



GLASSRATNER

**IN RE: OIL SPILL BY THE OIL RIG
“DEEPWATER HORIZON” IN THE GULF OF MEXICO, ON
APRIL 20, 2010**

**SUPPLEMENTAL EXPERT REPORT OF IAN RATNER, CPA/ABV, ASA, CFE
JANUARY 6, 2015
IN RESPONSE TO
THE DECEMBER 30, 2014 SUPPLEMENTAL EXPERT REPORT
OF R. BRUCE DEN UYL**

Ian Ratner, CPA

January 6, 2015

Date

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1. Mr. Den Uyl's Supplemental Expert Report dated December 30, 2014 (the "Supplemental Report") and the recent decline in oil prices do not change my previously expressed opinion that BP and BPXP have the ability to pay the maximum CWA penalty without causing a long term negative impact on their operations. BP acknowledges that price volatility is inherent in the industry and that "...it has historically taken up to 2 years for prices to undergo a recovery following periods of steep price declines."¹ This is an important factor because the majority of the future expected cash flows used to value the assets of BPXP will be generated after 2019 and would not be affected by the recent price decline.² The most significant flaw in the Supplemental Report is that Mr. Den Uyl ignored the fact that the majority of the future projected cash flows for the assets held by BPXP will occur in the out-years after 2019.³
2. In his Supplemental Report Mr. Den Uyl improperly substitutes a pricing sensitivity analysis from Wood Mackenzie as a long-term projection of oil prices for purposes of lowering his flawed valuation estimate of the equity value of BPXP from \$16 billion to \$5 billion. By relying on the Wood Mackenzie sensitivity analysis, which is not a long-term price projection, Mr. Den Uyl has essentially opined that oil prices will be \$70.8/bbl⁴ in 2017 and increase every year thereafter, only at the inflation rate of 2% through 2057.⁵ For example, the underlying assumptions in Mr. Den Uyl's new opinion are oil prices of \$75.1/bbl in 2020 and \$82.95 in 2025, whereas historically prices have typically recovered within two years.⁶ Mr. Den Uyl's oil price projection is also contradicted by various industry analysts.⁷ I have not identified any support for Mr. Den Uyl's oil price projections or any analyst price projections beyond 2020 which is the time period after which the majority of cash flows associated with the BP Gulf of Mexico ("GoM") assets are generated. Moreover, Mr. Den Uyl continues to exclude any allocation or attribution of value from hundreds of leases held by BPXP including significant discoveries such as Gila and Guadalupe.
3. Mr. Den Uyl applied a 33.5% downward adjustment to the \$38.3 billion Wood Mackenzie value of the GoM Assets per Exhibit 4 to his Supplemental Report. The downward adjustment was derived by comparing the difference between the 'Base Price' and 'Low Price' assumptions set out in the Wood Mackenzie sensitivity analysis for the Global Upstream Asset Values. The Global Upstream Asset base used to calculate the 33.5% adjustment is more than 4.5 times⁸ larger than the GoM Assets and this pro-rata adjustment inherently assumes that the relationship between the production volume, and timing and

¹ Source: BP December 10, 2014 Upstream Investor Day presentation, pages 6 and 7.

² My opinions with respect to Anadarko similarly do not change since Anadarko also appears to be well positioned to withstand the impact of recent oil price decreases. According to the October 28, 2014 APC press release regarding Q3 2014 results, APC had cash on hand of approximately \$8.3 billion. Further, the December 2, 2014 Morningstar Report states "...Anadarko has considerable flexibility to modify development activity in response to changing market conditions. Ongoing non-core asset sales (which generated over \$2 billion in the third quarter alone) should provide a cushion to help the company weather an environment of lower commodity prices."

³ See Schedule 1. Note that 66% and 46% of the future projected cash flows occur after 2019 and 2024, respectively.

⁴ All per barrel oil prices reflect the Brent measure unless otherwise noted.

⁵ The collective projected future cash flows for the 14 Gulf of Mexico assets extend to 2057 in some cases.

