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Services and Experience
Our Objective

We are a fully integrated multi-disciplinary team that has purpose to help the E&P sector in African Continent in exploiting their petroleum resources effectively.
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iii Training Courses Catalogue

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**Improved Hydrocarbon Recovery**

A comprehensive solution strategy that involves the optimal application of revitalization and engineering options in a timely manner. These options for a solution strategy include:

**Assess current asset state by**
- Reviewing Hydrocarbons in place
- Production analysis, drive mechanism and recovery factors
- Wellbore conditions, facilities capacity
- Address near term production issues

**Immediate impact, quick win opportunities “Well-centric Productivity”**
- Looking for well-centric production improvements through Immediate Impact Interventions –
- Facilities de-bottlenecking and other surface facility improvements
- Identify new pay opportunities through enhanced re-evaluation of subsurface logs or through additional surveillance programs – “Additional Reserves”.
- Stranded behind pipe reserves for optimum depletion plans.

**Look for improved recovery opportunities “Field-centric Productivity”**
- Increased reservoir contact techniques through infill drilling or additional fracturing/stimulation
- Implementing improved reservoir surveillance and management techniques
- Improving production management and recovery through better pressure maintenance techniques
- Look for opportunities to implement IOR/EOR: increasing oil mobility through injecting combinations of alkalis, surfactants, or polymers.

**Build a field re-development plan that includes.**
- Prioritized list of immediate impact intervention
  - Screened and ranked IOR and/or EOR techniques which could include combinations of infill drilling, flooding, or artificial lift programs.
- Delineated opportunities to exploit new pay
Production Technology

We provide all the support to maximize production, revenue and debottlenecking of all production constrains in the system. Our team can collaborate with your company’s team in order to set unique optimization approach that permits the engineer to determine the optimum setting and reduce the downtime. We always keep our eyes on success criteria till achieving the target starting from opportunities framing.

Artificial lift Design and Performance tracking
✓ AL type selection based on well condition: Gas Lift, ESP, Sucker rod, PCP or Jet pump
✓ Harsh environment sandy, corrosive fluid, scale and High GOR wells
✓ Evaluation of past installations and defining shortcomings of failed ones.

Well Productivity enhancement
✓ assessment of Productivity index and possible damage using Well test techniques.
✓ Treatment selection based on Lithology with proven effective solutions (Hydraulic fracking, Acidizing)
✓ Application of best practices for Well stimulation jobs

Smart completion Decision
✓ Screening Criteria and economics evaluation
✓ Design ICVs optimum number, sizes and staging
✓ Horizontal well design i.e., optimum horizontal length and ICDs segmentations
✓ Multilateral completion and modelling

Sand Management Strategy
✓ Active Sand control decision and selection
✓ Sand product monitoring and passive control
✓ Through tubing sand control
✓ Flow assurance and Erosion limits for 4 phase flow

Flow Assurance Studies
✓ System De-bottlenecking solutions for different Oil and Gas systems by using the power of Integrated Asset Modelling (IAM) from your reservoirs till delivery point.
✓ Flow assurance studies to ensure Safe hydrocarbon delivery to end point and utilizing specialized PVT analyses to detect solids formation that clogs the system.
Reserves and Resources Assessment

Our Experts have accumulated solid Experience with Reserve assessment according to SPE PRMS guidelines are the ideal candidates to help clients with

✓ Annual Reserves and Resources reporting
✓ Commercial valuation of current assets
✓ Acquisitions, Divestments and Mergers
✓ Portfolio Management

To eliminates the inconsistency the team follows systematic approach into the reserves management process and brings together the Production data, Accounting system data, Well and Field Event data and current applied Technologies to a common and uniform context. The following tasks comprise the reserves management workflow:

✓ Administrative tasks - definition of reserve categories, products, and reasons for change.
✓ Data loading – move of data from the transactional workspace where production and economics data is continuously recorded and updated, into the reserve’s reconciliation context where the opening and closing balances are static for the reconciliation exercise.
✓ Reconciliation or change tracking and recording of change reasons - in the reconciliation context, for each asset, Analyst considers the difference between the opening and closing positions, and using the predefined reasons for change, and allocates values to the change components.
✓ Approval of changes - pass of the explained asset change values and reasons through approval levels usually depending on value.
✓ Reporting – internal/external; collate of the reconciled change values by category and product type into reports formatted for either internal or external consumption.
Your company had accumulated experience whilst working on different challenges to maximize value and productivity of oil and gas fields. These experience lies within the hard-working employees and a good data management system. We can help you Maximize the value of those by providing several services:

