RYSTAD ENERGY

INDUSTRIAL CONTEXT FOR US ENDEAVOUR 2005-2020

FINAL REPORT

02.10.2020

equinor

The need to go out – US GoM deepwater was the best initial choice

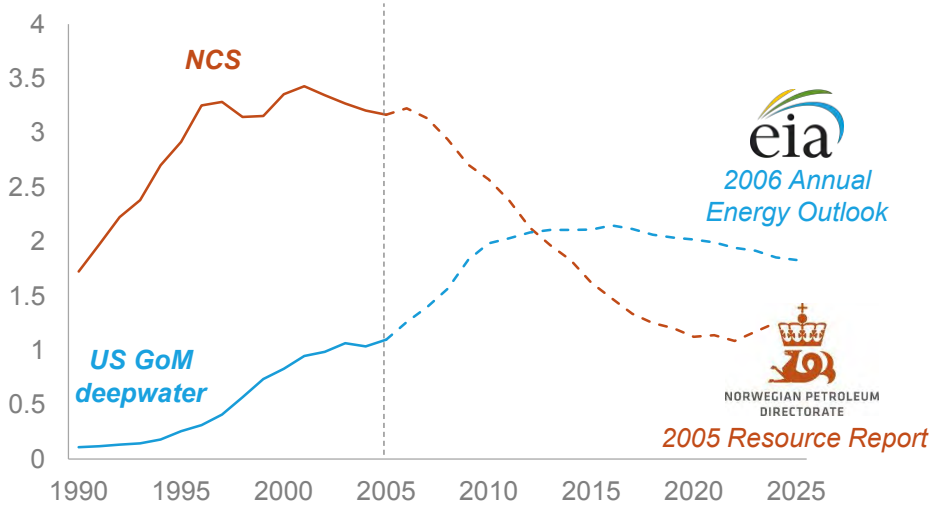
Strong strategic reasons to seek international opportunities for a NCS player in 2005

- Macro environment called for non-OPEC production growth and improved oil price
- IOCs were priced on growth outlooks
- NCS production appeared to have peaked with NCS players' value penalized due to low R/P ratios
- NCS players were leading in deepwater/subsea technologies and had organizational capacity

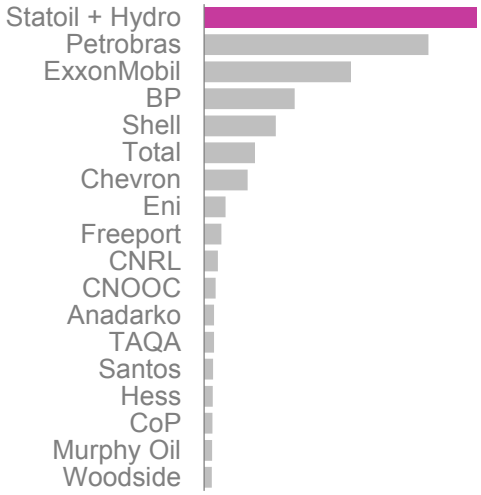
US GoM deepwater was the rational choice

- Steep creaming curve, low political risk, attractive fiscal regime and no privileges to NOCs
- All significant deepwater operators entered GOM
- Statoil was the largest deepwater operator globally and entered early with an attractive Encana deal
- Statoil was an aggressive explorer in US GoM, but underestimated geological and business challenges

Historical and projected oil production as seen from 2005
Million barrels per day



Top deepwater operators in 2005
Crude production deeper than 125m



US GoM investment* 2005-19
Billion USD real 2020

*M&A, capex and expex
Source: UCube; EIA; NPD; Rystad Energy research and analysis

Shale – a true revolution early understood by Statoil

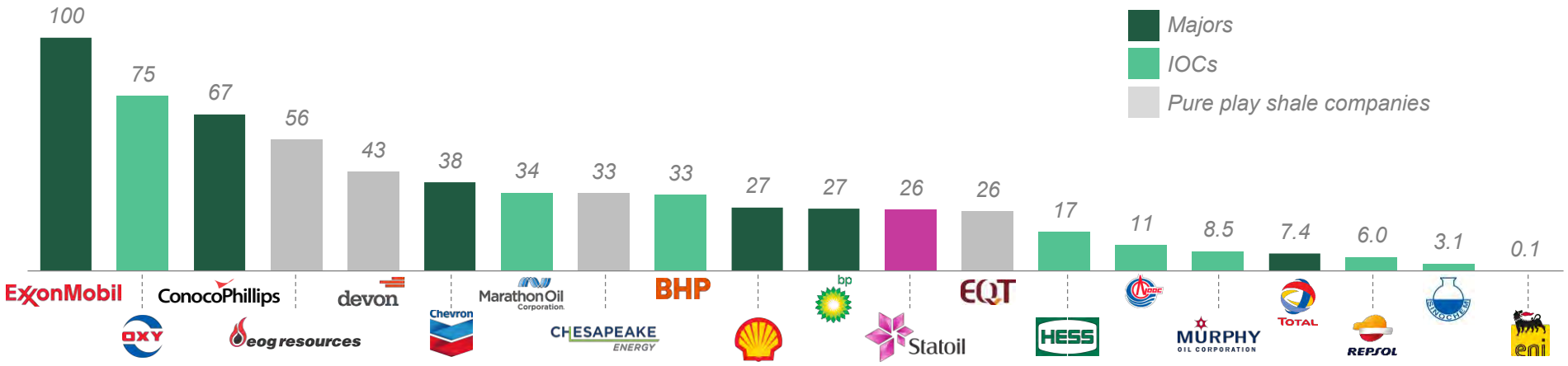
Shale gas was the natural choice in 2008

- US screaming for gas, attractive prices expected – as confirmed in Snøhvit and Shtokman studies
- Potential global revolution – important to master
- Statoil picked the right play early, and cheap
- All relevant players entered at similar conditions as Statoil or worse
- Statoil underestimated need to align contract incentives and take-away capacity

Tight oil was the natural choice in 2010

- World still screaming for oil, "the easy oil is gone" – tight oil break-through could take off globally
- Statoil early in acquiring acreage and organization in Bakken - the most attractive basin in 2011
- Statoil missed the tight oil revolution in Permian
- All relevant players entered US tight oil, but Statoil's bet was high relative to company size
- Statoil underestimated need for midstream access and complexity of land management

Selected companies and the bet taken in shale gas and tight oil (Net M&A + Capex)
BUSD real 2020



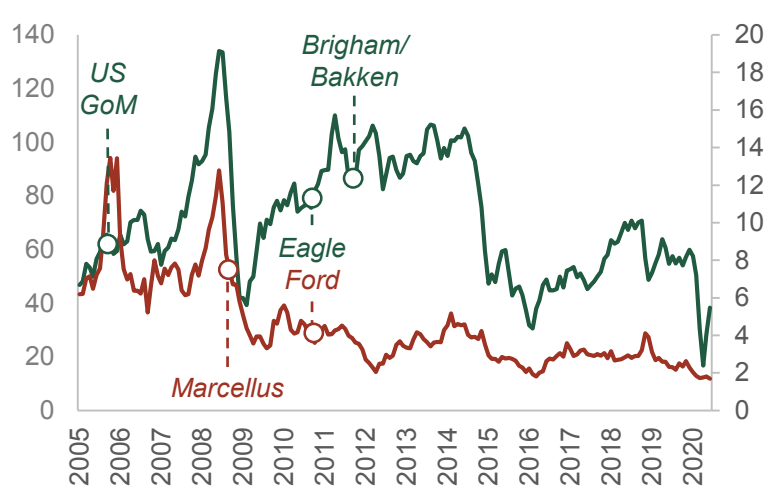
Source: UCube; Rystad Energy research and analysis

The unforeseen market collapse and NCS success made US entry look bad in hindsight

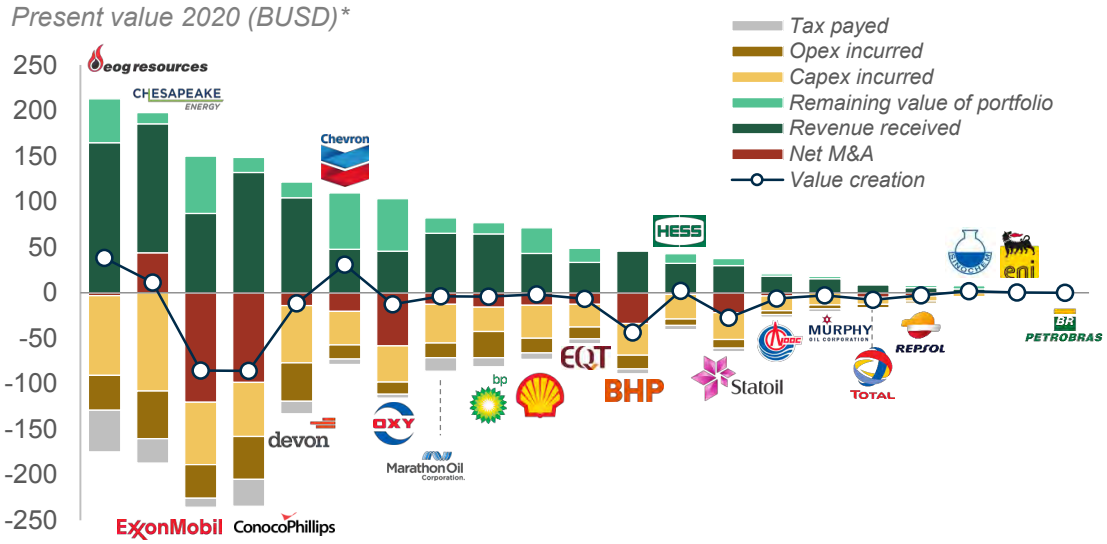
Shale a victim of its own success

- Shale became a success beyond everybody's expectations resulting in oversupply and market collapse
- Gas prices under double attack: Shale gas abundance and associated gas from tight oil revolution
- Oil price under triple attack: Tight oil productivity, new super play (Permian) and OPEC volume war
- Almost all players destroyed value except from landowners and early exits, Brigham deal would have created marginal value if market conditions prevailed.
- Unforeseen successes at NCS made US expansion, seen in hindsight, less pressing.

US commodity prices and major acquisitions by Statoil



Value creation from US onshore activity 2005-2019 (excl. finance costs)



*WACC 10% nominal, 2% future inflation
Source: UCube; EIA; Rystad Energy research and analysis

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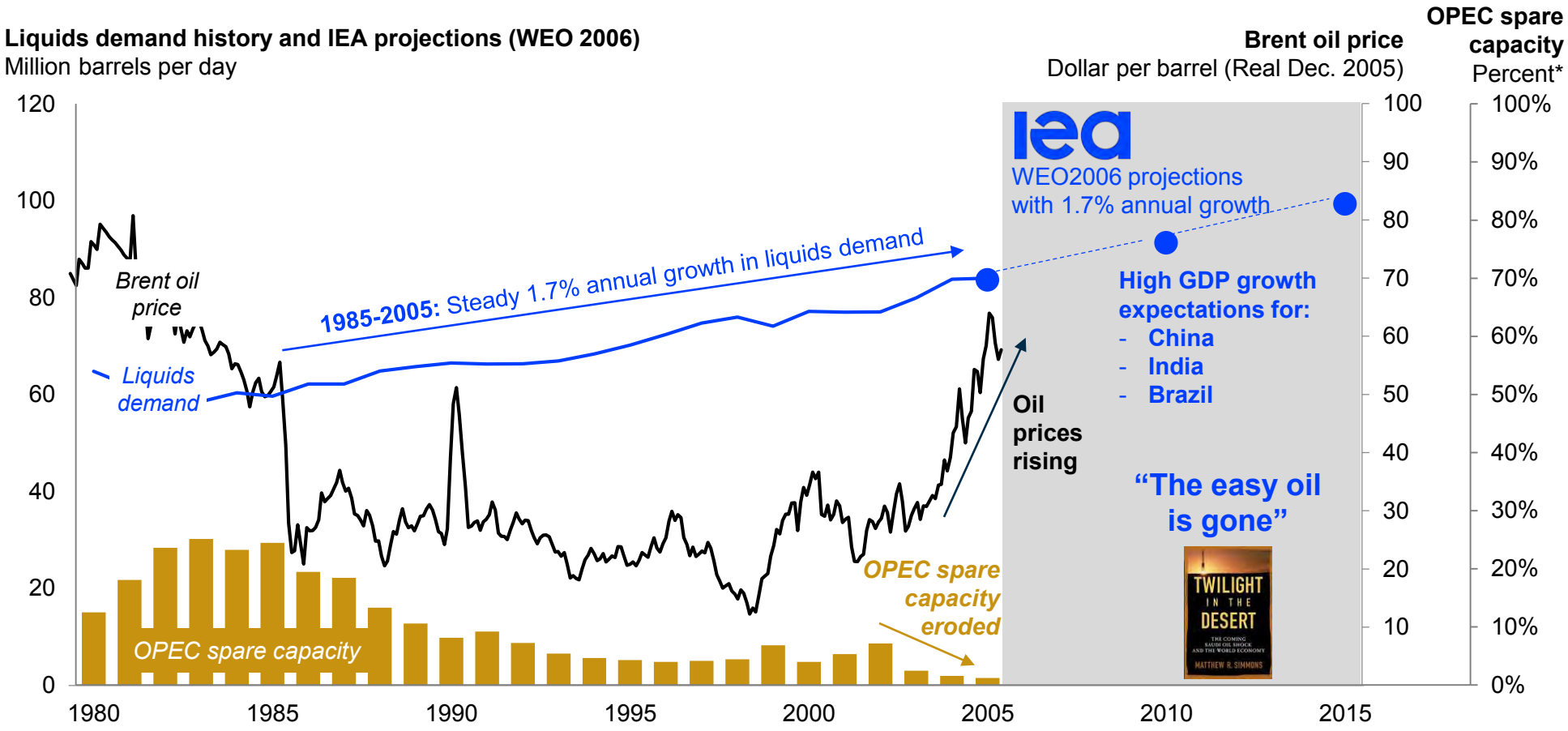
2005: The world is screaming for oil after 20 years of low prices low spare capacity



- *Following the oil price collapse in 1986, where OPEC decided to increase their market shares by utilizing their large spare capacity (25% of the worlds production in 1985), the industry saw 20 years of low oil prices.*
- *Over the same period oil demand grew at 1.7% per year. Over these years the OPEC spare capacity gradually eroded to serve the increase in demand.*
- *20 years of very low oil prices had led to underinvestment in the non-OPEC world. With steady demand growth expectations and very limited OPEC capacity to deliver these volumes, it was up to the non-OPEC world and largely offshore oil to deliver these volumes. The stage was set for production growth outside OPEC and higher oil prices.*

*Measured as percentage of global production in every year
Sources: IEA WEO 2006, EIA, Cube; Rystad Energy research and anlysis

2005: Production growth was seen as the key challenge in the upstream industry

CERA

The Oil Industry's Growth Challenge: Expanding Capacity from the Wellhead to the Consumer

Prepared for
The International Energy Forum
by
Cambridge Energy Research Associates

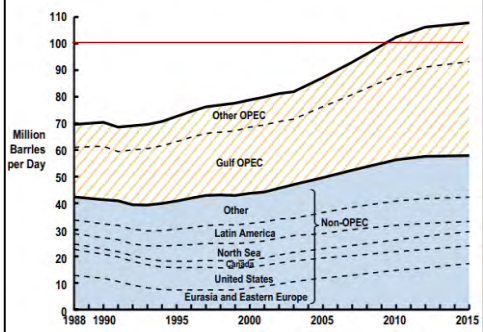
November 19, 2005

THE OIL INDUSTRY'S GROWTH CHALLENGE:

Expanding Capacity from the Wellhead to the Consumer

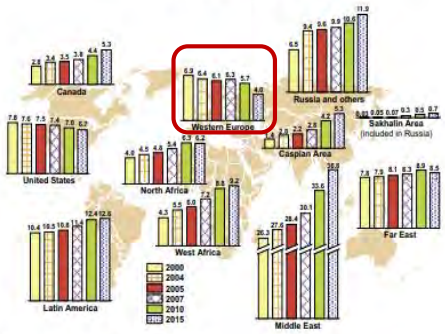
Each era brings with it new challenges for the oil industry. This first decade of the new millennium is no different, except for one key distinction. Today's growth challenge is of a scale that the oil industry has not experienced since the 1960s and early 1970s when upstream and downstream capacity raced ahead to keep pace with soaring demand. Today's circumstances are fueling a widespread supply anxiety.

Figure 1
World Liquid Productive Capacity



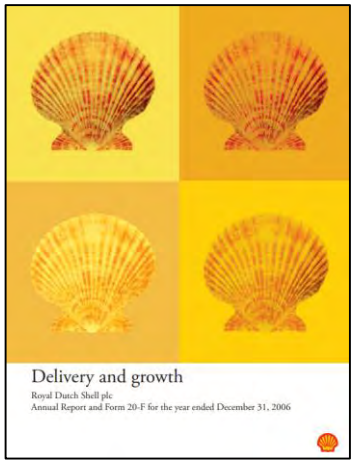
Source: Cambridge Energy Research Associates.
Updated October 2005
40916-18

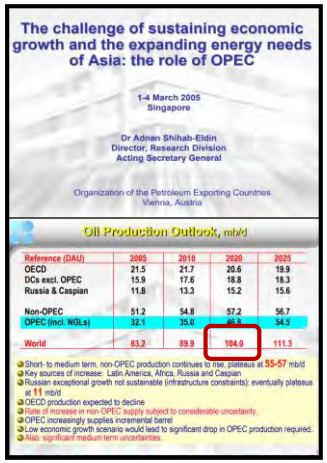
Figure 2
Shifts in World Liquid Capacity
(million barrels per day)



Source: Cambridge Energy Research Associates.
Updated October 2005
40916-11

- **The evolution of where and how we produce oil.** The oil industry is producing increasing volumes of liquid hydrocarbons from the oil sands of Canada and the tar sands of Venezuela. In the late 1960s, oil sands production was minimal, but also very expensive—several times the price of crude oil at that time. Now in Canada alone there is 1 million barrels per day of oil sands production—with much more on the way. Also, it was not that long ago when exploring in 5,000 feet of water pushed the limits of technology. Today, deepwater production is a large and critical source of supply growth in West Africa, Brazil, and the US Gulf of Mexico. Frontier depths are now 10,000–11,000 feet. In addition to oil sands and the deep water, gas-to-liquids (GTL) and ethanol will play more important roles over the next decade.





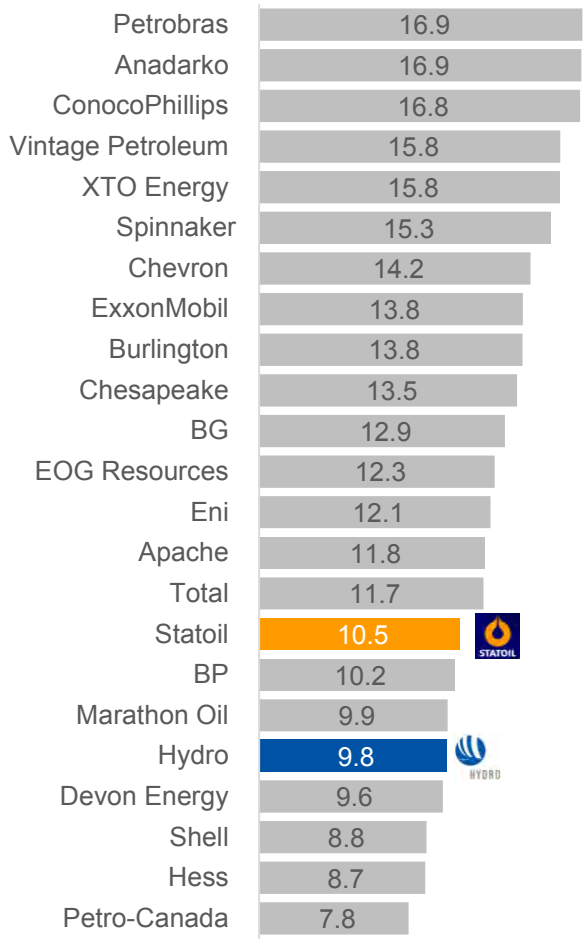
2005:

- *"All" industry players, at this page illustrated by CERA, Shell and OPEC, expected oil demand to far exceed 100 Mmboe by 2020, driven by Asia*
- *A supply shortage was expected*
- *Oil from the North Sea and other OECD regions expected to decline*
- *Deepwater, oil sands and OPEC were seen as key growth areas*
- *Oil companies focused on growth in their capital market communication*

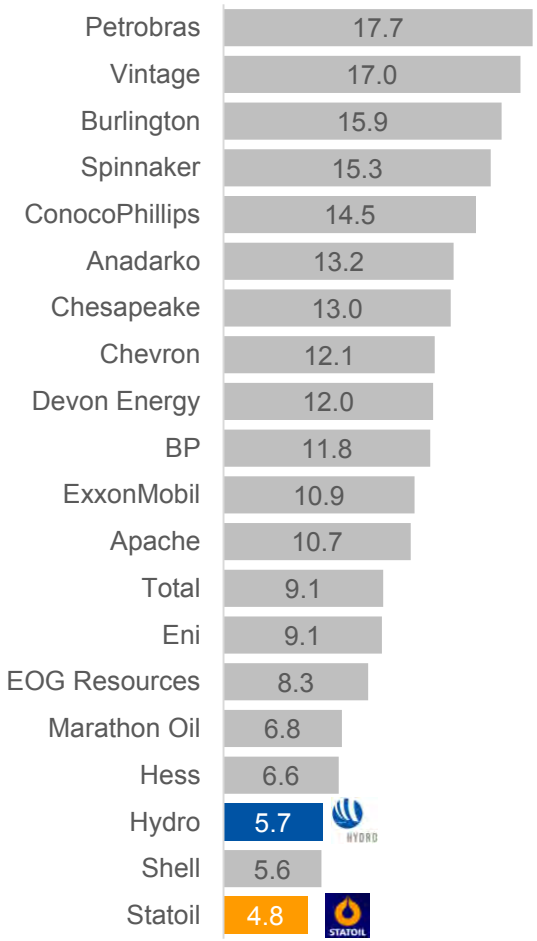
Source: CERA; November 19, 2005: Oil Industry's Growth Challenge, Shell annual report 2006; OPEC presentation March 2005 …

2005: Statoil had among the lowest RP ratio in the industry and recieved a price discount

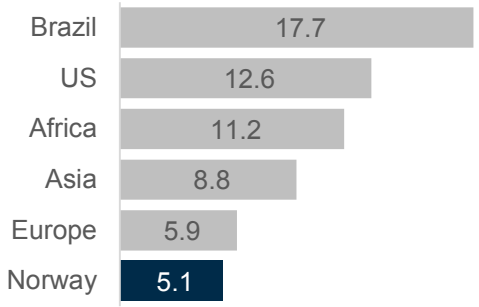
RP-ratio* as of 31.12.2004 by company
Oil and gas production divided by 1P reserves



RP-ratio as of 31.12.2004 by company**
Oil production divided by 1P reserves



RP-ratio as of 31.12.2004 by region
Oil production divided by 1p reserves

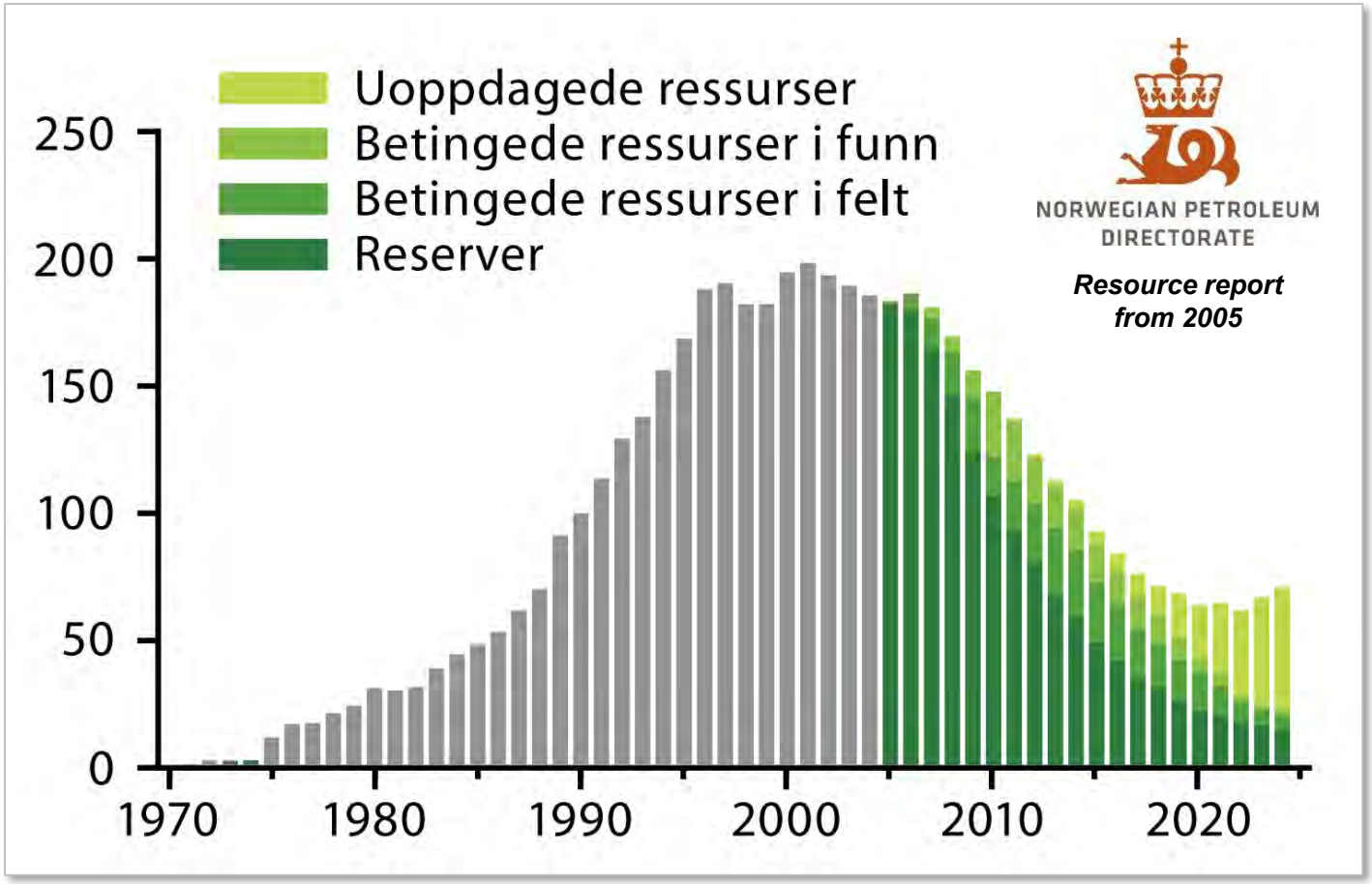


- *In 2005, Norway was at peak production and Norwegian players Statoil and Hydro with high production and relatively low on proven reserves, thus low RP ratio*
- *Analysts looked for growth through higher RP ratio and Statoil shares were traded with discount due to low RP ratio and limited production growth outlooks.*
- *Seen as important to get "out of the Norwegian corner" and achieve growth internationally.*

* Reserve to Production Ratio; **Only oil RP ratio in the six regions to the right included; *** Companies as shown to the left
Source: SEC Edgar database; 10-K / 20-F reports; Annual reports 2004

2005: Liquids production on the NCS was expected to decline rapidly

Liquids production on the NCS as seen from 2005
Million Sm3 liquids per year

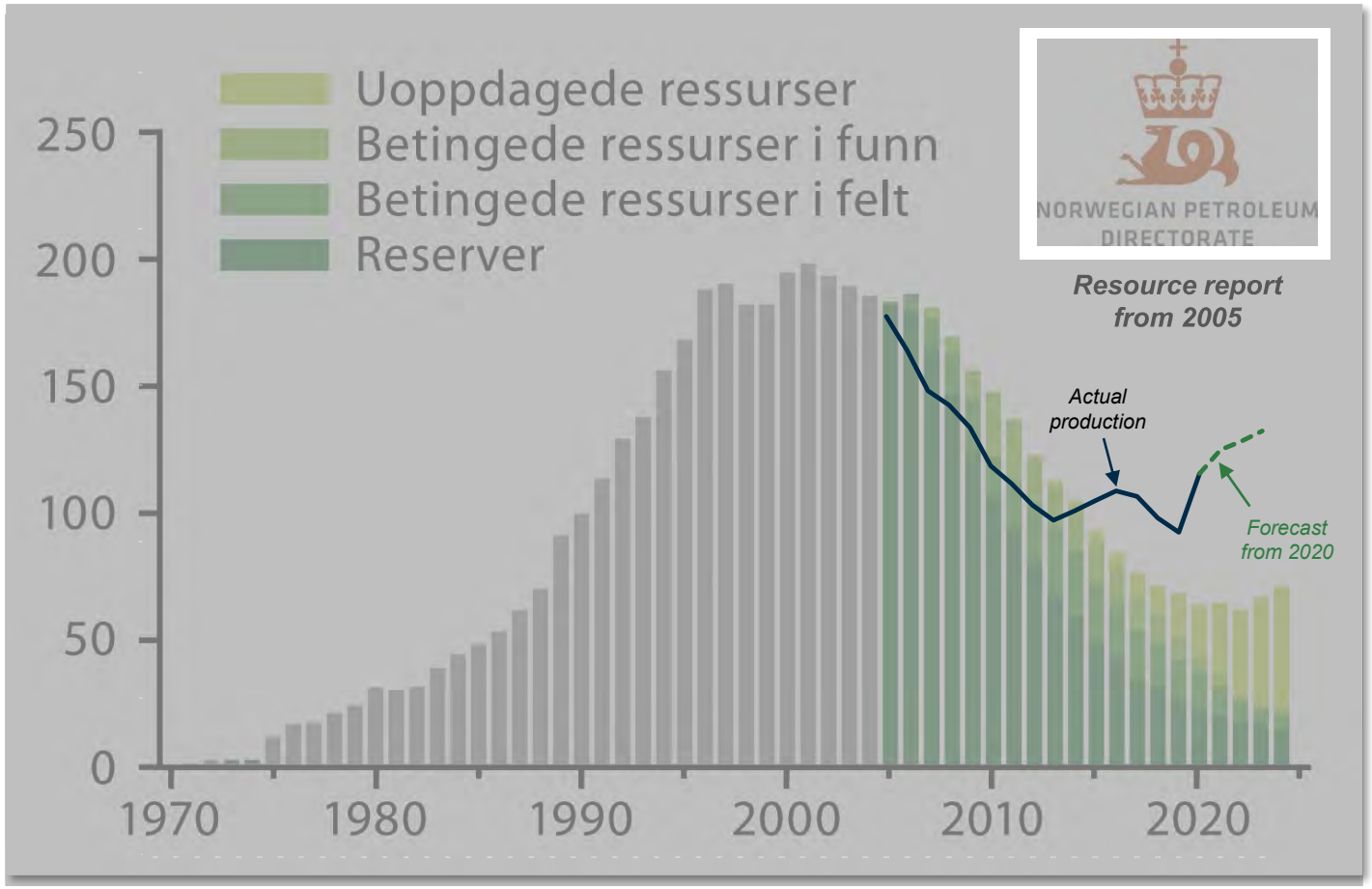


- *The chart on the left shows the expected liquids production as published in the 2005 resource report by NPD.*
- *On the NCS in 2005 peak oil production was expected to be behind us – the Norwegian government was preparing for reduced oil production outputs in the future.*
- *Even with sanctioning of contingent resources and expected exploration success, the result was still that the annual production towards 2010 would be reduced by 20%. Towards 2020, the same production levels compared to 2005 was expected to be halved.*

Legend: "Uoppdagede ressurser"=Undiscovered resources, "Betingede ressurser i funn"=Contingent resources in discoveries, "Betingede ressurser i felt"= Contingent resources in producing fields, "Reserver"=Reserves
Source: Rystad Energy research and analysis, NPD resource report 2005

2020: Actual liquids production has outperformed the 2005 forecast since 2013

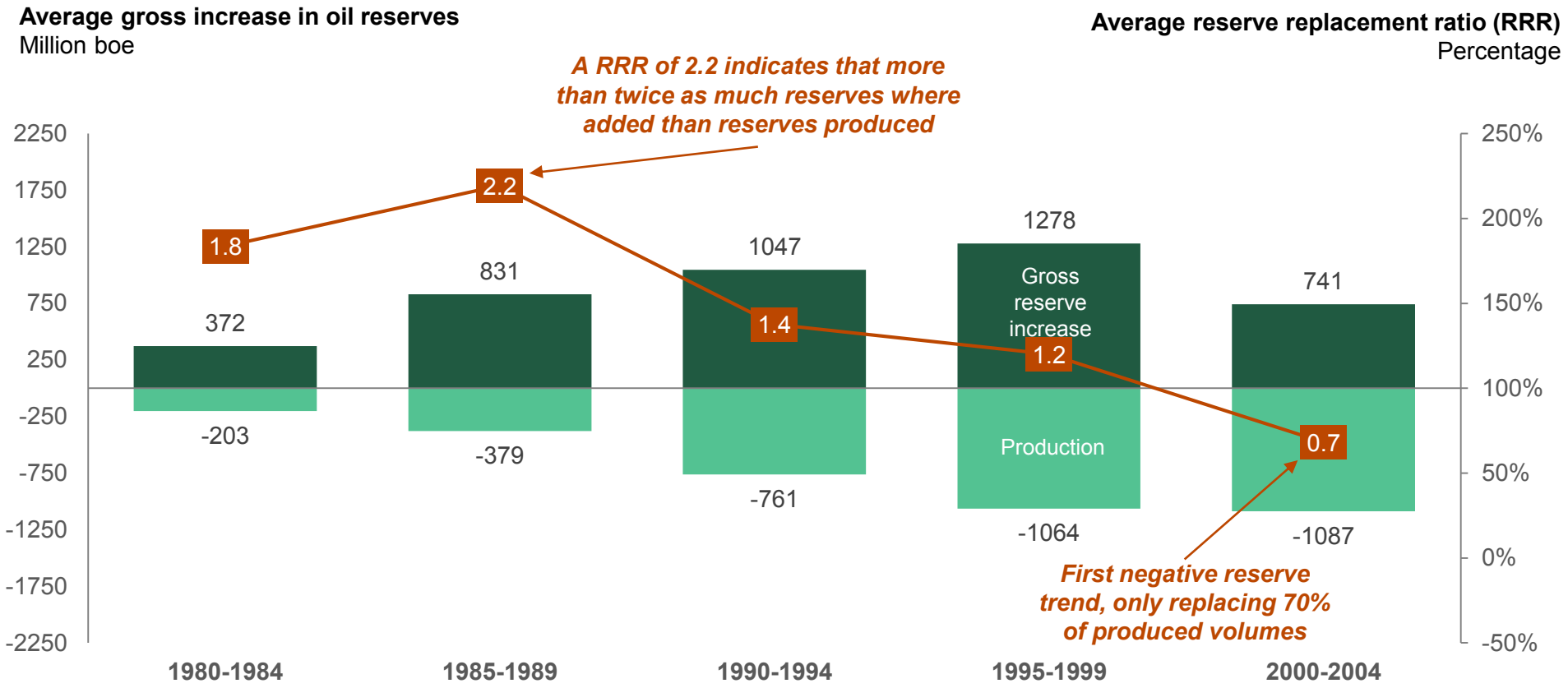
Liquids production on the NCS as seen from 2020
Million Sm3 liquids per year



- *The chart on the left shows the expected liquids production as published in the 2005 resource report by NPD compared to what really happened (black line).*
- *Between 2005 and 2013, liquids production underperformed compared to the expectations in 2005. However, actual liquids production has exceeded expectations since 2013.*
- *Between 2005 and 2020 the liquids production has exceeded the forecast from 2005 with 2% in total.*

Legend: "Uoppdagede ressurser"=Undiscovered resources, "Betingede ressurser i funn"=Contingent resources in discoveries, "Betingede ressurser i felt"= Contingent resources in producing fields, "Reserver"=Reserves
Source: Rystad Energy research and analysis, NPD resource report 2005 and 2019

2005: First five-year period where the NCS was not able to replace volumes produced



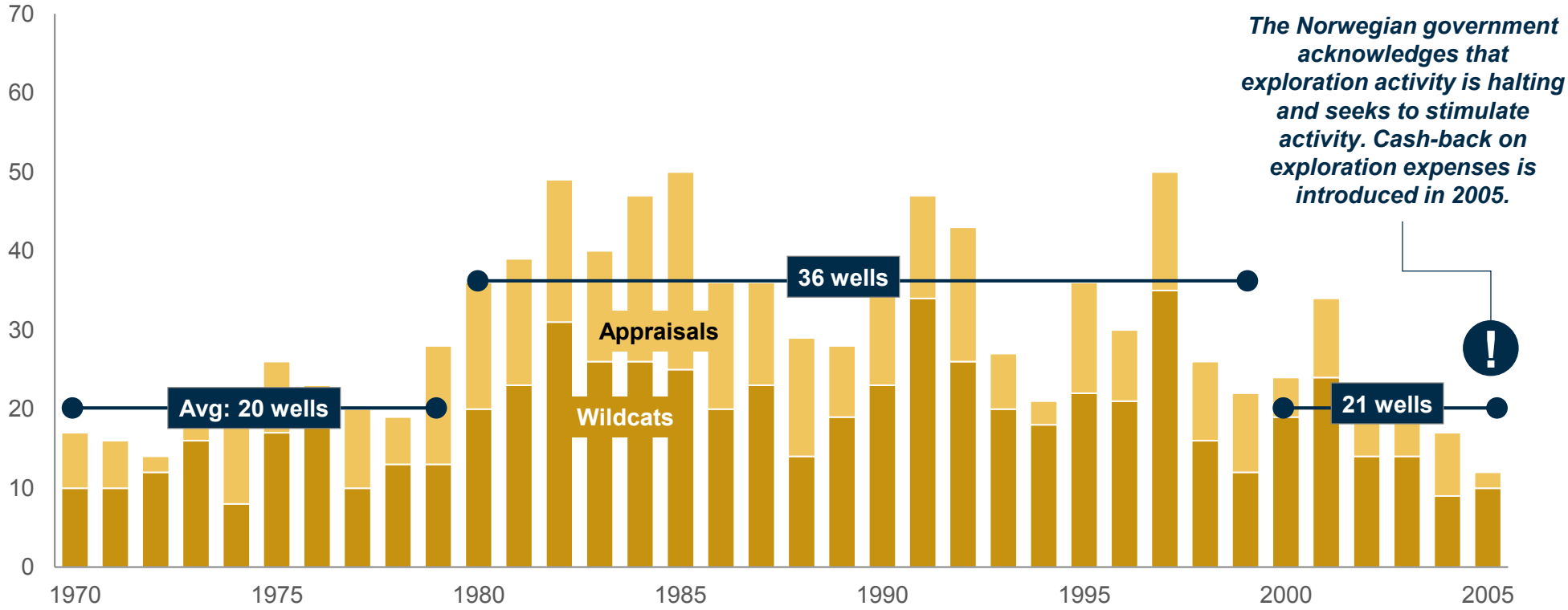
Positive reserve replacement ratio in all time periods historically on NCS before 2000. The average reserve replacement ratio has been decreasing slowly from the peak period in 1985 to 1989 to 2000-2004.

However, it has remained above 1 up until 2000. After year 2000 the average reserve replacement ratio has dropped to 0.68. This implies that only 68% of what was produced in that period was replaced with new reserves. Hence, the outlook for production and additional volumes was rather dark in 2005 on the NCS.

Source: Rystad Energy research and analysis

2005: Exploration at all-time low – cash-back introduced, but it does not benefit incumbents

Exploration activity on the NCS
wildcats and appraisals

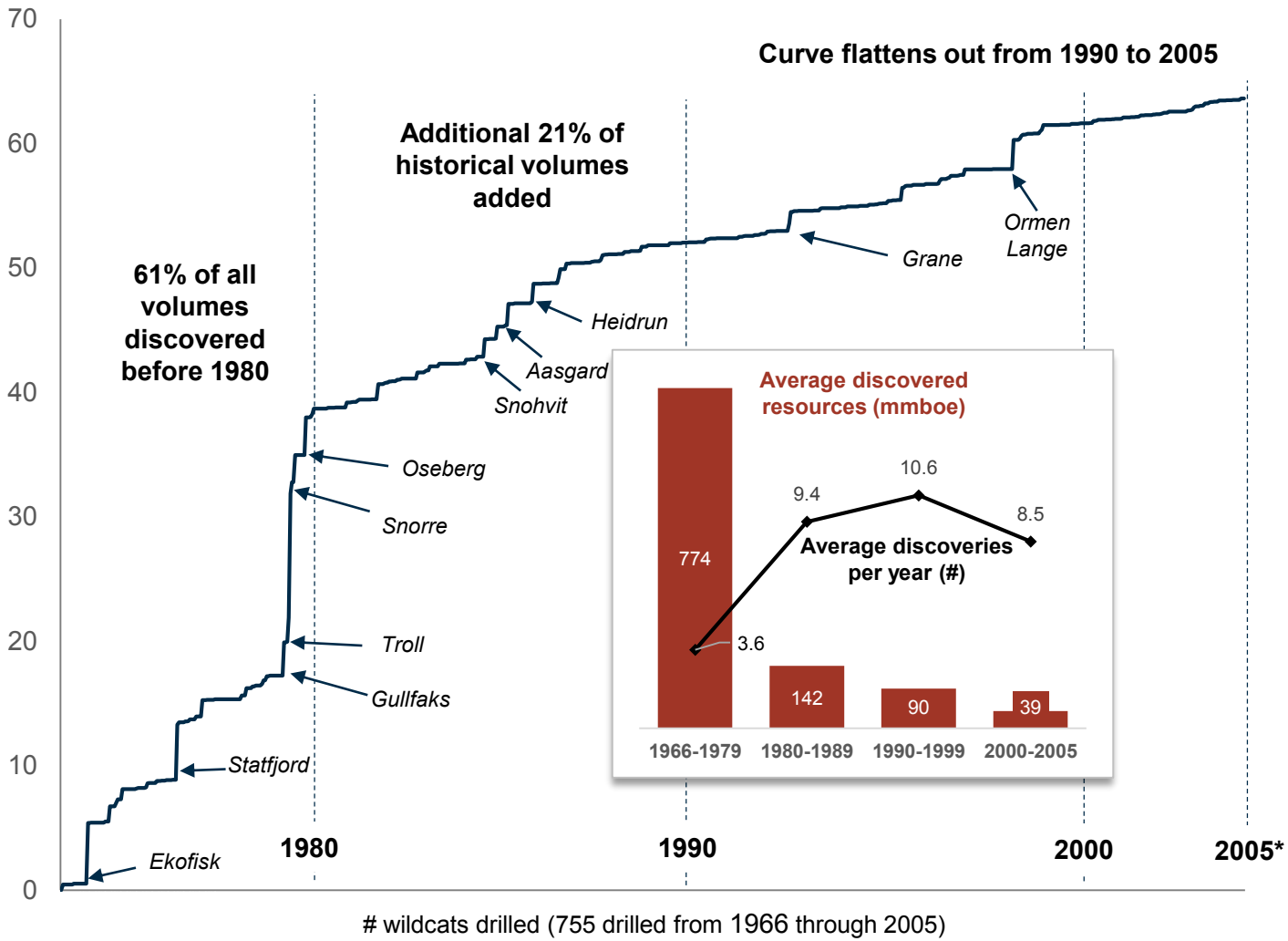


- *In 2005 the number of exploration wells on the NCS in 2005 was at the lowest level since at the lowest level ever since 1970. 12 exploration wells in 2005 represents a drop of 76% from the all-time high levels in 1985 and 1997.*
- *The Norwegian government acknowledged that exploration activity was halting and that it had to stimulate activity. Cash-back on exploration expenses was introduced in 2005. This was a very positive measure for new entrants that were not in tax position, but tax neutral for incumbents with production like Hydro and Statoil. The effect for incumbents were increased competition for offshore exploration acreage.*

Source: Rystad Energy research and analysis, NPD

2005: Discovered resources per exploration well on NCS was at an all-time low

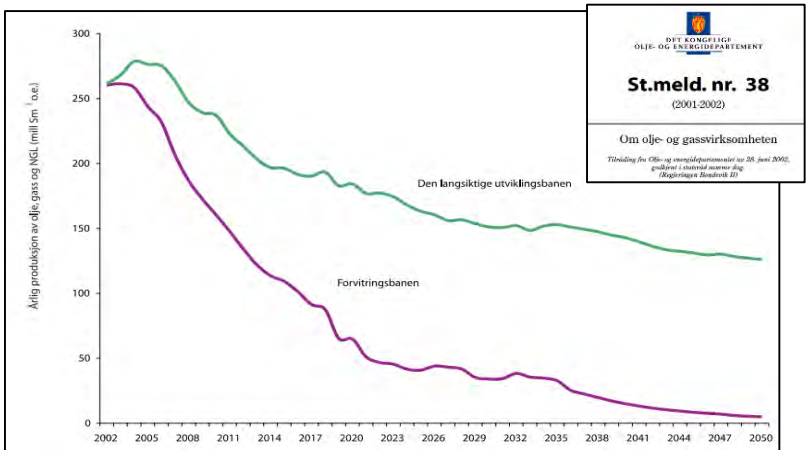
NCS creaming curve - cumulated discoveries
Billion boe



- The creaming curve on the left shows how the cumulated discovered resources on the NCS have flattened out from the late 1980s to 2005.
- Of the 63.6 billion boe that was discovered before 2005, 61% was discovered before 1980 and 82% before 1990.
- Although the number of average discoveries remains relatively constant, the average resource size of each discovery is trending downwards drastically.
- Average discovered resources per discovery (column chart) at all time low in the period 2000-2005 at 39 mmboe per discovery, 95% below the all-time high level in 1966-1979.

