



CONFÉRENCE ACP

« IMPACT SOCIÉTAL DE LA CHUTE DU BRUT SUR LES ACTIVITÉS
PÉTROLIÈRES ET PARA PÉTROLIÈRES »

RUEIL-MALMAISON LE 24 OCTOBRE 2015

La Nouvelle donne pétrolière et parapétrolière
“déjà vu all over again” ?

Bruno Floris
BSF ENERGY CONSULTING

The price forecasts are accurate !



BEHIND CLOSED DOORS AT THE EXTREMELY COMPLICATED JOB OF DETERMINING GAS PRICES.

Future oil prices : key factors !

Future Oil Price will depends :

Saudi Arabia strategy

will they continue fighting for their market share (see slide 19)and compete with even other ME oil producers ?

How long before they adjust their quota (in 1986, 1999 and 2009 took respectively 15, 14 and 7 months)

US shale oil production ; the reduction of drillings activity has started to affect oil production growth Oil production reached a peak of 9,6 million bbl/d in June and is now at 9,1 million bbl/d on mid October (source EIA)

Chinese consumption: Will its growth continue ? So far it has been growing thanks to gasoline and gasoil consumption.

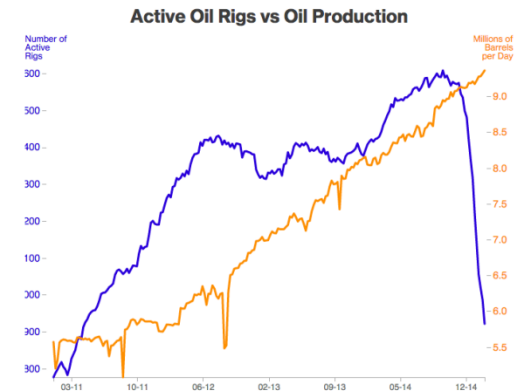
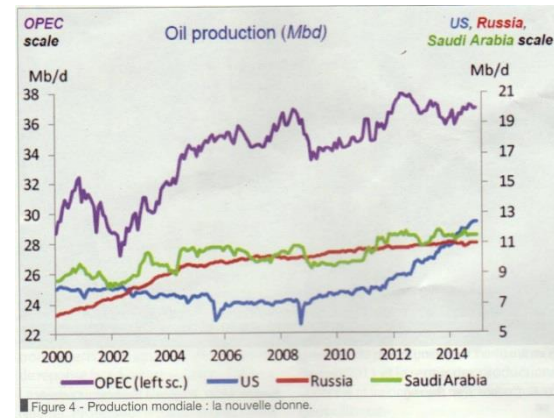
Global Industrial Index : is the slowdown be confirmed in the coming months ?

Speed of Iranian export recovery ?

Last but not least

Decline of production of mature fields around 4 to 5 million bbl/d each year. Each year oil companies need to invest to compensate this decline

How fast the reduction of CAPEX and OPEX :Will reduce the production of mature fields ?



Source: EIA, Baker Hughes

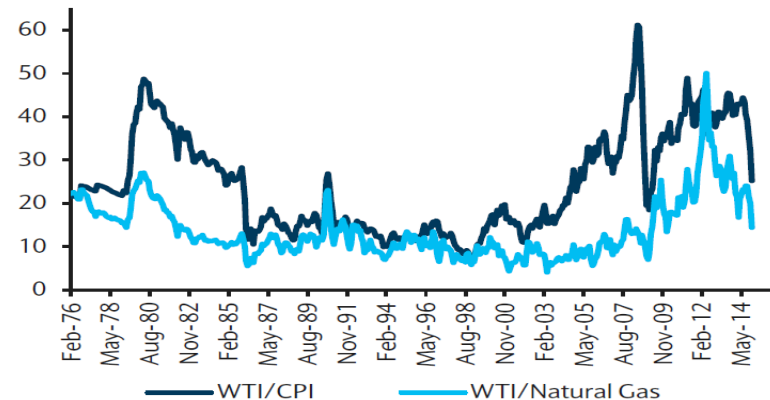
Last updated: 3/11/2015

Future oil prices : key factors !

