



# PETRO-TEC

Petroleum Technology &  
Engineering Consultants

***Company Profile***

## PREFACE

PETRO-TEC is an International company specialized in Petroleum Consulting, Field Development Planning (FDP), EOR studies, Reservoir Management, and Petroleum Training.

The international experience of our staff together with our competent set of equipment paves our way to success in our oilfield services business.

The experience of our consultants cover a wide spectrum of specialties. With their distinctive skills PETRO-TEC can tackle the Upstream and Downstream problems including Basin Modeling, Reservoir simulation studies, Full Field Development Studies, Performance evaluation, and Economic analysis.

EOR Studies including the full spectrum of Screening, experimental work, Pilot Studies, and full implementation can be performed by our consultants.

Economic analysis, evaluation of new ventures, unitization, redetermination, and developing strategies for acquiring new ventures are some of the areas in which we acquired profound knowledge and experience.

Evaluation of new discoveries, prospect appraisal and economic evaluation is one of the areas in which have in-depth experience. Performance prediction and Reserve Evaluation and/or assessment of new discoveries prior to commercial declaration is our specialty.

Planning ahead to find today's solutions of tomorrow's problems is our distinctive specialty. This is achieved by our comprehensive training programmers which cover a wide range of topics perfectly tailored to answer the needs of the Oil Industry.

Please remember to call us first for an immediate attention.



# PETROLEUM CONSULTING & SERVICES

## INTRODUCTION

Through consulting, our Petroleum Engineering specialists provide a blend of services erasing the barriers between the different disciplines in the oil industry. This integrated approach enables creating a spectrum of services to improve your production forecasting, increase your productivity, and lower your operating costs.

In this integrated analysis approach, consistency and compatibility is secured between the various disciplines to distinguish our comprehensive services.

By supplying your oil field materials, designing your operations, and on-site supervision, we secure the quality control and the reliability of your results.

Our services are provided by expert geologists, petrophysicists, petroleum engineers, economists, and computer scientists with worldwide experience. This is supported by association and joint-venture agreements with specialized firms.

In Brief, We can handle your Oilfield projects from the first discovery to appraisal, to reserve assessment, to commercial declaration, and to development.



# SUMMARY OF SERVICES

## **I. RESERVOIR ANALYSIS & APPRAISAL STUDIES**

- *Classical Reservoir Appraisal of in-place and recoverable hydrocarbons (Material Balance).*
- *Prospect Appraisal, Reserve Assessment, and Economic Evaluation.*
- *Reservoir performance analytical evaluation and Analysis (No simulation).*
- *Well Test & RFT Analysis.*

## **II. RESERVOIR CHARACTERIZATION & SIMULATION**

- *Geo-Modeling.*
- *Conditional Stochastic Reservoir Modeling.*
- *Sedimentological Stochastic Fault Studies.*
- *Petrophysical Evaluation (Log & Core Analysis).*
- *Black Oil and Compositional Simulation Studies: History Match of Production Profiles and Forecast of Future Reservoir Behavior.*

## **III. EOR STUDIES**

- *Screening Studies: planning, Execution, or Supervision.*
- *Planning of EOR Experimental tests.*
- *Pilot Design and implementation.*
- *Pilot Monitoring & Analysis.*
- *Full EOR Project implementation.*

## **VI. SPECIAL STUDIES**

- *Estimating the Performance and Economics of New field Discoveries.*
- *Comprehensive Technical support Services.*
- *Sand Control (In the reservoir, the well, and Surface Facilities).*
- *Well Test Design and Interpretation.*
- *Water Shut-off studies.*
- *Reservoir Performance Analysis and Identification of by-passed oil. Special studies to maximize recovery.*
- *Seismic Interpretation, Review, and QC.*
- *Sedimentological Stochastic Fault Studies.*
- *GUIDED Field Development Studies (using real data).*



## **V. PETROLEUM EXPLORATION AND STUDIES**

- *Promotion and Licensing of Exploration blocks.*
- *Assisting in Negotiation of Exploration Agreements.*
- *Geophysical Review and Interpretations.*
- *Reserve assessment and evaluation.*
- *Reservoir Geological Description: Structural, Stratigraphical, Sedimentological, and Facies Analysis.*
- *Basin Studies and Prospect Evaluation.*

