

Rules - User Viewpoint and

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## Introduction

- Applicable for 2009 prospectively
  - no retrospective application so comparative disclosures are based on prior SEC/ FASB rules
  - inconsistency in 2009
- Impact on disclosures
  - Technical definitions
  - Price assumptions
  - Non-traditional sources
  - Geographical disclosures
  - Other disclosures including probable and possible reserves
- FASB changes impacting 2009

# Extent of impact on disclosed total proved reserves?

- Impact varies by company- other than non-traditional sources, less impact than investors expected?
  - **Exxon (2009 10-K)**: "The estimated impact of changing to an average....price and the use of reliable technology was deminimus".
  - Shell (2009 20-F): Quantification of rule changes and commentary by region

| 2009 additions                      | Boe (million) |
|-------------------------------------|---------------|
| Synthetic crude                     | 1,630         |
| Reliable technologies and analogues | 270           |
| Price (versus using year end spot)  | 160           |
| Other                               | 2,357         |
| Total (before 2009 production)      | 4,417         |

- Chevron (2009 10-K): "the ability to use new technologies in reserves determination did not impact reserves significantly, as most reserve additions and revisions were based on conventional technologies"
- **BP (2009 20-F)**: "..application of technical aspects resulted in an immaterial increase of less than 1% to BP's total proved reserves" (2009 20-F)
- Anadarko (2009 10-K): "Less than 1% of... total proved reserves.. were added as a result of pressure gradient analyses, well control or seismic reliable technologies. The effect of applying the 12 month average price... decreased the net remaining reserve volumes by less than 3% of total proved reserves"

## Revised technical definitions

- Definition of proved oil and gas reserves
  - Lowest known hydrocarbons and highest known oil can be determined by reliable technology
  - Uniform standard of reasonable certainty regardless of location and distance from producing wells
  - Disclosure of technology used to reach appropriate "certainty" in a company's first filing with the SEC or if material additions to reserves are disclosed
- Generally limited impact

reserves as well as approximately 270 million boe associated with other SEC rule changes pertaining to the use of reliable technologies and the use of analogues. The application of reliable technologies contributed approximately 150 million boe of the 270 million boe. The most significant increases related to the use of wireline pressure gradients and wireline testing.

Source: Shell 2009 20-F



# Impact of SEC price definitions

- Changes in price reflected in reserves revisions- revisions a feature of new and prior rules
  - some disclosure of impact in the year and marker prices disclosed
  - But cost implications of determining impacts noted by many
- Limited disclosure of voluntary reserves sensitivity analysis in SEC filings
- Some disclosure in other information (source: Exxon 2009 Summarised Annual Report 2009)

A principal difference between the ExxonMobil and SEC definitions is the price assumption used. Proved reserves in this report are based on the same price and cost assumptions we use to make investment decisions. Proved reserves as defined by the SEC are based on historical market prices: beginning in 2009, the average of the market prices on the first day of each calendar month during the year; for prior years, the market price on December 31. References to "price/cost effects" mean the effect of using SEC historical prices and costs.

For years prior to 2009, another key difference was the treatment of oil sands reserves extracted in mining operations, as well as reserves attributable to equity companies. In this report, oil sands reserves and our share of equity company reserves are included in ExxonMobil's proved reserves for all periods. Under SEC definitions applicable to the prior years, these volumes were separately reported.

The table below shows year-end proved reserves on these different bases:

| (billions of oil-equivalent barrels) | 2009 | 2008 | 2007 | 2006 | 2005 |
|--------------------------------------|------|------|------|------|------|
| Basis                                |      |      |      |      |      |
| ExxonMobil                           | 23.3 | 22.8 | 22.7 | 22.7 | 22.4 |
| SEC                                  | 23.0 | 23.0 | 22.5 | 22.8 | 22.4 |

## Definition of oil and gas producing activitiesnon-traditional sources

- Amendment to definition of oil and gas producing activities
  - shifted definition to the final product of such activities, regardless of the extraction technology
  - includes bitumen extracted through mining activities, reserves from non-traditional sources such as oil sands, shale and coal-beds
  - Requires disclosure by final product
- Significant impact for companies with related operations- eg:
  - Shell (synthetic crude oil, bitumen)
  - Exxon (synthetic oil, bitumen)
  - Chevron (synthetic oil)
  - Conoco Phillips (synthetic oil, bitumen)

