



RYSTAD ENERGY

EQUINORS INVESTERING I OLJE/GASS I USA

FOREDRAG FOR OSLO VEST ROTARY CLUB

26.11.2020

JARAND RYSTAD, CEO

RYSTAD ENERGY

DE HEMMELIGE **EQUINOR-** RAPPORTENE

Statoil og Equinor har tapt mer enn 200 milliarder kroner i USA. Hemmelige rapporter avslører hvordan selskapet mistet kontrollen i tidenes største norske investering i utlandet.

TEKST LARS BACKE MADSEN, MORTEN ÅNESTAD OG MARIE MELGÅRD FOTO JAN JOHANNESSEN
Houston, Austin, London, Stavanger og Oslo



Equinor kjøpte kalkuner for millioner i USA

Equinor var med å kjøpe kalkuner på auksjoner i Houston hvert eneste år mellom 2007 og 2015. Den siste kostet 145.000 dollar – 1,1 millioner kroner.

DN+

🕒 2 min Publisert: 09.10.20 – 19.43 Oppdatert: 2 måneder siden



Våren 2014 var Statoil med på å vinne budrunden for en kalkun under Houston Livestock Show & Rodeo. Prisen endte på 115.000 dollar, eller 700.000 kroner etter datidens kurs. Gutten med hvit skjorte bak kalkunen er Andrew Horacefield, en 18-åring fra Crosby, Texas som hadde avlet opp kalkunen. (Foto: Houston Livestock Show and Rodeo)

Equinors USA-tap kan utløse tidenes industriskandale

Equinors (Statoils) pengebruk i USA kan kanskje utløse Norgeshistoriens største industriskandale. Det antatte tapet på 200 milliarder kroner motsvarer kanskje 40–50 prosent av dagens markedsverdi.



Prioriteringen av internasjonal vekst og lokaliseringen av enheten for strategiutvikling til London kan ha skjermet den strategiske tenkningen fra den operative virkeligheten. Utstrakt bruk av konsulenter antyder at selskapet har villet betale andre for å tenke for seg. Konsulenter kan også brukes til å støtte ledelsens beslutninger mot intern kritikk. Rapporten fra PwC nevner at det store oppkjøpet på land i USA ble presset gjennom av konsernledelsen mot interne forbehold.

Siden privatiseringen og børsnoteringen i 2001 har Eldar Sætre og selskapet investert mer i utlandet enn i Norge, men med sammenlagt svake resultater, skriver økonomiprofessor Øystein Noreng i denne analysen. (Bilde: Eirik Helland Urke)

Kritikk av USA satsingen: Berettiget eller etterpåklokskap?

Var det riktig av Statoil å satse internasjonalt i 2005?

Var det i så fall riktig å satse på Mexico Gulfen i USA?

Var det riktig å satse på skifergass i 2008?

..og skiferolje i 2010?

Var det riktig å tro på en oljepris over 100 dollar fremover i 2011?

Investerte Statoil nok i administrativ kapasitet i USA i 2008-2014?

2005-2014:
Ja

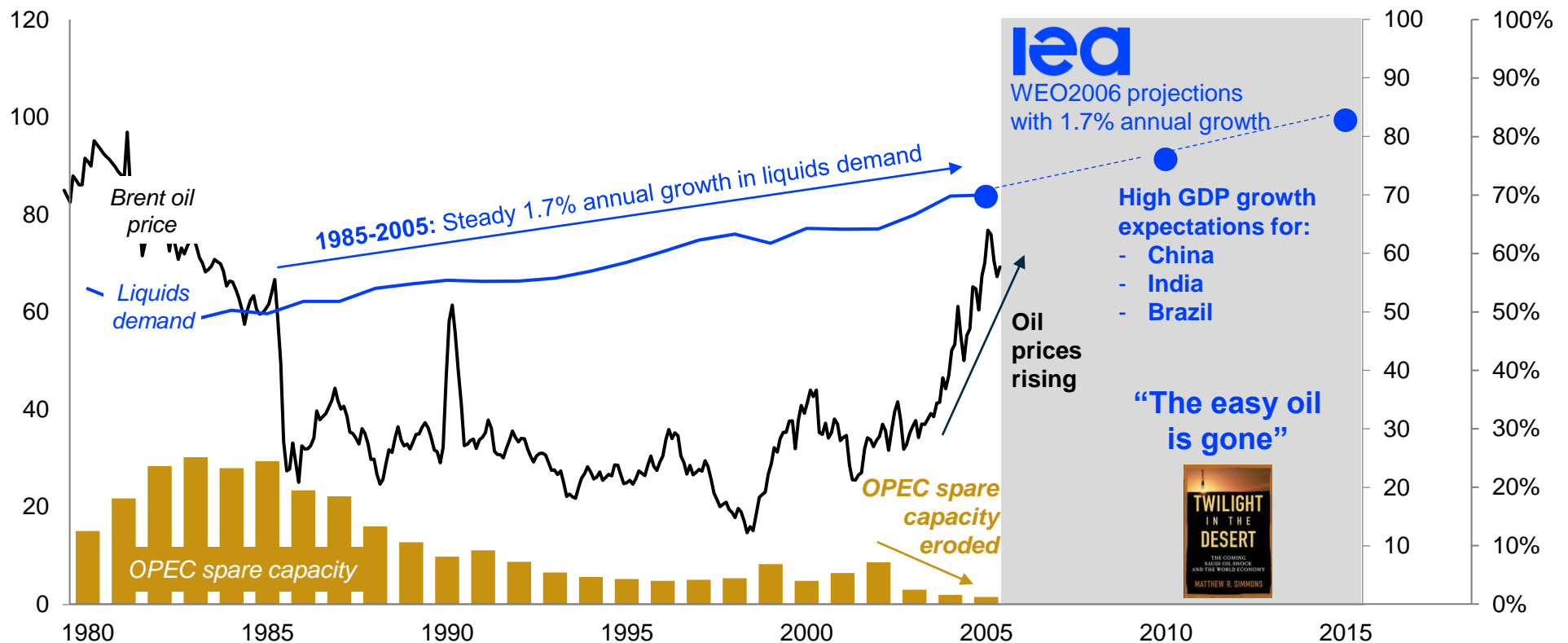
2020:
Nei

Er det en årsakssammenheng mellom *administrativt rot* og tapet på 200 mrd?

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

Liquids demand history and IEA projections (WEO 2006)

Million barrels per day



- Following the oil price collapse in 1986, where OPEC decided to increase their market shares by utilizing their large spare capacity (25% of the world's 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 analysis

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

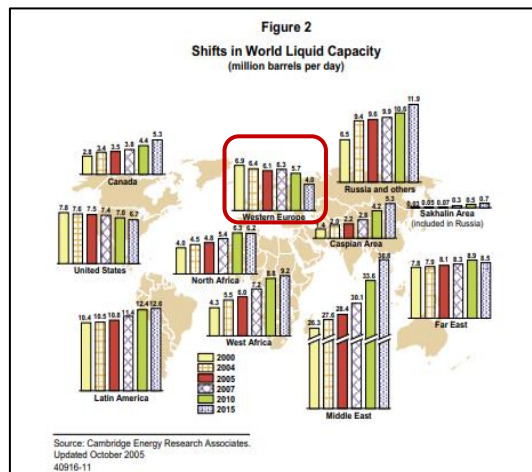
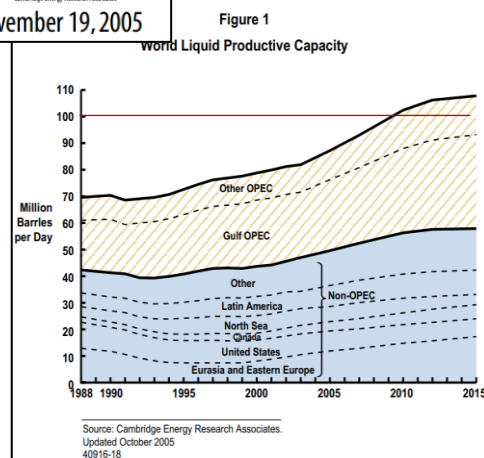
Prepared for:
The International Energy Forum
by
Cambridge Energy Research Associates

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.



- **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.

Delivery and growth

Royal Dutch Shell plc
Annual Report and Form 20-F for the year ended December 31, 2006

The challenge of sustaining economic growth and the expanding energy needs of Asia: the role of OPEC

1-4 March 2005
Singapore

Dr. Adrian Shihab-Eldin
Director, Research Division
Acting Secretary General

Organization of the Petroleum Exporting Countries
Vienna, Austria

Oil Production Outlook, mbd

Reference (DAU)	2005	2010	2020	2025
OECD	21.5	21.7	20.6	19.9
DCs excl. OPEC	15.9	17.6	18.8	18.3
Russia & Caspian	11.8	13.3	15.2	15.6
Non-OPEC	51.2	54.8	57.2	56.7
OPEC (incl. NGSLA)	32.1	35.0	46.1	54.5
World	83.2	89.3	104.0	111.3

• Short to medium term, non-OPEC production continues to rise, plateau at 55-57 mbd
 • Key sources of increase: Latin America, Africa, Russia and Caspian
 • Russian exceptional growth not sustainable (infrastructure constraints); eventually plateau at 11 mbd
 • OECD production expected to decline
 • Rate of increase in non-OPEC supply subject to considerable uncertainty
 • OPEC increasingly supplies incremental barrel
 • Low economic growth scenario would lead to significant drop in OPEC production required
 • High, significant medium term uncertainty

2005:

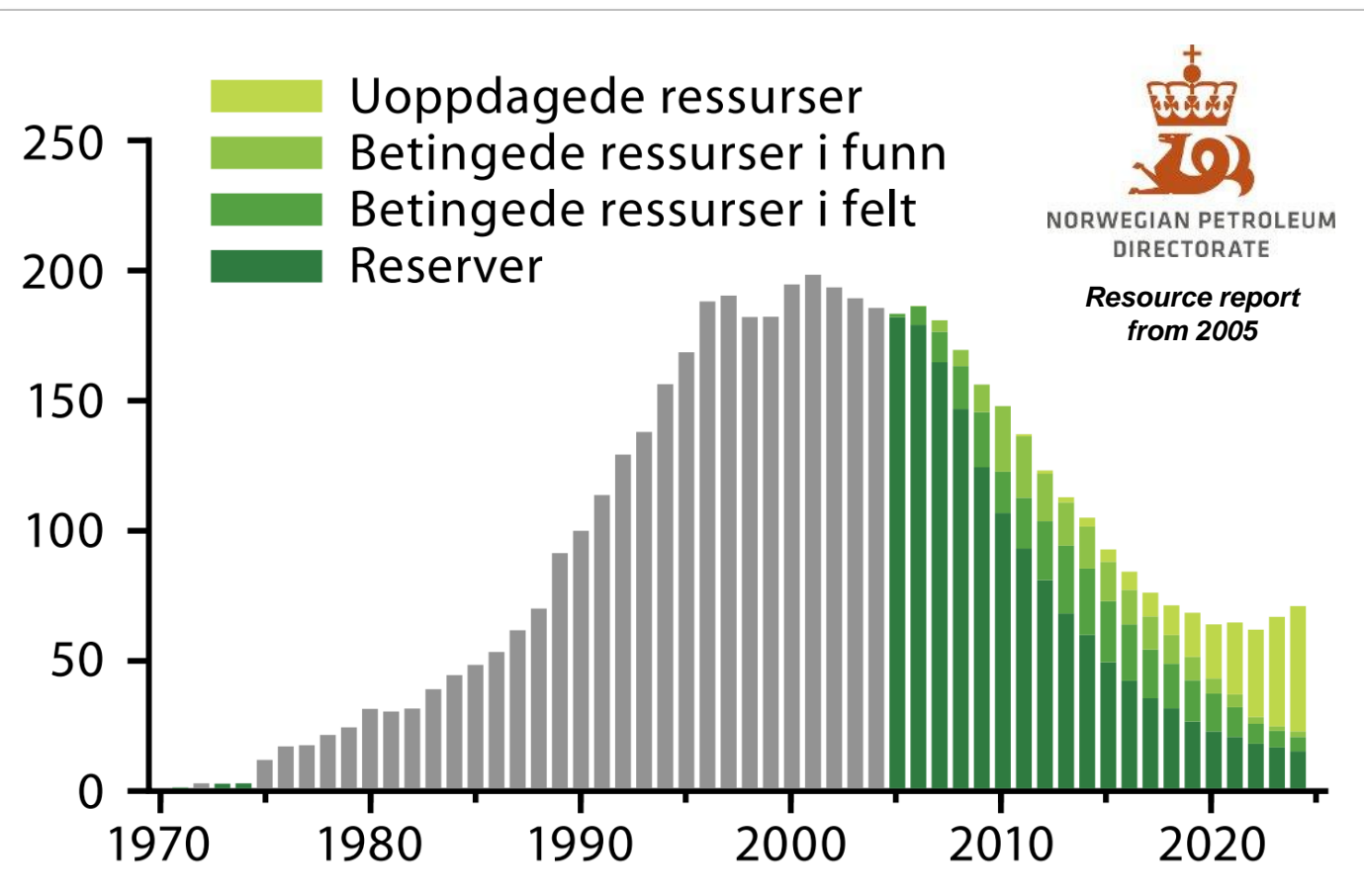
- “All” industry players, at this page illustrated by CERA, Shell and OPEC, expected oil demand to far exceed 100 Mmboe by 2020, driven by Asia
- A supply shortage was expected
- Oil from the North Sea and other OECD regions expected to decline
- Deepwater, oil sands and OPEC were seen as key growth 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: 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.

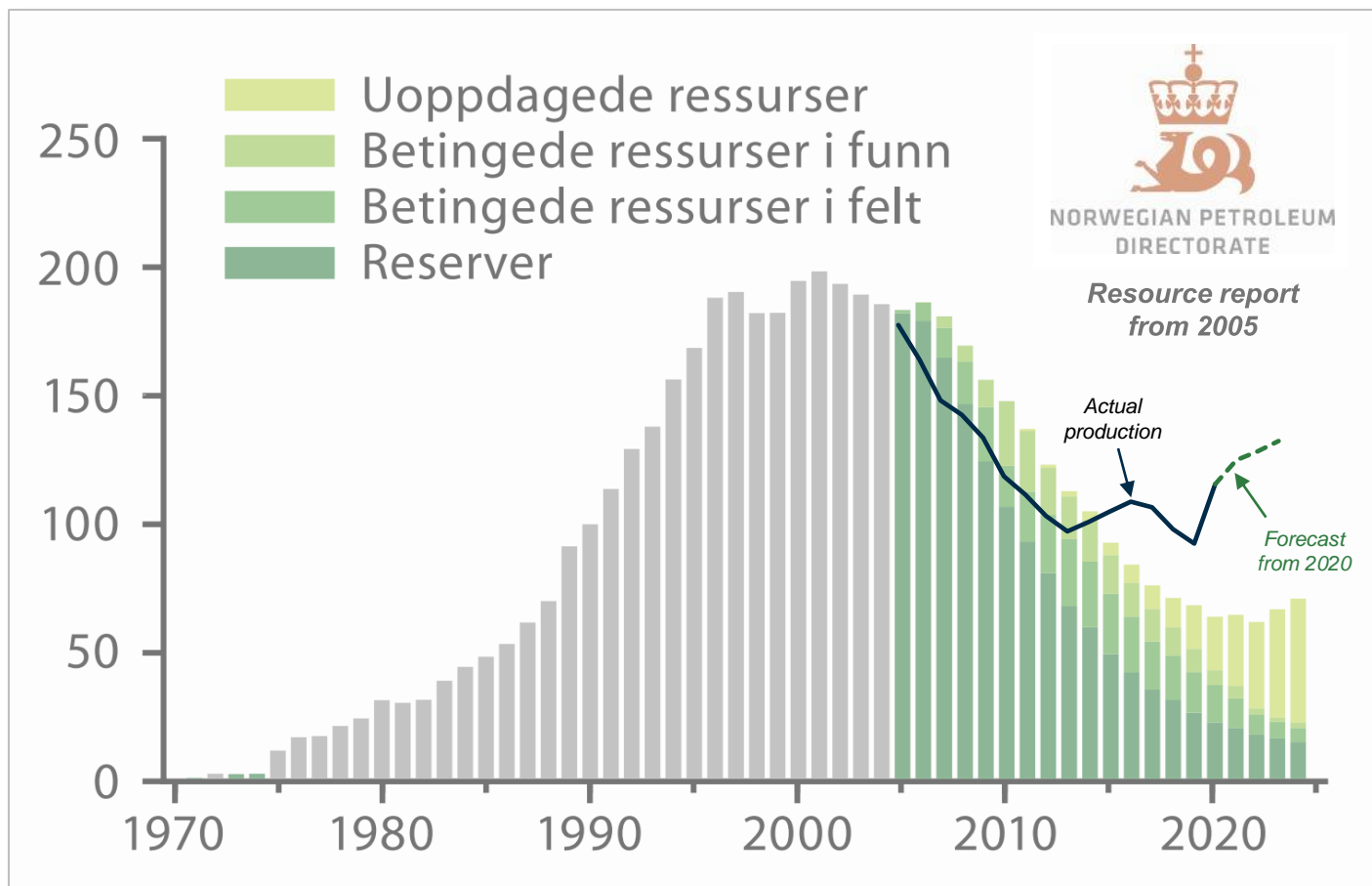
Legend: "Uoppdagede ressurser"=Undiscovered resources, "Betingede ressurser i funn"=Contingent resources in discoveries, "Betingede ressurser i felt"= Contingent resources in producing fields, "Reserver"=Reserves

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



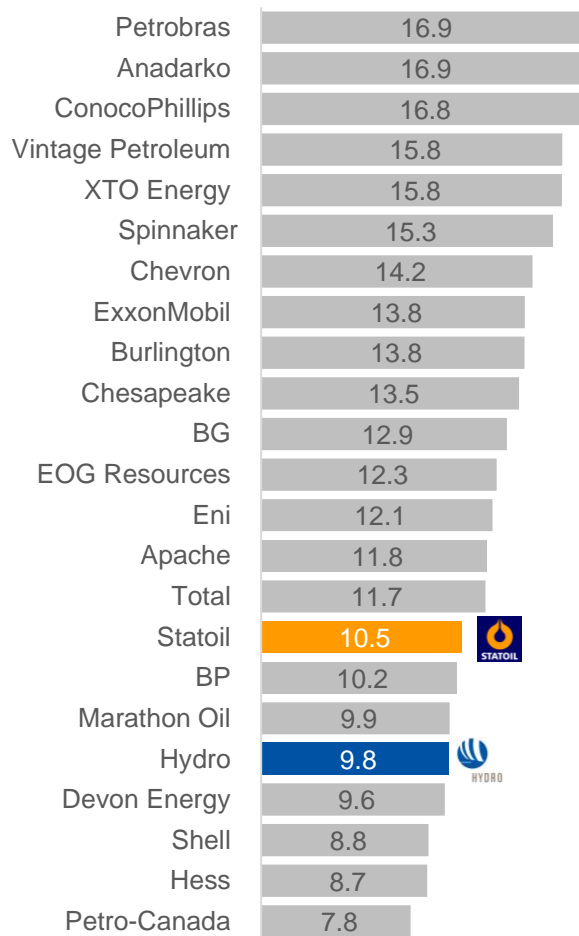
- The chart on the left shows the expected liquids production as published in the 2005 resource report by NPD compared to what really happened (black line).
- Between 2005 and 2013, liquids production underperformed compared to the expectations in 2005. However, actual liquids production has exceeded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