*All other years than 2005 represent year beginning, e.g. 1980 = beginning of 1980. 2005 is year end.
Source: Rystad Energy research and analysis, NPD

2005: Strong drive to look for opportunities outside NCS and outside Africa/Middel East



Figur 2.1 To utviklingsbaner for petroleumsproduksjonen på norsk kontinentalsokkel.
Kilde: OD/OED

Kapittel 2 **St.meld. nr. 38** 7
Om olje- og gassvirksomheten

av at regjeringen som ressursforvalter arbeider aktivt for at virksomheten på norsk kontinentalsokkel utvikler seg langs den langsiktige utviklingsbanen, slik at verdiene sikres og realiseres.

Det er *svært krevende* å nå den langsiktige utviklingsbanen. Dette skyldes bl.a. at de lettest tilgjengelige ressursene er utviklet, og at det blir stadig mer utfordrende å utvinne de mindre tilgjengelige ressursene. Dette er først og

Kollaps i leting etter olje og gass

I 2003 kommer leting etter olje og gass til å kollapse. Ikke siden 1968 blir det boret færre undersøkelsesbrønner etter olje og gass på norsk sokkel. Norsk oljevirksomhet kan forvitre.

Aftenposten

Reiten ser dystert på norsk sokkel

Norsk Hydro og generaldirektør Eivind Reiten mener Oljedirektoratet er for positive til utviklingen på norsk sokkel.

Under 1 min Publisert: 20.01.04 – 08.29 Oppdatert: 6 år siden

Oljeindustrien og korrupte land

>fridtjof Nansens Institutt. <br. Arild Moe. >. Av Lars H. Gulbrandsen <br

9. feb. 2005

Aker Kværner er i de seneste dager blitt anklaget for å samarbeide med et selskap som eies av den beryktede revolusjonsgarden i Iran. Statoils konsernsjef og styreformann måtte gå av etter avsløringer om en tvilsom konsulentavtale i Iran. Hydro kom i medias søkelys fordi selskapet hemmeligholdt utbetalingen av tresifrede millionbeløp for å få lete etter olje og gass i Angola. Disse beretningene er en følge av norsk olje- og gassindustris internasjonalisering og satsing på regioner som ikke tidligere har vært tilgjengelige for internasjonale selskaper. Dette omfatter

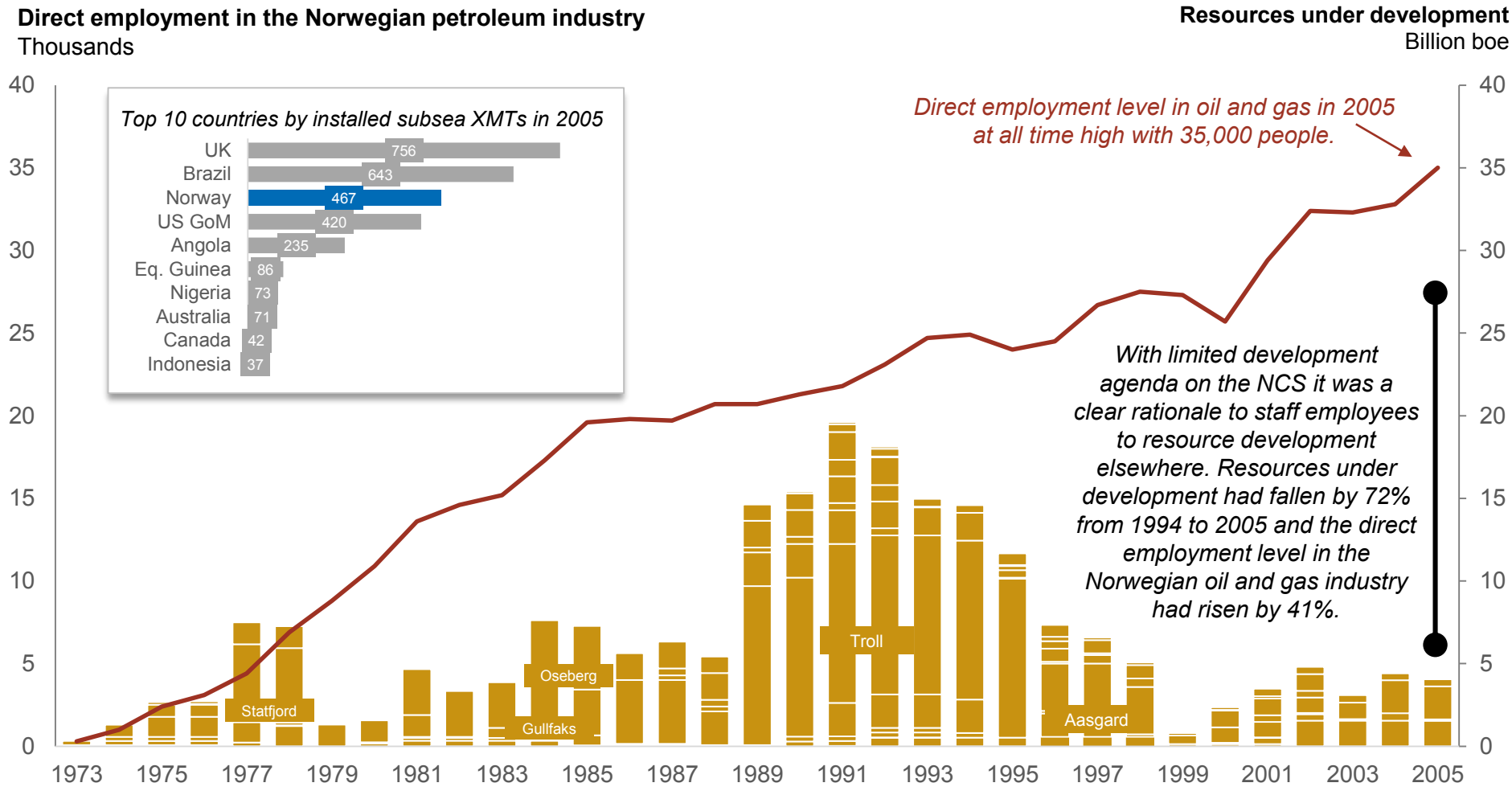
profit-generating phase. In PSA contracts, the higher the oil price when the field becomes profitable, the smaller the share of production that goes to the partners. The

The PSA effect and, to some extent, the stepping up of exploration activity and increased investments are all linked to the high price of oil. They will have a negative impact on the normalised return on capital employed. Given the normalisation

- *Norwegian oil and gas production was peaking over the period 2001-2005*
- *The sentiment was then, as expressed by the government and in the press as shown here, that production will 30%-50% by 2020*
- *For Statoil, having an aggressive strategy for internationalization was seen as natural and correct.*
- *However, two issues was associated with current international portfolio; 1) risks associated with corruption and political stability, 2) issues with PSA regimes – typically in Africa and Middle East - limiting financial upside and production growth at high oil prices.*
- *Thus, pursuing growth in United States, with recent breakthrough in the geological potential and attractive fiscal systems, was seen as attractive*

Sources: St.meld.38 2001-2002 Om olje- og gassvirksomheten; Aftenposten 9.11.2002; DN 20.1.2004;

2005: Growing and competent knowledge base on the NCS with few projects to work on

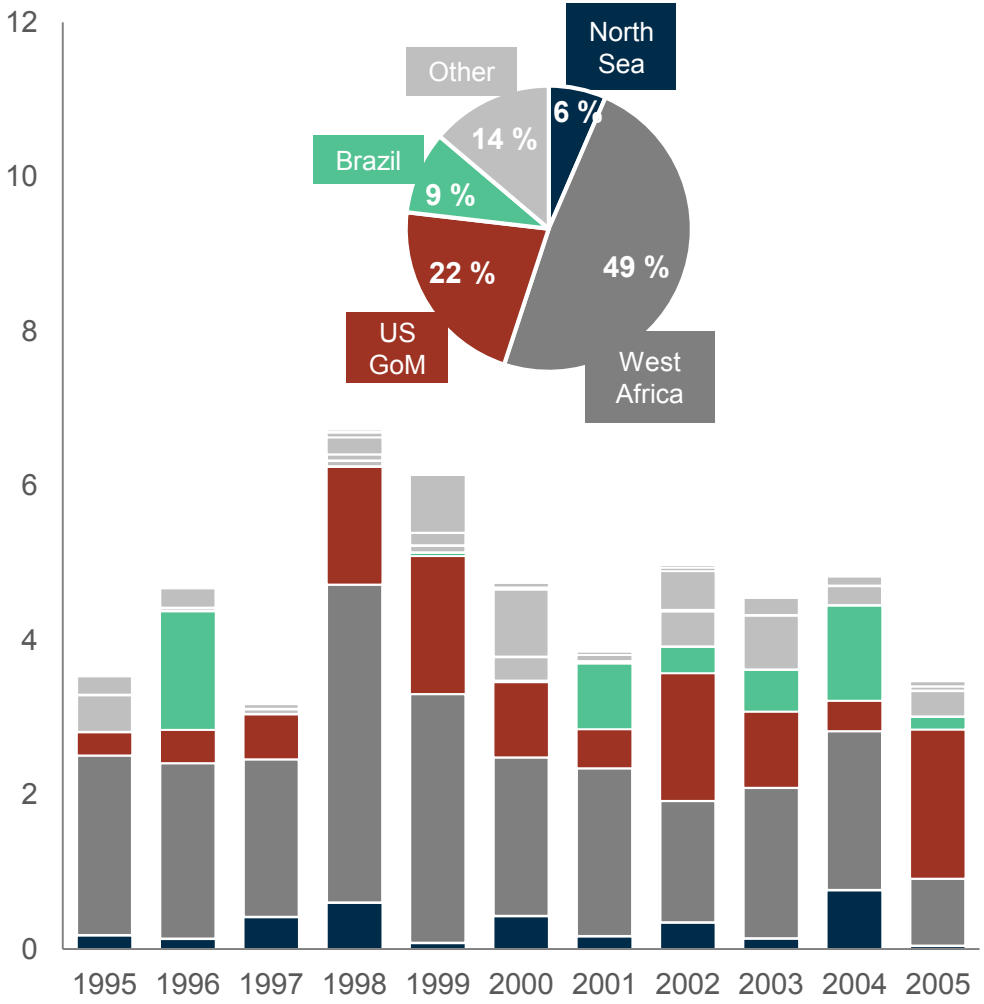


- The employment level in the oil and gas industry in 2005 had grown in the opposite direction of the resource under development in 2005. In order to utilize the people and knowledge base within the Norwegian oil and gas industry it was pertinent to look for international growth opportunities to utilize the highly competent labor
- In 2005 the Norwegian oil and gas industry was leading on reservoir modelling and subsurface understanding, flow assurance, horizontal drilling and subsea technologies.

Source: Rystad Energy research and analysis, NPD

2005: Where to go? Deepwater GoM was sought out for resource potential and economics

Discovered deepwater offshore liquids resources (deeper than 125m)
Billion boe



Source: Rystad Energy research and analysis

US GoM investment rationales:

Large resource potential

"The Gulf of Mexico was identified early as a focus area as it offered significant growth potential (estimated undiscovered resources of 15 billion barrels of oil and 100 Tcf of gas), established infrastructure and market, politically stable area and good fiscal terms." – 2002

WOODSIDE AUSTRALIAN ENERGY

Political stability

"This acquisition creates a new international core area for Statoil. It gives us the opportunity to utilize and further build on our capabilities in exploration, reservoir management and subsea technology. US production, with its attractive fiscal regime and stable political environment, provides an attractive balance to our overall international portfolio." – 2005

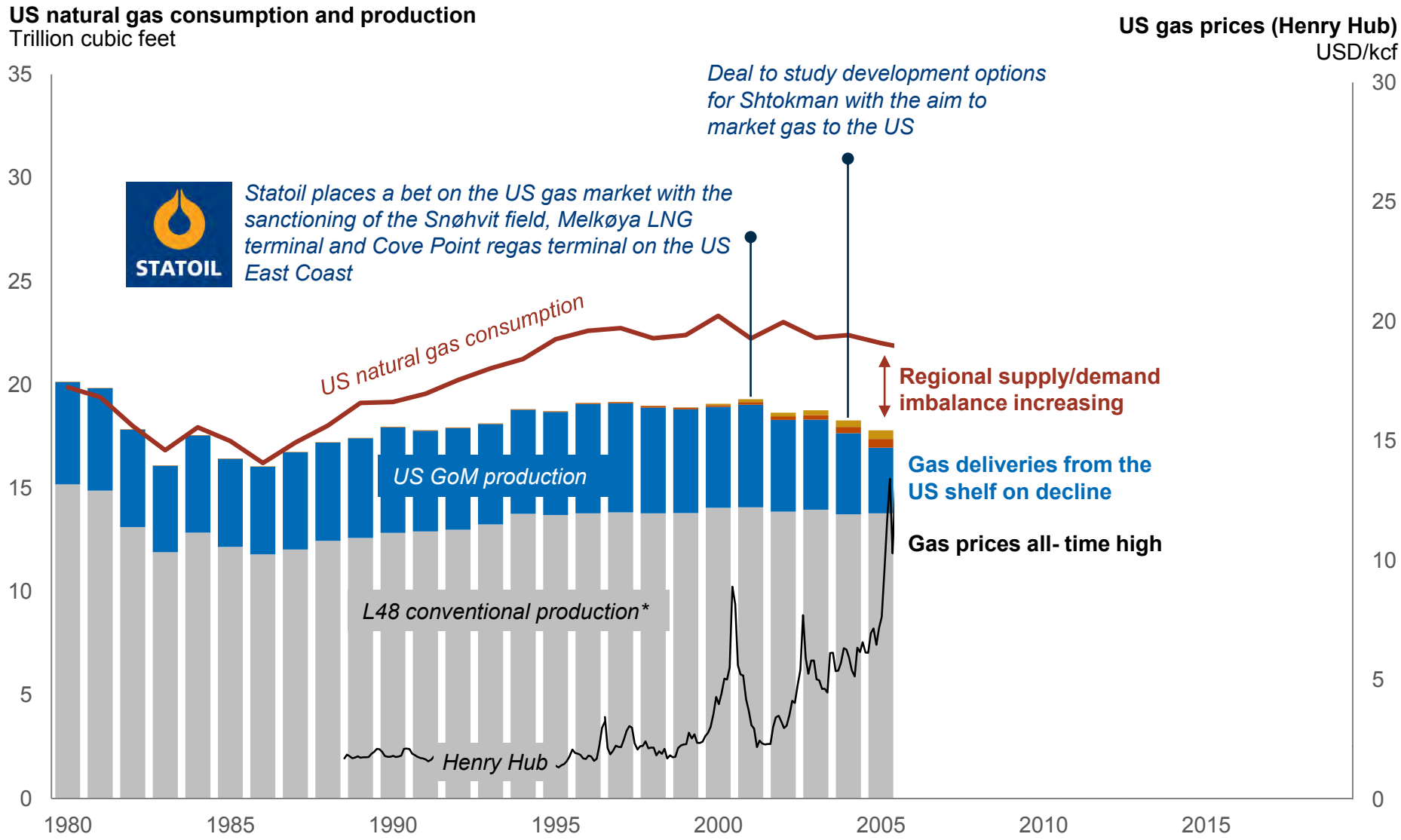
STATOIL

Attractive fiscal terms

"The Gulf of Mexico is a highly prolific hydrocarbon province where giant fields are still being discovered. . . The fiscal regime in the GoM is simple and profitable, and the leasing system allows competitors of all sizes to participate. Fiscal incentives like royalty free periods were introduced to help commercialise the smaller deep water finds." - 2002

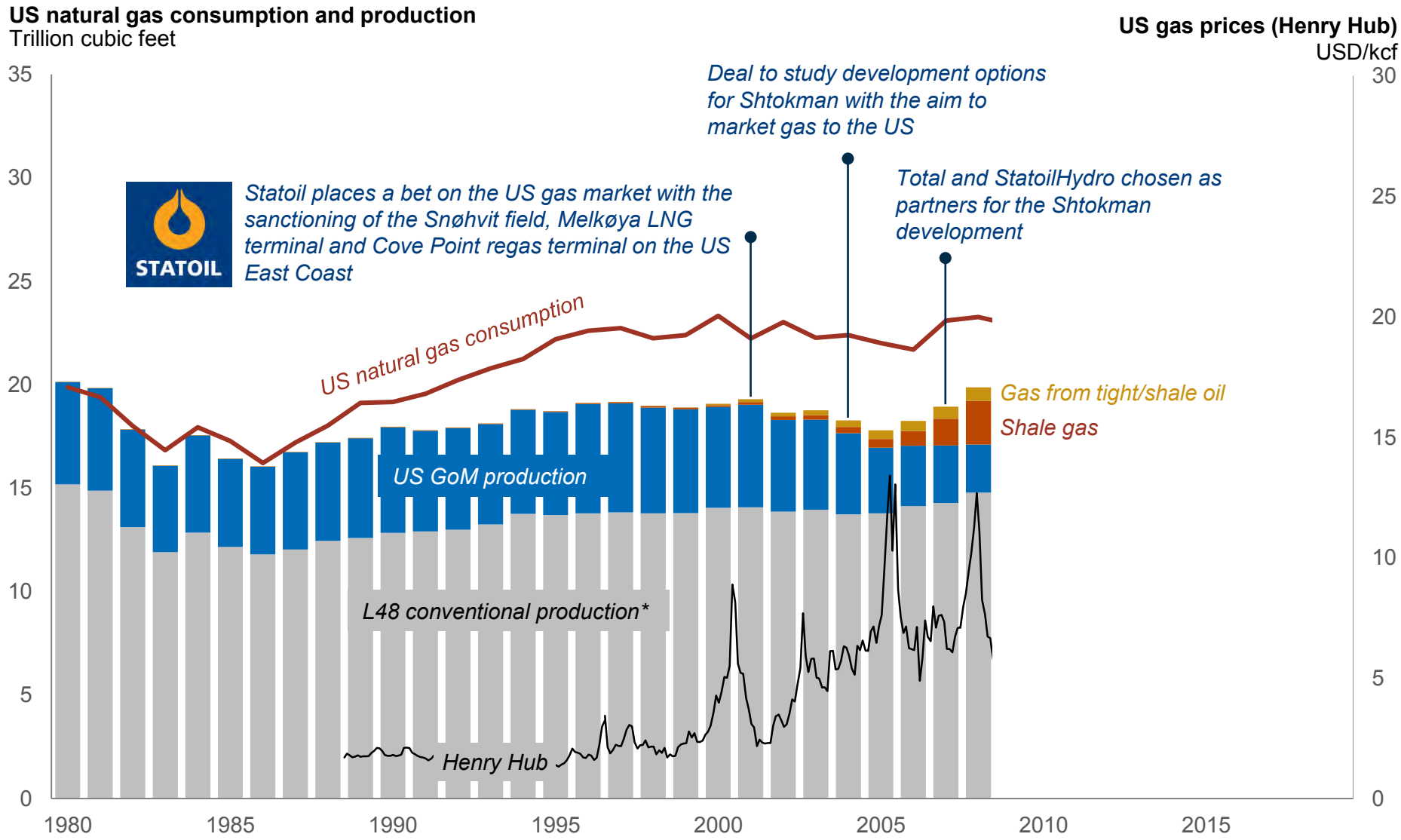
bhpbilliton

2005: US natural gas imbalance established and improving Henry Hub prices



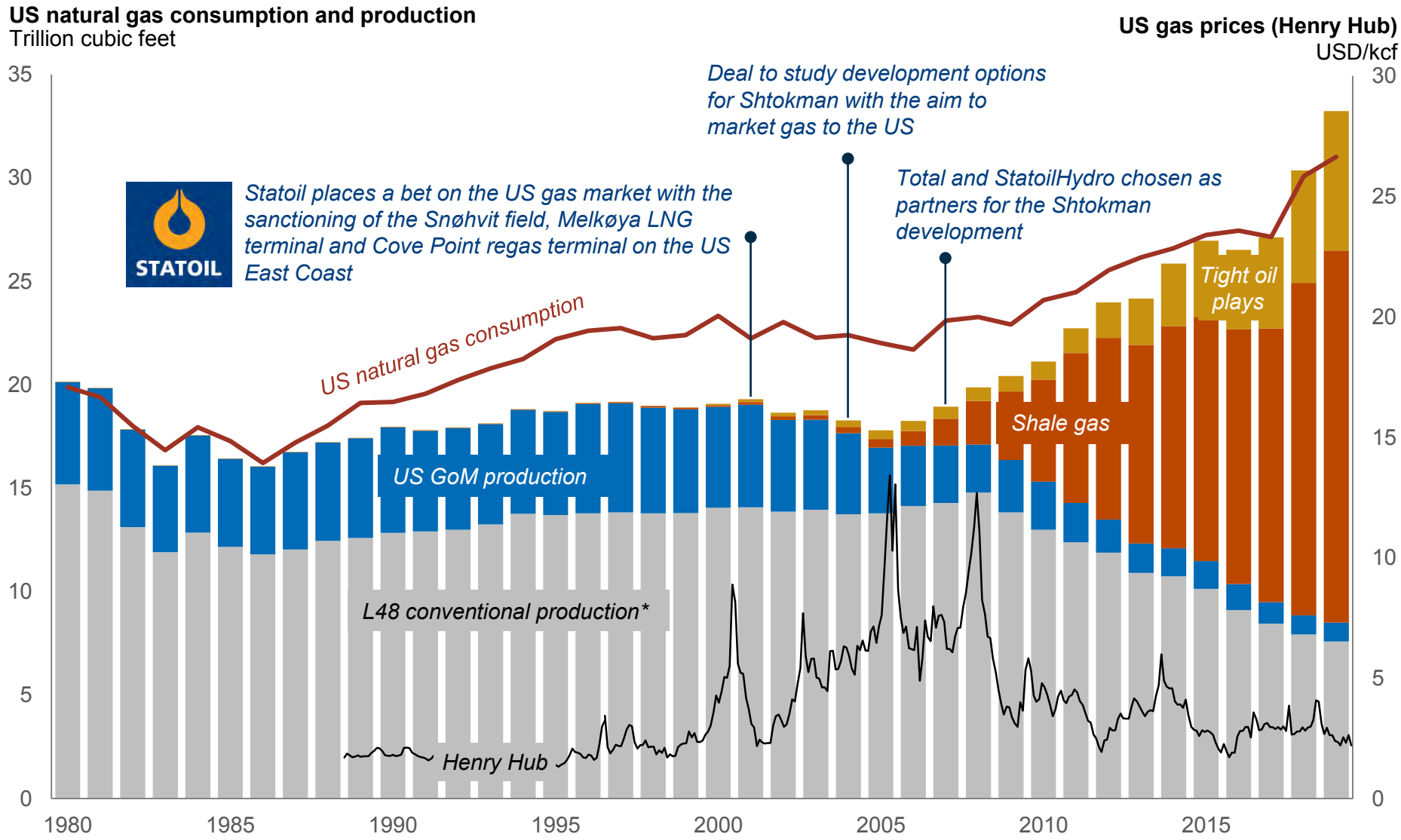
*Includes CBM and tight gas
Source: EIA; UCube; Equinor press releases

2008: Emergence of shale gas with still favorable macro conditions in the US



*Includes CBM and tight gas
Source: EIA; UCube; Equinor press releases

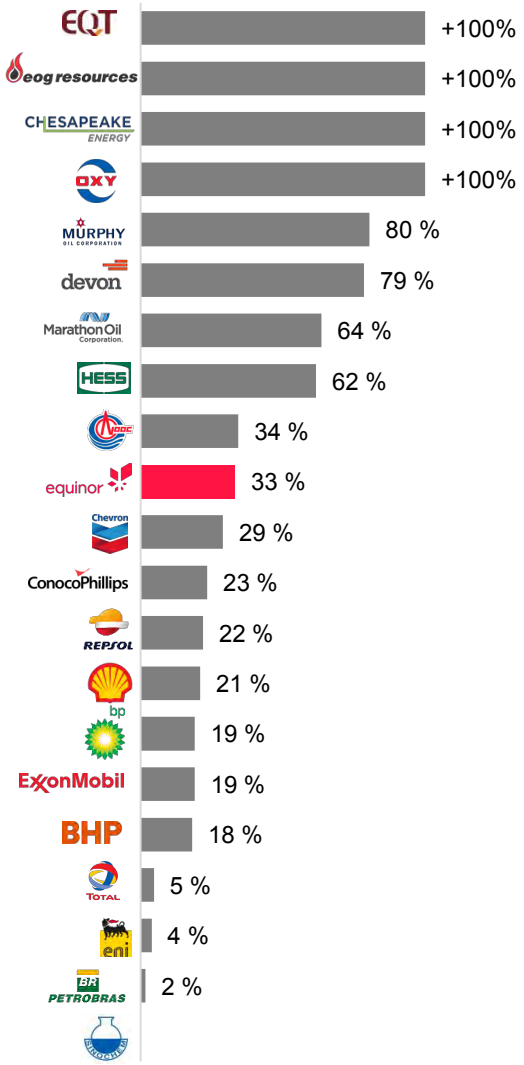
2019: Shale gas revolution yielded net gas exports from the US and low gas prices



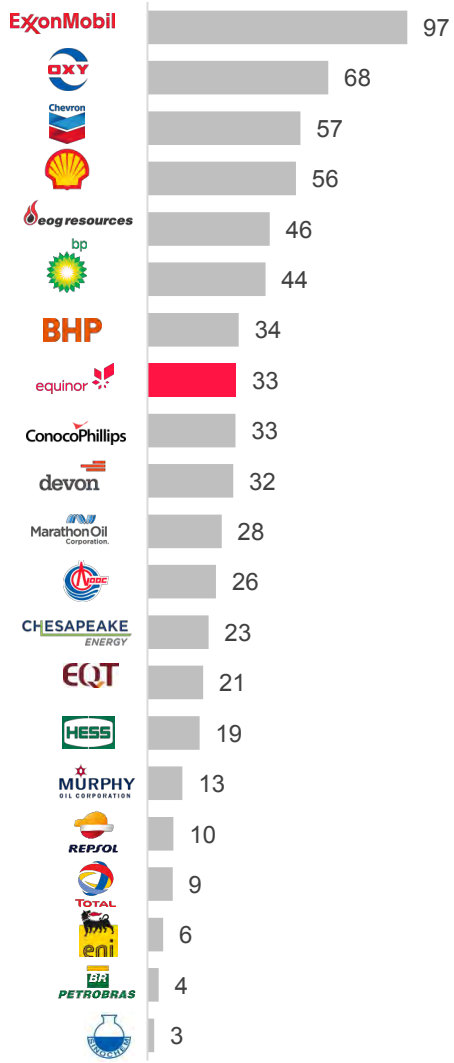
*Includes CBM and tight gas
Source: EIA; UCube; Equinor press releases

2008-2019: Equinors bet in the US was high compared to other INOCs

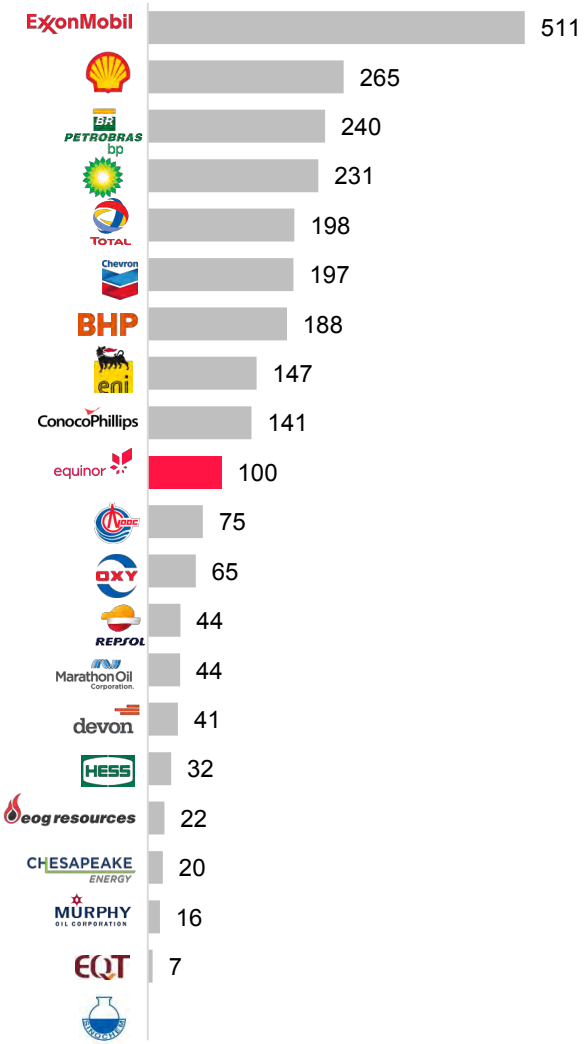
US investments relative to market cap
Percentage invested by market cap)



US investments (M&A and capex)
BUSD real 2008



Market cap in 2008
BUSD

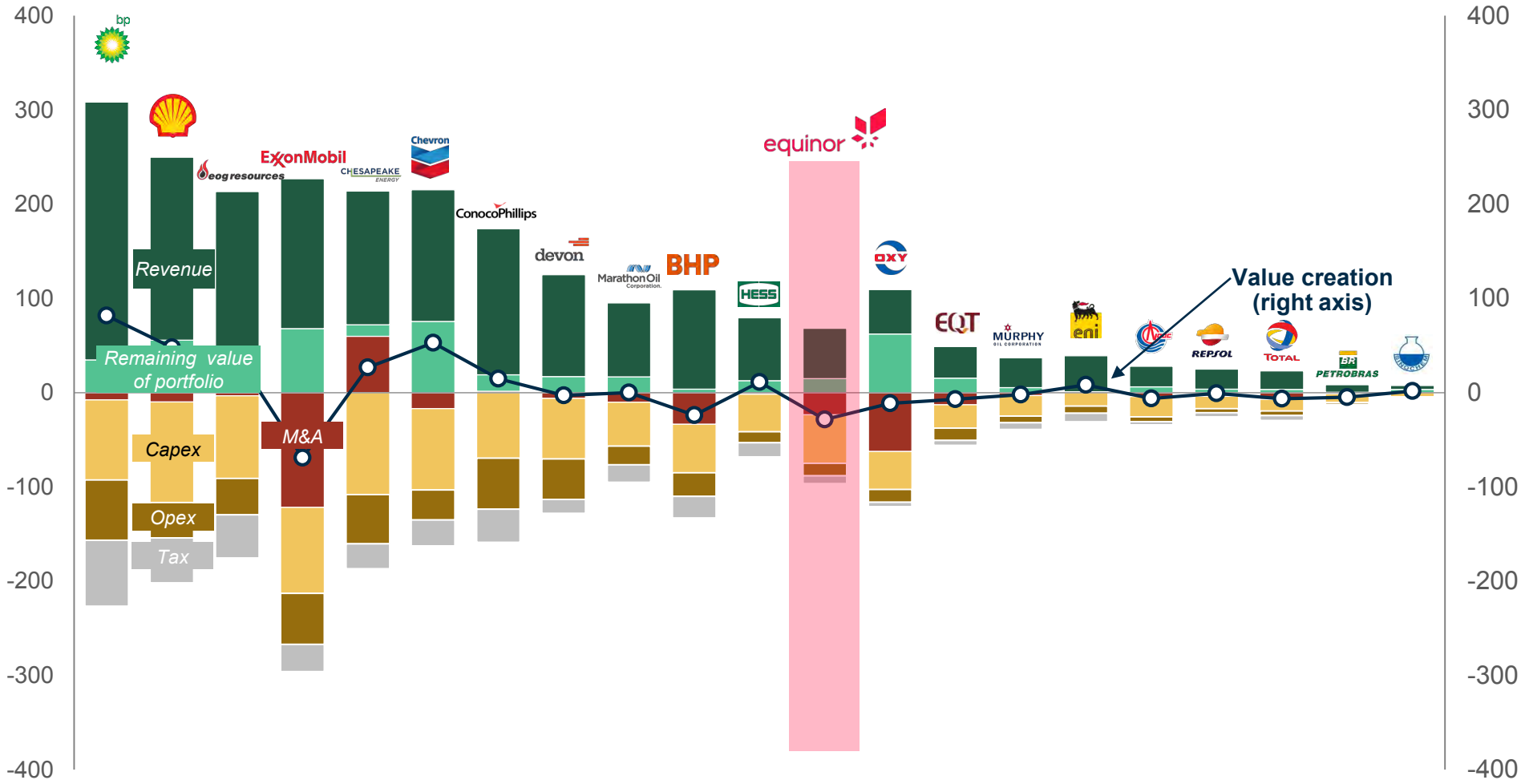


Source: Rystad Energy research and analysis

2008-2019: Several companies struggled to captured value from their US bets

Present value of historical and future cash flows (excl. finance costs)*
Billion USD

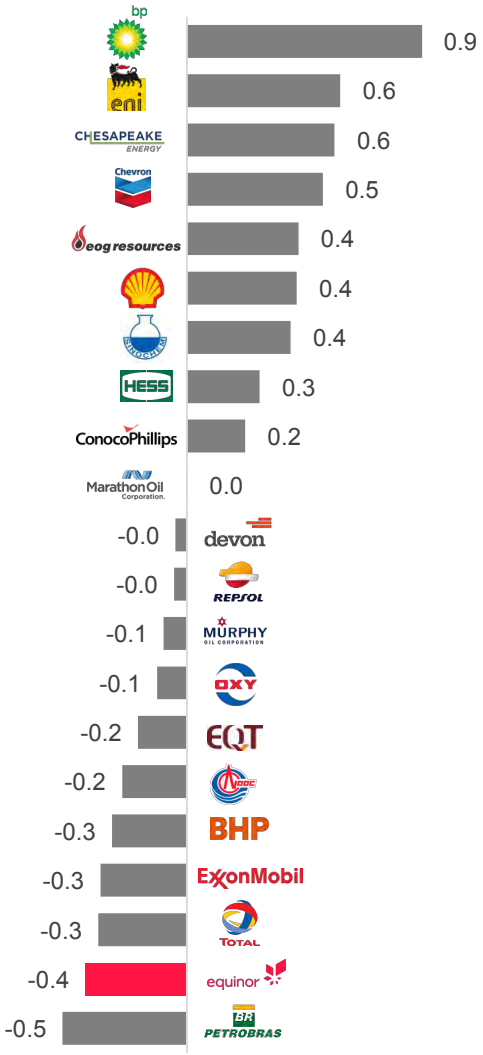
Value creation (black line)
Billion USD



*10% nominal discount rate, 2% inflation rate
Source: Rystad Energy research and analysis

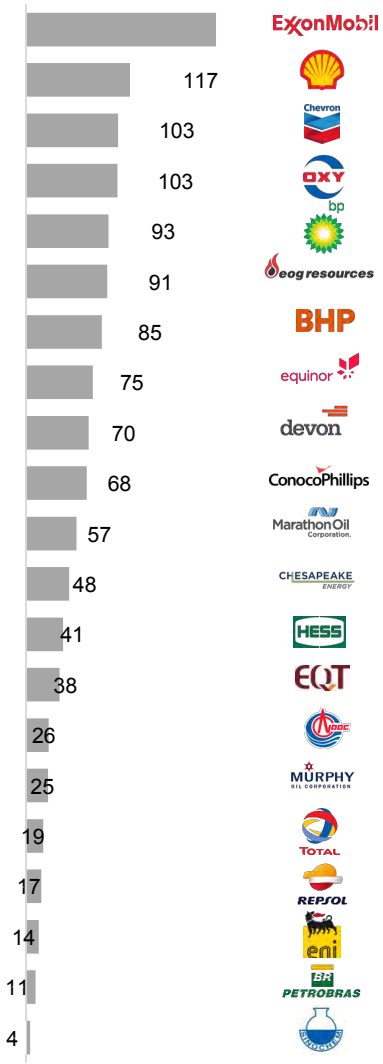
2008-2019: Like many other IOCs Equinor struggled to create value

Value creation per dollar invested
USD (real 2020)



Value creation*
BUSD NPV 2020

Present value of investments
BUSD PV2020



*Before finance costs, discount rate 10%, inflation rate 2%
Source: Rystad Energy research and analysis

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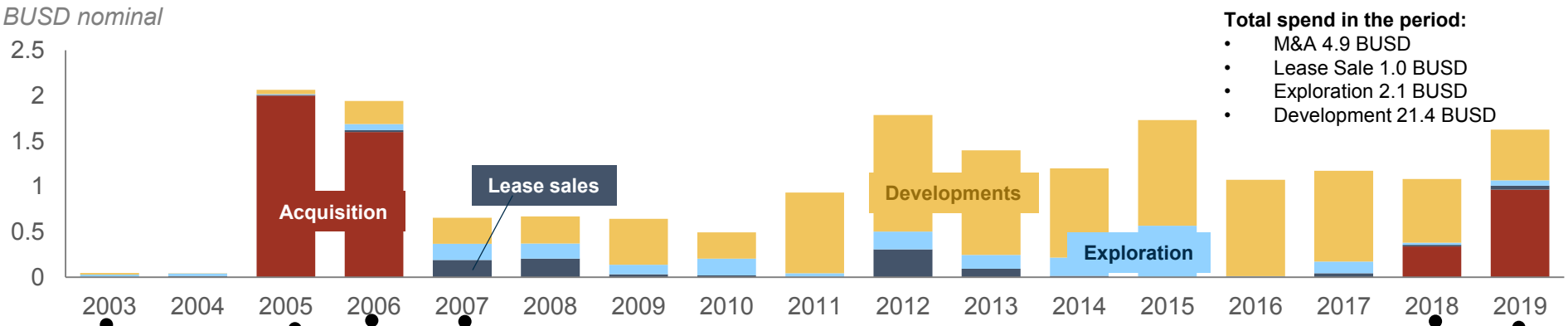
The deepwater US GoM saw large investments from international players, with exploration results strong overall but mixed for Statoil

Key take-away	Industrial context in US GoM deepwater	Statoil positioning
In the early 2000s, the deepwater Gulf of Mexico emerged as a top destination for international E&P investment	US GoM deepwater drew investment and new entries due to its resource potential, open access, attractive tax terms, and a lack of a NOCs with privileges	For a company with strong offshore capabilities, the deepwater GoM was one of the logical areas to add to the portfolio in the context of a weak growth outlook for Norway
Deepwater GOM saw a new wave of new international entrants in the early 2000s	From 2005-2010 multiple international companies entered the US GoM deepwater through acquisitions, including Repsol, Eni, Inpex and Ecopetrol. These companies spent over $12 billion to enter or bolster positions in the Gulf of Mexico.	Statoil and Hydro entered prior or early in this wave. Hydro entered in 2001, Statoil in 2003, but the major entry was with the acquisition of the Encana portfolio in 2005
The exploration potential of the GoM drove growing spend in lease auctions	Explorers spent $16 billion acquiring exploration licenses in lease sales (auctions) in the US deepwater Gulf of Mexico from 2005-2019.	Statoil began leasing acreage in 2005 and was the third highest spender in the lease rounds, spending $1.2 billion in these auctions in this period. However, Statoil was unable to create value in exploration.

Source: Rystad Energy research and analysis

After Statoil's initial M&A entry followed significant investments in new developments

Statoil's historical investments in US GoM



Total spend in the period:

- M&A 4.9 BUSD
- Lease Sale 1.0 BUSD
- Exploration 2.1 BUSD
- Development 21.4 BUSD

Statoil signed an agreement with Chevron Texaco to secure interest in a small number of deepwater exploration opportunities.

Statoil purchased Encana's deepwater GoM portfolio for **$2 billion**. Included stake in Chevron-operated Tahiti and a number of discoveries.

Acquired Plains E&P's working interest in two discoveries (Caesar and Bigfoot) and one prospect for **$700 million.**

Acquired Anadarko's interest in two discoveries (Knotty Head and Bigfoot) and one prospect for **$901 million.**

Merged with Norsk Hydro to become StatoilHydro, inheriting former Spinnaker Exploration shelf and deepwater assets.

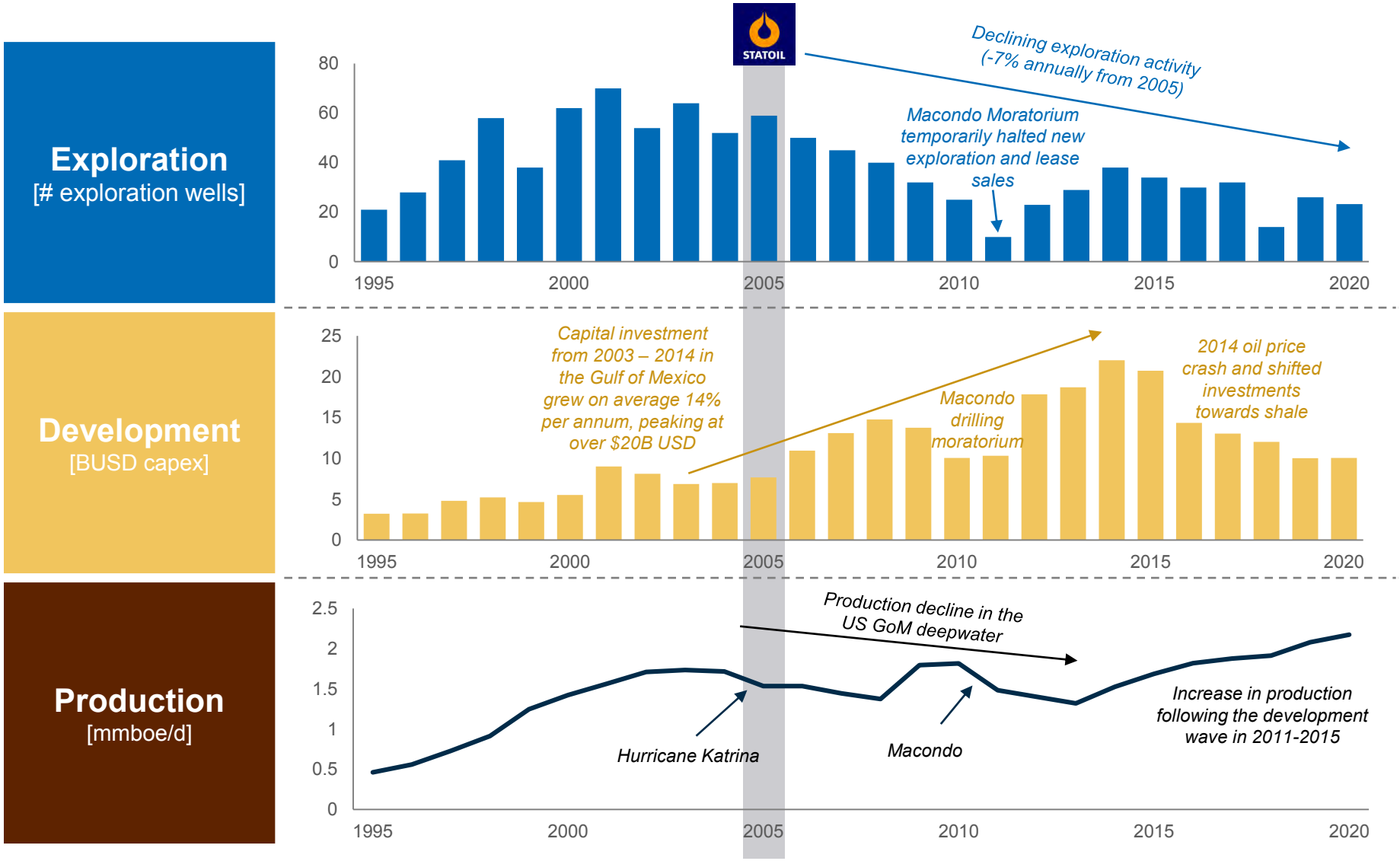
Sold all former Spinnaker asset on the shelf to Mariner Energy for **$243 million**

Acquired 40% interest in North Platte from Cobalt's bankruptcy auction, in **$339 million** joint bid with Total.

