Deepwater E&P in a Global Context

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See Disclosure Appendix of this report for important Disclosures and Analyst Certifications
Discussion: Deepwater E&P in a Global Context

- Who is finding what and where?

- Hot exploration plays and company strategies

- Impact of the GoM spill on the outlook for Deepwater Exploration
Recent Exploration Success Has Been Dominated by NOCs & E&Ps

Exploration success in the last few years has been dominated by NOCs & E&Ps – not IOCs

However, recently most Integrateds have talked about returning to exploration, with increased capex in that area

Source: Bernstein analysis, IHS, Rigzone
Companies Are Still Finding Hydrocarbons In Diverse Locations

- There has been plenty of exploration success, however, with 1,500 discoveries across 86 countries since 2006.
- Although discoveries have been of varying sizes, even last year significant finds were made in GoM, Brazil, Iraq, Australia etc.

Source: Bernstein analysis, IHS, Rigzone
After A Drought In The Mid-Noughties Deepwater Finds Have Returned

- Deepwater discoveries over 200m water depth have not correlated with the oil price

Source: Company reports, World Oil and Bernstein estimates
Deepwater Discoveries are Generally Getting Deeper, and Smaller

Global Deepwater Discoveries over time

Brazil (Tupi, Iara, Guara)

Diameter is proportional to discovery size (Mboe)

Deepwater

Ultra Deepwater

Source: Company reports, World Oil and Bernstein estimates
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The Majors’ Have Balanced Deepwater With Areas Of Lower Geological Risk

**Presence of Majors in Hot Global Exploration Plays**

<table>
<thead>
<tr>
<th>Region</th>
<th>Brazil Pre-Salt</th>
<th>Ghana &amp; Gulf of Guinea</th>
<th>New Indonesian Basins</th>
<th>Offshore Arctic</th>
<th>GoM Lower Tertiary</th>
<th>Offshore Libya</th>
<th>Kurdistan</th>
<th>European Unconventional Gas</th>
<th>Australian Gas</th>
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<td>Modest</td>
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<td><strong>Technical Challenge</strong></td>
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<td>Modest</td>
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**IOC Presence:** Negligible positions are marked "–" and exploration/appraisal activities are marked "x"

- BP
- COP
- CVX
- ENI
- MRO
- RDS
- TOT
- XOM
- HES
- PBR

**Legend:** – = Negligible positions. x = Exploration/appraisal activity. O = CVX has some exposure including Frade & Papa Terra

Source: Company reports, Bernstein analysis
The Geology Is Becoming Better Understood...but Surprises Have Occurred

200 major deepwater discoveries ranked by type of depositional environment

- **Surprise 1:** Stratigraphic traps
- **Surprise 2:** Deepwater carbonate reservoirs

Source: CHC Reservoirs and Bernstein estimates
The Industry Thought It Knew Deepwater West Africa Until 2006

Historical Congo drainage basin deepwater hydrocarbon discoveries

Post 2006 there have been much small discoveries in Angola and very limited exploration in Nigeria

Source: IHS, World Oil and Bernstein estimates
The Old School Deepwater Model Did Not Evolve From 2000-2005

- Wildcat exploration 1965-2005 offshore Ghana (GH), Cote D'Ivoire (CI), Liberia (LR) and Sierra Leone (SL) which are all shallow wells

Source: IHS and Bernstein estimates

Post 2005 industry deepwater focus
However The Ghana Play Could Still Extend Further West

- Recent exploration wells in Sierra Leone & Cote D'Ivoire have led some to write off the region to the West, and to suggest that Ghana is an isolated event.

- We believe there is still significant upside in these countries. While Anadarko’s Venus well test from September was judged a failure with only 45ft of net pay, this did not target the core of the interval, and newer seismic has shown encouraging geology.

Source: Company reports and Bernstein analysis

Exploration in Sierra Leone, Liberia, Cote D'Ivoire and Ghana
Offshore Brazil has the best creaming cure of any deepwater region, with a lot of life left in both the Campos and Santos Basins...as well as to the north.

Mainly post-salt clastic reservoirs

Mainly pre-salt carbonate reservoirs

Source: IHS, World Oil and Bernstein estimates
Lat Am Deepwater Exploration Appears To Being Moving North

Wildcat exploration 1965-2005 offshore Guyana (GY), Suriname (SR) and French Guiana (GF)

Along with Brazil, will this be the new focus in the 2010-2015 period

Q4 2010 French Guiana well: Tullow/Shell/TOTAL

Source: IHS and Bernstein estimates
After Indonesia became a net oil importer in 2003, the government increased deepwater licensing and increased frontier exploration. Activity in 2010 is led by Marathon’s exploration in Sulawesi, around the Pasangkayu block and Bone Bay, and in the slightly longer term we would expect to see increased exploration in West Papua, especially from Hess.

