



Richmond Energy Partners

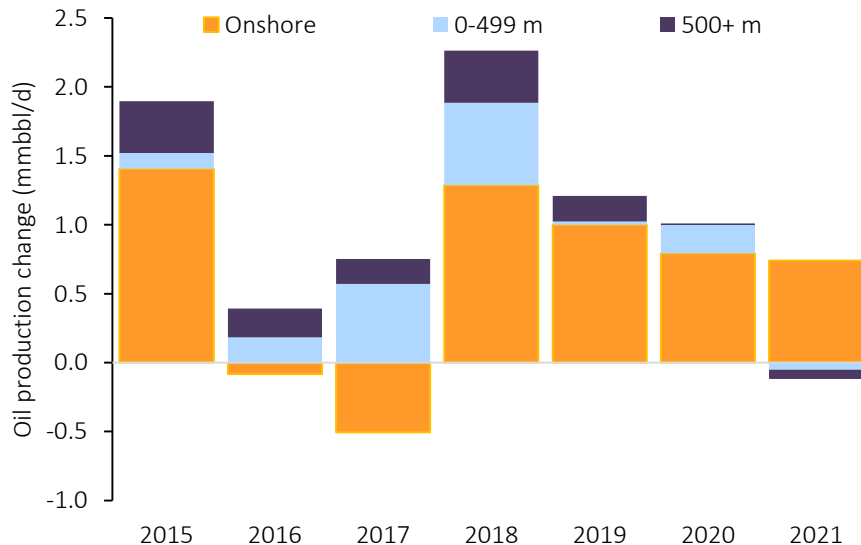
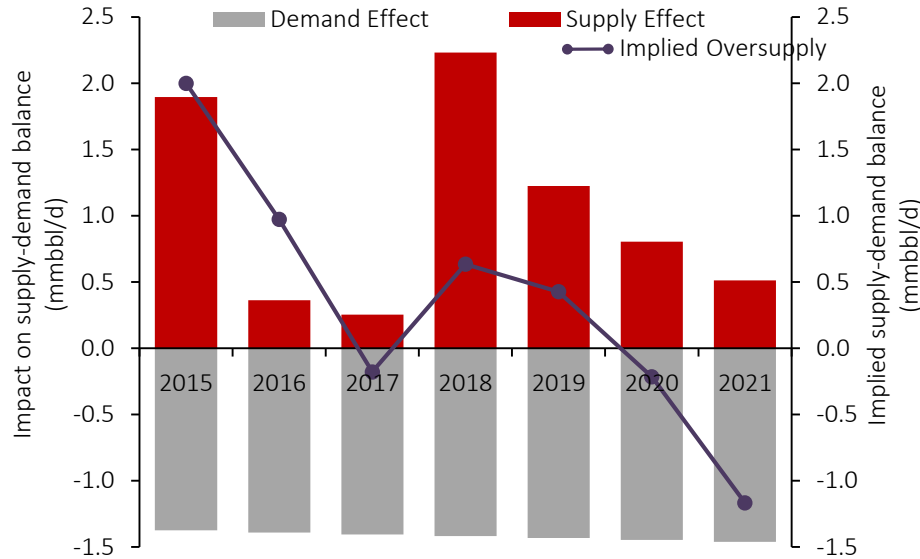
Improving performance through better intelligence

E&P in 2017 and Beyond

Keith Myers

- Oil and gas markets - OPEC's balancing act
- Equity market valuations - from bear to bull to...?
- Repairing balance sheets - out of the emergency room
- Mergers and acquisitions - buyers and sellers align
- Exploration performance – is exploration creating value?

Oil Markets – OPEC's Balancing Act

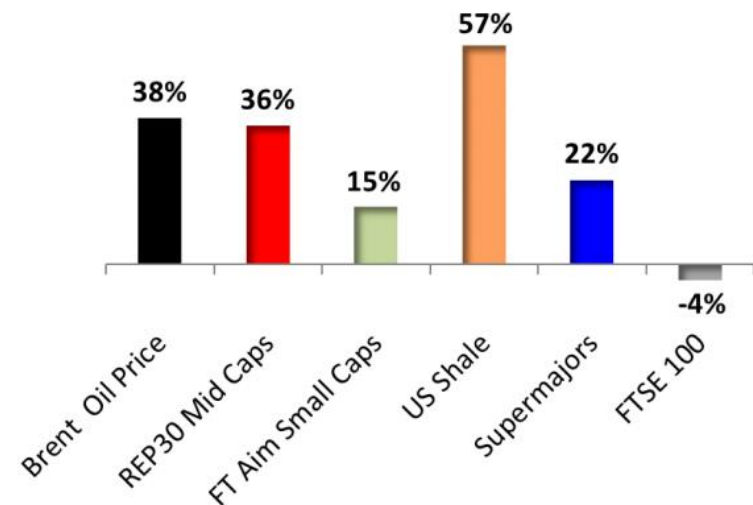


- OPEC-led market intervention to lead to roughly balanced market in 2017
- Risk of significant oversupply from 'off-market' crude in Libya and Nigeria
- Oversupply may return in 2018-19 due to project sanctioned pre-downturn
- Expectation of some degree of undersupply in early 2020s, regardless of adherence to OPEC cuts
- Majority of 2018-2021 production additions to come from onshore – namely US tight oil and Middle Eastern OPEC members