## **IV. OILFIELD SERVICES AND OPERATIONAL SUPPORT**

- *Water Shut-off.*
- *Scale Inhibition.*
- *Oil well work-over and stimulation planning*
- *Design, on-sight supervision, Quality Control, and data evaluation of Well Testing, Well-logging, Coring, Completion, Testing, and Stimulation program's.*

## **IIV. TRAINING:**

- *Reservoir Appraisal and Development.*
- *FDP Studies (Guided)*
- *Reservoir Simulation*
- *EOR Training*
- *Seismic Interpretation.*
- *Drilling Engineering*
- *Production Engineering.*
- *Production Operations.*
- *Log Analysis.*
- *Test operations & Analysis.*
- *Reservoir Engineering.*
- *HSE Training*
- *Management training*
- *HR Training.*
- *Economic analysis.*



# BUSINESS PROFILE

## Example Projects Undertaken

### WORK PROFILE

#### I. Petroleum Studies and Consultation:

- Reservoir Management, Burgan Field in Kuwait.
- Reservoir Management, Fahud field, Oman.
- FDP Study Auditing, Reserve Booking (Fahud field Oman 2013).
- Conducted a Reservoir Simulation and FDP Studies for The GNPOC of Sudan on Diffra, Hamam, Munga, and other satellite fields (2004 - 2007).
- Conducted a Reservoir Simulation and FDP Studies for Shell/PDO Oman Saih-RAWI Gas field, Sarmad, Dafaq, Hawqa oil fields, and Rabab Gas condensate field. (2001 - 2003).
- Conducted a Reservoir Simulation and FDP Studies for Shell Nigeria on Cawthorne Channel field, (1996). Conducted a Reservoir Simulation study for Shell Nigeria on Soku field, (1997).
- Provided a consultants to conduct three Reservoir Simulation Studies for Shell Nigeria, Agbada, Imo River, and Bomu fields, (1996-1997).
- PVT studies on condensate and volatile oil reservoirs, for Phillips Petroleum Co., U.K. (1998).
- Provided training and Mentorship for engineering staff of Shell Nigeria.
- Completed a reservoir simulation study on Oribi field for Soekor E & P, South Africa (1997).
- Completed a reservoir simulation study on Oryx field for Soekor E & P, South Africa (1998).
- Study of Petroleum product losses in port-Sudan terminal for Shaikan Insurance Co., Khartoum, (1996).
- Design of Surface Production facilities for Heglig field of Sudan (in co-operation with Expro North Sea Ltd.), (1995).
- Specialists in Petroleum Training since 1991. Conducted many courses:
  - In London: for the Yemeni Company for Petroleum Investment. (YICOM), and for the GPC of Sudan.
  - In Yemen, for the Ministry of Petroleum and Mineral Resources.
  - In Sudan, for the GNPOC, GPC of Sudan, and public courses.
  - Our instructors for different oil companies presented tens of courses worldwide.
- Preparation of a study on the potentiality of the Sudanese fields for PENTEX U.K. Ltd, (1994).
- Preparation of A Licensing Round proposal for the ministry of Energy of Sudan, (1995).
- Design of Petroleum Laboratory Equipment for Sudan University of Science and Technology, (1994).
- Advisors on Environmental Issues (related to the oil industry)
- Advisors on Petroleum Strategy Planning for Governments.
- Consultants to Insurance companies in Petroleum related matters.

#### II. Exploration Promotion:

- Promoted and Licensed block 14 for PetroSA in Sudan.
- Currently promoting 3 blocks for The Republic of Sudan.
- Promoting Murdi basin (Kufra Basin in Chad) for International companies.



