | 94 | 41 | 62 | 71 | 0 | 0 | 0 | 0 | 0 | 0 |
| FCF | 120 | -942 | 425 | -706 | -823 | -1125 | -48 | -472 | -481 | -448 |
| Interest | -72 | -65 | -125 | -158 | -210 | -269 | -281 | -257 | -268 | -269 |
| Tax Shield | 25 | 23 | 44 | 55 | 74 | 94 | 98 | 90 | 94 | 94 |
| Net Income from Continuing Ops | 631 | 412 | 965 | 907 | 1214 | -340 | 198 | 551 | 759 | 905 |
| Weighted Average Cost of Capital | | | | | | | | | | 8.88% |
| NPV of Unlevered FCF @ 31.12.16 | | | | | | | | | | -1186.00 |
| PV Terminal Value @ 31.12.16 | | | | | | | | | | 25088 |

SENSITIVITY ANALYSIS

| Equity Value \$m | | Discount Rate | | | | | | |
|---------------------|-------------|---------------|-----------|-----------|--------------|-----------|-----------|-----------|
| | | 8.00% | 8.25% | 8.50% | 8.88% | 9.00% | 9.25% | 9.50% |
| Exit Multiple | 7.00 | 20,678.70 | 20,491.65 | 20,306.33 | 20,025.90 | 19,940.79 | 19,760.53 | 19,581.93 |
| | 6.75 | 19,684.53 | 19,504.35 | 19,325.83 | 19,055.71 | 18,973.73 | 18,800.10 | 18,628.06 |
| | 6.46 | 18,549.93 | 18,377.59 | 18,206.85 | 17,948.48 | 17,870.07 | 17,704.00 | 17,539.45 |
| | 6.30 | 17,895.02 | 17,727.20 | 17,560.95 | 17,309.37 | 17,233.02 | 17,071.31 | 16,911.08 |
| | 6.15 | 17,298.51 | 17,134.82 | 16,972.65 | 16,727.25 | 16,652.78 | 16,495.04 | 16,338.76 |
| | 6.00 | 16,702.01 | 16,542.44 | 16,384.36 | 16,145.14 | 16,072.54 | 15,918.78 | 15,766.43 |

²⁶ Source: Bloomberg

²⁷ Pool of companies 1998 - 2010, T = 10yrs. Source: Moody's – 'Corporate Default and Recovery Rates, 1920-2010' (Exhibit – 37)

²⁸ Annual data from 1982 - 2010, Source: Moody's – 'Corporate Default and Recovery Rates, 1920-2010' (Exhibit – 21)

²⁹ After-tax Cost of Debt = $(((1 - \text{Default rate}) * \text{Weighted-Avg. Yield on Debt}) + (\text{Default rate} * (\text{Recovery rate} * \text{Weighted-Avg. Yield on Debt}))) * (1 - \text{tax rate})$

The discount rate and exit multiple impact the valuation. Changes in the cost of equity & debt will affect the valuation. Equity holders' perception of risk may change. Equity holders will perceive an increase in risk if commodity prices were to fall further. A higher / (lower) credit rating and / or lower / (higher) interest rates and / or lower / (higher) inflation will increase / (decrease) bond prices and decrease / (increase) yields. On 16th Dec, 2015, Moody's placed Noble Energy's senior unsecured shelf & debenture on review for downgrade. A downgrade would increase the R_d , ceteris paribus, and reduce equity value. Also with the US Federal Reserve now expected to increase interest rates gradually from 0.25% for the first time since 2006, bond prices will fall and yields will increase, ceteris paribus.

The TEV component of the exit multiple is affected by the prevailing market share price (equity value) and current net debt. The EBITDAX component of the exit multiple is influenced by multiple factors, see EBITDAX formula in reference 11.

Investment Thesis (Rosetta Resources Assets)

PRODUCTION

Noble Energy announced on 20th July that they closed the acquisition of Rosetta Resources³⁰. Noble Energy expects >15% annual production growth on Rosetta Resources assets, with a daily production volume estimate of >100 Mboe in 2018.

| YE 2014 Reserve Information | Oil + Condensate (MMBbls) | Natural Gas (Bcf) | NGLs (MMBbls) | Total (MMBoe) |
|------------------------------|---------------------------|-------------------|---------------|---------------|
| Proved Developed | | | | |
| Eagle Ford | 26 | 325 | 51 | 131 |
| Permian | 5 | 6 | 1 | 7 |
| Other | 0 | 0.3 | 0 | 0 |
| Proved | | | | |
| Eagle Ford | 20 | 304 | 49 | 119 |
| Permian | 17 | 19 | 4 | 24 |
| Other | 0 | 0 | 0 | 0 |
| Total Proved Reserves | 68 | 655 | 105 | 282 |

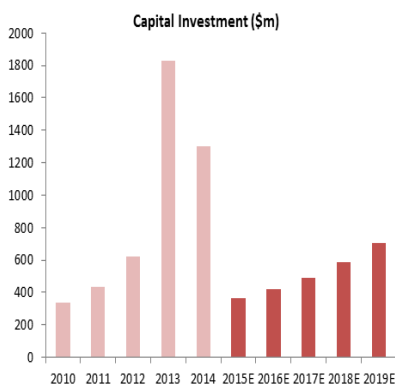
A significant portion of growth in the short-term is expected to come from Eagle Ford. During the 3rd quarter, Noble Energy in Eagle Ford operated 1 rig, drilled 6 wells and began production of 3 well, while in the Permian Basin, Noble Energy operated a single rig and drilled a single well.

The Eagle Ford and Permian Basin produced 54 Mboe/day from 21st July to end of 3Q'2015. Eagle Ford contributed 84% of volumes, while Permian Basin, 16%. Contribution to overall Rosetta Resources production volumes by Eagle Ford equalled 90% in 2014, 96% in 2013 and 96% in 2012.