Exercised preferential right to acquire 22.45% interest in Caesar Tonga from Shell for **$965 million.**

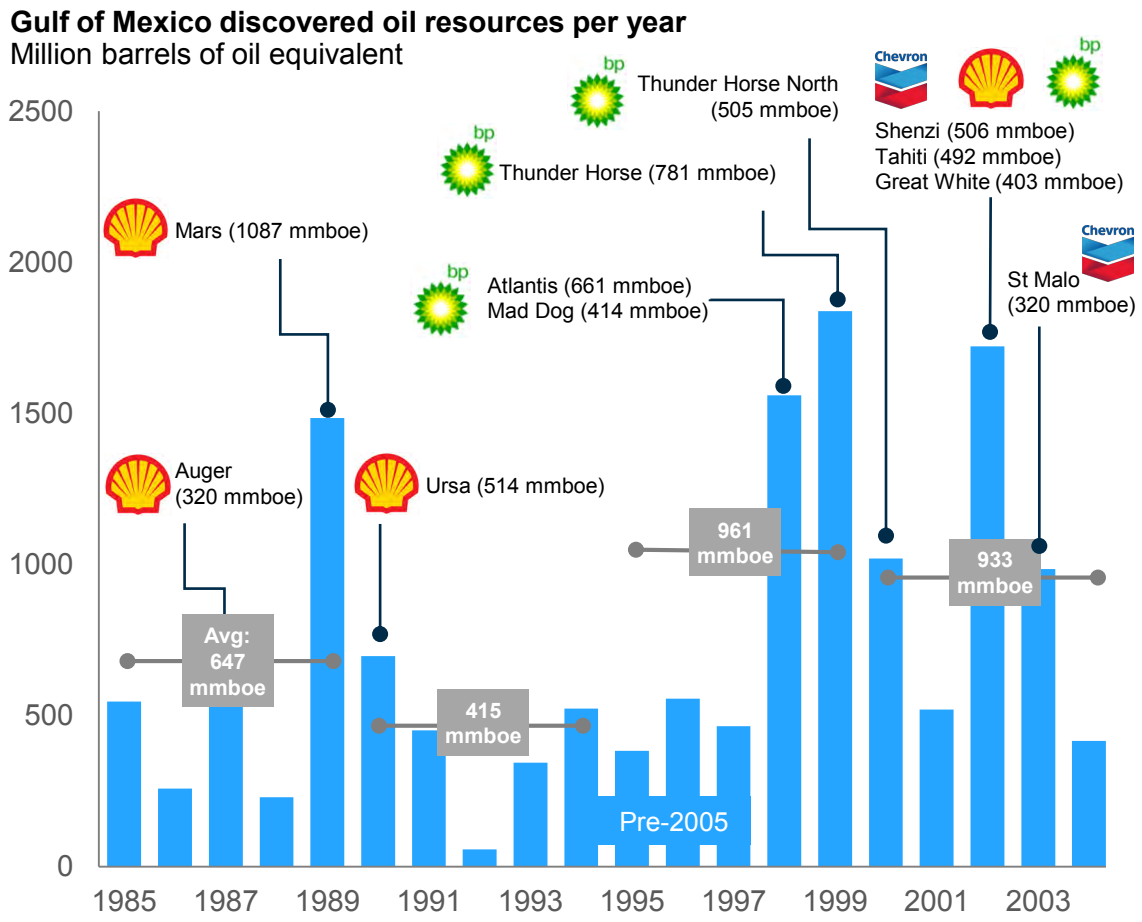
Source: Rystad Energy research and analysis

Since 2005, nearly $220 billion of capex has been spent in the deepwater Gulf of Mexico, bringing recent production to all-time highs above 2 million boe/d



Source: UCube; Rystad Energy research and analysis

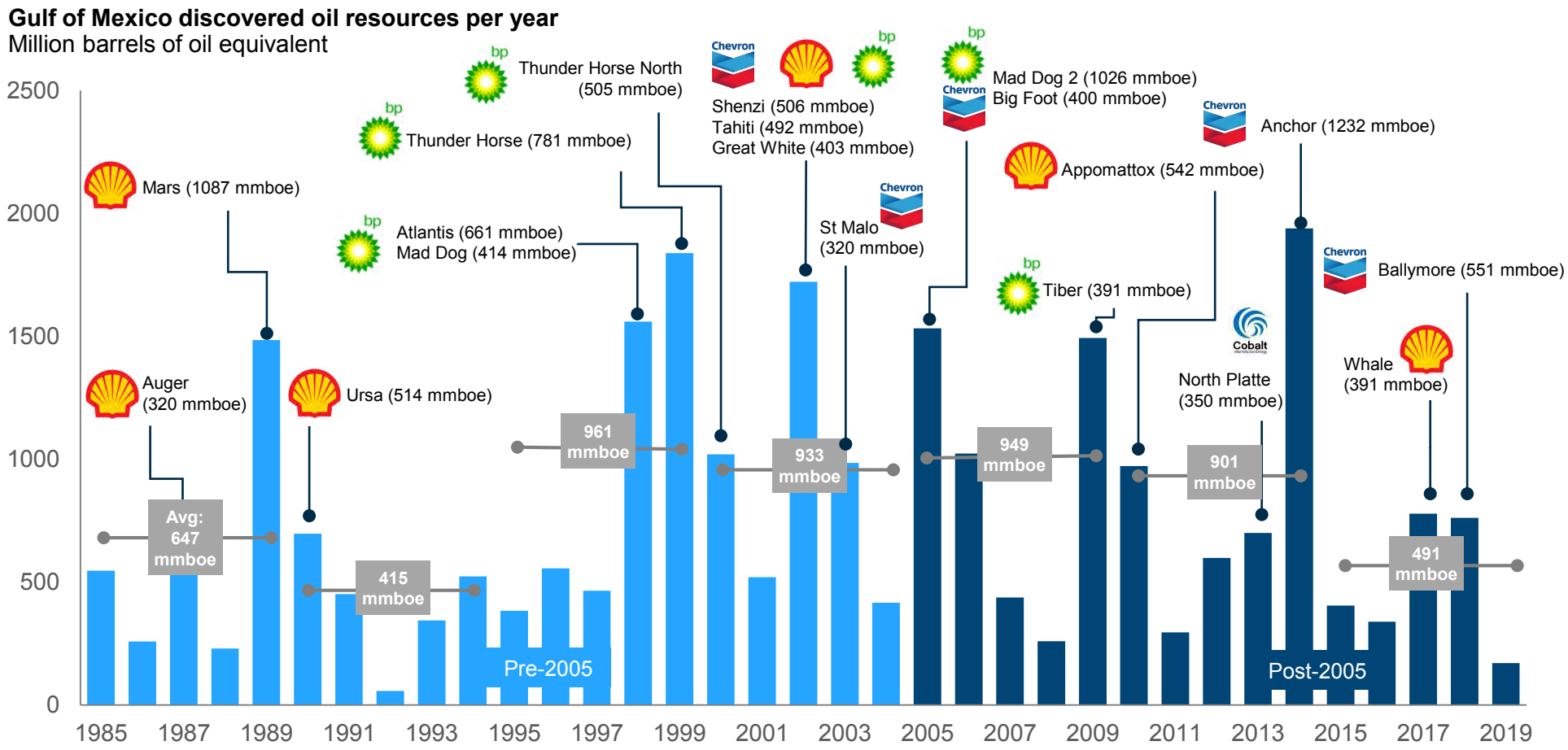
DW GoM has yielded large discoveries before and after Statoil's entry in 2005



Prolific exploration discoveries by the Supermajors such as Mars (1087 mmboe) from Shell, Mad Dog (combined 1440 mmboe) by BP, and Thunder Horse (combined 1286 mmboe) from BP offered exciting opportunities for new entrants to the basin.

Note: Only showing discoveries with greater than 300 mmboe resources
Source: Rystad Energy research and analysis

DW GoM has yielded large discoveries before and after Statoil's entry in 2005

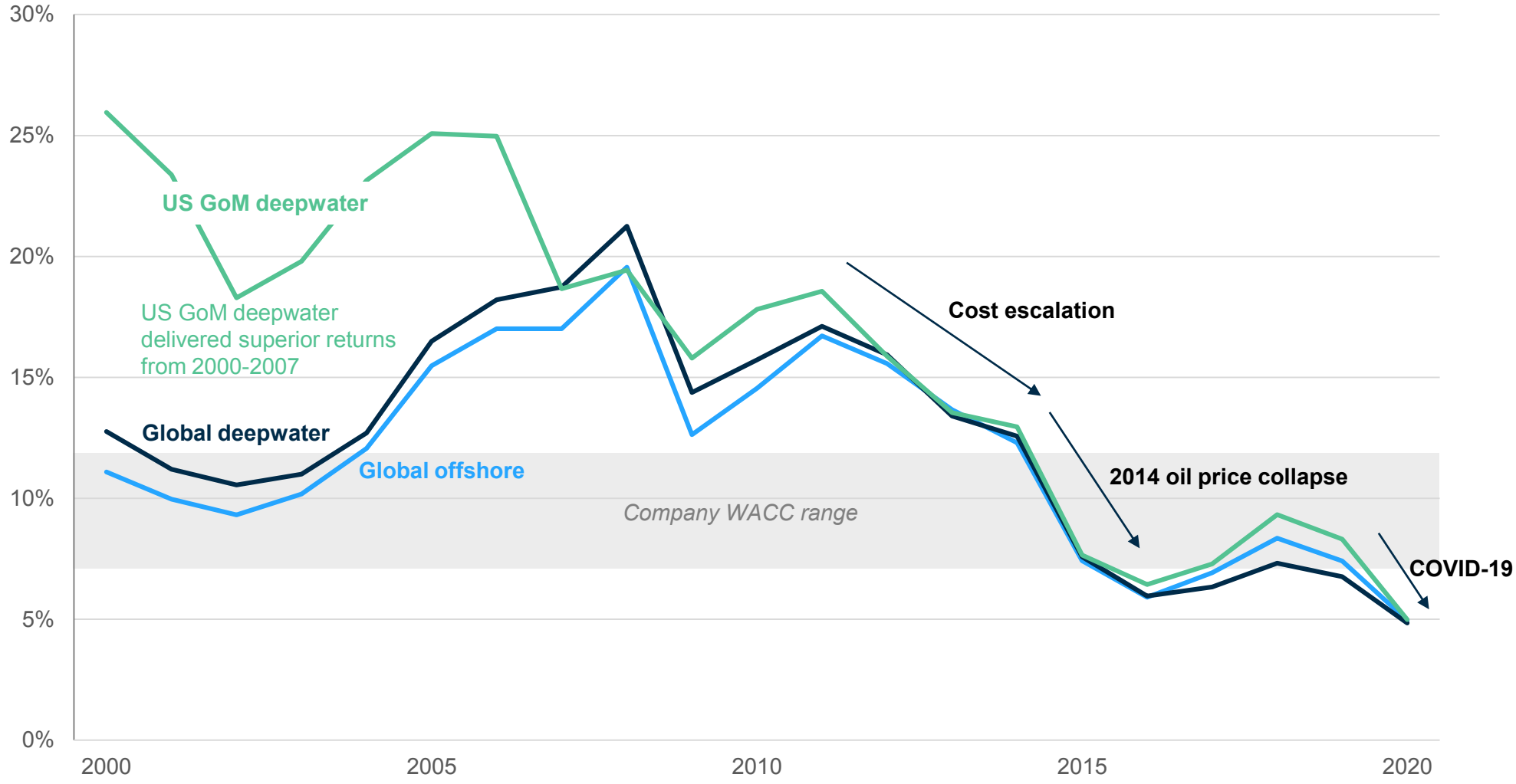


Since Statoil's entry to the Gulf of Mexico in 2005, major discoveries such as Anchor (1232 mmboe) in 2014 by Chevron, Ballymore (551 mmboe) in 2018 by Chevron, and Appomattox (542 mmboe) in 2010 by Shell proved that the maturing basin still had exciting exploration opportunities

Note: Only showing discoveries with greater than 300 mmboe resources
Source: Rystad Energy research and analysis

Before 2007 US GoM delivered superior returns compared to global offshore

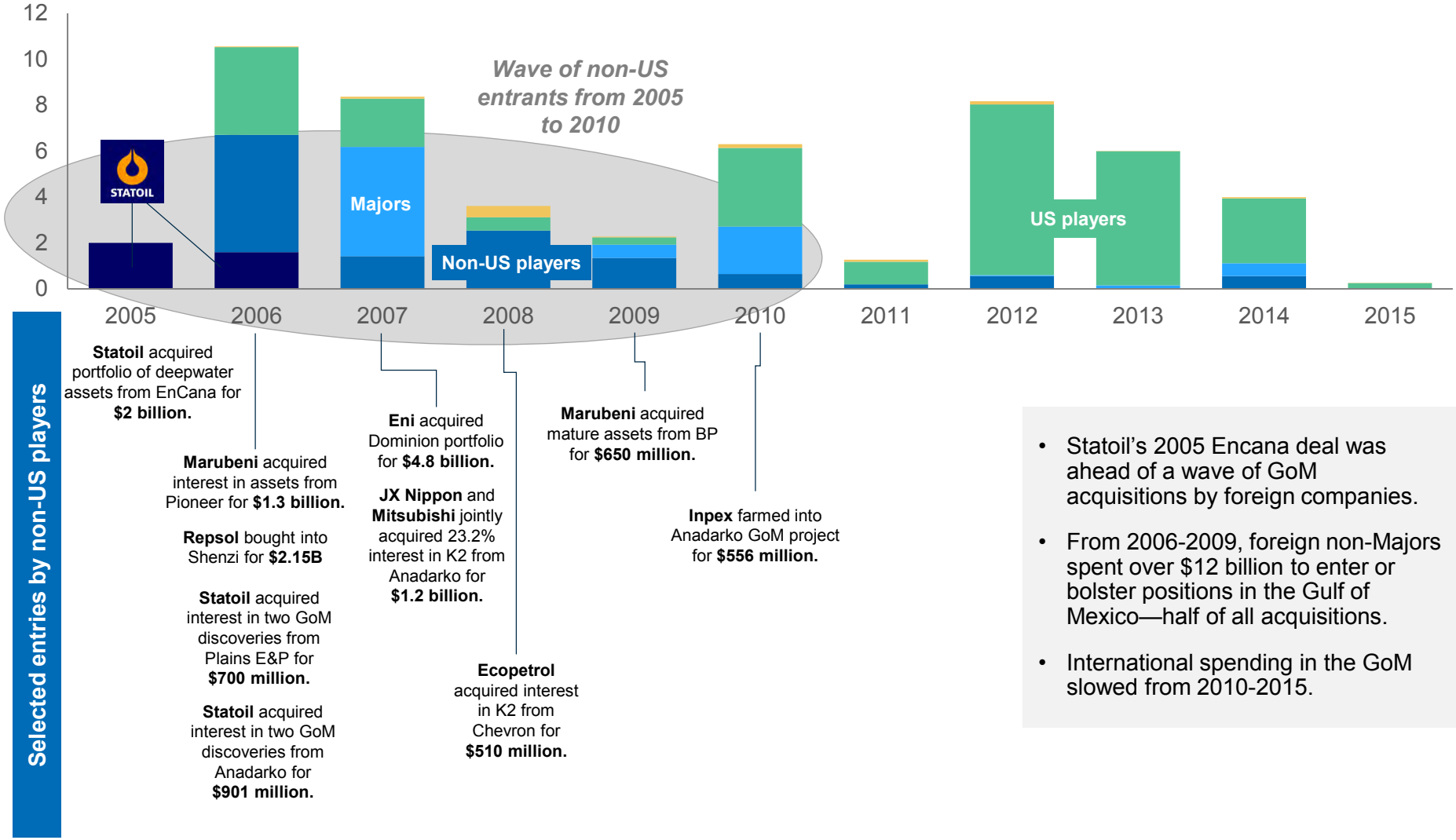
Return on Gross Investments (CROGI)
Percentage



*CROGI on organic investments (return on asset spend, M&A excluded)
Source: Rystad Energy research and analysis

Statoil entered just before the big wave of international M&A entries between 2005-2010

Gulf of Mexico M&A activity 2005-2015
Deal value, billion USD



- Statoil's 2005 Encana deal was ahead of a wave of GoM acquisitions by foreign companies.
- From 2006-2009, foreign non-Majors spent over $12 billion to enter or bolster positions in the Gulf of Mexico—half of all acquisitions.
- International spending in the GoM slowed from 2010-2015.

Note: Includes deals identified by Rystad
Source: Rystad Energy research and analysis

Many operators and analysts recognized deepwater GoM as attractive place to invest

Large resource potential

"The Gulf of Mexico is one of the deepwater areas with the highest exploration potential in the world; with total yet-to-find reserves estimated to be at least 20,000 million barrels." – 2006

REPSOL YPF

WOODSIDE AUSTRALIAN ENERGY

"The Gulf of Mexico was identified early as a focus area as it offered significant growth potential (estimated undiscovered resources of 15 billion barrels of oil and 100 Tcf of gas), established infrastructure and market, politically stable area and good fiscal terms." – 2002

"The oil industry is on the verge of cracking open a deep-water region in the Gulf of Mexico that could become the nation's biggest new domestic source of oil since the discovery of Alaska's North Slope more than a generation ago." – 2006

THE WALL STREET JOURNAL.

Political stability

"This acquisition creates a new international core area for Statoil. It gives us the opportunity to utilize and further build on our capabilities in exploration, reservoir management and subsea technology. US production, with its attractive fiscal regime and stable political environment, provides an attractive balance to our overall international portfolio." – 2005

STATOIL

"This zone (GoM) also possesses an attractive and stable tax regime and has historically provided one of the largest returns on capital in the offshore oil industry." – 2006

REPSOL YPF

Attractive fiscal terms

"The Gulf of Mexico is a highly prolific hydrocarbon province where giant fields are still being discovered. . . The fiscal regime in the GoM is simple and profitable, and the leasing system allows competitors of all sizes to participate. Fiscal incentives like royalty free periods were introduced to help commercialise the smaller deep water finds." - 2002

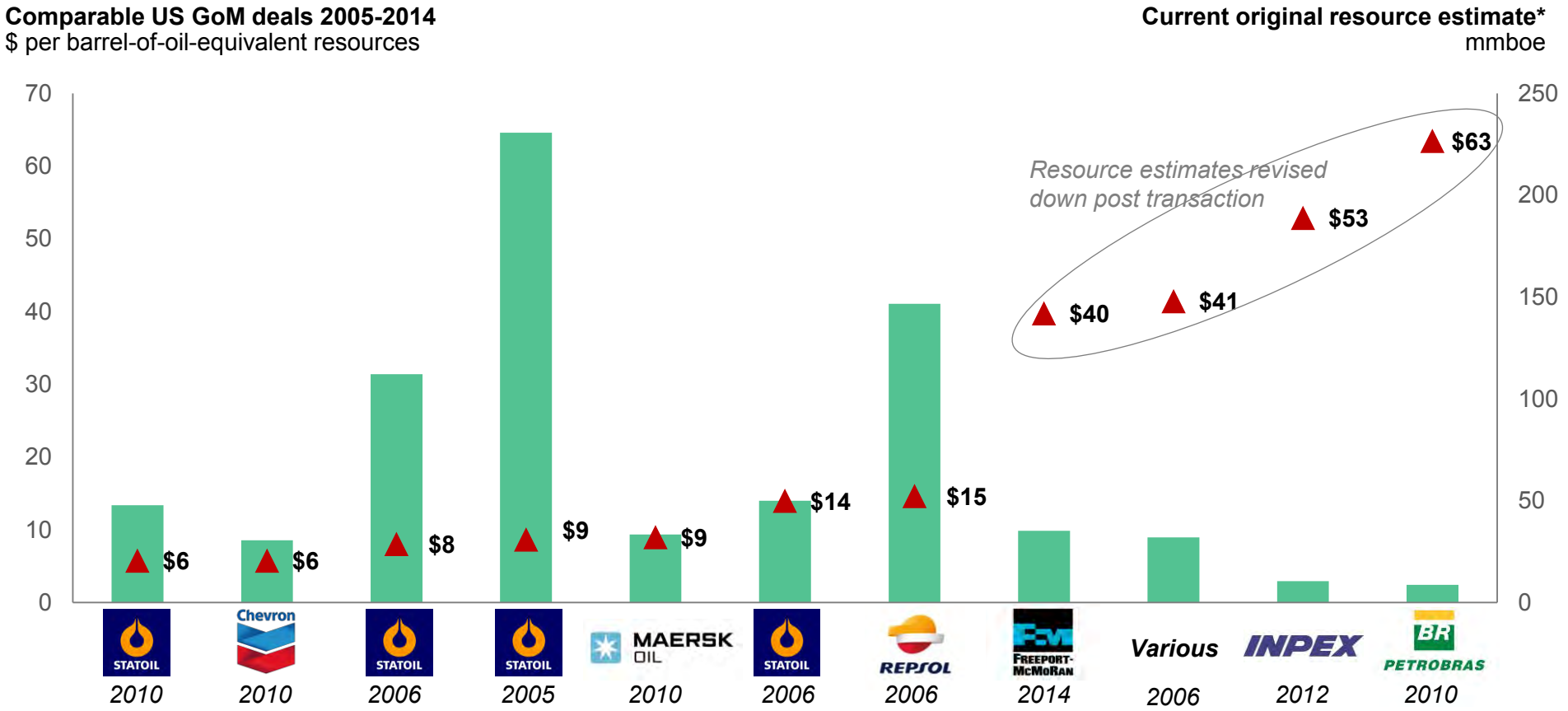
bhpbilliton

nexen

"Deep-water Gulf of Mexico developments are very attractive. This increase in margins is accelerating our value growth despite relatively flat production year-over-year." - 2003

Source: Rystad Energy research and analysis

Statoil GoM acquisitions compare favorably to other deals at the time on a $/boe basis



Statoil's major acquisitions were among the lowest in $ per boe of comparable deals in the 2005-2014 decade. On average, Statoil paid $9/boe for discovered resources. However, some Gulf of Mexico deals exceed $40/boe, typically when resources disappointed initial estimates. Typically, Gulf of Mexico deepwater resources cost $20/bbl to develop.

Note: Statoil deals include pre-emption rights increase of St Malo stake (2010, $6/boe); Anadarko assets deal (2006,$8/boe); Encana deal (2005, $9/boe); and Plains deal (2006, $9/boe)
1: Rystad resource estimates for discovered and producing resources only—exploration upside excluded
Source: Rystad Energy research and analysis

Statoil developments were impacted by delays and negative macro developments

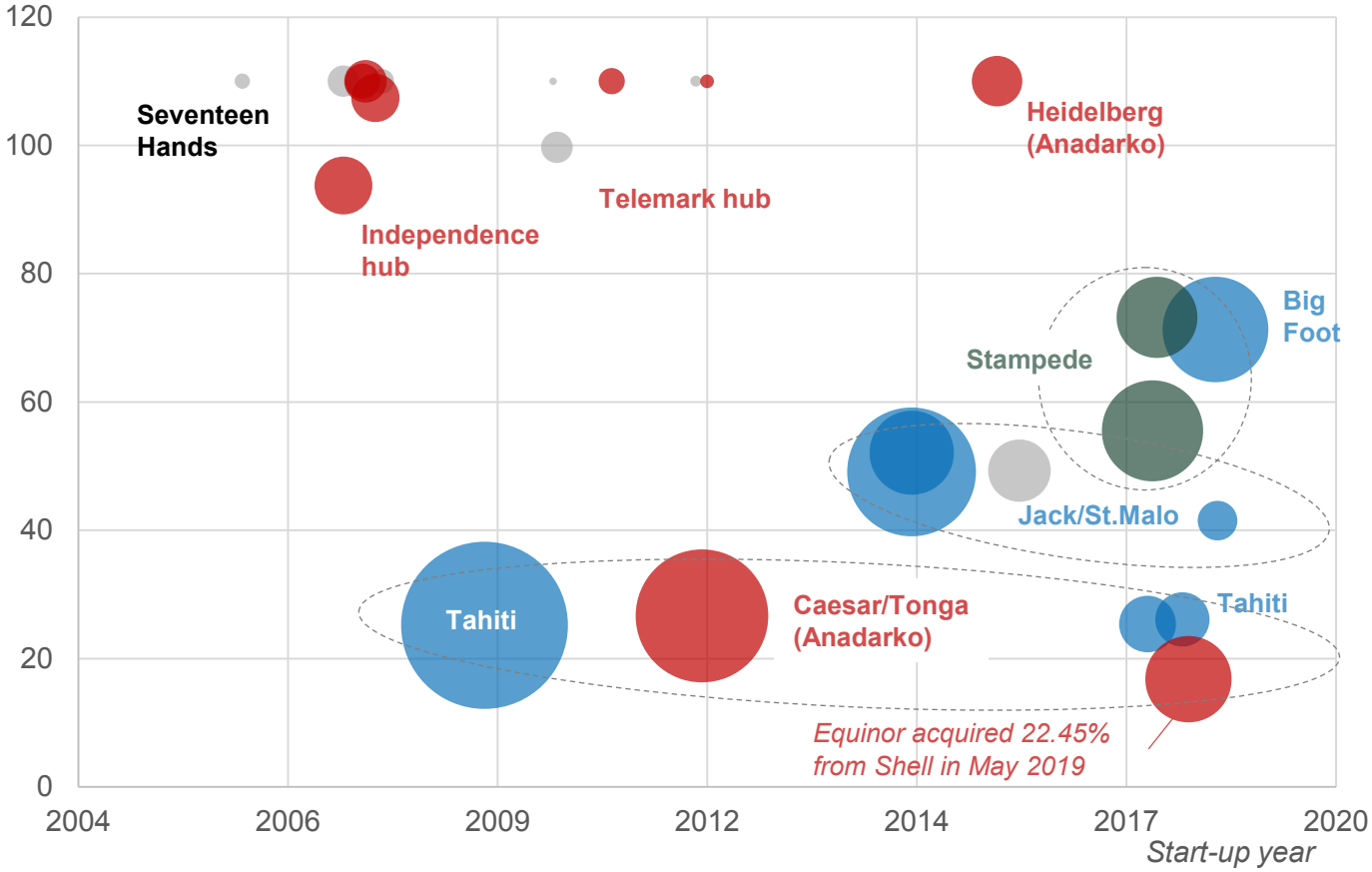
Project	Development cost $/boe	Deal	FID	First Oil	Operator	Change in Brent FID to First oil	Performance vs expectations
Tahiti (Spar)	12	Encana	2006	2009	Chevron	-18%	Metallurgical issues with mooring shackles set the development back by 12 months
Caesar-Tonga (Sub-sea tieback)	10	Plains (Caesar), Encana (Tonga)	2009	2012	Anadarko	+150%	Caesar-Tonga was developed as a sub-sea tieback to Anadarko's existing Constitution spar, approximately 10 miles east. Tying into existing facility kept development costs low.
Big Foot (TLP)	36	Plains & Anadarko	2010	2018	Chevron	-29%	First oil was four years later than expected. The first attempt to install the platform in 2015 failed as powerful currents caused tethers to detach and suffer irreparable damage.
Jack / St. Malo (FPS)	27	Encana	2010	2014	Chevron	-25%	Chevron developed Jack/St. Malo with a semi-sub in multiple phases.
Heidelberg (Spar)	27		2013	2016	Anadarko	-70%	Anadarko modelled the spar after the Lucius spar, as part of "Design One, Build Two" strategy, saving costs and abbreviating development cycle.
Stampede	25	Anadarko	2014	2018	HESS	-25%	Delivered ahead of schedule and under budget. Facing the same strong currents as Big Foot, Hess said that they learned from Big Foot's mishap.
Vito	16.8		2018	2021	Shell		Following a long period after discovery, the development concept of Vito was reimagined in order to achieve substantial cost reductions

Deepwater GoM average: $21/boe
Statoil average: $21/boe

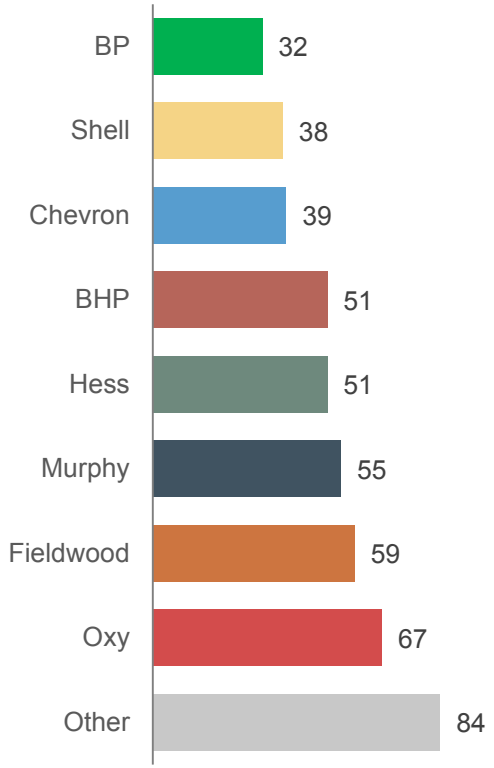
1: The Jack/St. Malo development consists of 5 separate assets; Chevron is operator of 4, ExxonMobil of 1; Total, ENI, Petrobras and Murphy Oil also hold interests
Source: Rystad Energy research and analysis

Overall, Statoil's developments were near the GoM average breakeven

Equinor developments by full-cycle break-evens (backward looking)
USD/boe, Bubble size represents resource size



Average full-cycle break-even by operator
USD/boe, 2005-2019

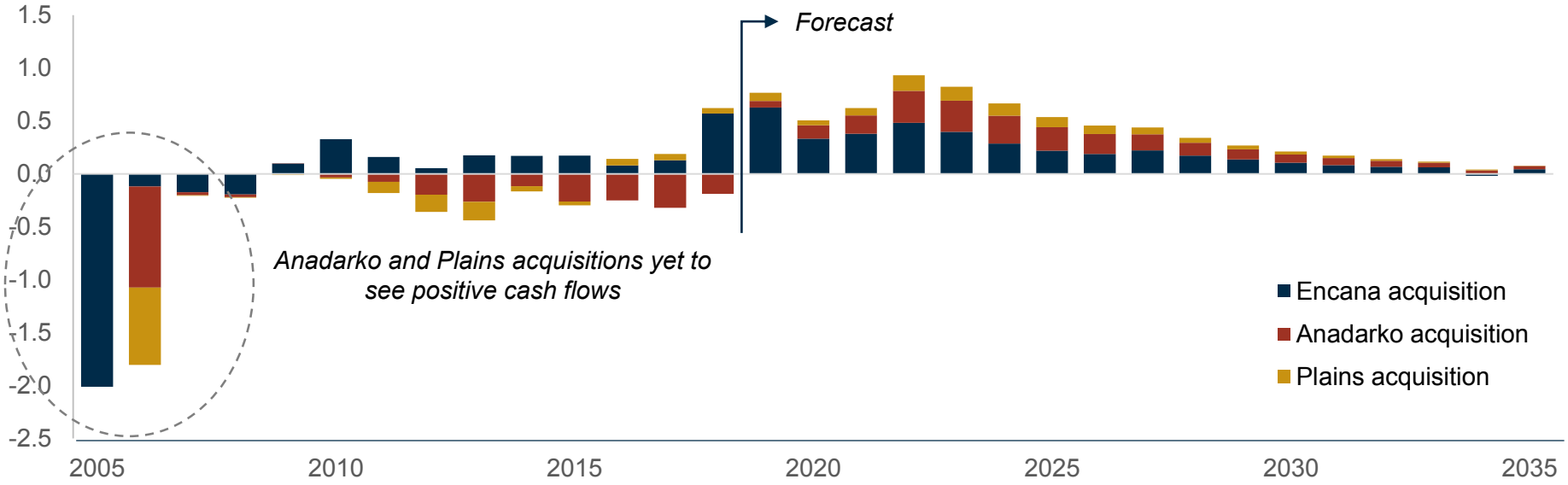


The Encana deal brought both Tahiti, Tonga part of Ceasar/Tonga, and Jack/St.Malo. These have been high quality development projects with robust break-evens. Stampede and Big Foot, both acquired through the Anadarko deal, had more challenging break-evens. Heidelberg, which was sanctioned in 2013 at the peak of the cost-curve, have some of the most challenging full-cycle break-evens.

Source: Rystad Energy Ucube

However, preliminary evaluation indicates that Statoil's major deals in the Gulf of Mexico were unable to create value

Cash flows from major Statoil deals
Billion USD, nominal



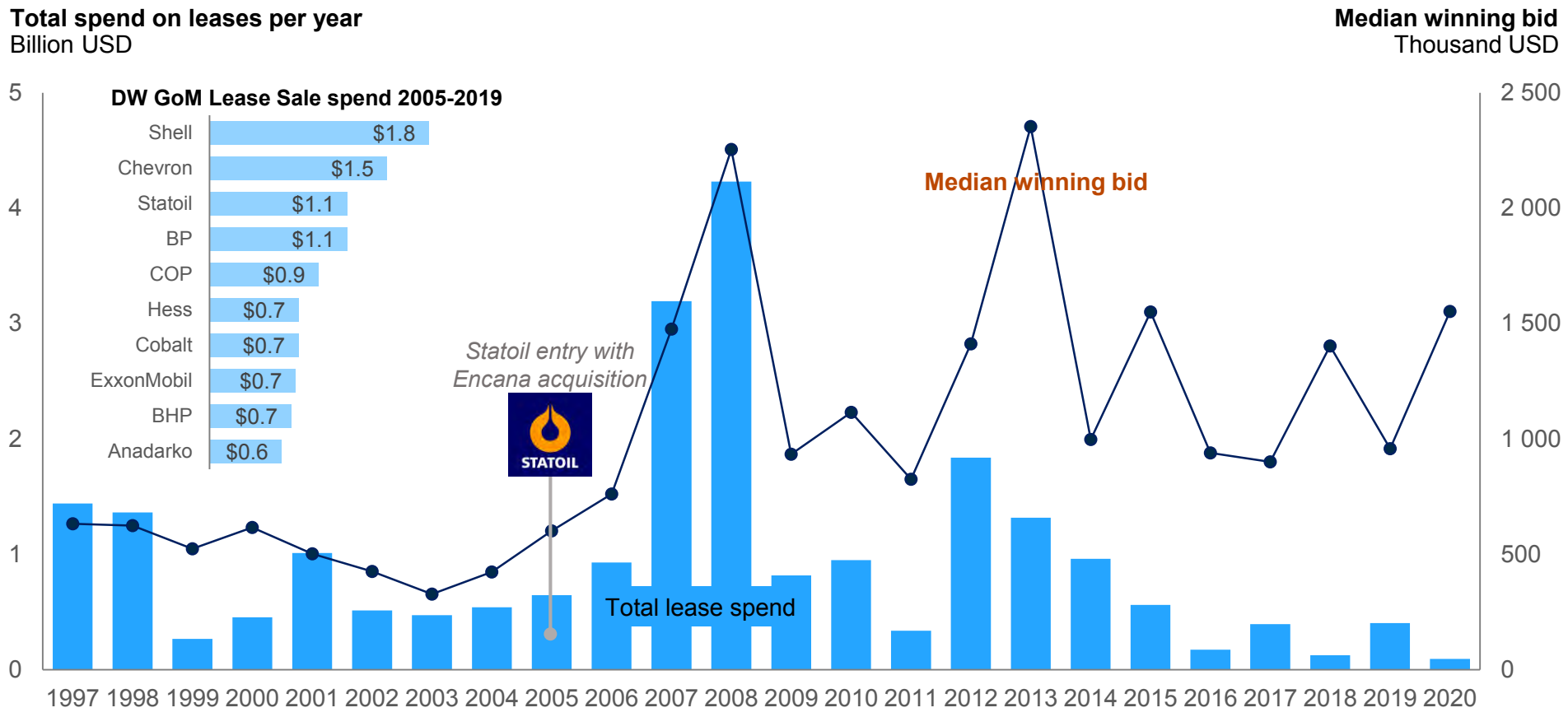
Performance metrics for major Statoil deals

	Acquisition year	NPV (10%) Million USD	IRR
Encana portfolio	2005	**-870**	**6%**
Anadarko assets	2006	**-1 220**	**0%**
Plains assets	2006	**-720**	**-1%**

With large upfront acquisition costs and years of development costs prior to positive cash flows, Statoil's major Gulf of Mexico deals ultimately resulted in negative NPVs (10% discount rates) and low-to-negative rates of return

Cash flows from Statoil acquisitions
Source: Deal announcement; Rystad Energy UCube

Lease sales in GoM became significantly more competitive in 2007

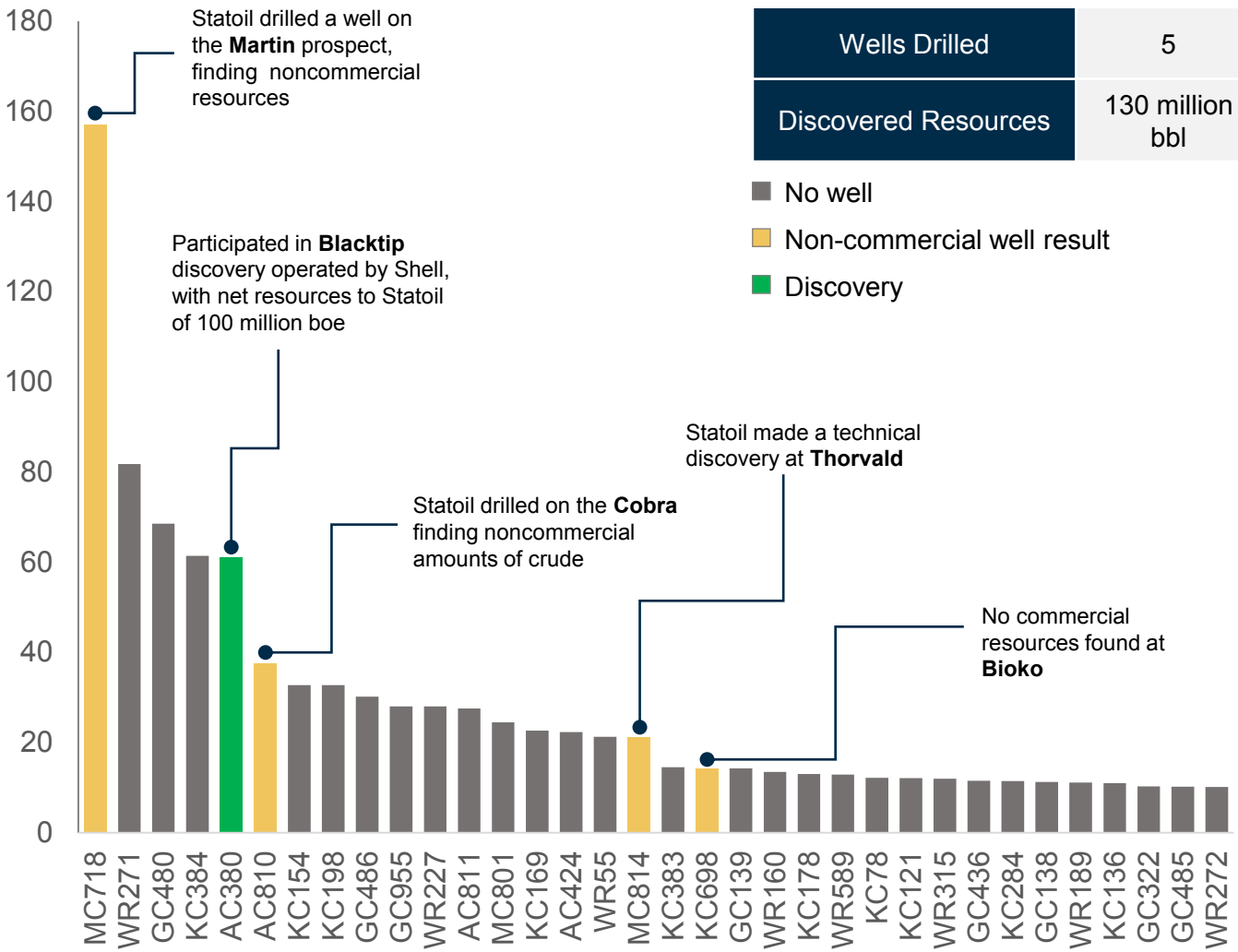


As Statoil entered the Gulf of Mexico, the median winning bid on a lease was approximately $600,000 USD. By 2007, this would shortly peak at over $1,400,000 USD. At the time, the minimum bid was approximately $187,000 or $37.50/acre. The rapid increase in median winning bid from 2003 to its peak in 2008 was indicative of the attractiveness of the US GoM.

Source: BOEM; Rystad Energy research and analysis

Of the top 30 winning lease bids, Statoil drilled on only 5 and made a discovery on 1

Statoil winning lease bids of over $10 million
Million USD



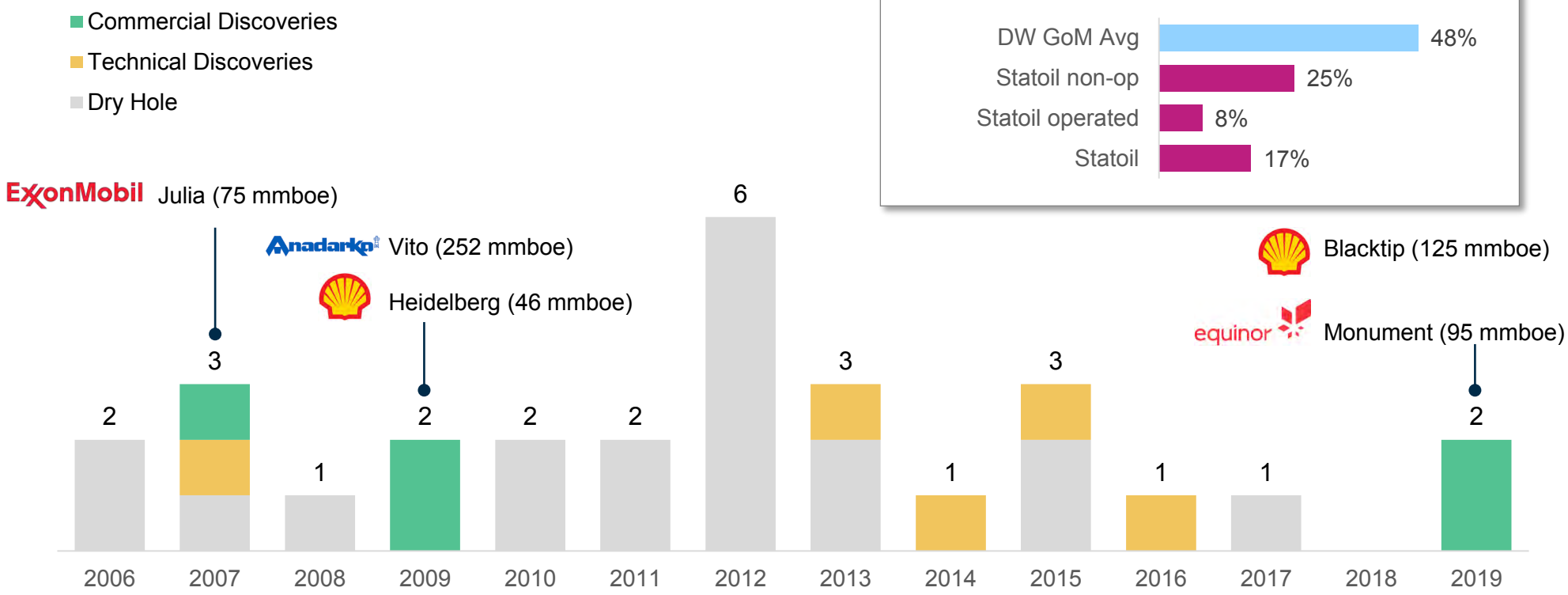
Wells Drilled	5
Discovered Resources	130 million bbl

- In 2006, Statoil began bidding in Lease Sales in which acreage is awarded to the highest bidder. Awards are based purely on signature bonus.
- Unlike in the NCS, in the DW GOM there is a culture of bidding with 100% working interest and then later negotiating – less up-front cooperation
- Among Statoil's winning bids, 34 were of more than $10 million, which is shown on the graph. Of these leases, Statoil only drilled 5 wells while an additional two wells were drilled by other companies on these leases.
- The $60 million dollar joint bid for AC380 was a success, as Blacktip was discovered on that block, which resources of around 125 million boe, with upside.
- Overall, it appears that sourcing drillable prospects in this less "collegial" exploration culture has proven to be difficult for Equinor

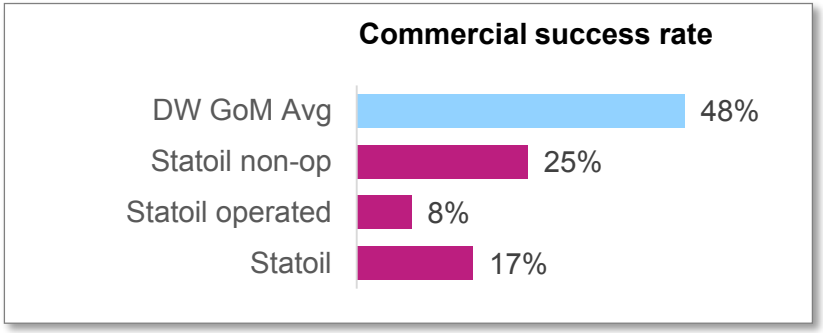
Source: BOEM, Rystad Energy Ucube & WellCube

Equinor has struggled with GoM exploration, with a commercial success rate of 17%

Equinor exploration history in the Gulf of Mexico
Number of wells drilled



Avg. US GoM deepwater

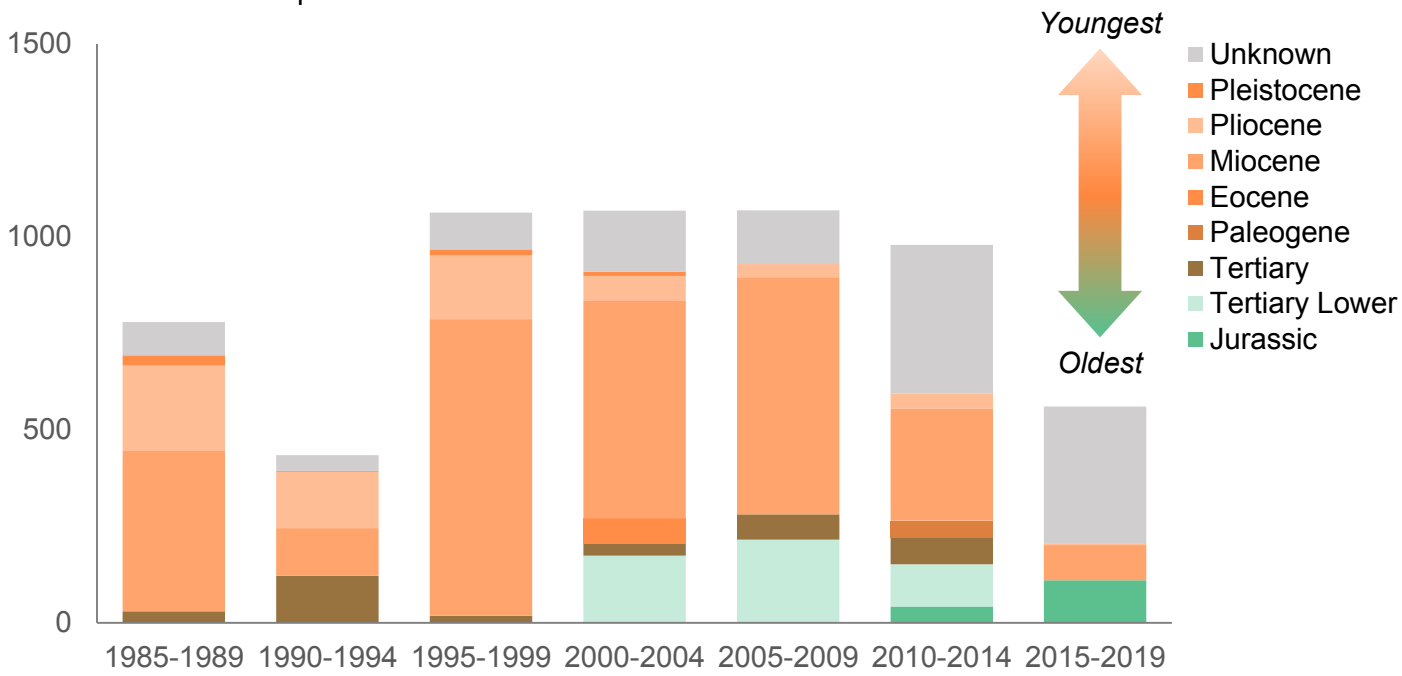


Equinor has struggled to source its own prospects –only 6 of its 31 wells have come from licensed acreage from Lease Sales. Furthermore, Equinor struggled to find commercial discoveries (17%), significantly lower than compared to the GoM average, which is high at 48% in part because many smaller discoveries in GoM can be commercialized via tieback to existing facilities and pipelines. After more than a decade exploring deepwater GoM, Equinor made its first operated commercial (RE estimate) discovery at Monument in 2020.

