Petrofac is a leading international provider of facilities solutions to the oil & gas production and processing industry

We provide project development, engineering, construction and facilities operation, maintenance and training services with capabilities across the lifecycle for upstream, midstream and downstream facilities and infrastructure

We will also invest alongside our clients, delivering our engineering and operations services service capability in complete alignment

Our clients include many of the world’s leading integrated, independent and national oil and gas companies
### Group overview (continued)

<table>
<thead>
<tr>
<th>Engineering &amp; Construction</th>
<th>Operations Services</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Engineering, construction and procurement</td>
<td>▪ Facilities management</td>
<td>▪ Investment in upstream opportunities based on proved hydrocarbon reserves and in oil &amp; gas infrastructure</td>
</tr>
<tr>
<td>▪ Engineering services</td>
<td>▪ Operations and maintenance</td>
<td>▪ Synergy with other two divisions</td>
</tr>
<tr>
<td>▪ Project management</td>
<td>▪ Comprehensive training programmes</td>
<td></td>
</tr>
</tbody>
</table>

By working in partnership with the owners of oil & gas reserves and infrastructure, providing innovative and cost-efficient services, we aim to create value across all aspects of an asset’s development.
Our vision

- To become the global oil & gas industry’s premier facilities and infrastructure provider, admired by customers and employees for consistently delivering and rewarding excellence:
  - working to world-class standards
  - focusing always on customer satisfaction
  - respecting the environment and sensitive to the communities in which we work
  - promoting and rewarding on merit
Overview of Engineering & Construction
A leading provider of engineering & design services and lump sum EPC for upstream and midstream oil & gas sector in the UKCS, Middle East, CIS and Africa

<table>
<thead>
<tr>
<th>Engineering &amp; design services</th>
<th>Engineering, procurement, construction &amp; commissioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Full-field development plans</td>
<td>• Facility design and engineering</td>
</tr>
<tr>
<td>• Technical, commercial and risk studies</td>
<td>• Procurement of all materials &amp; equipment</td>
</tr>
<tr>
<td>• FEED services and design packages</td>
<td>• Transportation of materials to site</td>
</tr>
<tr>
<td>• Engineering and project management services</td>
<td>• Fabrication and onsite construction</td>
</tr>
<tr>
<td>• Technical and HSE consultancy</td>
<td>• Commissioning and start-up</td>
</tr>
<tr>
<td>• Primarily cost reimbursable</td>
<td>• Primarily lump sum contracts</td>
</tr>
</tbody>
</table>

~ 3,000 employees

Key locations are Sharjah, Mumbai, Woking & Aberdeen
Primary areas of expertise, oil & gas

- Oil & gas gathering and production facilities
- Gas processing / separation / compression
- LPG / NGL recovery including turbo-expander plants
- Crude stabilisation
- High pressure water & gas re-injection
- Oil terminals & pumping stations
- Sulphur recovery
- Flowlines and pipeline systems
Areas of specialist expertise, refineries

- Crude distillation units
- Vacuum distillation units
- Distillate and LPG treating units
- Catalytic reformers
- Hydrotreating units
- Isomerization units
- Alkylation units