³⁰ Investor Release - 'Noble Energy Closes Acquisition of Rosetta Resources'

| Annual Production | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Oil (MBbls) | | | | | | | | | | |
| Eagle Ford | 536 | 1747 | 3445 | 4469 | 5237 | 4975 | 5721 | 6723 | 8067 | 9681 |
| Permian | 0 | 0 | 0 | 508 | 1709 | 1624 | 1867 | 2194 | 2633 | 3159 |
| Other | 202 | 116 | 52 | 22 | 9 | 0 | 0 | 0 | 0 | 0 |
| Total | 738 | 1863 | 3497 | 4999 | 6955 | 6599 | 7589 | 8916 | 10700 | 12840 |
| NGLs (MBbls) | | | | | | | | | | |
| Eagle Ford | 690 | 2396 | 4391 | 6317 | 8111 | 7705 | 8861 | 10412 | 12494 | 14993 |
| Permian | 0 | 0 | 0 | 69 | 296 | 281 | 323 | 380 | 456 | 547 |
| Other | 406 | 247 | 81 | 12 | 1 | 0 | 0 | 0 | 0 | 0 |
| Total | 1096 | 2643 | 4472 | 6398 | 8408 | 7987 | 9185 | 10792 | 12950 | 15540 |
| Natural Gas (MMcf) | | | | | | | | | | |
| Eagle Ford | 6600 | 22100 | 31717 | 39561 | 49883 | 47389 | 54497 | 64034 | 76841 | 92209 |
| Permian | 0 | 0 | 0 | 548 | 1708 | 1623 | 1866 | 2193 | 2631 | 3157 |
| Other | 32600 | 11300 | 2136 | 234 | 25 | 24 | 27 | 32 | 39 | 46 |
| Total | 39200 | 33400 | 33853 | 40343 | 51616 | 49035 | 56390 | 66259 | 79511 | 95413 |
| MBOE | | | | | | | | | | |
| Eagle Ford | 2326 | 7827 | 13122 | 17380 | 21662 | 20579 | 23666 | 27807 | 33368 | 40042 |
| Permian | 0 | 0 | 0 | 668 | 2290 | 2175 | 2501 | 2939 | 3527 | 4232 |
| Other | 6041 | 2246 | 489 | 73 | 14 | 4 | 5 | 5 | 6 | 8 |
| Total | 8367 | 10073 | 13611 | 18121 | 23966 | 22758 | 26172 | 30752 | 36902 | 44282 |
| MBOE/daily | 23 | 28 | 37 | 50 | 66 | 62 | 72 | 84 | 101 | 121 |

For our 2015 estimates we apply a 5% decrease on 2014 daily volumes. During the 6 months ended June 30th, 2015, daily volumes from Rosetta Resources assets amounted to 64.4 Mboe, while in 3Q'15 daily volumes from Eagle Ford and Permian equalled 54 Mboe (Noble Energy did not disclose production volumes listed 'Other' for Rosetta Resources assets, so we assume these values to be minimal). For 4Q'15 we anticipate a production increase that will offset the lower production in 3Q. For 2016 production we apply a 15% increase across all Rosetta Resources assets on 2014 volumes, in line with Noble Energy's opinion on production, 17.5% growth in 2017 and 20% growth thereafter as commodities are expected to increase.



CAPITAL INVESTMENT

Operational guidance from Rosetta Resources in Feb 2015³¹, suggested that Rosetta Resources would commit up to \$350m/year for 2015 and 2016 on CAPEX in response to lower commodity prices, while maintaining production at 58 to 62 Mboe/day. Similar to how we calculate CAPEX in Noble Energy: Legacy Assets, the aforementioned numbers indicate that 1 boe of production requires \$16 worth of

³¹ Rosetta Resources Inc. Announces Two-Year Strategic Outlook and Provides 2014 Operations and Reserve Update

CAPEX ($16 = 350m / (365 * 60Mboe/day)$). We assume moving forward under the direction of Noble Energy, 1 Mboe of production continues to require this level of CAPEX across to 2019 since additions will likely remain on the 'cheap' side as commodities are only expected to increase gradually.

PRICE DECKS

2015 price estimates consider the 6 months ended June 30th, 2015 realised prices (excluding derivatives). For 2016-19, the model employs consensus median Nymex WTI oil estimates whilst for natural gas we consider the Nymex Henry Hub estimates (adjusted for MMBtu conversion). For 2016-19 NGL price estimates we explore the current & historical (2010-14) relationship between realised oil prices and realised NGL prices. We determine that NGL prices as a % of oil prices have been falling. We maintain 30% of NYMEX WTI for our 2016-19 NGL forecast.

| | \$ | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|------------------------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Oil (Bbl) | | 73.91 | 85.03 | 91.16 | 95.04 | 82.61 | 44.35 | 53.00 | 60.00 | 66.00 | 66.00 |
| NGLs (Bbl) | | 41.24 | 51.26 | 35.88 | 31.1 | 26.48 | 13.21 | 15.90 | 18.00 | 19.80 | 19.80 |
| Natural Gas (Mcf) | | 4.5 | 4 | 2.77 | 3.64 | 4.14 | 2.65 | 3.16 | 3.34 | 3.41 | 3.42 |
| NGLs as % of Oil price | | 56% | 60% | 39% | 33% | 32% | 30% | 30% | 30% | 30% | 30% |

EXPENSES

| Expense / Boe (\$) | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lease Operating Expense | 2.86 | 2.58 | 2.94 | 3.89 | 4.20 | 3.80 | 3.80 | 3.80 | 3.80 |
| Treating & Transportation | 2.22 | 3.81 | 3.94 | 3.69 | 4.25 | 3.80 | 3.80 | 3.80 | 3.80 |
| Taxes | 1.8 | 1.76 | 1.71 | 1.92 | 1.55 | 1.10 | 1.30 | 1.40 | 1.40 |
| DD&A | 12.24 | 11.33 | 12.06 | 17.35 | 17.00 | 16.50 | 16.00 | 15.75 | 15.50 |
| General & Administrative (including SBC) | 7.47 | 5.05 | 4.03 | 3.31 | 3.94 | 2.99 | 2.99 | 2.98 | 2.97 |
| General & Administrative (excluding SBC) | 4.59 | 3.69 | 3.42 | 2.94 | 3.75 | 2.80 | 2.80 | 2.80 | 2.80 |

Lease Operating Expense (LOE): 2015 Rosetta operational guidance provides an estimate for LOE, we consider the lower boundary. We forecast the expense to fall in 2016 and hold constant after in response to low but increasing commodity prices.