# Definition of oil and gas producing activitiesnon-traditional sources

#### Crude oil and natural gas liquids, synthetic crude oil and bitumen

| PROVED DEVELOPED AND U          | NDEVELO | PED RES | ER'/ES 20  | 09          |         |         |           |         |          |         |           | MILLION BA    | ARRELS   |
|---------------------------------|---------|---------|------------|-------------|---------|---------|-----------|---------|----------|---------|-----------|---------------|----------|
|                                 |         |         | Australia/ |             |         |         |           | North   | South    |         |           | $\overline{}$ |          |
|                                 | Europe  | Asia    | Oceania    | Africa      |         |         |           | America | America  |         |           |               | Total    |
|                                 |         |         |            |             | USA     |         |           | Canada  | <u>.</u> |         |           |               | <b>\</b> |
|                                 | Oil and | Oil and | Oil and    | Oil and     | Oil and | Oil and | Synthetic |         | Oil and  | Oil and | ynthetic  | ,             | All      |
|                                 | NGL     | NGL     | NGL        | NGL         | NGL     | NGL     | crude oil | Bitumen | NGL      | NGL     | crude oil | Bitumen       | poducts  |
| Shell subsidiaries              |         |         |            |             |         |         |           |         |          |         |           |               |          |
| At January 1                    | 481     | 1,069   | 65         | 598         | 347     | 4       | -         | 8       | 12       | 2,612   | _         | 8             | 2 620    |
| Revisions and reclassifications | 123     | 210     | 4          | 189         | 92      | 1       | 1,207     | 54      | 11       | 633     | 1,207     | 54            | 1 894    |
| Improved recovery               | -       | 39      | -          | 1           | -       | ŀ       | -         | -       | -        | 40      | -         | -             | 40       |
| Extensions and discoveries      | 7       | 15      | 19         | 51          | 54      |         | 423       | 2       | 24       | 171     | 423       | 2             | 596      |
| Purchases of minerals in place  | -       | -       | -          | -           | -       | 1       | _         | _       | -        | 4       | _         | -             | _        |
| Sales of minerals in place      | (1)     | -       | -          | -           | -       | 4       | _         | -       | _        | (1)     | -         | -             | (1)      |
| Production [A]                  | (114)   | (102)   | (11)       | (104)       | (71)    | (7)     | (31)      | (7)     | (9)      | (418)   | (31)      | (7)           | (456)    |
| At December 31                  | 496     | 1,231   | 77         | <i>7</i> 35 | 422     | 38      | 1,599     | 57      | 38       | 3,037   | 1,599     | 57            | 4,693    |

#### Crude oil and natural gas liquids

| PROVED DEVELOPED AND UNDEVELOP  | PED RESEPTES 2008 |       |            |        |      |               | WILLION | N BARRELS |
|---------------------------------|-------------------|-------|------------|--------|------|---------------|---------|-----------|
|                                 |                   |       |            |        | Nor  | rth America   |         |           |
|                                 |                   |       | Australia/ |        |      |               | South   |           |
|                                 | Europe            | Asia  | Oceania    | Africa | USA  | Canada [A]    | America | Total     |
| Shell subsidiaries              |                   |       |            |        |      |               |         |           |
| At January 1                    | 615               | 996   | 63         | 574    | 375  | 119           | 9       | 2,751     |
| Revisions and reclassifications | 13                | 174   | 11         | 108    | 35   | (58)          | 12      | 295       |
| Improved recovery               | _                 | 23    | _          | 31     | _    | _             | _       | 54        |
| Extensions and discoveries      | 9                 | 15    | 4          | 5      | 7    | _             | _       | 40        |
| Purchases of minerals in place  | _                 | _     | _          | _      | _    | 4             | _       | 4         |
| Sales of minerals in place      | (21)              | (36)  | (2)        | (4)    | (1)  | _             | _       | (64)      |
| Production                      | (135)             | (103) | (11)       | (116)  | (69) | (1 <i>7</i> ) | (9)     | (460)     |
| At December 31                  | 481               | 1,069 | 65         | 598    | 347  | 48            | 12      | 2,620     |