Future Oil Price will depends :

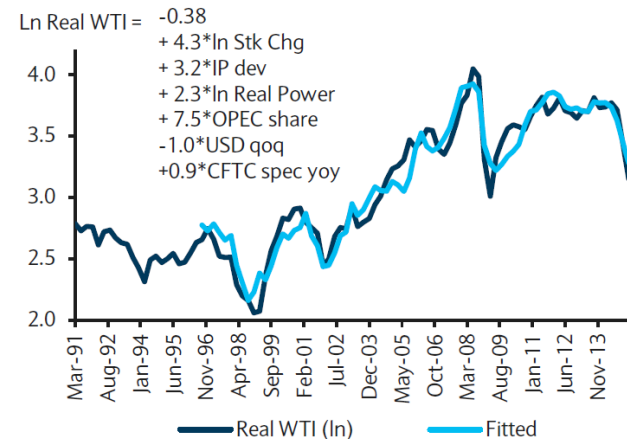
- Most analysts estimate that we are now in a market driven by prices and we may be entering a 2 years period (2015/2016) where oil price will be fluctuating between 40 and 60 USD/BBL in order to eliminate the over production!!!
- Barclays oil price model which takes into account
 - level of inventory
 - global industrial production
 - OPEP market share
 - Power prices (electricity!)
 - dollar and speculative oil positions
- **Is forecasting 60 \$/bbl in 2016 .**
- So far its predictions have been rather accurate !!!

On a relative basis, oil is falling toward pre-boom levels



Source: BLS, Haver, Barclays Research

The recent plunge looks to have been exacerbated by the dollar and spec positioning



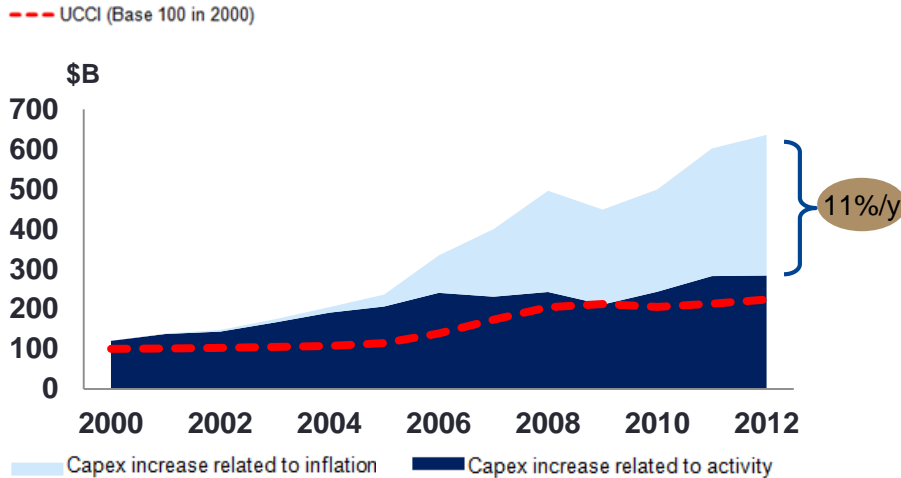
Source: Haver, Barclays Research

SECTION 1 :STRATEGY OF OIL COMPANIES IN A DEPRESSED MARKET

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- 1/ pre crisis environment
 - 2/ IOC short term reactions
 - 3/ IOC long term adaptation
 - 4/ a few quotes from Major Oil companies
 - 5/ focus on TOTAL
 - 6/ Dividends a priority !
 - 7/ Investments : when will they grow again ?