Treating & Transportation (LOE): Same logic as LOE.

Taxes: These comprise of Production & Ad Valorem taxes. 2015 Rosetta operational guidance provides an estimate for taxes. We consider the lower boundary from the range. For 2016-19 forecasts, we consider historical taxes from 2011 to 2014 as a % of Rosetta Resources' core revenue. The average % of core revenue across the historical range is employed in making our 2016-19 forecasts.

DD&A: 2015 Rosetta operational guidance provides an estimate for DD&A. We consider the lower boundary from the range. For 2016-19 forecasts we decrease the DD&A/Boe expense to reflect the fact that additions will be cheaper to make compared to pre-2015 level given the projected commodity prices, and thus the DD&A/Boe expense will decrease accordingly.

G&A: 2015 Operational guidance provides an estimate for G&A (excluding stock based compensation); we take the lower boundary from the range. We analyse historically between 2011 and 2014 the total stock based compensation expense as a % of core revenue and identify a decreasing trend. We continue the trend forward and forecast SBC on our core revenue projections. After forecasting SBC for 2015, this element is added to the 2015 G&A estimate (excluding SBC) to obtain the full G&A estimate including SBC. Due to the economic environment we expect job cuts in 2016 unless commodity prices rebound considerably, for this reason we reduce the G&A expense (excluding SBC) in 2016 and hold constant to 2019.

VALUATION

In order to determine the 2016 Equity Value of Rosetta Resources, we forecast the P&L, Balance Sheet and Cash Flow Statement for Rosetta Resources. We follow a similar approach as we did for Noble Energy (legacy assets) by applying TEV/Adj-EBITDA multiple on projected 2019 Adj.-EBITDA in addition to considering FCFs until 2019. In establishing our 'exit multiple' we consider the market value of equity of Rosetta Resources immediately prior to the acquisition announcement and utilise the 'Treasury Method' of share dilution, where it is assumed all in-the-money options³² are exercised and proceeds are used to repurchase stock. In the market value of equity calculation we consider the fully diluted shares outstanding of Rosetta Resources before being acquired by Noble Energy. Total Enterprise Value is calculated by adding Net Financial Obligations to the market value of equity. The exit multiple = pre-acquisition TEV / 2014 Adj-EBITDA. Rosetta Resources utilises the 'full cost' method of accounting whereby exploration expense, whether successful or not, is capitalised.

At minimum \$30m cash & cash equivalents is expected to be kept on the balance sheet at all times in our projection period. Tax benefits are expected to be recognised on the NOLs forecasted for 2015 and 2016. Due to weak commodity prices forecasted, we anticipate use of the senior secured revolving credit facility available which will be used to support future capital investments. In addition, we assume that

³² Stock Options + Restricted Stock Awards.

only mandatory debt repayments will be made each year and no optional debt repayments. In forecasting interest expenses, in addition to fixed coupon payments on senior notes and debentures, we consider interest on revolver borrowing³³, interest income on cash being linked to LIBOR rate and finally capitalized interest. We assume that assets added by forecasted CAPEX will qualify for capitalization of interest since CAPEX will likely be funded from interest bearing debt including revolver borrowing. For forecasting, we consider future yearly CAPEX to be spread evenly over the 12 month period in estimating our weighted average accumulated CAPEX and we apply our the weighted average interest rate on debt to establish the cost that can be capitalized.

From our 5-yr projection model, unlevered FCFs and Terminal Value are discounted at the weighted average cost of capital to derive the Total Enterprise Value. Our calculation of WACC follows the same principles underlined in the calculation of WACC for Noble Energy. The same comparable companies are used in our assessment on whether to utilise the levered beta of the subject company (5-yr monthly levered beta of Rosetta Resources prior to acquisition announcement). We find that the after un-levering the 5-yr monthly levered beta for Rosetta Resources, the unlevered beta is found to lie within the 95% CI of comparable companies' unlevered betas, and thus for the calculation of the cost of equity, it is suitable to use the levered beta of the subject company. Prior to the acquisition announcement by Noble Energy, the unsecured senior notes issued by Rosetta Resources were rated a B1³⁴ by Moody's. For our current yield in the cost of debt calculation for Rosetta Resources, we consider the current bond yield of Denbury Resources (comparable – independent US oil & gas E&P company) that has 5.5% fixed rate debt maturing in 2022, rated B1 by Moody's with a current yield of 17.075%. The avg. cumulative issuer-weighted global default rate for companies rated B1 is 35.782%³⁵, whilst the avg. defaulted corporate bond & loan recovery rate on senior unsecured bonds is 45.28%³⁶.

| | Rosetta Resources |
|-------------------------------|-------------------|
| Risk free rate | 2.63% |
| MRP | 6.62% |
| Equity Beta | 1.15 |
| Cost of Equity | 10.25% |
| Cost of Equity Portion | 8.14% |
| Current Yield | 17.08% |
| Cost of debt | 13.73% |
| After-Tax Cost of debt | 8.93% |
| Cost of Debt Portion | 4.79% |
| WACC | 11.01% |

| | |
|--|--------------------|
| DCF 2016 Implied Enterprise Value | \$ 3661.73m |
| Less:2016 Net Debt | \$ 1758.31m |
| 2016 Implied Equity Value | \$ 1903.42m |

³³ Interest on revolver borrowing is calculated as LIBOR + 1.5% to 2%. Information detailed in 10-K filing. USD LIBOR 1 month = 0.42%, assume constant across 2015 to 2019.