E&P Equity Markets in 2016

- Wide variation in E&P company performance
- Mid-Cap average correlates with Brent
- Strong rebound in US shale players

2016 year to date: Average Change USD



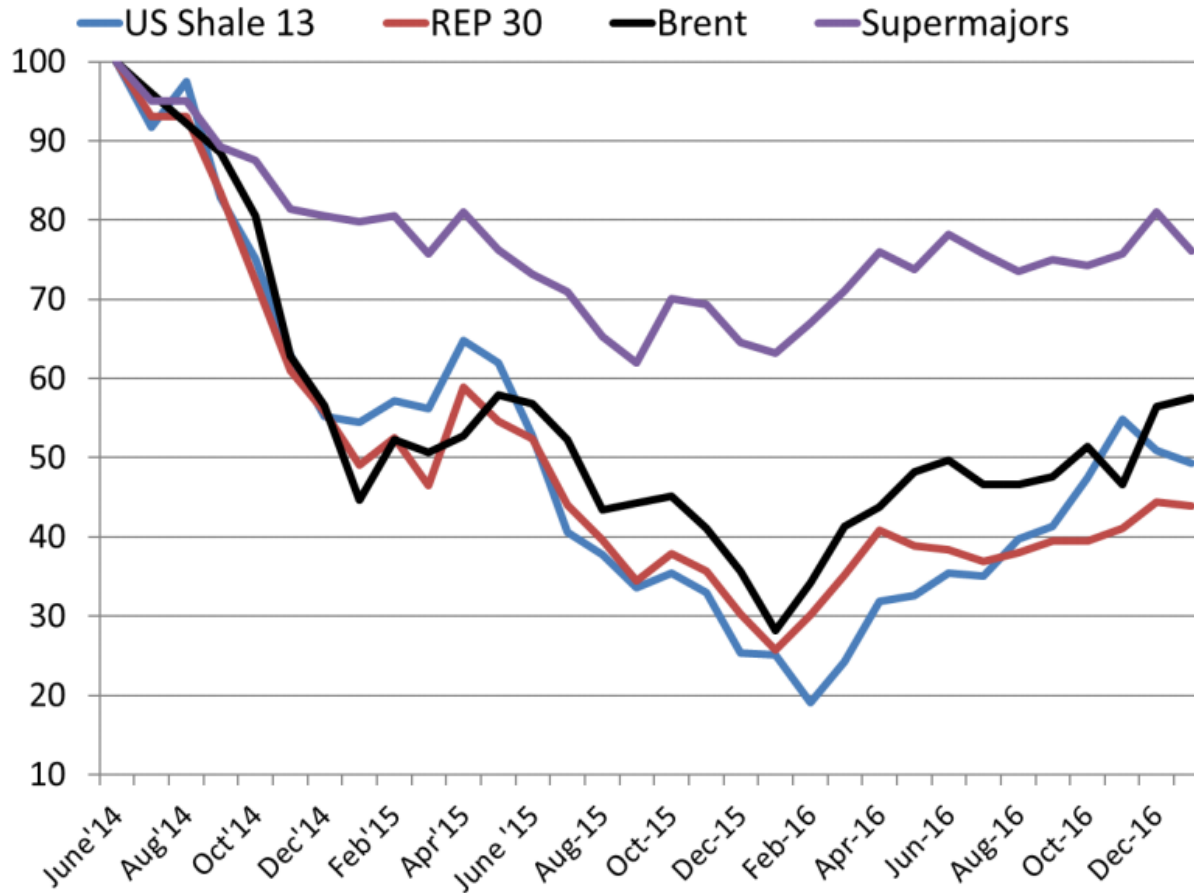
2016 Top 6		
Company	Change (USD)	Events
Ithaca	205%	Oil price hedges and good progress in cutting costs; GSA production closer; lower net debt
Aker BP	187%	Acquired Centrica's and Noreco's Norway assets; then Det norske / BP Norway merger synergies
Bankers	122%	Acquired by Geo Jade
Canacol	74%	Focus on gas as not linked to oil prices; good exploration success and strong production growth
Beach	71%	Merger with Drillsearch led to significant cost savings; strong operational performance
Parex	71%	Financially strong; steady production growth and increasing drilling

2016 Bottom 6		
Company	Change (USD)	Events
SEPLAT	-15%	Nigerian militant activity causes significant disruption to production
Ophir	-18%	Fortuna Schlumberger deal stalled; later it returns with Golar LNG, but deal needs to complete
Nostrum	-20%	Slower build up in production than expected to save cash
Genel	-59%	Taq Taq reserves downgrade; huge impairment charges
Cobalt	-77%	Angola asset sale to Sonangol collapses; huge Heidelberg impairment; financial restructuring
Pacific E&P	-100%	Shares delisted then relisted after major financial restructuring wipes out equity holders

REP30 best and worst share price performers in 2016

A New Cycle Begins?