Source: Shell 2009 20-F

# Geographical disclosures

- Disclosures of reserves and production by 'geographic area'
  - By country/ groups of countries/ continent- as meaningful
  - Reserves >15% total reserves
  - Production for each country or field containing >15% total reserves
  - Some amended geographies- potential sensitivity of disclosure

| PROVED DEVELOPED AND U | NDEVELO | PED RESE | RVES 20    | 09      |         |         |           |         |         |         |           | MILLION E | BARRELS       |
|------------------------|---------|----------|------------|---------|---------|---------|-----------|---------|---------|---------|-----------|-----------|---------------|
|                        |         |          | Australia/ |         |         |         |           | North   | South   |         |           |           |               |
|                        | Europe  | Asia     | Oceania    | Africa  |         |         |           | America | America |         |           |           | Total         |
| 4                      |         |          |            |         | USA     |         |           | Canada  |         |         |           |           |               |
| 4                      | Oil and | Oil and  | Oil and    | Oil and | Oil and | Oil and | Synthetic |         | Oil and | Oil and | Synthetic |           | All           |
|                        | NGL     | NGL      | NGL        | NGL     | NGL     | NGL     | crude oil | Bitumen | NGL     | NGL     | crude oil | Bitumen   | products      |
| Shell subsidiaries     |         |          |            |         |         |         |           |         |         |         |           |           |               |
| At January 1           | 481     | 1,069    | 65         | 598     | 347     | 40      | -         | 8       | 12      | 2,612   | -         | 8         | 2,620         |
| PROVED DEVELOPED AND U | NDEVEL  | OPED RI  | ESERVES :  | 2008    |         |         |           |         |         |         |           | mil       | llion barrels |

| ERVES 2008 |                                 |  |  |  |   | million barrels  |
|------------|---------------------------------|--|--|--|---|--|
| Europe     | Africa[A]                       | Asia-Pacific   | Middle East,<br>Russia, CIS[B]   | USA  | Other<br>Americas   | Total  |
|            |                                 |  |  |  |   |  |
| 615        | 567                             | 158  | 908  | 375  | 128   | 2,751  |
| 13         | 107                             | 6  | 180  | 35   | (46)  | 295  |
| _          | 31                              | _  | 23   | _  | _   | 54   |
| 9          | 4                               | 6  | 14   | 7  | _   | 40   |
| _          | _                               | _  | _  | _  | 4   | 4  |
| (21)       | (4)                             | (2)  | (36)   | (1)  | _   | (64)   |
| (135)      | (113)                           | (32)   | (85)   | (69)   | (26)  | (460)  |
| 481        | 592                             | 136  | 1,004  | 347  | 60  | 2,620  |
|            | Europe  615 13 - 9 - (21) (135) | Europe Africa[A]  615 567 13 107 - 31 9 4 (21) (4) (135) (113) | Europe Africa[A] Asia-Pacific  615 567 158 13 107 6 - 31 9 4 6 (21) (4) (2) (135) (113) (32) | Europe Africa[A] Asia-Pacific Russia, CIS[B]  615 567 158 908  13 107 6 180  - 31 - 23  9 4 6 14   (21) (4) (2) (36) (135) (113) (32) (85) | Europe         Africa[A]         Asia-Pacific         Middle East, Russia, CIS[B]         USA           615         567         158         908         375           13         107         6         180         35           -         31         -         23         -           9         4         6         14         7           -         -         -         -         -           (21)         (4)         (2)         (36)         (1)           (135)         (113)         (32)         (85)         (69) | Europe         Africa[A]         Asia-Pacific         Middle East, Russia, CIS[B)         USA         Other Americas           615         567         158         908         375         128           13         107         6         180         35         (46)           -         31         -         23         -         -           9         4         6         14         7         -           -         -         -         -         4           (21)         (4)         (2)         (36)         (1)         -           (135)         (113)         (32)         (85)         (69)         (26) |

Source: Shell 2008/ 2009 20-F

| Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F | Source: Shell 2008/ 2009 20-F

# Voluntary disclosure of probable and possible reserves

Limited application- eg Talisman (source: 2009 40-F)