³⁴ Bloomberg

³⁵ Pool of companies 1998 - 2010, T = 10yrs. Source: Moody's – 'Corporate Default and Recovery Rates, 1920-2010' (Exhibit – 37)

³⁶ Annual data from 1982 - 2010, Source: Moody's – 'Corporate Default and Recovery Rates, 1920-2010' (Exhibit – 21)

| FCF Map (\$m) – Rosetta Resources | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|--|------------|------------|-------------|--------------|-------------|-------------|------------|-----------|------------|------------|
| EBITDA | 201 | 319 | 433 | 592 | 718 | 228 | 443 | 617 | 833 | 1001 |
| EBIT | 73 | 178 | 280 | 346 | 564 | -176 | -13 | 94 | 211 | 265 |
| Less: Notional Taxes | -25 | -62 | -98 | -121 | -197 | 62 | 4 | -33 | -74 | -93 |
| Less: Tax Adjustments | -11 | -1 | -7 | -2 | -4 | 0 | 0 | 0 | 0 | 0 |
| NOPAT | 37 | 114 | 175 | 223 | 362 | -114 | -8 | 61 | 137 | 173 |
| Plus: Non-Cash Operating Expenses/(Income) | 160 | 199 | 252 | 355 | 321 | 309 | 418 | 524 | 665 | 800 |
| Plus / (Less): Change in NWC | -2 | 0 | -41 | 36 | 14 | 31 | -23 | -8 | -6 | 5 |
| Less: Cash Invested in Operations | -252 | -190 | -534 | -1829 | -1298 | -364 | -418 | -491 | -590 | -708 |
| FCF | -57 | 123 | -147 | -1215 | -600 | -138 | -31 | 85 | 206 | 270 |
| Equity Financing | -1 | 1 | 5 | -334 | 2 | -234 | 0 | 0 | 0 | 0 |
| Debt Financing | -56 | 122 | -152 | -881 | -602 | 97 | -31 | 85 | 206 | 270 |
| FCF | -57 | 123 | -147 | -1215 | -600 | -138 | -31 | 85 | 206 | 270 |
| Interest | -27 | -21 | -24 | -36 | -75 | -96 | -96 | -94 | -87 | -82 |
| Tax Shield | 9 | 7 | 9 | 13 | 26 | 34 | 34 | 33 | 31 | 29 |
| Net Income | 19 | 101 | 159 | 199 | 314 | -177 | -71 | 0 | 80 | 119 |

Weighted Average Cost of Capital

11.01%

NPV of Unlevered FCF @ 31.12.16

441

PV Terminal Value @ 31.12.16

3221

SENSITIVITY TABLE

| Equity Value \$m | Discount Rate | | | | | | |
|------------------|---------------|----------|----------|----------|----------|----------|----------|
| | 9.50% | 10.00% | 10.50% | 11.01% | 11.50% | 12.00% | 12.50% |
| 5.00 | 2,342.35 | 2,342.35 | 2,342.35 | 2,342.35 | 2,342.35 | 2,342.35 | 2,342.35 |
| 4.70 | 2,122.88 | 2,122.88 | 2,122.88 | 2,122.88 | 2,122.88 | 2,122.88 | 2,122.88 |
| 4.40 | 1,903.42 | 1,903.42 | 1,903.42 | 1,903.42 | 1,903.42 | 1,903.42 | 1,903.42 |
| 4.10 | 1,683.95 | 1,683.95 | 1,683.95 | 1,683.95 | 1,683.95 | 1,683.95 | 1,683.95 |
| 3.80 | 1,464.49 | 1,464.49 | 1,464.49 | 1,464.49 | 1,464.49 | 1,464.49 | 1,464.49 |
| 3.50 | 1,245.02 | 1,245.02 | 1,245.02 | 1,245.02 | 1,245.02 | 1,245.02 | 1,245.02 |

ROSETTA ACQUISITION OVERVIEW & 2016 FY PRICE TARGET

| ACQUISITION OVERVIEW | ACQUIRER - Noble Energy | TARGET - Rosetta Resources |
|--|-------------------------|----------------------------|
| Common Stock Outstanding (Pre-Acquisition) | 387,045,609 | 75,734,762 |
| Common Stock Outstanding (Post Acquisition) Current | 428,554,158 | |
| Closing Stock Price @ 08/05/2015 | \$49.12 | \$19.33 |
| Closing Stock Price @ 11/05/15 (acquisition announcement date) | \$45.54 | |
| Fully Diluted Shares Outstanding (Pre-Acquisition) 08.05.11 | 391.82m | 75.76m |
| Closing Stock Price @ 20/07/15, Date of Merger Completion | \$36.97 | |

100% Stock Acquisition, Exchange Ratio, **0.542 per 1 common**Shares Issued: **41.05m** = 0.542 * 75.73mImplied Per Share Purchase Price @ 08/05/15 considering prevailing Noble share price, **\$26.62** = 0.542 * 49.12Implied Per Share Premium @ 08/05/15, **38%** = 26.62 / 19.33Actual Per Share Purchase Price @ 20/07/15, **\$20.04** = 0.542 * 36.97Fair Value of Common Stock issued to complete merger, **\$1,518.1m** = 20.04 * diluted Rosetta Shares outstanding @ 20/07/15.Goodwill/(Badwill), **(226.2)** = 1,518.1 – 1,744. (Note: use 2015 Projected Rosetta Resources Stockholder's Equity).

Note: Noble Energy share price fell on day of announcement due to **implied** per share purchase premium of 38%, however on the 20.07.15 when acquisition was completed, prevailing Noble share price was \$36.97, meaning that the actual equity purchase price differed greatly to the implied equity purchase price on announcement date.