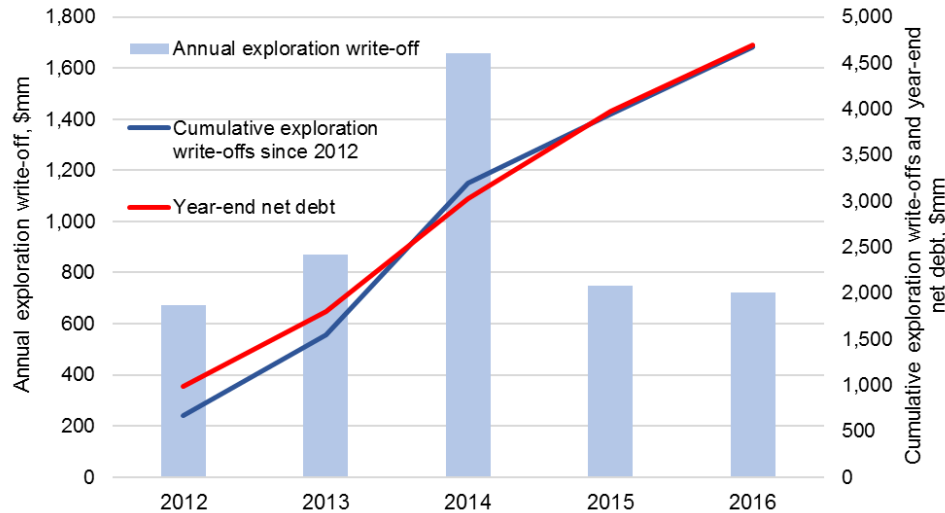
US shale and tight oil E&Ps versus conventional E&Ps Share price movements since June 2014



- Brent, and REP30 share prices, bottomed out in January 2016
- US shale bottomed out in February 2016
- Strong rebound in US shale through remainder of 2016 saw it overtake the REP30
- Profit taking in late 2016/early 2017 as oil price stabilises

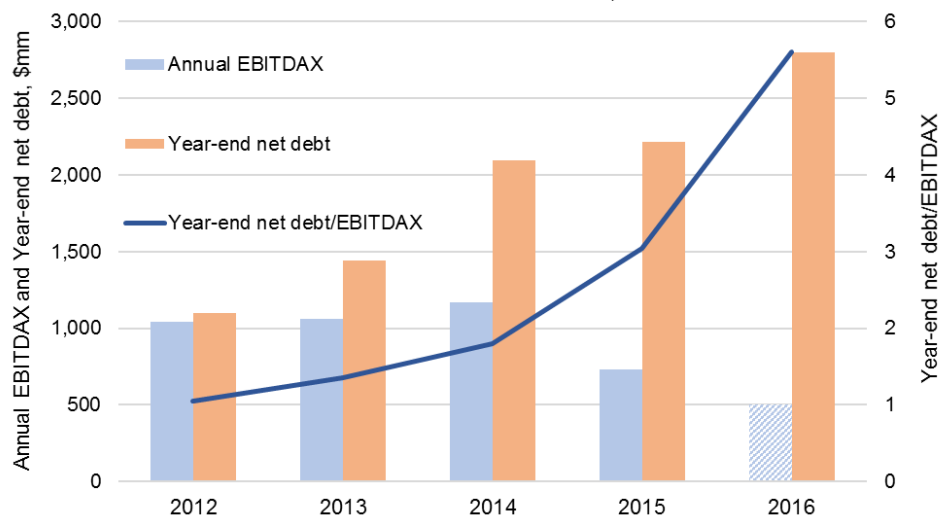
Restoring Confidence - Dealing with Debt

Tullow Oil - Exploration Expenses and Net Debt, 2012-2016



- Tullow's net debt has increased from \$1bn at end-2012 to \$4.7bn at end-2016
- Tullow has written-off \$4.7bn in exploration costs from 2012-2016 (pre-tax)

Premier Oil - Net Debt and EBITDAX, 2012-2016



- Premier's net debt has increased from \$1.1bn at end-2012 to \$2.8bn at end-2016
- Its net debt/EBITDAX ratio has increased from ~1 in 2012 to >5 in 2016
- Premier's net debt/EBITDAX covenant ratio has been set at 7.5 for 2017