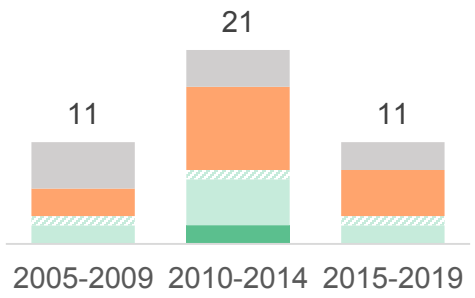
Source: Rystad Energy research and analysis

Miocene had been the predominant play; Lower Tertiary / Paleogene emerged in 2000s

5-year average Gulf of Mexico discovered oil resources per year by geographic time period
Million barrels of oil equivalent



Equinor exploration wells by geographic time period
Number of exploration wells

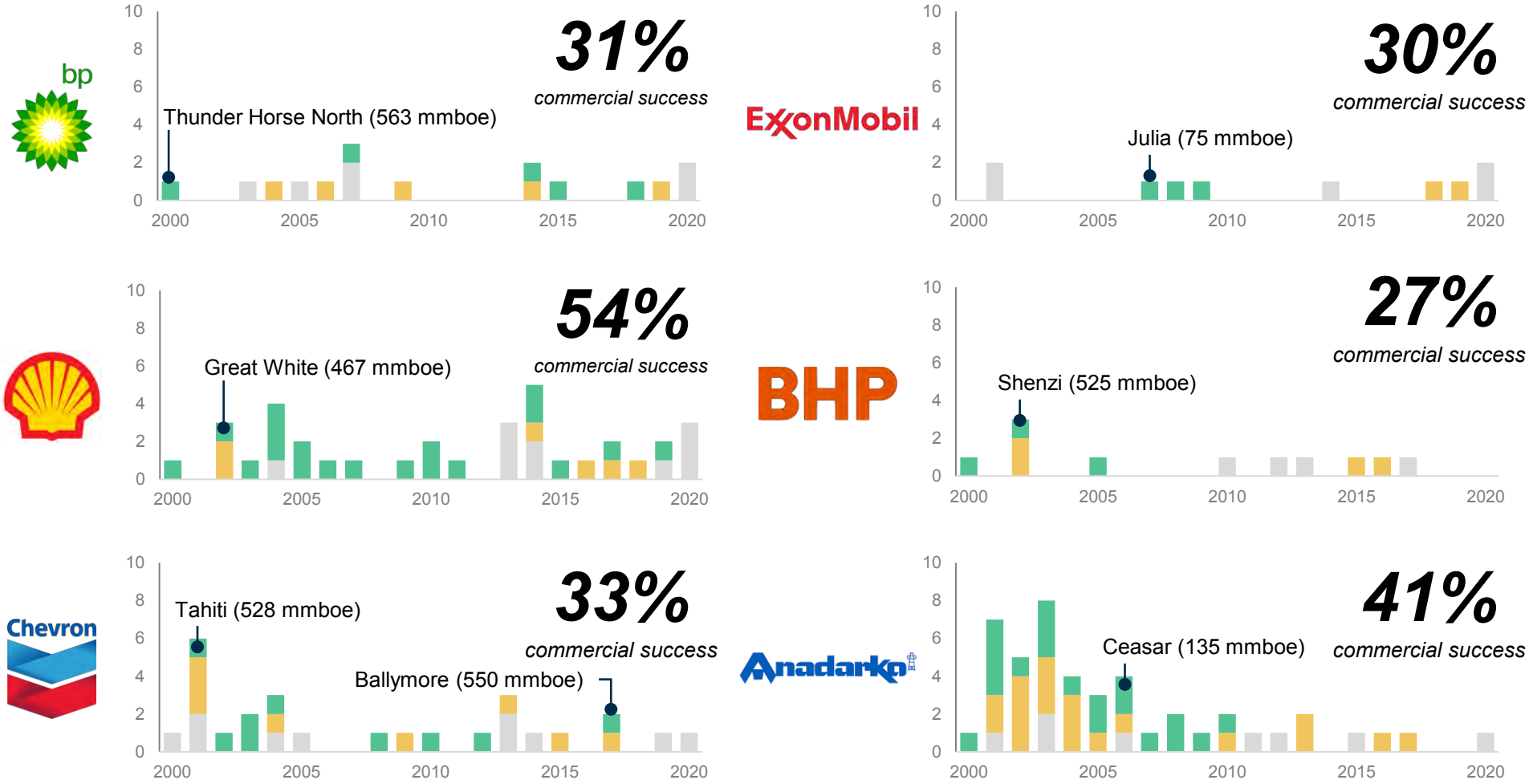


- Deepwater GoM was largely a Miocene and subsalt Miocene play until the Lower Tertiary emerged in the early 2000s
- Lower Tertiary is also referred to as Paleogene and sometime by the formation, usually the Wilcox
- The Jurassic / Norphlet play has emerged in recent years with the leader being Shell with its Appomattox discovery and various tiebacks
- Equinor has maintained focus on Lower Tertiary and Subsalt Miocene
- Equinor has not targeted a single play but spread its efforts. Likely a result of acquiring different portfolios. Only 6 of the wells came from their own acquired leases
- The two recent successes are:
  - **Monument**, operated discovery which is a Paleogene play in Walker Ridge (remote area)
  - **Blacktip**, a Paleogene discovery in the Perdido thrustbelt on the far west of the GoM

Source: Equinor; Rystad Energy research and analysis

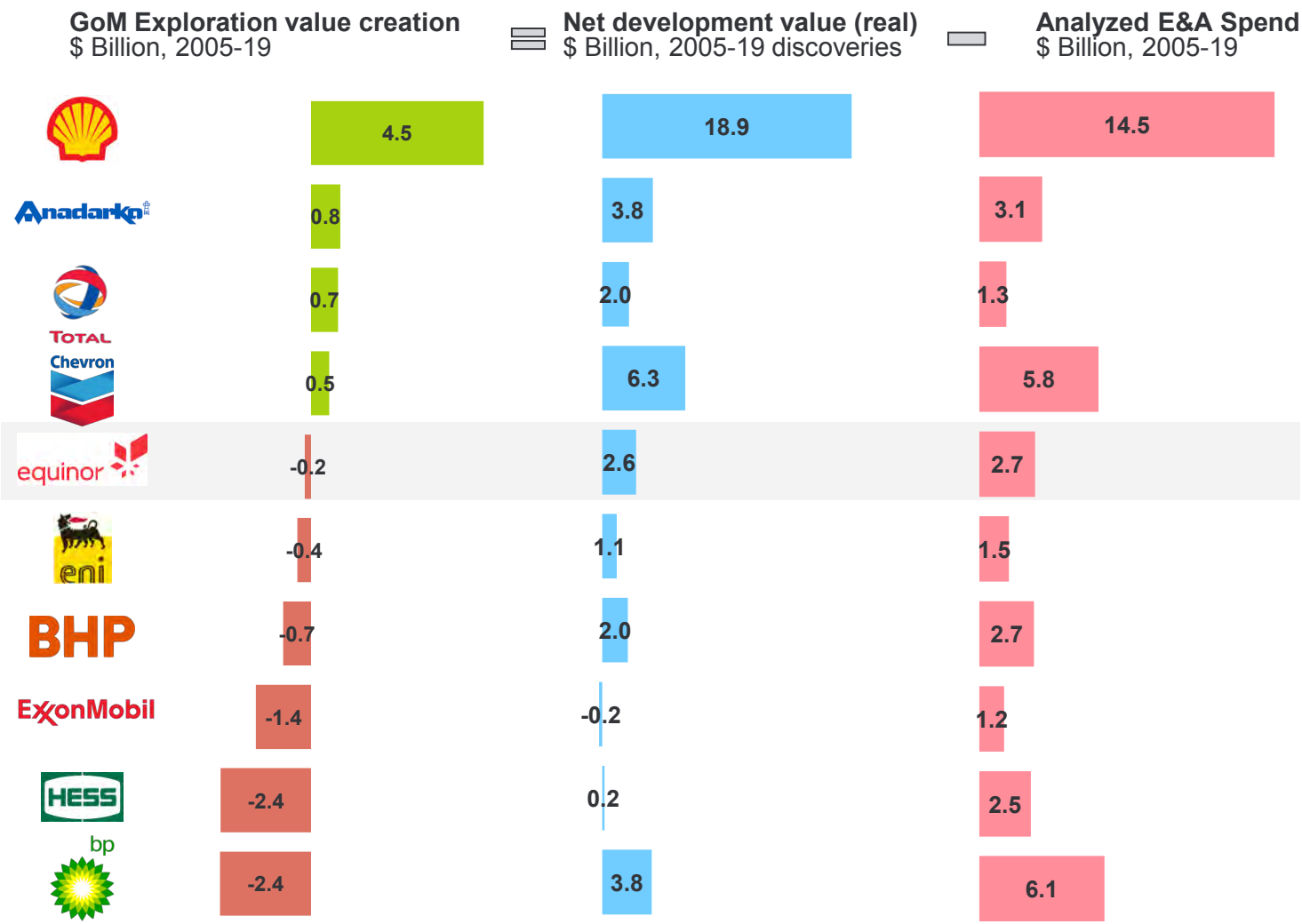
…Which lags substantially Gulf of Mexico peers

Operated exploration history in the Gulf of Mexico
Number of wells drilled



Note: Anadarko operated exploration includes Occidental Petroleum
Source: Rystad Energy research and analysis

Statoil has been unable to create value in GoM exploration, but has avoided large value destruction that has plagued peers such as BHP, XOM, and BP from 2005-2019

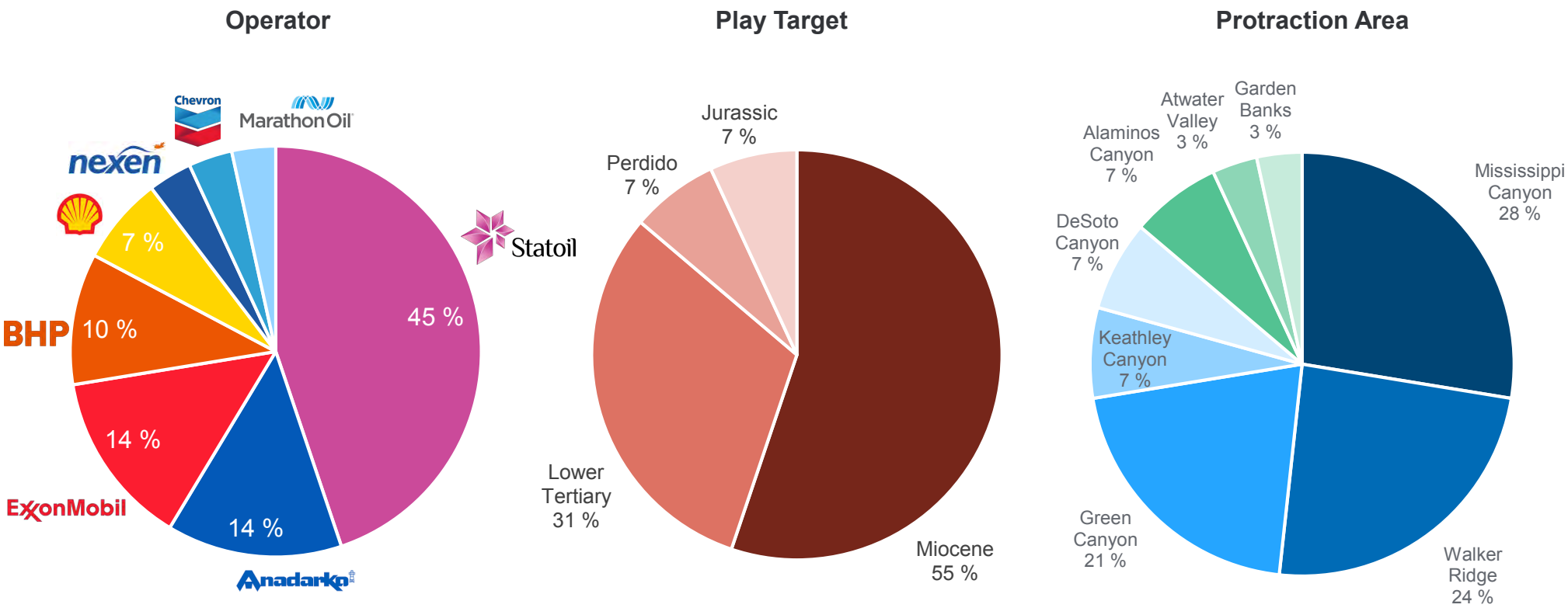


- Despite a lackluster performance as an operator, Equinor's non-op exploration was able to limit value destruction overall in the GoM
- Equinor was not successful in ventures they chose to take a larger stake and more risk on such as Heidelberg, Julia, and Pony.
- These prospects were more typically in remote areas of the Gulf of Mexico with little to no previous infrastructure to fast-track development
- Large discoveries such as Appomattox, Whale, Power Nap and Vito that were easily able to be tied-back to exiting infrastructure created tremendous and quick value for Shell

Source: Rystad Energy research and analysis

Statoil's wildcats were spread across 7 operators and three main protraction areas

Statoil exploration wells drilled in deepwater GoM 2005-2020 YTD



Statoil's approach to exploration, garnered largely from experience in the NCS, was not built for the less collaborative, more operator-driven deepwater GoM. The large number of partnerships may reflect Statoil's inability to organically generate drillable prospects on leased acreage and bring on partners willing to share the risk. It may also be indicative of Statoil being seen by counterparties as being very eager to grow in the GoM and hence more willing to take on risk.

Source: Rystad Energy research and analysis

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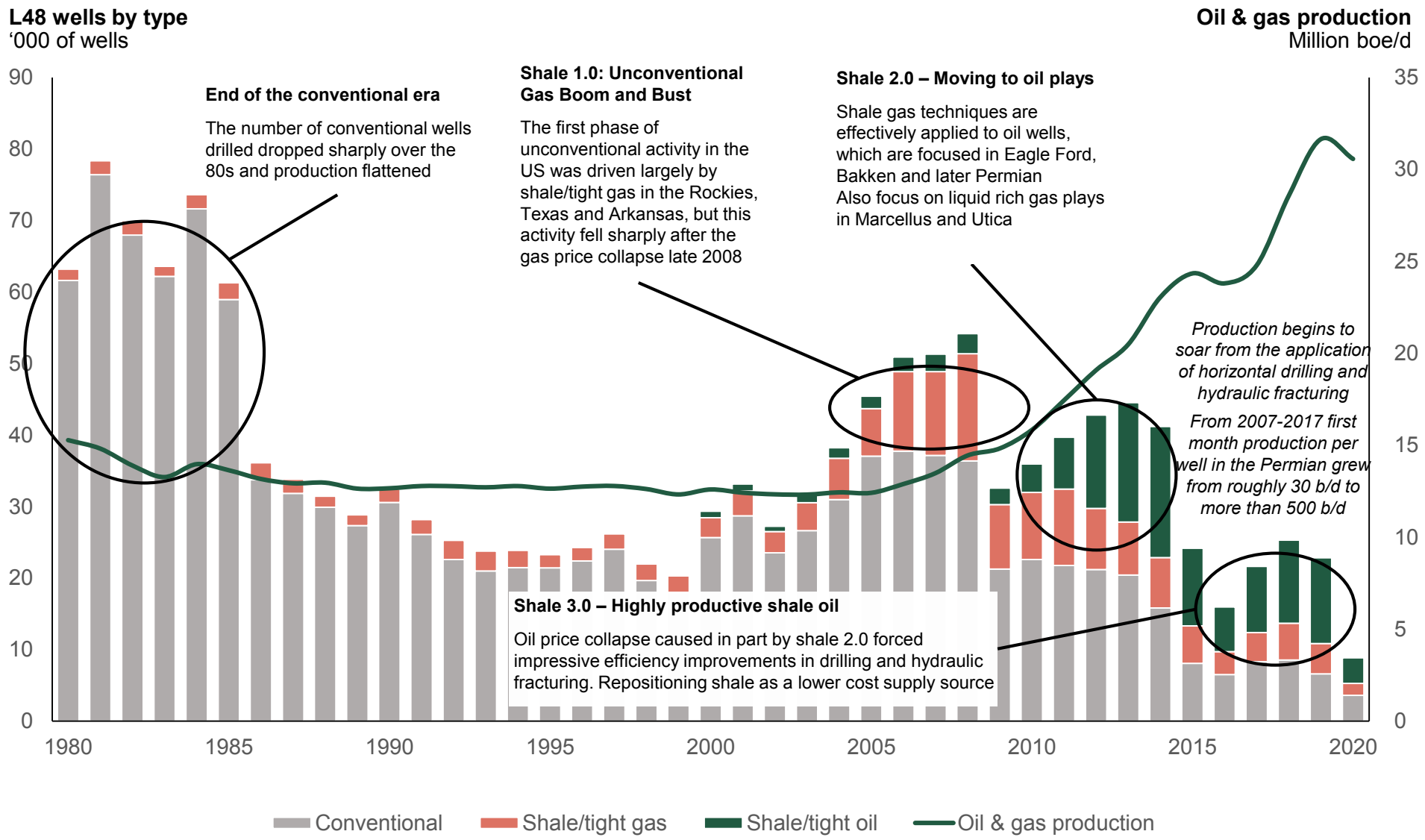
Statoil saw shale as prime growth opportunity early in the sector's development

Key take-away	Industrial context in US shale	Statoil positioning
Shale gas and tight oil were consistently underestimated in the 2000s	US independents were the first entrants into shale gas and later tight oil. Companies such as Chesapeake and EOG grabbed prime acreage before other competitors entered the unconventional basins.	In 2008, Statoil formed a JV with Chesapeake, a leader in shale, to develop acreage in the Marcellus and evaluate shales *outside* North America. This was part of positioning Statoil as a leader in global unconventionals.
Majors and international E&Ps spent billions on shale acquisitions, largely in the 2008-2014 timeframe	International oil companies, majors, and even NOCs spent $50 billion acquiring companies and stakes in shale projects. However, US-based independents still accounts for more than 70% of production.	Statoil was among the first entrants to shale gas in 2008 before most companies entered in 2009-11. However, this meant that Statoil entered near the peak in gas price and had to contend with a very difficult gas price environment.
Macro headwinds have hindered the sectors ability to create value	The industry was so successful at unlocking shale gas supplies that it cratered natural gas prices, which has been a hindrance to value creation. Similarly, the oil price collapse of 2014-15 made early tight oil drilling largely uneconomic.	Collapses in price followed Statoil's Marcellus and Bakken acquisitions, hindering value creation substantially. Statoil did not take a position in the Permian which proved to be the most prolific tight oil play.

Source: Rystad Energy research and analysis

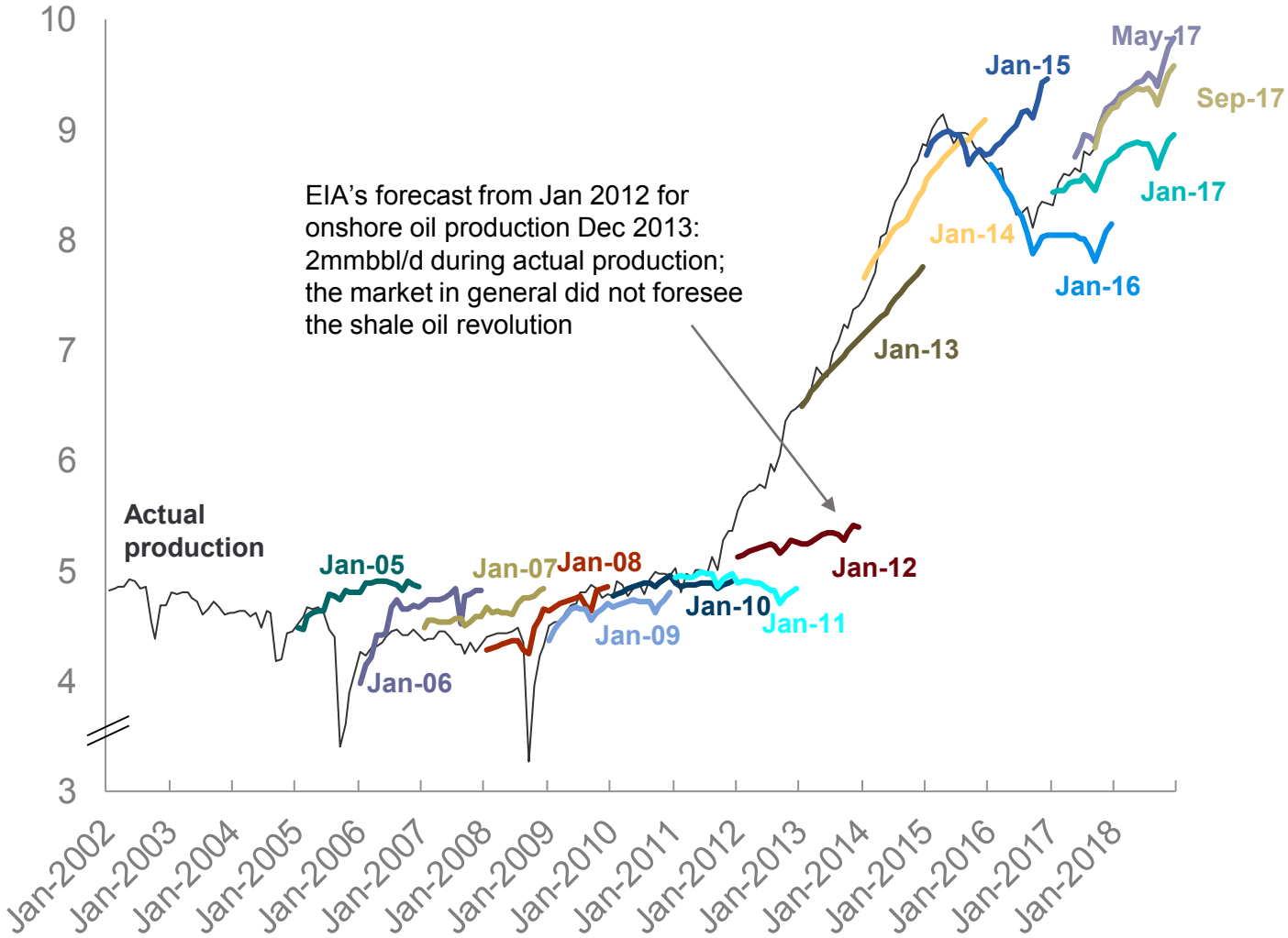
Unconventionals evolved in three phases and brought a massive productivity increase



Source: Rystad Energy ShaleWellCube; Rystad Energy Ucube

Growth in tight oil plays was unexpected, as evidenced by the EIA's 2012 forecast

EIA lower 48 oil production forecasts
Million barrels per day



- The graph shows reported oil production from the US outside of Alaska. The US government (EIA) strongly missed on these projections due to the shale oil revolution.
- In January 2012, the EIA expected a slight increase over the next two years to 5.5 million barrels per day in 2014. The actual figure was 7.65 mmbbl/d. Overall, we can conclude that almost no one saw the shale oil revolution that came and caused dramatic demand for rigs.

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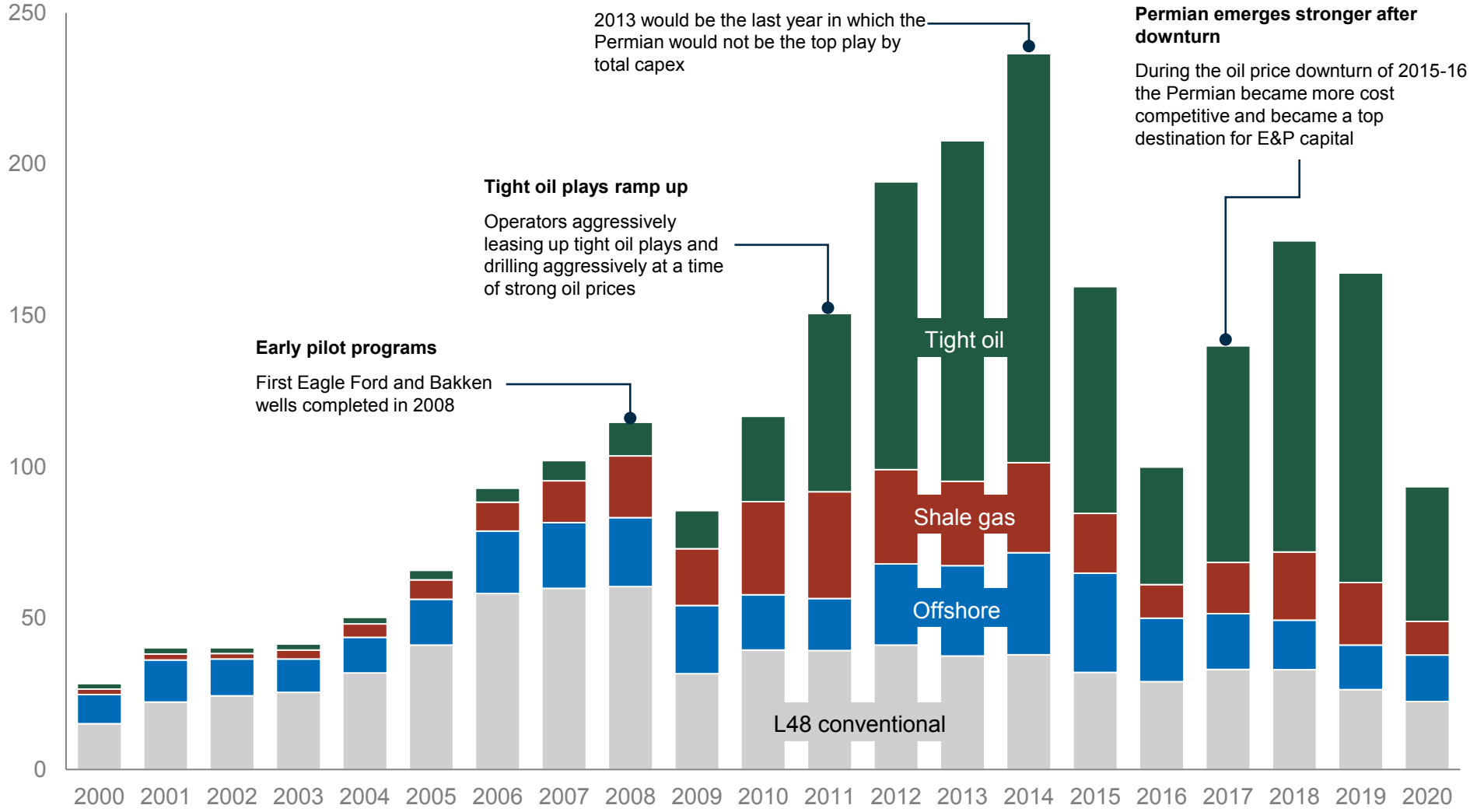
Source: Rystad Energy Ucube, Rystad Energy research and analysis; EIA, IEA

By 2014, tight oil capital investment dwarfed shale gas and outpaced conventional fields

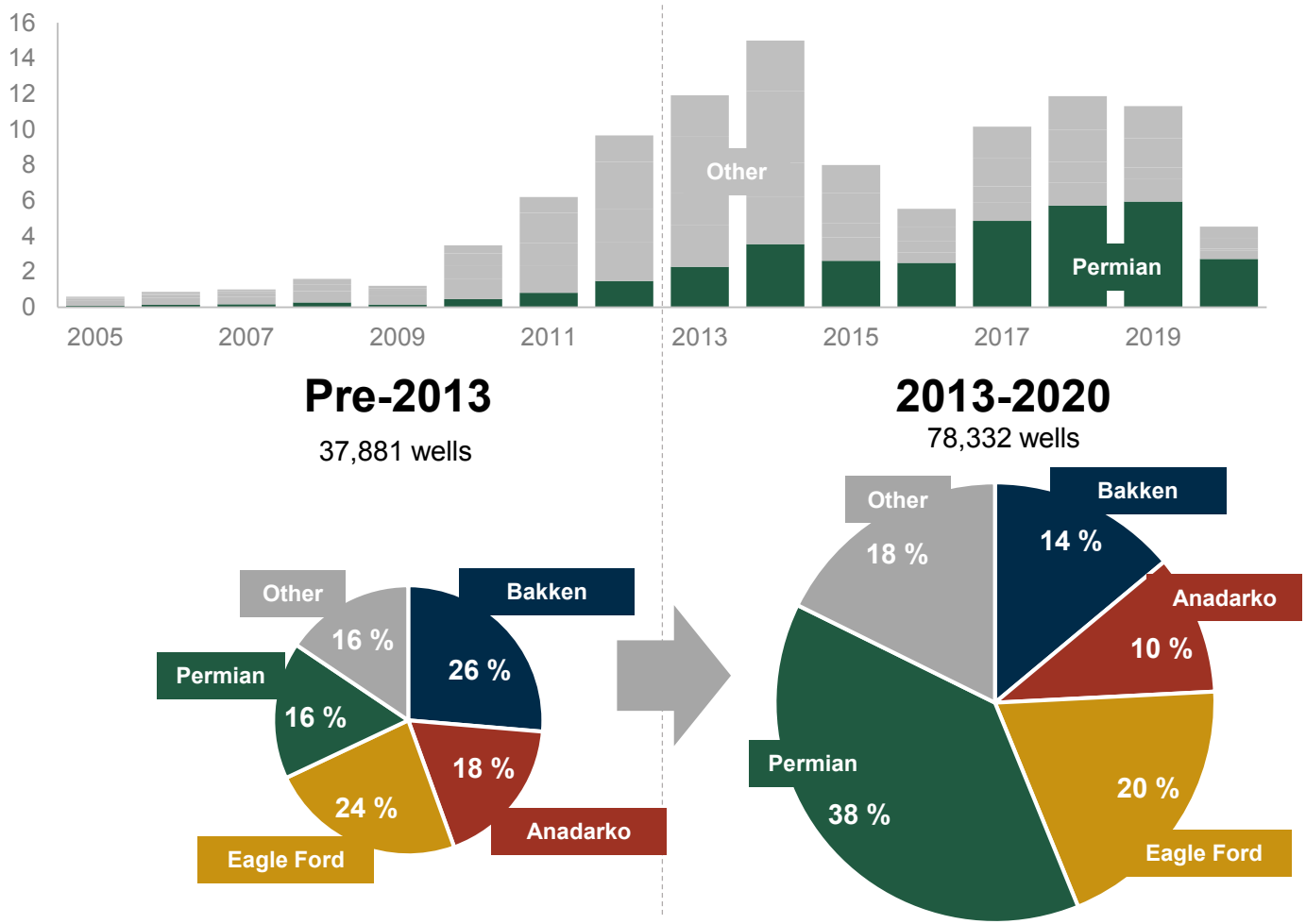
US capital expenditure by supply segment
Billion USD



Source: Rystad Energy Ucube

The Bakken and Eagle Ford emerged earlier but the Permian became the dominant oil play

Shale and tight oil wells spudded by basin
Thousand wells

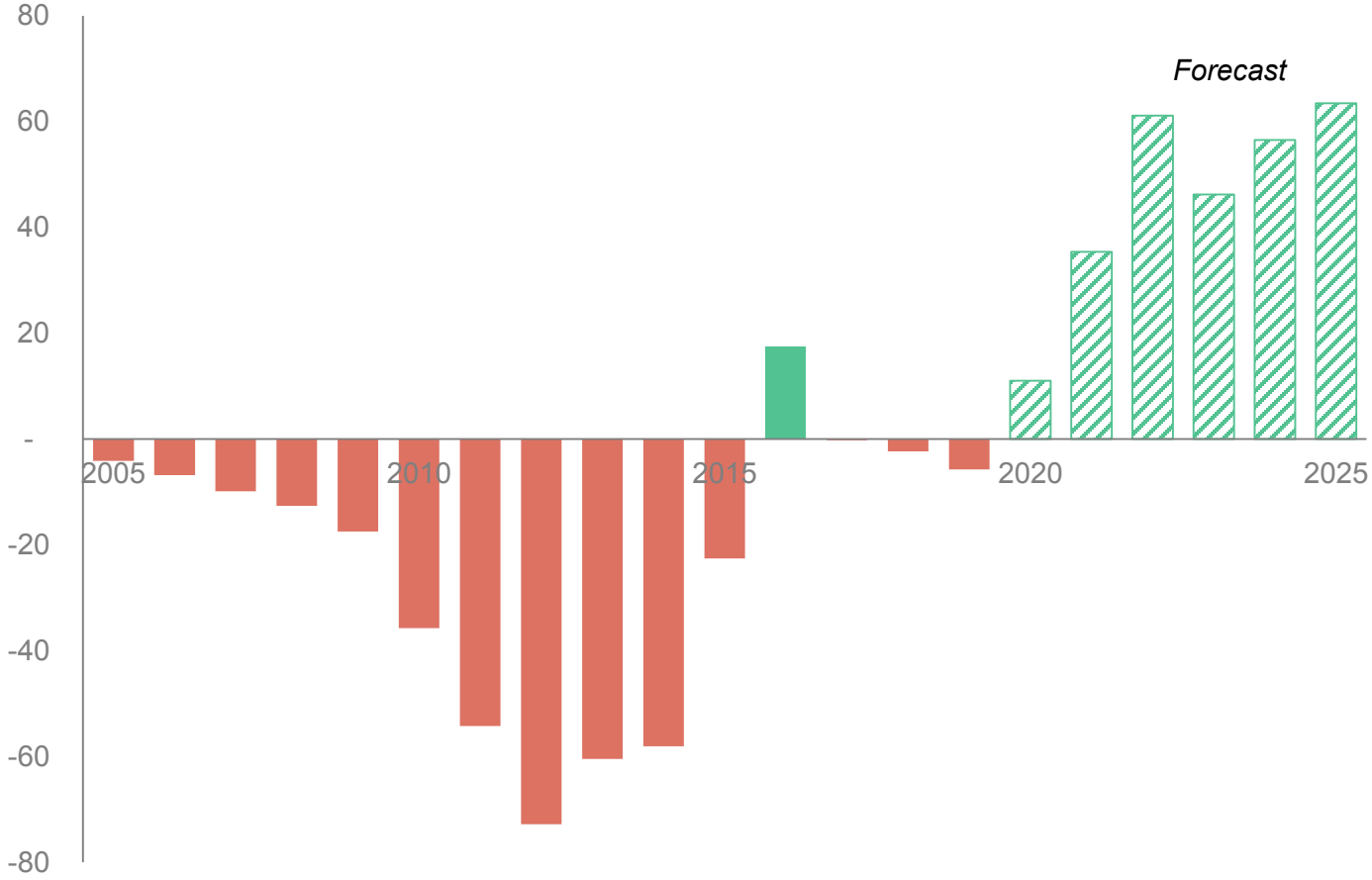


- Tight oil drilling increased rapidly in the US in the 2010s, going from a little more than three thousand wells spudded in 2010 to almost ten thousand in 2012.
- Statoil acquired Brigham at a time (2011) of rapid growth in this segment in the industry. Year-on-year growth in Bakken wells spudded in 2011 and 2012 was 32% and 42%, respectively.
- Initially, the Eagle Ford and Bakken together were the primary basins, together accounting for nearly half of tight oil drilling prior to 2013.
- However, the Permian emerged as the premier tight oil basin, with a larger resource and some of the most economic wells in the country.
- Ultimately the Permian emerged as the predominant tight oil play, with the lowest-cost resource

Source: Rystad Energy Ucube

A growth machine - US shale liquids plays has yet to be in the green

Organic FCF from US shale liquids plays
Billion USD nominal

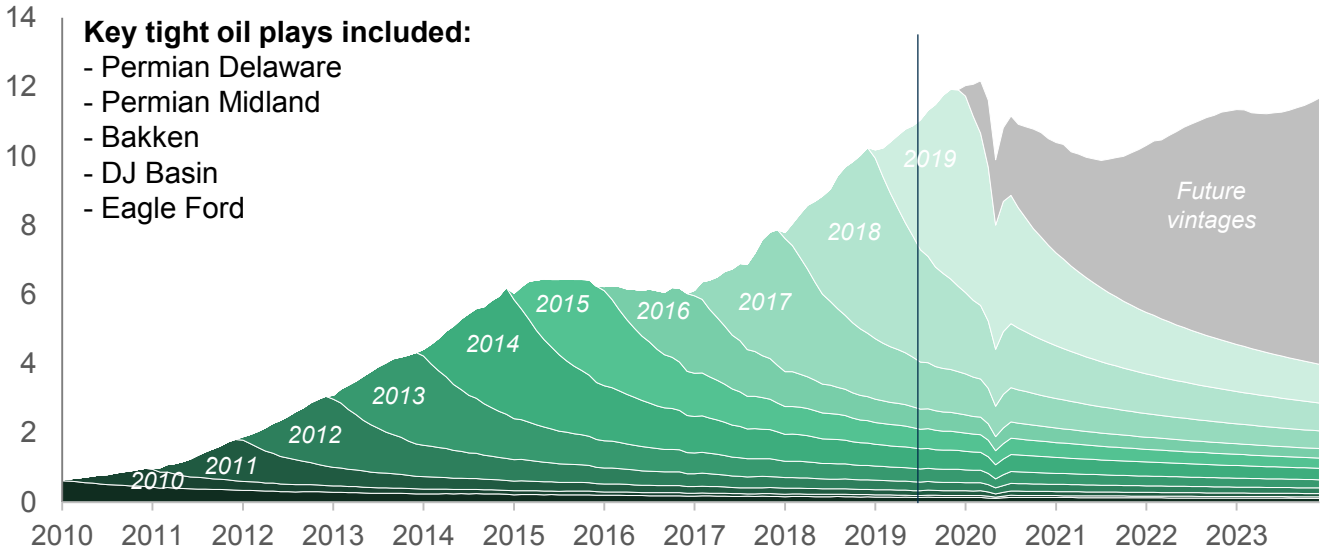


- The chart show the organic FCF from US shale plays in the period.
- From 2005 the portfolio had yet to return positive cash flows except for 2016 following a slow down in growth and investments
- This cash flow profile is mostly result of the continued investment growth in US shale where all cash have been reinvested.
- Building on a base of producing wells and more muted growth outlooks we expect the free cash flows from shale to be in the green from 2021 and onwards

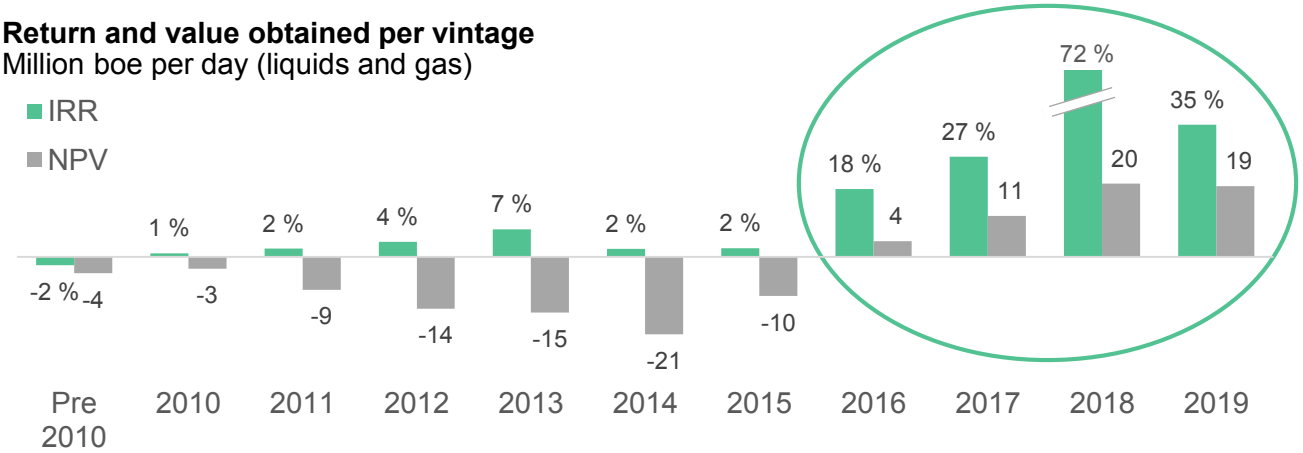
Source: Rystad Energy UCube; Rystad Energy research and analysis

But looking at well vintages, wells completed from 2016-2019 will likely create value

Production by vintage for key oil plays
Million boe per day (liquids and gas)



Return and value obtained per vintage
Million boe per day (liquids and gas)

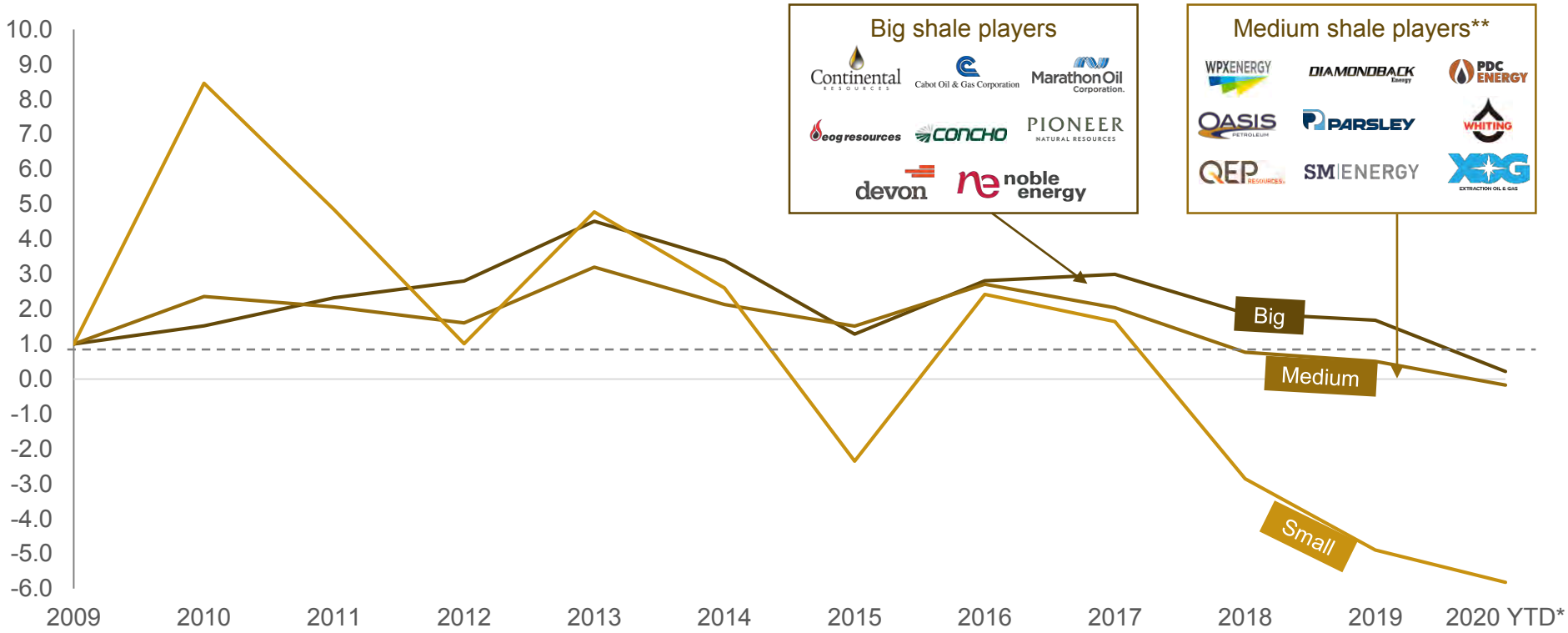


- The top chart show production from key tight oil plays by vintage (completion year)
- Vintages drilled before 2016 have largely been value destructive, with negative NPVs and IRRs below 10.
- From 2016, with improved break-evens and healthier oil prices, all vintages are NPV positive given cashflows they have already obtained and forecasted production and oil prices.
- An average tight oil player would have had difficulties in creating value prior to 2016.