Sum-of-the-Parts (\$m)

| | | | |
|-----|---|-----------------|---------------|
| DCF | 2016 Equity Value: Noble Assets Pre Rosetta Acquisition | 17948.48 | |
| DCF | 2016 Equity Value: Rosetta Resources | 1903.42 | |
| | | 19851.90 | |
| | 100% Stock (0.542:1), Equity Purchase Price | 1518.18 | |
| | 2016 Equity Value: Noble & Rosetta Consolidated | 18333.72 | |
| | Diluted Shares Outstanding | 431.15m | |
| | Implied Price Per Share @ 31.12.16 | \$ 42.52 | 37.66% |

PRO-FORMA FINANCIAL STATEMENTS + ANALYSIS

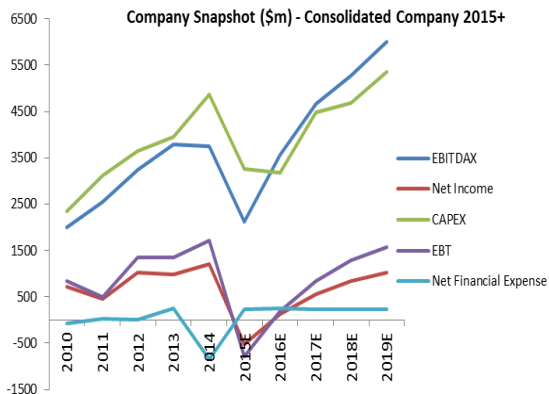
| Pro-Forma Consolidated Balance Sheets (\$m) | Noble Energy | | | | | Noble Energy + Rosetta Resources Consolidated | | | | |
|---|--------------|--------------|--------------|--------------|--------------|---|--------------|--------------|--------------|--------------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
| Current Assets | | | | | | | | | | |
| Cash and Cash Equivalents | 1081 | 1455 | 1387 | 1117 | 1183 | 1015 | 986 | 1089 | 1017 | 1058 |
| Accounts Receivable, Net | 556 | 783 | 964 | 947 | 857 | 622 | 821 | 1010 | 1091 | 1197 |
| Commodity Derivative Assets, Current | 62 | 10 | 63 | 1 | 710 | 931 | 931 | 931 | 931 | 931 |
| Other Current Assets | 130 | 129 | 251 | 484 | 325 | 206 | 279 | 353 | 386 | 433 |
| Deferred Income Tax Assets | 9 | 41 | 106 | 62 | 0 | 278 | 210 | 0 | 0 | 0 |
| Total Current Assets | 1838 | 2418 | 2771 | 2611 | 3075 | 3053 | 3226 | 3383 | 3425 | 3620 |
| PPE | | | | | | | | | | |
| Total PPE (Gross) | 14656 | 19351 | 19840 | 22760 | 26229 | 35596 | 38634 | 42945 | 47428 | 52559 |
| Accumulated DD&A | -4392 | -6569 | -6289 | -7035 | -8086 | -12744 | -15287 | -18169 | -21153 | -24521 |
| Total PPE (Net) | 10264 | 12782 | 13551 | 15725 | 18143 | 22853 | 23347 | 24775 | 26275 | 28038 |
| Commodity Derivative Assets, Non-Current | 0 | 37 | 21 | 16 | 180 | 245 | 245 | 245 | 245 | 245 |
| Goodwill | 696 | 696 | 635 | 627 | 620 | 394 | 394 | 394 | 394 | 394 |
| Other Non-Current Assets | 484 | 511 | 576 | 663 | 535 | 561 | 561 | 561 | 561 | 561 |
| Total Assets | 13282 | 16444 | 17554 | 19642 | 22553 | 27105 | 27773 | 29359 | 30900 | 32858 |
| Current Liabilities | | | | | | | | | | |
| Accounts Payable - Trade | 927 | 1343 | 1508 | 1354 | 1578 | 1342 | 1435 | 1647 | 1705 | 1878 |
| Other Current Liabilities | 422 | 437 | 569 | 618 | 533 | 715 | 770 | 881 | 906 | 991 |
| Commodity Derivative Liabilities, Current | 24 | 76 | 7 | 65 | 0 | 0 | 0 | 0 | 0 | 0 |
| Deferred Income Tax Liabilities | 0 | 6 | 0 | 0 | 158 | 230 | 230 | 230 | 230 | 230 |
| Pension & Other Post Retirement Benefits, Current | 4 | 4 | 7 | 8 | 104 | 104 | 104 | 104 | 104 | 104 |
| Current Portion of Asset Retirement Obligations | 45 | 33 | 69 | 39 | 81 | 86 | 86 | 86 | 86 | 86 |
| Current Portion of Long-Term Debt & Capital Leases | 0 | 324 | 324 | 200 | 68 | 60 | 68 | 75 | 1044 | 100 |
| Revolver | 0 | 0 | 0 | 0 | 0 | 513 | 1177 | 2138 | 2997 | 3860 |
| Total Current Liabilities | 1422 | 2223 | 2484 | 2284 | 2522 | 3052 | 3870 | 5162 | 7072 | 7250 |
| Commodity Derivative Liabilities, Non-Current | 51 | 7 | 3 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| Asset Retirement Obligation, Non-Current | 208 | 344 | 333 | 547 | 670 | 685 | 685 | 685 | 685 | 685 |
| Pension & Other Post Retirement Benefits, Non-Current | 76 | 88 | 116 | 157 | 24 | 24 | 24 | 24 | 24 | 24 |
| Long-Term Debt | 2272 | 4145 | 3784 | 4624 | 6103 | 7843 | 7775 | 7700 | 6656 | 7556 |
| Deferred Income Taxes, Non-Current | 2110 | 2059 | 2218 | 2441 | 2516 | 2724 | 2724 | 2724 | 2724 | 2724 |
| Other Noncurrent Liabilities | 295 | 313 | 358 | 395 | 393 | 401 | 401 | 401 | 401 | 401 |
| Total Liabilities | 6434 | 9179 | 9296 | 10458 | 12228 | 14728 | 15479 | 16696 | 17563 | 18640 |
| Shareholder's Equity | | | | | | | | | | |
| Preferred Stock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Common Stock + APIC | 3036 | 3153 | 3306 | 3467 | 3628 | 6313 | 6412 | 6538 | 6681 | 6845 |
| Accumulated Other Comprehensive Loss | -104 | -100 | -113 | -117 | -90 | -90 | -90 | -90 | -90 | -90 |
| Treasury Stock | -624 | -638 | -648 | -659 | -671 | -671 | -671 | -671 | -671 | -671 |
| Retained Earnings | 4540 | 4850 | 5713 | 6493 | 7458 | 6825 | 6643 | 6886 | 7417 | 8133 |
| Total Shareholder's Equity | 6848 | 7265 | 8258 | 9184 | 10325 | 12377 | 12295 | 12663 | 13337 | 14217 |
| Total Liabilities & Shareholder's Equity | 13282 | 16444 | 17554 | 19642 | 22553 | 27105 | 27773 | 29359 | 30900 | 32858 |