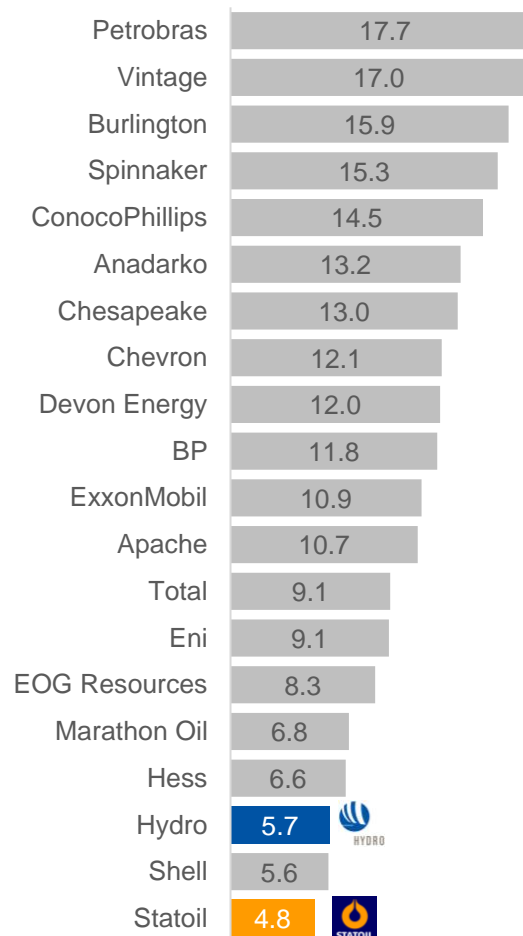
Source: Rystad Energy research and analysis, NPD resource report 2005 and 2019

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

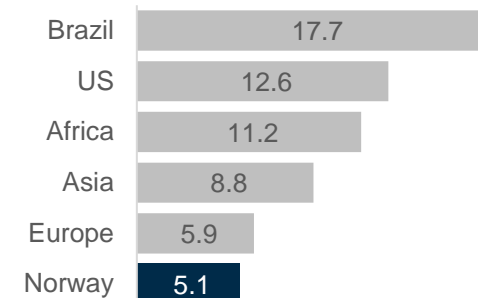
RP-ratio* as of 31.12.2004 by company
Oil and gas production divided by 1P reserves



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



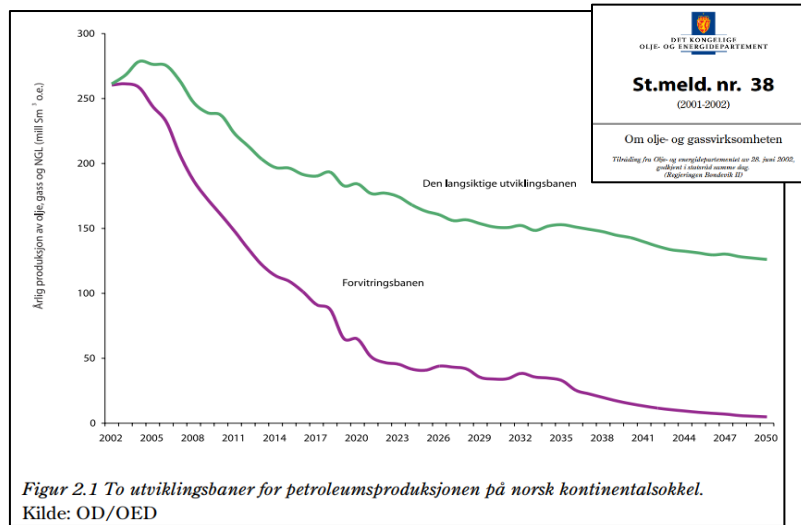
RP-ratio as of 31.12.2004 by region
Oil production divided by 1p reserves



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



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 forvitte.

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

>fridtof 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 gassindustri 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

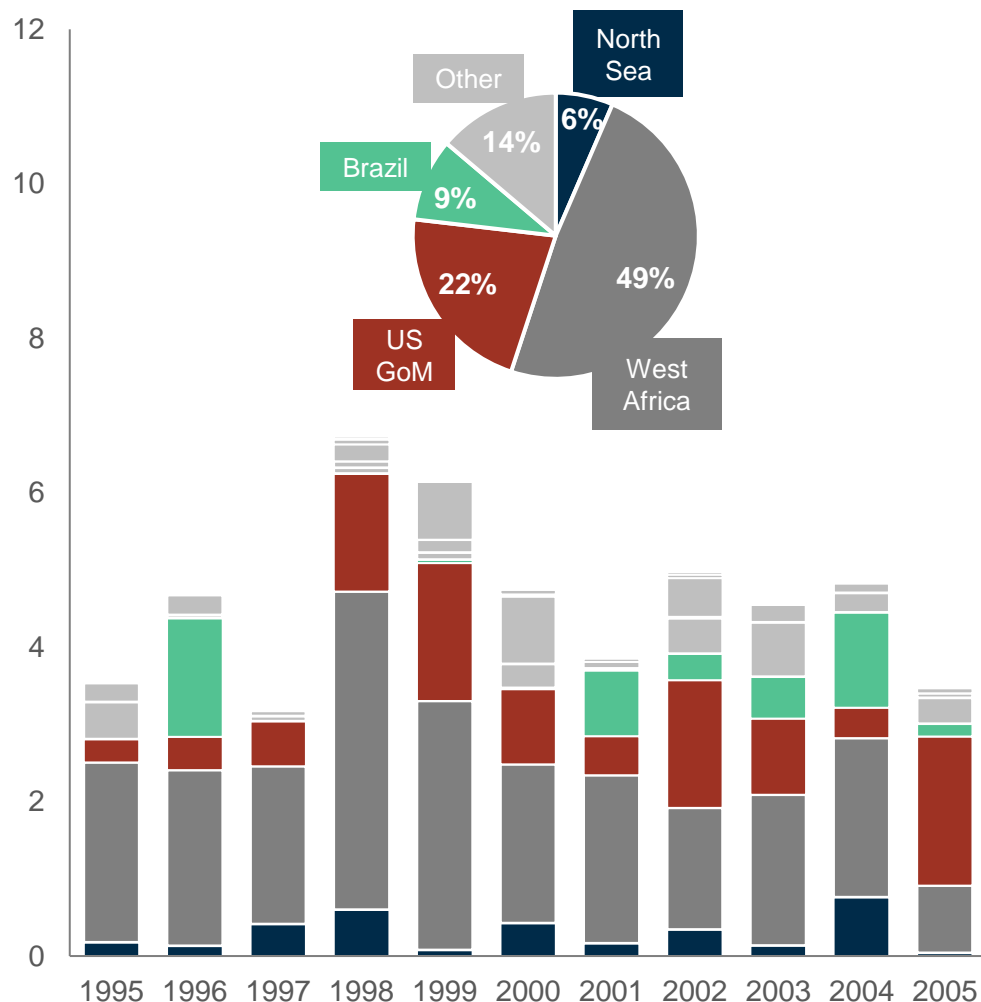
The PSA effect and, to some extent, the stepping up of exploration activity and increased investments are all linked to the high price of oil. They will have a **negative impact** on the normalised return on capital employed. Given the normalisation

- 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

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



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



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



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

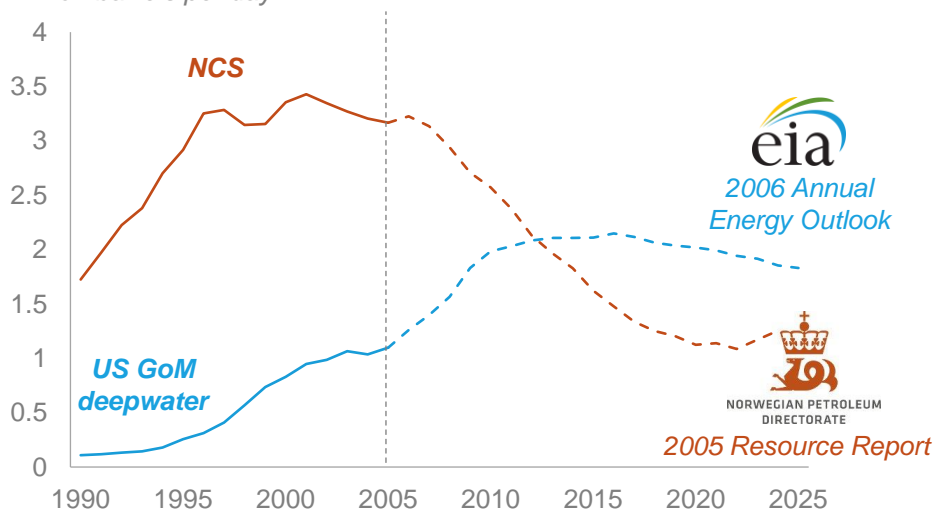
- Macro environment called for non-OPEC production growth and improved oil price
- IOCs were priced on growth outlooks
- NCS production appeared to have peaked with NCS players' value penalized due to low R/P ratios
- NCS players were leading in deepwater/subsea technologies and had organizational capacity

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

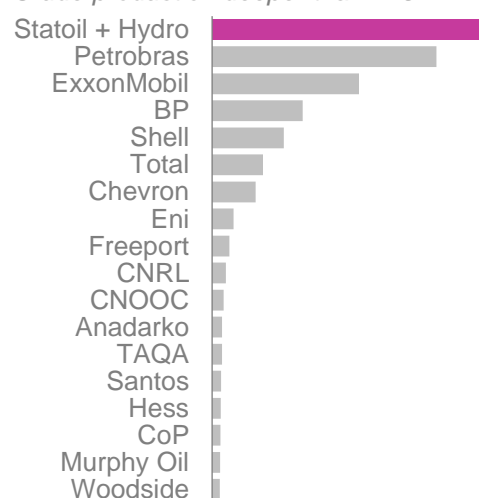


*M&A, capex and expex

Source: UCube; EIA; NPD; Rystad Energy research and analysis

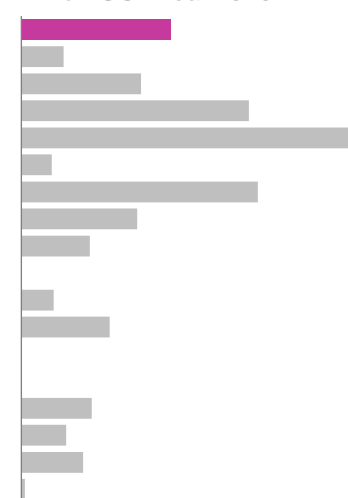
Top deepwater operators in 2005

Crude production deeper than 125m

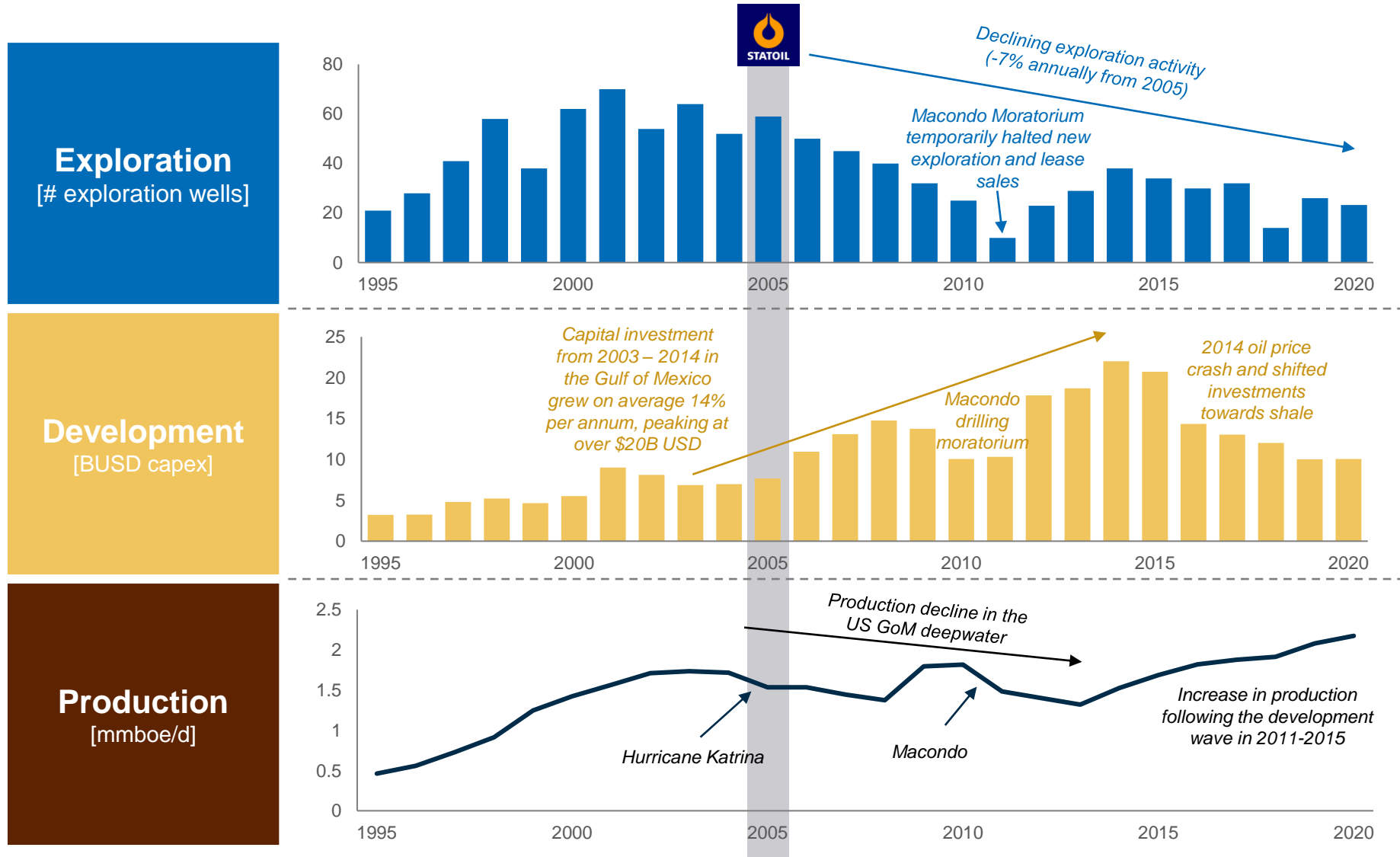


US GoM investment* 2005-19

Billion USD real 2020



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

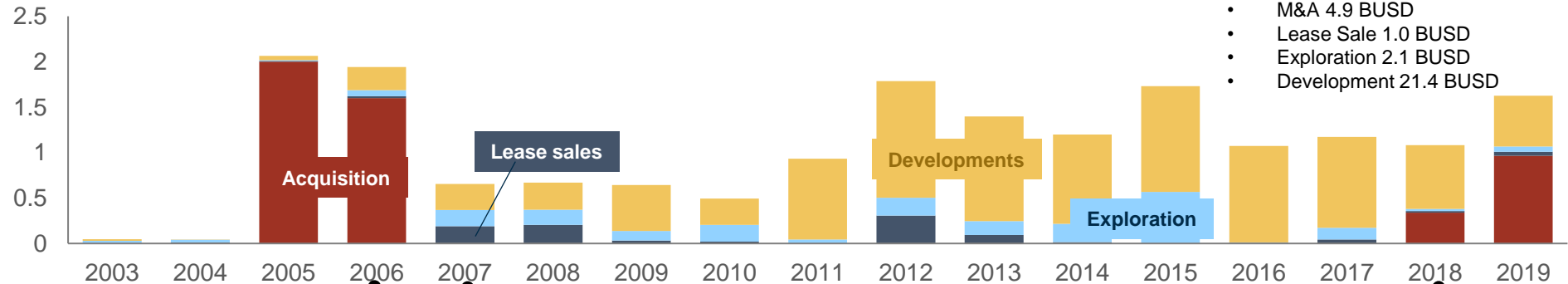


Source: UCube; Rystad Energy research and analysis

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

Statoil's historical investments in US GoM

BUSD nominal



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.

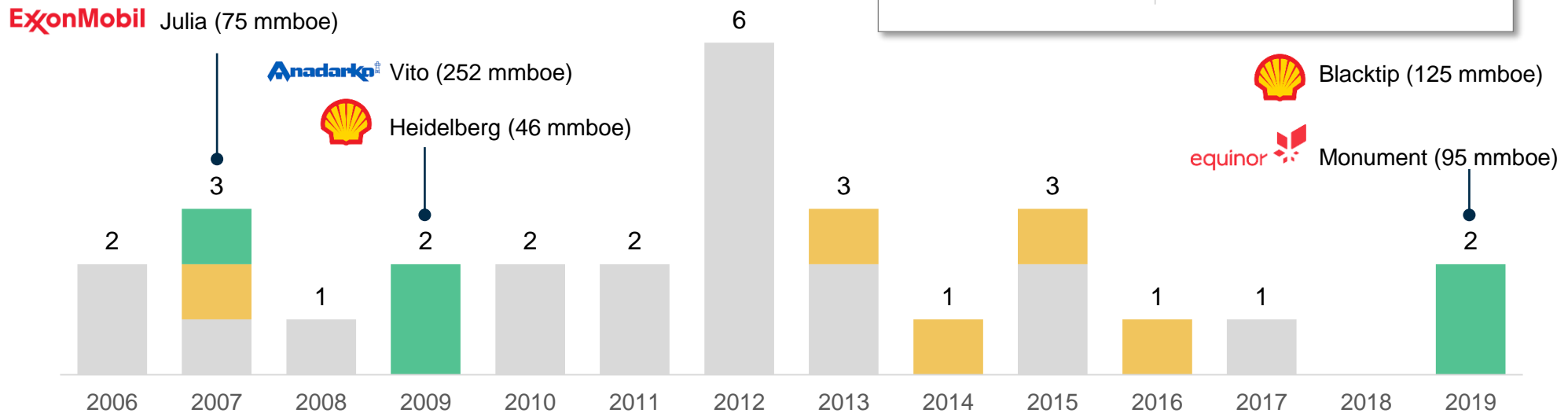
Exercised preferential right to acquire 22.45% interest in Caesar Tonga from Shell for **\$965 million**.

