Offshore Oil and Gas Exploration and Development Trends



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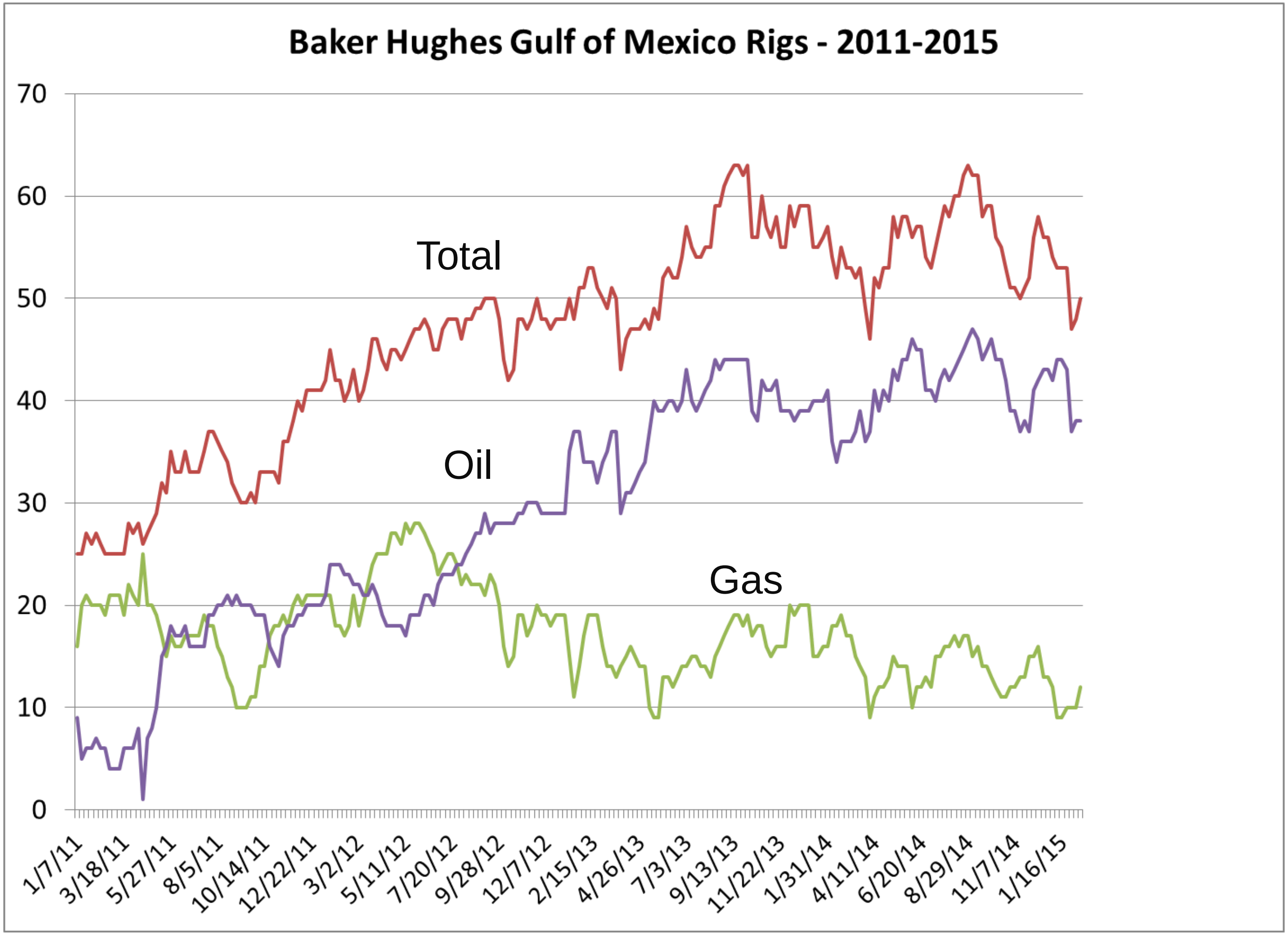
Gulf of Mexico Overview