## EXAMPLES OF WORK DONE

PROJECT	CLIENT	LOCATION	COMP. DATE	DURATION	VALUE
Evaluation of Exploration and Producing blocks in Sudan	SUDAPET	<b>Khartoum, Sudan</b>	Dec. 2015	9 weeks	80K\$
Reservoir management	KOC Kuwait	<b>Kuwait</b>	Sep. 2015	15 months	300K US\$
Reservoir Management	Shell/PDO	<b>Oman</b>	Jul 2014	15 months	230K US\$
Reserve calculation and Production profile estimate. West Jebel-Elzait field	TRI-Ocean	<b>Egypt</b>	Feb. 2013	2 months	45K US\$
FDP of Hadida, Sufyan fields	PETRO-ENERGY Sudan	<b>Sudan</b>	Dec. 2012	12 months	450K US\$
Consultation with PETROSA for Exploration Licensing and contract negotiation.	PetroSA	<b>Khartoum &amp; Cape Town</b>	Feb. 2006	18 Months	270K US\$
FDP study of Diffra South Field, 2005	GNPOC	Khartoum, Sudan	July 2005	3 Months	200K US\$
Reservoir Simulation Study of Diffra West Field, 2003	GNPOC	Khartoum, Sudan	Feb. 2005	6 Months	400K US\$
FDP Study of Rabab Field, 2002	PDO	Muscat, Oman	Oct. 2002	10 Months	550K US\$
Reservoir Simulation Study of Sarmad Field, 2001	PDO	Muscat, Oman	Dec. 2001	3 Months	300K US\$
Reservoir Simulation Study of Saih Rawl Field, 2001	PDO	Muscat, Oman	July 2001	3 Months	300K US\$
Conducted a Reservoir Simulation and FDP Studies for Shell Nigeria on Cawthorne Channel field, (1996).	SPDC SHELL NIGERIA	PORT HARCOURT	November 1996	8 Months	160K US\$
Conducted a Reservoir Simulation study for Shell Nigeria on Soku field, (1997).	SPDC SHELL NIGERIA	PORT HARCOURT	June 1997	7 Months	140K US\$
Provided a consultant to conduct three Reservoir Simulation Studies for Shell Nigeria, Agbada, Imo River, Bomu fields, (1996-1997).	SPDC SHELL NIGERIA	PORT HARCOURT	June 1997	12 Months	240K US\$
Conducted a compositional reservoir simulation study for Phillips Petroleum Co., U.K. (1997-1999).	Phillips Petroleum co. UK	London, UK	June. 1998	9 Months	180K US\$
Conducted two training courses for ADCO in Abu-Dhabi.	ADCO	Abu-Dhabi	June. 1999	2 week	37K US\$
Conducted a SCAL training course for Employees from ADNOC, ADMA, and ADCO.	ADCO	Abu-Dhabi	Nov. 1999	1 week	18.5K US\$

## EXAMPLES OF WORK DONE

PVT studies on condensate and volatile oil reservoirs, for Phillips Petroleum Co., U.K. (1998).	Phillips Petroleum co. UK	London, UK	Sep. 1998	3 Months	60K US\$
Completed a reservoir simulation study on Oribi field for Soekor E & P, South Africa (1997).	Soekor Exploration & Prod. South Africa	Cape Town South Africa	Dec 1997	3 months	90K US\$
Completed a reservoir simulation study on Oryx field for Soekor E & P, South Africa (1998).	Soekor Exploration & Prod. South Africa	Cape Town South Africa	Oct 1998	9 months	180K US\$
Design of Surface Production facilities for Heglig field of Sudan (in co-operation with Expro North Sea Ltd.), (1995).	GPC Sudan	Khartoum	Oct. 1995	3 months	25K US\$
Design of Petroleum Laboratory Equipment for Sudan University of Science and Technology, (1994).	Sudan University of Sc. & Tech	Khartoum, Sudan	Oct. 1994	3 Months	Free

## PETROLEUM CONSULTING & SERVICES

### V. ORGANIZATION:

- a) PETRO-TEC is formed by an integrated group of consultants covering most of the disciplines in the oil industry. Please review our web site for more detail and CV of many of our consultants.
- b) Criteria for Staff Selection Process:
  - o Technical ability and experience.
  - o Personality: Must be a team player and understands cultural differences.
  - o Transfer of technology: Most of our consultants are Teaching Instructors who has the giving spirit as second nature. (This is the most important Criterion)
  - o Self Starter who can cope with deadlines.

### VI. OFFICE FACILITIES:

#### For Studies:

We either use our studies base in London or our office in UAE. For training, we use either Imperial college in London or Abu-Dhabi grand Hotel in UAE.

## FURTHER INFORMATION

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