NPVs and IRRs include midstream and overhead, but not finance and acquisition cost. Discount rate of 10% applied to NPV. Rystad Energy base case prices used for forward calculations (See appendix)
Source: ShaleWellCube; Rystad Energy research and analysis

The larger shale players have outperformed smaller setups, but on average destroyed value

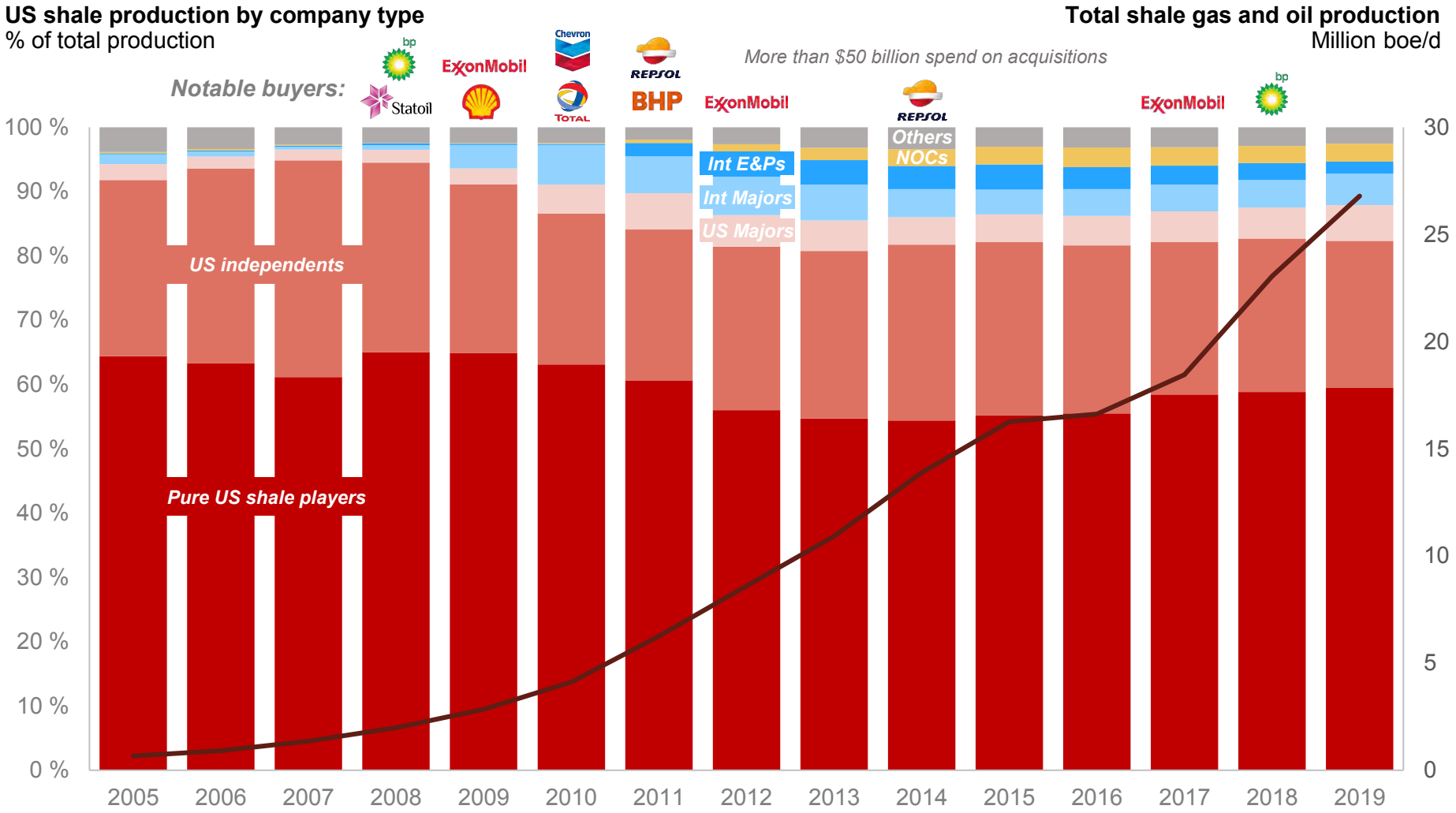
Shareholder return indexed to 2010 for pure-play shale players



From the organic view taken on the vintage evaluation, this also considers acquisition cost and expectations for future improvement in learning curves. As such not directly comparable with NPV calculations on organic cash flows The larger shale players have higher value creation than the smaller players from 2010 until today. Before 2013, the smaller outperformed the larger and after 2013, the smaller have been outperformed by the larger companies. Negative value creation after 2014 for the small and medium shale players on average. Covid-19 in 2020 results in negative development for all shale players compared to 2019.

*Through June 2020 **Not exhaustive list of companies
Source: Rystad Energy research and analysis

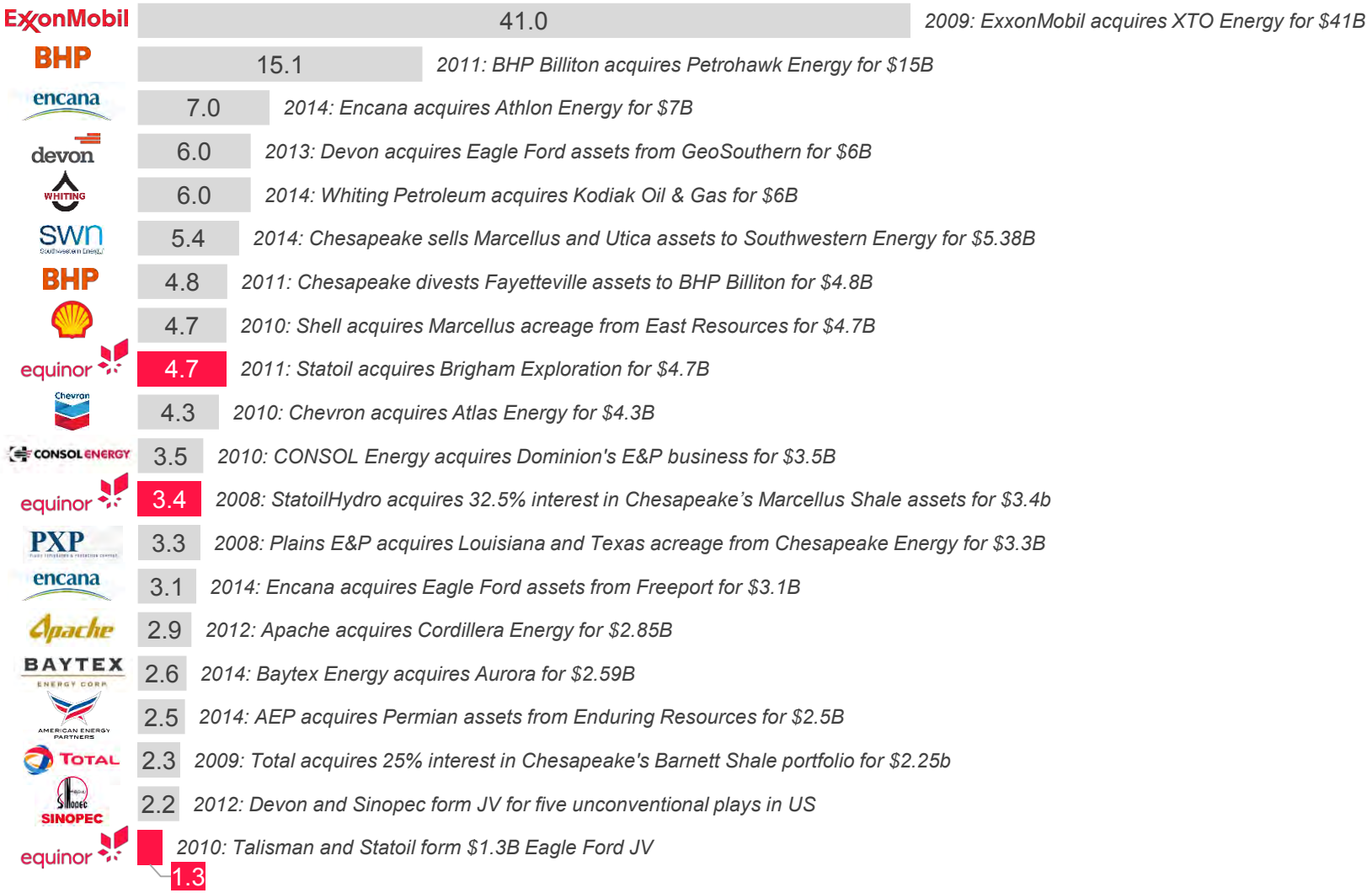
Majors and international E&Ps bought into shale—but together still account for less than 20% of total shale production



*Excluding low production companies
Source: Rystad Energy Ucube

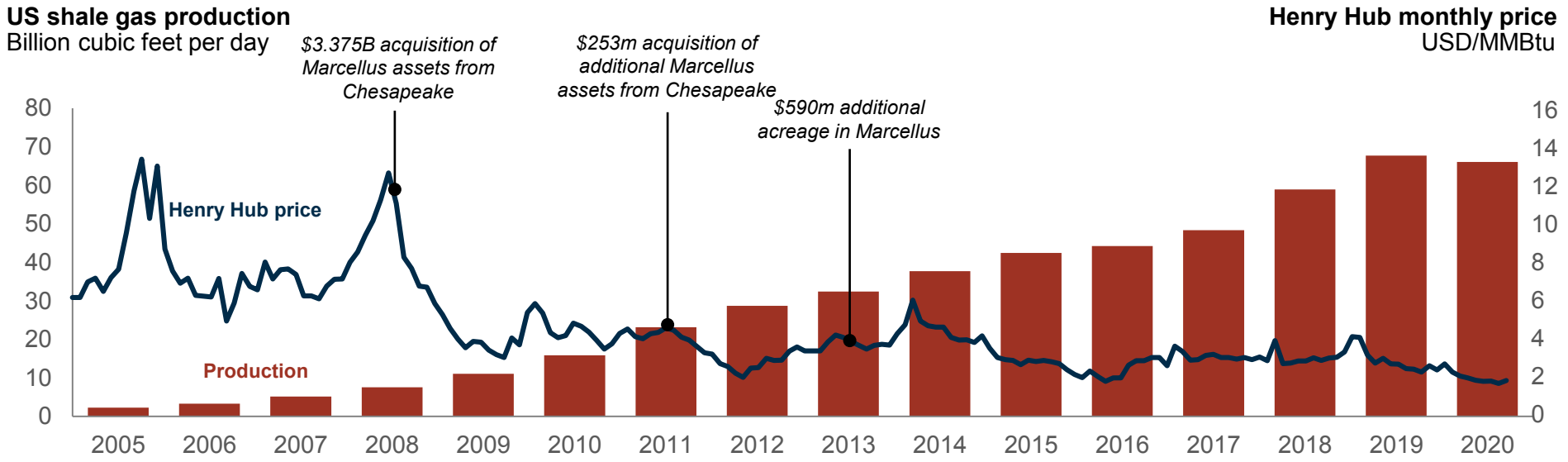
Equinor were part of a very active period of M&A in the onshore US

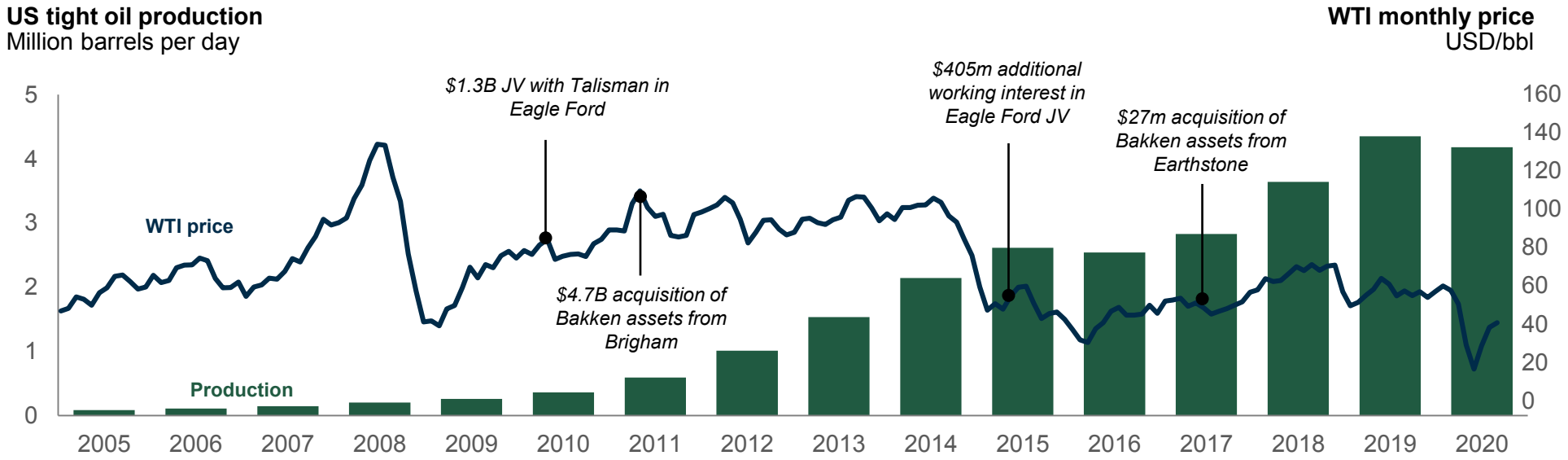
Top 20 US onshore deals by deal value, 2008 - 2014
Billion USD



Note: Equinor's Eagle Ford transaction falls outside the top 20
Source: UCube; Rystad Energy research and analysis

Shale has grown more productive despite of weak oil and gas prices over the past decade





Source: Rystad Energy UCube, EIA

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Statoil's early entry into the Marcellus allowed it to achieve a lower entry cost than others

Metrics for representative Marcellus deals

	$ per acre	Deal value million USD	Acres Thousand	Net production Mcf/d	Comments
Statoil (2010)	4,300	300	59	Unknown	Statoil acquires additional Marcellus acreage from Chesapeake for $253m
Ultra Petroleum (2009)	5,000	400	80	Unknown	Ultra Petroleum acquires additional acreage in Marcellus for $400M
ExxonMobil (2011)	5,300	1,700	317	Unknown	ExxonMobil acquiers Marcellus assets for $1.7B
Statoil (2008)	5,700	3,400	600	39	StatoilHydro acquires 32.5% interest in Chesapeake's Marcellus assets for $3.4b
Chief Oil & Gas (2013)	6,700	500	75	130	Chief Oil & Gas and partners acquire Marcellus assets from Chesapeake for $500M
Chevron (2011)	7,000	1,600	228	Unknown	Chevron acquires additional Marcellus acreage from Chief Oil and partner for $1.6B
Shell (2010)	7,200	4,700	650	60	Shell acquires Marcellus acreage from East Resources for $4.7B
Statoil (2012)	8,400	600	70	28	Statoil acquiers Marcellus assets for $590M
Williams (2010)	11,900	500	42	Unknown	Williams acquires Marcellus acreage from Alta Resources for $501M
Southwestern (2014)	13,000	5,400	413	336	Chesapeake sells Marcellus and Utica assets to Southwestern Energy for $5.38B

One of the earliest movers to enter the gassy Marcellus play, Statoil was able to strike high acreage positions for less than its supermajor peers.

Source: Rystad Energy research and analysis

Chesapeake was a highly sought-after partner, but cost carries created misalignment

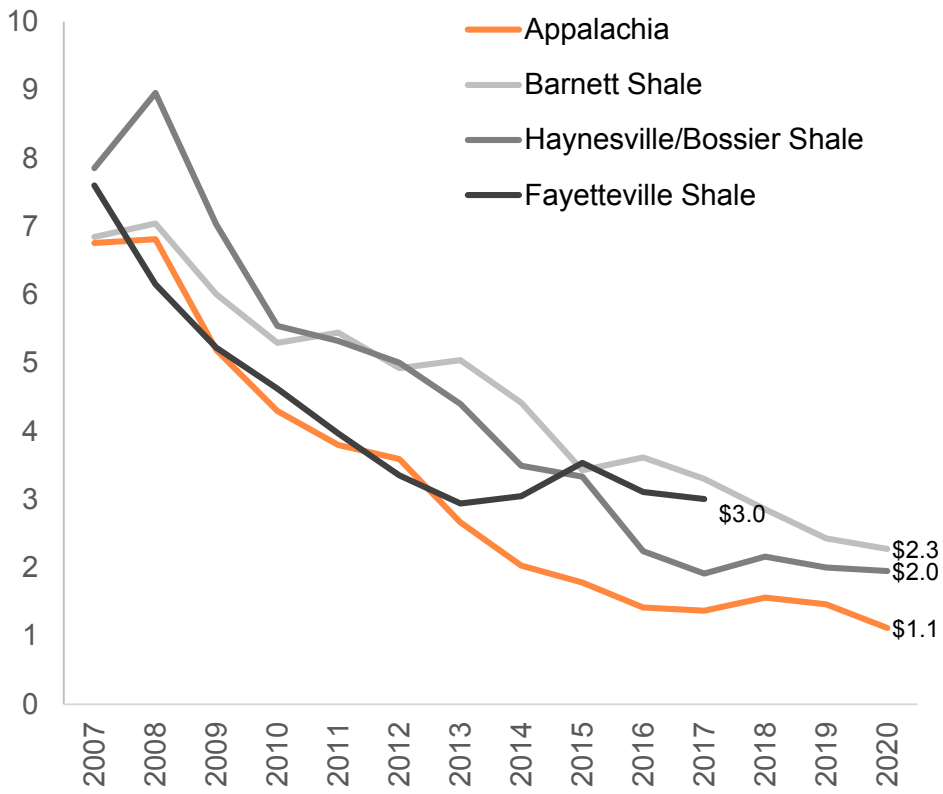
Company	Deal Year	Total Deal Value	Cost carry	Shale Play	Comments
Statoil	2008	$3.375 B	$2.1 B	Marcellus	Statoil acquired 32.5% of Chesapeake's Marcellus assets, equating to 0.6 million acres. The transaction involved $1.25B in cash upfront. Chesapeake received the remaining $2.1 billion via Statoil funding 75% of Chesapeake drilling costs from 2009 to 2012. Both companies noted ongoing discussions around a future international strategic alliance geared towards unconventional gas
TOTAL	2010	$2.25 B	$1.4 B	Barnett	Total acquired a 25% interest in Chesapeake's upstream Barnett shale assets, a total of 270,000 acres. The asset included 700mcfd of production and 3 trillion cubic feet of reserves with possible vast unproved reserves. Transaction included $800 million in upfront cash as well as Total funding 60% of Chesapeake drilling until the remaining $1.45B is recouped.
CNOOC	2010	$2.16 B	$1.08 B	Eagle Ford	CNOOC acquired a 33.33% stake in Chesapeake's Eagle Ford acreage, equivalent to 200,000 acres overall. The JV was reviewed by CFIUS, the US congressional authority on foreign direct investment, due to CNOOC's affiliation with the Chinese government. CNOOC paid $1.08B upfront and financed Chesapeake's drilling and completion costs to pay the other $1.08B.
TOTAL	2012	$2.32B	$1.42 B	Utica	Total acquired a 25% interest in 619,000 acres owned by Chesapeake and EnerVest in the Utica shale. Total paid $610 million upfront and the other $1.42B by financing Chesapeake's drilling and completion costs. EnerVest received $290 million.
Sinopec	2013	$1.02B	$0	Mississippi Lime	Sinopec acquired a 50% stake in Chesapeake's Mississippi Lime venture which included 850,000 acres in northern Oklahoma. Chesapeake received 93% of the purchase price upfront. Sinopec did not pay for Chesapeake's drilling and completion costs to finance the deal like had been normal in previous transactions.

A features that Chesapeake often built into its JV agreements was the "cost carry" in which the new partner would agree to pay for future drilling up to a certain amount of capex. In the Statoil deal, the carry accounted for $2.2 billion out of the $3.4 billion deal consideration. During a cost carry, the JV partners are usually facing misaligned incentives. Chesapeake, which had a high debt load in 2008-09 at the time of the deal, had an incentive to keep drilling wells even if they were not NPV-positive because Statoil would be paying the well costs and Chesapeake needed the cash flow. Notably, the last of these deals, in 2013, did not include a cost carry.

Source: Rystad Energy Ucube, Chesapeake Energy press releases

The Marcellus proved to be the most economically robust shale gas play but became a victim of its own success, keeping gas prices depressed

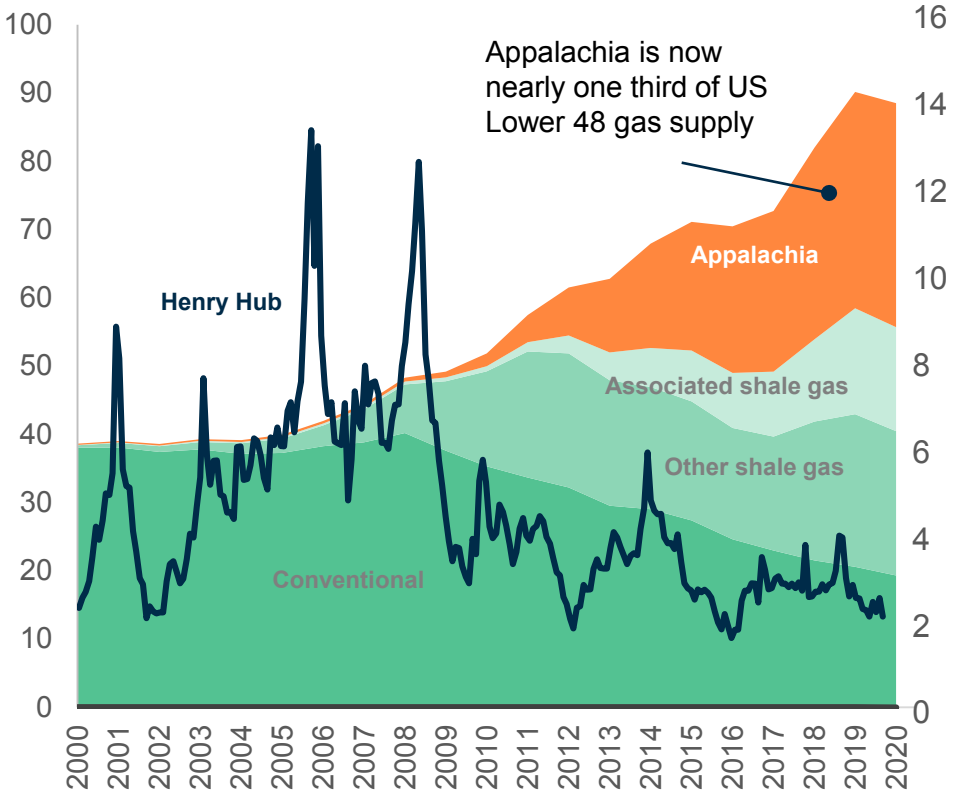
Gas wellhead breakeven prices
$/mcf by completion year



Breakeven prices at the wellhead have consistently declined over the last decade.

US L48 gas production
Billion cubic feet per day

Henry Hub Price
$/MMBtu

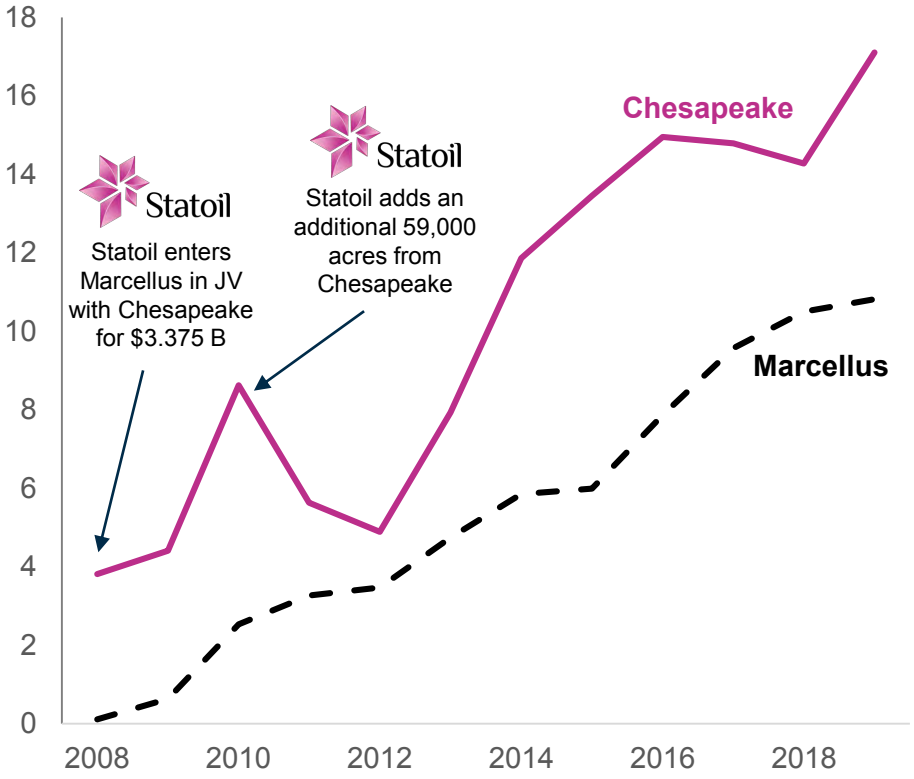


Gas production in the US dramatically increased with the introduction of shale gas. Appalachia has fueled the largest portion of this growth, keeping gas prices depressed.

Source: Rystad Energy research and analysis, Rystad Energy ShaleWellCube

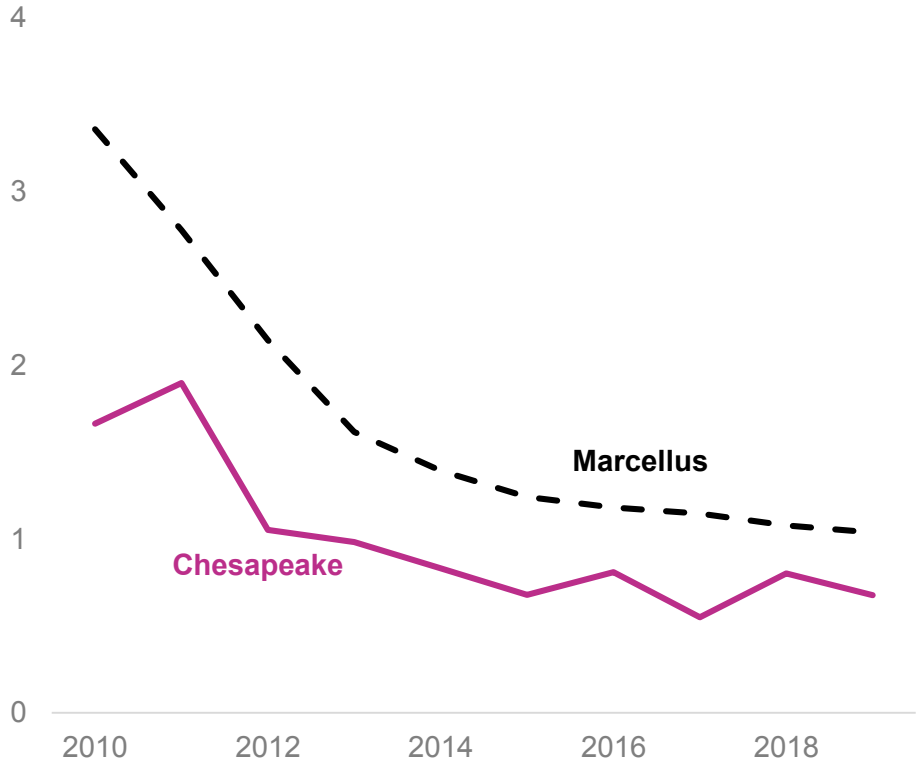
Chesapeake operated highly productive and low-breakeven wells

Median Marcellus initial 90-day production by completion year
Million cubic feet per day



Statoil partnered with one of the top performing operators in the basin in Chesapeake, at the early stages of the Marcellus's development.

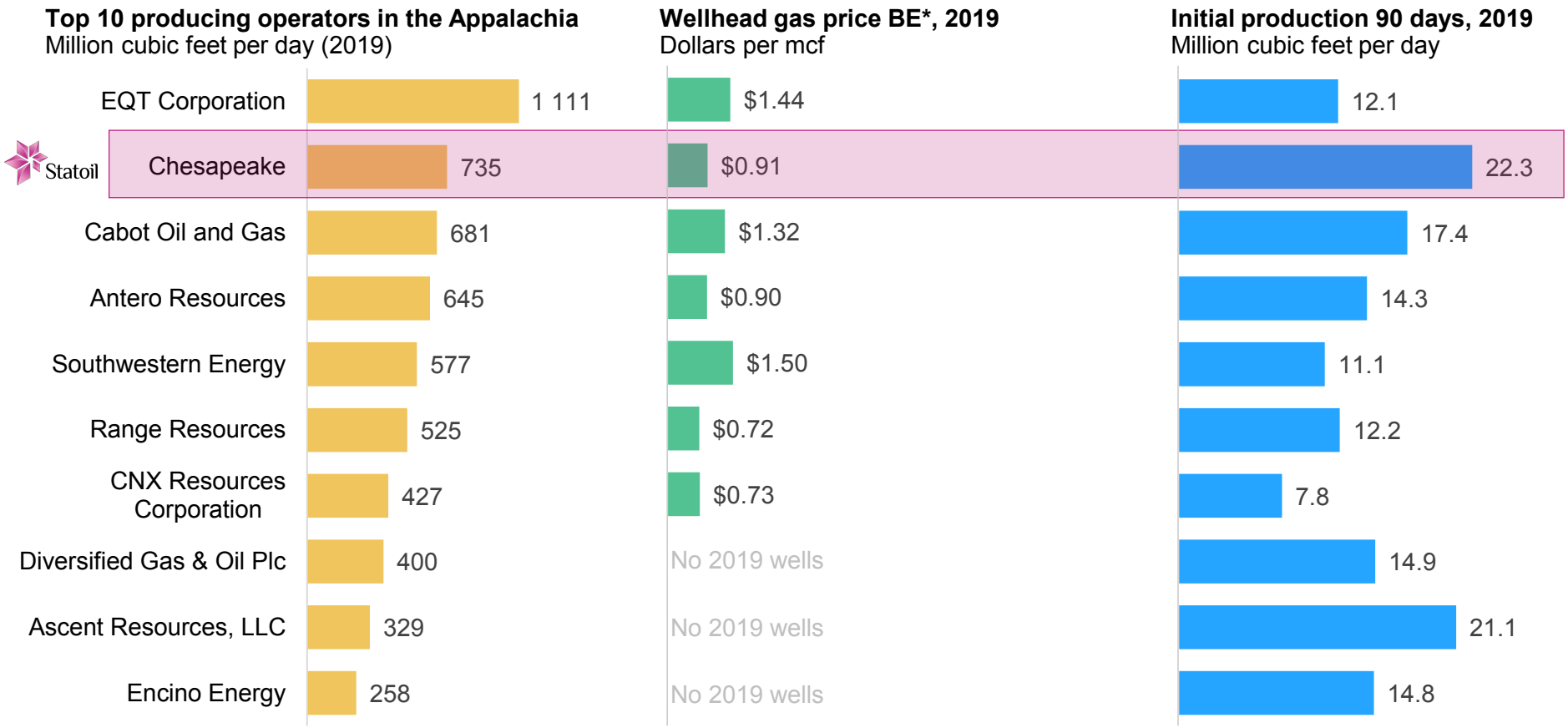
Median Marcellus wellhead breakeven by completion year
USD per million Btu



Chesapeake has maintained one of the lowest breakevens since Statoil entered the Marcellus, well below the average.

Source: Rystad Energy research and analysis

The Marcellus position is large, highly productive and among the best in Appalachia



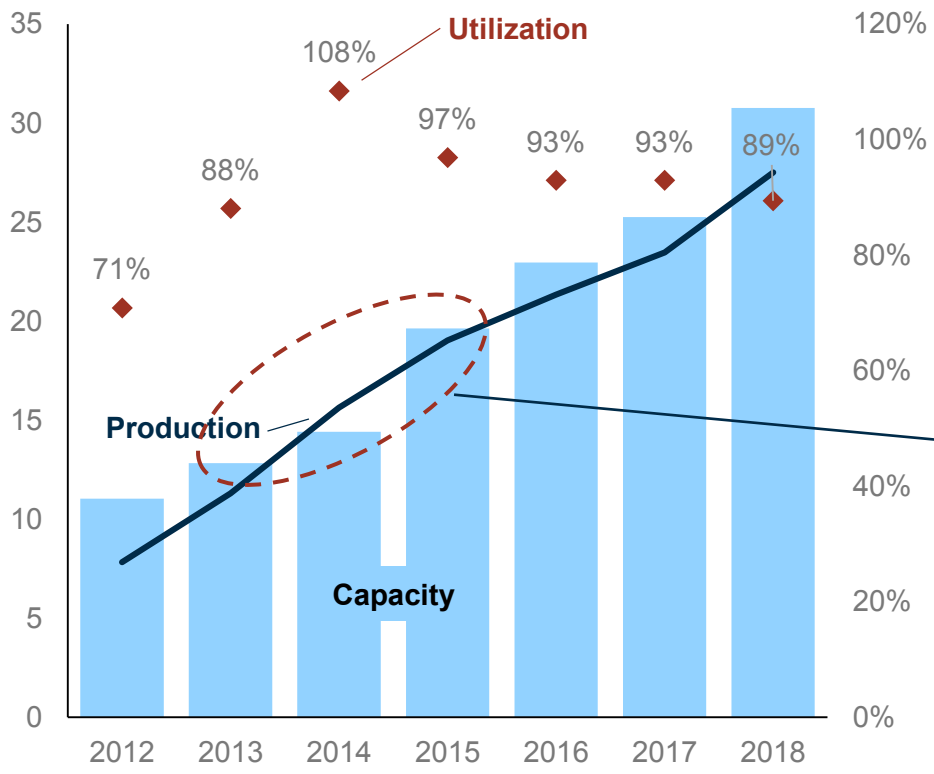
Despite the overall macro adversity, Chesapeake and Statoil have one of the most material, economically robust Appalachia acreage positions, evidenced by low breakevens, the plays most productive wells and the 2nd largest production.

*Operators with no new completions are excluded
Source: Rystad Energy research and analysis; ShaleWellCube

Despite Chesapeake's operational performance, infrastructure issues further depressed gas prices in the Marcellus

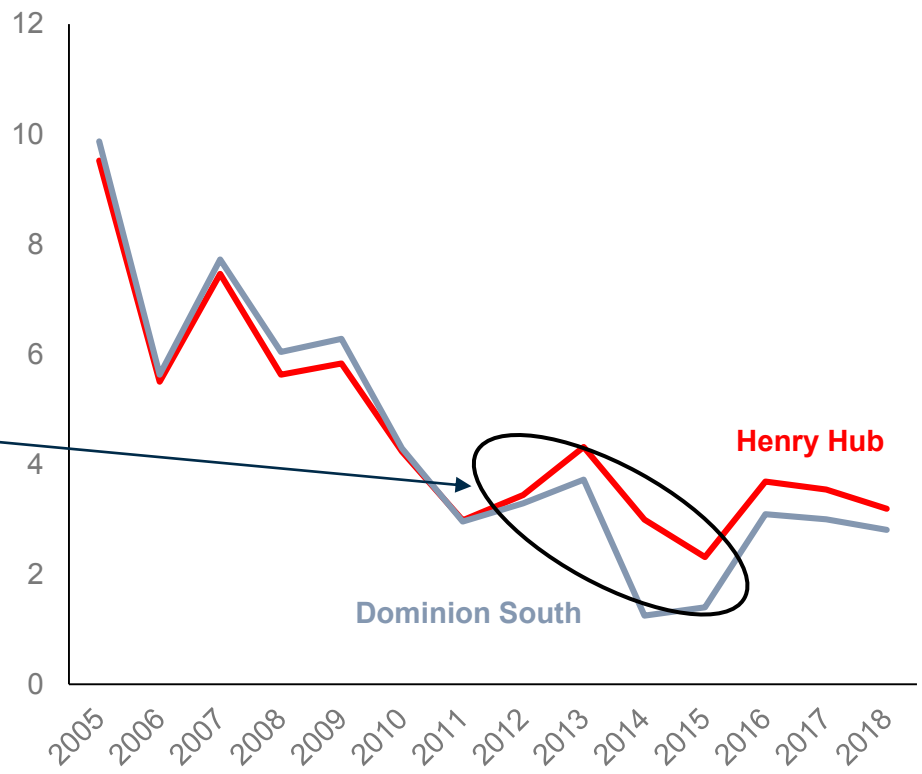
Northeast takeaway capacity & production
Million cubic feet per day

Utilization
Percentage



A gap emerged between takeaway capacity and Marcellus gas production. Statoil had secured some firm takeaway capacity on the Northern Access Pipeline in 2010, however the pipeline has yet to be built due to regulatory hurdles.

Henry Hub & Dominion South gas prices
USD per MMBtu



The takeaway shortage drove the spread between Henry Hub price and Dominion South price.

Source: Rystad Energy Research and Analysis

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Statoil's Eagle Ford acquisitions were slightly expensive when benchmarked against other deals in the same time period

Metrics for representative Eagle Ford deals

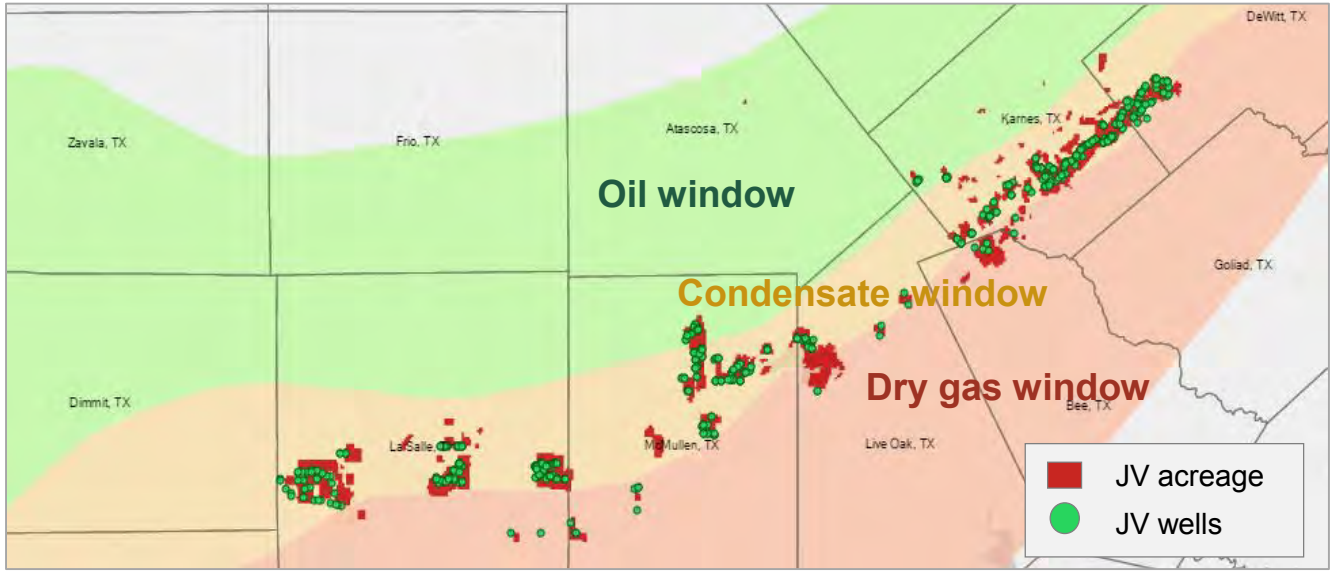
	$ per acre	Deal value million USD	Acres Thousand	Net production kboe/d	Comments
Plains E&P (2010)	9,600	600	60	2,000	Part of the purchase went to a JV with EOG Resources. Plains E&P believed the acreage had potential for high reserves.
CNOOC (2010)	10,800	2,200	200	Unknown	CNOOC acquired a 1/3 stake in Chesapeake's Eagle Ford assets. More than half of the purchase price was financed through drilling costs.
Exco (2013)	12,400	700	55	Unknown	KKR helped Exco to finance the deal by contributing 50% of the costs while Exco operated the wells.
Statoil (2010)	12,600	800	67	2,800	Statoil partnered with Talisman to form a JV in the Eagle Ford.
Statoil (2011)	14,600	200	15	6,100	Statoil and Talisman added acreage to their Eagle Ford JV through the acquisition of SM acreage.

Statoil and Talisman's entry deal consideration was largely in line with typical spend per acre in the basin. At the time, Statoil was aware that its position was in the condensate and dry gas windows. With gas and condensate prices relatively strong at the time, the part of the part of the play Statoil and Talisman entered wasn't inherently less attractive than the oil window acreage.

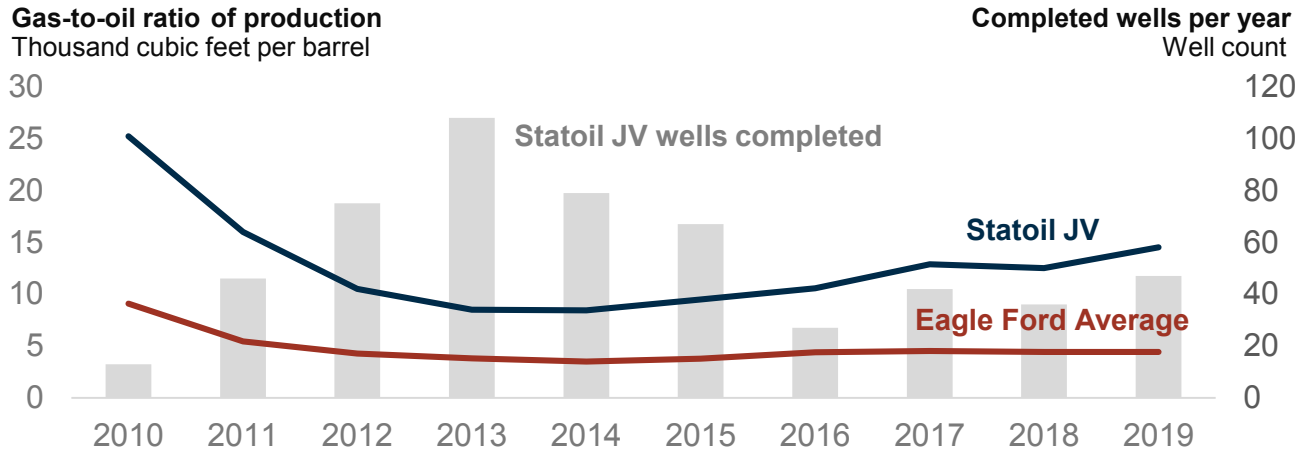
Source: Rystad Energy Ucube

Statoil bought into gassy acreage on the southern end of the Eagle Ford condensate window

Eagle Ford JV acreage and wells



- Statoil and Talisman formed a JV in the Eagle Ford in 2010, in which Statoil spent more than $800 million. The JV went onto to acquire more acreage from SM Energy.
- In 2015, Repsol acquired Talisman and Statoil became the operator of the entire JV's portfolio. Later, in 2019, Equinor divested their entire Eagle Ford portfolio to Repsol, leaving the basin.
- By the time Statoil entered the Eagle Ford in 2010, the geology of the basin was well known, including the different resource windows.
- Overall, Statoil ended up having much "gassier" acreage than average in the Eagle Ford. Statoil expected a significant portion of revenue from NGLs and condensate, but oversupplies in the Gulf Coast depressed prices.



