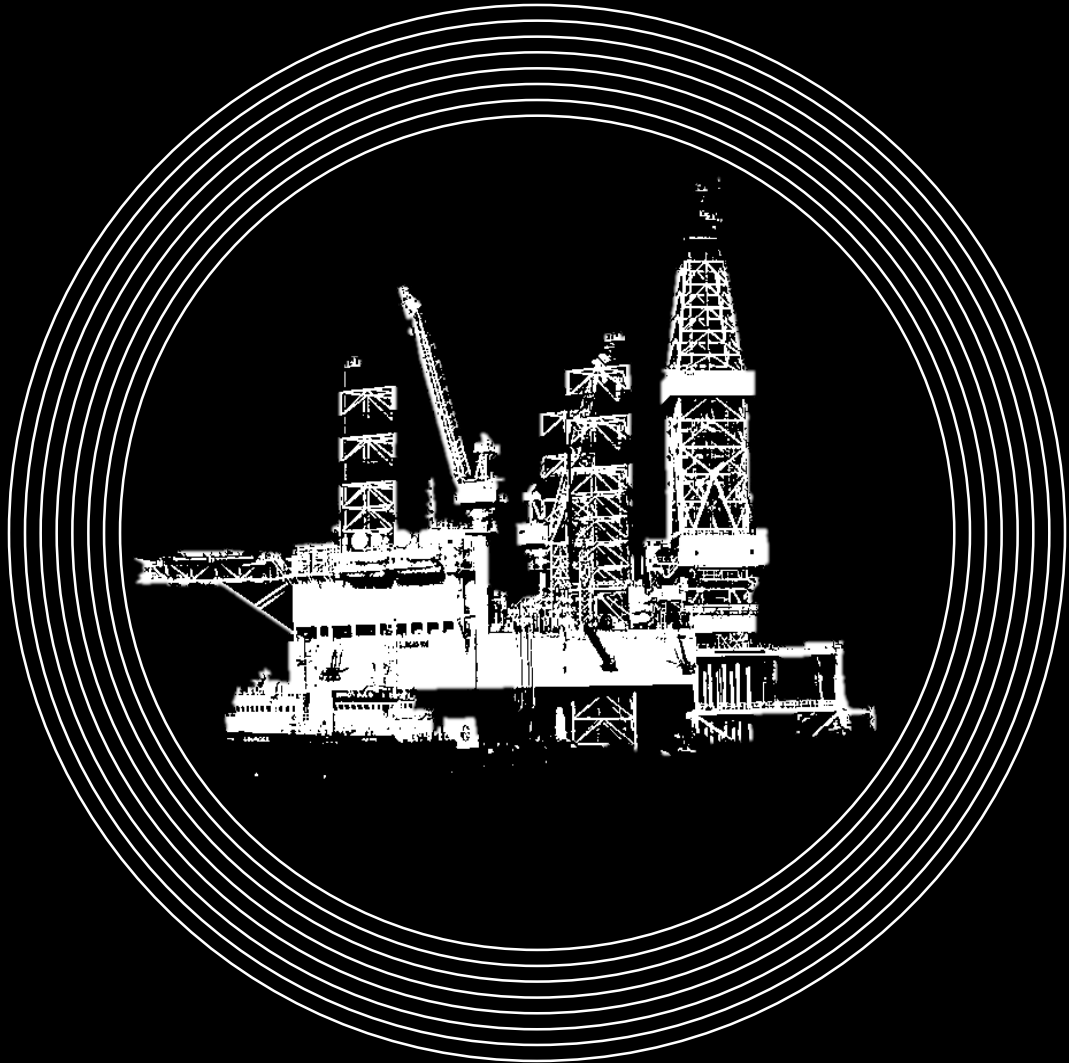




**COMPANY
PROFILE**

**KISH PETROLEUM
ENGINEERING**



www.kpe.ir



KISH PETROLEUM ENGINEERING	2
Health, Safety & Environment	3
The Board & Shareholder	4
Organization Chart	5
Key Personnel	6
Certificates	8
International & Domestic Cooperation	9
Services & Capabilities	10
Projects	16

KISH PETROLEUM ENGINEERING



Kish Petroleum Engineering (KPE) is an engineering firm which serves Iranian upstream oil and gas sector. **KPE** is the central core of upstream activities in Oil Industries' and Engineering Construction (OIEC) Group.