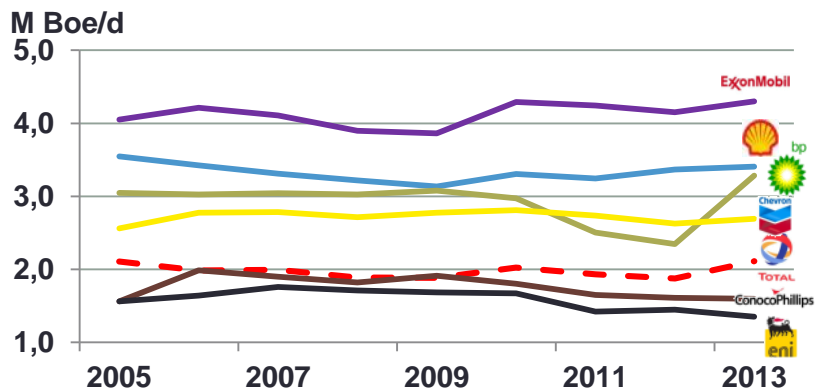
Industry environment before 2014-2015

High Inflation for E&P industry Capex



Production of IOCs

From 2005 to 2013



Source: IHS CERA

1/ Strong Inflation on Capex

- Started in 2005
- About 11% year on year

2/ Steady production for main International Oil Companies

3/ Stable Brent price from 2011 to 1H 2015

- Following big price increase started in 2009 (from 50\$)

4/ Investments were being reduced already in 2014.

5/ Reserve replacement in 2014 were 135 % in USA and 86% ROW

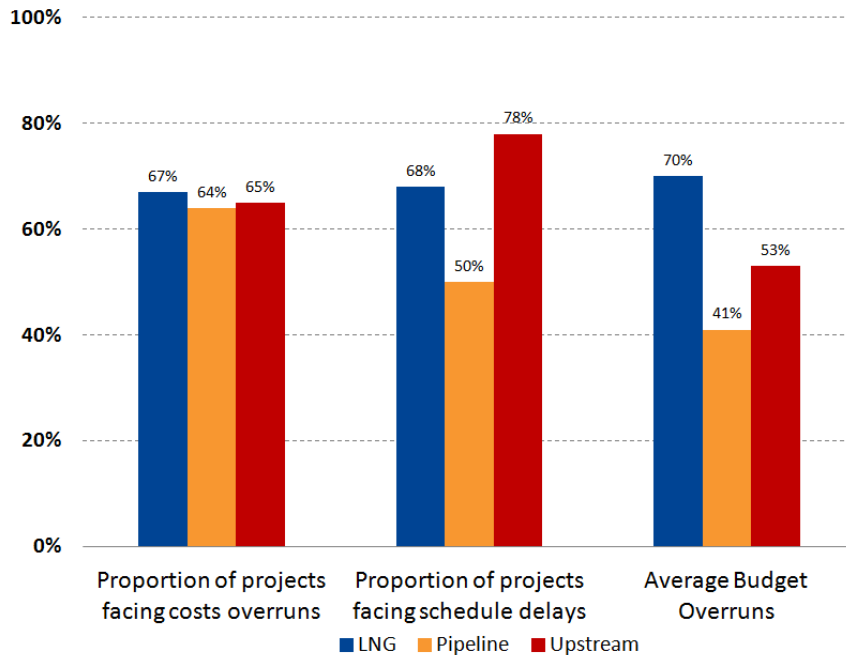
6/ FINDING & DEVELOPMENT COSTS

- US 25,65\$/bbl ,
- offshore Europe 63 \$/bbl ,
- West Africa 57 \$/bbl

Projects' drift in recent years : data & Origins

Drifts of projects on schedule and costs*

Focus on LNG, Pipeline & Upstream (Projects Capital Invest. >\$1bn)



1/Cost:

- Rising costs while Brent price remained steady in 2011-2014

2/Planning

- AGRESSIVE PROJECT PLANNING**
- Lack of control leading to important delays

3/Complexity:

- Technological**
 - Remote areas, deep-offshore, harsh environment...
- Geophysical**
 - Reservoirs difficult to produce...
 - Inadequate subsurface definition and risking
- CLIENT ORGANISATION & REQUIREMENTS**
- 93% of mégaprojects with turn-over of Project Director failed according to IPA
- GOLD PLATED requirements compared to reuse of solutions