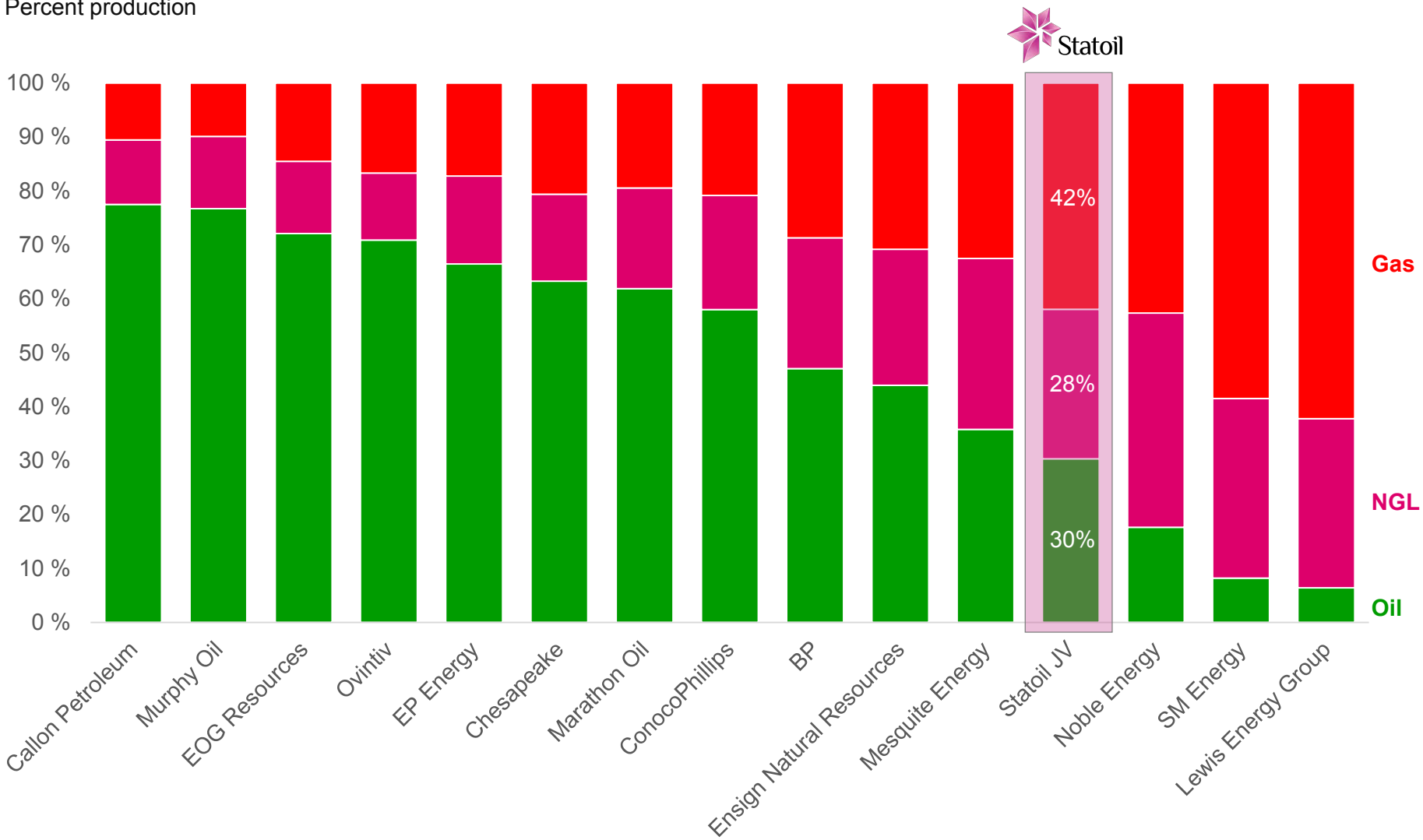
. . . this acreage is located in an attractive, liquids rich area of the Eagle Ford play. Statoil expects that a **significant proportion of the revenue from Statoil's Eagle Ford acreage will come from gas liquids and condensate** which are competitively located to be sold into the petrochemical and refinery centres in Texas. – 2010 press release

Statoil

Source: Rystad Energy ShaleWellCube, Rystad Energy research and analysis

Statoil's production mix reflected the multi-commodity nature of the commercialization

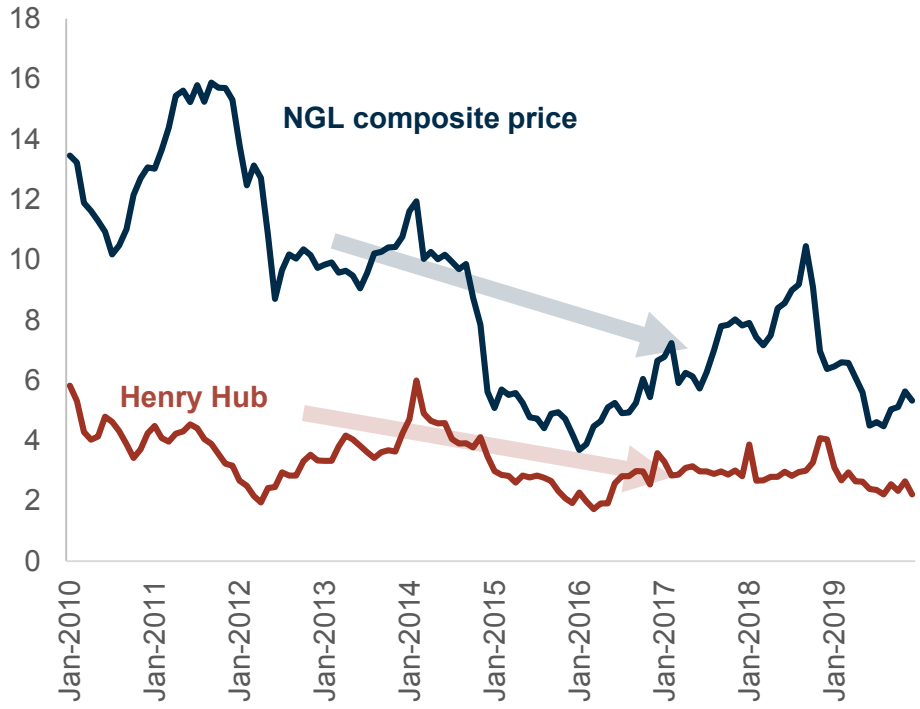
Eagle Ford hydrocarbon mix by operator[1], 2010-2019
Percent production



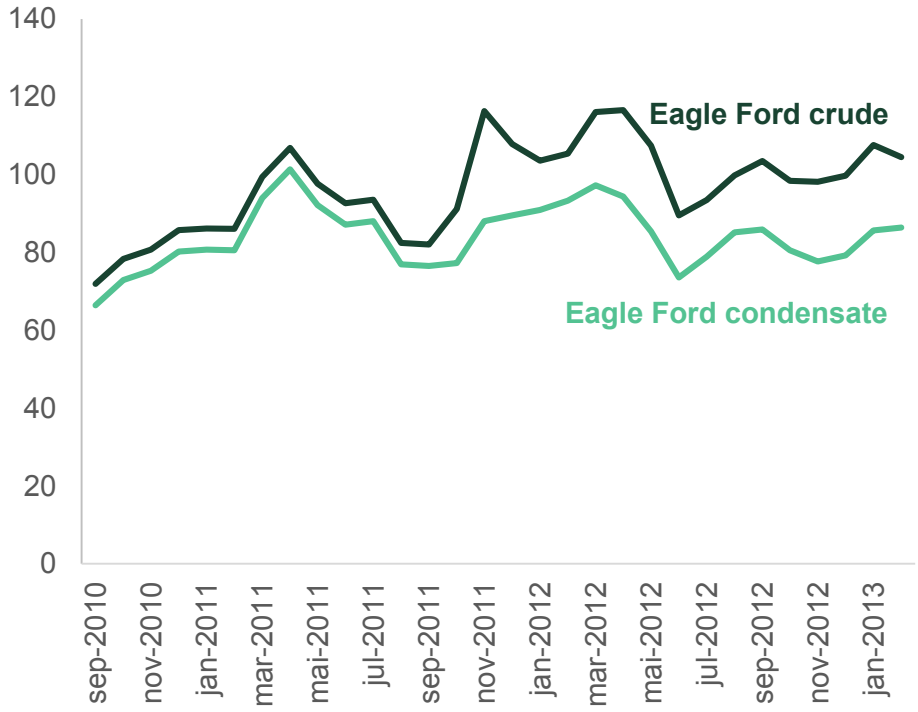
1: Gas considered on a boe basis; top 15 operators by production
Source: Rystad Energy research and analysis

Statoil relied on NGLs and condensate revenues, but NGL prices dropped and condensate discounts widened

NGL composite price[1] and Henry Hub natural gas price
USD per MMBtu



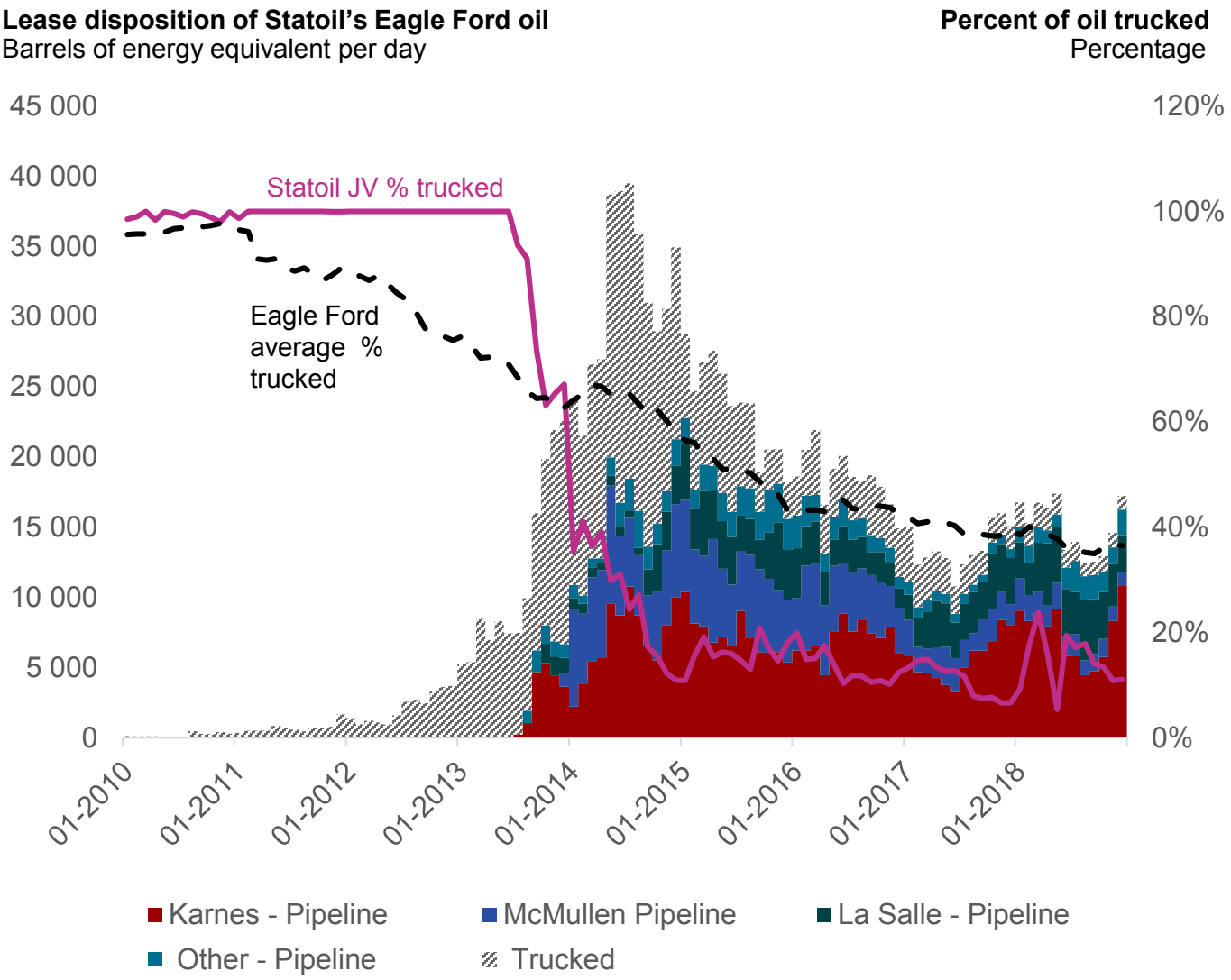
Plains Marketing posted prices[2]
USD per bbl



- A high proportion of the Eagle Ford JV's production consisted of gas, NGLs and condensate, but all 3 commodities were impacted negatively by the surge in light hydrocarbon production from shale plays
- Eagle Ford condensate was priced at only a slight discount to Eagle Ford crude in 2010, evidenced by Plains Marketing price postings. In 2012, Plains' Eagle Ford condensate posting averaged $17/bbl below the Eagle Ford crude posting.

1: EIA NGL composite price is an average of Bloomberg spot prices for component hydrocarbons, weighted by actual monthly gas plant production volumes
2: Data only available Sept-2010 to Jan-2013.Posted prices represent prices Plains Marketing is willing to pay to acquire the commodity. Eagle Ford crude represents 40-45 API crude; condensate prices represent 60.1 API condensate
Source: Rystad Energy, EIA, Plains All American

Prior to 2013, nearly all Statoil Eagle Ford crude and condensate was trucked to market

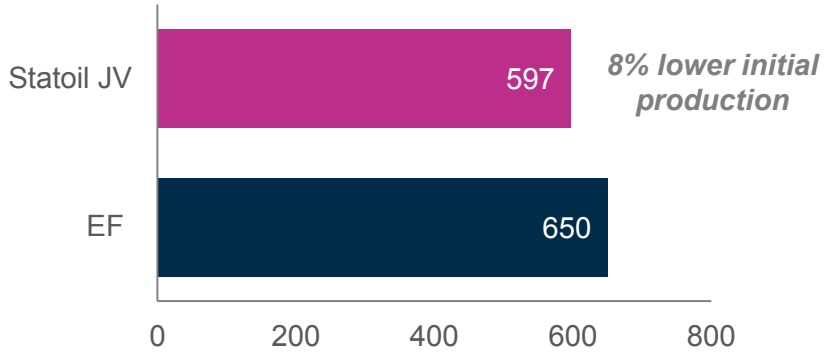


- In 2010, over 95% of crude and condensate production in the Eagle Ford was trucked from the lease as production exceeded pipeline capacity. Most was trucked to refineries in Corpus Christi.
- In 2012, trucking began to decline as new pipelines entered service.
- The Statoil JV entered into long-term agreements with the Double Eagle Condensate Pipeline in H1 2012. It is possible that acquiring undeveloped acreage may have delayed Statoil's process of arranging for firm pipeline transportation, as the prior owners were unlikely to have had midstream arrangements in place
- Following the completion of the Double Eagle pipeline in mid-2013 the JV's trucking began to decrease rapidly.
- By 2015, the JV averaged 18% trucking while the basin averaged 50%.
- The basin-average trucking rate remains high as many areas do not have high enough production density to merit crude gathering systems

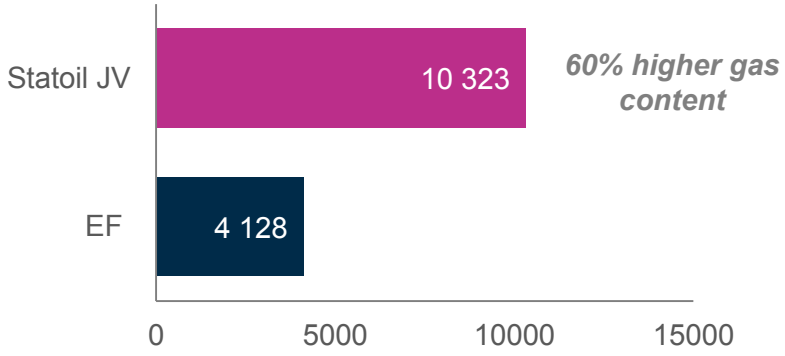
Source: Rystad Energy ShaleWellCube

Statoil's Eagle Ford position was below average in productivity and economic robustness

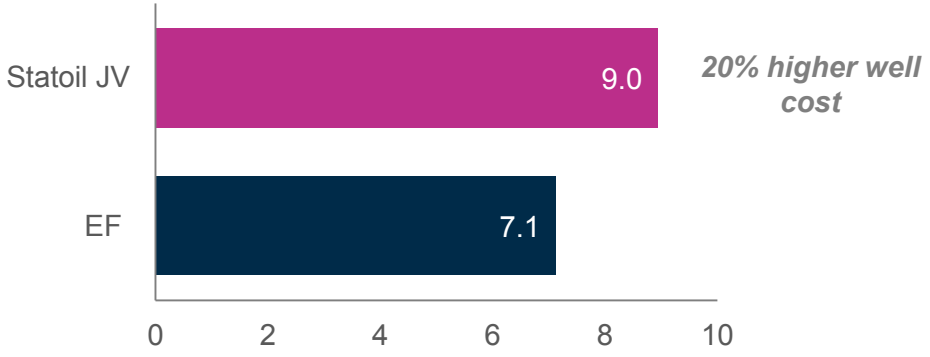
Initial 90-day production, 2010-18 average
Boe/d



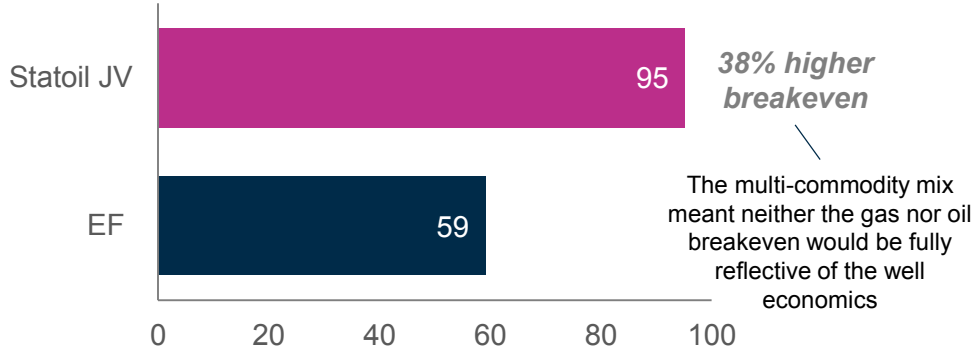
Gas to oil ratio, 2010-18 average
Cubic feet per barrel



Well cost, 2010-18 average
Million USD



Wellhead oil breakeven, 2010-18 average
$ / barrel



- In large part due to its position in the southern flank of the play, outside the core, Statoil's JV lagged industry averages in the Eagle Ford for initial production, gas to oil ratio, well cost and breakeven.
- The economics are complicated by the multi-commodity nature of the Gas-Condensate play as well as the deeper wells required, which drove up well costs relative to other parts of the Eagle Ford. These economics did not compete well within the Equinor portfolio, resulting in divestment in 2019.

Source: Rystad Energy ShaleWellCube

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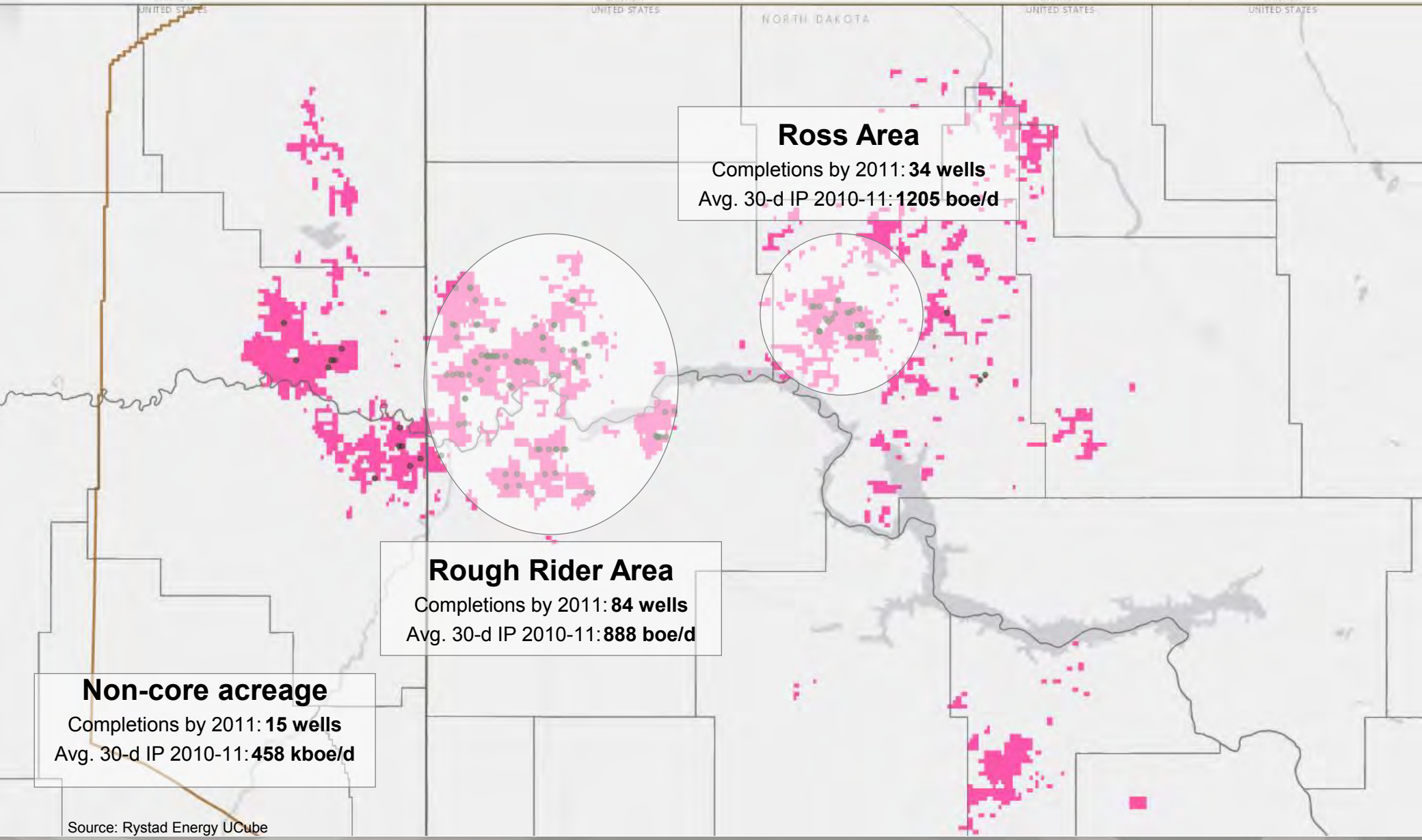
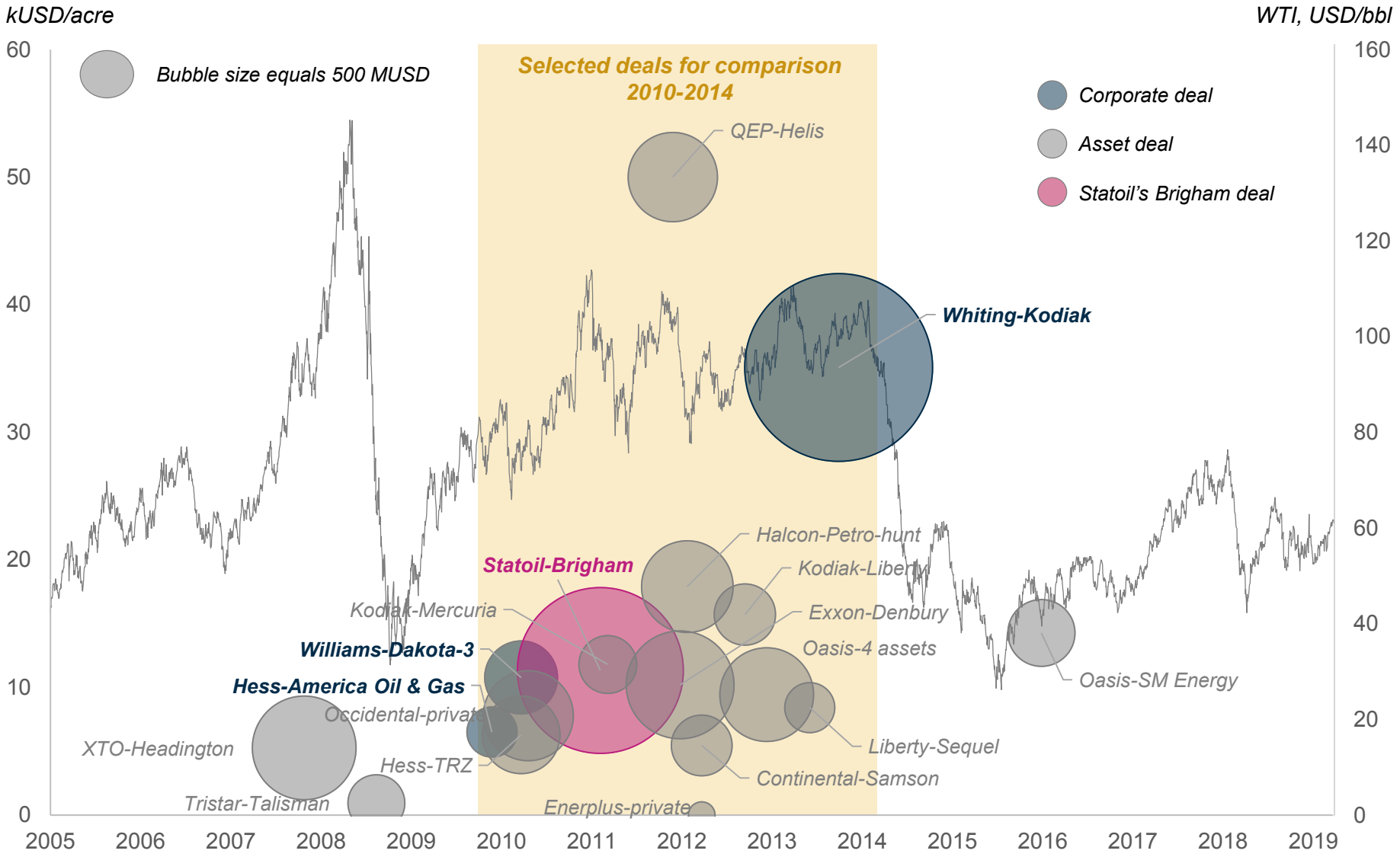
The Brigham acquisition in 2011 – two main areas of activity pre-acquisition



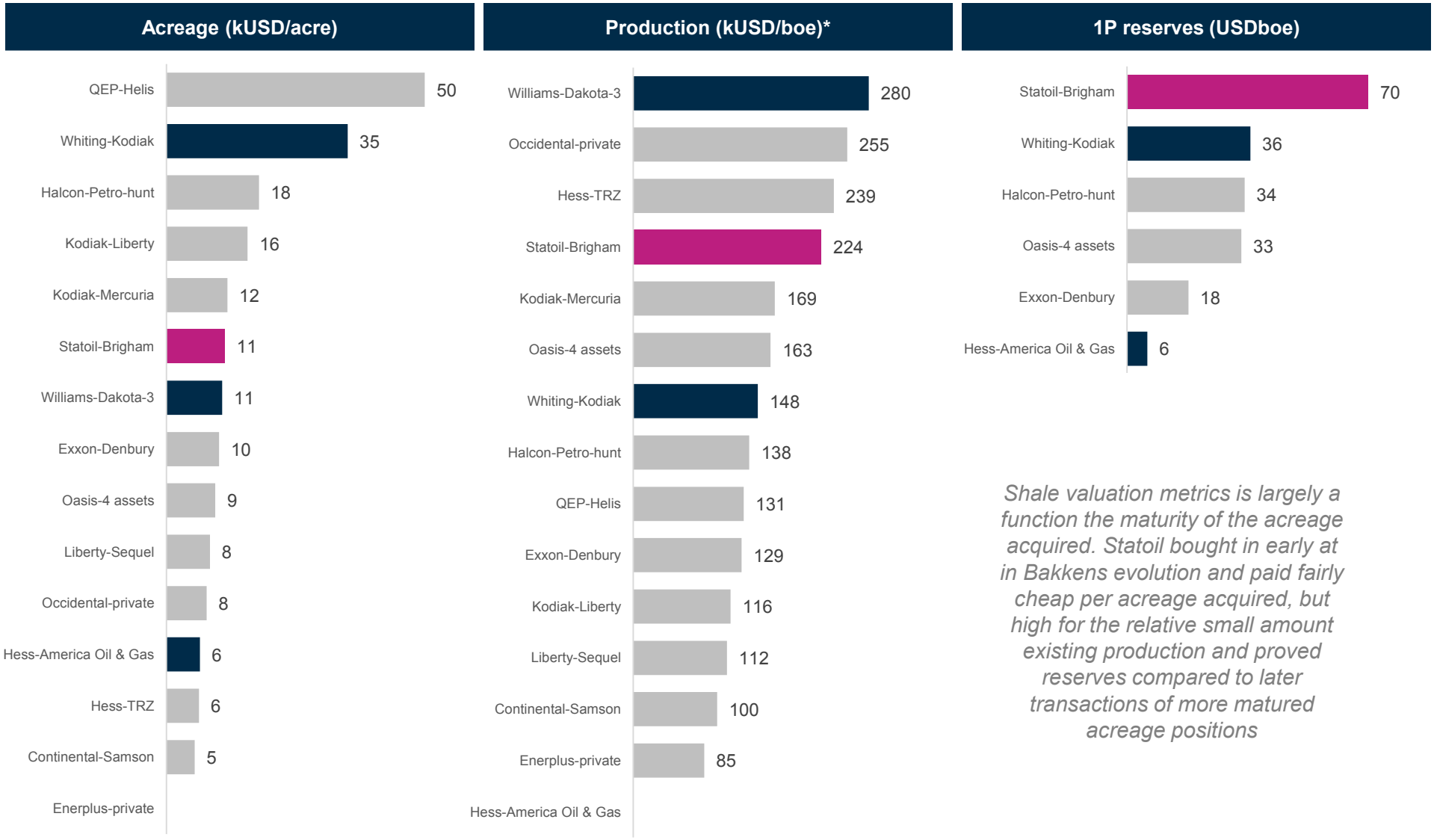
Source: Rystad Energy UCube

Statoil's Brigham acquisition did not compare unfavorably on a per acreage pricing



Source: Bloomberg, Rystad Energy research and analysis

Metrics per Bakken deal completed 2010-2014



Shale valuation metrics is largely a function the maturity of the acreage acquired. Statoil bought in early at in Bakkens evolution and paid fairly cheap per acreage acquired, but high for the relative small amount existing production and proved reserves compared to later transactions of more matured acreage positions

*Production at time of transaction
Source: Rystad Energy research and analysis

Brigham acquisition rationale – why acquire an operator?

	Rationale	Supporting points	Operatorship needed
Diversify away from NCS and reach set production goals and reserves targets	• Clear ambition from Statoil to add reserves and production outside the NCS. Following prior strategic decision to move into unconventional US onshore. • Shale provides improved R/P and rapid production growth possibilities.	*We are positioning ourselves as a leading player in the fast-growing US onshore oil and gas industry, in line with the strategic direction we have set out.* **Helge Lund after Brigham transaction** *We actively manage our portfolio to create value and we will put our money where our strategy is. So we are expanding into unconventionals … this is actually one of the largest single transactions Statoil has ever done. It builds on our stepwise approach into US unconventionals.*	No
Be in control of your own destiny	• Statoil had prior experience with Chesapeake in Marcellus where carry agreements and different hedging positions lead to unequal economic positions and possibly unfavorable position for Statoil. • The operator have more power in the US than on the NCS, operatorship would allow Statoil to better control the efforts given change in macro and infrastructure conditions	*In Marcellus, we have a carry structure, which is an incentive to build up production over a certain period. Here* ***there are no carry structures. There are no promotes. There is equality of economics*** *point forward in this joint venture with Talisman, which is one of the very attractive aspects of it, and it is a 50-50 JV. So we have* ***got a lot more flexibility in this to mix and match to events, rock quality and macro environments.*** **John Knight after Eagle Ford JV**	✓
Use knowledge to expand in Europe and internationally	• Statoil needed to build an organization in order to expand operations internationally. In the joint global efforts with Chesapeake, it was Chesapeake that had led the subsurface work. • Brigham acquisition was viewed as good strategic fit for Statoil with one technology leader acquiring another.	*Chesapeake concentrating mostly on the G&G in the [coring] office. We have also had some diligence in there, but we have looked mostly at the commercial terms available in other parts of the world and the above ground risks in the Statoil part of the team.* **John Knight after Eagle Ford JV** *Brigham has proven itself as a premier operator with a highly attractive position in the Williston Basin. We are a strong strategic fit, as both companies put a premium on technological innovation and advancement.* **Helge Lund after Brigham transaction**	✓
Cheaper with corporate deals than asset deals	• Some metrics pointed to that it was cheaper to buy acreage through corporate transactions than asset deals. • This would also be true for the Brigham deal for the stock price prior to the transaction, but with 36% premium to the 30-day trailing average, it was at par or higher.	*From an investor's point of view, it seems like a lot of oil shares are valued at implicit oil prices way below $80, while asset deals seem to be done in that kind of range. Wouldn't it have been cheaper to look for some oil companies to buy instead of assets at the moment?* **Question from Carnegie to Statoil following Eagle Ford JV**	✓

Source: Conference call transcripts following Eagle Ford acquisition; press releases; Rystad Energy research and analysis

Statoil's deals in the US were part of a global strategy of leading in unconventionals

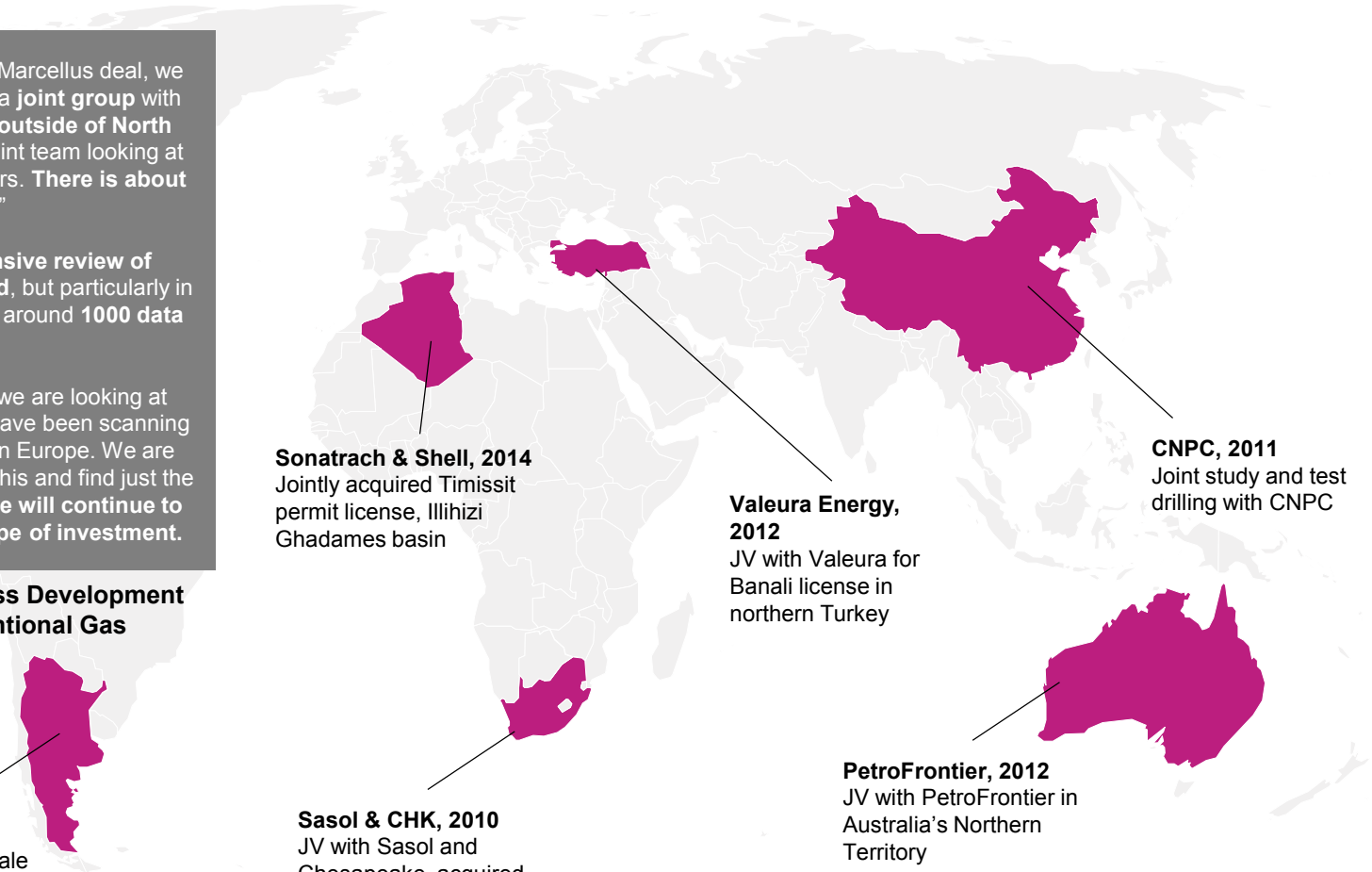
Statoil shale initiatives outside of North America

"At the time we announced the Marcellus deal, we said that we were also forming a **joint group** with Chesapeake to **look at deals outside of North America**, and we have had a joint team looking at those things for the last two years. **There is about 2000 people**."

"We have done a very **extensive review of opportunities around the world**, but particularly in Europe, and we have been into around **1000 data rooms**"

"As a matter of public record, we are looking at opportunities in China, and we have been scanning opportunity the last two years in Europe. We are going to be **very choosy** about this and find just the right place. But **I'm sure that we will continue to divert our exposure to this type of investment.**

John Knight, SVP Business Development and Global Unconventional Gas



Source: Rystad Energy research and analysis

Pre-transaction: In 2010-11 Brigham was chasing Bakken records for well productivity

May 26th, 2010

REUTERS

Business Markets World Politics TV More

HOT STOCKS NEWS MAY 26, 2010 / 7:21 PM / 10 YEARS AGO

Brigham shares up on strong results from 2 Bakken wells

Adveith Nair 4 MIN READ

BANGALORE (Reuters) - Oil and natural gas explorer Brigham Exploration Co BEXP.O on Wednesday reported positive initial results from two more wells in its core Bakken shale acreage, sending its shares up as much as 11 percent.

The company said its Jack Cvancara 19-18 and Tjelde 29-32 wells flowed at peak rates of 5,035 barrels of oil equivalent per day (boepd) and 3,171 boepd respectively, during the first 24 hours.

"These results continue to affirm the validity of Brigham's Bakken acreage and the fact that they are getting increasingly better at finding the sweet spots," Natixis Bleichroeder analyst Curtis Trimble said by phone.

October 4th, 2010

CNN Money Companies Markets Tech Media

Brigham Exploration Announces State 36-1 #2H Rough Rider Three Forks Well Early Production Rate of 2,356 BOEPD, Three High Rate Bakken Completions, Additional Acreage Acquisitions and Provides Operational Update

October 04, 2010: 04:30 PM ET

MARKETWIRE

Brigham Exploration Company (NASDAQ: BEXP) announced the completion of the State 36-1 #2H Rough Rider Three

April 13th, 2011

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UNCONVENTIONAL

Brigham's Bakken Shale Wells Set Two IP Records

Wed, 04/13/2011 - 09:50 AM

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Brigham Exploration Co., Austin, Tex., (Nasdaq: BEXP) reports that its Sorenson 29-32 #2H Bakken well produced a North Dakota Bakken record 5,330 barrels of oil equivalent during its early 24-hour peak flow back period. Brigham also announced that its Johnson 30-19 #1H Bakken well, which is located in Richland County, Montana, produced a Montana Bakken record early 24-hour peak flow back rate of approximately 2,962 barrels of oil equivalent.

Additionally, Brigham announced the completion of four additional North Dakota Bakken wells and, as a result, has completed 56 consecutive long lateral high frac stage wells in North Dakota at an average early 24-hour peak flow back rate of approximately 2,884 barrels of oil equivalent. Brigham has also provided an update on its drilling and completion activities in the Williston Basin.

Record North Dakota Bakken Well

Brigham announced that the Sorenson 29-32 #2H produced a North Dakota

September 23rd, 2011

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NEWS

Brigham Reaches Record Early Production at Three Forks Well

Brigham Exploration Co. | Friday, September 23, 2011

Tweet Share 0 Share reddit this!

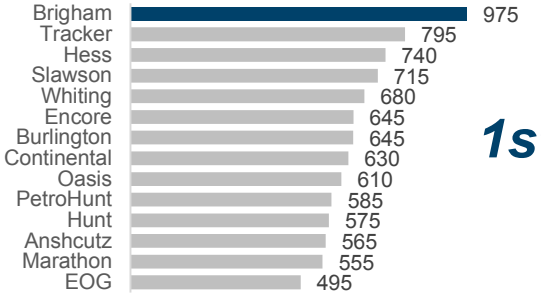
Brigham announced that the Irgens 27-34 #2H Three Forks well produced approximately 2,906 barrels of oil equivalent during its early 24-hour peak

Source: News articles

Pre-transaction: - Brigham with best in class in IPs and worst in class in well cost

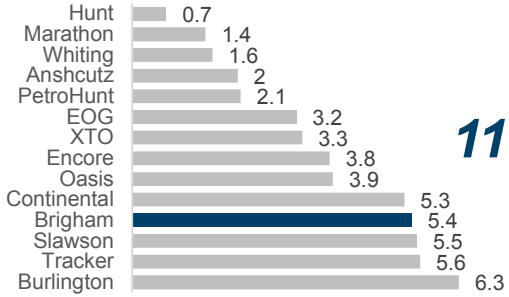
Productivity

Initial production - 30 days (boe/d)



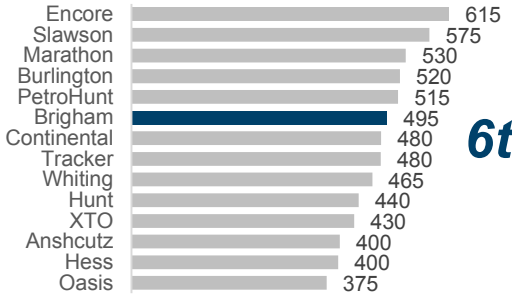
1st

Initial production decline (percent)



11th

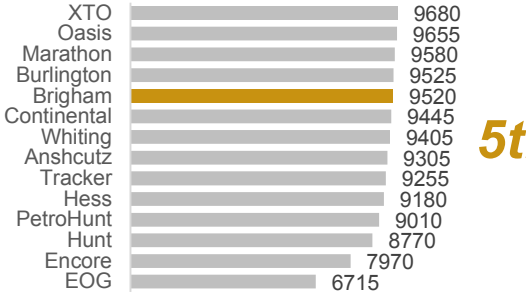
EUR per well (kboe)



6th

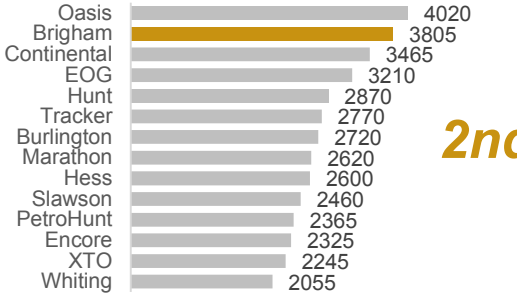
Completion intensity

Lateral length (feet)



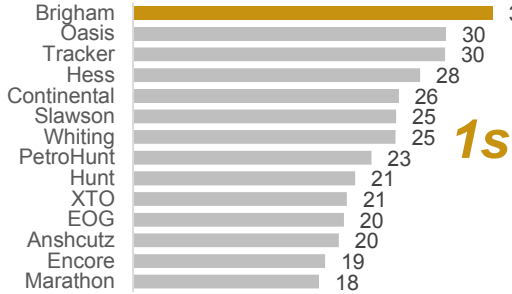
5th

Proppant (Thousand pounds)



2nd

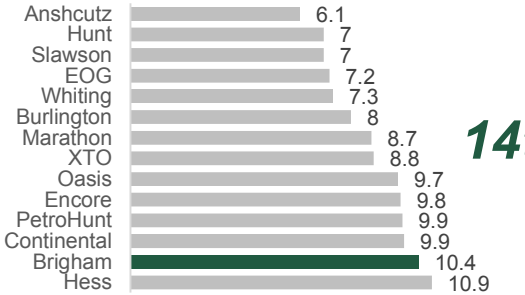
Frac stages



1st

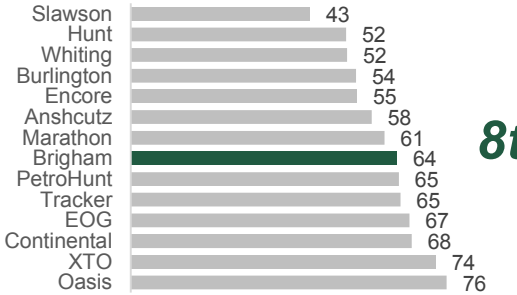
Economics

Well cost (MUSD)



14th

Wellhead break-even (USD/boe)



8th

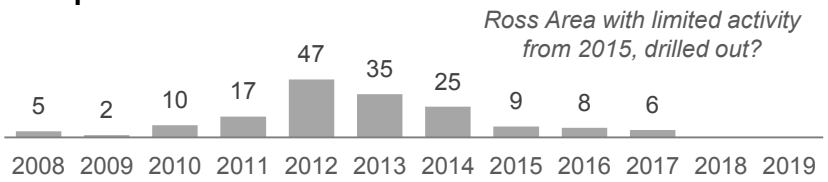
Brigham with very high completion intensity per lateral length. Resulted high IPs, but less optimal long-term economics.