- Acid gas removal units
- Sulphur recovery units
- Sour water stripping units
- Crude desalters / electrostatic treaters
- Asphalt plants
- Hydrogen plants
- Offsites and utilities
<table>
<thead>
<tr>
<th>PROJECT</th>
<th>COUNTRY</th>
<th>PROJECT VALUE</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashagan Field Development</td>
<td>Kazakhstan</td>
<td>US$ 1400mm</td>
<td>EP&amp;CM</td>
</tr>
<tr>
<td>Kovykta Regional Gasification Project</td>
<td>Russia</td>
<td>US$ 1200mm</td>
<td>PMC</td>
</tr>
<tr>
<td>AGT Pipelines and Pumping stations</td>
<td>Georgia &amp; Azerbaijan</td>
<td>US$ 1140mm</td>
<td>EPC, JV</td>
</tr>
<tr>
<td>Harweel Clusters Phase 2 A&amp;B Facilities</td>
<td>Oman</td>
<td>US$ 985mm</td>
<td>EPC</td>
</tr>
<tr>
<td>KOC - Facilities upgrade project</td>
<td>Kuwait</td>
<td>US$ 650mm</td>
<td>EPC</td>
</tr>
<tr>
<td>Ohanet Gas Development</td>
<td>Algeria</td>
<td>US$ 660mm</td>
<td>EPC, JV</td>
</tr>
<tr>
<td>Hasdrubal Terminal for Hasdrubal Project</td>
<td>Tunisia</td>
<td>US$ 400mm</td>
<td>EPC</td>
</tr>
<tr>
<td>Dorood Onshore Facilities</td>
<td>Iran</td>
<td>US$ 265mm</td>
<td>EPC</td>
</tr>
<tr>
<td>Kauther Gas Plant</td>
<td>Oman</td>
<td>US$ 260mm</td>
<td>EPC</td>
</tr>
<tr>
<td>Khalda Gas Processing Facility</td>
<td>Egypt</td>
<td>US$ 200mm</td>
<td>EPC</td>
</tr>
</tbody>
</table>
- Integrated EPC project management team (task force)
- Common infrastructure and working methods
- Integrated electronic Business Management System (eBMS)
- Work placed where optimal technical offering exists along with cost efficiency
- Project management teams always located to suit client and logistics requirements of project
Risk management

- Business acquisition
  - portfolio approach to client and country
  - systematic contractual and commercial approach
  - thorough estimation and proposal preparation process
  - market diversification to counter cycles

- Project execution
  - depth of management / technical resources
  - performance of suppliers / subcontractors
  - control and mitigation of project challenges

- Proven risk mitigation processes
• Excellent execution capability and track record
• Customer focus
• Rigorous risk identification and mitigation
• Managing resource challenges through relentless focus and through relationships with suppliers and subcontractors
• Positive demand outlook and positioning on programme developments further enhances order visibility
• Expanding service capability to take advantage of market opportunities and leverage customer relationships
• Growth limited not by opportunity but by capability to execute without compromising on delivery (people/expertise/supply chain constraints) and therefore quality of execution
• Ownership culture and core values
Sales & development
Industry overview

- Business historically cyclical
  - medium term outlook remains positive
- Driven by capital investment of international majors and national oil companies
- Current investment boom in core markets
  - Middle East
  - Africa
  - Kazakhstan
- Depth and quality of resources is key issue to the industry
- “It’s all about execution”
Strategies for growth & risk management

- Geographic diversification
  - management of political risk
  - local presence as a differentiator

- Product and client diversification
  - markets served

- Execution model
  - FEED \(\rightleftharpoons\) EPC \(\rightleftharpoons\) O & M / Training
  - long term programmes of investment / repeat orders

- Synergies with Operations Services and Resources
  - differentiation - Operations & Maintenance, Training
  - alignment as an equity investor
Main sales & development focus

**Middle East**
- Qatar ➔ Saudi Arabia
- Kuwait ➔ UAE (Abu Dhabi) ➔ Iraq (long term)
- Oman

**Africa**
- Algeria ➔ Nigeria
- Egypt ➔ Libya
- Tunisia

**CIS**
- Kazakhstan ➔ Kashagan & Karachaganak programmes
- Russia

**Far East**
- Thailand / Malaysia / Indonesia
Geographic diversification - risk management

- We aim for a balanced portfolio
  - 2005 mostly Middle East order intake
  - 2006 mostly Africa & CIS order intake

- Increase participation in long term programmes
  - less prone to energy price cycles
    - Kazakhstan
  - enhanced oil recovery
    - Oman
Product and client diversification

- Increased focus on National Oil Companies (NOCs)
- Counter oil & gas cycle
  - selective targeting
  - refinery
  - petrochemicals
  - offshore services
- Commercial mix
  - EPC lump sum turn key (LSTK)
  - EPCM lump sum (LS)
  - reimbursable with incentives
Product and client diversification (continued)