M&A Activity Picks Up

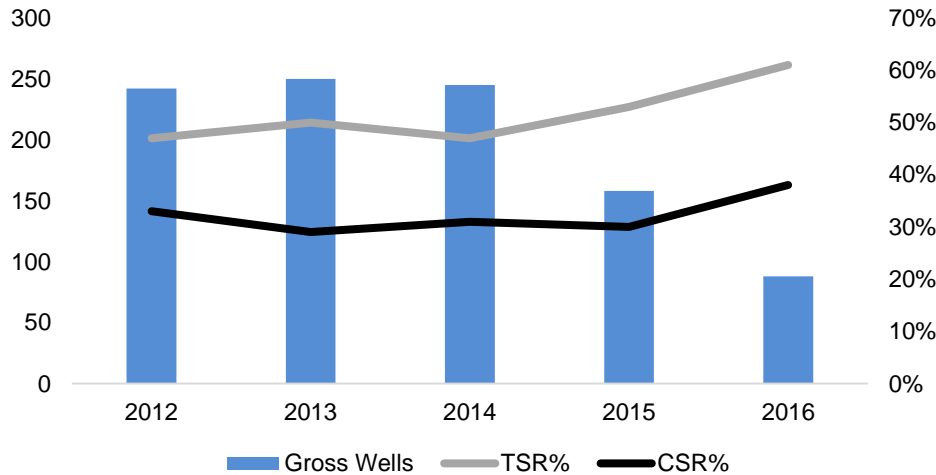
- Greater oil price consensus between potential sellers and buyers than this time last year
- Opportunities through distressed companies or strategy related divestments
- NOCs, Supermajors and private equity active buyers
- Some innovative deals

Year	Buyer	Seller	Type	Phase	Location	Enterprise Value \$m	Production boe/d	2P Reserves mmboe	\$/boe	\$,000 per boe/d
2017	Chrysaor	Shell	Asset	Oil and Gas	UK	3,024	115,000	350	8.6	26
2016	Statoil	Petrobras	Asset	Oil	Brazil	2,500		660	3.8	
2016	Exxon	InterOil	Corporate	Gas	PNG	2,200		365	6.0	
2016	Anadarko	F-McMR	Asset	Oil	USA	1,700	80,000			21
2016	Rosneft	ENI	Asset	Gas	Egypt	1,575		1,000	1.6	
2017	Delek	Ithaca	Corporate	Oil and Gas	UK	1,240	20,500	57	21.8	60
2016	Det norske	BP	Asset	Oil and Gas	Norway	1,233	62,100	225	5.5	20
2016	BP	Kosmos	Asset	Gas	Maur/Sen	916		1,181	0.8	
2017	Kufpec	Shell	Asset	Gas condensate	Thailand	900	39,000	68	13.2	23
2017	Total	Tullow	Asset	Oil	Uganda	900		312	2.9	
2016	Pertamina	Maurel & Prom	Corporate	Oil and Gas	Global	898	25,000	220	4.1	36
2016	Siccar Point	OMV	Asset	Oil	UK	750	1,400	43	17.4	536
2016	BP	ENI	Asset	Gas	Egypt	525		333	1.6	
2016	Gran Tierra	PetroLatina	Corporate	Oil	Colombia	525	5,400	53	9.9	97
2016	Geo Jade	Bankers	Corporate	Oil	Albania	506	17,000	201	2.5	30



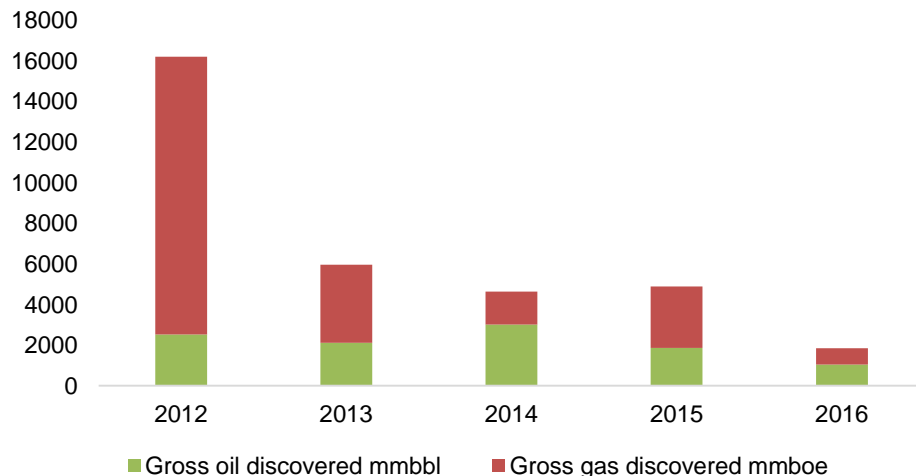
Exploration Success Rates at 8-year High, Discovered Volumes at All Time Low