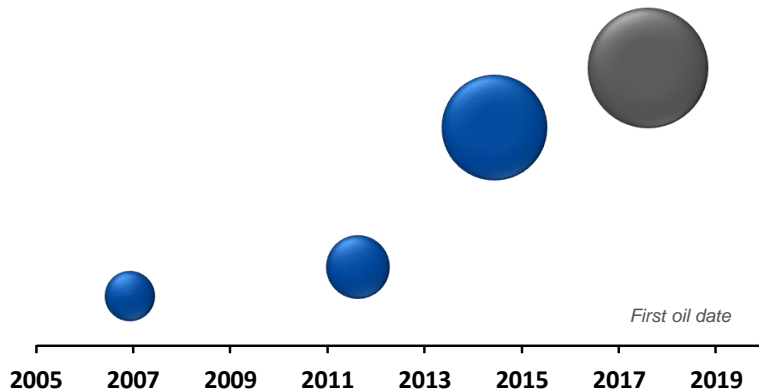
4/ DEGRADATION OF ENGINEERING QUALITY

* EY Spotlight on oil and gas megaprojects

Local content environment

Local Content requirement evolution

Example in M Mh, deep offshore in Angola



**Increasing Local Content requirements
with heterogeneous local capacity**

- Multiple actors:
 - Local Authorities
 - National Oil Companies (NOC)
 - International Oil Companies (IOC)
 - International contractors
 - Local contractors
- Differences from one country to others:
 - Existing laws, rules...
 - Realistic vs. ambitious program
- Impacts on projects forecast:
 - costs and delays

IOCs' Short term reactions

- **PRIORITY IS CAPITAL EFFICIENCY AND LEVEL OF CASH EVEN IF RESERVE REPLACEMENT IS NOT ACHIEVED AND PRODUCTION LEVEL CANNOT BE MAINTAINED.**
- **Projects cancelled and delayed:**
 - **Reduction of greenfield investment:**
 - Zinia 2, Joslyn
 - Mad Dog Phase 2 (BP) original budget
 - 22 billion reduced to 14 billion after redesign
 - Johan Castberg (Statoil)
 - **Cutting Brownfield spend:**
 - Mature West Africa
 - Snorre Field (Statoil)
- **Capex and Opex reduction plans**
 - Rig rates re-negotiation / cancellation
 - Staff reduction

Immediate response

IOCs' adaptation - Long term

- **HSE:** Safety remains « the priority of priorities »
- Launch programs to **reduce** developments/operating costs
- **Develop** O& G industry standards
- **MODIFY PROJECT APPROACH**
 - Before FID (final Investment decision) performed extensive engineering studies to reduce risks and cost overrun
 - Re-use of proven solutions
 - **Involve** all members of the supply chain to change: from Operator, to contractor down to suppliers
- **Maintain** and develop core competencies



Industry has to overcome these challenges together

A few quotes of major IOC

Royal Dutch Shell 2Q Commentary

- **Improve portfolio choice** : Many potential projects have been purposely delayed, or rephased and in a few cases, canceled. We're looking now for low NPV breakeven projects, certainly less than \$70 a barrel, and **we see opportunities typically nearer \$50 a barrel**. And managing the pace of FIDs is a powerful tool to drive lower cost, plan our capital spending and to make sure that only the most attractive and affordable investments can go ahead.
- **Engineering productivity** : **The amount of engineering hours required per piece of equipment have gone up by a factor of five...** Now part of it is because
 - the standards had become more complex.
 - **because of regulatory requirements, technical requirements,**
 - **because we are dealing with more challenging or sophisticated projects to run...**
 - (inadequate) competence in the sector,
 our sector and many other construction sectors **not being able to use modern productivity tools** to really improve productivity.

BP 2Q Commentary

- **Project cost Deflation** : For our development costs for new projects, **we're projecting to deflate by as much as 20% to 30%** depending on the project.
- .
- Examples include
- a **33% savings against the subsea installation budget** on one of our Gulf of Mexico expansion projects.
- Another is negotiating a rate reduction of over **30% for drilling** our latest development well on the Mungo asset in the U.K. North Sea
- around **10% rate reduction from major well service suppliers** globally,
- including a **20% reduction on tubulars**Standardization :
- **Standardization** “
- we're driving now a **single kind of wellhead that we can use in different places around the world.**
- Standardization of equipment, standardization of activity and that's starting to link up between the companies as well. So there's a period of time where everyone had their own way of doing it.
- **we're part of an industry group now working on standardization of some of the big pieces of equipment to try to do just that.**

A few quotes of major IOC

CHEVRON 2Q Commentary

- **Structural Cost Reduction Initiatives**
:
- We are also changing the way we work through
- greater standardization,
- project re-scoping,
- refinement of fit-for-purpose designs, and timing optimizations.
- In combination, we estimate negotiated savings and work changes will lower our future supply chain spend \$1.6 billion.