| Reformulated Balance Sheet (\$m) | Noble Energy | | | | | Noble Energy + Rosetta Resources Consolidated | | | | |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|---|--------------|--------------|--------------|--------------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
| Operating Assets | 12139 | 14942 | 16083 | 18508 | 20480 | 24914 | 25611 | 27093 | 28707 | 30623 |
| Operating Liabilities | 3754 | 4158 | 4653 | 4808 | 5178 | 5413 | 5560 | 5884 | 5966 | 6225 |
| Net Operating Assets | 8385 | 10784 | 11430 | 13700 | 15302 | 19501 | 20051 | 21209 | 22740 | 24399 |
| Financial Assets | 1143 | 1502 | 1471 | 1134 | 2073 | 2192 | 2162 | 2266 | 2193 | 2234 |
| Financial Obligations | 2680 | 5021 | 4643 | 5650 | 7050 | 9315 | 9918 | 10812 | 11596 | 12416 |
| Net Financial Obligations | 1537 | 3519 | 3172 | 4516 | 4977 | 7124 | 7756 | 8546 | 9403 | 10181 |
| Common Shareholder's Equity | 6848 | 7265 | 8258 | 9184 | 10325 | 12377 | 12295 | 12663 | 13337 | 14217 |

| Pro-Forma Consolidated Income Statement (\$m) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Revenues | | | | | | | | | | |
| Oil, Gas and NGL Sales | 2523 | 3179 | 4037 | 4809 | 4931 | 3669 | 5004 | 6342 | 7074 | 8027 |
| Income from Equity Method Investees | 118 | 193 | 186 | 206 | 170 | 94 | 105 | 140 | 161 | 169 |
| Other Revenues | 72 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Revenues | 2713 | 3404 | 4223 | 5015 | 5101 | 3763 | 5110 | 6483 | 7236 | 8196 |
| Costs and Expenses | | | | | | | | | | |
| Production Expense | 515 | 558 | 673 | 850 | 958 | 1147 | 1086 | 1303 | 1431 | 1570 |
| Exploration Expense | 242 | 277 | 409 | 415 | 498 | 280 | 381 | 481 | 521 | 584 |
| Depreciation, Depletion and Amortization | 819 | 878 | 1370 | 1568 | 1759 | 2224 | 2543 | 2882 | 2984 | 3368 |
| General and Administrative | 273 | 339 | 384 | 433 | 503 | 494 | 462 | 538 | 566 | 649 |
| Gain on Divestitures | -113 | -25 | -154 | -36 | -73 | 0 | 0 | 0 | 0 | 0 |
| Asset Impairments | 144 | 757 | 104 | 86 | 500 | 0 | 0 | 0 | 0 | 0 |
| Other Operating (Income) Expense, Net | 64 | 86 | 25 | 43 | 38 | 47 | 64 | 81 | 88 | 99 |
| Total Operating Expenses | 1944 | 2870 | 2811 | 3359 | 4183 | 4192 | 4537 | 5285 | 5590 | 6269 |
| Operating Income | 769 | 534 | 1412 | 1656 | 918 | -429 | 572 | 1198 | 1646 | 1927 |
| Other (Income) Expense | | | | | | | | | | |
| (Gain) / Loss on Derivatives (realized & unrealized) | -157 | -42 | -75 | 133 | -976 | 0 | 0 | 0 | 0 | 0 |
| Interest, Net of Amount Capitalized | 72 | 65 | 125 | 158 | 210 | 365 | 377 | 350 | 355 | 350 |
| Other Non-Operating (Income) Expense, Net | 6 | 9 | 6 | 21 | -26 | 0 | 0 | 0 | 0 | 0 |
| Total Other (Income) Expense | -79 | 32 | 56 | 312 | -792 | 365 | 377 | 350 | 355 | 350 |
| Income from Continuing Operations Before Income Taxes | 848 | 502 | 1356 | 1344 | 1710 | -795 | 195 | 847 | 1291 | 1576 |
| Income Tax Provision / (Benefit) | 217 | 90 | 391 | 437 | 496 | -278 | 68 | 297 | 452 | 552 |
| Income from Continuing Operations | 631 | 412 | 965 | 907 | 1214 | -516 | 127 | 551 | 839 | 1025 |
| Income from Discontinued Operations, Net of Tax | 94 | 41 | 62 | 71 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Income | 725 | 453 | 1027 | 978 | 1214 | -516 | 127 | 551 | 839 | 1025 |

| Financial Ratios | Noble Energy | | | | | Noble Energy + Rosetta Resources Consolidated | | | | |
|------------------------------|--------------|--------|--------|--------|---------|---|--------|--------|--------|--------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015E | 2016E | 2017E | 2018E | 2019E |
| FLEV | 22.44% | 48.44% | 38.41% | 49.17% | 48.20% | 57.55% | 63.08% | 67.49% | 70.50% | 71.61% |
| Net Debt to Operating Assets | 12.66% | 23.55% | 19.72% | 24.40% | 24.30% | 28.59% | 30.28% | 31.54% | 32.76% | 33.25% |
| RNOA | 7.40% | 4.50% | 8.86% | 8.92% | 2.58% | -1.43% | 1.86% | 3.67% | 4.71% | 5.13% |
| ROCE | 10.16% | 6.29% | 12.28% | 10.61% | 12.02% | -4.17% | 1.03% | 4.35% | 6.29% | 7.21% |
| Net borrowing Cost | -4.93% | 0.81% | -0.06% | 5.51% | -17.00% | 3.33% | 3.16% | 2.66% | 2.45% | 2.24% |
| Net Debt to EBITDAX | 0.77 | 1.38 | 0.98 | 1.19 | 1.33 | 3.34 | 2.17 | 1.83 | 1.79 | 1.69 |

Note: Reformulated financial statements have considered dirty surplus items in the historical financial statements and these have been treated appropriately in order to gain full clarity on financial ratios particularly for comparative purposes (past + future). Dirty surplus items are not forecasted in 2015+.