|   | Proved<br>Developed <sup>1,2</sup> |                  |         |                  | Tota<br>Prove |                  |         | Probable<br>Developed <sup>4,5</sup> |         | Probable<br>Undeveloped <sup>4,6</sup> |         | Total<br>Probable <sup>4</sup> |  |
|---|------------------------------------|------------------|---------|------------------|---------------|------------------|---------|--------------------------------------|---------|--|---------|--------------------------------|--|
|   | Gross 7                            | Net <sup>8</sup> | Gross 7 | Net <sup>8</sup> | Gross 7       | Net <sup>8</sup> | Gross 7 | Net <sup>8</sup>                     | Gross 7 | Net <sup>8</sup>                       | Gross 7 | Net <sup>8</sup>               |  |
| Oil and Natural Gas<br>Liquids (mmbbls) |                                    |                  |         |                  |               |                  |         |                                      |         |  |         |                                |  |
| North America                           |                                    |                  |         |                  |               |                  |         |                                      |         |  |         |                                |  |
| Canada                                  | 92.6                               | 82.1             | 8.4     | 7.3              | 101.0         | 89.4             | 20.3    | 17.4                                 | 8.3     | 6.6                                    | 28.6    | 24.0                           |  |
| United States                           | -                                  | -                | -       | -                | -             | -                | -       | -                                    | -       | -                                      | -       | -                              |  |
| UK                                      |                                    |                  |         |                  |               |                  |         |                                      |         |  |         |                                |  |
| United Kingdom                          | 197.1                              | 196.0            | 70.4    | 70.1             | 267.5         | 266.1            | 59.4    | 59.1                                 | 112.4   | 112.4                                  | 171.8   | 171.5                          |  |
| Scandinavia                             |                                    |                  |         |                  |               |                  |         |                                      |         |  |         |                                |  |
| Norway                                  | 26.1                               | 26.1             | 29.8    | 29.8             | 55.9          | 55.9             | 22.7    | 22.7                                 | 42.3    | 42.3                                   | 65.0    | 65.0                           |  |
| Southeast Asia                          |                                    |                  |         |                  |               |                  |         |                                      |         |  |         |                                |  |
| Indonesia <sup>9</sup>                  | 23.2                               | 11.0             | 5.4     | 1.7              | 28.6          | 12.7             | 0.5     | 0.2                                  | 11.6    | 5.1                                    | 12.1    | 5.3                            |  |
| Malaysia                                | 23.7                               | 14.0             | 3.6     | 2.5              | 27.3          | 16.5             | 23.8    | 11.9                                 | 9.5     | 3.9                                    | 33.3    | 15.8                           |  |
| Australia                               | 6.0                                | 5.9              | 5.1     | 4.9              | 11.1          | 10.8             | 2.9     | 2.8                                  | 4.3     | 4.1                                    | 7.2     | 6.9                            |  |
| Vietnam                                 | 1.5                                | 1.3              | -       | -                | 1.5           | 1.3              | 0.3     | 0.3                                  | 28.5    | 23.2                                   | 28.8    | 23.5                           |  |
| Other                                   |                                    |                  |         |                  |               |                  |         |                                      |         |  |         |                                |  |
| Algeria                                 | 23.2                               | 12.6             | 15.1    | 7.9              | 38.3          | 20.5             | 6.2     | 3.2                                  | 6.1     | 3.6                                    | 12.3    | 6.8                            |  |
| Tunisia                                 | 0.5                                | 0.4              | 0.2     | 0.1              | 0.7           | 0.5              | 0.2     | 0.1                                  | -       | -                                      | 0.2     | 0.1                            |  |
| Total                                   | 393.9                              | 349.4            | 138.0   | 124.3            | 531.9         | 473.7            | 136.3   | 117.7                                | 223.0   | 201.2                                  | 359.3   | 318.9                          |  |

## Other disclosures

- Disclosures relating to PUDs
  - Material changes in PUDs that occurred during the year including those converted to proved developed reserves,
  - Discussion of investments and progress made during the year to convert PUDs to proved developed reserves
  - Explanation of the reasons for material amounts of PUDs in individual fields or countries that remain undeveloped for five years or more
- Internal controls used in the reserves estimation
  - Narrative disclosures

## FASB disclosures- 932-235-50

- Alignment of FASB rules to SEC rules
  - Including price assumptions in value disclosures
- Separate and full disclosures for oil and gas activities required for equity accounted investments
  - except where the entity is unable to obtain the information necessary
  - Eg TNK-BP International Limited 2009

Provided below are the Group's estimates of its share of the reserves and related discounted future net cash flows of its equity affiliate. The Group does not provide disaggregated disclosures of its share of the equity affiliate's reserves and related discounted future net cash flows as it was unable to obtain reliable reserve and discounted future net cash flows information with a prescribed level of disaggregation from its equity affiliate before the issue date of these consolidated financial statements.