The company was founded in **1999** acquiring an experienced group of professionals including geologists, geophysicists, petrophysicists, reservoir engineers, drilling engineers, production engineers, and surface facilities engineers. One of **KPE's** goals is provision of engineering consultancy services for oil companies (Clients) for planning, development, drilling, production, and reservoir management. Full-field studies and preparation of field development plans, drilling engineering and operations, production and completion engineering, and conceptual design for surface facilities are some of the **main activities** of the company. We believe consultant companies who prepare development plans are the best entities for supervising field development operations and incorporating the required modifications resulting from new information obtained during field development. **KPE** offers innovative and integrated products and services for new ventures, exploration, appraisal, development and production especially in **current Iranian oil and gas market**.

On this strategy, **KPE** decided to rejuvenate its structure and equipped itself to also enter into operational activities. Operational drilling as well as production disciplines were therefore added to **KPE's** main activity streams since 2008. We work with international and local service companies and oil field supplies not only to assist them in engineering the services but also manage, plan and supervise the integrated operations which involve several subcontractors. Through offering technical expertise and cost-effective integrated solutions, **KPE** has been involved in a variety of projects including well management, marine engineering and operation, HSE supervision and, economic evaluation of exploration, development and production assets.

Recently, **KPE** has also been engaged in implementation of cutting-edge IOR/EOR technologies and production enhancement techniques with the aim of improving production rates and recovery factors in Iranian oil & gas reservoirs. This is done through a performed through a full-cycle involvement format in which **KPE** utilizes its resources as well as international business relationships to screen the fields, identify the appropriate technologies, facilitate financing of the projects and eventually plan, manage and, execute the operations.

Full Field Study and
MDP Preparation



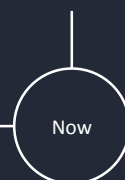
1999

Operational & Engineering
Supervisory in Field Development



2008

Field Development &
Production Enhancement



Now



HSE Policy

(Health, Safety and Environment)

KPE (Kish Petroleum Engineering) as a consultant in exploration and production activities is committed to continual HSE improvement in its operations through active participation of his employees, contractors and the community by utilizing the necessary resources. The company firmly believes that sound HSE performance is key to ensuring sustainable business and shall thus be considered as an integral part in business decision making process. In all business processes, the board of directors has ultimate responsibility for safety, health, environmental protection and energy efficiency and creates the organizational prerequisites for implementing this policy.

As its policy objectives, KPE shall, as a minimum:

- Observe and comply with all HSE statutory requirements within the area of operations.
- Prevent incidents/accidents and mitigate the consequences that having potential harmful effects on personnel, assets and/or the environment.
- Establish transparent HSE performance criteria and declare them internally and to interested parties.
- Establish guiding principles and practices to achieve resource conservation, waste reduction, and sustainability development.
- Prevent environmental pollution and reduce consumption, recycling materials, and disposing of wastes in an environmentally responsible manner.

To achieve the aforementioned objectives, KPE shall:

- Develop and maintain an appropriate HSE management system.
- Hold all levels of management, staff and contractors accountable for HSE within their areas of responsibility.
- Develop a positive HSE culture throughout the company through effective communication and training.
- Conduct HSE reviews and audits in order to identify shortcomings within the organization and ensure compliance with local and corporate standards and regulations.
- Ensure that contractors demonstrate full compliance with this policy.
- Develop and implement a risk assessment-based approach in conducting business operations.
- Establish good relations with local communities based on constructive mutual dialogue with regulators, community representatives, local authorities as well as other concerned parties on HSE and security matters of common interest.

This policy shall be reviewed periodically to ensure continual improvement.