⁶ See Schedule 2 for a summary of Mr. Den Uyl's projected oil prices for each year from 2015 through 2057 derived from the Wood Mackenzie Low Price scenario. Also see the chart on page 7 of the BP December 10, 2014 Upstream Investor Day presentation showing that oil prices recover within 2 years of a period of steep decline.

⁷ See Schedule 3 which is a summary of various recent oil price projections.

⁸ Global Upstream Asset Value \$181.4bn/GoM Asset Value \$38.3bn = 4.7 (BP-HZN-2179MDL09216019; Value Country tab)

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magnitude of the cash flows for the Global Upstream Assets and the GoM Assets are the same. Mr. Den Uyl did not validate this significant assumption.

4. Mr. Den Uyl's updated equity value of \$5 billion for BPXP is based on an asset value of \$14 billion.⁹ The carrying value or book value of BPXP's fixed assets as of September 30, 2014 was \$19.3 billion,¹⁰ \$5 billion more than Mr. Den Uyl's asset valuation. Further, BPXP book value records assets at cost, does not include any appreciation or the value of any future cash flows, and is solely based on investments and capital expenditures associated with BPXP's activities in the GoM. If Mr. Den Uyl's opinion were correct, International Financial Reporting Standards and GAAP would require BP or BPXP to record an impairment adjustment to the GoM assets. No reference to an impairment adjustment was identified in the December 10, 2014 Upstream Investor Day presentation.
5. Mr. Den Uyl continues to use incorrect or inconsistent cost information to support his \$7.8 billion downward valuation adjustment. His adjustment is intended to be the present value of the difference between BPXP's portion of operating costs reflected in BP's Group Plan Template¹¹ and his selection of a purported Wood Mackenzie estimate of operating costs for the GoM. His selection is inconsistent with Wood Mackenzie's estimated 2014 operating costs for the GoM of \$26/boe which results in projected total operating costs of \$2.28 billion. These Wood Mackenzie projected operating costs for 2014 are consistent with the \$2.25 billion of operating cost for 2014 projected in the BP Group Plan Template. This indicates no need for the Den Uyl \$7.8 billion downward adjustment.¹² Further, Mr. Den Uyl's \$7.8 billion adjustment is comprised of projected cost differentials for every year through 2057. In fact his cost differential is over \$1 billion/year from 2018 - 2034. Mr. Den Uyl's projected cost differential through 2057 is further unsupported considering the BP Group Plan Template was only for the period from 2014 through 2023 and redacted for all years after 2018.
6. Another error related to the \$7.8 billion cost adjustment is that Mr. Den Uyl also assumes operating costs are fixed as projected and that they would not change as a result of lower revenues or actions taken by BP to reduce operating expenses given a drop in oil prices. BP recently stated that history shows a strong alignment between industry costs and oil prices with cost changes generally reacting to oil price movements.¹³ This statement refers to cost savings following a period of price declines. BP has recently taken measures to reduce thousands of employees from the workforce in response to the decline in oil prices.¹⁴ The potential cost savings resulting from a smaller workforce or the cost savings lag, referred to above, were not accounted for in Mr. Den Uyl's new opinion.
7. Finally, Mr. Den Uyl cites an S&P credit rating analysis as support for a "negative outlook" for the debt of BP. In contrast, recent analysts' reports about BP have generally noted that BP is operationally and financially strong. Morningstar rates BP as financially strong and undervalued, Reuters recommendation is that BP is expected to outperform the market, and S&P themselves rate BP as a four-star "BUY"¹⁵

⁹ See Exhibit 4 to the Den Uyl Supplemental Report. BPXP Value of \$21.8bn - \$7.8bn cost adjustment = \$14bn.

¹⁰ Source: BPXP Q3 2014 financial statements (BP-HZN-2179MDL09315079)

¹¹ The BP Group Plan Template at Exhibit 12430 (BP-HZN-2179MDL08942839)

¹² Schedule 4 summarizes and compares the inconsistent information relied on by Mr. Den Uyl.

¹³ Source: BP December 10, 2014 Upstream Investor Day presentation, page 7.

¹⁴ Source: December 10, 2014 Reuters article by Ron Bousso.

¹⁵ S&P Capital IQ BP Stock Report January 3, 2015; Morningstar Equity Analysts Report December 12, 2014; and Reuters analysts report on BP December 27, 2014.