Source: Rystad Energy research and analysis

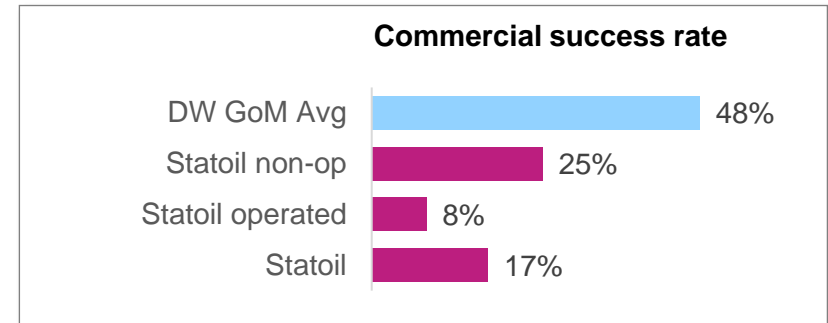
Equinor has struggled with GoM exploration, with a commercial success rate of 17%

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

- Commercial Discoveries
- Technical Discoveries
- Dry Hole



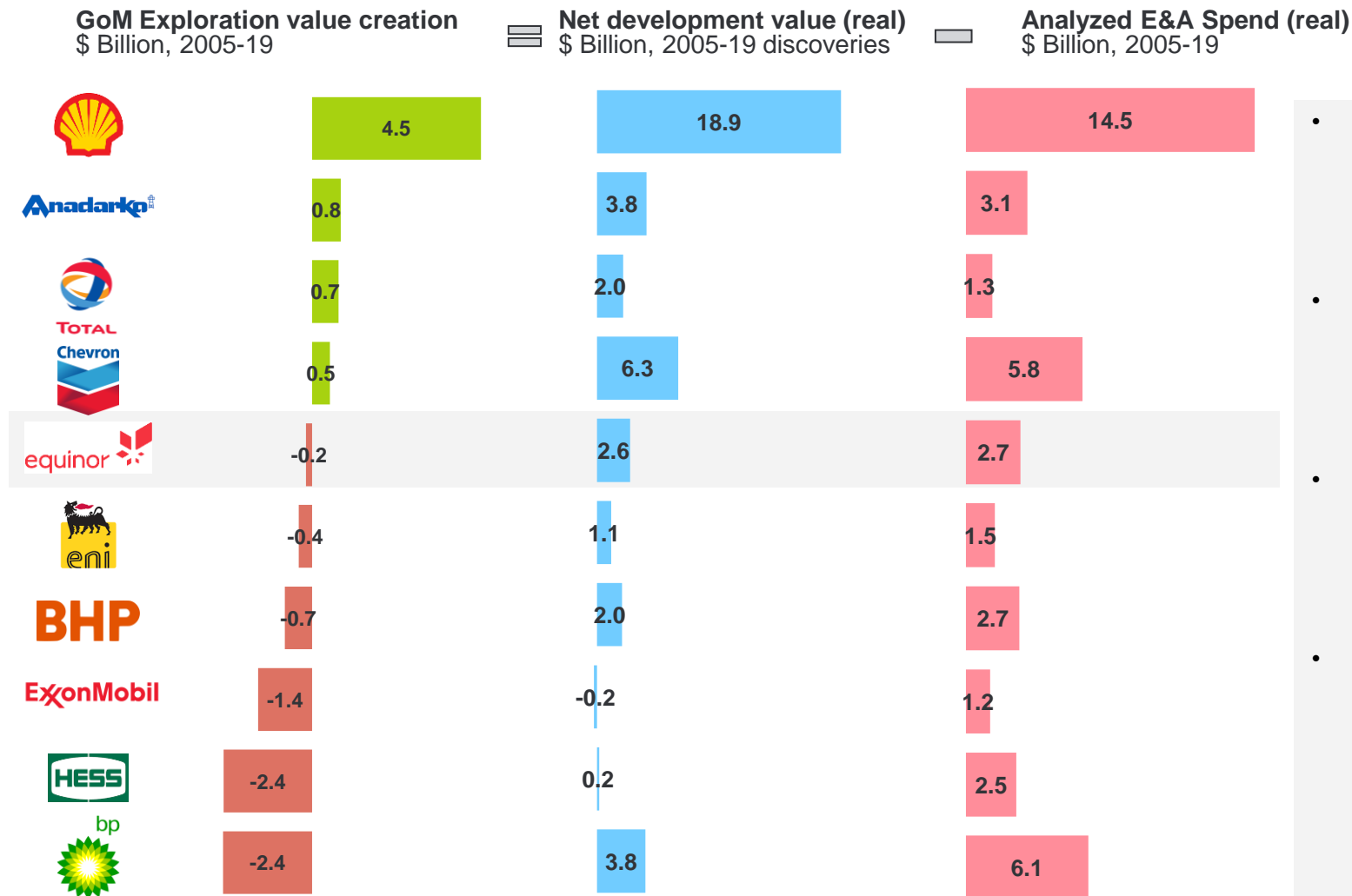
Avg. US GoM deepwater



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

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

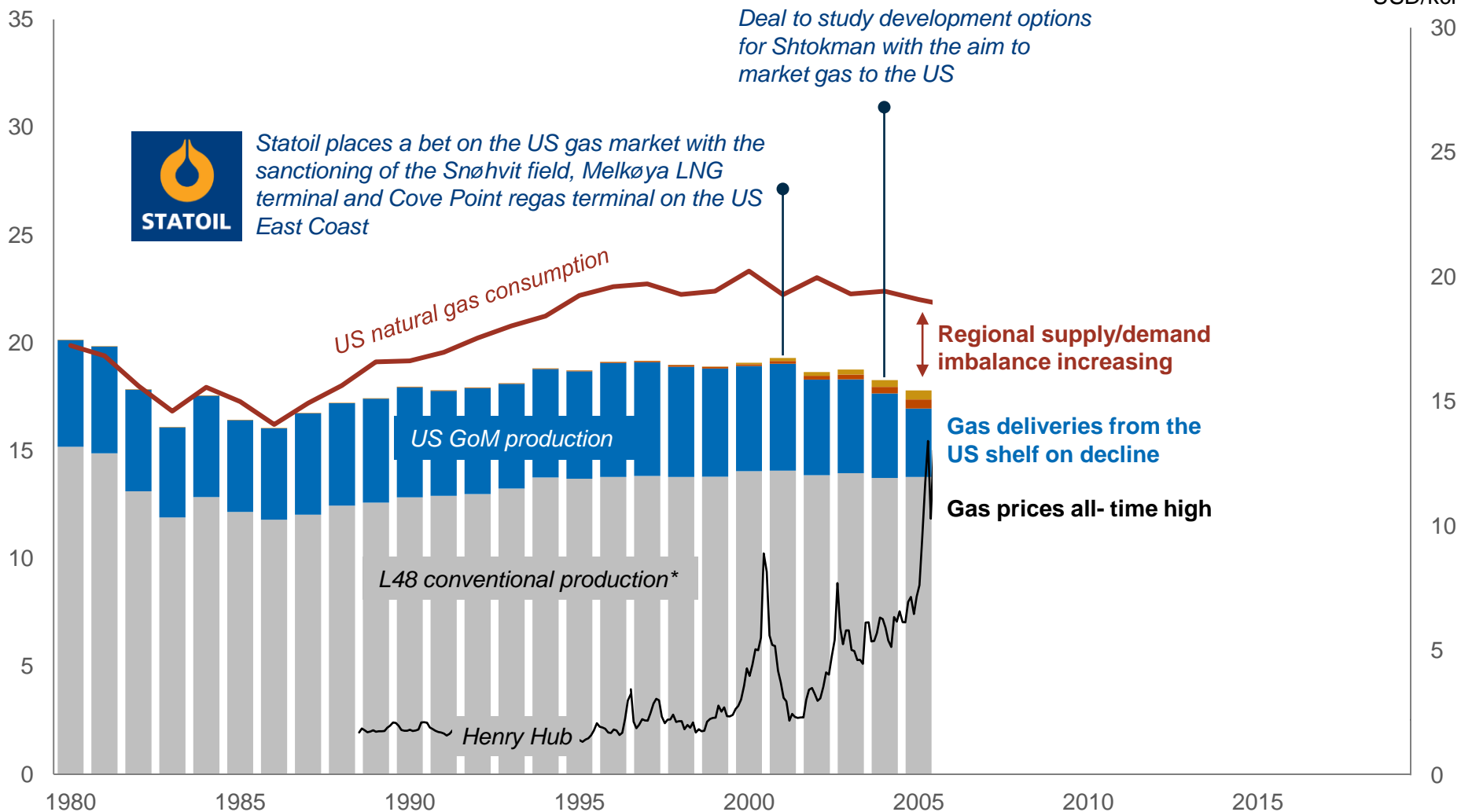
2005: US natural gas imbalance established and improving Henry Hub prices

US natural gas consumption and production

Trillion cubic feet

US gas prices (Henry Hub)

USD/kcf



*Includes CBM and tight gas

Source: EIA; UCube; Equinor press releases

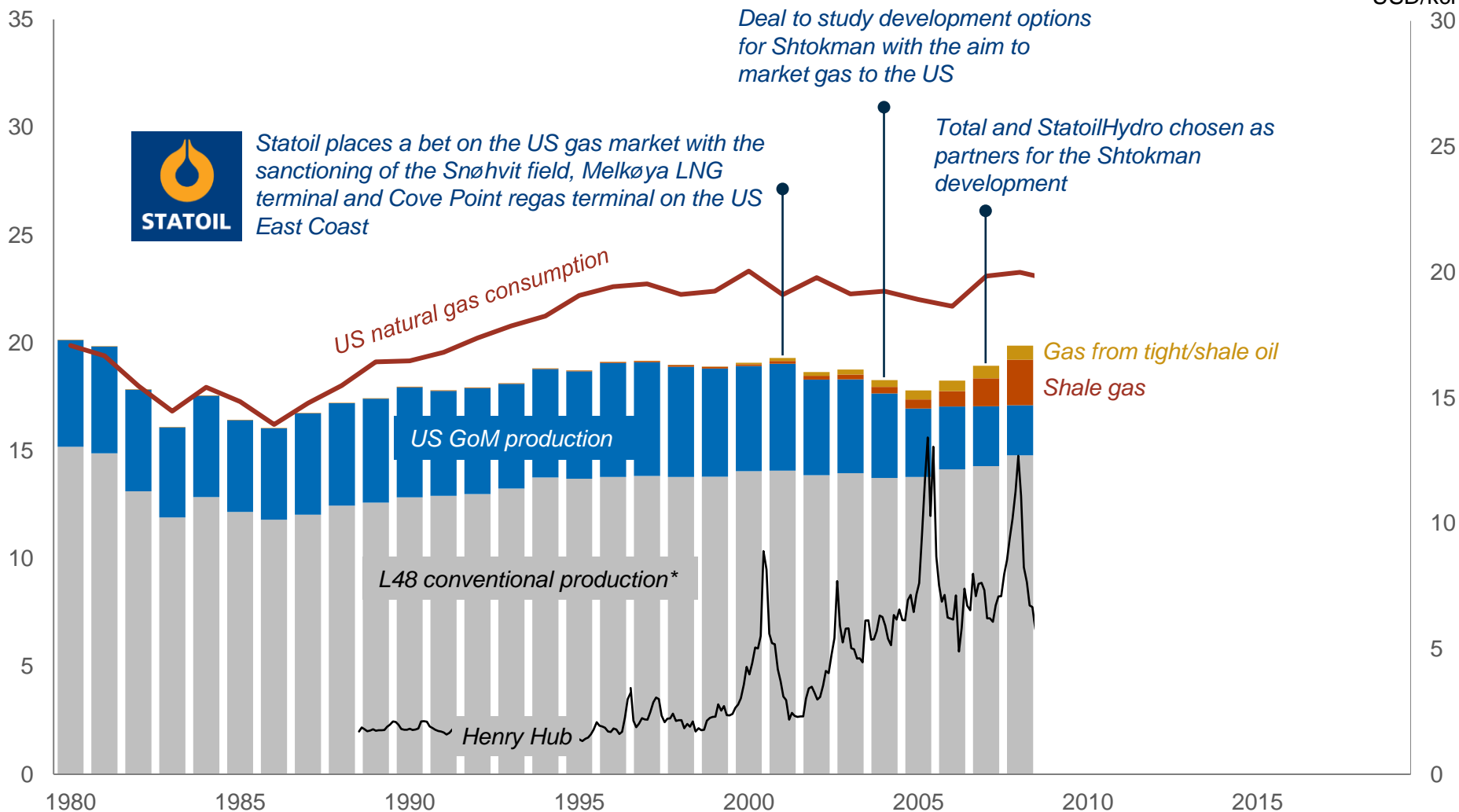
2008: Emergence of shale gas with still favorable macro conditions in the US

US natural gas consumption and production

Trillion cubic feet

US gas prices (Henry Hub)

USD/kcf



*Includes CBM and tight gas

Source: EIA; UCube; Equinor press releases

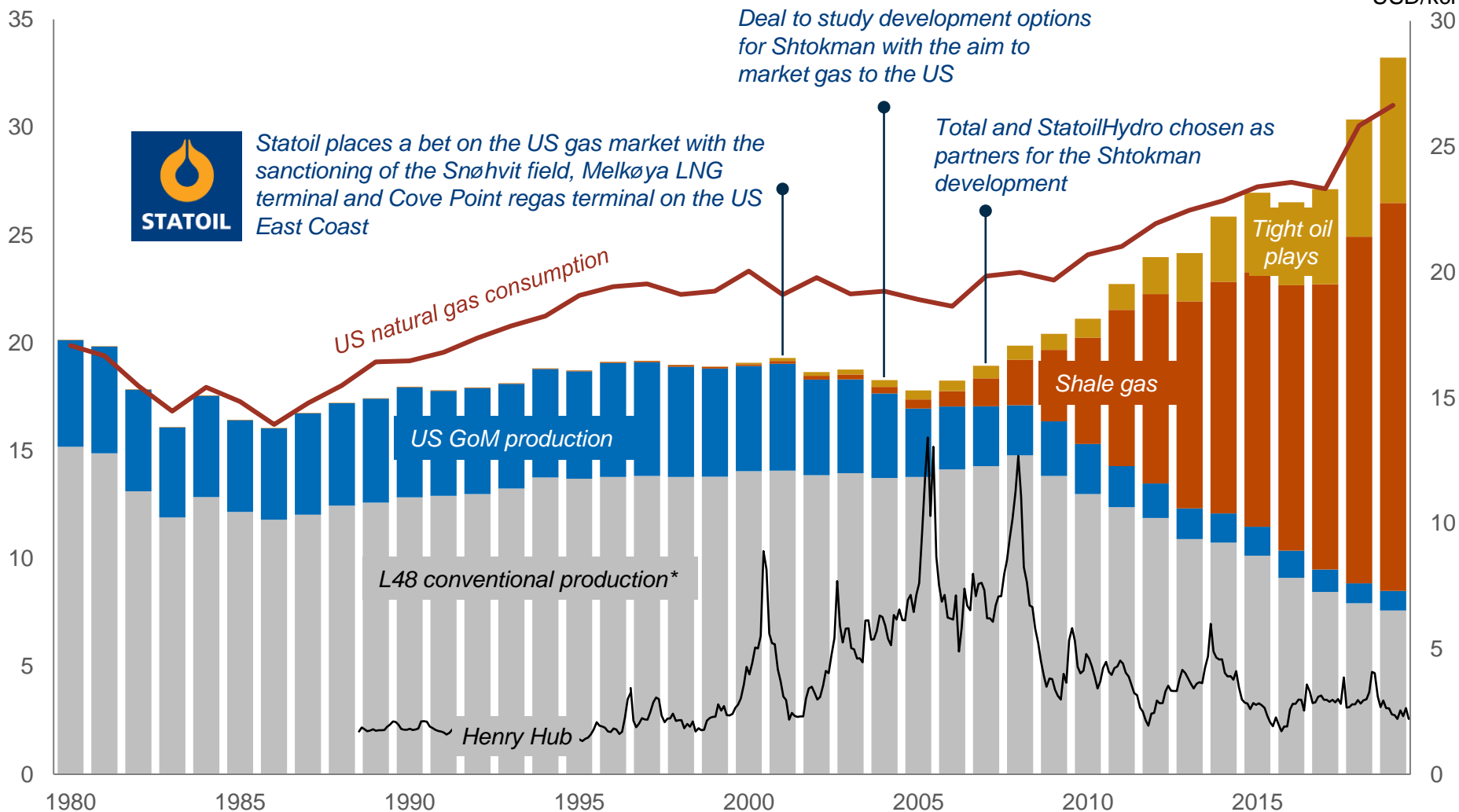
2019: Shale gas revolution yielded net gas exports from the US and low gas prices

US natural gas consumption and production

Trillion cubic feet

US gas prices (Henry Hub)

USD/kcf



*Includes CBM and tight gas

Source: EIA; UCube; Equinor press releases

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

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

YPF, 2017

JV with YPF to jointly explore Vaca Muerta shale

Sonatrach & Shell, 2014

Jointly acquired Timissit permit license, Illihizi Ghadames basin

Sasol & CHK, 2010

JV with Sasol and Chesapeake, acquired permit to explore Karoo basin

Valeura Energy, 2012

JV with Valeura for Banali license in northern Turkey

CNPC, 2011

Joint study and test drilling with CNPC

PetroFrontier, 2012

JV with PetroFrontier in Australia's Northern Territory

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.

Shale – a true revolution early understood by Statoil

Shale gas was the natural choice in 2008

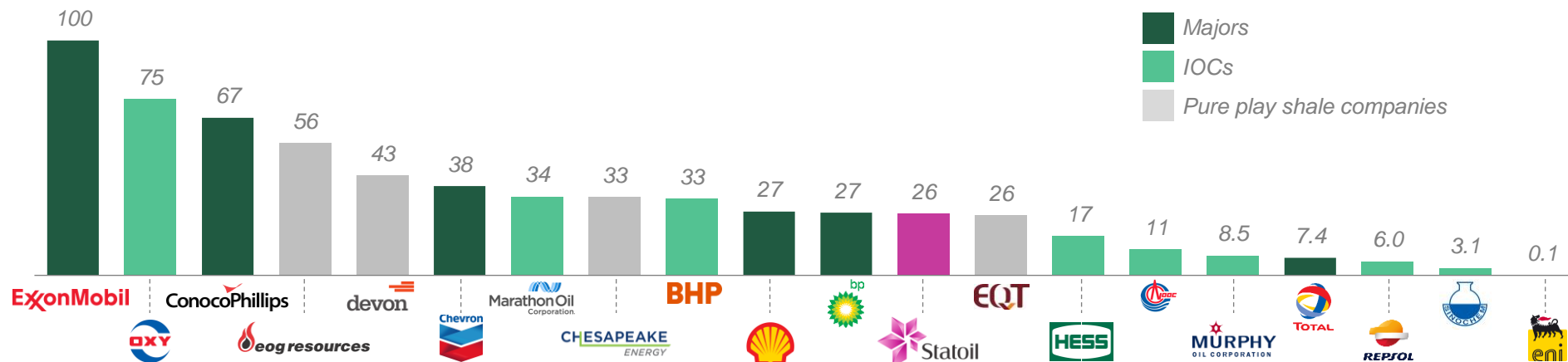
- US screaming for gas, attractive prices expected – as confirmed in Snøhvit and Shtokman studies
- Potential global revolution – important to master
- Statoil picked the right play early, and cheap
- All relevant players entered at similar conditions as Statoil or worse
- Statoil underestimated need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

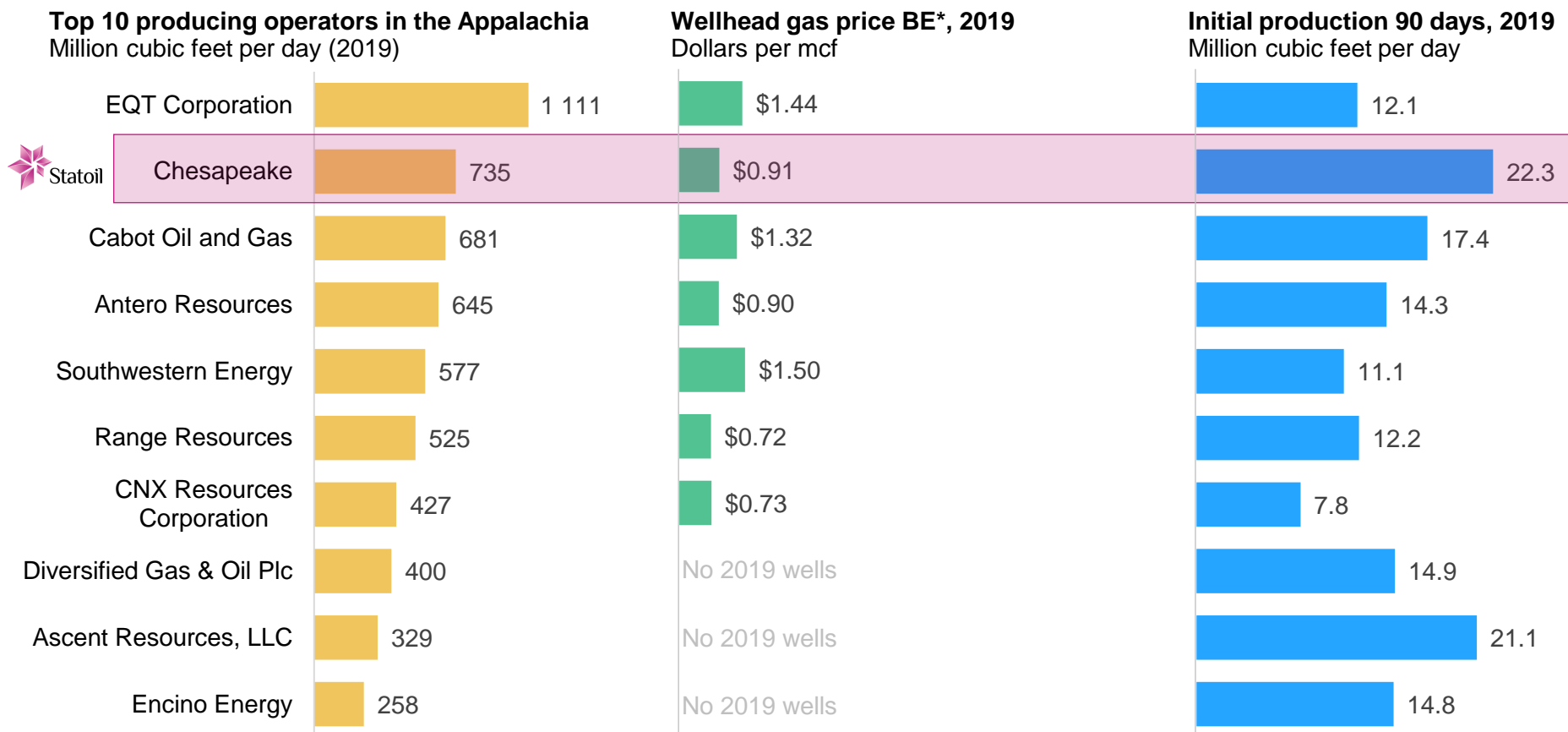
Selected companies and the bet taken in shale gas and tight oil (Net M&A + Capex)