Managing Director

The Board



Behzad Mohammadi

Chairman



AliReza Behbahaninia



Naeimeh Eshraghi



Mohammad Ahmadi Abhari



Farzad Hajivand



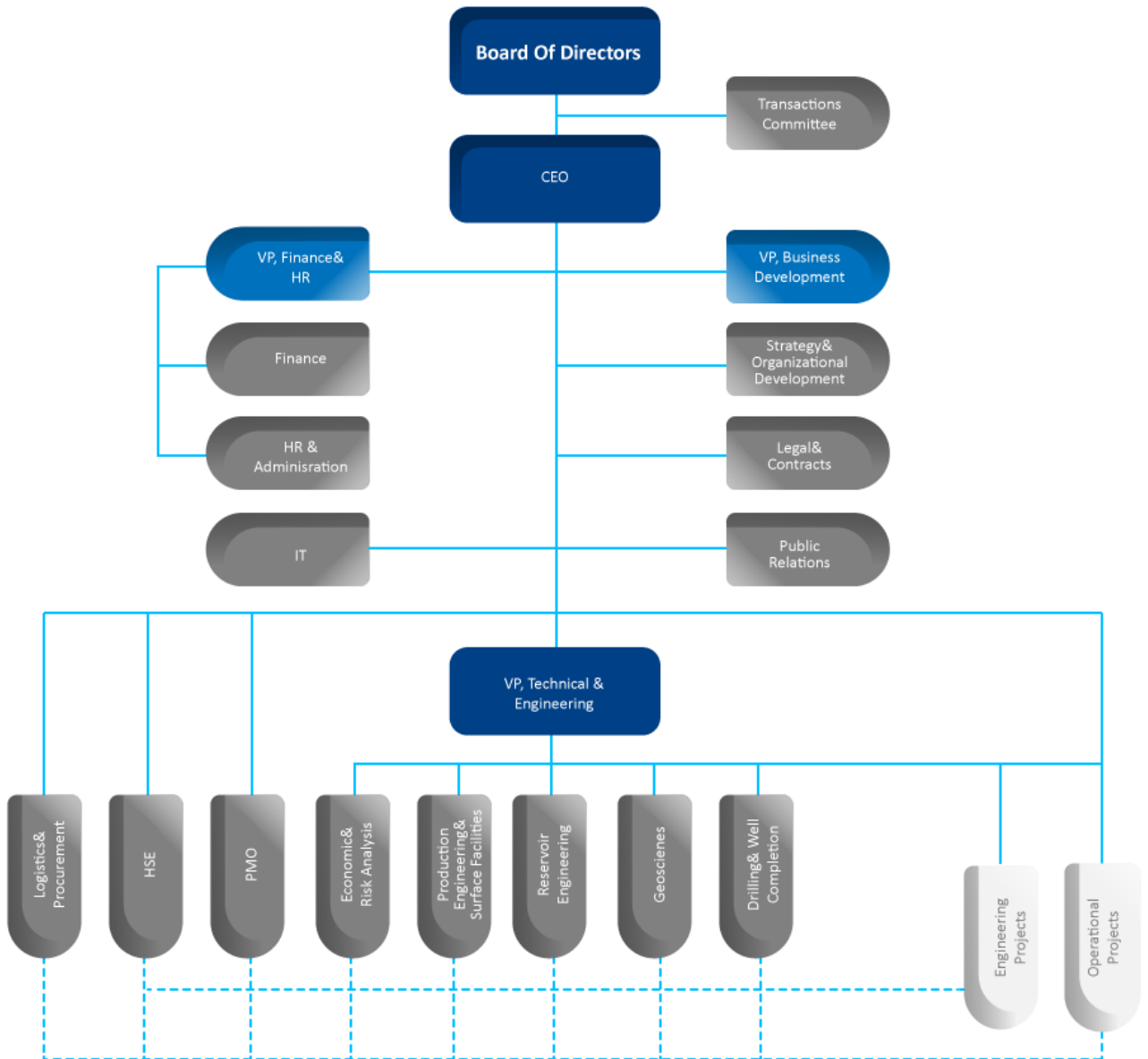
AmirKamran kiamehr

Shareholder



Oil Industries' Engineering & Construction Group (OIEC)

Organization Chart



Key Personnel



Alireza Behbahaninia

Managing Director

M.Sc. in Chemical Engineering



Naeimeh Eshraghi

VP, Financial & Administration

B.Sc. in Petrochemical Engineering



Ali Yazdani

VP, Technical & Engineering

Ph.D. in Petroleum Engineering



Ramin Mahdavi

VP, Business Development

MSc in. Mining Exploration Engineering



Ali Azardar

Legal & Contracts Affairs Manager

Master of International Law



Mansour Taheri

Drilling & Well Completion Manager

B.Sc. in Petroleum Engineering



Khalil Ghafouri

Reservoir Engineering Manager

M.Sc. in Hydrocarbon Reservoir Engineering



Mohammad Reza Hosseini

HSEQ Manager

M.Sc. in Environment Management



Masoud Fahiminia

Geoscience Manager

M.Sc. in Mining Exploration Engineering



Mahmood Taghavi

Geology Operation Head

M.Sc. in Stratigraphy and Paleontology



Amir Hossein Seyed Jalali

Financial Manager

Master of Accounting

Key Personnel



Abbas Shahrani
HR Manager
M.Sc. in Management



Mohammad Reza Vanaki
Geophysics Head
M.Sc. in Geophysics-Seismic Engineering



Amin Mosadeghi
IT Manager
B.Sc. in ICT Engineering



Amir Amel Asli Torogh
Logistics & Procurement Manager
B.Sc. in Mechanical Engineering