EXXON analyst day

- **Industry project delivery**
- Exxon created a “development company” in order to have a complete integrated approach of projects
- LONG TERM COOPERATION WITH SELECTED SUPPLIERS :
- Exxon “have a network with the best contractors out there who also know how we do it, and we do it the same way every time. And it allows them to create savings that they deliver to us because they know, when they are going to work on a project with us, this is how it's going to be.
- And when they bid, they pass, that's why they win the bid, they understand and they pass along that savings to us.

Total adaptation and strategic vision

EP Culture more focused on costs

- **Capital discipline**
 - Strict selection criteria for new projects
 - Portfolio management and capital allocation
 - Focus on profitability
- **Cost Reduction**
 - Reducing Opex and controlling Capex
 - No compromise on safety
- Promoting “**good enough**” designs
- Optimizing **contractual strategy**
- From local content to **in-country value**
- **Discussion** with supply chain and main contractors at **pre-FEED stage**

Project selectivity to improve profitability

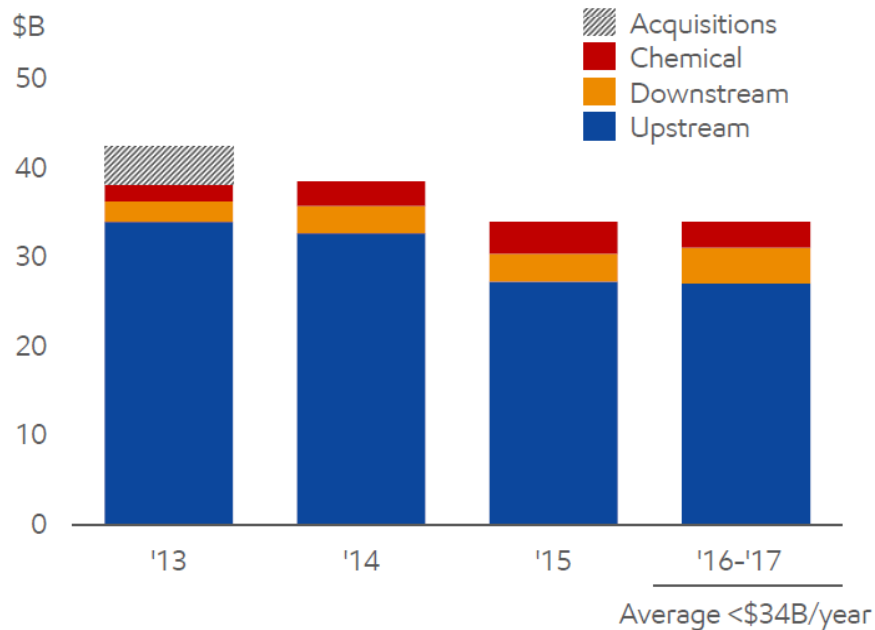
TOTAL LATEST NEWS ! September 2015

- Capital expenditures will see strong return discipline applied, essentially high-grading its portfolio, and will reduce capex to \$23-24bn\$ this year 2015 and \$20-21bn\$ next year 2016(a ~13% decline), further they plan
- operating expenses to be reduced by \$3bn\$, a billion more than before, by 2017.
- All of this reduced capital will still result in 6-7% production growth between 2014 and 2017 and 5% per year from 2014-2019.
- The company stated that organic free cash flow generation will cover the dividend through 2017 at \$60 oil.

EXXON STRATEGY : Continue to invest in 2015 with a budget reduced by 10% compared to 2014. Less upstream Capex more downstream !

