

Energy Developments and Production Solutions

PPP in Oil and Gas

Financing, Contracting and Investment
Strategies



British Syrian Society
31 October 2009
Damascus



Petrofac Group



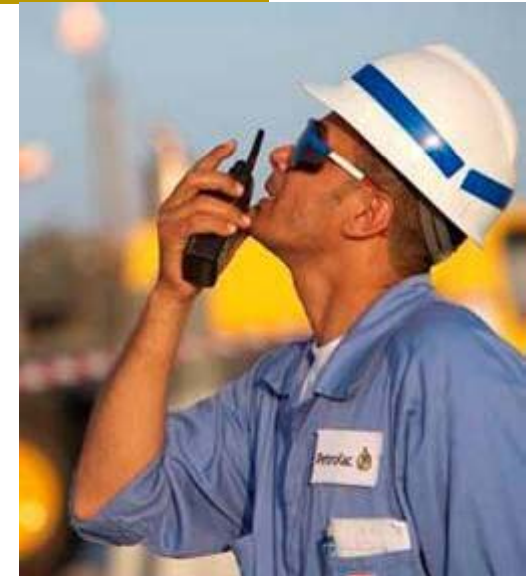
Petrofac is a leading provider of facilities solutions to the oil and gas industry - More than 11,000 employees worldwide

Performance (for year end and as at 31 December 2008):

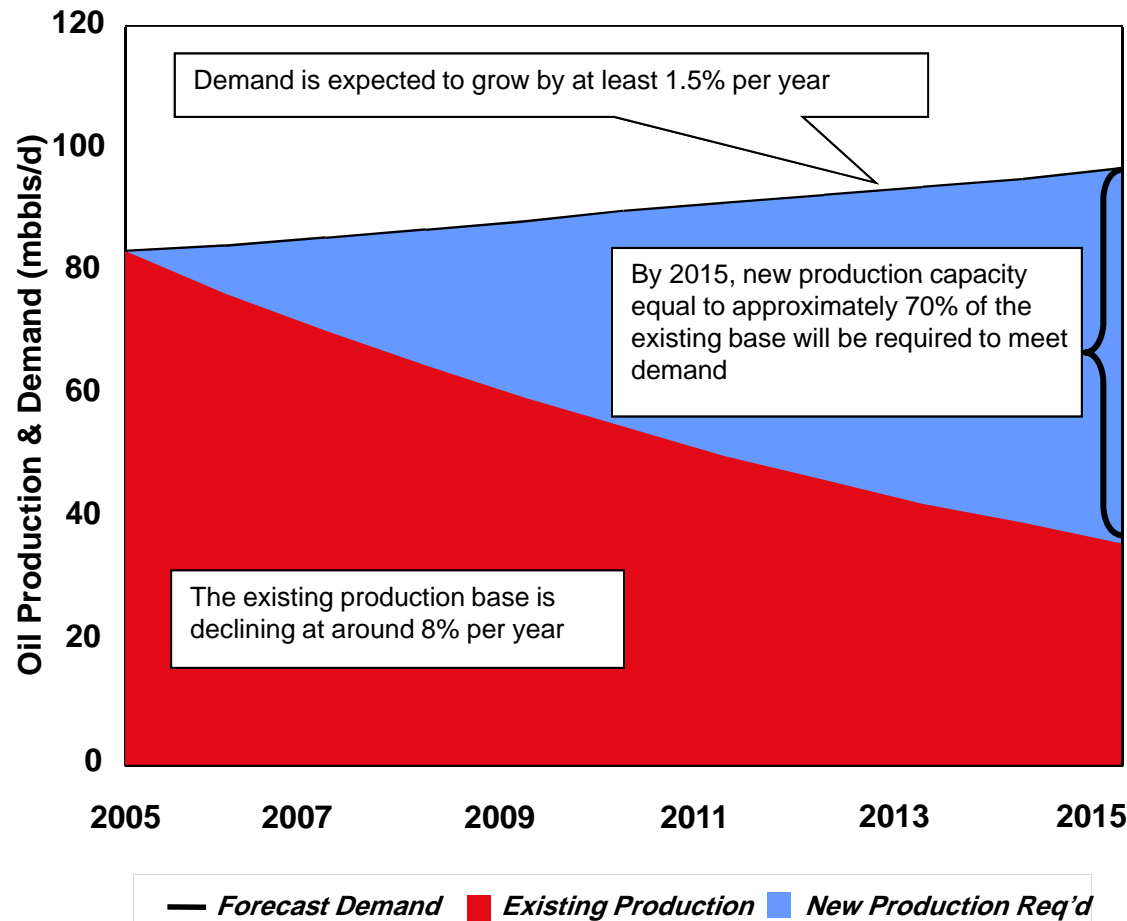
- Revenue of US\$ 3,300 million
- Net Profit of US\$ 265 million
- Backlog of US\$ 3,997 million
- Gross Cash Balances of US\$ 694 million