Mohammad Reza Rajoli Nodeh
Petrophysics Head
M.Sc. in Petroleum Geology



Gholam Ali Pasha
Drilling Operation Head
B.Sc. in Drilling Engineering



Meisam Afsari
Well Completion Engineering Head
M.Sc. in Petroleum (Well) Engineering



Mohammad Khazemkhanloo
Strategy & Organizational Development Manager
M.Sc. in MBA



Pejvak Darvishkhaki
Project Planning & Control Expert
B.Sc. in Industrial Management



Sina Sadeghi
Public Relations Manager
B.Sc. in Business Management

International & Domestic Cooperation

Through its past and current projects, **KPE** has been in corporation with several domestic & international companies. These companies are comprised of service companies, material and equipment supplies, manufactures consultants and E&P companies.

International

- BeicipFranlab
- NAUTIC AWT Energy Solutions
- Region Ltd.
- Novomet
- EnergyOne
- Fenix
- Zenith Energy Ltd.
- WellCEM
- WellTEC well technology and solutions
- PANORAMA Oil & Gas
- PEWETE
- GOT
- AGR
- Tenaris

Domestic

- National Iranian Drilling Company(NIDC)
- North Drilling Company(NDCO)
- Ostovan Kish (Drilling Company)
- Petro Danial Kish (Directional Drilling)
- MEHRAN Engineering and Well Services
- Petro Sanat Haffar
- Sealand Engineering and Well Services
- Mapsa
- Mapsa Kish
- Sarvak Azar Engineering and Development (SAED)
- Persia
- Well Services of Iran
- Overseas Technical Service Kish
- Sahand University of Technology
- Sahand oil and gas research institute
- Petroleum University of Technology

BeicipFranlab

NAUTICAWT
ENERGY SOLUTIONS



NOVOMET

EnergyOne



Welltec

PANORAMA
Oil & Gas SDN BHD



GERMAN OIL TOOLS
WELL COMPLETION & LINER HANGER



Tenaris



ND
North Drilling Co.



MEHRAN
Engineering and Well Services



MAPSA ENG.
WWW.MAPSAS4E.COM



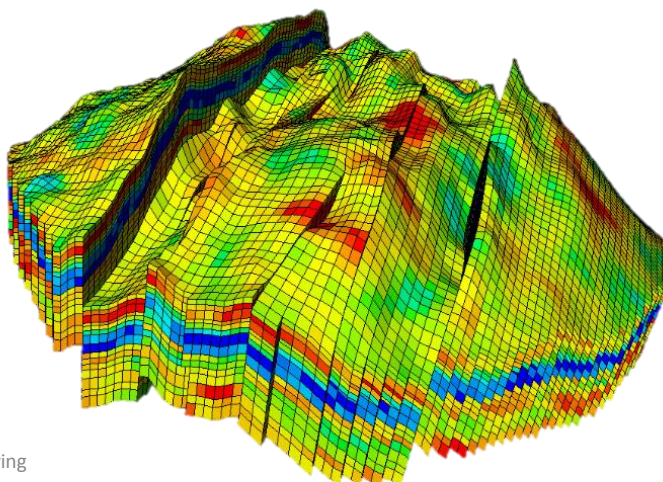
Well Services of Iran
(Schlumberger Methods)

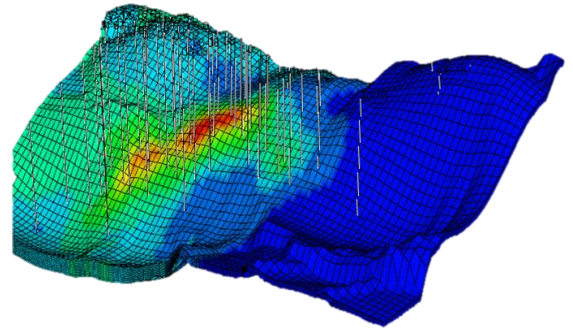


Geoscience

Main components of our integrated geoscience services for field and reservoir operation & characterization are as following;