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Analysis of Wood Mackenzie Calculated Net Present Value to Gulf of Mexico Assets

| Analysis of Wood Mackenzie Calculated Net Present Value (\$ in millions) | | | | | | | | |
|---|-------------------------|---|------------------------------------|--------------------------------------|--|--|--|--|
| Asset [3] | Total Remaining NPV [1] | Gulf of Mexico Ownership Percentage [2] | NPV Attributable to Gulf of Mexico | Total Net Undiscounted Cash Flow [1] | Portion of Total Net Undiscounted Cash Flow 2020 - Forward | % of Net Undiscounted Cash Flow after 2019 | Portion of Total Net Undiscounted Cash Flow 2025 - Forward [1] | % of Net Undiscounted Cash Flow after 2024 |
| | a | b | c=a*b | d | e | f=e/d | g | h=g/d |
| Thunder Horse | \$ 14,890 | 75.00% | \$ 11,167 | \$ 42,636 | \$ 30,470 | 71.47% | \$ 19,279 | 45.22% |
| Atlantis | 13,511 | 56.00% | 7,566 | 34,146 | 20,795 | 60.90% | 14,304 | 41.89% |
| Mad Dog | 10,290 | 60.50% | 6,225 | 37,989 | 30,700 | 80.81% | 22,180 | 58.38% |
| Mars | 13,903 | 28.50% | 3,962 | 47,268 | 24,279 | 51.37% | 16,078 | 34.01% |
| Great White | 6,975 | 33.33% | 2,325 | 13,271 | 7,539 | 56.81% | 3,004 | 22.63% |
| Na Kika | 3,885 | 50.00% | 1,942 | 12,844 | 1,183 | 9.21% | (283) | -2.20% |
| Tiber | 2,273 | 62.00% | 1,409 | 21,173 | 24,599 | 116.18% | 21,741 | 102.68% |
| Santa Cruz and Santiago | 2,122 | 46.50% | 987 | 3,510 | 470 | 13.38% | (86) | -2.46% |
| Kaskida | 844 | 100.00% | 844 | 12,125 | 15,793 | 130.25% | 12,644 | 104.28% |
| Isabela | 926 | 66.67% | 617 | 1,674 | 291 | 17.38% | (16) | -0.96% |
| Moccasin | 924 | 43.75% | 404 | 8,789 | 9,547 | 108.63% | 9,165 | 104.27% |
| Princess | 1,486 | 22.69% | 337 | 5,893 | 468 | 7.93% | (172) | -2.91% |
| Ursa | 1,365 | 22.69% | 310 | 9,144 | (107) | -1.17% | (469) | -5.13% |
| Other [4] | | | 167 | 167 | - | 0.00% | - | 0.00% |
| Crosby | (8) | 50.00% | (4) | 693 | - | 0.00% | - | 0.00% |
| Total | \$ 73,384 | | \$ 38,259 | \$ 251,322 | \$ 166,027 | 66.06% | \$ 117,367 | 46.70% |

Notes:

[1] Per "Cash Flow (US\$)" tab of the applicable source file.

[2] Per "Key Facts" tab of the applicable source file. Data for Na Kika per Bates # BP-HZN-2179MDL09189950.

[3] Source Files:

BP-HZN-2197MDL09216031 = Thunder Horse

BP-HZN-2197MDL09216030 = Atlantis

BP-HZN-2197MDL09216024 = Mad Dog

BP-HZN-2197MDL09216029 = Mars

BP-HZN-2197MDL09216022 = Great White

BP-HZN-2197MDL09216023 = Na Kika

BP-HZN-2197MDL09216032 = Tiber

BP-HZN-2197MDL09216020 = Santa Cruz and Santiago

BP-HZN-2197MDL09216025 = Kaskida

BP-HZN-2197MDL09216026 = Isabela

BP-HZN-2197MDL09216039 = Moccasin

BP-HZN-2197MDL09216027 = Princess

BP-HZN-2197MDL09216021 = Ursa

BP-HZN-2197MDL09216028 = Crosby

[4] No source file was provided for this amount. We have assumed that none of "Other" Net Undiscounted Cash Flows occur after 2019.