Selectively investing in attractive opportunities

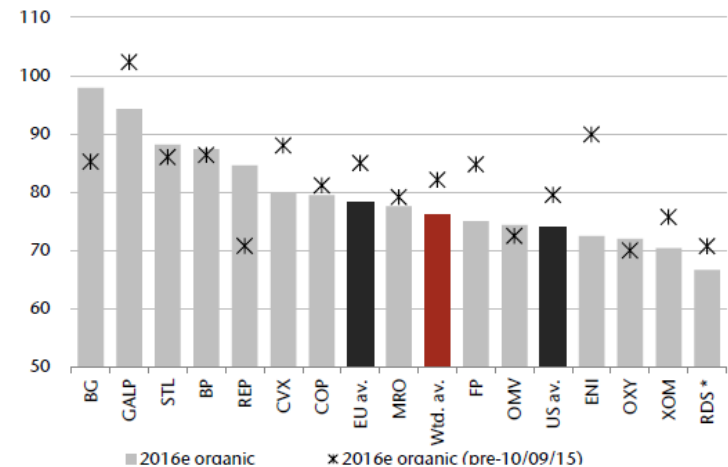
Capex by Business Line



- 2014 Capex of \$38.5B
- Expect to spend \$34B in 2015
 - Reduced Upstream spending
 - Attractive Downstream and Chemical investments
- Average less than \$34B per year from 2016 to 2017
- Continued emphasis on project execution and capital efficiency

Last but not least...IOCs SUSTAINING THE DIVIDEND HAS BECOME A PRIORITY

- Oil companies sector is reducing its break-even oil price as close as possible to 60\$/bbl
 - Capex down 21% from 2014 levels (saving \$53billions)
 - Opex reductions of 10-15% identified (saving \$15billions)
 - Scrip dividends (not cash)reduce dividend cash outflows (\$8billions)
- But break-even remains in excess of oil price forecast through 2017, sector will thus need to fund a deficit of \$46b
- Additional debts will likely fund the dividend deficit in 2016!
- Concern on the horizon – declining production profiles from lack of investment

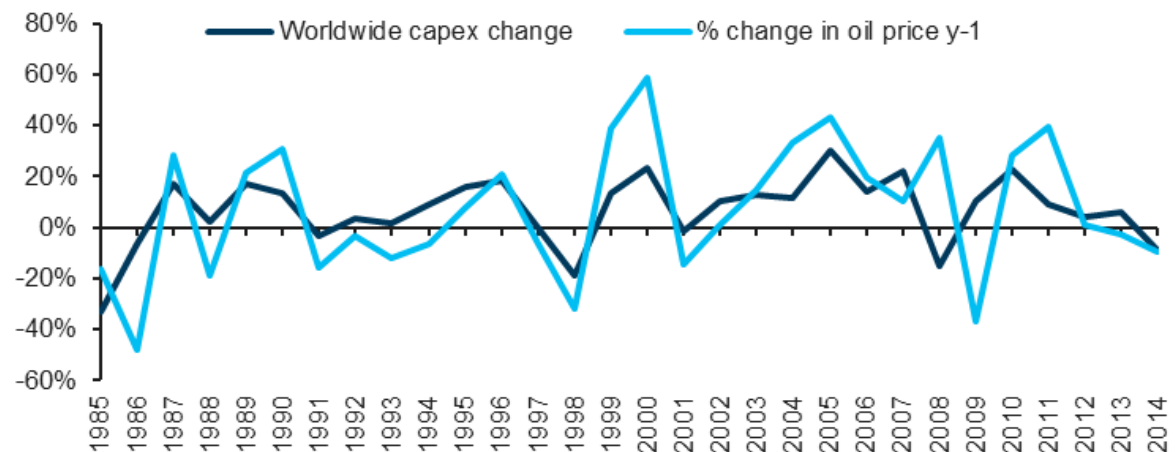


What will happen to investment budgets ?

UPSTREAM :Barclays I annual study review of E&P budget confirms what intuition indicates lower Oil prices = lower capex ! But the graph shows however that reduced CAPEX never lasted more than 2 years over a 30 years span!

MIDSTREAM and DOWNSTREAM

Very positive outlook in particular in MO and ASIA where most countries are trying to monetize their oil and gas resources by transforming in the country , their products. Many fast tracks projects!



SECTION 2 :STRATEGY/ BEHAVIOUR OIL SERVICES COMPANIES

STRATEGY/ BEHAVIOUR OIL SERVICES COMPANIES

• 1/ **WORKFORCE REDUCTION :**

- Started last quarter of 2014 for the large upstream oil services companies (Schlumberger, Halliburton, Baker Hughes, etc.)

As of July 2015 average US upstream 23,5% ranging from Halliburton 11,3% ,16,7 % for Schlumberger to 40/50%)
EPC contractors like TECHNIP started later in July 2015 with a reduction of 16% (6000 staff members !)