We deliver services through seven business units

- Engineering & Construction
 - Engineering & Construction Ventures
 - Engineering Services
 - Offshore Engineering and Operations
 - Training
 - Production Solutions
 - Energy Developments
- } These business units can co-invest



Industry fundamentals: Supply, new production capacity required



Source: Simmons & Company analysis

Satisfying future demand

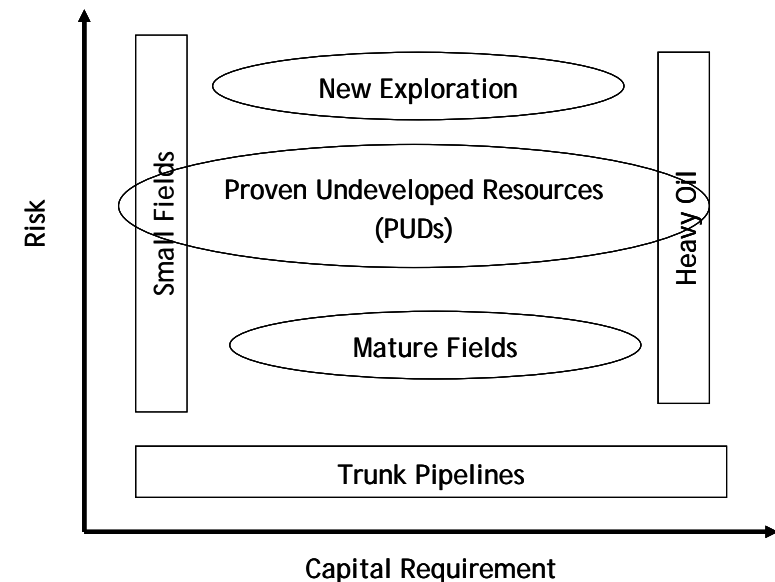
- ▶ A century of development was required to build the production base achieved in 2005
- ▶ This base is now declining at the rate of 8% per year on average despite oil companies' best efforts to maintain flat production levels
 - ▶ If oil producers did not work hard to arrest decline the existing base would likely erode at >12% per year
- ▶ If demand continues to grow at a conservative rate (i.e. lower than IEA estimates) of 1.5% per year then total demand in 2015 could reach 97mbbls/day
- ▶ To satisfy this demand the industry needs to develop new production capacity of at least 60mbbls/day, which is equal to approximately 70% of the existing base
- ▶ AND this needs to be done in 10 years rather than the ~100 it took the last time around!

- Expected demand in 2015 will require the industry to develop 60mbbls/d of additional production capacity; an amount equal to ~70% of the existing base

Challenges in Oil and Gas Development



- For many NOC's, allocation of limited experienced teams and/or fiscal resources needed to develop/redevelop their asset pools.
- Financing (in particular, non-recourse) development in countries without well-established financing infrastructures.
- Building and retaining skills in the development process.
- Developing marginal resources (heavy oil, complex reservoirs, small fields) particularly in fluctuating price environments
- Determining the asset value and then matching the contract rewards to the project risks