All data from wells completed in 2010-2011
Source: Rystad Energy ShaleWellCube

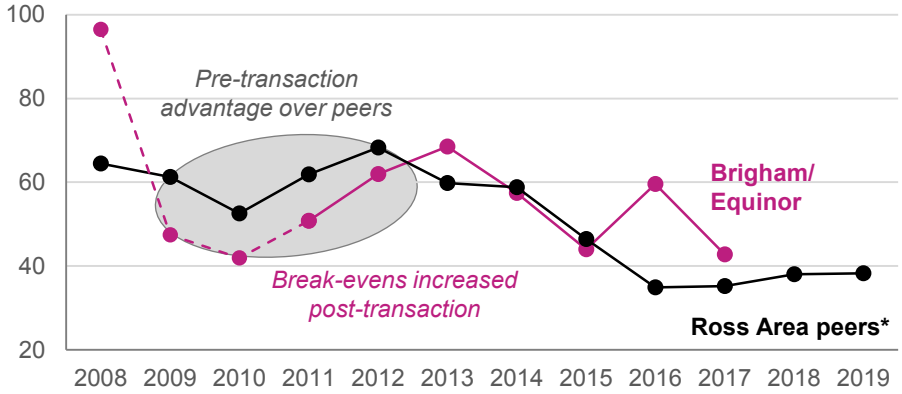
Post transaction: Ross with declining performance and Rough Rider below peer average

Ross Area

Wells completed



Wellhead break-evens

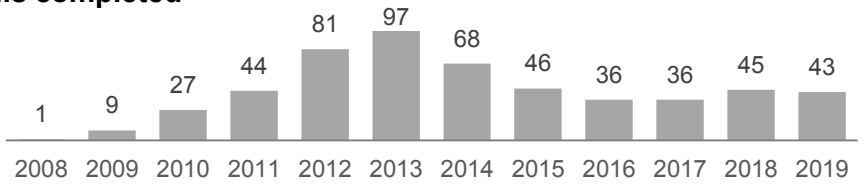


Evolution in well design

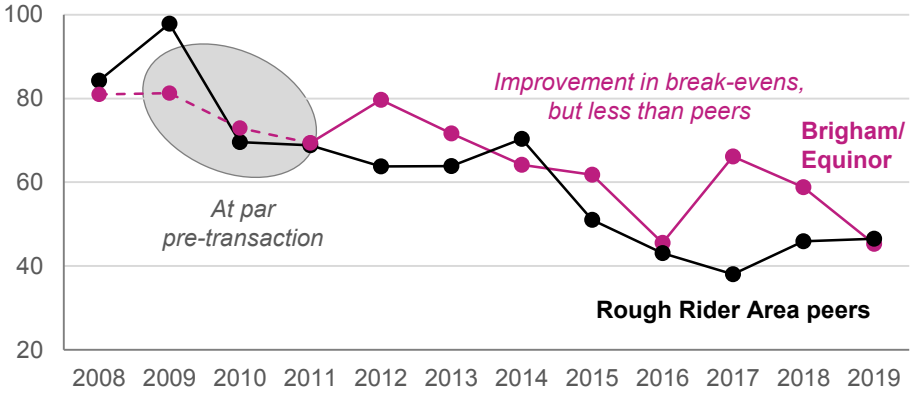
	2010-11	2012-13	2014-15	2016-17	2018-19
Lateral (feet)	9550	9600	9950	9500	No wells
Frac stages	36	34	34	44	No wells
Proppant (klbs)	3 700	3 400	5 100	7 700	No wells
IP (boe/d)	1210	700	650	650	No wells
Well cost (MUSD)	9.0	9.0	8.0	8.0	No wells

Rough Rider Area

Wells completed



Wellhead break-evens

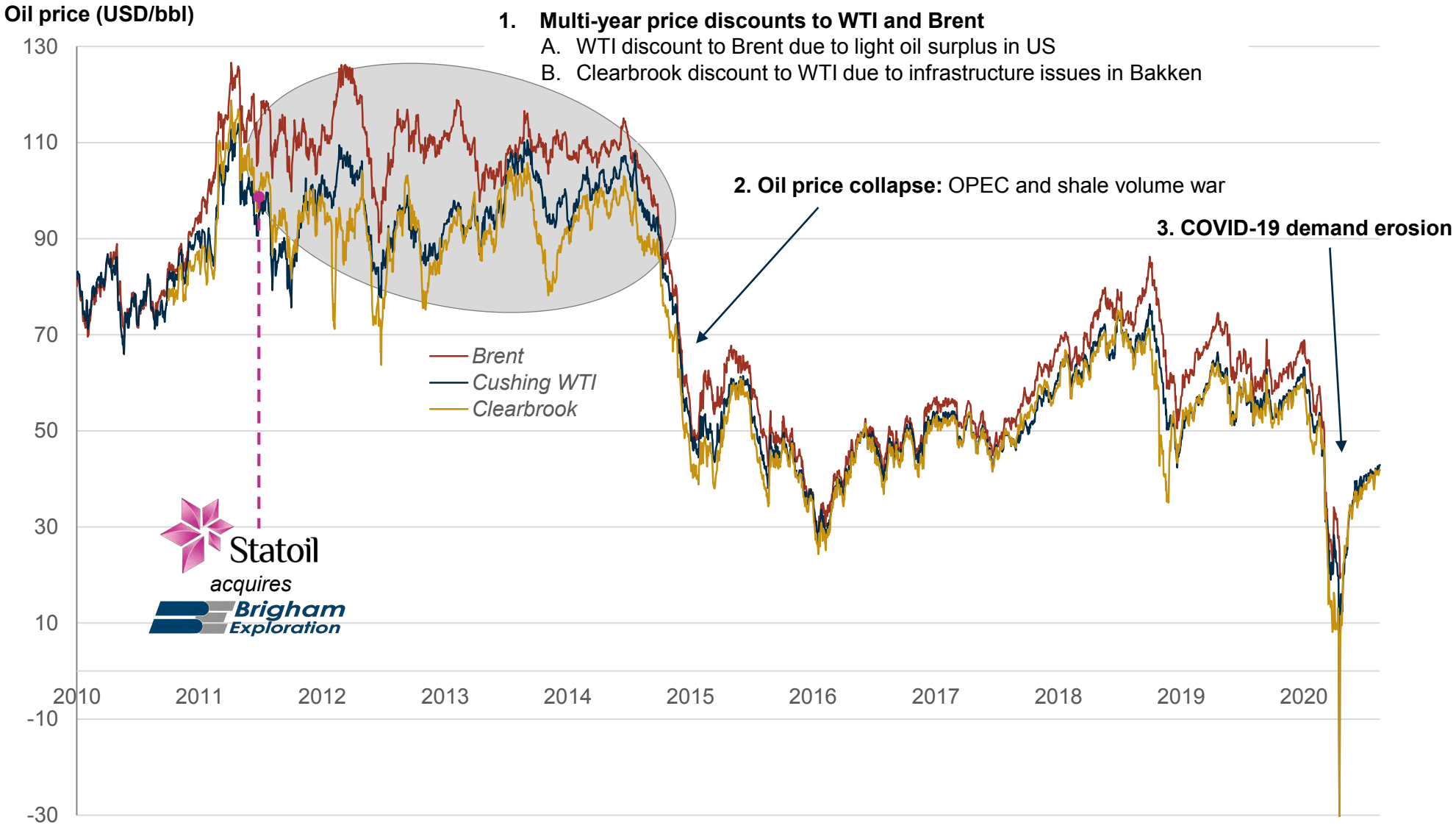


Evolution in well design

	2010-11	2012-13	2014-15	2016-17	2018-19
Lateral (feet)	9500	9800	9800	9800	9700
Frac stages	34	34	33	42	42
Proppant (klbs)	3 800	3 800	5 300	8 000	8 700
IP (boe/d)	890	800	610	840	970
Well cost (MUSD)	11.0	10.9	8.0	8.0	8.4

Source: ShaleWellCube; Rystad Energy research and analysis

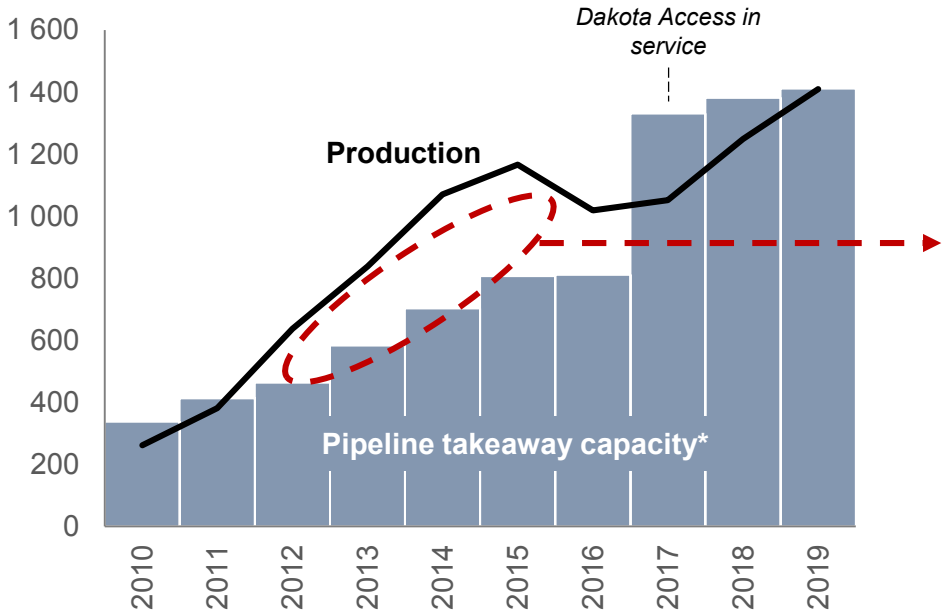
Post transaction: Three severe disappointments in oil price development



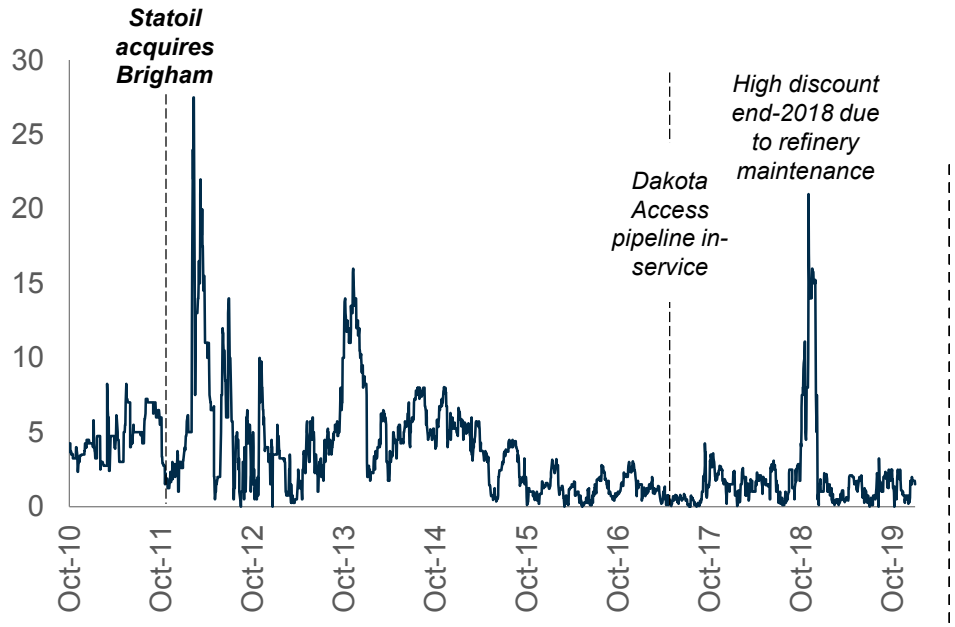
Source: Bloomberg; Rystad Energy research and analysis

Post transaction: Up to 25 USD/bbl discount to WTI for Clearbrook, closest hub to Bakken

Bakken oil production and takeaway capacity
Thousand barrels per day



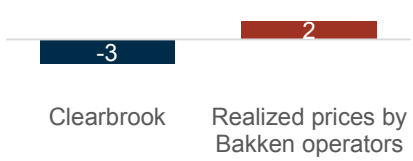
Discount to WTI for Bakken crude at Clearbrook
USD/bbl



- The Bakken faced acute pipeline constraints from 2011 to 2017, when the Dakota Access Pipeline came into service following a series of delays.
- Due to pipeline constraints and reliance on expensive crude-by-rail, Bakken discounts to WTI reached $25/bbl at the nearby Clearbrook pricing hub.
- Infrastructure constraints led to low realized prices by Bakken operators – a $10/bbl realized price discount to WTI from 2012-2014.

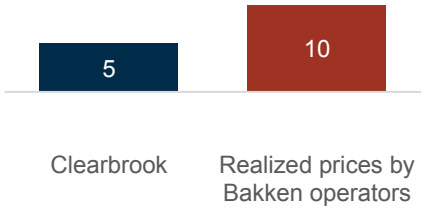
2010-2011 (pre-deal)

Clearbrook-WTI spread
USD/bbl



2012-2014 (post-deal)

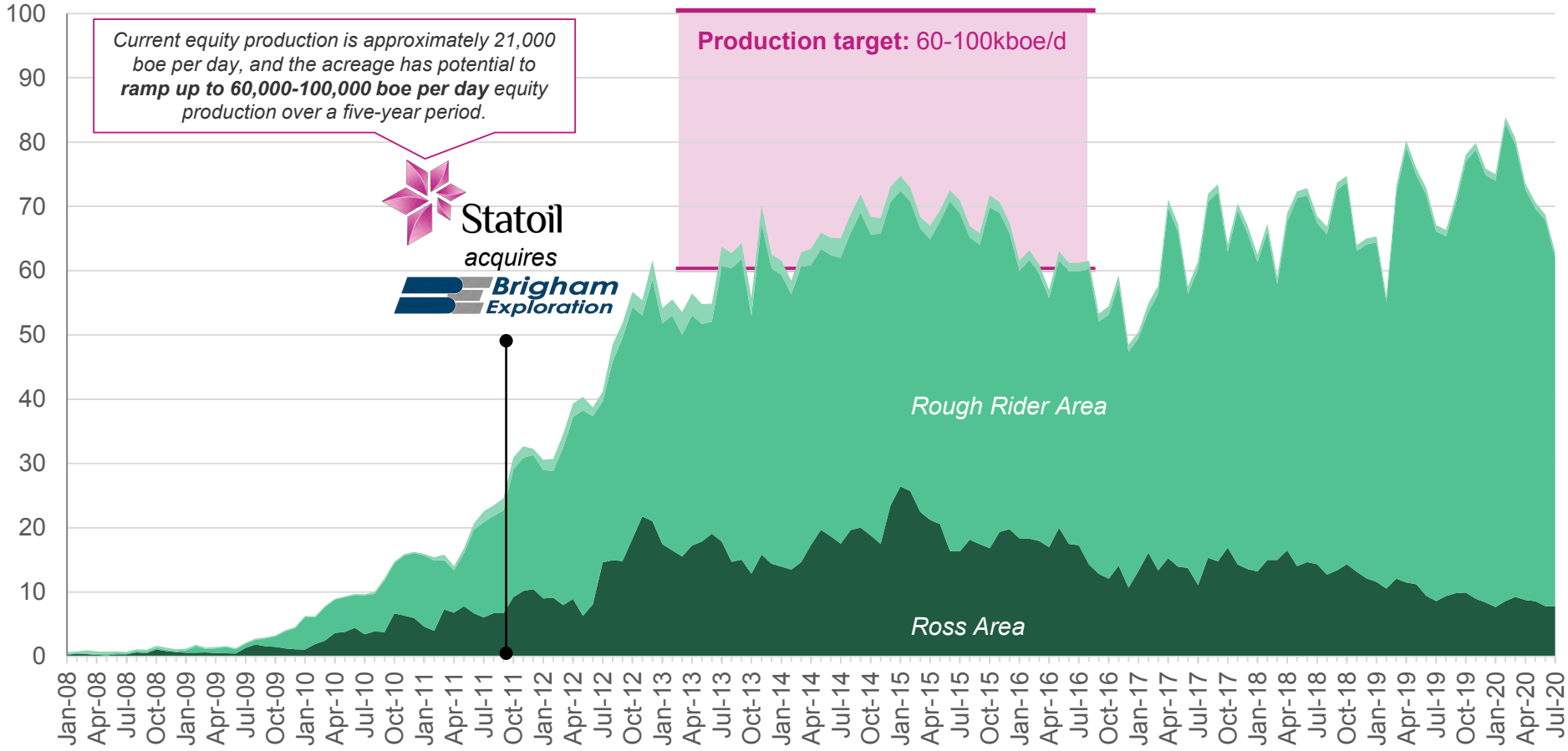
Clearbrook-WTI spread
USD/bbl



*Pipeline takeaway capacity includes local refining
Source: Bloomberg; UCube; North Dakota Pipeline Authority (takeaway capacity); Rystad Energy research and analysis

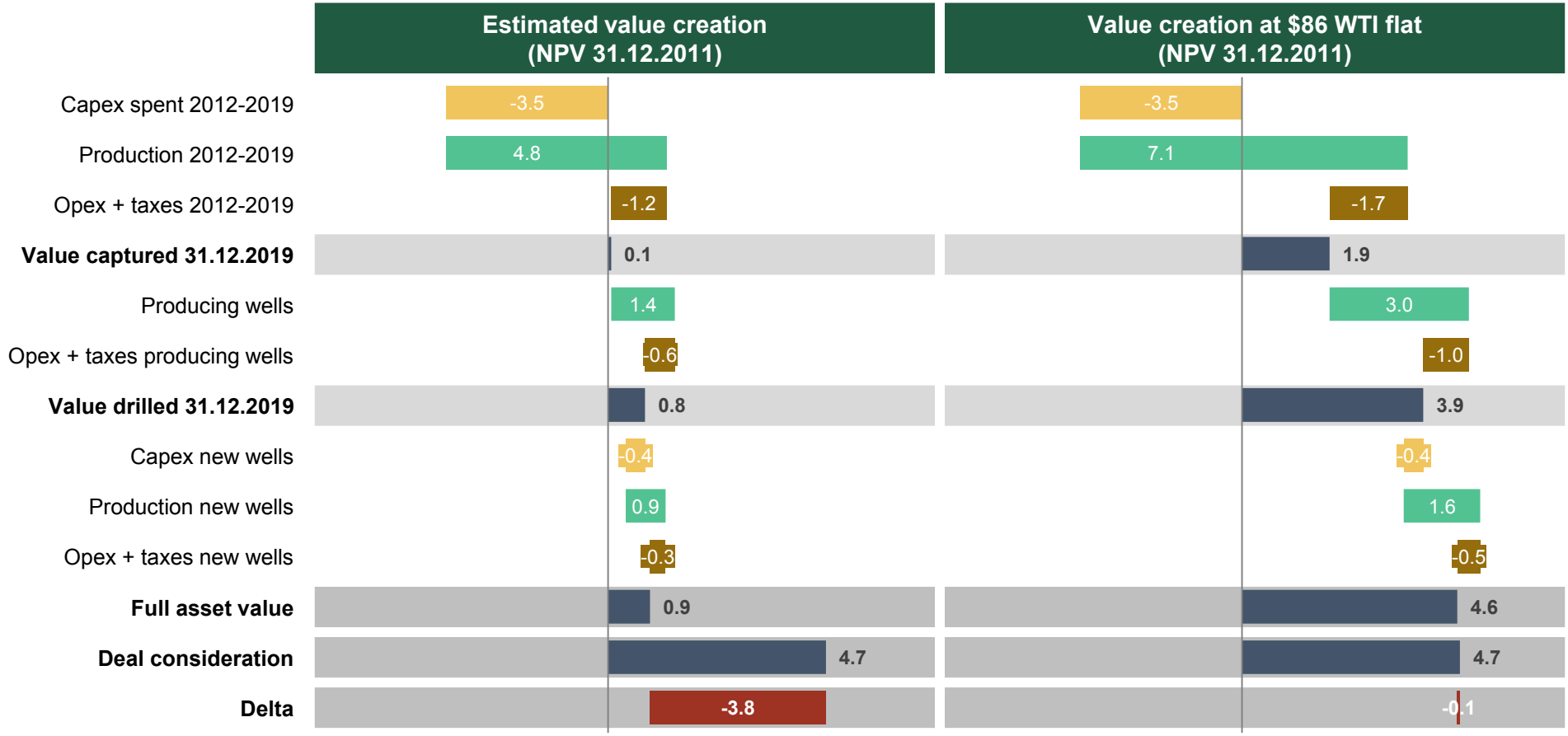
Statoil's initial production target has been reached despite unfavorable market conditions

Equinor/Brigham Bakken production
kboe/d



Source: Rystad Energy research and analysis

When adjusting for market effects the Brigham acquisition was fairly priced



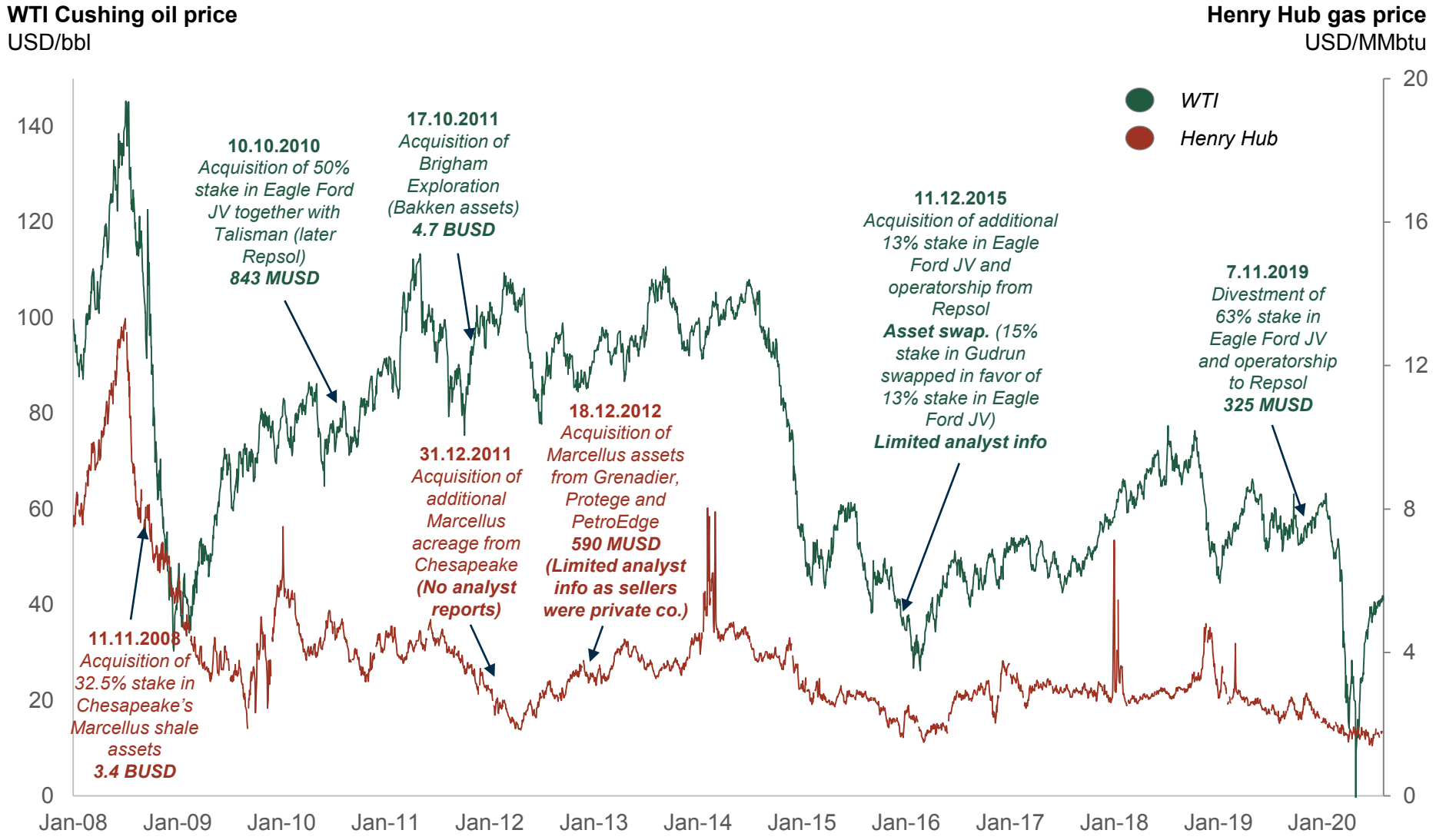
- With full market effects: historical commodity prices obtained in Bakken and Rystad Energy base case price strips forward
- Drilled inventory has yielded 0.8 BUSD, but not enough to defend acqusition price of 4.7 BUSD.

- With expected market effects at time of transaction: Flat 2011 commodity prices adjusted for inflation
- Deal appears value neutral and fairly priced

Production is measured as revenue from entitlement production (revenue after royalties and production tax). WACC of 10% used, inflation rate of 2%. In the value creation adjusted for market effects 2011 average prices are used going forward (WTI 95 USD/bbl, Henry Hub 4 USD/mmBTU). Note: In a different, more positive macro environment it is likely that the drilling program would have looked different and that service price escalation would have been higher. This has not been accounted for in the valuation that has been adjusted for market effects.
Source: Company news reports; UCube; ShaleWellCuibe; Rystad Energy research and analysis

Index

Seven sizeable onshore transactions in the US by Statoil in the period from 2008 to 2019



Source: Rystad Energy research and analysis

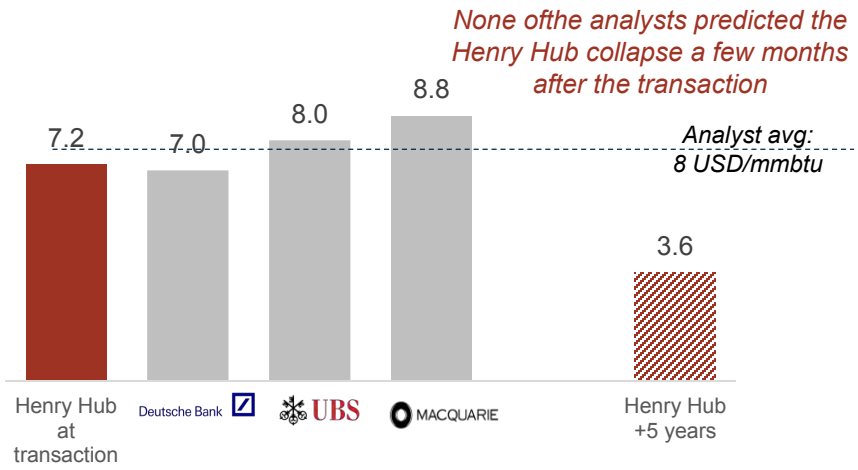
Summary of analyst evaluations

	Description	Analysts	Summary of analyst evaluation
11/11-2008 **Acquiring 32.5% stake in Chesapeake Marcellus assets** Value: 3.4 BUSD	*On November 11, 2008, StatoilHydro announced that it would enter US unconventional by acquiring a 32.5% stake in Chesapeake's Marcellus assets for 3.375 BUSD.*	DNB Markets J.P.Morgan UBS Deutsche Bank	• All analysts believed that the acquisition represented a sound strategic entry into US onshore, but analysts disagreed on pricing. • DNB Markets stated that Marcellus was a quality asset, pricing, while other banks saw too ambitious production targets. • Chesapeake (the seller) in liquidity squeeze at the time, could have helped StatoilHydro's bargaining power to obtain an even lower price.
10/10-2010 **JV with Talisman in Eagle Ford** Value: 843 MUSD	*On October 10, 2010, Statoil announced that it would acquire a 50% stake in Eagle Ford through a joint venture with Talisman (later Repsol) for 843 MUSD. The acreage was acquired from Enduring Resources and Talisman.*	Nordea DNB Markets UBS Arctic Securities Cheuvreux	• The overall takeaway of the equity research reports is that the acquisition s fairly priced and that it makes sense strategically. • At the time Statoil was also looking at other potential shale plays globally and the knowledge and experience the company would gather from being an operator in the Eagle Ford was therefore also key for their success in shale globally.
17/10-2011 **Acquisition of Brigham Exploration** Value: 4.7 BUSD	*On October 17, 2011, Statoil announced that it intended to acquire Brigham Exploration and its Bakken assets for 4.7 BUSD. The price represented a 36% premium to the 30-day trailing average price.*	Deutsche Bank Societe Generale Swedbank Pareto Securities Barclays UBS	• All banks had unchanged recommendations for their Statoil target pricing compared to their previous target pricing, implies a neutral valuation. • Several analysts noted that the deal was expensive compared to previous transactions in the Bakken and that it required high oil prices to create value. • Most analysts acknowledged the deal as the right strategic move in the continuation of Statoil's strategic decision to move into shale.
7/11-2019 **Divestment of Eagle Ford assets** Value: 325 MUSD	*On November 7, 2019, Equinor announced that it would sell all its stake (63%) in the Eagle Ford JV and operatorship to Repsol for 325 MUSD. The consideration was significantly lower than the 843 MUSD Equinor had to pay for 50% ownership back in 2010.*	Berenberg Societe Generale	• Limited analyst coverage on the transaction from Equinor's perspective. • Berenberg supported Equinor's exit from the Eagle Ford at the time since the US operations had been challenging and led to significant impairments. The transaction was also recommended due to its favorable pricing. • The acquirer, Repsol said that the field breakeven level was at above $55 USD/boe without synergies, which would have barely made it profitable in the end of 2019. Therefore, overall good deal for Equinor.
		Deal summary	**According to analysts, most of Statoil's US onshore acquisitions had a clear strategic rationale and were reasonably priced. The exception is the Brigham deal, which was viewed as an expensive deal.**

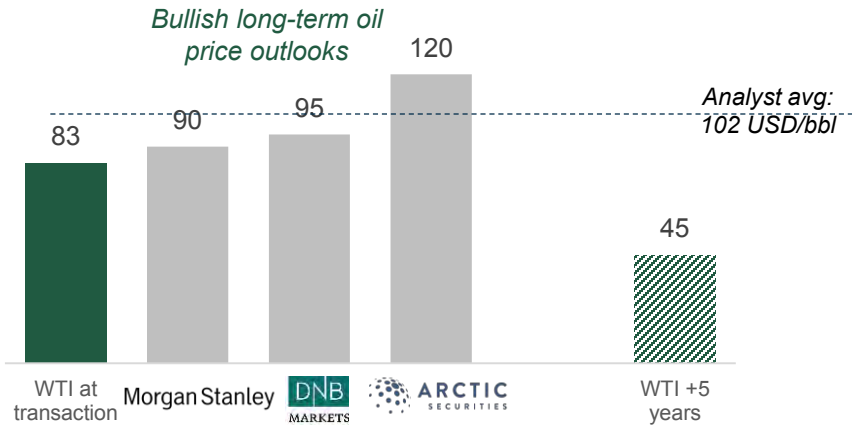
Source: Rystad Energy research and analysis

Positive long-term commodity price outlooks at the time of the transactions were expected to increase

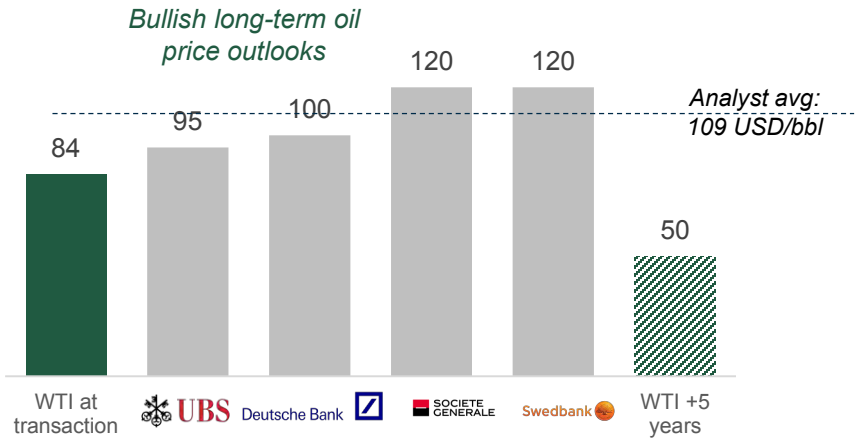
11/11-2008: 32.5% stake in Marcellus



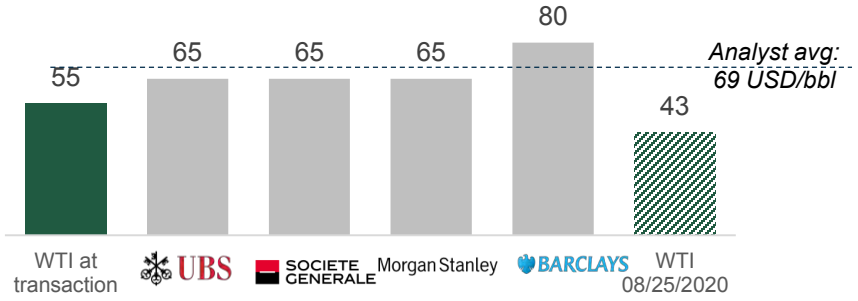
10/10-2010: JV in Eagle Ford



17/10-2011: Acquisition of Brigham



7/11-2019: Divestment in Eagle Ford



*For the analysts price outlooks, the longest time horizon provided has been used.
Source: Research reports, Rystad Energy research and analysis

11/11-2008: StatoilHydro acquires 32.5% in Chesapeake's Marcellus assets for 3.4 BUSD

Deal description

On November 11, 2008 StatoilHydro announced that it would enter US unconventional by acquiring a 32.5% stake in Chesapeake's Marcellus assets for 3.375 BUSD.

Key deal metrics

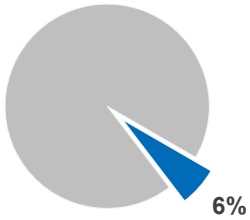
Deal value: 3.375 BUSD

Production: 50 kboed by 2012

Net acres: 585k

Area: Marcellus

Deal size relative to STO's EV*

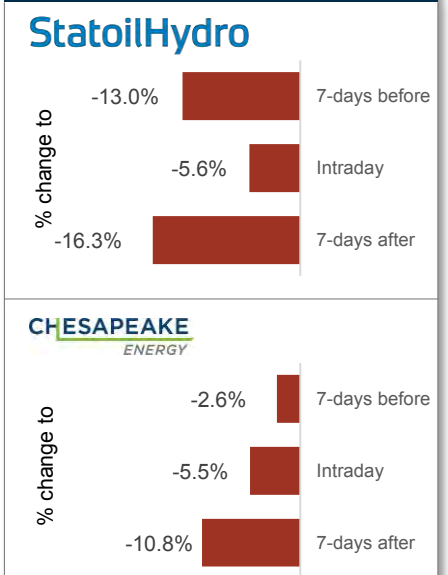


STO share price:** 126 NOK

Communicated deal rationale by StatoilHydro

- Deal makes sense for StatoilHydro as it contributes to diversify its upstream portfolio.
- The acquisition enhances StatoilHydro's offering in the international gas value chain and increases the company's flexibility in LNG cargo arbitrage by sending gas through Cove Point.
- The high gas prices in 2008 were expected to continue and it therefore made sense to invest in a gas play.

Change in stock price following announcement



Analyst	Analyst evaluation	Analyst summary
DNB MARKETS	Target stock price: 180 NOK	*Views that the pricing of the gas in the acquisition is fairly good and emphasizes the maturity of the field as an advantage as a lot of technical work has been conducted. Also stresses that it is a good strategic step into new secure reserves in quality assets in North America.*
J.P.Morgan	Target stock price: 170 NOK	*Thinks the deal makes good strategic sense and boosts StatoilHydro's equity gas position in the US. JP Morgan also believes the pricing is reasonable and maintains its overweight recommendation for the stock.*
Deutsche Bank	Target stock price: 100 NOK	*As JP Morgan and DNB Markets, Deutsche Bank thinks the deal makes strategic sense, but also see some limitations with the deal. First, they believe forecasted production could be to agressive and that they see potentially lower gas prices as new supply was coming on stream globally.*
UBS	Target stock price: 160 NOK	*Also believes it is a good strategic move, but also stresses that the Marcellus development is complex and that production targets could be difficult to reach. They also see potentially weakening oil prices and more negative macro conditions. In summary, the price paid by StatoilHydro is above UBS' estimate.*

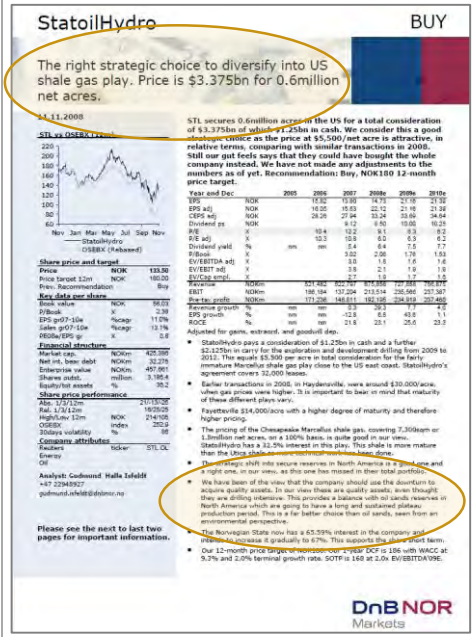
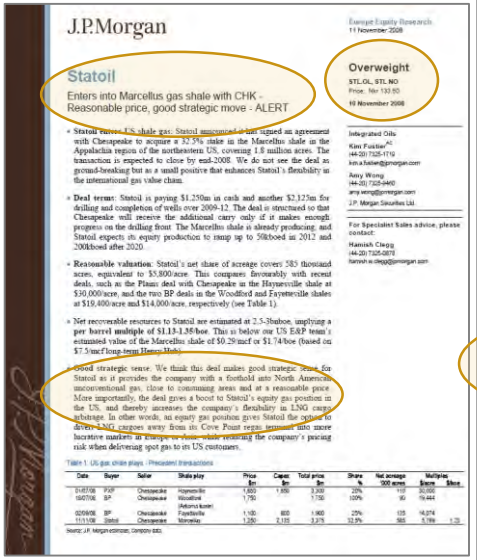
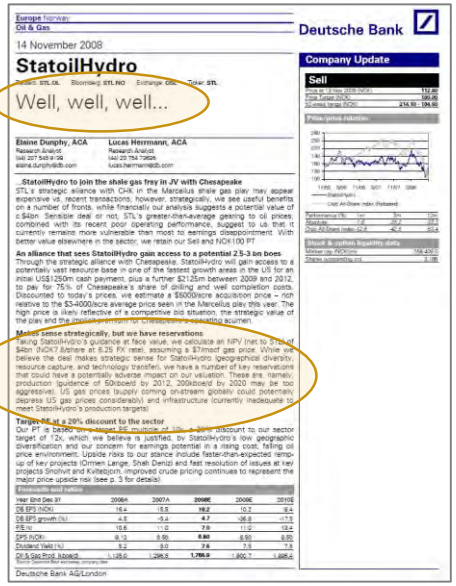
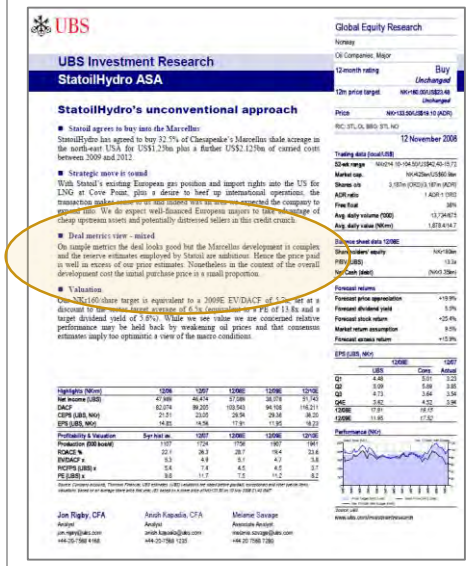
Overall evaluation

All analysts believed that the acquisition represented a sound strategic entry into US onshore, but analysts disagreed on pricing. DNB Markets stressed that Marcellus was a quality asset with lots of technical work conducted, which defended the pricing, while other banks saw too ambitious production targets and lower future gas prices. Chesapeake was also in a liquidity squeeze, which could have helped StatoilHydro's bargaining power to obtain an even lower price.

"Neutral deal"

*EV=enterprise value at time of transactions **Closing prices
Source: Rystad Energy research and analysis

11/11-2008: StatoilHydro acquires 32.5% in Chesapeake's Marcellus assets for 3.4 BUSD

DNB MARKETS	J.P.Morgan	Deutsche Bank	UBS
"In our view these are quality assets, even though they are drilling intensive"	*"Reasonable price, good strategic move"*	*"Well, well, well…"*	*"On simple metrics the deal looks good but…."*
			
"The strategic shift into secure reserves in North America is a good one and a right one, in our view, as this one has missed in their total portfolio"	*"We think this deal makes good strategic sense to Statoil as it provides the company with a foothold in North American unconventional gas, close to consuming areas and at a reasonable price"*	*"We have a number of key reservations, namely production (may be too aggressive), US gas prices and infrastructure"*	*"The Marcellus development is complex, and the reserve estimates employed by Statoil are ambitious. Hence the price paid is well in excess of our prior estimates"*

Source: Rystad Energy research and analysis

10/10-2010: Acquisition of 50% stake in Eagle Ford JV together with Talisman for 0.8 BUSD

Deal description

On October 10, 2010 Statoil announced that it would acquire a 50% stake in Eagle Ford through a joint venture with Talisman (later Repsol) for 843 MUSD. The acreage was acquired from Enduring Resources and Talisman Energy.

Key deal metrics

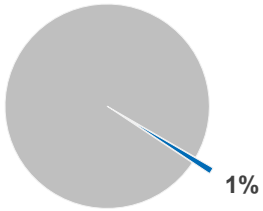
Deal value: 0.843 BUSD

Resources: 550 million boe

Net acres: 67k

Area: Eagle Ford

Deal size relative to STO's EV*

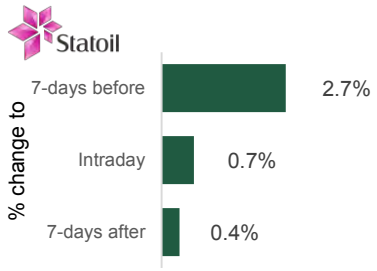


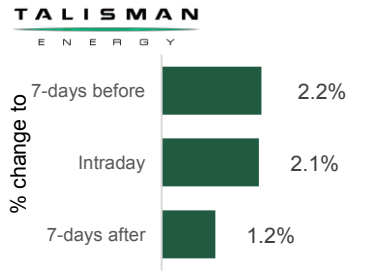
STO share price:** 127.8 NOK

Communicated deal rationale by Statoil

- Strategic importance of becoming a shale operator was key in this deal for Statoil as they had ambitions of being involved in other shale plays globally.
- The knowledge and experience they would gather from being an operator in the Eagle Ford was therefore key for their success in shale plays globally.
- The deal also made sense as they increased their position in US shale gas after having entered shale gas in the Marcellus two years prior.

Change in stock price following announcement





Analyst	Analyst evaluation	Analyst summary
Nordea	*Target stock price: 150 NOK*	*Judged the pricing of the transaction as fair after having compared it to recent transactions in the Eagle Ford. Stressed that the acquisition was important for Statoil to gather experiences before investing in other shale plays globally.*
DNB MARKETS	*Target oil price: 95 USD/bbl* *Target stock price: 160 NOK*	*DNB Markets judged the pricing as fair, similar to Nordea Markets. That was primarily because of the asset being a liquid rich shale play (50/50 liquids and gas).*
UBS	*Target stock price: 135 NOK*	*UBS emphasized that increasing position in US shale made strategic sense as they were already present in the Marcellus play. In addition, deal price seemed reasonable. Also mentioned that it would provide valuable experience for Statoil.*
ARCTIC SECURITIES	*Target oil price: 120 USD/bbl* *Target stock price: 180 NOK*	*Arctic menttioned that transaction prices had increased in the Eagle Ford, which could imply that Statoil had to pay extra to enter Eagle Ford late. Therefore neutral valuation.*
CHEUVREUX CRÉDIT AGRICOLE GROUP	*Target stock price: 155 NOK*	*Fair valuation when comparing to other transactions that was conducted in the past two years. Acquisition made sense as Statoili was increasing its exposure to and knowledge of US non-conventional resources.*

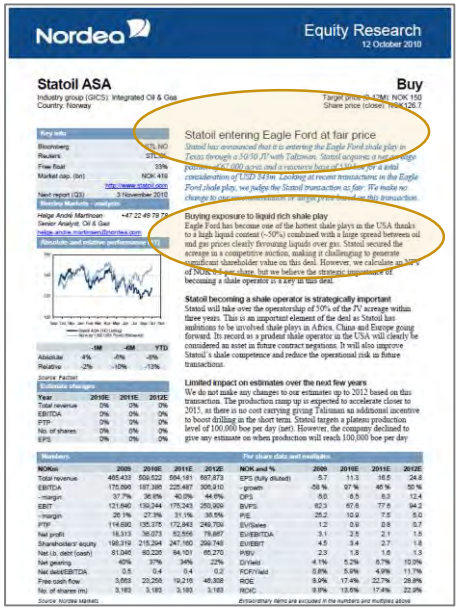
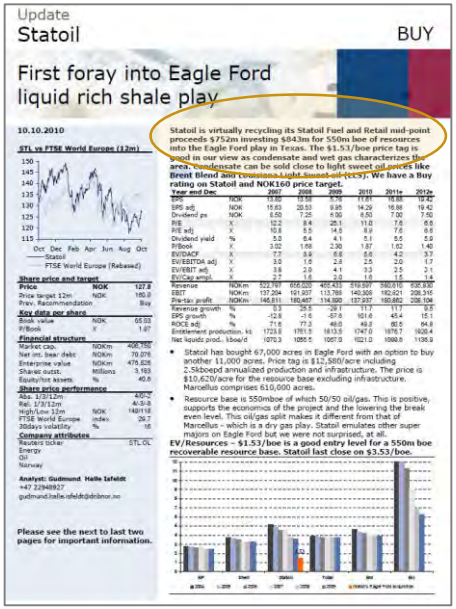
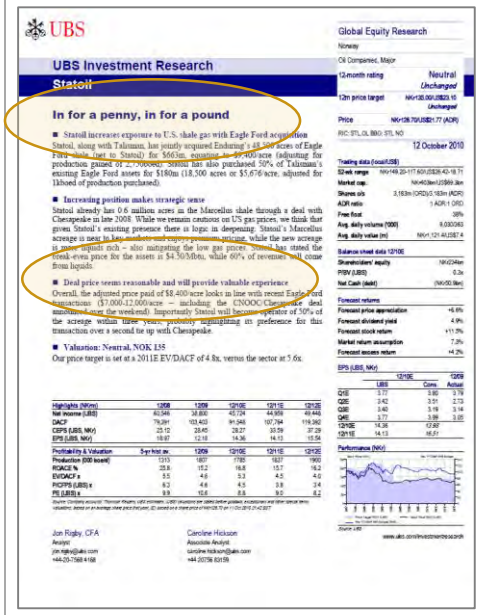
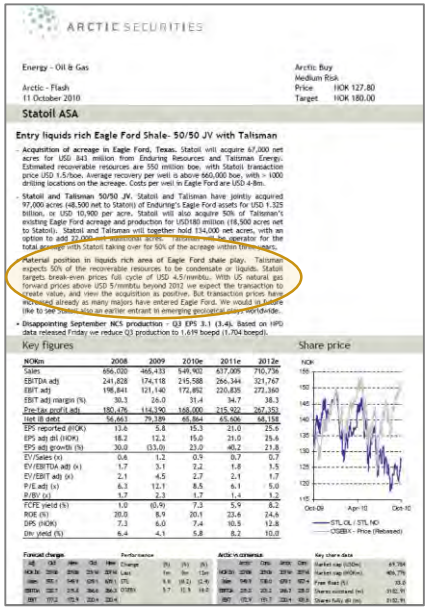
Overall evaluation

The overall takeaway of the equity research reports is that the acquisition was fairly priced and that it made sense strategically. In addition, as Statoil was looking at other potential shale plays globally the knowledge and experience the company would gather from being an operator in the Eagle Ford was key for their success in shale plays globally.