- Build on expertise in gas processing (especially sour in Middle East, Kazakhstan)
- Utility & offsites experience
  - transcends oil & gas, petrochemical & refinery
- Selective offshore modifications
  - synergy with Operations Services and Resources
- LNG / GTL
- Selective technology positions
  - alliances
  - joint ventures
- Build on local presence
  - partners, subcontractors
Move increasingly to “core” clients in order to compete with peer competition

Differentiation through full service execution model

Develop long terms positions with repeat business and negotiated awards

Structural pricing advantage
  - high value / low cost engineering

Brand value matters
  - “Petrofac delivers locally & globally”
  - “It’s all about execution”
Confident that awards in 2006 will exceed plan

Positive outlook in Middle East, Africa and Kazakhstan
  - strong visibility of upcoming awards

Solid platform for growth
  - execution model
  - geographic diversification
  - selective market diversification
  - risk management

Main challenge is availability of resources and maintaining quality execution
Project Execution
Project execution

- Phases of a project
- Basic components of each phase
- Management of risk
- Controls and monitoring
- Feedback and lessons learned
Phase of a project

What is project execution?

Proposal and bidding → Contract realisation

Warranty

Handover
Proposal approach

- Proposals are the cornerstone of a good execution
- Manage the proposal as a project
- Mobilise the task force for the proposal
- Understand, analyse, dissect technical, contractual and commercial requirements
- Engage with client in clarification
- Identify third party involvement and engage them
Technical / contractual submission

- Prepare and submit technical proposal including clear representation of understanding of requirements
- Prepare preliminary execution plans for the realisation phase including organisation, schedule, specifications and data sheets and basis of bid
- Detailed review of vendors’ and subcontractors’ submissions and engage them in clarification process
- Identify clearly the contractual exceptions and / or basis of proposal
- Prepare risk matrix and proposed mitigations
Proposal approach

Commercial proposal

- Zero pricing principle (no rule of thumbs, no estimation curves)
- Prepare TDR, BOM, PR and level 2 schedule
- Issue enquiries and obtain quotations
- Engage critical vendors in clarification and negotiations
- Evaluate data obtained against in house recent data from projects
- Engage subcontractors and issue BOQ, for obtaining prices
- Compare obtained quotes to in-house performed estimates
- Review cycles for BOM, BOQ and prices
- Comparison to historical data
Conclusion

- Price with a high level of accuracy
- Preliminary execution plan allowing early start for critical activities
- Leadership that understand the project details & partially mobilised team
- Identification and alignment with subcontractors
- Clear identification and alignment of critical vendors
- Identified risks and proposed mitigations
Project realisation

- Extremely complex process of relations and inter-relations
- How do we ensure successful execution?
  - management principles
  - management approach
  - systems and procedures
  - monitoring and control
  - continuous feedback and enhancement
Project realisation

- Project management principles and approach
- Project controls
- Quality Assurance and control
- Health, Safety & Environmental
- Engineering & design
- Procurement
- Construction and commissioning
Project management - approach

- Task force, with full in-house capability and competence
- Target driven schedules and plans
- QA and HSE are an integral part of the project activities
- Construction / commissioning driven schedule
- Decision making process based on technical and optimum cost solutions
- Early procurement of critical material (E&C)
- Bulk orders in phases to meet site requirements
- Continuous cost monitoring, reporting and control
Project control

Definition

- Control of schedule and budget (time & cost)

Planning

- Checks and balances - independent functional head
- Planning
  - WPS packages with identified contractual time limits
  - identify critical mini milestones (forward indicators)
  - develop resources loading (human, financial, etc)
  - engage construction sub contractors
  - develop comprehensive PMS
- Types & level of plans: activity, commodities, resources, TDR, PR
- Feed back and updates (monthly)
Project controls

Monitoring and control

- Structured progress reporting - daily, weekly, and monthly reports
  - data collection
  - progress measurement
  - update of schedule
  - provide forecasts

- Structured project review meetings - bi-weekly, quarterly
  - functional head review
  - quarterly peer review