BUSD real 2020



Source: UCube; Rystad Energy research and analysis

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

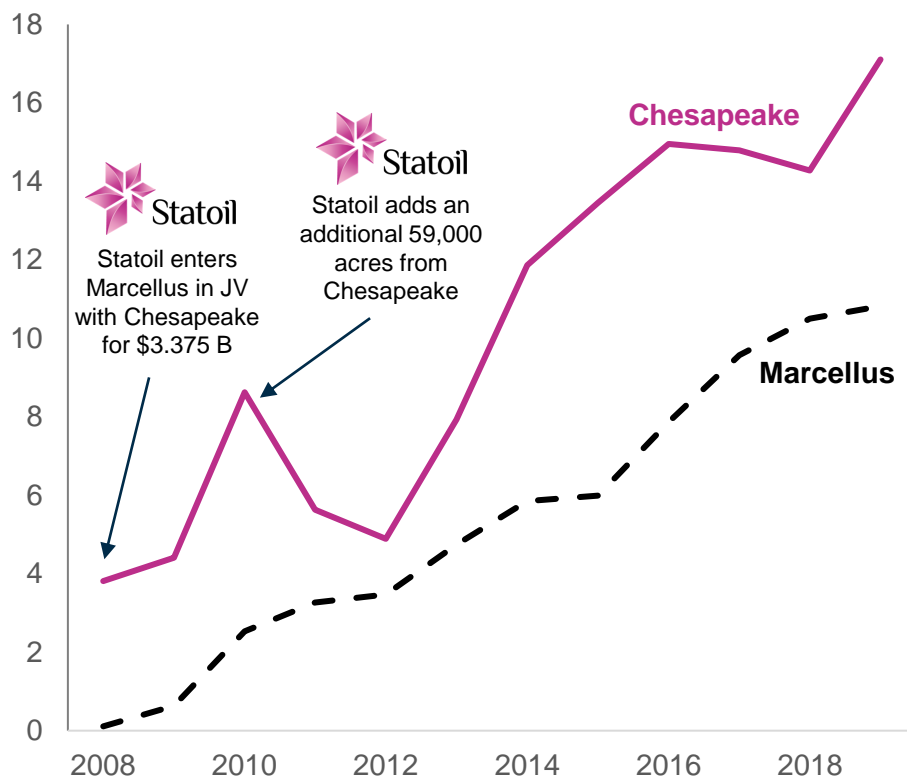


Despite the overall macro adversity, Chesapeake and Statoil have one of the most material, economically robust Appalachia acreage positions, evidenced by low breakevens, the plays most productive wells and the 2nd largest production.

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

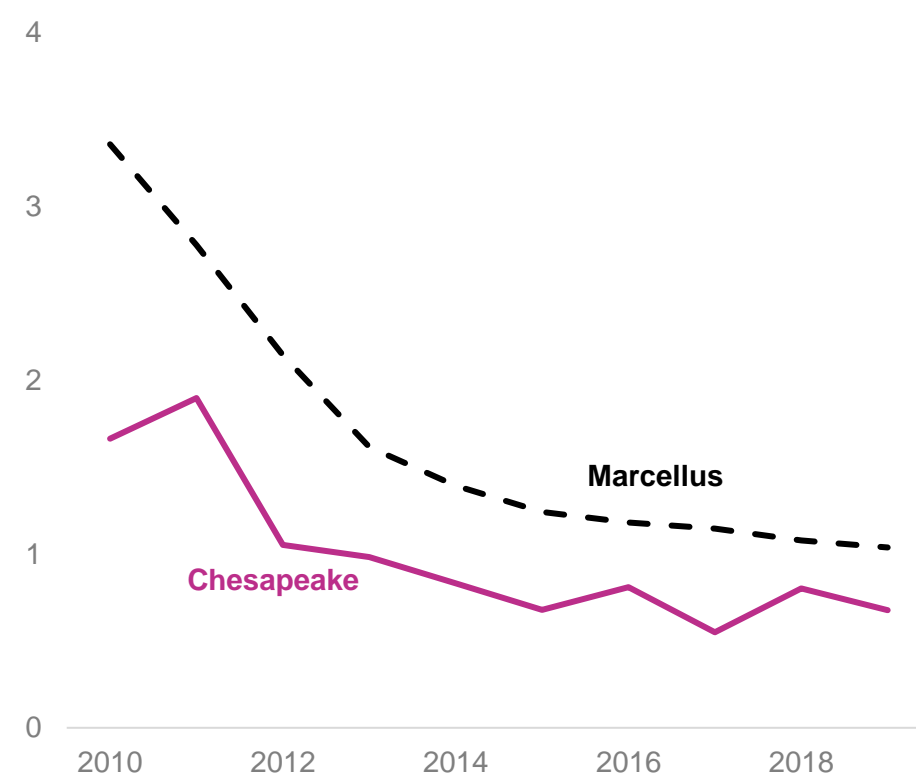
Chesapeake operated highly productive and low-breakeven wells

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

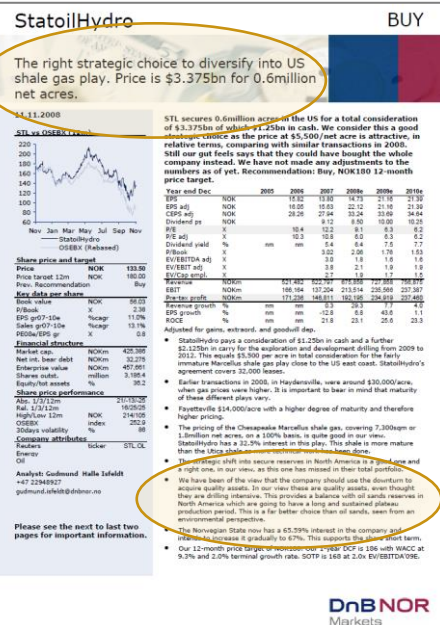


Chesapeake has maintained one of the lowest breakevens since Statoil entered the Marcellus, well below the average.

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



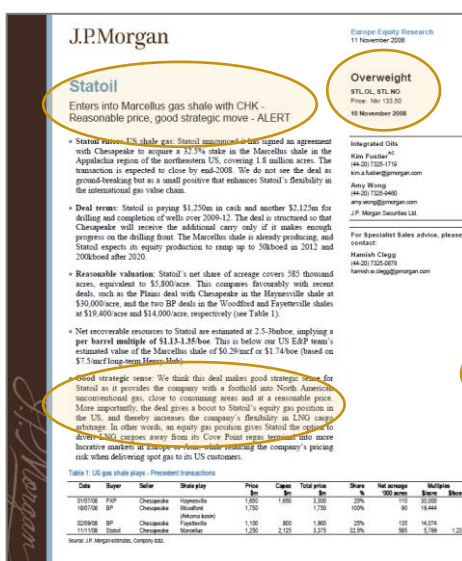
*"In our view these are quality assets,
even though they are drilling
intensive"*



“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”



"Reasonable price, good strategic move"



"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"



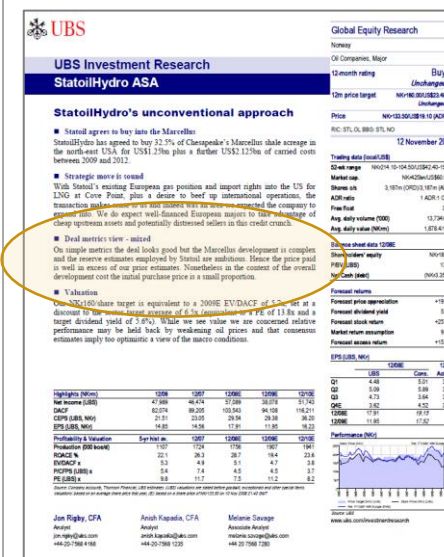
"Well, well, well..."



“We have a number of key reservations, namely production (may be too aggressive), US gas prices and infrastructure”








"On simple metrics the deal looks good but...."



“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”

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 700mcf 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

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

	41.0	2009: ExxonMobil acquires XTO Energy for \$41B
	15.1	2011: BHP Billiton acquires Petrohawk Energy for \$15B
	7.0	2014: Encana acquires Athlon Energy for \$7B
	6.0	2013: Devon acquires Eagle Ford assets from GeoSouthern for \$6B
	6.0	2014: Whiting Petroleum acquires Kodiak Oil & Gas for \$6B
	5.4	2014: Chesapeake sells Marcellus and Utica assets to Southwestern Energy for \$5.38B
	4.8	2011: Chesapeake divests Fayetteville assets to BHP Billiton for \$4.8B
	4.7	2010: Shell acquires Marcellus acreage from East Resources for \$4.7B
	4.7	2011: Statoil acquires Brigham Exploration for \$4.7B
	4.3	2010: Chevron acquires Atlas Energy for \$4.3B
	3.5	2010: CONSOL Energy acquires Dominion's E&P business for \$3.5B
	3.4	2008: StatoilHydro acquires 32.5% interest in Chesapeake's Marcellus Shale assets for \$3.4b
	3.3	2008: Plains E&P acquires Louisiana and Texas acreage from Chesapeake Energy for \$3.3B
	3.1	2014: Encana acquires Eagle Ford assets from Freeport for \$3.1B
	2.9	2012: Apache acquires Cordillera Energy for \$2.85B
	2.6	2014: Baytex Energy acquires Aurora for \$2.59B
	2.5	2014: AEP acquires Permian assets from Enduring Resources for \$2.5B
	2.3	2009: Total acquires 25% interest in Chesapeake's Barnett Shale portfolio for \$2.25b
	2.2	2012: Devon and Sinopec form JV for five unconventional plays in US
	1.3	2010: Talisman and Statoil form \$1.3B Eagle Ford JV

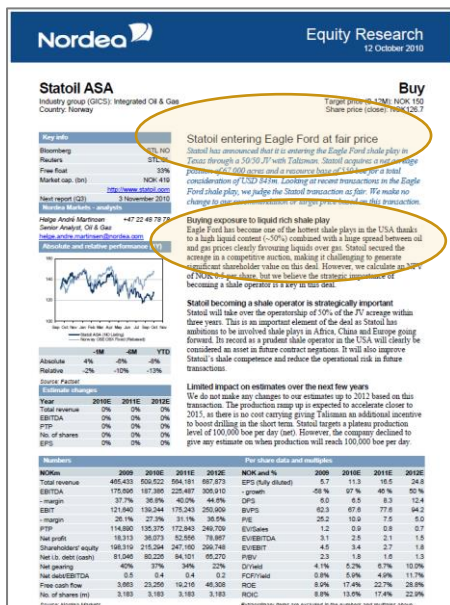
Note: Equinor's Eagle Ford transaction falls outside the top 20

Source: UCube; Rystad Energy research and analysis

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



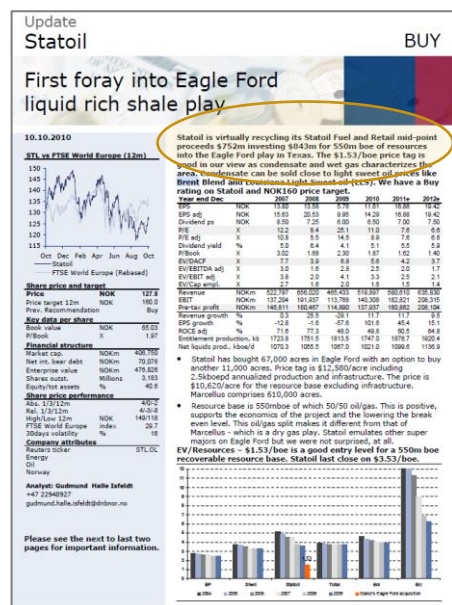
"Statoil entering Eagle Ford at fair price"



“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”



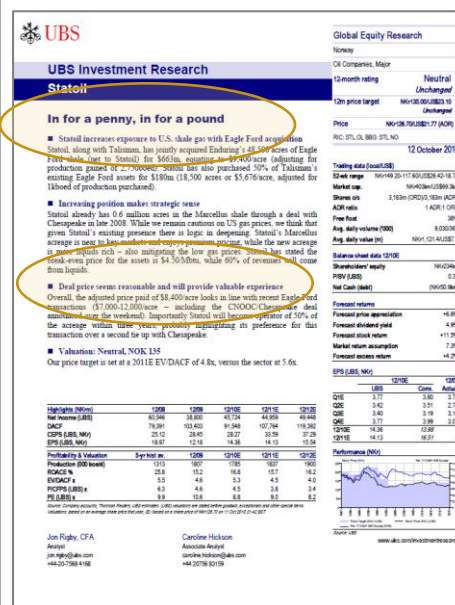
"First foray into Eagle Ford liquid rich shale play"



"Statoil is virtually recycling its Statoil Fuel and Retail mid-point proceeds \$752m investing \$843m into the Eagle Ford play in Texas"



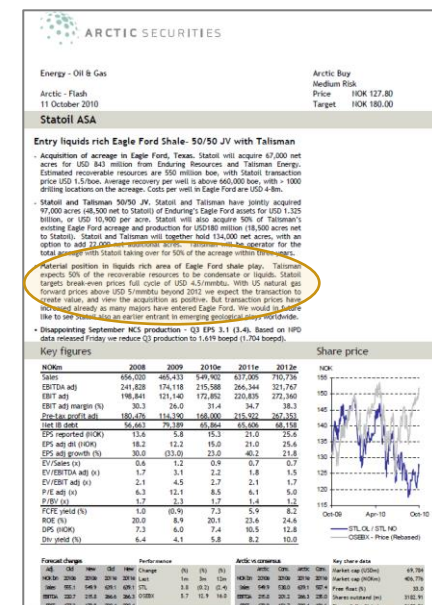
"In for a penny. in for a pound"



"Deal price seems reasonable and will provide valuable experience"



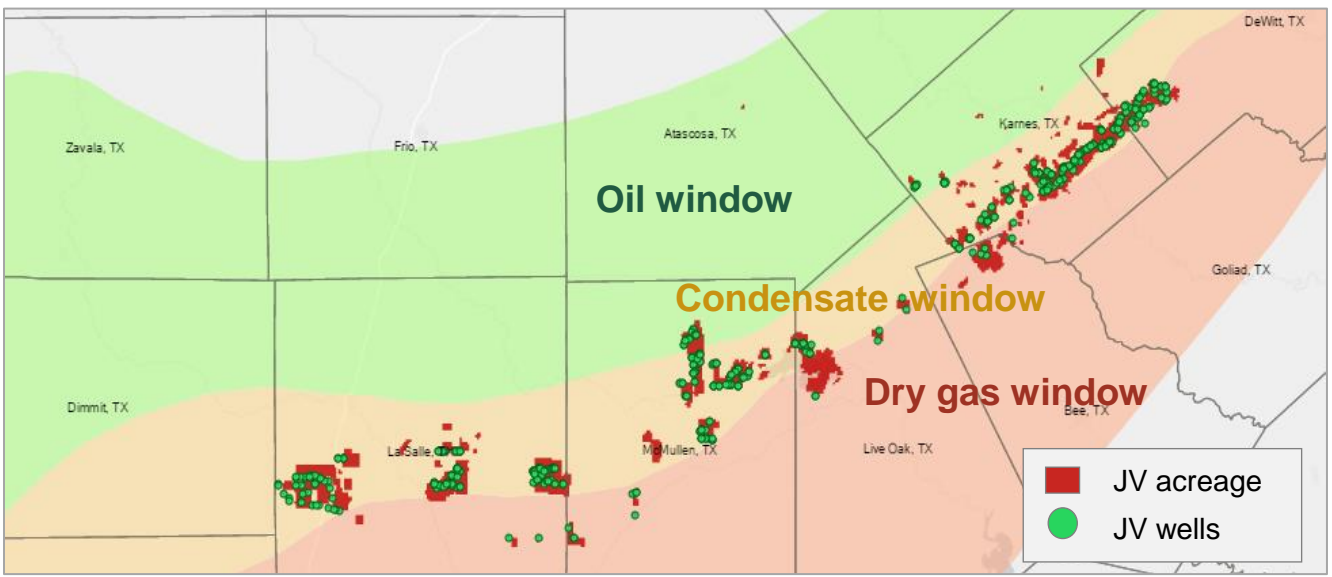
"We expect the transaction to create value, and view the acquisition as positive"



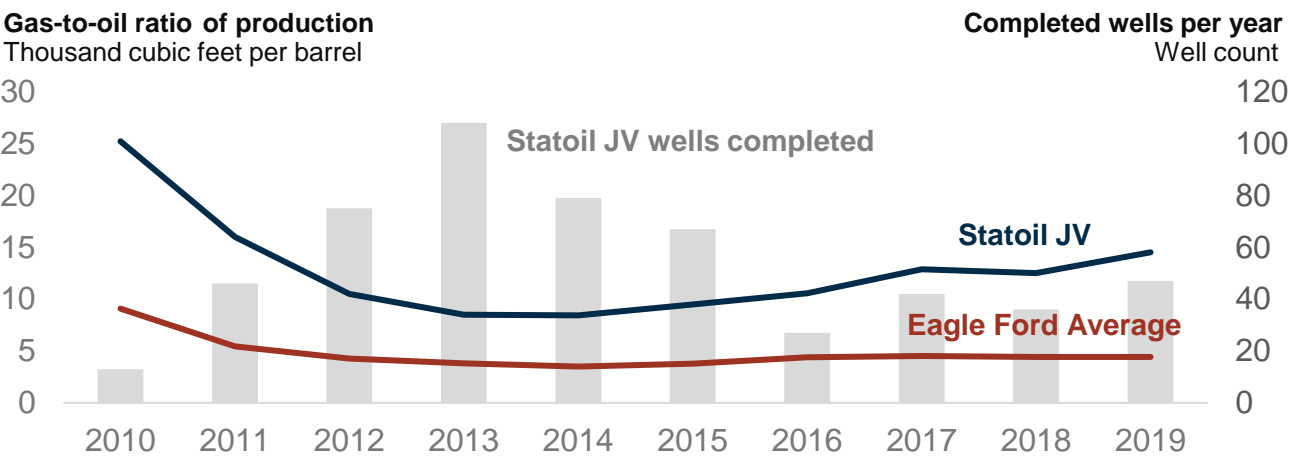
“Transaction prices have increased already as many majors have entered Eagle Ford”