We expect Noble Energy to respond to weak commodity prices by increasing production and driving core revenues higher in 2016 to 2019. Revenues are supported by a gradual increase in commodities. A \$278m deferred income tax asset is expected to be recorded in 2015 since we forecast Net Operating Losses (NOLs) for both Noble Energy (legacy assets) & Rosetta Resources assets. The accounting treatment applied for NOLs is the loss carry forward³⁷. The deferred income tax asset is expected to be fully utilised by 2017, as Noble Energy (legacy assets) generate sufficient taxable income in 2016 and 2017 despite a 2016 NOL forecasted for Rosetta Resources assets.

Ratio Analysis:

Financial Leverage: 2015 financial leverage³⁸ is expected to be an increase on 2014 driven by a reduction in cash forecasted in 2015 together with a net increase in revolver borrowings to partially fund capital investment (\$352m borrowing by Noble Energy legacy assets, while Rosetta Resources assets will reduce their end of 2014 \$200m outstanding balance on Revolver repaying \$39m). Rosetta Resources assets will be able to reduce their outstanding balance in 2015 after raising \$235m through an equity issuance in first-half 2015. Net Financial Obligations³⁹ are expected to grow by 43.18% after Noble Energy consolidates with Rosetta Resources, this is due to the high amount of debt held by Rosetta Resources which is to be fully assumed by Noble Energy (@ end of 2014, Rosetta Resources had \$1,699m of net debt and FLEV = 101.78%). Beyond 2015, we anticipate financial leverage to increase largely driven by high borrowings on the revolving credit facility in order to support future capital investments. In March, 2019, 8.25% senior notes will mature and Noble Energy is due to repay a \$1b principal, we assume that Noble Energy will re-finance the debt and issue senior notes with a principal amount of \$1bn @ the current cost of debt. Although market dynamics will likely have changed by 2019, the current R_d should provide a suitable estimate.

Net Debt to Operating Assets: We estimate continual increases to 2019. While, debt holders keep a close watch on a firm's immediate liquidity; their main concern

³⁷ US taxation laws permit corporates to carry NOLs forward for a maximum of 20 years on the balance sheet.

³⁸ Financial Leverage = Net Financial Obligations / Common Shareholder's Equity

³⁹ Net Financial Obligations = Financial Obligations (includes: Commodity Derivative Liabilities + Pension + Other Benefits + Asset Retirement Obligation + Revolver + LT Debt) – Financial Assets (includes: Cash & Cash Equivalents + Commodity Derivative Assets).

however is Noble Energy's ability to meet long term obligations. The ratio we apply considers financial assets as being available if required to cover debt payments. Based on projections, we identify that Noble Energy remains sufficiently solvent going forward and debt levels though increasing are not concerning.

Net Debt to EBITDAX: With EBITDAX as a proxy for cash flow, the net debt / EBITDAX ratio provides an additional assessment on Noble Energy's ability to pay of its debt, and is often a determinant of a firm's credit rating. In 2015, the result forecasted is 3.34, a substantial increase on 2014, which is contributed by the effect of lower commodity prices and also the high financial leverage of Rosetta Resources. At 3.34, Noble Energy bonds are expected to be reviewed and downgraded, resulting in a higher R_d . As mentioned earlier, Moody's has now placed Noble Energy's senior unsecured shelf & debenture on review for downgrade. For 2016, the ratio is expected to return to a lower level and we would expect Noble Energy bonds to be upgraded if downgraded now, as growth in forecasted 2016v2015 EBITDAX (driven by increased production & higher commodity prices) outweighs the growth in forecasted 2016v2015 net debt.

RNOA: 2015 forecasted RNOA⁴⁰ is -ve since operating expenses > operating revenues. RNOA is set to increase in 2016 to 2019 as commodity prices are expected to gradually increase along with production increasing YoY generating higher revenues. Excluding the RNOA change between 2014 and 2015 forecast, the change in RNOA is expected to be greatest in 2016 as Net PP&E is expected to increase by only \$494m driven by contracted 2016 capital investment program. From 2016 to 2019, CAPEX levels are more significant and expansion in NOA is much larger.

ROCE: ROCE⁴¹, a key profitability measure is forecasted to be negative in 2015. Financing risk is driven by the financial leverage of the company and the operating spread⁴². Since the operating spread in 2015 & 2016 is forecasted to be negative, financial leverage is unfavourable towards the ROCE. The operating spread is then expected to become positive in 2017-19, at which point financial leverage will lever the ROCE over RNOA. Most importantly, from our forecasted ratios, we can identify that changes in new consolidated company's profitability is to be driven by core return on operations, with leverage boosting effect on ROCE in 2017-19.