REP40 gross wells and success rates

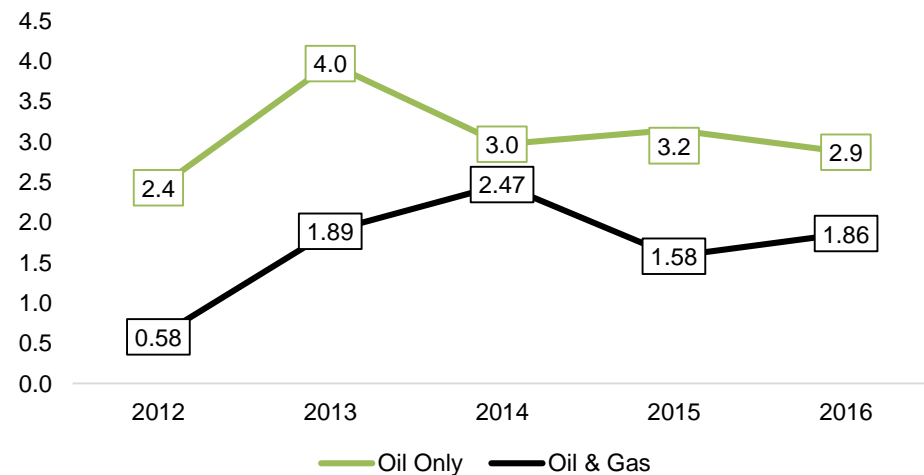


- Exploration drilling down 44% on 2015 (64% on 2014 levels)
- Discovered volumes down 41% for oil and 73% for gas on 2015
- Overall commercial success rate (CSR) improved to 38% - a 9 year high
- Hydrocarbons discovered per well decreased to 21 mmboe, matching 2013-2014 levels