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

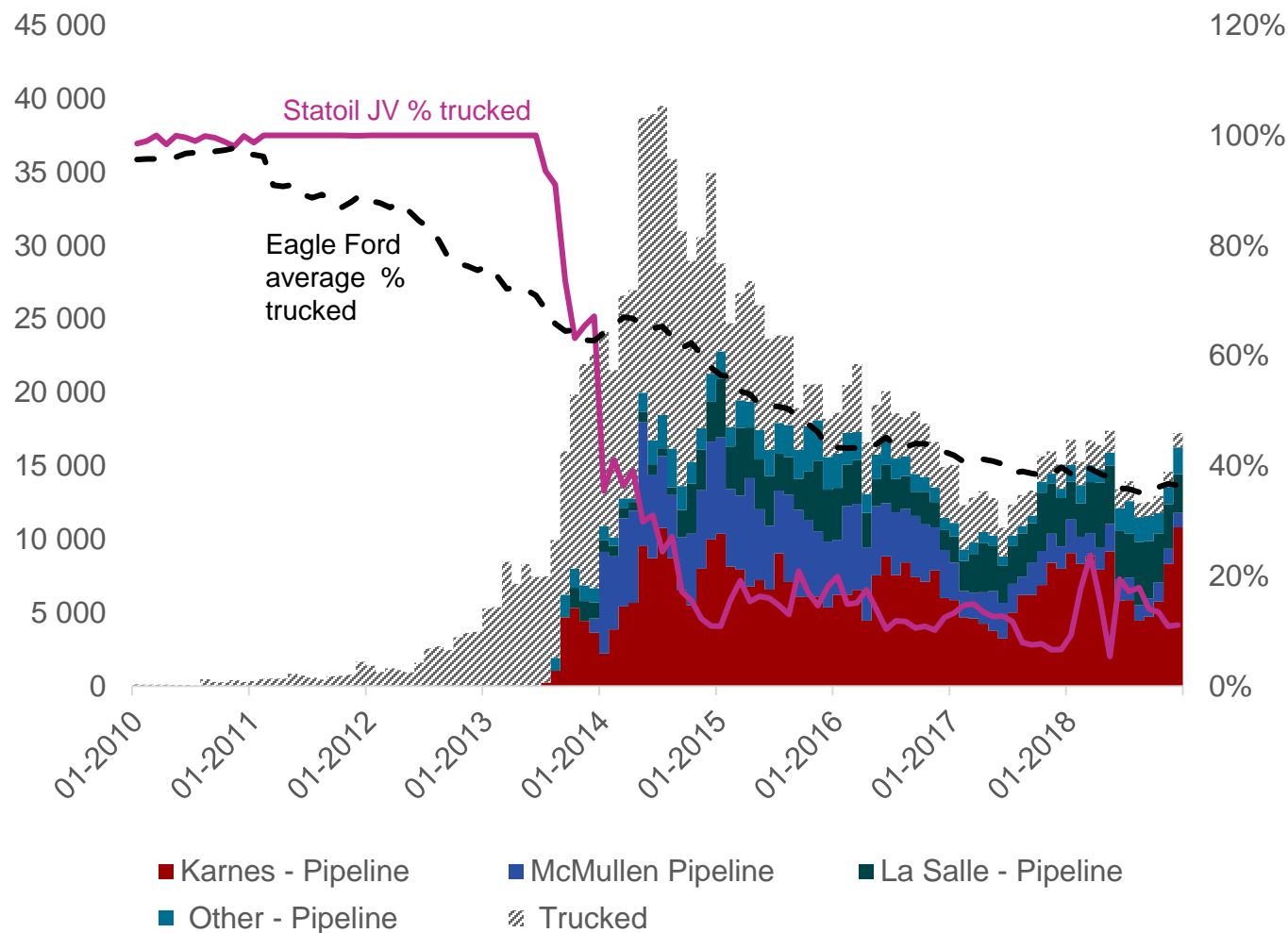


Source: Rystad Energy ShaleWellCube, Rystad Energy research and analysis

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

Lease disposition of Statoil's Eagle Ford oil
Barrels of energy equivalent per day

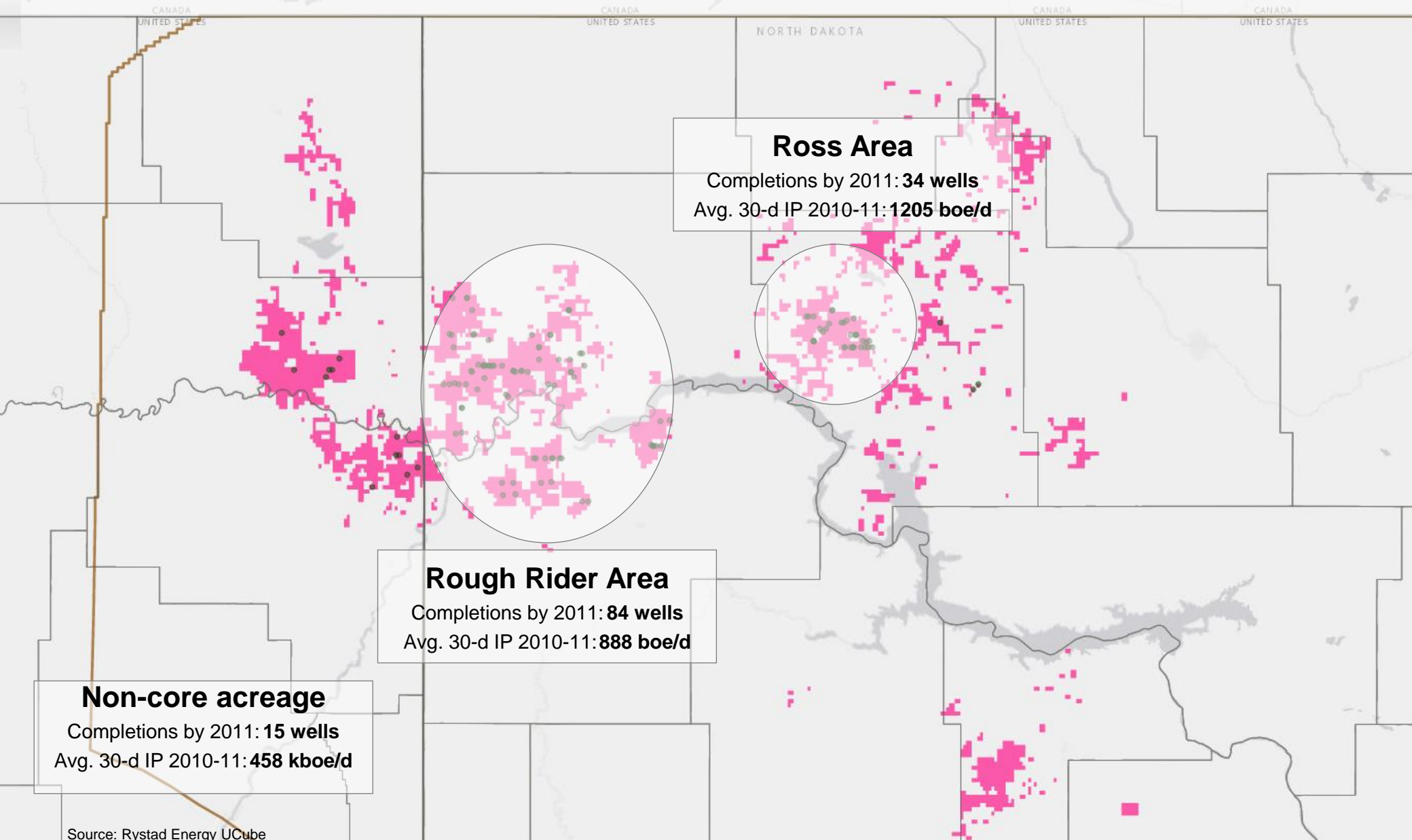
Percent of oil trucked
Percentage



- 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

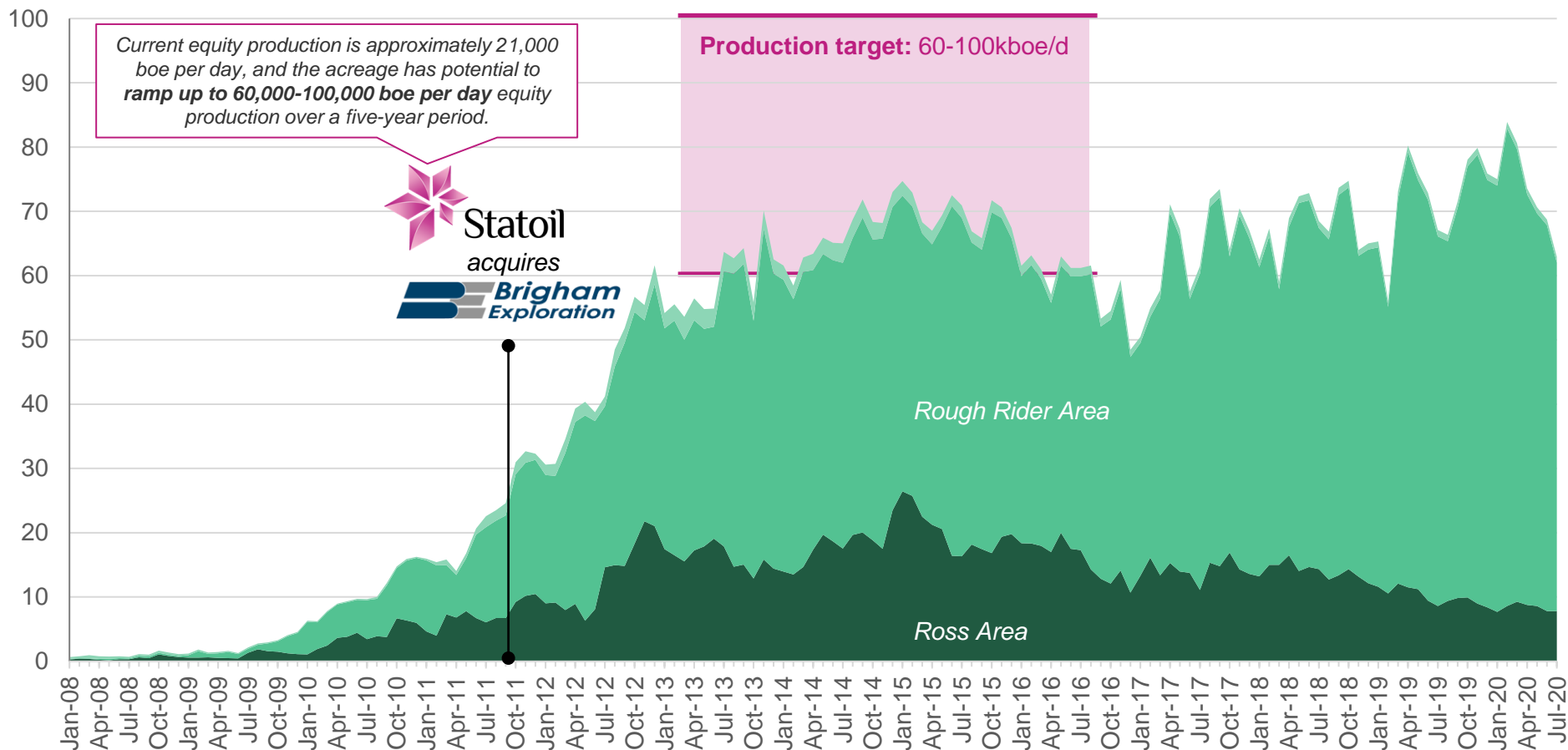
The Brigham acquisition in 2011 – two main areas of activity pre-acquisition



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

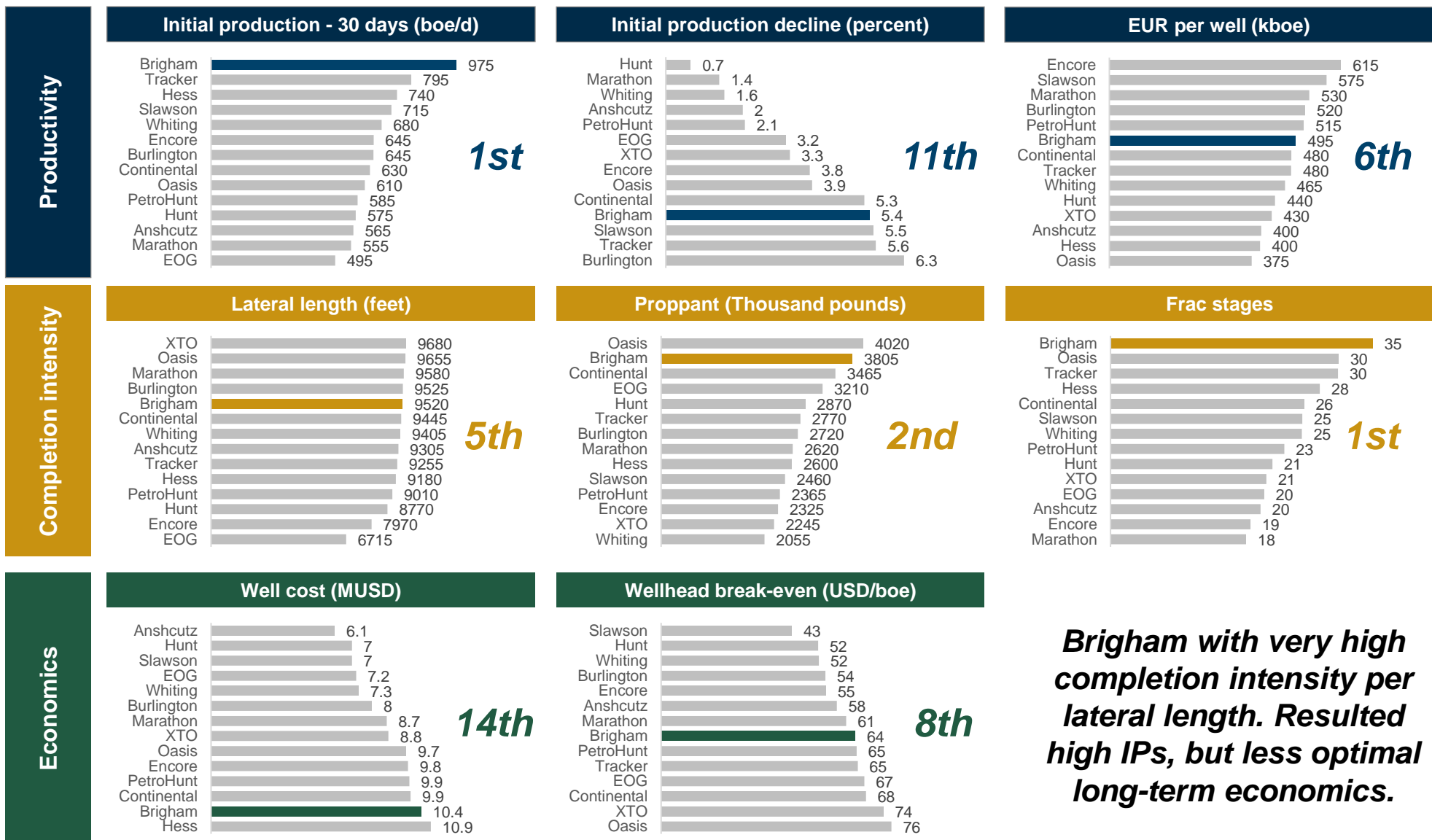
Equinor/Brigham Bakken production

kboe/d



Source: Rystad Energy research and analysis

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

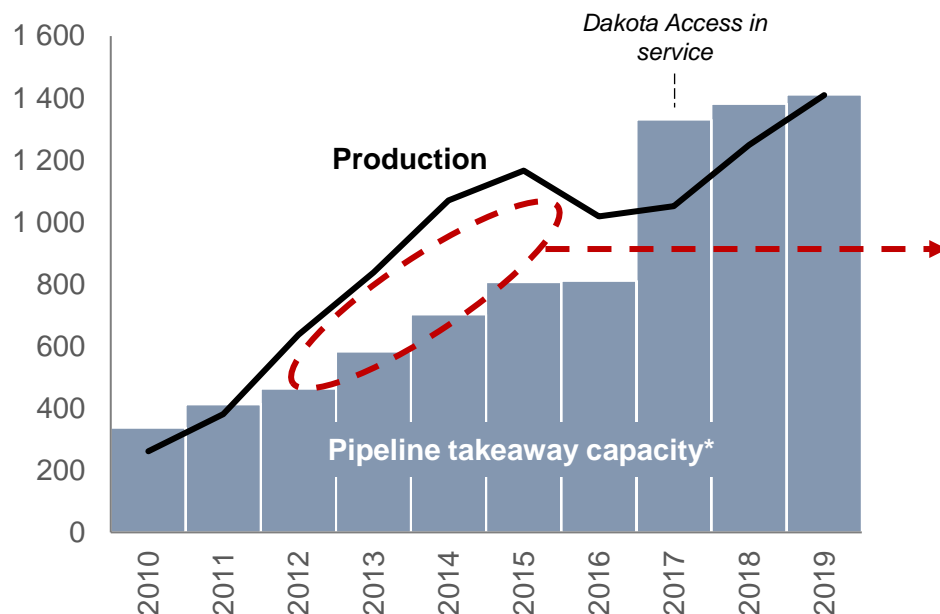


All data from wells completed in 2010-2011
Source: Rystad Energy ShaleWellCube

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

Bakken oil production and takeaway capacity

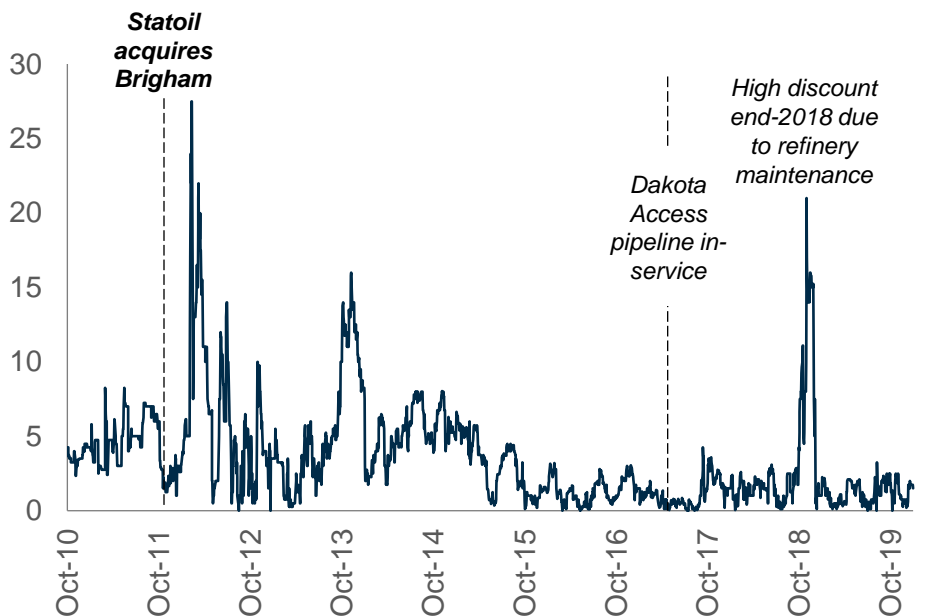
Thousand barrels per day



- 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.