- Early identification of delays

- Early rectification of problems
Quality management principles

- Customer focused organisation
- Leadership and standard setting
- Involvement of right resources
- Process approach
- Continual improvement
- Factual approach to decision making
- Mutually beneficial supplier relationships
Quality Assurance & control

- Embedded within execution, not treated as a “bolt-on”
- Dedicated QA/QC teams and unique plan per project
- Clearly specified requirements to vendors and subcontractors
- Formal Business (Quality) Management System - procedures, audits, corrective action, lessons learned - managed through the eBMS
- Detailed design checking / audits
- In-house / third party inspectors
Vision

Petrofac will be acknowledged by our industry as a standard setter in HSSE management, an expert in delivering high HSSE performance from diverse workforces in challenging operational environments.

Commitment

Petrofac Board of Directors has ultimate responsibility for health, safety and environmental performance. This responsibility and the Board’s commitment to the achievement of HSSE excellence are foundations of our Business Management System.

We are committed to a target of zero accidents. We will ensure that our activities are not injurious to health and endeavour to minimise adverse impact on the environment.

All Petrofac employees and contractors are required to meet these commitments as an integral part of their work.

On behalf of the Board of Petrofac Limited:

[Signature]

Group Chief Executive Officer
Differentiator

- Extensive in-house HSE capability - stand alone consultants
- Concept design / safety case / consequence modelling
- HSE studies - QRA / HAZID / HAZOP / SIL / ENVID / LAYOUT
- Detailed loss prevention design - passive & active
- Construction safety programmes / response procedures
Principles / approach

- Identify project specifics and risk areas
- Develop programs and specific plans
- Set targets and KPIs across all levels of project staff
- Develop plans, monitor, report and improve
- Visible leadership
- Ensure execution plans embody safety
- Ensure method statements and JRA cover requirements to execute safely
- All project team are responsible for safety
- Constructability reviews include safety aspects
• Full in-house capability and control
• Cover all aspects from studies to detailed (Woking, Sharjah and Mumbai)
• Low cost operation centres - Mumbai, Chennai
• All disciplines / software
• Integrated data centric approach
• In-built Quality Assurance process
• Mature procedures and method statements
• Schedule tailored to meet construction needs
• Established material management system
• Feedback through field engineering
3D Computer Aided Design (CAD)

- Full multi-discipline 3D CAD capability
  - PDS and PDMS experience
- Formal model reviews / walk-through with client participation
- Constructability reviews / sequence planning
- Commissioning and start up input
- Early operations & maintenance input
- Accurate MTOs on demand
- Capability to interrogate / drill down to underlying engineering data
3D Computer Aided Design (CAD) (continued)

- Consistency & continuity / clash check / Quality Assurance
- Steelwork electronic export to fabrication - schedule & quality
- Piping Isometric electronic export to fabrication - schedule & quality
- Ease of revision / replication (second process train)
- Available at site for construction review / visualisation
- Operations & maintenance planning / training
- On-going Plant Asset Management tool for owner
Procurement

- Integrated within project task force
- World wide capability - Europe, USA, Middle East offices
- Buying, inspection, expediting
- Deep understanding of market and vendors
- Use of client vendor lists
- Integrated material management system
Procurement

- Centralised in Sharjah and strategic global work locations
- Over 100 highly experienced buyers, expediters, management and support staff
- Permanent procurement offices in Woking, Houston, Mumbai, Moscow and expediting centres in Italy and Korea
- Inspection through world wide frame agreements with certified inspection organisations and our own in-house inspectors
Construction and commissioning

Construction principles

- Construction is subcontracted
- Early engagement of construction partner (during proposal phase)
- Ensure relationship is governed by an equitable contract
- Develop a complementary win-win relation
- Mobilise supervision early in the project
- Incentive schemes
- Deal with problems promptly
- Integrate with commissioning plans
Construction approach

- Experienced, hands-on construction management team
  - supervision, planning, quality, HSE, materials management
  - proper training and exposure

- Construction partner (local)
  - local materials, logistics, custom clearance, construction resources
  - local authorities and regulations