Innovative Approaches to Development



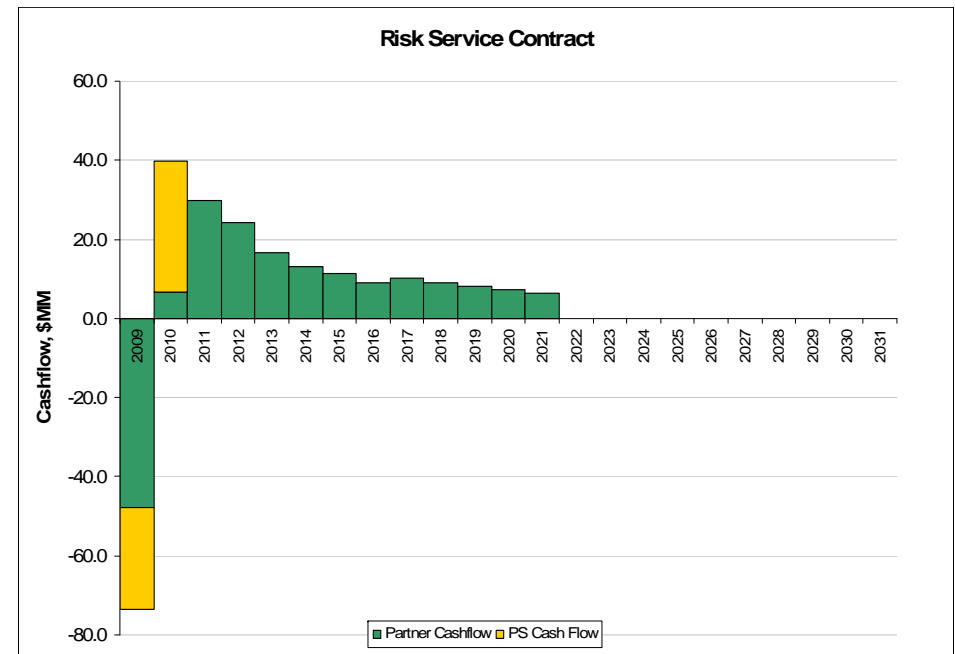
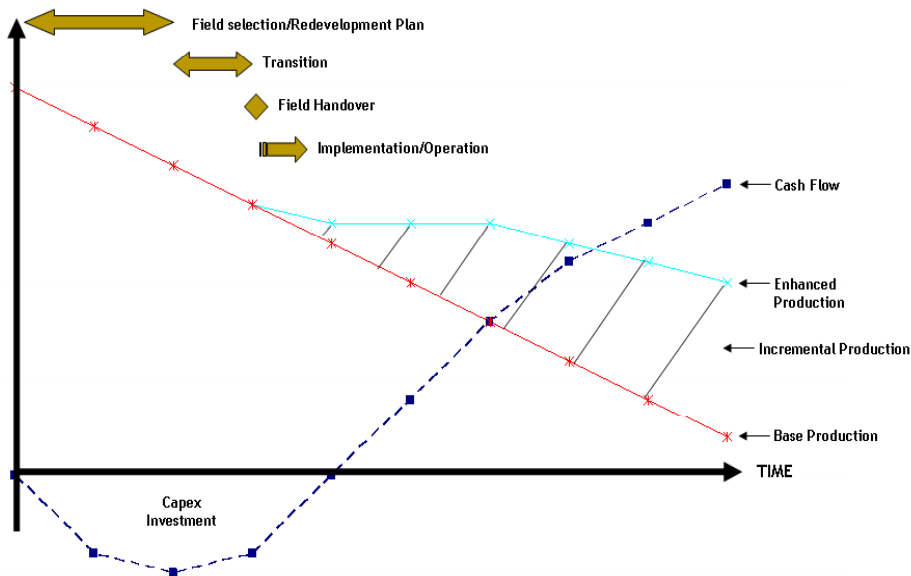
- Faster development cycles improve economics for marginal projects - adapt contracting philosophy to speed things up:
 - FEED/Bid EPC vs Design Competitions vs. sole source open-book benchmarking
 - Modularization versus on-site construction
 - Multiple Construction Contractors
- Optimize wells-subsurface-facilities design iterations by creating integrated teams
- New/Old facilities concepts - (e.g. MOPU, Twister/Caltec, thermal cracking vs. RFCC's)
- Redefine what is infrastructure to permit leverage - sharing of existing infrastructure to change cost and risk profiles.

Alternative Contracting Solutions: Examples



- **Production Enhancement Contract: Tariffs/production share on mature field redevelopment**
 - contractor takes over operations and invests to improve efficiencies and enhance reservoir production
 - Repayment from negotiated tariff/production share for baseline/incremental production
 - Romania

- **Risk Service Contract: New Well Tie-back**
 - Contractor pays share of drilling/tieback costs
 - Repaid a negotiated multiple of its costs out of production
 - Contractor involvement complete once payback achieved. Period can be extended to provide operations services, and train and build operational team.
 - Algeria - North Sea



Keys to Success in PSC and alternatives



- Explore new concepts early in the process - don't be afraid to try something new, but make sure everyone knows why and how it will be done - a roadmap for the process/project is essential.
- Stability - contracts and players should not change unless wholly unworkable - extra diligence at the beginning pays off.
- Understand the key risks, drivers, and constraints of the development team (NOC, partners and other regulatory bodies)
- Keep in mind the objectives and the prize - shared objectives lead to flexibility in means to attain them
- Planning and Communication and Realism
- Structure local involvement from the beginning, but with fallback plan
- Understand the culture, while ensuring that it doesn't interfere with the shared objectives.