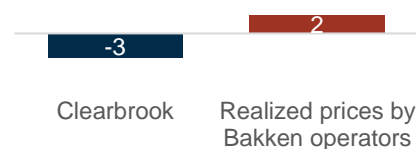
Discount to WTI for Bakken crude at Clearbrook

USD/bbl



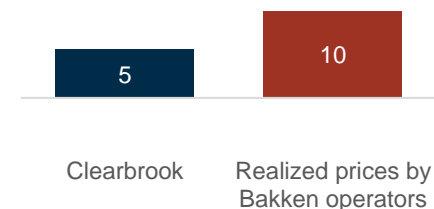
2010-2011 (pre-deal)

Clearbrook-WTI spread
USD/bbl



2012-2014 (post-deal)

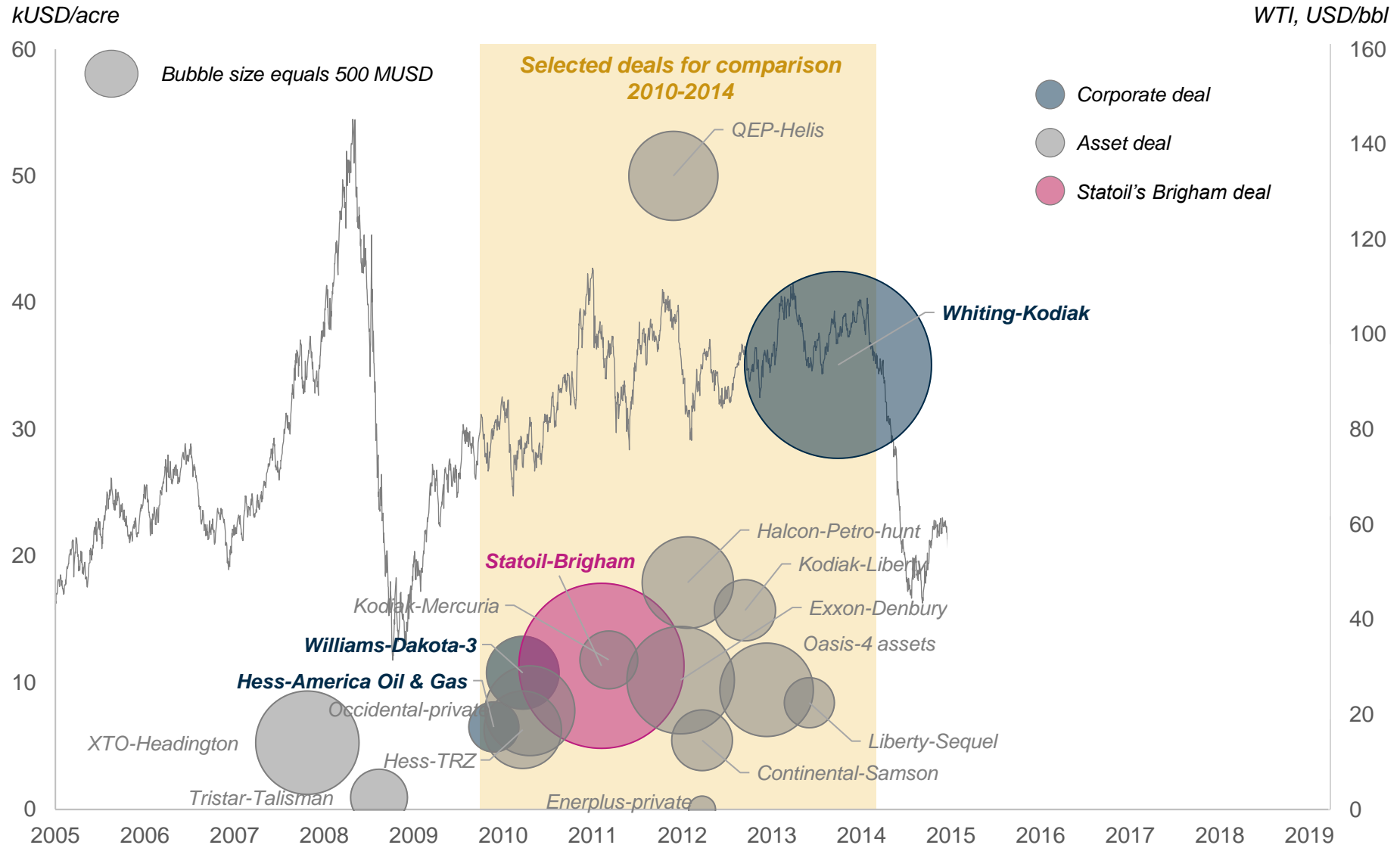
Clearbrook-WTI spread
USD/bbl



*Pipeline takeaway capacity includes local refining

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

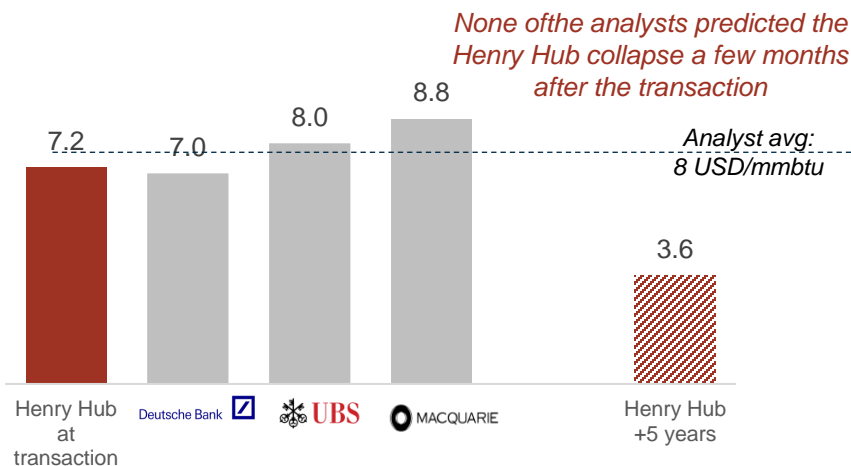
Statoil's Brigham acquisition did not compare unfavorably on a per acreage pricing



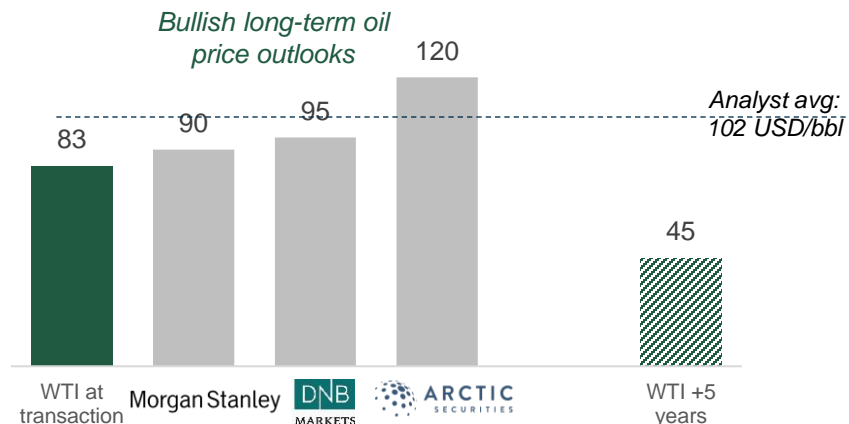
Source: Bloomberg, Rystad Energy research and analysis

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

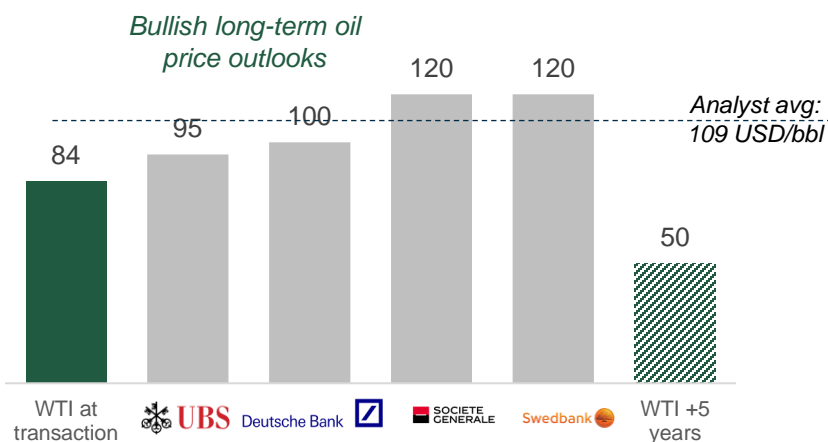
11/11-2008: 32.5% stake in Marcellus



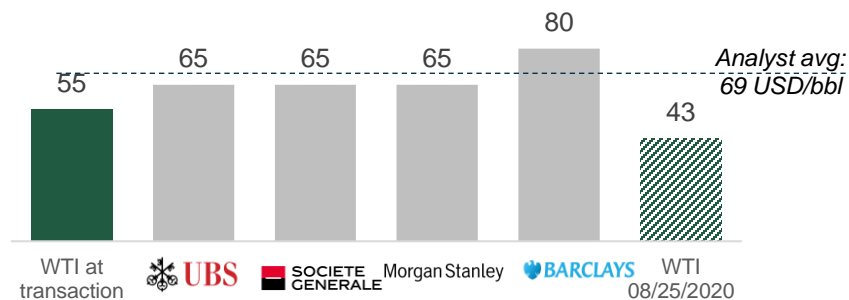
10/10-2010: JV in Eagle Ford



17/10-2011: Acquisition of Brigham

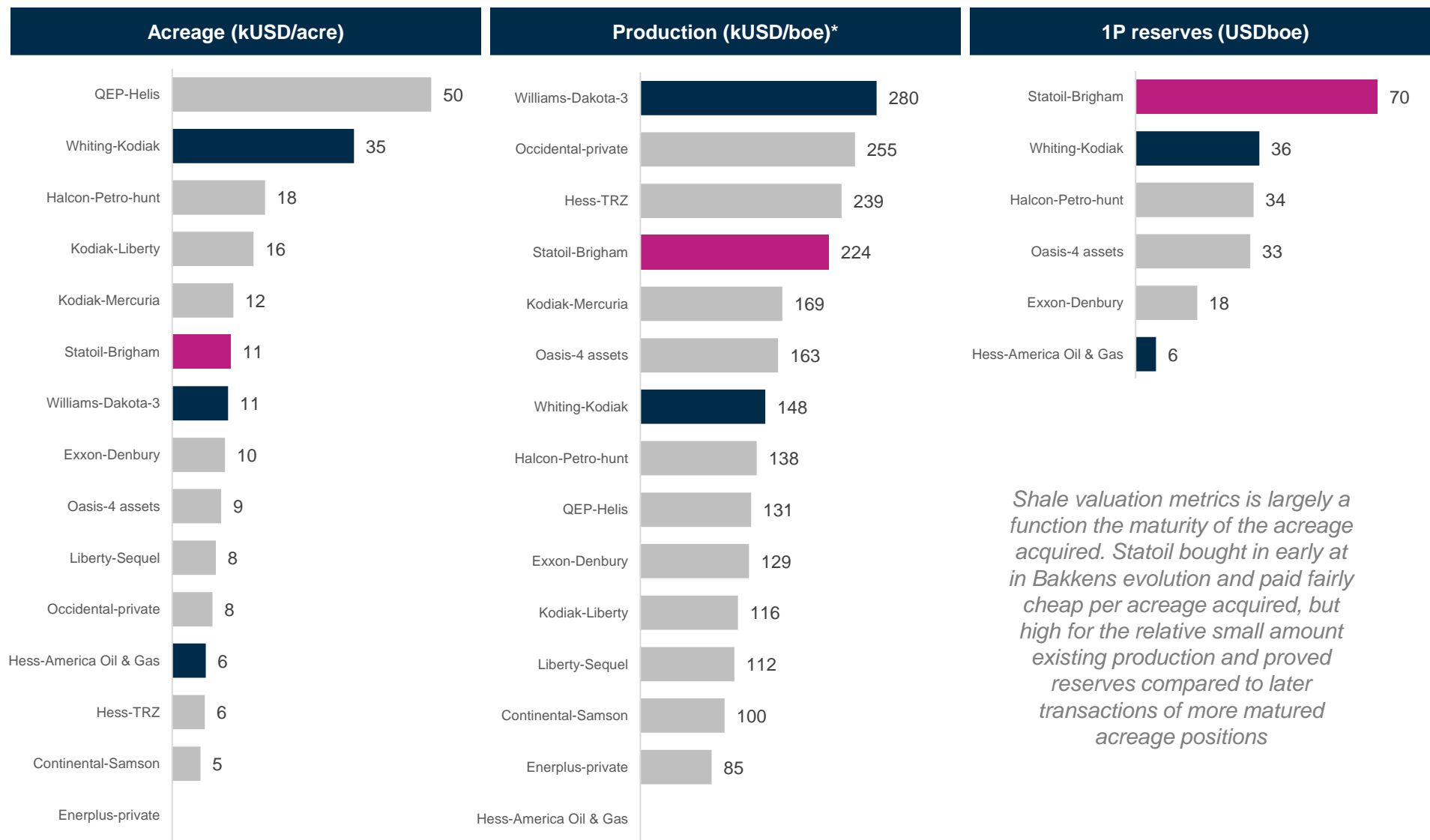


7/11-2019: Divestment in Eagle Ford



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

Metrics per Bakken deal completed 2010-2014



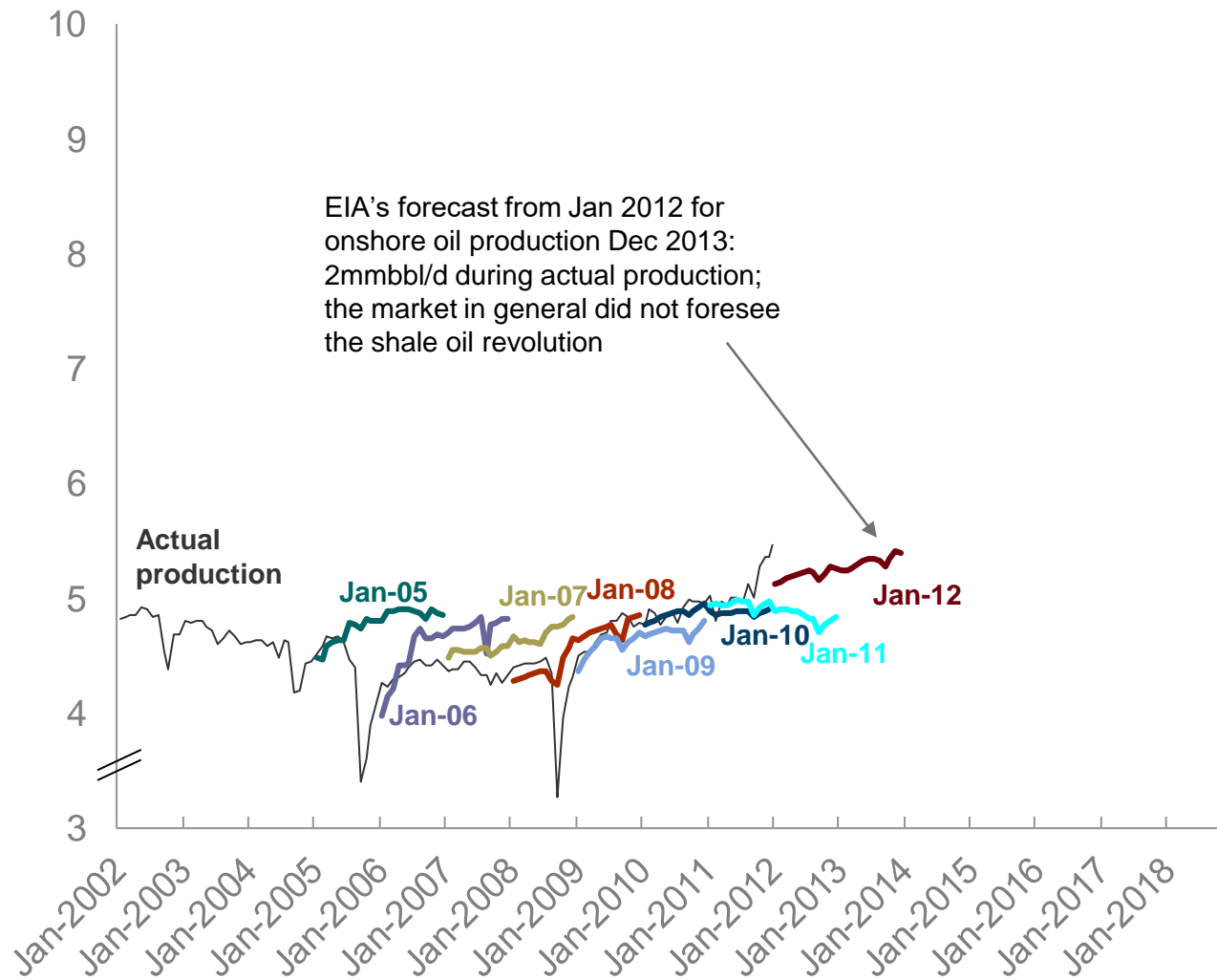
Shale valuation metrics is largely a function the maturity of the acreage acquired. Statoil bought in early at in Bakken's evolution and paid fairly cheap per acreage acquired, but high for the relative small amount existing production and proved reserves compared to later transactions of more matured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

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

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



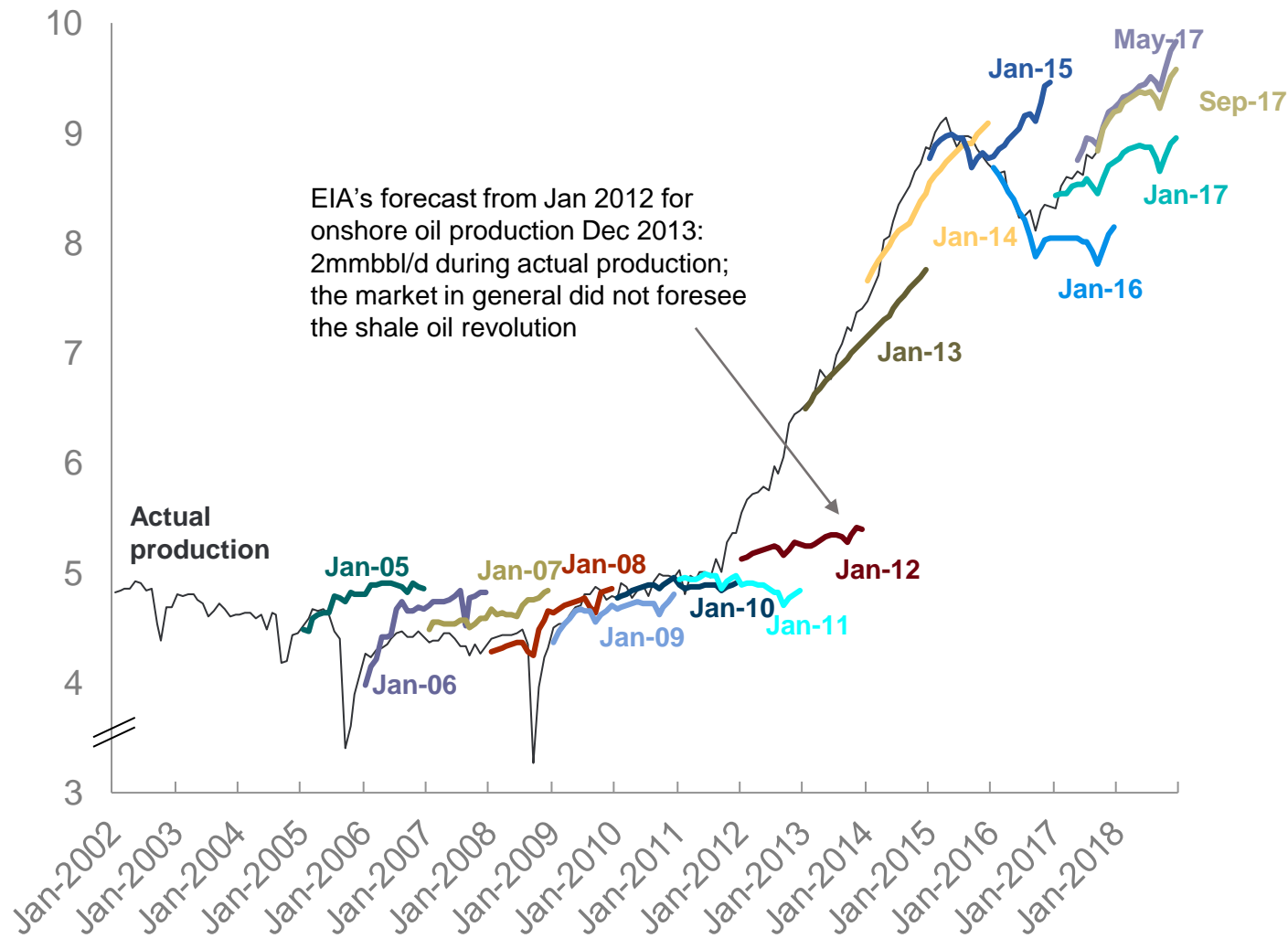
- The graph shows reported oil production from the US outside of Alaska. The US government (EIA) strongly missed on these projections due to the shale oil revolution.
- In January 2012, the EIA expected a slight increase over the next two years to 5.5 million barrels per day in 2014. The actual figure 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.