Source: Company reports, Bernstein analysis
The IOCs are heavily involved in offshore Libya – an area close to a proven system, and where political risks are greater than geological risks.

Successful exploration to date has included Hess’ Block 54 and Repsol’s discovery in block NC202, and BP collected further Seismic data in 2009.
Although the shallow water part of the South China Sea has been actively explored since the early 1980s, it is only over the past 5 years that deep water exploration has started to become interesting, with seismic indicating deep sea fan systems extending significant distances from the shelf.

Although Husky has made a number of discoveries in Block 29/26, but this is currently the only block to be drilled, and represents just 2% of the total exploration acreage.

If the discovery density of 29/26 was typical, the basin could hold reserves up to 30bn boe, or 10bn boe on a risked basis, although this is still highly speculative.
Lastly The GoM Was A Recent Deepwater Success Story..Until The Spill

Historical Mississippi drainage basin and Gulf of Mexico deepwater hydrocarbon discoveries

US Gulf of Mexico (>200M Water Depth)

A recent resurgence in GoM discoveries suggested a bright future…up to the spill

Prior to 2008, the last wave of deepwater discoveries in the GoM occurred between 1998-2002

Source: IHS, World Oil and Bernstein estimates
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Macondo Blowout And Spill Not The First...But Very Much The Largest


Blowouts and fires in the GoM do happen but we usually do not hear about them.

Spills also occur but the current spill past annual averages in 3 days.

Source: MMS and Bernstein estimates
Future deepwater exploration in the US has suffered a set-back

US Offshore Strategy from March.....with April update and moratorium

Key
- Lack of local support or low resource potential
- New areas open to study and exploration
- Currently open areas
- Newly protected areas

Source: DOI and Bernstein estimates
The Arctic – Melting Ice Opens A New Frontier…but An Oil Spill Closes It

- In the past the extent of ice coverage has made it impossible to access exploration acreage in the Arctic, although recent years have seen longer “ice windows”

- While Russia has not organised any licensing rounds, Canada and the US have held various lease sales in the Beaufort and Chukchi seas, with the IOCs heavily involved

- Chukchi and Beaufort drilling now is not very likely until after 2012…although Shell will keep trying for a permit in 2010

- West Greenland drilling seems ok this year

Arctic Provinces

The Current GoM new drilling moratorium is important to the deepwater but not as important to the future production as you might think.

Source: IEA, Wood Mackenzie, Company reports and Bernstein estimates.
However, Should Deepwater Fears Spread It Will Impact Global Supply

Potential impact of Delays to Deepwater Projects

1-year delay in projects from 2013 onward causes shortfall in supply

Source: IEA, Wood Mackenzie, Company reports and Bernstein estimates
Disclosure Appendix
Valuation Methodology

Our target prices for the Global Integrated Oils are calculated by applying our estimates for 2011 cashflow per share (CFPS) to a forward price-to-cashflow (P/CF) multiple. This P/CF multiple is generated through the relationship, and historically strong correlation, between 12 month forward P/CF multiples and Return on Average Capital Employed (ROACE) within the Global Integrated Oils group. Our calculation utilizes this relationship and an estimated long term, through the cycle, ROACE to generate the target P/CF multiple. The price calculations for the Integrateds are summarized in exhibit below. A key assumption is that investors continue to reward companies with higher returns, as has been the case historically. We use $80 per barrel WTI and $9.00/mcf for US gas in 2010 and $102.6/bbl WTI and $8.50/mcf for US gas in 2011.

<table>
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<th>Closing Price (24/05/10)</th>
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<td>17.16</td>
<td>73</td>
<td>51.28</td>
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Source: Bloomberg and Bernstein Estimates
Oil prices forecasts are heavily dependent on GDP expectations. As such should GDP be stronger than expected or weaker than expected it could materially change the outlook for oil demand and prices and for the cash flow generation of the peer group. In addition supply disruptions caused by weather or terrorism remain a material risk and would place further upward pressure on pricing. The greatest risk to our target prices for the Majors is a significant decline in crude oil prices, as the Majors commonly trade in line with commodity prices. Additionally, downward revisions to production volume targets could adversely impact share prices.
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12-Month Rating History as of 05/24/2010

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