REP40 gross wells volumes discovered

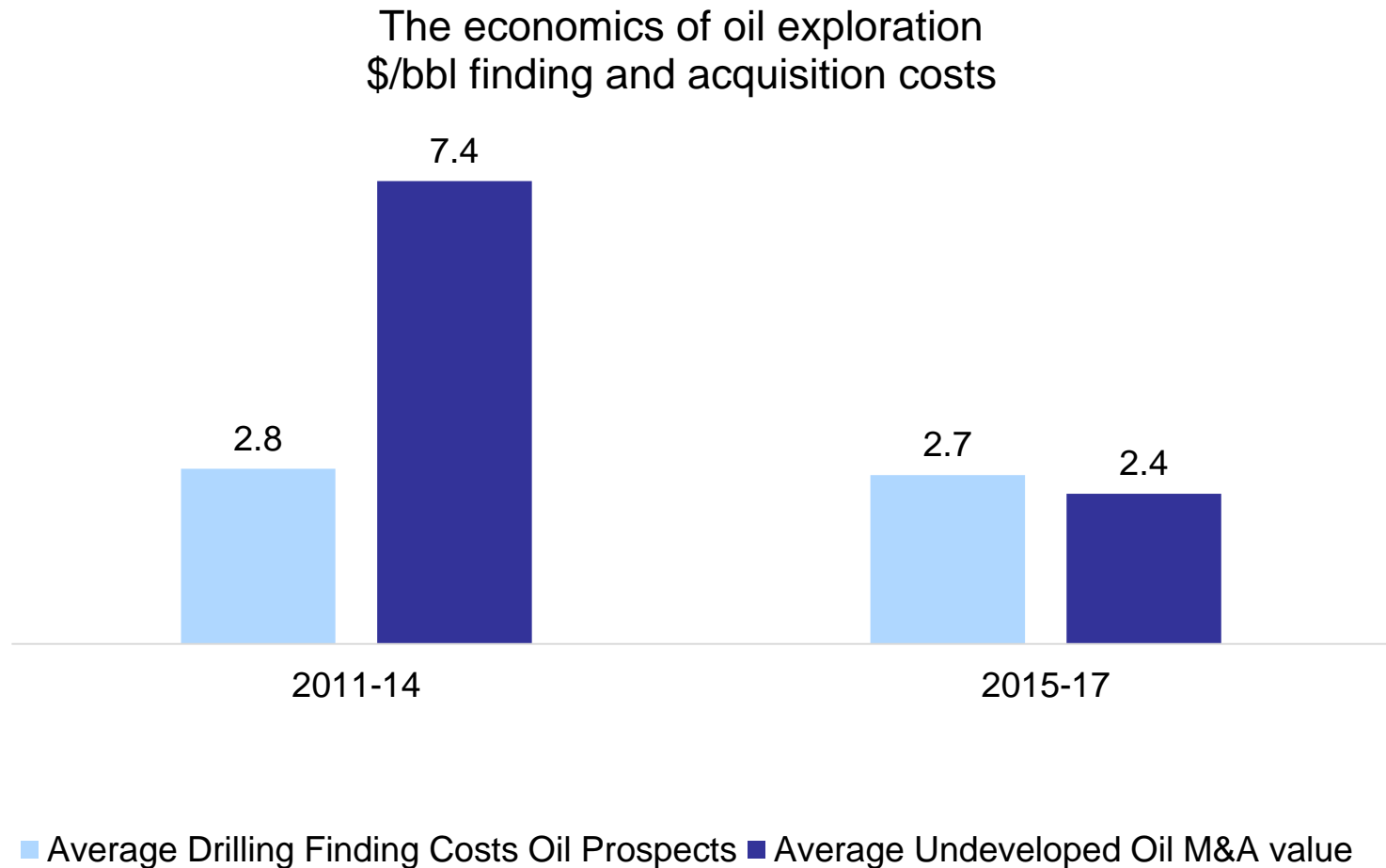


REP40 gross finding costs \$/boe





Average Exploration Not Creating Value in Recent Years

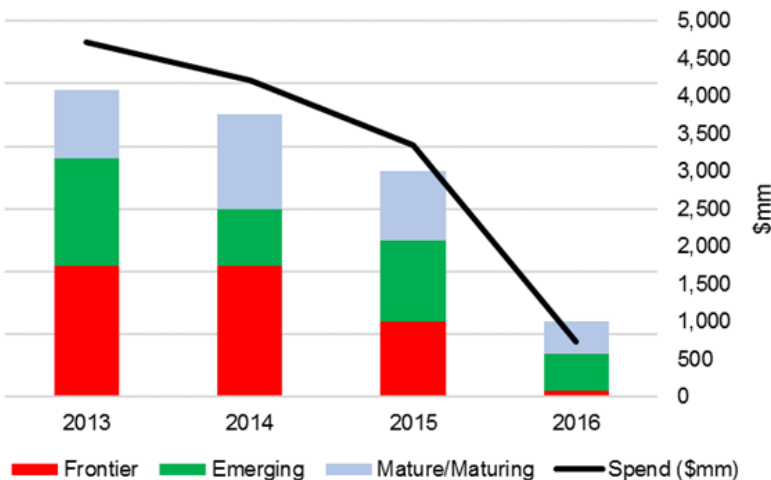


Source – Richmond Energy Analysis. Finding costs include only drilling spend, not seismic, G&G and appraisal

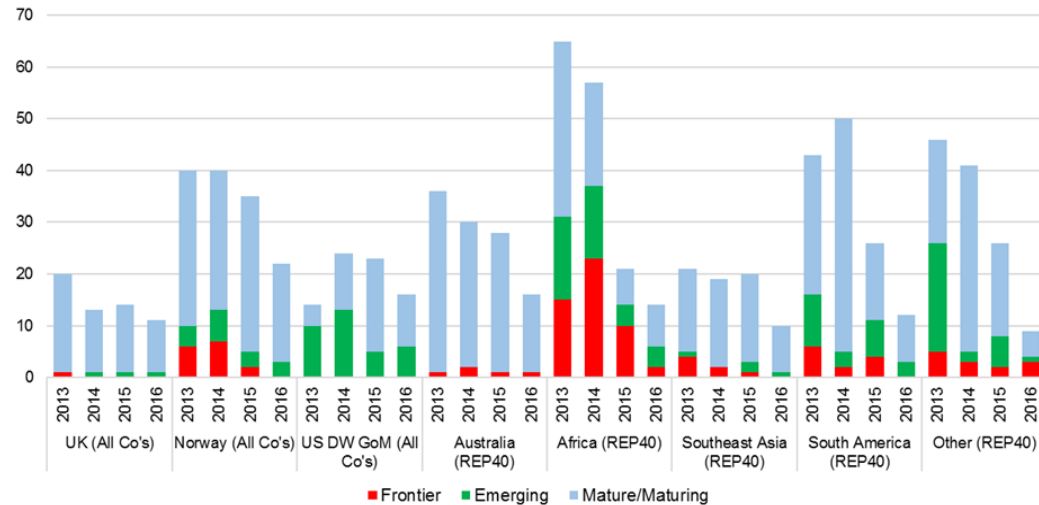
Where has the Exploration Axe Fallen?

- Frontier and deepwater (outside of the US GoM) exploration have seen severe declines
- African deepwater frontier exploration fell from 23 well completions in 2014 to just 2 in 2016