- **Geology:**
Geological Wellsite Services; Gathering and accurate interpretation of geological and engineering data during all phases of drilling programs (offshore and onshore), Complex evaluation of drill cuttings, conventional cores and sidewall cores, Supervision of mudlogging and wireline logging operation, Preparation and provision of daily geological reports and Graphic well log, Supervising and/or closely working in a liaison with Directional, MWD, Wireline, Coring and DST teams, Very close liaison with drilling team on location in order to secure a cost-effective and safe drilling environment , Daily informative reports of rig activities, **Regional and Reservoir Geological Studies;** Structural, Stratigraphy, Sedimentology, Paleontology, Fracture Study, **Core Studies;** Biostratigraphy, Petrography, Sedimentology, and Reservoir Quality, **Geological Modeling;** Stochastic & Deterministic Methods, Fracture Modeling, Uncertainty Analysis
- **Geomechanics:**
Geomechanical core analysis , 1D And 3D Geomechanical (Seismic Driven) modeling, Wellbore stability analysis and optimum well trajectory design, 3D Dynamic Geomechanical modeling (Coupled Models), Reservoir and overburden compaction/heave modeling, Reservoir stimulation design including hydraulic or acid fracturing, Candidate well selection analysis for hydraulic or acid fracturing operation, Feasibility studies and modeling of CO2 sequestration and gas storage projects
- **Geophysics:**
Acquisition; 2D and 3D Marine, Transition (TZ) and Land Planning, Supervision of Data Acquisition, **Processing;** Conventional PSTM & PSDM, **Interpretation;** Structural, Stratigraphic, Fracture Extraction and Analysis, **VSP;** Designing, Supervision Of Operation, VP & Vs Processing, Interpretation, and Q Factor Calculation, **Reservoir Characterization;** Pre & Post Stacked Seismic Inversion (Deterministic& Probabilistic), Attribute And Geo-Body Study, AVO Analysis, **4D Seismic;** Feasibility Study, Planning, Processing and Interpretation
- **Petrophysics:**
Logging Operation; Planning for Open/Cased Hole, Supervision of operation (Logging While Drilling (LWD), Logging after Drilling, and Cased Hole Logging), Consultancy on QC and Evaluation, **Perforation interval selection;** Based on Open Hole Evaluation, Behind Casing/Liner Cement Quality Analysis, **Formation Evaluation;** Conventional and Advanced Logs
- **Geochemistry:**
Source Rock Assessment, Kerogen Typing, Source Rock Sedimentary Environment Analysis, Burial History Analysis, Thermal Maturity Evaluation, Source-Oil Correlation, Oil-Oil Correlation, Biomarker Analysis, Reservoir Continuity Assessment, SARA Oil Analysis





Reservoir Engineering

- **Basic Reservoir Engineering:**
Conducting basic reservoir engineering studies including: Routine core, Special core, PVT, Well Testing, Geothermal, Reservoir pressure and contact performance, Material balance, Well flow performance, PLT analysis.
- **Reservoir Simulation:**
Conducting reservoir simulation studies to determine optimum field development plans. These studies start with building a robust reservoir model using basic reservoir engineering data. The model is then calibrated through a “history matching” process so that the production/pressure history of the wells are matched reasonably. Thereafter, the model is used to provide production forecasts assuming different development scenarios, the results of which are used to make optimum investment decisions.
- **Supervision of Laboratory Procedures:**
Provide laboratory programs and technical proposals to collect required information .
Supervision of routine core analysis, special core analysis, PVT analysis, and enhanced oil recovery (EOR) studies conducted in core and fluid laboratories.
- **Design and Supervision of Reservoir Engineering Tests:**
Design and supervision of well tests, drill stem tests, and wireline formation tests.

Drilling, Well Engineering & Operation

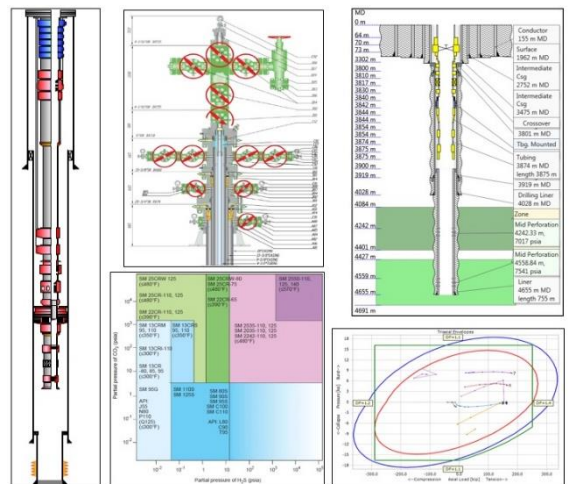
- Preparation of drilling programs on a synergetic basis, which involves interaction with G&G and engineering departments, drill and completions on paper, risk register, contingency and mitigation plans. In the process, the equipment and material requirement and the corresponding services along with the plan and budget are defined.
- Preparation (with supervision) of tender documents related to different services and technical documents related to procurement with continuous tracking on the delivery period of equipment/material and subsequent actions on proper storage
- Drilling operation management and drilling operation supervision on engineering activities related to the basis of well design, drilling program and execution of plan. The logistics and rig performance on a daily and overall basis are also included.
- Preparation of final well reports and evaluation (with supervision) on quality of services.
- Performance evaluation with respect to plan/budget, lessons learned and technical up-grading of staff.