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Projected Oil Prices per Mr. Den Uyl's December 30, 2014 Supplemental Report

| | Year | Projected Price/bbl (Brent) |
|--|------|-----------------------------|
| | 2015 | \$ 79.10 [1] |
| | 2016 | 75.20 [1] |
| | 2017 | 70.80 [1] |
| | 2018 | 72.22 [2] |
| | 2019 | 73.66 |
| | 2020 | 75.13 |
| | 2021 | 76.64 |
| | 2022 | 78.17 |
| | 2023 | 79.73 |
| | 2024 | 81.33 |
| | 2025 | 82.95 |
| | 2026 | 84.61 |
| | 2027 | 86.30 |
| | 2028 | 88.03 |
| | 2029 | 89.79 |
| | 2030 | 91.59 |
| | 2031 | 93.42 |
| | 2032 | 95.29 |
| | 2033 | 97.19 |
| | 2034 | 99.14 |
| | 2035 | 101.12 |
| | 2036 | 103.14 |
| | 2037 | 105.21 |
| | 2038 | 107.31 |
| | 2039 | 109.46 |
| | 2040 | 111.64 |
| | 2041 | 113.88 |
| | 2042 | 116.15 |
| | 2043 | 118.48 |
| | 2044 | 120.85 |
| | 2045 | 123.26 |
| | 2046 | 125.73 |
| | 2047 | 128.24 |
| | 2048 | 130.81 |
| | 2049 | 133.43 |
| | 2050 | 136.09 |
| | 2051 | 138.82 |
| | 2052 | 141.59 |
| | 2053 | 144.42 |
| | 2054 | 147.31 |
| | 2055 | 150.26 |
| | 2056 | 153.26 |
| | 2057 | 156.33 |

Notes:

- [1] Per the "Price_Assumptions" tab of the Wood Mackenzie analysis (BP-HZN-2179MDL09216019).
- [2] All future projected oil prices are based off the projected price for 2017 increasing each year thereafter at the rate of inflation of 2% (BP-HZN-2179MDL09216019).

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Summary of Various Oil Price Projections

| Date | Source | Index | Projected Oil Prices | | | | | | |
|------------|---|-------|----------------------|----------|-----------|-----------|----------|-----------|------|
| | | | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | |
| Dec-14 | IMF Commodity Price Forecast | Spot | \$ 84.60 | \$ 85.70 | \$ 85.60 | \$ 85.30 | \$ 85.10 | | [1] |
| 12/2/2014 | Morningstar Equity | Brent | \$ 73.00 | \$ 78.00 | \$ 85.00 | \$ 100.00 | | | [2] |
| 12/5/2014 | Morgan Stanley | Brent | \$ 70.00 | \$ 88.00 | \$ 100.00 | \$ 92.00 | | | [3] |
| 12/9/2014 | Bank of America | Brent | \$ 77.00 | | | | | | [4] |
| 12/9/2014 | World Bank | | \$ 78.00 | \$ 80.00 | | | | | [5] |
| 12/17/2014 | Trefis | Brent | | | | | | \$ 100.00 | [6] |
| 12/22/2014 | Goldman Sachs | Brent | \$ 85.00 | | | | | | [7] |
| 12/22/2014 | Bloomberg | Brent | \$ 82.00 | | | | | | [7] |
| 12/22/2014 | Reuters / Business Insider | Brent | \$ 74.00 | \$ 80.30 | | | | | [8] |
| 12/22/2014 | S&P Rating Services | | \$ 70.00 | \$ 75.00 | \$ 85.00 | | | | [9] |
| 12/26/2014 | Forbes | Brent | | | \$ 80.00 | | | \$ 100.00 | [10] |
| 12/26/2014 | BMA Capital | | \$ 60.00 | \$ 70.00 | \$ 75.00 | | | | [11] |
| | Den Uyl Projection from Supplemental Report | Brent | \$ 79.10 | \$ 75.19 | \$ 70.79 | \$ 72.20 | \$ 73.65 | \$ 75.12 | [12] |

Notes:

[1] www.knoema.com/yxptpab/crude-oil-price-forecast-long-term-to-2025-data-and-charts

[2] Morningstar Equity Analyst Report regarding BP PLC, dated 12/12/2014.