- Equitable win-win relation
  - identify weakness and bottle necks
  - open and frank relations
  - minimal reference to contract
  - create alignment
Commissioning principles

- Use in-house resources
- Mobilise early enough to involve them in the formal reviews
- Input to engineering-equipment, model reviews
- Input to quality plans of vendors
- Early definition of commissioning handover systems/schedule
- Include vendor requirements in the purchase inquiries
- Identification of specialist and tools early on
- Mobilise to site early enough to act as client for construction
Commissioning approach

- Preparation is key - detailed planning
- Early involvement of key commissioning personnel
- Align expectations with client
- Identify critical project activities
- Ensure quality vendor Factory Acceptance Testing (FAT)
- Establishment of robust preservation and maintenance team
- Review and ensure commissioning requirements are embodied in the EPC
- Develop detailed method statements and procedures
Handover

- Alignment with the client
-Structured system approach
- Output of project realisation
- Continuity and consistency from construction & commissioning
- Responsiveness and flexibility
- Team work and win-win relation
Warranty

- Obtain back to back warranties
- Allow provisions
  - in-house resources
  - third party costs
  - materials
- Assign warranty coordinator (continuity)
- Responsiveness and problem solving
- Develop relations with the plant custodians
- Successful warranty is an output
Human resources & infrastructure
Current employee strength ~ 3,000

By location

- Sharjah: 1,080 (42%)
- Sites: 700 (27%)
- Mumbai: 400 (15%)
- Woking: 240 (9%)
- Russia: 180 (7%)
- Total: 2,600

Manpower growth

- 2004: 1,750
- 2005: 2,400
- Current: 2,600

By class

- Engineering: 1,275 (49%)
- Construction: 950 (37%)
- Procurement: 70 (3%)
- Support & others: 305 (12%)
- Total: 2,600

Support & others

- Procurement
- Construction
- Engineering
- Total 2,600

Around 57% of the total employees (exc Brownfield) fall in the age bracket of less than 40 years, representing a young organisation.
Human resources - challenges

- **Ability to recruit**
  - awareness on educational campuses
  - integrated recruitment management system, CV databank & talent search
  - steps initiated to further enhance Petrofac brand and visibility in the job market
  - employee referral

- **Ability to retain**
  - industry best practices implemented in hiring and positioning employees in the organisation
  - compensation adjustment being done as deemed necessary
  - plans introduced to compensate employees over a longer time horizon (share awards)
  - performance linked rewards introduced for outstanding performers
  - providing career progression opportunities
Infrastructure capability

- Infrastructure is a great enabler for any growing organisation

- The business is supported by:
  - dedicated team to support all engineering/non-engineering software applications and the IT infrastructure
  - job sites connected to home office using latest communication technologies for data/voice communication
  - use of latest technology and continuous upgrade of hardware and software solutions with high availability/redundancy to keep up with fast changing technology advancements
  - standardisation of software solutions (e.g. DOCUMENTUM, PDMS & PDS etc)
  - secure systems for un-interrupted service (UPS units and Auto Fire Suppression Systems in all data centres, redundant servers, firewalls, antivirus/antispam, intrusion detection systems, etc)
The following initiatives are being implemented:

- move to new building in Sharjah with state of the art facilities by mid 2008
- global Wide Area Network being finalised to improve efficiency and ease of operations
- ERP being evaluated
Engineering & design services
Providing consultancy, engineering and project implementation services to greenfield and brownfield hydrocarbons developments onshore and offshore

Consultancy Services:
- feasibility, conceptual design, field development planning
- cost estimating, planning, technical & commercial risk analysis
- flow assurance, process studies, upgrade & modification studies
- due diligence, allocation studies

Engineering Services:
- Front End Engineering Design (FEED)
- detailed design
- preparation and evaluation of engineering, procurement & construction (EPC) tender packages

Project Implementation:
- execution through PMC/EPCM, EP, phased commitment and EPC delivery models - reimbursable; fixed/incentivised fee; lump sum
Consultancy