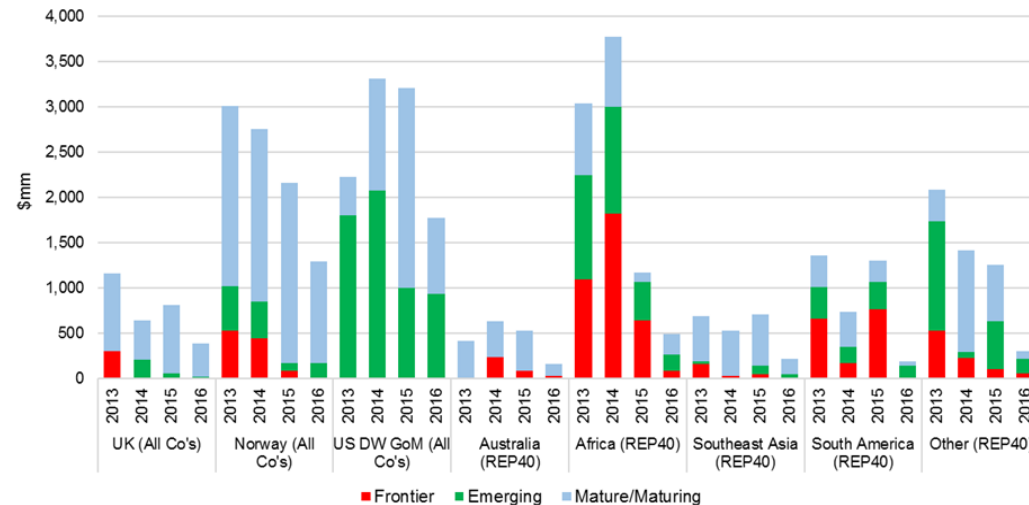
REP40 Gross Deepwater Well Completions, and drilling spend, outside of the US DW GoM



Well Completions by Year, by Region and by Play Maturity



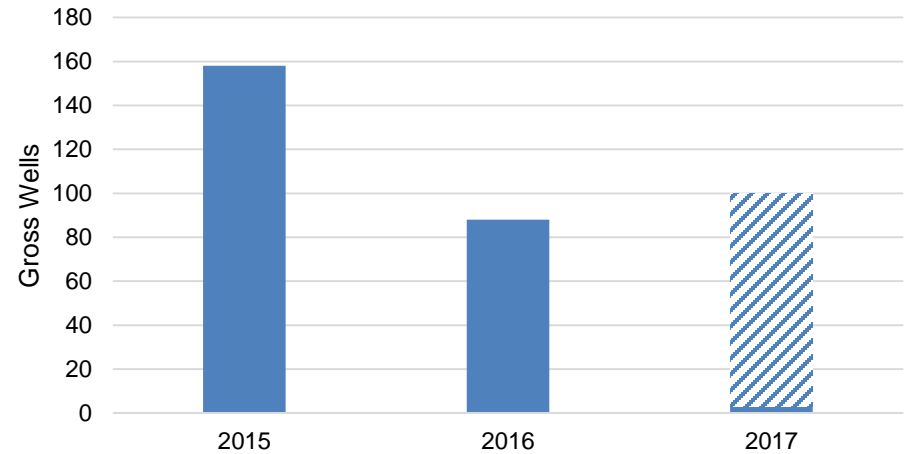
Drilling Spend by Year, by Region and by Play Maturity



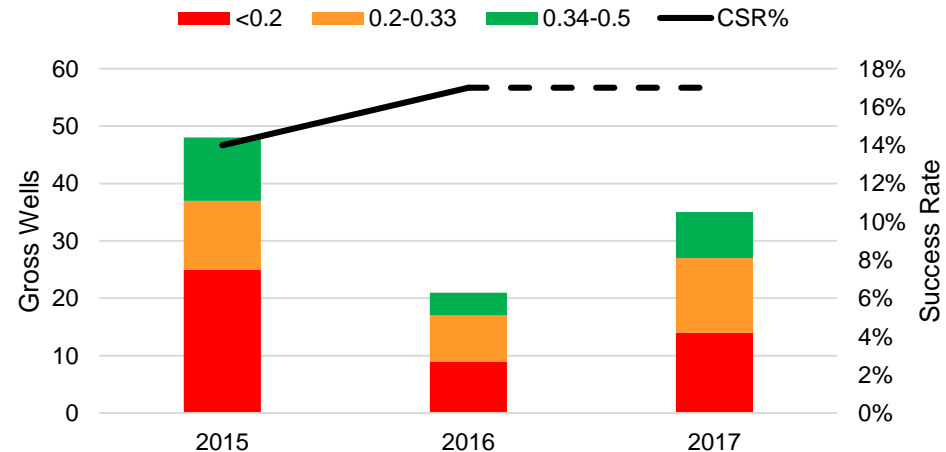
Exploration in 2017

- Exploration drilling forecast to increase by ~15% on 2016 levels
- Proportionally more higher risk wells expected
- Expect overall success rates to remain in-line with 2016 levels
- Focus on building prospect inventories through new acreage without well commitments