[3] Morgan Stanley - Crude Oil: 2015 Outlook

[4] <http://newsroom.bankofamerica.com/press-releases/economic-and-industry-outlooks/2015-market-outlook-bofa-merrill-lynch-global-research>

[5] www.worldbank.org/en/news/press-release/2014/12/08/world-bank-revises-its-growth-projections-for-russia-for-2015-and-2016

[6] www.trefis.com/stock/xom/articles/270141/where-are-oil-prices-headed-in-the-long-run/2014-12-17

[7] www.businessinsider.com/brent-oil-price-forecasts-2015-2014-12

[8] www.businessinsider.com/r-oil-prices-likely-to-rebound-in-second-half-of-2015-reuters-poll-2014-12

Prices stated in article are based on a survey of 30 economists and analysts.

[9] Bates # BP-HZN-2179MDL09322778.

[10] <http://www.forbes.com/sites/greatspeculations/2014/12/26/revisiting-our-price-estimates-for-large-independents-amid-lower-crude-prices/>

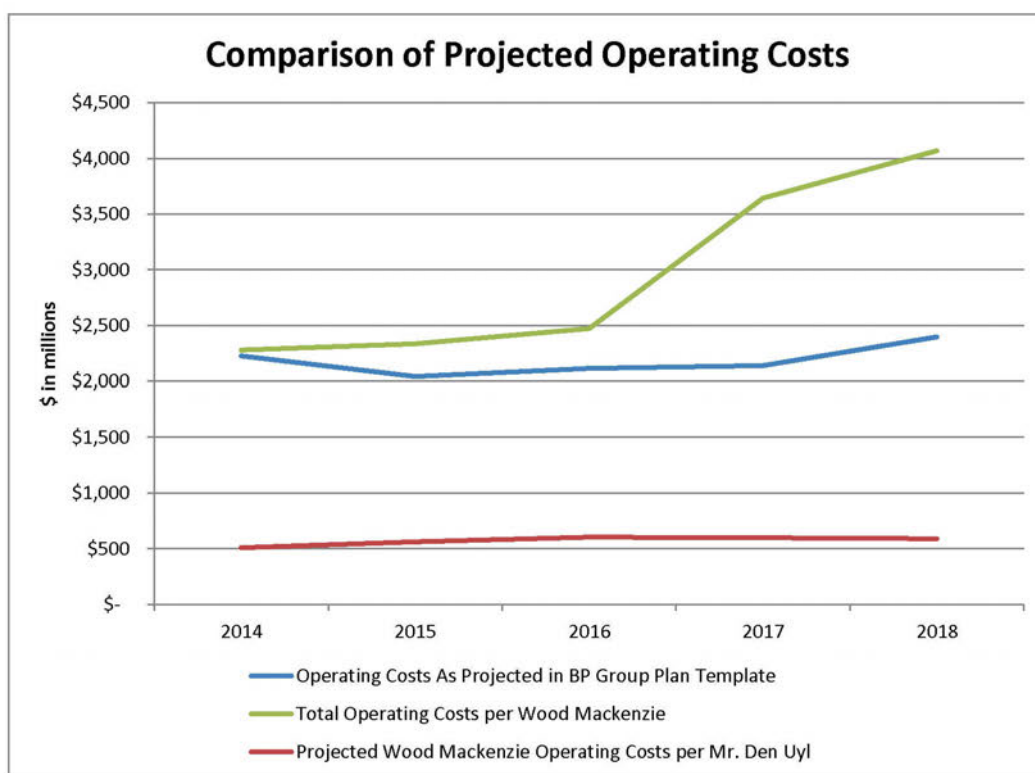
[11] BMA Capital, Oil and Gas: Exploration & Production Update.

[12] BP-HZN-2179MDL09216019, "Price_Assumptions" Tab.