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

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EIA lower 48 oil production forecasts

Million barrels per day

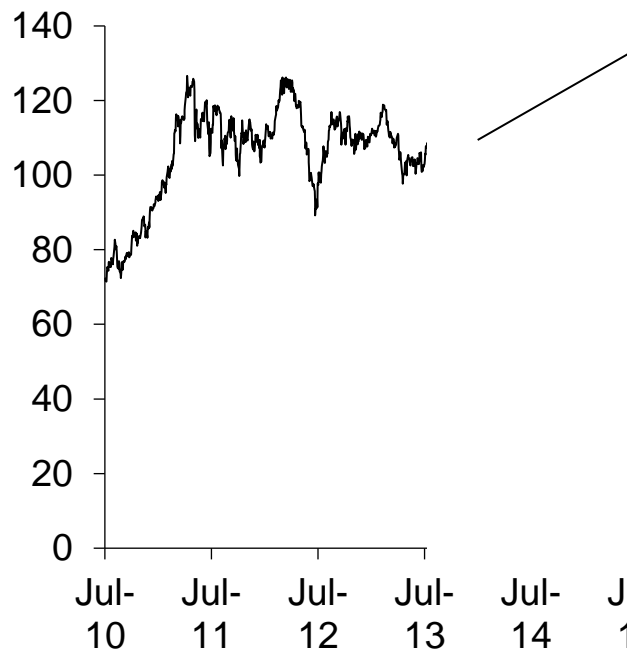


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Source: Rystad Energy Ucube, Rystad Energy research and analysis; EIA, IEA

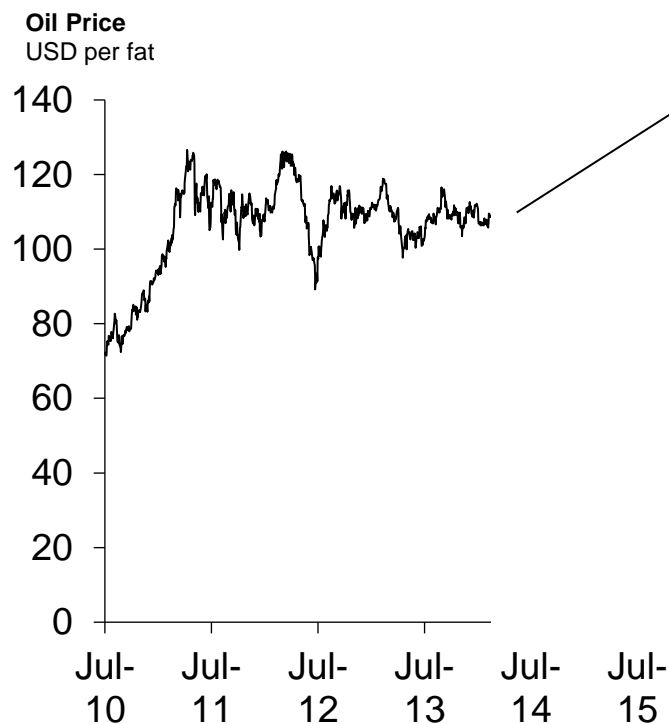
Vi forsøkte å advare mot oljenedtur i 2013...

August 2013



Source: Bloomberg, Rystad Energy research and analysis

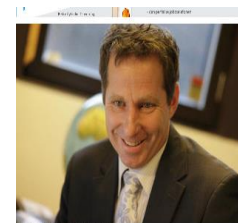
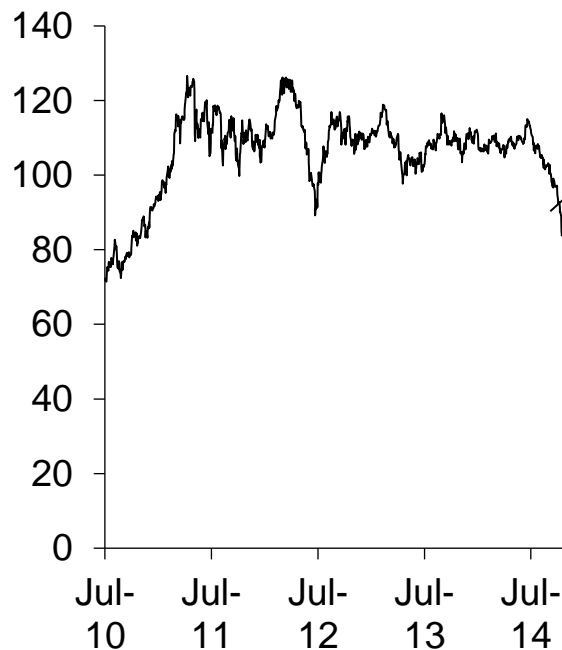
Men ingen ting skjedde, og igjen i 2014...



Source: Bloomberg, Rystad Energy research and analysis

..og lite skjedde, og igjen i oktober 2014

Oil Price
USD per fat



Venter snarlig katastrofe for Norge

Jarand Rystad spår krakk i skatteinntektene fra oljebransjen.



Nettavisen 15. oktober 2014

Venter snarlig katastrofe for Norge

Tusenvís mister jobben og skatteinntektene dunderer i bakken, tror analytiker.

Publisert: for 2 år siden
Sist oppdatert: for 2 år siden

Niels Ruben Ravnaas
Tips meg

Ole Eikeland
Tips meg



Del på Facebook

1437



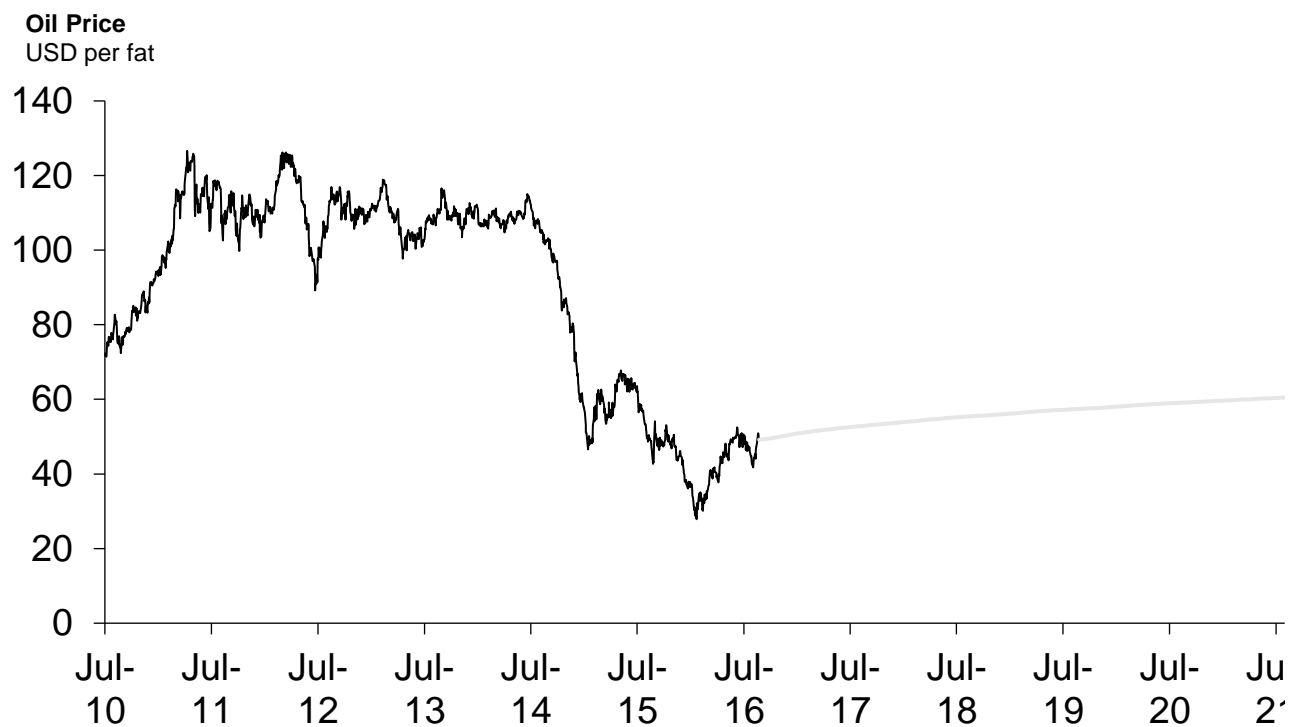
Del på Twitter

Den siste tiden har oljeprisen falt som en stein. På kort tid har prisen rast fra vel 115 dollar til nå 88 dollar per fat.

For Norge vil nedturen være dramatisk.



..og lite skjedde, og igjen i oktober 2014



Source: Bloomberg, Rystad Energy research and analysis

Petoro porteføljen redusert med 410 mrd fra 2014 til 2016



VERDIVURDERING AV STATENS DIREKTE ØKONOMISKE ENGASJEMENT (SDØE), 2016

Offentlig rapport, 9. juni, 2016



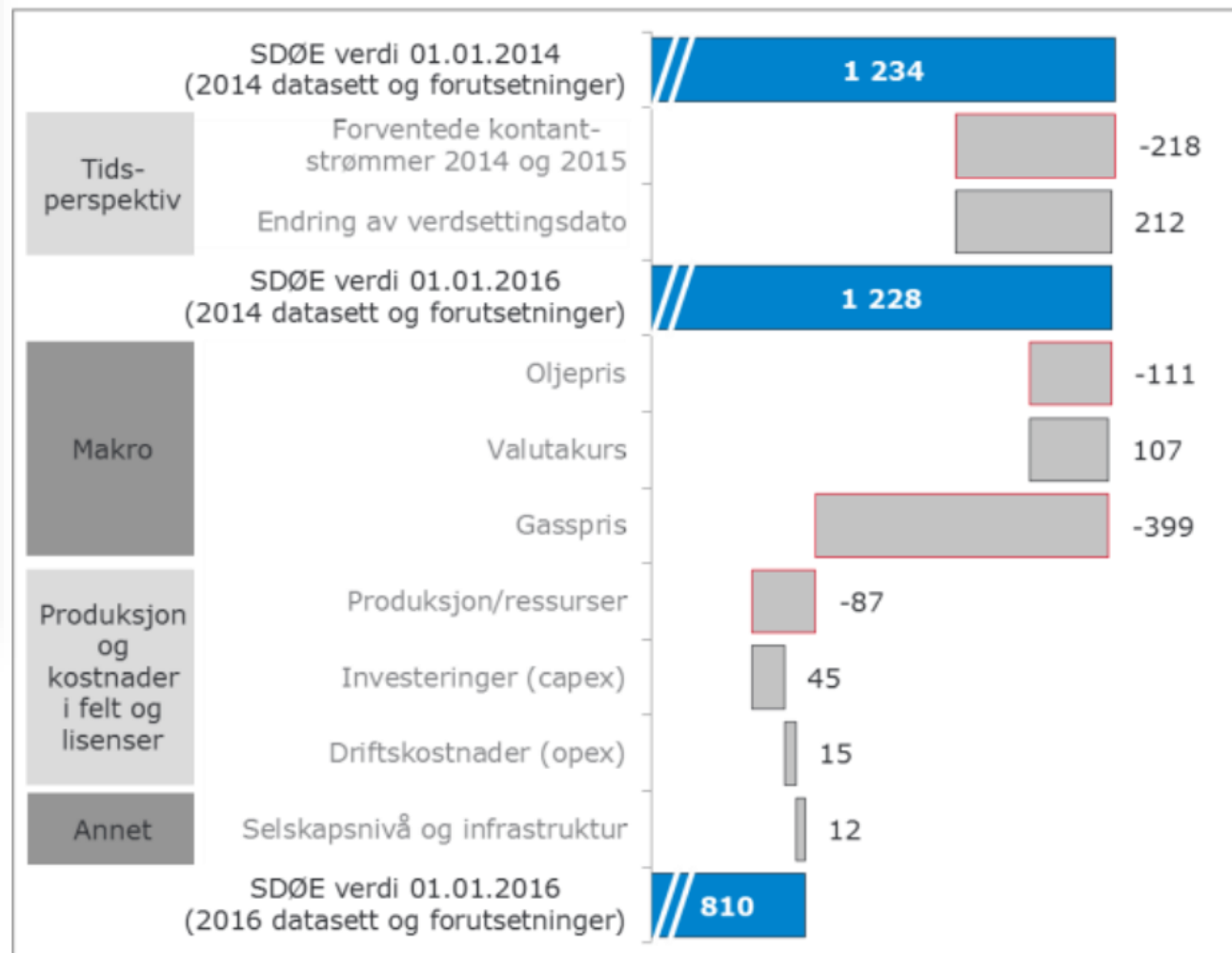
OLJE- OG ENERGIDEPARTEMENTET

Ministry of Petroleum and Energy

Denne rapporten er laget på oppdrag for Olje- og energidepartementet. Informasjonen og resultatene i dokumentet er basert på Rystad Energy's egen uavhengige verdianalyse av SDØE-porteføljen. Til analysen er det benyttet data fra Petoro og Olje- og energidepartementet i tillegg til Rystad Energy's egen oppstrømsdatabase, UCube. Rystad Energy gir ingen garanti for at informasjon og synspunkter i rapporten er rettferdig, komplette eller korrekte. Synspunktene gjelder på utgivestidspunktet og vil være gjenstand for revisjon og forandring. Rystad Energy tar ikke noe ansvar for handlinger utført på basis av informasjonen i dette dokumentet.

RYSTAD ENERGY AS
Fjordaløen 16, 0250 OSLO, NORWAY TELEPHONE +47 24004200 INFO@RYSTADENERGY.COM WWW.RYSTADENERGY.COM

Figur 3.1: Forandring i verdi for SDØE-porteføljen fra 2014 til 2016 (mrd kroner)



Kilde: Som vist over, rapport fra Rystad Energy for Olje og Energidepartementet om verdien av SDØE

Verdien av de 8 største oljeselskap ned fra 1350 mrd dollar i 2011 til 630 nå

Exxon Mobil Corporation

NYSE: XOM

41.98 USD 0.00 (0.00%)

Closed: Nov 25, 09:05 EST · Disclaimer

Pre-market 41.64 **-0.34 (0.81%)**

1 day 5 days 1 month 6 months YTD 1 year 5 years **Max**



Open	-	Div yield	8.29%
High	-	Prev close	41.98
Low	-	52-wk high	71.37
Mkt cap	177.50B	52-wk low	30.11
P/E ratio	53.99		

Topp 8 oljeselskap:

2011:

- 1350 mrd dollar

2020 November:

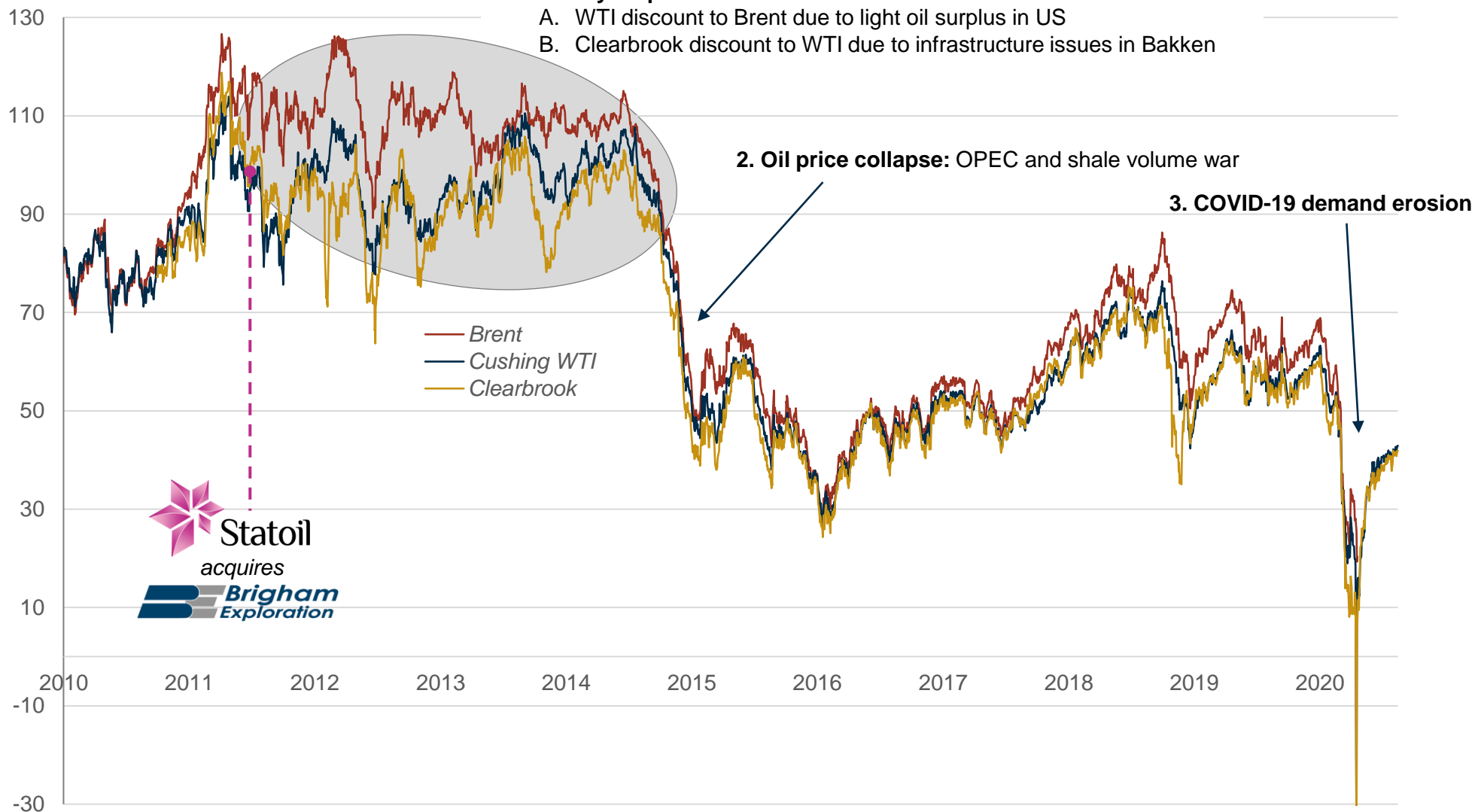
- 630 mrd dollar

Fall på 54 %.