Kish - Onshore Rig

Well Completions and Workover

- Well Completion Design, Engineering and Supervision**
 Providing fit for purpose well completion design focused at maximizing the life of reservoirs and enhancing recovery in a safe, cost effective and efficient manner.
- Production Optimization and Enhancement**
 Realization of reservoir potential and improving performance of existing completions and new wells in both mature and marginal field development projects.
- Workover and Well Intervention Engineering and Supervision**
 Integrated approach to provide recommendations of well candidates selection, well treatments assessment, workover & well interventions planning, design and supervision.
- Tubular Design, Stress Analysis and Material Selection**
 Utilizing industry-recognized software for analyzing comprehensive tubular and completion strings and make recommendations based on well performance and well integrity.
- Completions and Workover Project Management**
 Provision of integrated completion, workover and intervention projects management and execution.



Azar 03

Surface Facilities Services

- Hydraulic and thermal design and optimization of offshore/onshore oil and gas gathering systems ,export oil and gas transportation facilities and gas/water injection systems
- Process simulation, design and optimization of Central Processing Facilities(CPF)
- Debottlenecking and revamping of existing oil and gas production and processing facilities
- CAPEX estimation and economic analysis for offshore/onshore oil and gas field development
- Management, engineering and design of surface facilities for exploration and production (E&P) mega projects



Production Engineering & Operation

- **Production Engineering**
Production equipment selection, optimization and design - Production performance and optimization - Production logging (PL) & well testing (PTA, downhole and surface) - Perforation strategy and optimization - Artificial lifting (ESP – PCP – Gas lift - ...) design - Production operation (workover/well intervention) proposal & EOJR preparation – Production & asset monitoring and evaluation - Cost estimating and budgeting – RFT/MDT proposal preparation and job execution and data analysis – Drillstem test (DST) program and operation .
- **Candidate Well(s) Selection and Screening for Stimulation (IOR) and Artificial Lifting Applications**
Using all integrated multi-disciplinary Petroleum engineering data - Economic studies for cost effective operation – Well ranking of a field for field development purposes - Proper well selection for stimulation treatment operation – Proper well selection for artificial lifting system operation
- **Reservoir Stimulation Engineering and Execution**
Matrix acidizing - Coiled Tubing (CT) acidizing - Hydraulic (Acid/Prop) fracturing - Economical limits for material and operation costs optimization - Pre- & Post-Frac (Minifrac) well testing - Fluid mechanics and Chemical engineering to select proper stimulation fluid
- **Production Operation Planning, Job Design and Proposal Preparation to Execute and Supervise**
Matrix / CT acidizing & chemical treatment operation - CT Kick off/ N2 lifting & CT chemical treatment - Rigless & Rigbased perforation operation with Tubing, CT and Wireline – Wire Line & E-Coil Production Logging - Slickline operation for running P.S., SSSV, G.C., G.R., M.Q.G., LIB and etc.