"Good deal"

*EV=enterprise value at time of transactions **Closing prices
Source: Rystad Energy research and analysis

10/10-2010: Acquisition of 50% stake in Eagle Ford JV together with Talisman for 0.8 BUSD

Nordea	DNB MARKETS	UBS	ARCTIC SECURITIES
"Statoil entering Eagle Ford at fair price"	*"First foray into Eagle Ford liquid rich shale play"*	*"In for a penny, in for a pound"*	*"We expect the transaction to create value, and view the acquisition as positive"*
			
"Eagle Ford has become one of the hottest shale plays in the USA thanks to a high liquid content (~50%). Prices clearly favors liquids over gas"	*"Statoil is virtually recycling its Statoil Fuel and Retail mid-point proceeds $752m investing $843m into the Eagle Ford play in Texas"*	*"Deal price seems reasonable and will provide valuable experience"*	*"Transaction prices have increased already as many majors have entered Eagle Ford"*

Source: Rystad Energy research and analysis

2000 people at Statoil have been staffed looking at international opportunities in shale

STO - Statoil ASA enters Eagle Ford shale - Strengthens US onshore portfolio Conference Call

Event Date/Time: Oct. 11. 2010 / 1:45PM GMT

John Knight - *Statoil ASA - SVP, Business Development and Global Unconventional Gas*

At the time we announced the Marcellus deal, we said that we were also forming a joint group with Chesapeake to look at deals outside of North America, and we have had a joint team looking at those things for the last two years. There is about 2000 people. Chesapeake concentrating mostly on the G&G in the [coring] office. We have also had some diligence in there, but we have looked mostly at the commercial terms available in other parts of the world and the above ground risks in the Statoil part of the team.

We have done a very extensive review of opportunities around the world, but particularly in Europe, and we have been into about 1000 data rooms jointly with Chesapeake.

The one thing that we have chosen to do with them is to have this study agreement in South Africa I've referred to. And this November is a point at which we and Chesapeake need to agree amongst ourselves whether to continue in a formal or informal way looking at deals together. So once we have sat down with Chesapeake a month or so time, we will have more news for you as to what will happen to the joint venture beyond this current timeline, which ends in November.

Source: Rystad Energy research and analysis

Statoil entered Bakken at a high price to secure drilling technology and industry knowledge

Deal description

Brigham Exploration

On October 17, 2011 Statoil (STO) announced that it intended to acquire Brigham Exploration (BEXP) and its Bakken assets for 4.7 BUSD. The price represented a 36 % premium to the 30-day trailing average price.

Key deal metrics

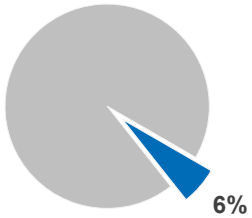
Deal value: 4.7 BUSD

Resources: 300-500 mmboe

Net acres: 415k

Area: Bakken

Deal size relative to STO's EV*

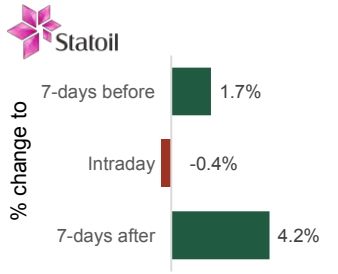


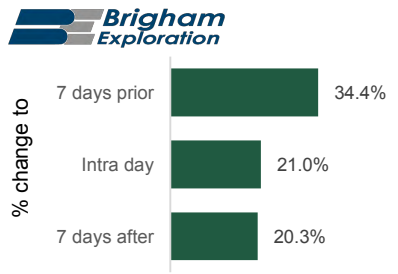
STO share price:** 137 NOK

Communicated deal rationale by Statoil

- Was consistent with Statoil's strategy and supplemented its previously acquired stakes in the Marcellus and the Eagle Ford.
- Acquisition would also help diversify Statoil's portfolio away from only NCS operations.
- Acquisition included access to pipeline, leading drilling technology and valuable industry knowledge.

Change in stock price following announcement





Analyst	Analyst evaluation	Analyst summary
Deutsche Bank	*Target oil price: 100 USD/bbl* *Target stock price: 160 NOK*	• *Viewed the acquisition as a logic extension of Statoil's company strategy.* • *Retained their "buy" recommendation with a high target price.*
SOCIETE GENERALE	*Target oil price: 119 USD/bbl* *Target stock price: 137 NOK*	• *Pricy acquisition but Statoil's balance sheet remained solid.* • *Deal consistent with Statoil's strategy.*
BARCLAYS	*Target stock price: 175 NOK*	• *Noted that Statoil did a corporate deal and not only an asset deal because of the expertise of BEXP's management.* • *Statoil's share price remained relatively robust after announcement of deal.*
Pareto Securities	*Target oil price: 119 USD/bbl* *Target stock price: 120 NOK*	• *Viewed the price as high.* • *Price implied WTI long term at 90-95 USD/bbl.* • *Deal provided Statoil with new expertise and technology, which helps defend the high price.*
UBS	*Target oil price: 95 USD/bbl* *Target stock price: 150 NOK*	• *UBS calculated a breakeven level for the deal at greater than 70 USD/bbl.* • *Deal made sense because of presence in US onshore and because of expectations for high oil prices in the future.*
Swedbank	*Target oil price: 120 USD/bbl* *Target stock price: 185 NOK*	• *Viewed the deal as expensive but mentioned that Statoil had demonstrated ability to generate value from what seemed to be expensive transactions in the past.*

Overall evaluation

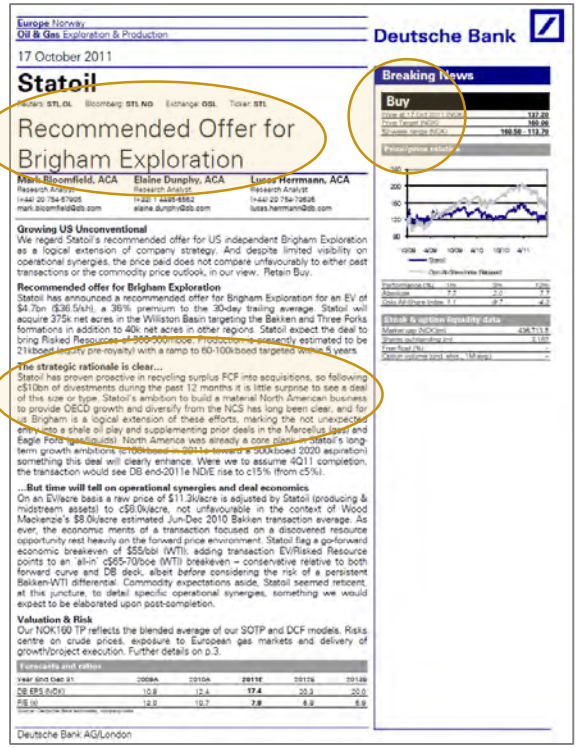
All banks had unchanged recommendations for their Statoil target pricing compared to their previous target pricing. This could imply a neutral valuation. On the other hand, several banks believed that it was an expensive deal but justified it in their belief that Statoil would be able to create value with future oil prices at well above 100 USD/bbl and through portfolio management.

"Strategic, but too expensive"

*EV=enterprise value at time of transactions **Closing prices
Source: Rystad Energy research and analysis

Deutsche Bank, Societe Generale and Barclays were the most optimistic deal analysts

Deutsche Bank



Europe Norway
Oil & Gas Exploration & Production

Deutsche Bank

17 October 2011

Statoil

Recommended Offer for Brigham Exploration

Breaking News

Buy

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Growing US Unconventional
We regard Statoil's recommended offer for US independent Brigham Exploration as a logical extension of company strategy. And despite limited visibility on operational synergies, the price paid does not compare unfavourably to either past transactions or the commodity price outlook, in our view. Retain Buy.

Recommended offer for Brigham Exploration
Statoil has announced a recommended offer for Brigham Exploration for an EV of $4.7bn ($36.5/sh), a 36% premium to the 30-day trailing average. Statoil will acquire 375k net acres in the Williston Basin targeting the Bakken and Three Forks formations in addition to 40k net acres in other regions. Statoil expect the deal to bring Risked Resources of 300-500mboe. Production is presently estimated to be 21kboed (equity pre-royalty) with a ramp to 60-100kboed targeted within 5 years.

The strategic rationale is clear...
Statoil has proven proactive in recycling surplus FCF into acquisitions, so following c$10bn of divestments during the past 12 months it is little surprise to see a deal of this size or type. Statoil's ambition to build a material North American business to provide OECD growth and diversify from the NCS has long been clear, and for us Brigham is a logical extension of these efforts, marking the not unexpected entry into a shale oil play and supplementing prior deals in the Marcellus (gas) and Eagle Ford (gas/liquids). North America was already a core plank in Statoil's long-term growth ambitions (c100kboed in 2011e toward a 300kboed 2020 aspiration) something this deal will clearly enhance. Were we to assume 4Q11 completion, the transaction would see DB end-2011e ND/E rise to c15% (from c5%).

...But time will tell on operational synergies and deal economics
On an EV/acre basis a raw price of $11.3k/acre is adjusted by Statoil (producing & midstream assets) to c$8.0k/acre, not unfavourable in the context of Wood Mackenzie's $8.0k/acre estimated Jun-Dec 2010 Bakken transaction average. As ever, the economic merits of a transaction focused on a discovered resource opportunity rest heavily on the forward price environment. Statoil flag a go-forward economic breakeven of $55/bbl (WTI), adding transaction EV/Risked Resource points to an 'all-in' c$65-70/boe (WTI) breakeven – conservative relative to both forward curve and DB deck, albeit before considering the risk of a persistent Bakken-WTI differential. Commodity expectations aside, Statoil seemed reticent, at this juncture, to detail specific operational synergies, something we would expect to be elaborated upon post-completion.

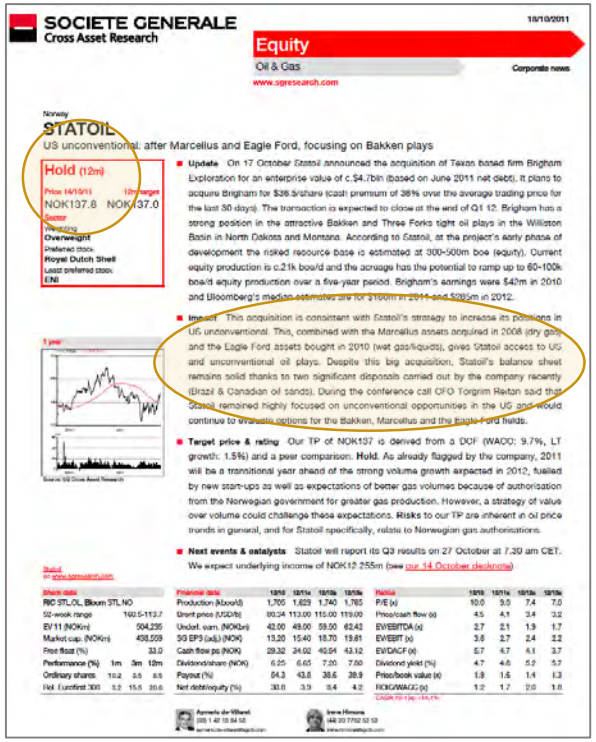
Valuation & Risk
Our NOK160 TP reflects the blended average of our SOTP and DCF models. Risks centre on crude prices, exposure to European gas markets and delivery of growth/project execution. Further details on p.3.

Deutsche Bank AG/London

"We regard Statoil's recommended offer for Brigham Exploration as a logical extension of company strategy"

"The price paid does not compare unfavorably to either past transactions or the commodity price outlook"

SOCIETE GENERALE



SOCIETE GENERALE
Cross Asset Research

18/10/2011

Equity
Oil & Gas
Corporate news
www.sgresearch.com

Norway
STATOIL
US unconventional: after Marcellus and Eagle Ford, focusing on Bakken plays

Hold (12m)
Price 14/10/11 — 12m target
NOK137.8 — NOK137.0
Sector
Weighting
Overweight
Preferred stock:
Royal Dutch Shell
Least preferred stock:
ENI

- **Update**: On 17 October Statoil announced the acquisition of Texas based firm Brigham Exploration for an enterprise value of c.$4.7bn (based on June 2011 net debt). It plans to acquire Brigham for $36.5/share (cash) premium of 36% over the average trading price for the last 30 days. The transaction is expected to close at the end of Q1 12. Brigham has a strong position in the attractive Bakken and Three Forks tight oil plays in the Williston Basin in North Dakota and Montana. According to Statoil, at the project's early phase of development the risked resource base is estimated at 300-500m boe (equity). Current equity production is c.21k boe/d and the acreage has the potential to ramp up to 60-100k boe/d equity production over a five-year period. Brigham's earnings were $42m in 2010 and Bloomberg's median estimates are for $160m in 2011 and $285m in 2012.
- **Impact**: This acquisition is consistent with Statoil's strategy to increase its positions in US unconventional. This, combined with the Marcellus assets acquired in 2008 (dry gas) and the Eagle Ford assets bought in 2010 (wet gas/liquids), gives Statoil access to US and unconventional oil plays. Despite this big acquisition, Statoil's balance sheet remains solid thanks to two significant disposals carried out by the company recently (Brazil & Canadian oil sands). During the conference call CFO Torgrim Reitan said that Statoil remained highly focused on unconventional opportunities in the US and would continue to evaluate options for the Bakken, Marcellus and the Eagle Ford fields.
- **Target price & rating**: Our TP of NOK137 is derived from a DCF (WACC: 9.7%, LT growth: 1.5%) and a peer comparison. **Hold**. As already flagged by the company, 2011 will be a transitional year ahead of the strong volume growth expected in 2012, fuelled by new start-ups as well as expectations of better gas volumes because of authorisation from the Norwegian government for greater gas production. However, a strategy of value over volume could challenge these expectations. Risks to our TP are inherent in oil price trends in general, and for Statoil specifically, relate to Norwegian gas authorisations.
- **Next events & catalysts**: Statoil will report its Q3 results on 27 October at 7.30 am CET. We expect underlying income of NOK12.255m (see our 14 October deskrone).

Statoil
on www.sgresearch.com

Share data	
RIC STL.OL, Bloom STL NO	
52-week range	102.5-113.7
EV/11 (NOKm)	504,235
Market cap. (NOKm)	458,509
Free float (%)	33.0
Performance (%) 1m 3m 12m	
Ordinary shares	10.2 3.5 6.5
Rel. Eurofirst 300	5.2 15.5 20.6

Financial data	12/10	12/11e	12/12e	12/13e
Production (kboe/d)	1,705	1,829	1,740	1,765
Brent price (USD/b)	80.54	113.00	115.00	119.00
Undist. earn. (NOKbn)	42.00	48.00	59.50	62.42
SG EPS (adj) (NOK)	13.20	15.40	18.70	19.81
Cash flow ps (NOK)	29.32	24.02	40.64	42.12
Dividend/share (NOK)	6.25	6.65	7.20	7.60
Payout (%)	54.3	43.8	38.6	38.9
Net debt/equity (%)	30.8	3.9	8.4	4.2

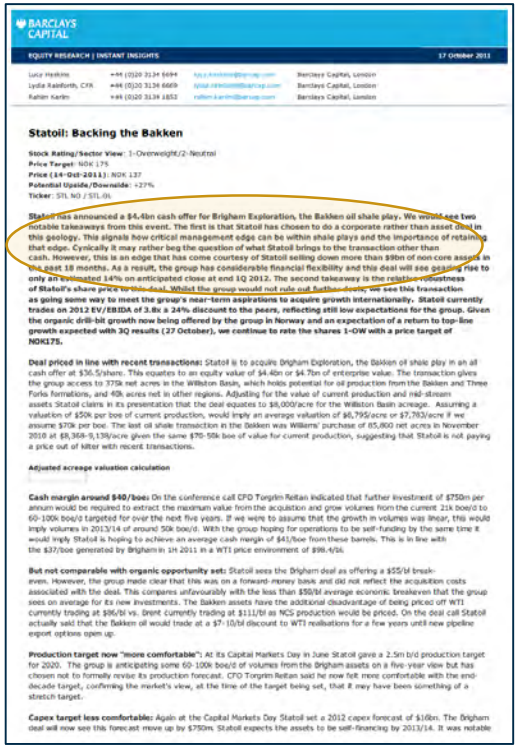
Ratios	12/10	12/11e	12/12e	12/13e
P/E (x)	10.0	9.0	7.4	7.0
Price/cash flow (x)	4.5	4.1	3.4	3.2
EV/EBITDA (x)	2.7	2.1	1.9	1.7
EV/EBIT (x)	3.8	2.7	2.4	2.2
EV/DACF (x)	5.7	4.7	4.1	3.7
Dividend yield (%)	4.7	4.8	5.2	5.7
Price/book value (x)	1.9	1.6	1.4	1.3
ROIC/WACC (x)	1.2	1.7	2.0	1.8

Annette de Willard — (33) 1 42 13 54 18
Irene Himona — (44 20) 7762 52 13

"Acquisition is consistent with Statoil's strategy to increase its positions in US unconventional"

"Despite the big acquisition, Statoil's balance sheet remains solid thanks to two significant disposals carried out by the company recently (Brazil & Canadian oil sands)"

BARCLAYS



BARCLAYS CAPITAL
EQUITY RESEARCH | INSTANT INSIGHTS — 17 October 2011

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Statoil: Backing the Bakken

Stock Rating/Sector View: 1-Overweight/2-Neutral
Price Target: NOK 175
Price (14-Oct-2011): NOK 137
Potential Upside/Downside: +27%
Ticker: STL NO / STL.OL

Statoil has announced a $4.4bn cash offer for Brigham Exploration, the Bakken oil shale play. We would see two notable takeaways from this event. The first is that Statoil has chosen to do a corporate rather than asset deal in this geology. This signals how critical management edge can be within shale plays and the importance of retaining that edge. Cynically it may rather beg the question of what Statoil brings to the transaction other than cash. However, this is an edge that has come courtesy of Statoil selling down more than $9bn of non-core assets in the past 18 months. As a result, the group has considerable financial flexibility and this deal will see gearing rise to only an estimated 14% on anticipated close at end 1Q 2012. The second takeaway is the relative robustness of Statoil's share price to the deal. Whilst the group would not rule out further deals, we see this transaction as going some way to meet the group's near-term aspirations to acquire growth internationally. Statoil currently trades on 2012 EV/EBIDA of 3.8x a 24% discount to the peers, reflecting still low expectations for the group. Given the organic drill-bit growth now being offered by the group in Norway and an expectation of a return to top-line growth expected with 3Q results (27 October), we continue to rate the shares 1-OW with a price target of NOK175.

Deal priced in line with recent transactions: Statoil is to acquire Brigham Exploration, the Bakken oil shale play in an all cash offer at $36.5/share. This equates to an equity value of $4.4bn or $4.7bn of enterprise value. The transaction gives the group access to 375k net acres in the Williston Basin, which holds potential for oil production from the Bakken and Three Forks formations, and 40k acres net in other regions. Adjusting for the value of current production and mid-stream assets Statoil claims in its presentation that the deal equates to $8,000/acre for the Williston Basin acreage. Assuming a valuation of $50k per boe of current production, would imply an average valuation of $6,795/acre or $7,783/acre if we assume $70k per boe. The last oil shale transaction in the Bakken was Williams' purchase of 65,800 net acres in November 2010 at $8,368-9,139/acre given the same $70-50k boe of value for current production, suggesting that Statoil is not paying a price out of kilter with recent transactions.

Adjusted acreage valuation calculation

Cash margin around $40/boe: On the conference call CFO Torgrim Reitan indicated that further investment of $750m per annum would be required to extract the maximum value from the acquisition and grow volumes from the current 21k boe/d to 60-100k boe/d targeted for over the next five years. If we were to assume that the growth in volumes was linear, this would imply volumes in 2013/14 of around 50k boe/d. With the group hoping for operations to be self-funding by the same time it would imply Statoil is hoping to achieve an average cash margin of $41/boe from those barrels. This is in line with the $37/boe generated by Brigham in 1H 2011 in a WTI price environment of $98.4/bbl.

But not comparable with organic opportunity set: Statoil sees the Brigham deal as offering a $55/bl break-even. However, the group made clear that this was on a forward-money basis and did not reflect the acquisition costs associated with the deal. This compares unfavourably with the less than $50/bl average economic breakeven that the group sees on average for its new investments. The Bakken assets have the additional disadvantage of being priced off WTI currently trading at $96/bl vs. Brent currently trading at $111/bl as NCS production would be priced. On the deal call Statoil actually said that the Bakken oil would trade at a $7-10/bl discount to WTI realisations for a few years until new pipeline export options open up.

Production target now "more comfortable": At its Capital Markets Day in June Statoil gave a 2.5m b/d production target for 2020. The group is anticipating some 60-100k boe/d of volumes from the Brigham assets on a five-year view but has chosen not to formally revise its production forecast. CFO Torgrim Reitan said he now felt more comfortable with the end-decade target, confirming the market's view, at the time of the target being set, that it may have been something of a stretch target.

Capex target less comfortable: Again at the Capital Markets Day Statoil set a 2012 capex forecast of $16bn. The Brigham deal will now see this forecast move up by $750m. Statoil expects the assets to be self-financing by 2013/14. It was notable

"Backing the Bakken"

"We see two notable takeaways. First is that Statoil has chosen to do a corporate rather than asset deal. The second is the relative robustness of Statoil's share price to the deal"

Source: Rystad Energy research and analysis

But other analysts were more pessimistic due to the high price paid

Pareto Securities

Pareto Securities
Equity Research

Statoil
Quarterly Preview
18 October 2011

Statoil enters Bakken

Buy
Hold
Sell

Statoil enters the Bakken play at a price we estimate implies WTI long term at USD 90-95/bbl. Although the price is fairly high, the transaction makes sense strategically. The acquisition adds to and consolidates Statoil's N-American onshore footprint. In addition, it provides the company with access to new expertize/technology and its first operatorship in an unconventional play.

Bakken acquisition: High price, but good strategic fit

Statoil has made a cash offer of Brigham Exploration Company at USD 4.7bn (EV basis). Recoverable resources are estimated at 3-500 mill boe, with significant upside potential. Based on 400 mill boe, we estimate the deal price is equivalent to a long term WTI oil price of USD 90-95/bbl, and we would consider this as a 'full price' for the assets. On the other hand, Statoil gains a highly skilled company with a solid operational track record, as well as its first operated unconventional asset. Overall, Statoil's unconventional portfolio now has a potential to reach 3-500' boe/day over a ten year period (of which this transaction contributes 60-100' boe/day).

Q3'11 report: We expect lower EPS q/q on lower realized prices

Statoil reports Q3'11 results on Thursday 27 October at 07:30 CET. We expect underlying EPS of NOK 3.7, down from NOK 4.0 in Q2'11, largely due to lower oil and gas prices. We estimate equity production of 1.77 mill boe/day, up from 1.69 mill boe/day in Q2'11.

Ample upside from current share price

Based on our estimates, STL trades at P/E 5.7x2011e, or 8.8x2011e adjusted for sales gains. This is an attractive level, as the company historically has traded at P/E 9-10x on average. Based on our DCF model, the current share price implies a long term oil price of USD 95/bbl. We forecast USD 120/bbl, and with Statoil's pure play upstream profile, we think STL is an attractive bet. BUY, TP NOK 195.

NOKm	2009	2010	2011e	2012e	2013e
Mcap.	460,981	441,025	436,703	436,703	436,703
Net debt	72,367	69,681	55,048	49,214	34,923
Revenues	463,655	528,515	678,000	722,000	742,000
EBITDA	173,918	186,703	245,956	277,556	287,056
EBIT	119,862	136,095	196,456	217,656	219,756
EPS	5.75	11.97	23.99	19.76	20.70
EPS adj	12.03	13.24	15.65	19.76	20.70
EV/EBITDA	3.1	2.8	2.0	1.8	1.7
EV/EBIT	4.5	3.8	2.5	2.3	2.2
P/E adj	12.0	10.5	8.8	6.9	6.6
FCF yield (%)	1.3	1.0	3.7	6.1	8.4
Div yield (%)	4.1	4.5	4.7	5.1	5.5

Source: Pareto

Target price (NOK)	195
Share price (NOK)	137

Forecast changes

%	2011e	2012e	2013e
EBIT	-4%	7%	8%
EPS adj	-6%	6%	9%

Source: Pareto

Pareto vs. consensus average

%	2011e	2012e	2013e
EBITDA	(1.6)	9.7	14.0
EBIT	0.2	9.1	8.5
EPS	5.5	7.8	5.9
EPS adj	(6.0)	10.6	13.1

Source: Pareto and Factset

Ticker	STL.OL, STL NO
Sector	E&P
Shares fully diluted (m)	3,182.0
Market cap (NOKm)	436,570
Net debt (NOKm)	55,048
Minority interests (NOKm)	7,553
Enterprise value 11e (NOKm)	499,104
Free float	33%

Performance

Source: Factset

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"Statoil enters the Bakken play at a price we estimate implies WTI long term at USD 90-95/bbl, and we consider this as a full price for the assets"

"It provides the company with access to new expertise/technology"

UBS

UBS

UBS Investment Research
Statoil

Global Equity Research
Norway
Oil Companies, Major

12-month rating	Buy *Unchanged*
12m price target	NKr150.00/US$26.95 *Unchanged*
Price	NKr137.20/US$24.50 (ADR)

RIC: STL.OL BBG: STL NO

18 October 2011

Trading data (local/US$)

52-wk range	NKr160.50-113.70/US$29.46-20.07
Market cap.	NKr437bn/US$78.0bn
Shares o/s	3,183m (ORD)/3,183m (ADR)
ADR ratio	1 ADR:1 ORD
Free float	33%
Avg. daily volume ('000)	8,378/816
Avg. daily value (m)	NKr1,052.6/US$18.5

Balance sheet data 12/11E

Shareholders' equity	NKr247bn
P/BV (UBS)	0.3x
Net Cash (debt)	(NKr7.69bn)

Forecast returns

Forecast price appreciation	+9.3%
Forecast dividend yield	4.7%
Forecast stock return	+14.0%
Market return assumption	7.0%
Forecast excess return	+7.0%

EPS (UBS, NKr)

	12/11E		12/10
	UBS	Cons.	Actual
Q1	3.33	3.74	3.77
Q2	4.06	4.02	3.42
Q3E	4.38	4.07	2.65
Q4E	5.35	4.89	3.35
12/11E	17.11	*17.25*	
12/12E	18.20	*18.09*	

Performance (NKr)

Source: UBS

www.ubs.com/investmentresearch

Statoil adds Bakken position

■ **Statoil makes all cash offer for Brigham Exploration Company**

Offer of $36.50/share is a 36% premium to the 30-day average. It values Brigham at $4.7bn (including $0.24bn of debt). Brigham brings 300-500Mboe of risked resource in the tight oil Bakken – or 375k net acres. Current production is 21kboed.

■ **Deal deepens Statoil North American position**

Statoil is already present in the Eagle Ford and Marcellus onshore, deepwater GoM and Canadian oil sands. Deepening in North America therefore makes sense in our view (and this is 'not the end' of North American expansion according to the company). At around $9k/acre the price paid appears full and the all in economic breakeven for the deal is probably >$70/bbl (i.e. go forward breakeven of $55/bbl plus acquisition costs). Current production is ~1% of Statoil's total and the 60-100kbd 2016 target would account for an additional 3-5% of our forecast group production.

■ **Statoil capacity significant – we believe more deals are likely**

Even without completion of the proposed disposal of Gassled ($3.2bn) we see Statoil as likely to be very lightly geared by year end and cash generative at $95/bbl long-term. To generate growth with Norway accounting for 80% of group production we believe Statoil needs to grow its international business. Further deals in other key areas – GoM, Brazil, Africa – should not be ruled out, we believe. We believe the market is well aware of this M&A risk and hence will likely shrug it off as long as the deal makes sense.

■ **Valuation: Buy, Nkr150**

Our price target is set at a 2012E EV/DACF of 4.0x, a 23% discount to the sector average.

Highlights (NKm)	12/09	12/10	12/11E	12/12E	12/13E
Net income (UBS)	38,800	42,000	54,419	57,872	56,707
DACF	98,929	92,580	103,091	123,001	127,287
CEPS (UBS, NKr)	28.45	28.29	37.09	38.70	40.16
EPS (UBS, NKr)	12.18	13.20	17.11	18.20	17.83
Profitability & Valuation	**5-yr hist av.**	**12/10**	**12/11E**	**12/12E**	**12/13E**
Production (000 boe/d)	1563	1704	1611	1719	1796
ROACE %	21.0	15.2	20.0	21.2	18.8
EV/DACF x	5.4	5.3	4.6	3.6	3.4
P/CFPS (UBS) x	6.1	4.7	3.7	3.5	3.4
PE (UBS) x	10.4	10.0	8.0	7.5	7.7

Source: Company accounts, Thomson Reuters, UBS estimates. (UBS) valuations are stated before goodwill, exceptionals and other special items. Valuations based on an average share price that year. (E) based on a share price of NKr137.20 on 17 Oct 2011 17:34 BST

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"Deal deepens Statoil North American position"

"At $9k/acre the price paid appears full and the all in economic breakeven for the deal is probably >$70/bbl"

Source: Rystad Energy research and analysis

Swedbank emphasized that the price was rather high compared to Rystad estimates

Swedbank

"Looks like an expensive acquisition"

"Expensive compared to Rystad upstream valuation"

Statoil

Looks like an expensive acquisition

Strong Buy
TP NOK 185

What:

Statoil has announced a USD 4.7bn acquisition of Brigham Exploration Company which holds a 115,000 acres position in the Bakken and Three Forks formations. Compared to several recent transactions in the area, Statoil has paid a significant premium. However, the company has previously demonstrated its ability to generate value from apparently expensive acquisitions (oil sands) which we do not rule out could be the case for Bakken as well. We have included the acquired production in our estimates and lift our 2012E and 2013E EPS by 1% and 2%, respectively. Strong Buy recommendation and target price of NOK 185 reiterated.

Why:

We see four positive aspects in the transaction: 1) Support to 2020 production target, 2) potential value creation through portfolio management recently demonstrated by the oil sand farm down with an estimated IRR Of 29% and value creation of NOK 4.4/share, 3) a relatively low bid premium compared to Brigham's closing price and 4) midstream assets and technology acquired. On the negative side is the fact that the transaction is made on a relative high multiple of close to USD 12/boe and that Rystad Energy's valuation of Brigham's upstream assets implies a bid premium of 82%. In addition, the acquisition is yet another non-core transaction. We think investors seeking US onshore oil exposure rather prefer other names than Statoil, which traditionally has been focusing on offshore and harsh environment.

Investment case:

We have a Strong Buy recommendation on the shares with a 12-month target price of NOK 185. The primary reasons for our positive view are: 1) favorable valuation at EV/GAV of 0.7x, 2) yield protection with an estimated yield of around 5% for 2012 and 3) likely value creation through portfolio management. The key risk factors are future oil and gas prices, production ramp up and production guidance, as well as the increasing portion of gas of overall production.

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1

Pro and cons

Positive

- **Support to 2020 production target:**
  - Statoil has a 2020 production ambition of 2.5 mmboe/day, of which 1.4 mmboe/day is related to production in Norway.. We have, however, some concerns related to production growth outside Norway due to somewhat lower visibility for new production. The acquisition of Brigham reduces the overall risk to the 2020 production target of 2.5 mmboe/day.
- **Value creation through portfolio management:**
  - Statoil has previously made acquisitions which at first glance looked expensive, but have proved to be profitable after some time. Both the oil sand project in Canada (estimated IRR of 29% after partial divestment) and the operational data from Marcellus are good examples.
- **A relatively low bid premium:**
  - Statoil pays a 36.5% premium compared to Brigham's average share price over the past 30 days and 20.2% compared to the closing price on Friday. In our view, the bid premium is relatively low.
- **Midstream assets and technology acquired:**
  - The acquisition of Brigham includes access to pipeline and a leading drilling technology.

Negative

- **Apparently expensive per boe:**
  - Statoil pays USD 4.7bn for Brigham's assets, which corresponds to an EV/boe of USD 11.8. Statoil now trades at en EV/1P reserves of around USD 16. Considering that Statoil's total resource base (a much wider definition than 1P reserves) implies an EV/resources of much less that USD 16/boe, and we assume the company must invest heavily in the Brigham assets (estimated USD 750m in 2012), the transaction price of USD 11.8 looks expensive compared.
- **Expensive compared to Rystad upstream valuation:**
  - Rystad Energy have valued Brigham's upstream assets at USD 2,576m, which implies that Statoil pays an 82% premium to the estimated fair value. However, this estimate assumes around only 50% of the capex for 2012 compared to Statoil's guiding of USD 750m. One could therefore argue that Statoil's internal valuation of the assets assume a different production profile and the two numbers (Rystad vs. the transaction price) are not directly comparable. Based on the estimated 82% overprice paid, the Statoil's NAV reduction should be around NOK 3-4/share. This value excludes however the value of the midstream assets acquired and the overprice is therefore somewhat lower.
- **Non-core:**
  - Statoil's core competence has traditionally been deepwater and harsh environment. Although the company has made several non-core investments over the past years (oil sand, shale gas, shale oil), we still consider onshore investments to be non-core activity for Statoil. In our view, investors buying the Statoil share do not seek US onshore exposure.

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3

"Compared to several recent transactions in the area, Statoil has paid a significant premium. However, the company has previously demonstrated its ability to generate value from apparently expensive acquisitions"

"Rystad Energy have valued Brigham's upstream assets at USD 2,576m, which implies that Statoil pays an 82% premium to the estimated fair value"

"This value excludes however the value of the midstream assets acquired and the overprice is therefore somewhat lower"

RYSTAD ENERGY

Source: Rystad Energy research and analysis

7/11-2019: Divestment of 63% stake in Eagle Ford JV to Repsol for 0.3 BUSD

Deal description

On November 7, 2019 Equinor announced that it would sell all its stake (63%) in the Eagle Ford JV and operatorship to Repsol for 325 MUSD. The consideration was significantly lower than the 843 MUSD Equinor had to pay for 50% ownership back in 2010.

Key deal metrics

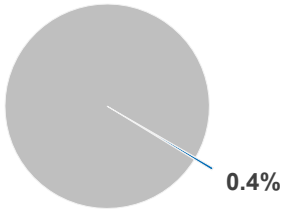
Deal value: 325 MUSD

Production: 34 kboe/d

Net acres: 70k

Area: Eagle Ford

Deal size relative to STO's EV*

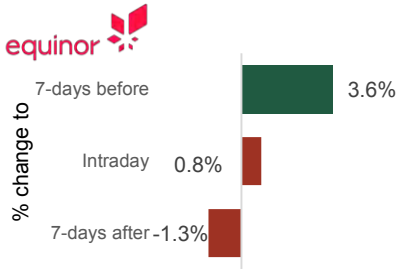


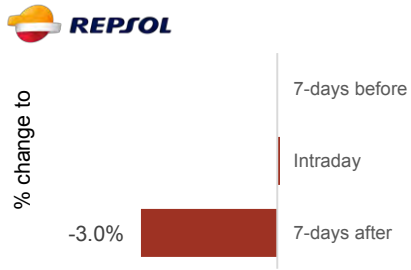
STO share price:** 179.85 NOK

Communicated deal rationale by Equinor

- The communicated deal rationale by Equinor was to rebalance its upstream portfolio.
- Operating US onshore assets had not been easy and despite having conducted cost optimization activities, impairments had been inevitable. As the economics of the deal seemed sound it appeared to be an optimal time for Equinor to exit from its Eagle Ford position.

Change in stock price following announcement





Analyst	Analyst evaluation	Analyst summary
BERENBERG		*Berenberg believed that Equinor exited the Eagle Ford at a fair valuation. In addition, Berenberg supported a rebalancing of Equinor's upstream portfolio as US onshore had not been easy and impairments had been unevitable as the macro outlook and oil prices had been low (compared to pre-2014 levels) since 2014.*
	*Target oil price: 65 USD/bbl*** *Target stock price: 200 NOK*	
SOCIETE GENERALE		*Equity report conducted in Repsol's perspective. It was stressed that the deal's breakeven was at >$55 USD/boe, but that cost synergies for Repsol would drive it down to 55 USD/boe. In the end of 2019 Brent prices were above 60 and the deal therefore appeared to be value accretive for Repsol. However, with little margin between the oil price and breakeven level it seemed favorable for Equinor to exit its position.*

Overall evaluation

Limited analyst coverage on the transaction. Berenberg supported Equinor's exit from the Eagle Ford as the US operations had been challenging and led to significant impairments. The transaction was also recommended by Berenberg due to the favorable pricing. Finally, Repsol also revealed that the field breakeven level was at above $55 USD/boe without synergies, which would have barely made it profitable at the end of 2019. Overall good deal for Equinor.

"Good deal"

*EV=enterprise value at time of transactions **Closing prices ***2021 oil price forecast
Source: Rystad Energy research and analysis

7/11-2019: Divestment of 63% stake in Eagle Ford JV to Repsol for 0.3 BUSD

BERENBERG
PARTNERSHIP SINCE 1590

Equinor ASA (EQNR NO)
Oil & Gas – Integrated

BERENBERG

Exiting Eagle Ford at good valuation

- **Selling Eagle Ford:** Equinor has agreed to sell down its 63% stake in US-onshore asset Eagle Ford to its partner Repsol for $325m. We welcome the deal and Equinor's broader strategy of rebalancing its upstream portfolio, as the US onshore has been a weak link in Equinor's international asset base. We incorporate the disposal into our models, with minimal EPS changes, leaving our rating and price target unchanged.
- **Economics of the deal:** Equinor is selling about 70k net acres and 34kboepd of production for $325m, valuing the deal at $4.6k/acre or $26/boe. Equinor originally acquired the assets in 2010, partnering with Talisman Energy, which has since been bought by Repsol. The partners had reportedly looked to sell the joint venture back in 2014, but failed to find the right buyers. A Bloomberg report in March suggested that Equinor was considering the sale of all or part of its Eagle Ford assets and, as such, the deal does not come as a surprise.
- **US onshore has not been easy:** Equinor bought its way into US shale in 2010-12 through M&A, including the acquisition of Brigham Exploration in 2011. The company has focused on improving its position through cost optimisation (it reduced the earnings break-even oil price to c$50/bbl in 2018 from over $90/bbl in 2014) and a value-over-volume strategy. Nevertheless, it has had to take an impairment on the US onshore assets, such as the $2.2bn write-off taken at Q3 2019 results. We therefore welcome Equinor's decision to sell Eagle Ford as the disposal will allow the company to optimise its capital allocation strategy. We also note that management's focus has shifted in 2019, from onshore US to offshore Gulf of Mexico, given Equinor's earlier decision to increase its stake in the Caesar Tonga field.
- **Valuation:** Our price target is based on 2020 EV/DACF multiple of 5.5x.

8 November 2019

HOLD

Current price	Price target
NOK179.85	NOK200.00

07/11/2019 Oslo Close

Market cap (NOKm)	567,733
Reuters	EQNR.OL
Bloomberg	EQNR NO

Changes made in this note

Rating: Hold (no change)
Price target: NOK200.00 (no change)

Estimates changes

	2019E old	Δ %	2020E old	Δ %	2021E old	Δ %
Adjusted EPS	1.51	-	1.66	-11	1.92	0.7
DPS	1.04	-	1.14	-	1.26	
CFPS	4.44	-	5.59	-14	6.06	-12

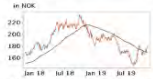
Source: Berenberg estimates

Share data

Shares outstanding (m)	3,320
Enterprise value (NOKm)	724,682
Daily trading volume (m)	3

Key data

EV/DACF	5.8x
Dividend yield (%)	5.3%
FCF yield (%)	7.3%



Source: Thomson Reuters Datastream

Y/E 31/12, USDm	2017	2018	2019E	2020E	2021E
Brent oil price ($/bl)	**54.76**	**71.69**	**63.08**	**60.00**	**65.00**
Total production (k boe/d)	2,096	2,109	2,103	2,252	2,257
Adjusted operating income	**12639**	**17957**	**14015.36**	**13903.28**	**16673.891**
Clean net income	4,590	7,536	3,366	5,336	6,107
Clean EPS (p)	**1.39**	**2.01**	**1.51**	**1.66**	**1.94**
DPS (p)	0.88	0.96	1.04	1.14	1.26
Operating cash flow	**15,219**	**18,604**	**14,746**	**17,855**	**18,882**
CFPS (p)	4.66	5.59	4.44	5.50	5.99
Cash ROIC	6.8%	7.8%	6.2%	7.8%	8.4%
ROACE (%)	8.7%	14.7%	5.6%	9.0%	10.8%
Net debt/equity (%)	38.7%	25.9%	44.0%	41.8%	38.1%
EV/DACF (x)	5.1x	5.3x	5.8x	4.5x	4.1x
P/E (x)	13.4x	12.5x	12.9x	11.5x	10.1x
Dividend yield (%)	4.8%	3.8%	5.3%	5.9%	6.5%
Price to book (x)	1.5x	1.9x	1.6x	1.5x	1.5x
FCF yield (%)	6.7%	9.9%	7.3%	6.5%	11.8%

Source: Company data, Berenberg

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"Exiting Eagle Ford at good valuation"

"US onshore has not been easy. Despite executing cost optimization activities impairments have been inevitable "

SOCIETE GENERALE

SOCIETE GENERALE
Cross Asset Research

EQUITY
11 November 2019

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Repsol

Eagle Ford asset acquisition: more may follow, within budgeted Upstream capex

Buy

Price 07/11/19	€15.15
12m target	€16.0
Upside to TP	5.6%
12m f'cast div	€0.98
12m TSR	12.1%

Main changes since last report

Target (€)	16.0	nc
EPS 19e (€)	1.53	nc
EPS 20e (€)	1.75	nc
EPS 21e (€)	1.98	nc

nc: no change

Preferred stock
PP PP

Least preferred stock
n/a

SG strategy team sector weighting
Overweight

Share price performance

Source: SG Cross Asset Research/Equity

Perf. (%)	1m	3m	12m	ytd
Share	7.4	15.1	-4.0	7.6
Rel. index*	7.5	-4.3	-8.3	-8.4
Rel. sector**	6.9	6.0	9.5	2.3

* MSCI World ($)
** MSCI World Oil & gas ($)

RIC REP.MC, Bloom REP SQ

52-week range	15.9-12.5
EV 19 (€m)	35,769
Mkt cap. (€m)	23,020
Free float (%)	86.7
No. shares o/s (m)	1520
Avg vol. 3m (No. shares)	5,618,286

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The deal Repsol has agreed to acquire partner Equinor's 63% stake in Eagle Ford, a producing asset in Texas, for $325m. Repsol is acquiring approximately 70,000 net acres and 34kboe/d of production, which boosts its total output at Eagle Ford to 54kboe/d (2018 avg. was 18kboe/d). The liquids/gas split is c.60/40. As a result of the deal, Repsol will operate and own 100% of the working interest of the asset. The price corresponds to c.$4,642 per net acre, which is materially below the average of c.$14,500 paid per acre in recent deals. Equinor first entered the Eagle Ford asset in 2010, and in 2015 it increased its interest from 50% to 63%, assuming operatorship. In March 2019, Bloomberg reported that Equinor was looking to sell the Eagle Ford assets to focus on its other US assets.

Strategic rationale As per the 3Q19 conference call, Repsol's CEO accepts that the upstream portfolio is not "as tight" as it could be; i.e. it is too geographically diversified. Hence, the company has been open about the need to tighten the E&P portfolio by both: (1) exiting areas that are immaterial or lack potential to grow value, such as its exit from Russia, Angola and Kazakhstan; and (2) adding scale to core areas, such as North America, where it can extract higher efficiencies from economies of scale. Moreover, during the conference call, the CEO said Repsol's "accumulated tax pools is an added fiscal advantage". One such pool is its North American c.$1.4bn deferred tax asset (at end-2018, built through losses at the Talisman assets), which it will likely use to offset future profits in the region.

Upside potential Repsol has always said E&P deals need a cash breakeven of $55/boe or below. It has said that this deal's breakeven is >$55/boe but its estimated cost synergies will drive that to $55/boe. The asset offers two types of upside. (1) EOR (enhanced oil recovery): the current recovery rate is <10% and Repsol expects it can double this via EOR. (2) There is potential upside in the Austin Chalk, a layer of chalk and marl overlying the Eagle Ford, which is considered a separate play from the Eagle Ford. The Austin Chalk is dotted with natural fractures that have absorbed oil from the Eagle Ford formation below. Repsol's geologists believe this geological structure is an analogue to structures seen in its operations in other countries; as it has not drilled the play yet, it believes there is upside.

Inorganic spend within E&P capex guidance – room for more deals, we believe Repsol's 2018-20 strategic plan has a three-year group capex budget of €15bn, of which 58% or €8bn for upstream, meaning €2.67bn p.a. Importantly, the €8bn includes both organic and (some unknown) inorganic. With its 9M19 results, Repsol is 58% of the way to the end-2020 target, with 7 quarters out of 12. However, its upstream capex total for those 7 quarters (1Q18-3Q19) has been just €3.5bn, or 44% of the €8bn budget. Adding the $325m cost of the Eagle Ford deal brings that to €3.79bn, meaning the run rate to date is only €2.17bn of upstream capex per annum. Were that run-rate to remain unchanged, by YE20, its total three-year E&P capex would be just €6.5bn, instead of €8bn. Of course, Repsol has committed exploration spending in 2020 (unknown) and normally 4Q is a seasonally heavier upstream capex quarter; thus, the three-year organic spend plus Eagle Ford amounts to c.€7bn, and we therefore believe there is still clear room for up to €1.0bn of additional inorganic spend between now and end-2020. With its material NA deferred tax asset, the likelihood of further M&A in the region is quite realistic, in our view, but all within the €8bn upstream capex budget.

"The deal's breakeven is >$55 USD/boe"

"The asset offers two types of upside. 1) EOR (enhanced oil recovery) and 2) potential upside in Austin Chalk"

Source: Rystad Energy research and analysis