2/ **STAFF COMPENSATION REDUCTION: field or expatriate compensation reduced (cf Schlumberger)**

3/ **ASSETS REDUCTION :** Fleet of, Vessels

EX: TECHNIP :taking the fleet down to 23 vessels from 36 at the end of 2013.

4/ **ALLIANCES TO OFFER IMPROVED SUBSEA DEVELOPMENT SOLUTIONS**

OneSubsea : Alliance between Cameron and Schlumberger. From reservoir to subsea to surface

Forsys Subsea FMC Technologies Inc. and Technip has formed an exclusive alliance, a 50/50 joint venture. This alliance will reduce the interfaces of the subsea umbilical, riser and flowline systems (SURF) and subsea production and processing systems (SPS) to optimise capex and opex.

Subsea Production Alliance Aker Solutions and Baker Hughes Formed on April 22, 2014 - an alliance to develop technology for production solutions that will boost output, increase recovery rates and reduce costs for subsea fields.

5/ **ALLIANCE WITH CLIENT FOR SPECIFIC PROJECTS OR DOMAIN :**

EX: FNLG Alliance between SHELL, TECHNIP, HYUNDAI for repetitive design approach

INTEGRATED PROJECT TEAM BETWEEN CLIENT AND MAIN CONTRACTORS (EX :BP ANDREW TYPE ALLIANCE : Functioning as a single team, alliance members shared common objectives and incentives and reduced the need for contract interactions. (for BP Andrew the project came in 20 percent under budget and six months ahead of schedule. BP linked the cost of the project to the financial rewards, which were shared among the alliance members.

STRATEGY/ BEHAVIOUR OIL SERVICES COMPANIES

5/ CONSOLIDATION (M&A)

5-1) Strong interest but a very cautious approach ;

A: Mergers and acquisitions (M&A) in the oil and gas industry saw a decrease in terms of deal value and volume in the first quarter of 2015 compared to the fourth quarter of 2014.

During the first three months of 2015, the total number and value of oilfield services deals decreased 77 percent, to three deals, and 94 percent, to \$384 million, respectively, when compared to the same period last year.

5-2) Companies with strong cash position or easy access to financing are going ahead.

Ex : acquisition by HALLIBURTON of BAKER HUGHES for an amount of 35 billions dollars

acquisition by SCHLUMBERGER of CAMERON for an amount of 12,7 billions dollars in cash and stock.

acquisition by CHIYODA of EMAS for 180 millions \$ EMAS is a contracting group providing specialised marine support services, subsea construction and offshore installation, floating production, fabrication and well services to the global offshore energy sector. EMAS acquired previously AKER MARINE CONSTRUCTION!

more to come ? FMC ?

6/ FOCUS ON MIDSTREAM and DOWNSTREAM and NOC companies in MO, ASIA and South America

L'IMPACT SOCIETAL

- La crise dans l'industrie petroliere et parapetroliere n'est pas terminée contrairement aux premieres anticipations!
- A fin septembre 2015 le niveau des pertes d'emplois dans le secteur des hydrocarbures au niveau mondial etait superieur à 200 000 avec une accélération au cours de l'été (50000 postes)
- Le parapetrolier a été le plus touché en particulier les sociétés de service du secteur E&P.
- Des consolidations sont à prévoir car certaines sociétés de services dans l'AMONT sont déjà en mode "survie" et de nombreuses petites sociétés petrolieres independantes US en défaut de paiement.
- Les compagnies petrolières rendues prudentes par leur experience des années 80 ont retardé les licenciements pour conserver leur expertise, mais cette prudence n'a pas résisté aux premiers resultats trimestriels negatifs
 - Ex ConocoPhillips -10% des effectifs en septembre apres un second trimestre négatif.
- La situation est cependant differente dans la partie AVAL (raffinage et pétrochimie) secteur dans lequel de nombreux pays en Asie et MO continuent à investir pour "monétiser" leurs ressources
- Les sociétés de service vont devoir privilegier la polyvalence et accélérer leur migration numérique pour réduire les OPEX de leurs clients
- La standardisation des équipements et la recherche d'economie à tous les niveaux en particulier dans les organigrammes (stream-lining!)