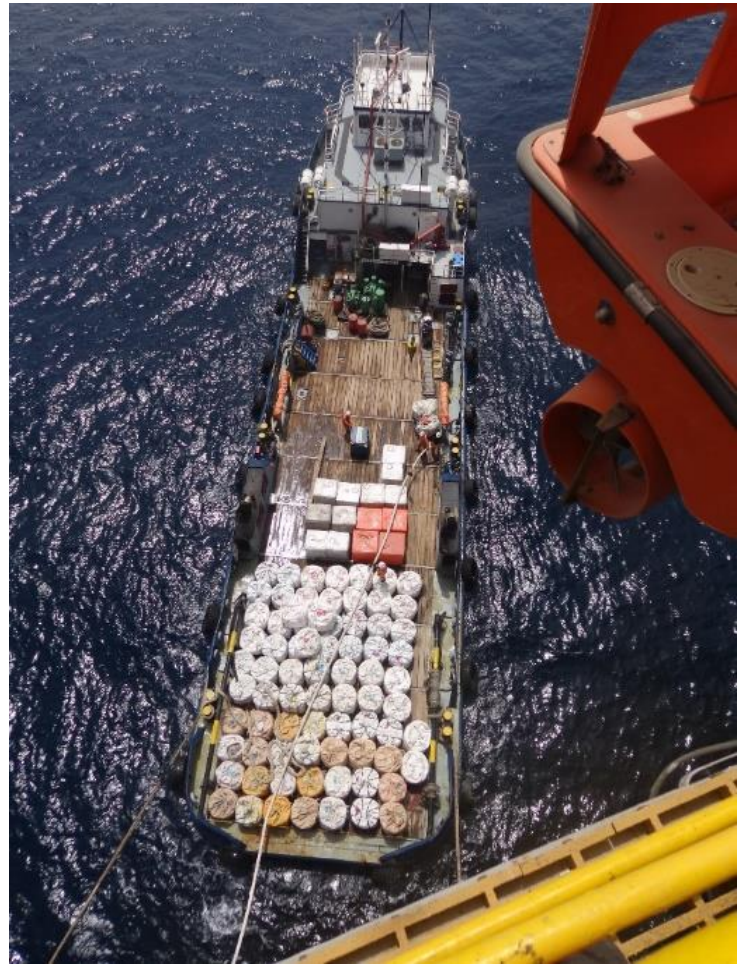


Azar – Acid Fracturing

Integrated Logistics Services

Provide cost-effective services to meet customer requirements. We use our extensive experience and technical knowledge to manage onshore & offshore logistics activities for both short and long-term projects, including but not limited to :

- Supply base services and facility support for drilling and production operation
- Planning and management of logistics support services
- Waerhousing / storage and inventory management
- Receiving and distribution of goods and material,
- Provision of management / labour / cranes and stevedoring, customs and border services,
- Vessel charter and equipment hire, provision of fuel and fresh water.



South Pars 20,21

IOR/EOR Technology Implementation

Implementation of IOR/EOR methods and production enhancement techniques is one of the core activities in KPE which is aimed at improving the recovery efficiency of Iranian oil and gas fields which many are in decline period of their life time. Having the required recourses and technical expertise in the IOR/EOR area as well as access to up-to-date and cutting-edge technology knowledge through its international relationships enable KPE to implement such technological activities in producing / developing oil and gas projects. These competencies are established by screening available technologies, nominating the appropriate fields and wells, followed by advanced engineering and design using all the state of art tools. Moreover, KPE intends to facilitate the project financing through local and international investors. Thereafter, KPE enters to the execution phase of this full cycle process in which operations of such activities are planned, executed, and managed. Based on valuable experience and exposure to Iranian oil and gas market over the years, KPE is capable of accessing all the requirements in the operation phase. This includes access to service companies, required equipment, drilling and work-over rig providers, HSE needs, logistics, well intervention and completion skills, material suppliers and consultants.



Technology, Research & Training

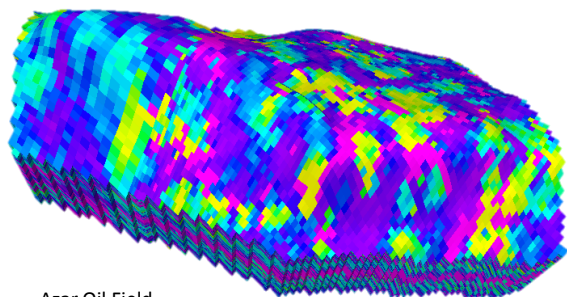
- **KPE**, as part of its mission and strategic objectives, constantly monitors the technology evolution in its activity spectrum. The professional disciplines in **KPE** are committed to keep themselves updated on the most current advancements in the respected fields. The aim is to utilize this knowledge in the ongoing projects from pure engineering to operation phases.
- **KPE**, as a knowledge based company, holds a small research & development team who is responsible to perform business needs research activities . This is accomplished by a continuous collaboration with engineering and operation teams to identify the needs and plan accordingly. **KPE** is also connected to academia and other research organizations to participate and contribute to overall oil and gas sector development in the country. Presence in and holding technical seminars and symposiums are examples of such intentions .
- Continuous training of personnel and their career development has been always an important goal in **KPE's** business targets. On this line, a training group is founded in the company to actively monitor the needs and plan according to the standard requirements of staff development .