- Impacts range of supplemental disclosures:
  - Capitalized costs, costs incurred for property acquisition, exploration, and development activities, results of operations, standardized measure of discounted future net cash flows disclosures

# Impacts for equity accounted investmentseg standardised measure (BP)

|   |        |                   |          |                  |                     |            |        |                 |                 | 2009    |
|---|--------|-------------------|----------|------------------|---------------------|------------|--------|-----------------|-----------------|---------|
|   | Eur    | оре ——            | Nort Ame |                  | ── South ── America | — Africa — | Asia   | · — —           | . Australasia ₁ | Total   |
|   |        |                   | Ame      | Rest of          | America             |            |        |                 |                 |         |
|   | UK     | Rest of<br>Europe | US       | North<br>America |                     |            | Russia | Rest of<br>Asia |                 |         |
| 1.015                                       | - OK   | Lutope            |          | America          |                     |            | Hussia | Asia            |                 |         |
| At 31 December 2009<br>Subsidiaries         |        |                   |          |                  |                     |            |        |                 |                 |         |
| Future cash inflows                         | 50.800 | 17,700            | 204,000  | 4,900            | 26,400              | 58,400     | _      | 36,100          | 32.500          | 430,800 |
| Future production cost <sup>b</sup>         | 20,000 | 8,000             | 91,300   | 2,700            | 6,700               | 12,000     | _      | 9,200           | 11,000          | 160,900 |
| Future development cost <sup>b</sup>        | 5,000  | 2,500             | 24,900   | 1,000            | 5,600               | 12,200     | _      | 6,400           | 3,100           | 60,700  |
| Future taxation <sup>c</sup>                | 12,900 | 3,700             | 27,300   | 200              | 5,800               | 11,300     | _      | 4,700           | 4,500           | 70,400  |
| Future net cash flows                       | 12,900 | 3,500             | 60,500   | 1,000            | 8,300               | 22,900     | _      | 15,800          | 13,900          | 138,800 |
| 10% annual discount <sup>d</sup>            | 5,800  | 1,600             | 29,500   | 500              | 3,200               | 9,800      |        | 6,300           | 7,300           | 64,000  |
| Standardized measure of discounted          |        |                   |          |                  |                     |            |        |                 |                 |         |
| future net cash flowse                      | 7,100  | 1,900             | 31,000   | 500              | 5,100               | 13,100     | _      | 9,500           | 6,600           | 74,800  |
| Equity-accounted entities (BP share)f       |        |                   |          |                  |                     |            |        |                 |                 |         |
| Future cash inflows <sup>a</sup>            | _      | _                 | _        | _                | 37,700              | _          | 96,700 | 30,000          | _               | 164,400 |
| Future production cost <sup>b</sup>         | _      | _                 | _        | _                | 17,000              | _          | 65,200 | 25,200          | _               | 107,400 |
| Future development cost <sup>b</sup>        | _      | _                 | _        | _                | 4,000               | _          | 10,200 | 3,100           | _               | 17,300  |
| Future taxation <sup>c</sup>                |        |                   |          |                  | 5,200               |            | 4,300  | 100             |                 | 9,600   |
| Future net cash flows                       | _      | _                 | _        | _                | 11,500              | _          | 17,000 | 1,600           | _               | 30,100  |
| 10% annual discount <sup>d</sup>            |        |                   |          |                  | 6,800               |            | 7,900  | 800             |                 | 15,500  |
| Standardized measure of discounted          |        |                   |          |                  |                     |            |        |                 |                 |         |
| future net cash flows <sup>g h</sup>        |        |                   |          |                  | 4,700               |            | 9,100  | 800             |                 | 14,600  |
| Total subsidiaries and equity-accounted ent | ities  |                   |          |                  |                     |            |        |                 |                 |         |
| Standardized measure of discounted          |        |                   |          |                  |                     |            |        |                 |                 |         |
| future net cash flows                       | 7,100  | 1,900             | 31,000   | 500              | 9,800               | 13,100     | 9,100  | 10,300          | 6,600           | 89,400  |

Source: BP 2009 20-F

### Supplementary information on oil and natural gas (unaudited) continued

### Equity-accounted entities

In addition, at 31 December 2008, the group's share of the standardized measure of discounted future net cash flows of equity-accounted entities amounted to \$9,000 million (\$28,300 million at 31 December 2007 and \$14,700 million at 31 December 2006), excluding minority interest.

Source: BP 2008 20-F

# **Concluding remarks**

- Impact on reserves estimation and company process
  - Pricing changes in particular aided company processes
- Less pervasive impact than anticipated?
- Inconsistency between 2009 and comparative periods
- Enhanced narrative disclosures
- Limited adoption of additional voluntary disclosures
- Alignment of other supplementary disclosures required under US GAAP
- More extensive disclosures adopted for equity accounted investments





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