Equinors har falt 40
% i samme periode

Post transaction: Three severe disappointments in oil price development

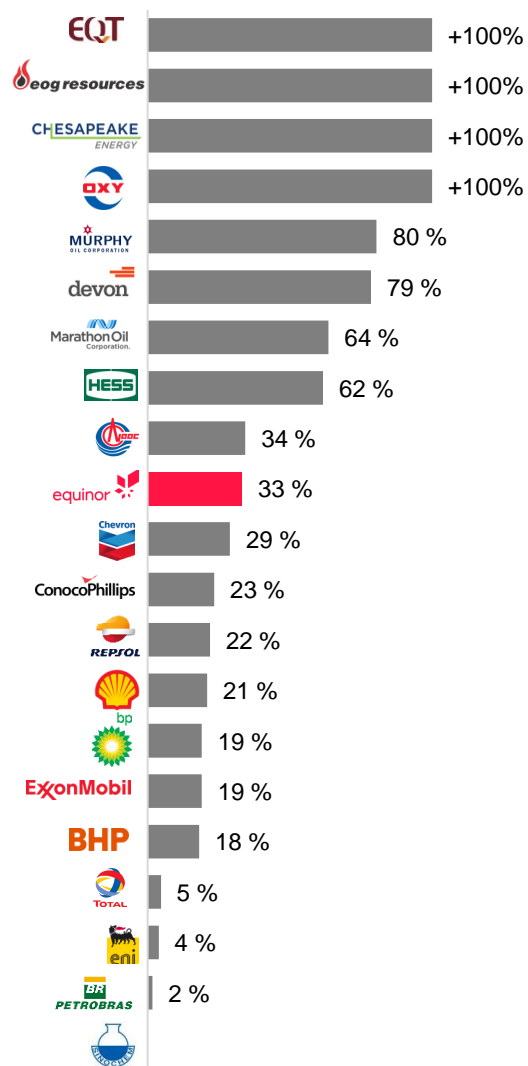
Oil price (USD/bbl)



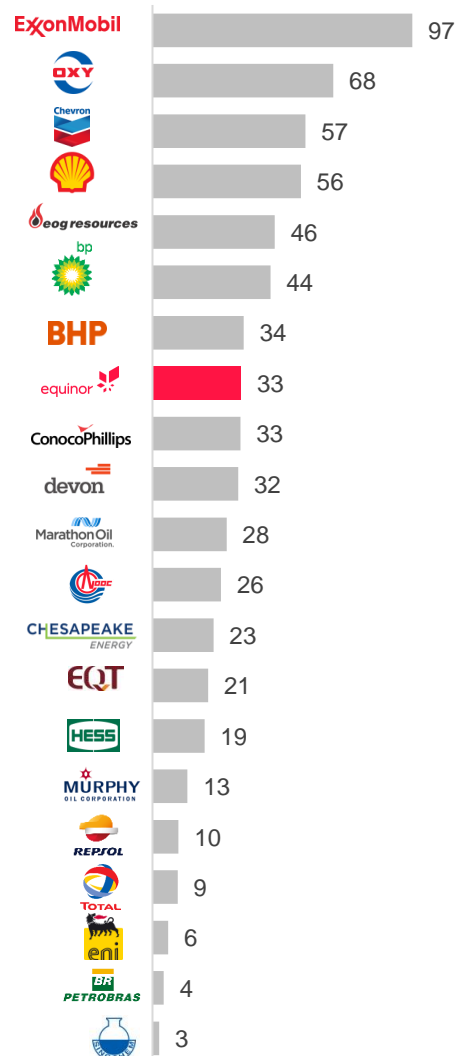
Source: Bloomberg; Rystad Energy research and analysis

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

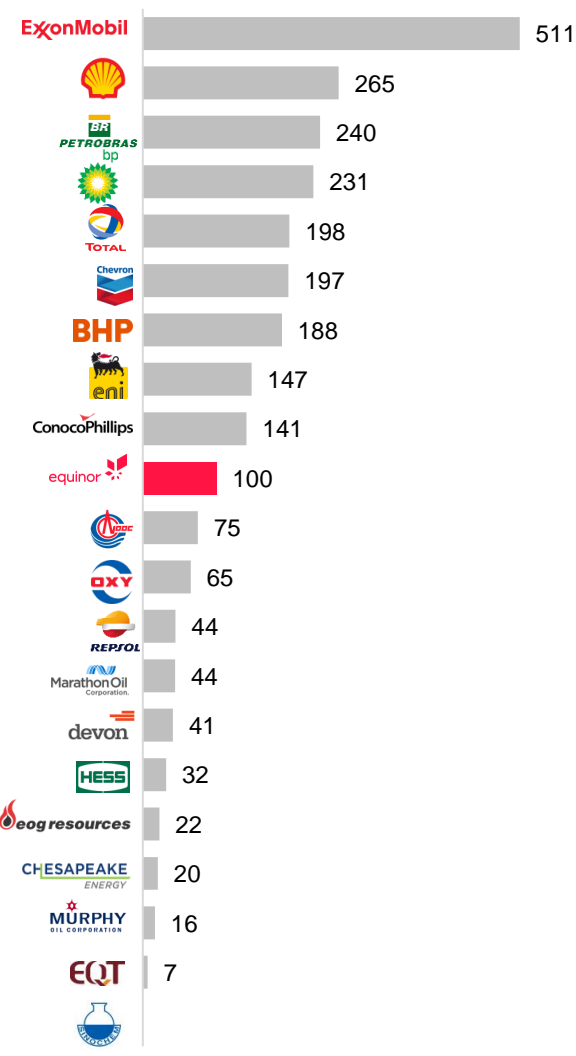
US investments relative to market cap
Percentage invested by market cap)



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



Market cap in 2008
BUSD



Source: Rystad Energy research and analysis

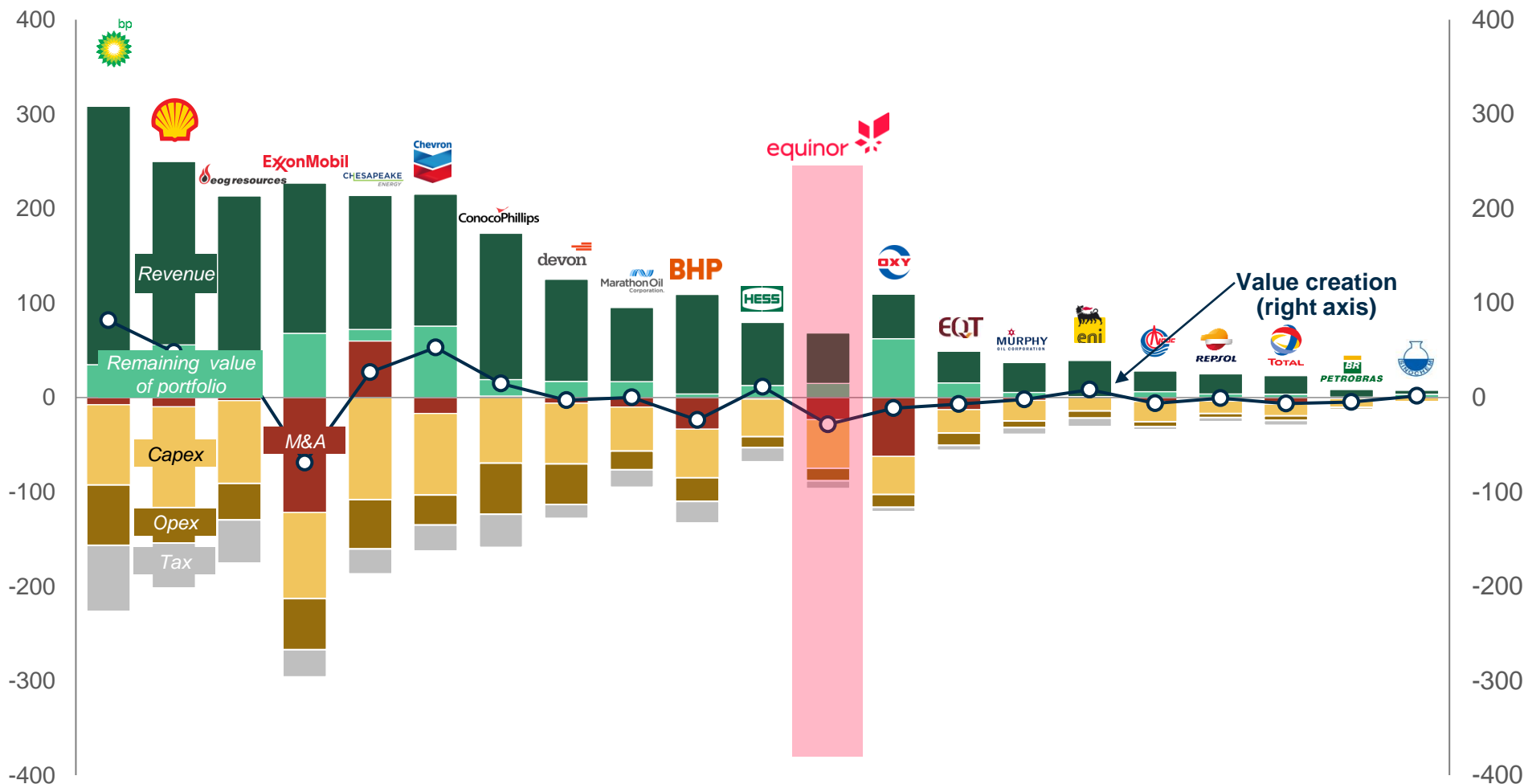
2008-2019: Several companies struggled to capture value from their US bets

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

Det ble granskning...

Nettavisen Økonomi.

Nyheter Øk

USD \$ 8,87 -0,34% EUR € 10,55 -0,34% GBP £ 11,84 -0,41% SEK kr 1,04 -0,11% JPY ¥ 0,08 -0,32% Nibor → - % Oslo Børs 936,10 0,11%

Equinor

Knusende Equinor-rapport: Brukte 180.000 kroner på én kalkun i USA



BURDE TATT GREP: – Styret og ledelsen burde ha sett og grepet tak i utfordringen tidligere, og det er nå styrets og ledelsens ansvar å sikre at vi tar læring fra dette, sier styreleder Jon Erik Reinhardsen Foto: Jil Yngland (NTB)

Brukte over 180.000 på én kalkun

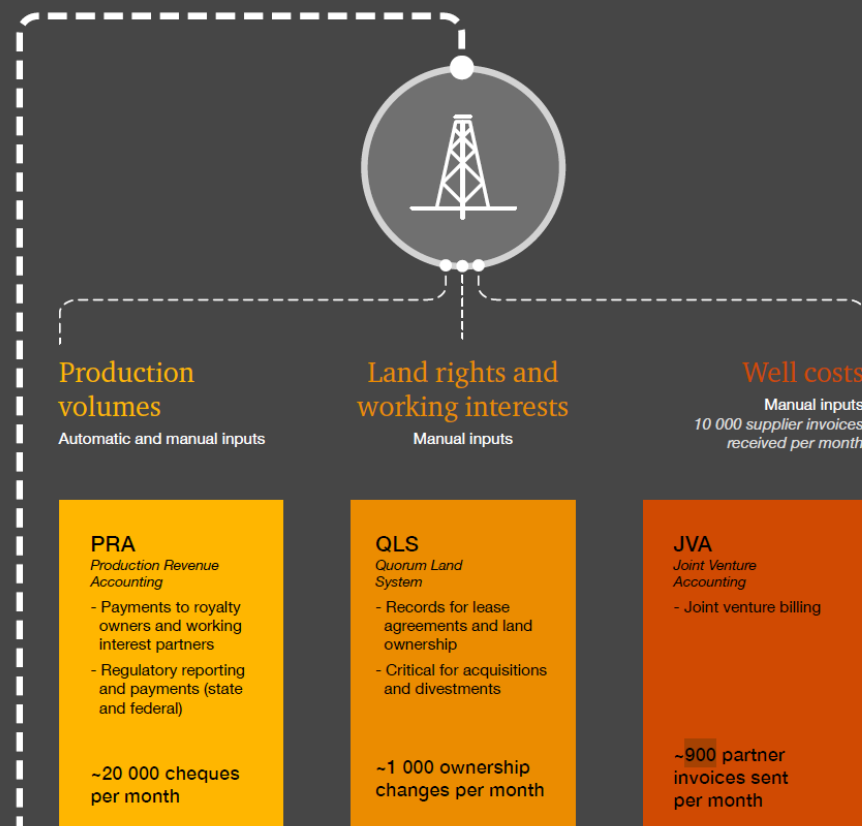
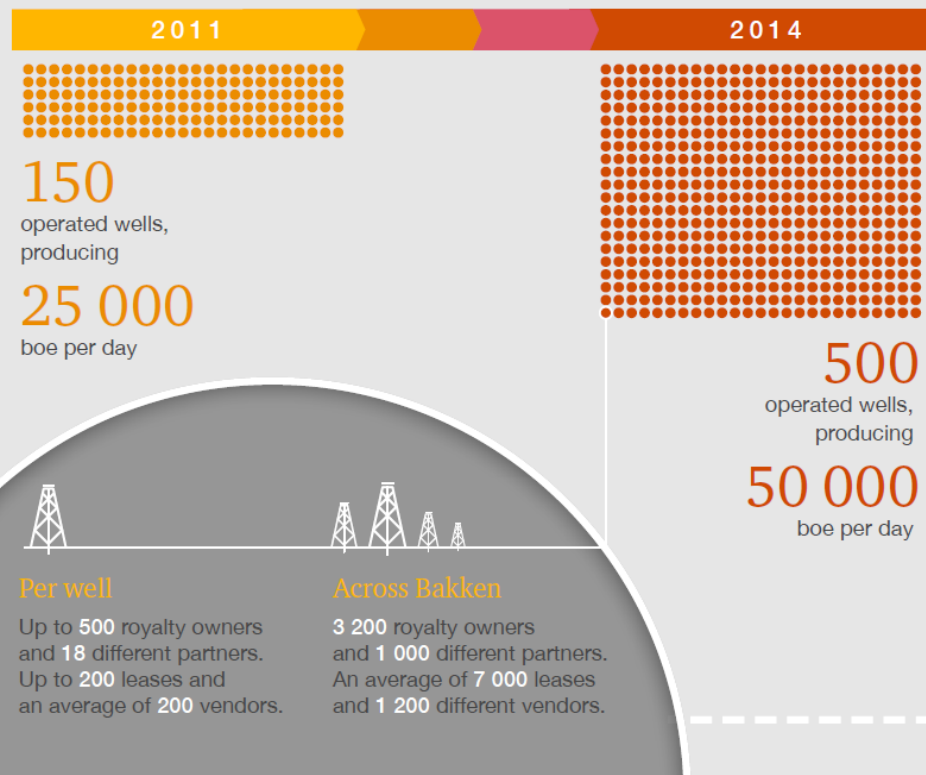
Blant de mest sjokkerende eksemplene på manglende kostnadskontroll fra Dagens Næringslivs avsløring i vår, var at Equinor i 2014 skulle ha brukt 700.000 kroner på en kalkun i forbindelse med en auksjon for veldedighet på Houston Rodeo.

Granskerne mener imidlertid at Equinor kun brukte 30.000 dollar, eller 180.000 kroner, på kalkunen i 2014. Totalt brukte Equinor 173.250 dollar, som etter dagens dollarkurs er 1,6 millioner kroner, på kalkuner for veldedighet mellom 2007 og 2015.

Operasjonell kompleksitet i USA – kostet selskapet USD 100 mill (0.5% av tapene)

Operating Bakken

The Bakken asset can be used to demonstrate the scale of data that is handled in support of US onshore activities, and how Equinor's systems processed the information.

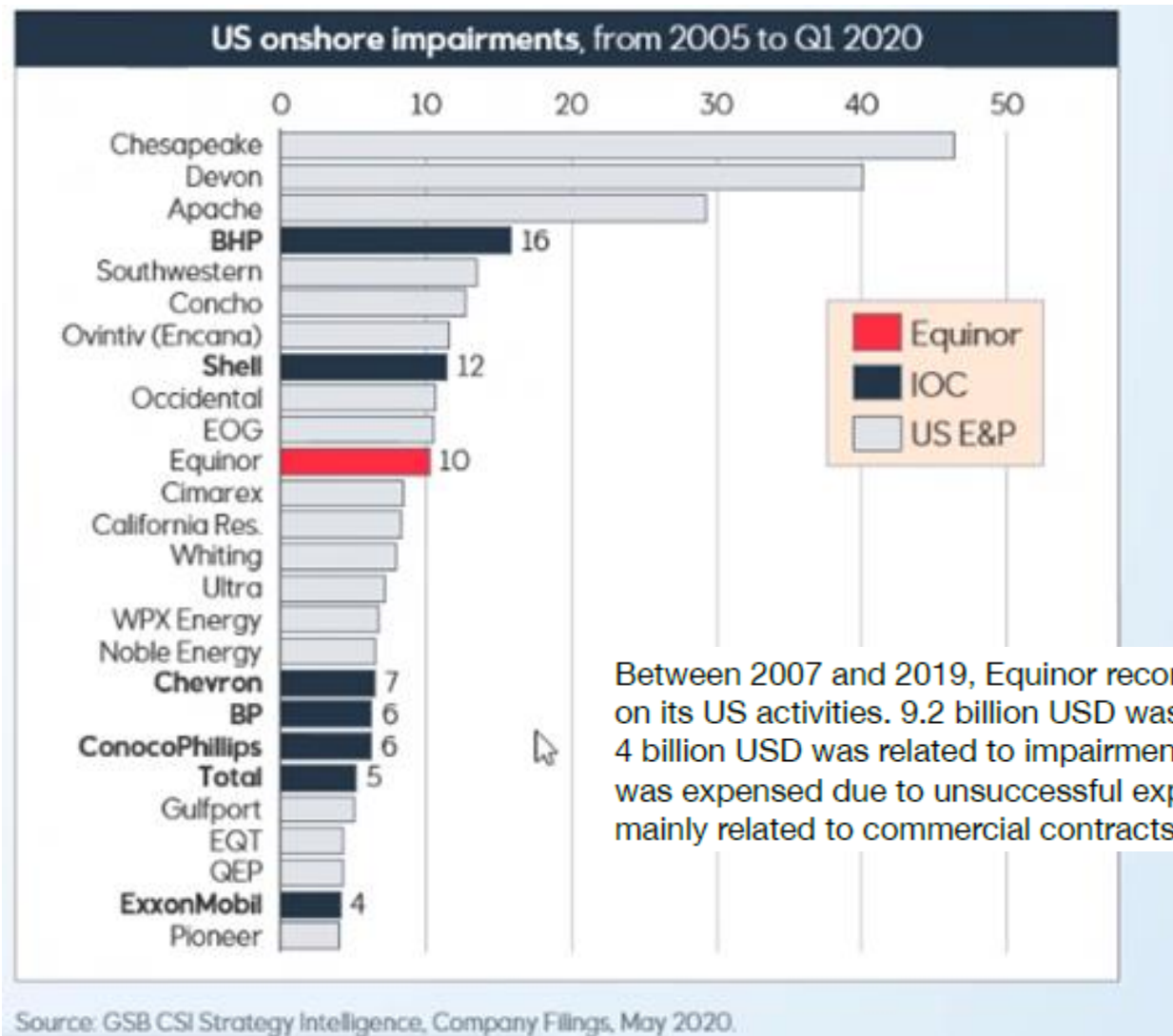


Financial impact of business support problems

Direct impacts identified from the problems in US onshore business support functions are currently estimated to be around 100 million USD. This includes items such as cost of external consultants, write-offs and provisions for expected losses from overpaid royalties or receivables not collected.

Three key back office systems run independently from one another. One ownership change that is recorded incorrectly, or not manually updated simultaneously across these three systems can result in hundreds of errors that need to be fixed. In 2014, less than 50% of Equinor's operated wells had matching ownership records across these three systems.

Nedskrivninger fra oljevirksomhet i USA:



Nedskrivninger

- Land: 10 b,
 - Offshore: 8 b
 - Annet: 3.5 b
-
- 90% fra oljeprisfall
 - 9.5% fra leting og reservoar/utbygging
 - 0.5% fra regnskapsmessig rot

Kritikk av USA satsingen: Berettiget eller etterpåklokskap?

Var det riktig av Statoil å satse internasjonalt i 2005?

Var det i så fall riktig å satse på Mexico Gulfen i USA?

Var det riktig å satse på skifergass i 2008?

..og skiferolje i 2010?

Var det riktig å tro på en oljepris over 100 dollar fremover i 2011?

Investerte Statoil nok i administrativ kapasitet i USA i 2008-2014?

2005-2014:
Ja

2020:
Nei

Er det en årsakssammenheng mellom *administrativt rot* og tapet på 200 mrd? Nei