- **Kish Gas Field, Supervision of Drilling (12 new wells and one workover) and Test Operations**

Kish gas field is located in offshore of Kish Island and extended to Persian Gulf. The project of consulting services and supervision of Kish gas field development plan awarded to Kish Petroleum Engineering Services (KPE) by Petroleum Engineering and Development Company (PEDEC-NIOC) after tender on March 2012.

- **Azar Full Field Study and MDP Preparation Project**

The main objectives of the project are to provide In-House Special Services (CIHS) to Azar-Sarvak Layer during the Development Operation Phases. In addition, three stages of MDP updating are planned as given below:



Azar Oil Field

- ✓ **Stage One:** Full field study (FFS) and MDP scenario updating based on new 3D seismic data
- ✓ **Stage Two:** Updating the FFS and MDP scenarios based on data taken from the EP wells
- ✓ **Stage Three:** Updating the FFS based on development wells data after finalizing drilling phase and production data of EP wells. The main purpose of this stage is to evaluate EOR/IOR method. In addition, field production monitoring and reservoir surveillance will be provided.

- **Preparation of MDP for Khangiran Oil Field**

Completed Projects

Year	Project title	Client name
2017	Jufeyr oil field - Preparation of development plan	Oil Industries Engineering and Construction (OIEC)
2017	Sepehr oil field - Preparation of development plan	Oil Industries Engineering and Construction (OIEC)
2017	Mansouri oil field - Preparation of initial development plan	Petro Tadbir Pars Engineering
2017	Yaran oil field – Full field study and preparation of development plan	Persia Oil& Gas Industry Development
2017-ongoing	Petroleum engineering and geosciences technical assistance services	Iranian Offshore Oil Company (IOOC)
2012-2014	Salman oil field - Full field study and preparation of development plan	Iranian Offshore Oil Company (IOOC)
2012-ongoing	Azar oil field – Full field study and engineering services	Sarvak Azar Engineering & Development Company (SAED)
2014 - 2016	Azar oil field - Acid Fracturing Project	Sarvak Azar Engineering & Development Company (SAED), PEDEC
2012- ongoing	Kish gas field – Development consultation and supervision services	Petroleum Engineering & Development (PEDEC)
2010 - 2016	South Pars development projects of phases 20 & 21	Oil Industries Engineering and Construction (OIEC), POGC
2013 - 2015	Integrated logistics services in Phases 20 and 21 South Pars	Oil Industries Engineering and Construction (OIEC)
2012-2013	Towsan and Alpha oil fields – Subsurface engineering and consulting services	Petropardazan Pooya Energy development (PEDCO)
2010-2011	Cheshmeh Khosh-Bangestan oil field - Preparation of development plan	Arya Oil and Gas Development Company

Completed Projects

Year	Project title	Client name
2009-2017	Yadavaran oil field – Subsurface and surface consulting and supervision	Petroleum Engineering & Development Company (PEDEC)
2008-2010	Comprehensive research program for applying in layer- fracturing in Iran's hydrocarbon reservoirs through EOR method	NIOC Research & Technology Directorate
2008-2010	South Pars gas field – Full field study	Pars Oil & Gas Company (POGC)
2006-2009	Aghar, Dalan and Tange-bijar fields - Full field study	Iranian Central Oil Fields Company (ICOFC)
2005-2006	Mansouri oil field - Full field study and preparation of development plan	Petroleum Engineering & Development Company (PEDEC)
2004-2006	Aghajari oil field - Full field study	National Iranian South Oil Company (NISOC)
2003-2005	Resalat oil field (Shuaiba, Misharif, Arab B and Arab C) - Full field study	Iranian Offshore Oil Company (IOOC)
2002-2003	Kaki oil field - 2D seismic	Oil & Energy Industries Development (OEID)
2001-2004	Rag sefid oil field - Full field study and preparation of development plan	Petroleum Engineering & Development Company (PEDEC)
2001-2004	Karanj oil field - Full field study and preparation of development plan	Petroleum Engineering & Development Company (PEDEC)
2000-2002	Tabnak gas field - Full field study and preparation of development plan	Petroleum Engineering & Development Company (PEDEC)
2000-2002	Shah Deniz gas field - Economical studies	Oil Industries Engineering and Construction (OIEC)

Two Decades of Experience in the Oil and Gas industry

E&P Engineering and Consultancy

Engineering and Management of Drilling and Well Completion

Integrated Logistics Services

IOR/EOR Engineering and Operation

Kish Petroleum Engineering

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