- Deepwater oil plays continue to drive activity, but production growth and deliverability additions have been somewhat lower than anticipated.
- Activity has rebounded modestly since the Macondo spill in 2010.
- Offshore infrastructure build out is fostering development of many moderate size fields that would otherwise not be economic.
- Recent oil price declines have so far only had a small impact on rig counts; but it is difficult to know the extent to which planned projects are being delayed.
- ***Oil, gas, and NGL production are likely to turn around over the next five to ten years.***

Gulf of Mexico Oil and Gas Rig Counts



Deepwater Field Startups

- In recent years, there have been about 10 deepwater startups per year; 2012 was an exception with 19 startups.
- 2014 was a robust year for initial production from startups.
- Numerous startups are planned through 2017, yielding initial production from startups of 400,000 bpd in 2015 and 450,000 bpd in 2016..

Estimated Annual GoM Deepwater Deliverability Additions

	Startups	Gas MMcfd	Oil Th BOPD
2010	9	200	200
2011	5	100	100
2012	19	400	340
2013	8	65	65
2014	9	490	400

Projected Production for the Gulf of Mexico (Source: ICF Detailed Production Report)

GOM Oil Production, Th. BOPD			
	Deepwater	Shelf	Total
2010	1,488	55	1,544
2011	1,269	47	1,316
2012	1,220	45	1,265
2013	1,114	46	1,161
2014	1,264	44	1,308
2015	1,258	40	1,298
2020	1,319	22	1,341
2025	1,510	19	1,529

GOM Gas Production, BCF per Day			
	Deepwater	Shelf	Total
2010	3.1	3.4	6.5
2011	2.6	2.8	5.4
2012	2.1	2.4	4.5
2013	1.8	2.0	3.9
2014	1.9	1.7	3.6
2015	1.9	1.5	3.4
2020	2.2	1.0	3.2
2025	2.9	0.8	3.8

GOM NGL Production, Th. BPD			
	Deepwater	Shelf	Total
2010	125	134	260
2011	112	123	235
2012	81	103	184
2013	84	104	188
2014	101	109	210
2015	101	96	196
2020	117	61	178
2025	154	53	207

World Offshore Activity

- Infield Consulting reports total CAPEX of over $700 billion from 2012 through 2018.
- Deepwater plays emerging worldwide.
- Brazil and West Africa are a focus for deepwater oil exploration; along with the Gulf of Mexico.
- Many emerging plays from West Africa appear to be similar in geology to Gulf of Mexico plays.
- Pre-salt plays in Brazil are on cutting edge of exploration and drilling technology, with reservoirs beneath thousands of feet of salt and ultra-deep water..
- Increasing use of FPSOs and subsea completions.

CAPEX by Region, 2012-18

Infield 2013 World E&P Capex Forecast

Billion $ of Capex 2012 to 2018

Region	Forecast 7 Year Capex	Allocation Water Depth 0 - 499m	500-1499 m	> 1500 m	Total	Capex Water Depth 0 - 499m	500-1499 m	> 1500 m	Total
Latin America	107	27%	15%	58%	100%	29	16	62	107
North America	66	23%	21%	56%	100%	15	14	37	66
Europe	135	84%	11%	5%	100%	113	15	7	135
Africa	120	35%	44%	21%	100%	42	53	25	120
Mideast	74	89%	4%	7%	100%	66	3	5	74
Asia	146	86%	10%	4%	100%	126	15	6	146
Australasia	54	84%	16%	0%	100%	45	9	0	54
World total	702	62%	18%	20%	100%	436	124	142	702

Highlights

- Modest rebound in Gulf of Mexico activity expected, particularly after 2020 – focus will be mostly in deeper waters.
- Overall GoM production will turn up over the next five to ten years.
- Per Infield Consulting, total global CAPEX for offshore activity (including the GoM) is over $700 billion from 2012 through 2018.
- Deepwater activity emerging outside of the GoM, particularly in Brazil and West Africa.

THANK-YOU