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Analysis of GoM Operating Cost Estimates

| Description | Operating Expenses (\$ in millions unless otherwise indicated) | | | | | |
|--|---|-----------------|-----------------|-----------------|-----------------|----------------|
| | 2014 | 2015 | 2016 | 2017 | 2018 | |
| Per BP Group Plan Template | | | | | | |
| Operating Costs As Projected in BP Group Plan Template | [1] \$ 2,225 | \$ 2,041 | \$ 2,113 | \$ 2,140 | \$ 2,396 | <i>a</i> |
| Per Wood Mackenzie | | | | | | |
| Operating Costs (US\$/BOE) | [2] \$ 26 | \$ 24 | \$ 23 | \$ 35 | \$ 40 | <i>b</i> |
| Daily Production Volume ('000 BOE/day) | [3] 241 | 267 | 290 | 287 | 278 | <i>c</i> |
| Days per Year | 365 | 365 | 365 | 365 | 365 | <i>d</i> |
| Total Operating Costs per Wood Mackenzie | [4] \$ 2,280 | \$ 2,335 | \$ 2,471 | \$ 3,644 | \$ 4,070 | <i>e=b*c*d</i> |
| Per Mr. Den Uyl | | | | | | |
| Projected Wood Mackenzie Operating Costs per Mr. Den Uyl | [5] \$ 508 | \$ 561 | \$ 603 | \$ 599 | \$ 590 | <i>f</i> |



Notes:

- [1] BP-HZN-2179MDL08942839, Exhibit 12430.
 [2] BP-HZN-2179MDL09216019, "Opex_WVM" Tab, Line 123, Columns CD through CH.
 [3] BP-HZN-2179MDL09216019, "Production_WVM_Rpt" Tab, Line 10, Columns BU through BY.
 [4] BP-HZN-2179MDL09216019, "Opex_WVM" Tab, Line 123, Columns AW through BA.
 [5] Exhibit 5A of Mr. Den Uyl's December 30, 2014 Supplemental Expert Report.

Supplemental Expert Report of Ian Ratner, CPA/ABV, ASA, CFE

Appendix 1: Sources Considered

(In addition to the documents cited in my Round 1, Round 2, Round 3, and Supplemental Reports and my Round 1, Round 2, and Round 3 lists of documents considered)

| Bates, Exhibit, TREX, or Other Description |
|---|
| TREX-233137 |
| TREX-233229 |
| TREX-233284 |
| TREX-233294 |
| TREX-233295 |
| TREX-233624 |
| TREX-233856 |
| TREX-247596 |
| All documents listed in Exhibit 7 of Den Uyl Supplemental Report (filed 12/30/2014) |
| Bank of America Press Release: 2015 Market Outlook: BofA Merrill Lynch Global Research Forecasts Bull Market Slows to a Jog in 2015 |
| BMA Capital: Oil and Gas: Exploration & Production - Price decline absorbed; volumetric gains to unlock upside |
| Business Insider Article: Here's What the Pros Are Predicting For Oil Prices |
| Business Insider Article: Wall Street Is Convinced Oil Prices Will Be Higher By This Time Next Year |
| Forbes: Revisiting Our Price Estimates for Large Independents Amid Lower Crude Prices |
| FuelFix Article: Q&A: BP America CEO Talks Oil Prices, Opportunities |
| IMF Commodity Price Forecast - Crude Oil Price Forecast: Long Term to 2025 Data and Charts |
| Morgan Stanley - Crude Oil: 2015 Outlook |
| Morningstar Equity Analyst Report for Anadarko Petroleum Corp (December 2, 2014) |
| Morningstar Equity Analyst Report for BP plc (December 12, 2014) |
| Morningstar Equity Analyst Report for BP plc (December 19, 2014) |
| October 23, 2014 Press Release: BP Announces Oil Discovery in the Deepwater Gulf of Mexico |
| Reuters Article: BP to Spend \$1 Billion on Thousands of Job Cuts |
| Reuters: BP plc London Stock Exchange (December 27, 2014) |
| S&P Ratings Services RatingsDirect: Various Rating Actions Taken on European Oil And Gas Majors On Lower Oil Price Environment |
| S&P Stock Report: BP plc (January 3, 2015) |
| The World Bank Press Release: World Bank Revises Its Growth Projections for Russia for 2015 and 2016 |
| Trefis Team Press Release: Where Are Oil Prices Headed In The Long Run? |