- Typically 1 man day to 10,000 hours work packages
- Ongoing client relationships are key to repeat business
- Process, risk and cost disciplines are dominant
- Primary business development activity: consultancy packages often convert into FEED and project implementation opportunities
- Research & Development group also based within Consultancy
Consultancy

Ongoing studies and Conceptual Engineering for new and repeat clients:

- Statoil Algeria: Tinhert Integrated GTL Project - Concept Studies & Cost Curves
- BG Tunisia: Hasdrubal Field Development - Concept Studies
- BG Egypt: Gaza Marine Field Development - Concept Studies
- BG Egypt: West Delta Deep Compression Project - Concept Studies
- TNK-BP Russia: Demianskiy Field Development - Feasibility Studies
- TNK-BP Russia: Oronburg Gas Plant Consultancy - Safety Review Studies
- Amerada Hess Russia: Samara Field Development - Concept Studies
- First Calgary Algeria: MLE Field Development - Concept & Cost Estimating Studies
- TPS Tunisia: Cercina Field Development - Feasibility Study & Technical Due Diligence
- Hydro Iran: Azar Field Development - Concept studies
- WoodMcKenzie Saudi Arabia: PNZ Field - Due Diligence & Facilities Review
Hasdrubal Field Development

Client: BG TUNISIA
Scope: Conceptual Engineering

- Conceptual design of the offshore and on-shore facilities, including the subsea pipeline
- New 150 MMSCFD gas processing and treatment onshore facilities next to existing Hannibal plant
- 110km, 18 inch Multiphase Subsea Pipeline
- Innovative design at concept phase reduced pipeline diameter
Engineering Services

- Typically 20,000 to 100,000 manhours on a reimbursable basis or lump sum engineering scopes
- Woking-led, often with backup of Petrofac Sharjah, Mumbai or partner design services to maintain competitiveness
- Compressed project schedule often influences client to roll FEED scopes into long lead procurement and execution phases on EPC or EPCM basis
OMV E&P - STRASSHOF DEVELOPMENT, AUSTRIA

- FEED - Oct ’06 to Jan ’07
- Sour gas processing from two domestic Austrian fields
- Sulphur recovery, acid gas reinjection options being considered
- Includes multiphase gathering lines, gas & condensate export lines

HYDRO - AZAR DEVELOPMENT, IRAN

- FEED/design competition following extensive consultancy study
- 90,000 bopd sour oil production including gathering system, processing facilities & export line
- FEED execution in Woking, handing over to Sharjah office for preparation of EPC bid in Q1 ‘07

KPDL (BG) - KARACHAGANAK 4th TRAIN, KAZAKHSTAN

- 100,000 manhour FEED executed through ’06
- Increase capacity of existing processing facilities through addition of 4th train
- Collaborative effort with Sharjah/Mumbai with handover for detailing & execution
- Scope includes LLI procurement, tie-ins & early works, construction planning
Project execution encompasses full responsibility for delivery of project scope, on varied contractual basis:

- PMC / EPCM
- EP & CM
- EPC

- Reimbursable, fixed/incentivised fees, selective lump sum arrangements
- Award normally through negotiation from concept or FEED stage
LUNDIN - OUDNA FIELD DEVELOPMENT, TUNISIA
- PMC for deepwater FPSO project, following initial conceptual study and FEED work late ’04
- Conversion and upgrade of existing FPSO; new subsea hardware & moorings
- Currently ramping up to full production

BP IN AMENAS - IN AMENAS GATHERING SYSTEM, ALGERIA
- FEED, detailed design, procurement of pipeline systems for greenfield Algerian development
- Flowlines, manifold systems, trunklines
- Scope includes route surveys, hydraulics/flow assurance, liaison with Algerian authorities, procurement, expediting & inspection
- Initial award Jan ’03 - several scope extensions subsequently

KOYKHTA REGIONAL GAS DEVELOPMENT, RUSSIA
- PMC for Rusia Petroleum and East Siberia Gas Company, associates of TNK-BP
- Tendered award August ’05
- PMC team of 185 (75% Russian nationals) established in Moscow, Samara, Irkutsk and field
- Early works in progress; completion scheduled for end 2010
Established 2004 as joint activity of E&C and OS divisions, to offer industry-leading capability to facilities management clients for modifications / refurbishment / upgrades / enhancement to operating facilities, mainly offshore