⁴⁰ RNOA = Operating Income (after-tax) / Net Operating Assets

⁴¹ ROCE = RNOA + FLEV*(RNOA – Net Borrowing Cost)

⁴² Operating Spread = RNOA – Net Borrowing Cost

Price Target – Drill Down

The 2016 FY Price Target represents the Value of Proved Reserves + Value of Future Opportunities. Noble Energy & Rosetta Resources disclose Proved Reserves in their filings (Proved Developed + Proved Undeveloped); however both companies elect not to disclose Unproved Reserves i.e. Probable Reserves + Possible Reserves. We consider calculating the NPV of Proved Reserves to determine the portion of 2016 Equity Value resulting from future opportunities.

| Noble Energy (Legacy Assets): US, Israel, Equatorial Guinea | Rosetta Resources: Permian Basin, Eagle Ford, Other |
|---|--|
| Price Decks: Utilise forecasts from our price decks. Prices beyond 2019 are held constant. | Price Decks: Utilise forecasts from our price decks. Prices beyond 2019 are held constant. |
| Production: Beyond 2019, production is assumed to stay constant on 2019 output until reserve depletion. | Production: Beyond 2019, production is assumed to stay constant on 2019 output until reserve depletion. |
| Production Expenses: Considers only Lease Operating, Production & Ad Valorem Taxes (applicable to US only) and Transportation and Gathering (applicable to US only). Expense/Boe beyond 2019 is held constant. | Production Expenses: Considers only Lease Operating, Production & Ad Valorem Taxes and Treating & Transportation. Expense/Boe beyond 2019 is held constant. |
| <p>Development CAPEX:</p> <p>United States – Future Development Costs to convert PUDs into PDs are \$7272m. All PUDs should be converted to PDs within 4 years according to company data.</p> <p>Israel - Future Development Costs to convert PUDs into PDs are \$724m and all PUDs should be converted to PDs within 4 years according to company data.</p> <p>Equatorial Guinea - Future Development Costs to convert PUDs into PDs are \$186m and all PUDs are expected to be converted to PDs by end of 2014 according to company data.</p> | <p>Development CAPEX:</p> <p>Future development costs of \$1488m to convert PUDs into PDs. According to information in Rosetta Resources 2014 10-K filing, all PUDs are planned to be converted to PDs within 5 years, thus by the end of 2019. We smooth \$1488m across 5 yrs.</p> |
| G&A Expense per Boe is held constant beyond 2019. | G&A Expense per Boe is held constant beyond 2019. |
| Cash Taxes @ 35%. | Cash Taxes @ 35% |

The 2016 Implied Equity Value of Future Opportunities originates from conversion of probable and possible reserves into proved reserves and new successful exploration discoveries. From our calculation below, we can observe that a sizeable portion of our overall 2016 FY Price Target is being driven by value of future opportunities. Future opportunities have an inherent risk, i.e. recovery of resources from probable or possible reserves could be minimal and unsuccessful exploration. Higher value originating from existing proved reserves provides greater appeal to investors. We must also remember that the 2016 Equity Value from Proved Reserves above considers a price deck held constant beyond 2019 to reserve depletions, and given the volatile nature of commodity prices, it is likely that the Equity Value of Proved Reserves will change.

| Proved Reserves @ YE14 | | \$m |
|--|--|-----------------|
| Noble Energy (Legacy Assets) | | |
| US Proved Reserves | | 7986.37 |
| Israel Proved Reserves | | 7119.15 |
| Equatorial Guinae Proved Reserves | | 2309.00 |
| <hr/> | | |
| NPV @ 31.12.16 of Proved Reserves (before G&A, Cash Taxes) | | 17414.52 |
| Less: NPV @ 31.12.16 of G&A Expense | | 2289.21 |
| Less: NPV @ 31.12.16 of Cash Taxes | | 6713.64 |
| NPV of Noble Energy (Legacy) Proved Reserves | | 8411.67 |
| Rosetta Resources | | |
| NPV @ 31.12.16 of Proved Reserves (before G&A, Cash Taxes) | | 2808.65 |
| Less: NPV @ 31.12.16 of G&A Expense | | 480.83 |
| Less: NPV @ 31.12.16 of Cash Taxes | | 1069.10 |
| NPV of Rosetta Resources Proved Reserves | | 1258.72 |
| <hr/> | | |
| Consolidated NPV of Noble Energy Proved Reserves | | 9670 |
| Less: 2016 Net Debt | | 7756 |
| <hr/> | | |
| 2016 Equity Value from Proved Reserves | | 1914 |
| 2016 Equity Value from Proved Reserves per Share | | \$ 4.44 |
| <hr/> | | |
| 2016 Equity Value (5-Yr DCF + Exit Multiple) | | \$ 42.54 |
| Less: 2016 Equity Value from Proved Reserves | | \$ 4.44 |
| <hr/> | | |
| 2016 Implied Equity Value of Future Opportunities | | \$ 38.08 |

MULTIPLES ANALYSIS

| Company | EV / EBITDAX | | EV / Sales | | EV / EBIT | |
|-------------------------|--------------|-------------|-------------|-------------|----------------|--------------|
| | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 |
| Apache | 6.7 | 6.46 | 3.83 | 3.88 | -1659.68 | 56.17 |
| Anadarko Petroleum | 9.1 | 8.72 | 4.56 | 4.29 | -5.84 | -110.82 |
| Murphy oil | 4.38 | 4.96 | 2.01 | 2.17 | -5.54 | -17.22 |
| Marathon oil | 7.05 | 6.66 | 2.55 | 2.51 | -9.93 | 24.44 |
| ConocoPhillips | 8.94 | 7.62 | 2.5 | 2.47 | -47.64 | 86.09 |
| Industry Average | 7.23 | 6.88 | 3.09 | 3.06 | -345.73 | 7.73 |
| Noble Energy | 9.59 | 5.89 | 5.57 | 4.21 | -47.63 | 36.82 |

Noble Energy is trading at a premium compared to the rest of the industry (except 2016, EV/EBITDAX suggests Noble Energy trading at a discount).

Disclosures and Disclaimer

Research Recommendations

| | |
|-------------|--|
| Buy | Expected total return (including dividends) of more than 15% over a 12-month period. |
| Hold | Expected total return (including dividends) between 0% and 15% over a 12-month period. |
| Sell | Expected negative total return (including dividends) over a 12-month period. |

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