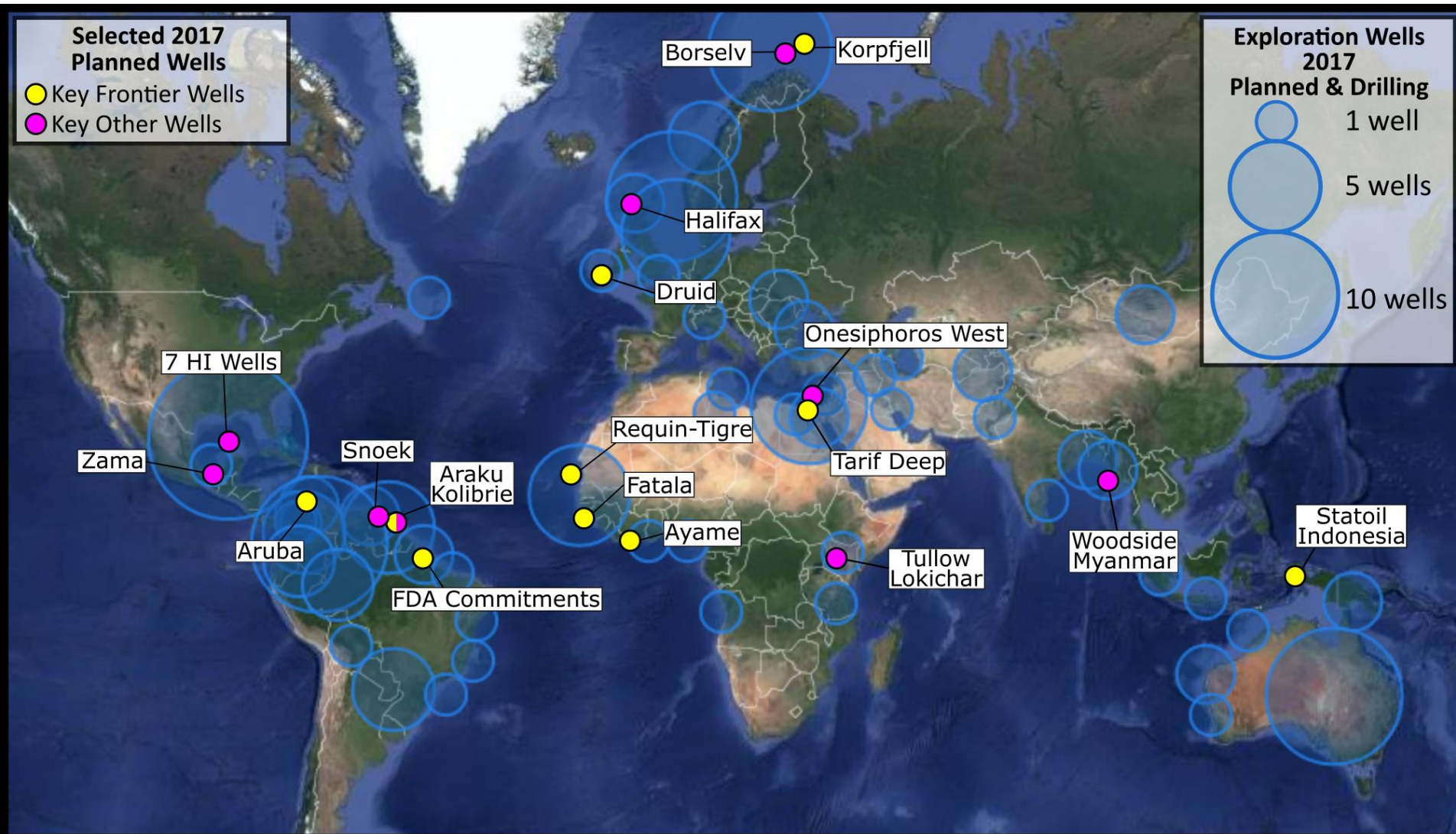
REP40 gross exploration wells



REP40 gross high impact wells by REP pre-drill CoCS category



Key Wells to Watch in 2017





Outlook for 2017

- Approaching supply/demand balance and stable \$50-60/bbl price range for now but OPEC production cuts need to continue through 2017
- Consequently average E&P equity values are unlikely move much in 2017 except for E&Ps that can demonstrate a growth proposition
- Net debt levels remain at historically high levels, and lenders are showing historically high levels of understanding and flexibility
- A modest uptick in M&A activity is likely as seller/buyer expectations become better aligned
- Explorers must stay focussed on making discoveries profitable to develop at sub \$40/bbl oil – average exploration is destroying value

Out of the emergency room but still in hospital



- It is an exciting time for our business. We continue to grow and have become part of a larger Group with sister companies Hannon Westwood, Douglas Westwood, Novas Consulting, and most recently JSI.
- The formal launch of our newly integrated offering is not until next month. BUT, our clients are already reaping the benefits with easy access to an increased pool of expertise, qualitative data, insight and resources.
- Today, Richmond Energy Partners is part of a diverse Group of talented businesses providing unique Upstream E&P research, analysis and insight, covering both operator and supply chain perspectives.



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The quality of well cost and resource estimates vary and may differ from earlier REP publications where appraisal results or other information becomes available. The classification of wells as dry/non-commercial/commercial, as well as the definition of a frontier well, is subjective and REP's classifications may differ from your own.

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