- Motto is “Designs that work and can be built”
- Team grown in Aberdeen to c. 650 personnel in engineering and construction activities
- Committed contracts for:
  - Talisman, MonArb assets
  - Venture, GKA developments
  - Marathon, North Sea and Equatorial Guinea
  - Lundin, Heather & Thistle
- New activities being established in UAE to support DPE dutyholder role
  - major brownfields and new offshore E&C opportunities will arise
Initiated as concept study in 2003 after Petrofac awarded dutyholder contract on MonArb

Petrofac undertook FEED & LLI procurement in 2004 and rolled into project execution in 2005

1,300 tonne compression module fabricated in Rotterdam, loaded out July ’06 and lifted on to Montrose platform

Offshore carryover of fab yard tasks estimated at ~200 hours

Success of this project has lead to repeat award by Talisman at their Claymore platform (currently at concept studies stage)
- Initial client alignment through Consultancy activities with value-adding propositions and solutions
- Leverage off breadth of Petrofac’s offering: equity, development, operations and training; enables continuous development of engineering services offering and our best marketing tool
- Likewise, support and develop opportunities for other group divisions
- Build client alignment through quality of offering: rigorous attention to detail, HSSE, quality, project targets; always seek to roll on to next project phase
- Focus on core countries and clients first; pursue new clients and/or regions only with strong strategic rationale
- Work in new country/environment on services basis until all challenges and issues associated with delivery are well understood
EPC project overviews
Project Details

Project: Kashagan Field Development Project
Client: AGIP KCO
Location: Kazakhstan
Project Scope: EPCM
Contract Price: Approx US$ 650 Million
Start Date: August 2004
Completion: June 2008
Starting Point: FEED Verification

- **Oil Treatment Unit**: 2 X 165,000 BOPD production trains: Includes Separation, Dehydration, Stabilization, Mercaptan Removal Units, Flash Gas Compression and Produced Water Treatment facilities

- **Gas Plant**: 2 X 260 MMSCFD gas processing trains: includes Gas Dehydration, Acid Gas Sweetening, Cryogenic Dew Pointing unit (Turbo Expanders), De-Ethanizer, LPG Column, LPG Mercaptan Removal Unit, LPG Dehydration Unit and Sales Gas Compression

- **Sulphur Recovery Units**: 2 X 1900 TPD units Includes Sulphur Recovery and Tail Gas Units complete with Reactor, Sulphur Condenser, Waste Recovery Boilers, Incinerator, etc
Key execution features

- Extensive work during proposal phase - continuity of team for execution
- Integrated execution focus - Sharjah & Mumbai - through task force concept
- Front end loading of key resources
- Rapid adoption / integration of FEED package and assigned equipment items
- Early procurement of all long leads including steel
- Head start on country specific issues - Kazakhstan regulations on design, certification on supplies
- Extensive pre-award discussions with all major suppliers
- Worldwide procurement - careful selection
- 3D PDS model - all disciplines, interface resolution
Key execution features (continued)

- Use of effective data management tool - DOCUMENTUM
- Regular design reviews HAZOP/ HAZID / SIL / PEER / constructability / maintainability
- Proactive vendor management - package approach
- Inspection coverage through resident inspectors / TPI’s - inspection check lists
- Dedicated interface management co-ordinator
- Continuous and close monitoring of progress/cash flow/currency needs
- Benefits to client through value engineering - created win-win situation
- Strong, open and transparent relationship with PMC team / client
<table>
<thead>
<tr>
<th>Client</th>
<th>PDO (Shell)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project type</td>
<td>Oil &amp; Gas Production / Treatment</td>
</tr>
<tr>
<td></td>
<td>Grass Roots / Tie-ins</td>
</tr>
<tr>
<td>Scope</td>
<td>Engineering, Procurement, Construction,</td>
</tr>
<tr>
<td></td>
<td>Pre-Commissioning &amp; Training</td>
</tr>
<tr>
<td>Award</td>
<td>Dec 2005</td>
</tr>
<tr>
<td>Schedule</td>
<td>Approx three years</td>
</tr>
<tr>
<td>Value</td>
<td>Approx $ 1.0 billion</td>
</tr>
</tbody>
</table>
Execution approach - management of risk

- Taskforce, full in-house capability / control
- QA and HSE embedded within execution
- Day 1 emphasis on commissioning & start-up deadline - focus on schedule
- Schedule for construction, engineering to meet commissioning & start-up
- Early purchase of all mechanical equipment (E&C)
- 1st bulk PO - preliminary MTO before detailed design
- Pre-award agreement with local construction partner
Key features

- High H2S in Wellhead Fluid (HSE)
  - Valve / Flange Minimisation
  - Plant Layout (QRA Modelling)
  - Construction Safety
  - Simops / (O&M)
- High H2S, CO2
  - Corrosion / Metallurgy (CRA Overlay)
- High Pressure (Separation & Injection) - 100 Bar / 450 Bar
- Phased Development (EPF, Ph 2, Ph 3)
Client: Kuwait Oil Company

Project Type: Combination of fixed lump sum and re-measured brownfield project

Contract Price: Approx $650 Million

Award: May 2005

Completion Duration: Progressively from 26 to 32 months

The project is part of the KOC development plan to meet and achieve:

- upgrade of existing surface production facilities (7 gathering stations + 2 gas booster stations)
- facilities enhancement - water treatment, flare mitigation, HSE
- increase production from 100,000 bpd to 150,000 bpd per gathering station
KOC Facility Upgrade Project

Key features

- Multiple brownfield sites
- Live facilities
- 90% of construction activities require Permit to Work (PTW) approval
- Manual excavation
KOC Facility Upgrade Project

Key execution features

- Early mobilisation for pre-survey work
- Personnel familiar with existing facility inducted into project team
- Pre-bid agreement with construction subcontractor
- Nominated subcontractor had extensive experience with KOC
- Field engineering support team established in Kuwait
- Maximised procurement from known Kuwaiti vendors
- Worldwide procurement for other items
- Senior project team representation at Kuwait for client interface
- Large HSE & QC organisation to support construction
- Continuous & close monitoring through regular visits to site by senior management
- Work sequence prioritised to balance peak resource loading
Petrofac Operations Services

International sales & development
Major milestones

- **2002**
  - Acquisition of PGS

- **2003**
  - Setup of PFMI

- **2004**
  - SPGC - Iran
  - GNPOC - Sudan

- **2005**
  - KOC - Kuwait
  - DPE - UAE

- **2006**
  - SPGC - Iran

- **2007**
International capabilities

- Operations support services
- Turnkey operations management
- Workforce development
- Well operations management
- Back-office support
  - finance & accounting
  - IT
  - HR
  - procurement
  - sales & marketing
Dubai Petroleum Establishment

Scope of work

- Facilities manager during the transition stage
- Safety case holder during the transition stage
- Petrofac will employ the offshore staff and the onshore operations support group; around 1,100 employees
- Responsible for production and well management operations on the Dubai offshore assets - 4 platforms and 71 offshore fields
- Full responsibility commences in April 2007
- Reimbursable OPEX with management fee and performance fee based on agreed KPI’s
- First contract with a sovereign government
- Well operations

Project Details

- Operations Services
- Life of Field
- UAE
Summary and close
Key messages

- Excellent execution capability and track record
- Customer focus
- Rigorous risk identification and mitigation
- Managing resource challenges through relentless focus and through relationships with suppliers and subcontractors
- Positive demand outlook and positioning on programme developments further enhances order visibility
- Expanding service capability to take advantage of market opportunities and leverage customer relationships
- Growth limited not by opportunity but by capability to execute without compromising on delivery (people/expertise/supply chain constraints) and therefore quality of execution
- Ownership culture and core values

Well positioned to continue to deliver good results