✓ Define Talent Network of your company and identify strength and weakness in your team.
✓ Organize well data into simple solutions or Industry solutions like
  
  o Oracle: Our Oracle experts can guide you through high-level projects or support routine Oracle management tasks.
  o SQL Server: our expert team includes specialists with expertise in versions 7 through 2019
  o MySQL: We can help you optimize your MySQL environments.
  o others: DB2, PostgreSQL, MongoDB, and AWS Databases: our experts provide a range of services, including troubleshooting, addressing replication latency issues, scheduling maintenance, enabling new features, and much more.

✓ Our Technical experts and data engineers will define data flow paths fit for your company for faster data analysis and decision making.
✓ Define Bi solutions for Management and engineers to visualize and download data.
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IMPROVED DATA MANAGEMENT

Introduction

This course will help you to grab the excellence in dealing with Microsoft office Excel and PowerBI in conjunction with OFM. That would enable you to collect all field and well massive data into organized format for accurate and effective decision making.

At end of this course, participants will be able to:

✓ Advanced Use Excel, Access, Power Query, Power-BI and OFM
✓ Value of smarter data analysis
✓ How to set up data for faster decision making
✓ How to define the problem and how to analyze using Simple Statistical indicators

Learning Level: Intermediate to Expert

INTEGRATED ASSET MODELING AND FLOW ASSURANCE

Introduction

The course convoys you through the upstream production system from reservoir point to delivery point highlighting all constrains and operating envelope along the system and the best design practices for each component.

At end of this course, participants will be able to:

✓ Recap on NODAL® Analysis workflow
✓ Full system analysis for transient conditions under several Flow conditions.
✓ Introduction to operating envelope for each system component including sanding, erosion, system pressure and solid precipitation.
✓ Introduction to PVT and prediction of solid precipitates (hydrate, wax and Asphaltene)
✓ Inorganic scale mechanisms and remediation
✓ Introduction to Material Selection and Corrosion control

Learning Level: Beginner to intermediate
FULL CYCLE ANALYSIS AND EVALUATION OF PETROLEUM PROJECTS

Introduction

The course introduces economic analysis terms and models in petroleum Industry. It dives deep to practical examples of decision making and the evaluation of potential profit and risk.

At end of this course, participants will be able to:

✓ Understand various economic terms used in the oil & gas industry.
✓ Understand how to develop economic models of various petroleum fiscal regimes.
✓ Carry out cash flow analysis, different economic analyses for petroleum related project and determine economic indicators.
✓ Evaluate and quantify risks and uncertainties.
✓ Make the right investment decision in the presence of risk.
✓ Carry out a comprehensive economic evaluation study for any petroleum related project including risk analysis and sensitivity study using spreadsheet.
✓ Contribute to the petroleum project investment within a solid economic system and do a detailed economic evaluation.
✓ Contribute to the decision-making process for any petroleum related project.
✓ Special focus Bid Rounds & Mergers and acquisitions
✓ Uncover hidden monsters and costs Consumers.
✓ Differentiate between Reality and Hoax in Reserve assessment (SPE PRMS)
✓ Identify Basin and Formation Costs and production identity.
✓ Business Survival at lower Commodity price

Learning Level: Intermediate to Expert

RESERVOIR SIMULATION TRAINING WORKSHOP FROM STATIC MODEL TO DEVELOPMENT PLANS

Introduction

The course introduces the engineering approach of all skills required to be acquired to deal with all reservoir simulation modelling aspects/skills required for Planning optimum depletion plans.

At end of this course, participants will be able to:

✓ Quality check of Structural, Property and Facies Modelling in the static model.
✓ Proper Pressure and Saturation Initialization of dynamic model
✓ History matching the simulation model to mimic actual reservoir performance.
✓ Uncertainty and Automated History matching Workflows
✓ Implement and plan the optimum depletion plans.

Learning Level: Intermediate to Expert
**FIELD DEVELOPMENT PLANS FOR MAJOR GAS FIELDS IN MEDITERRANEAN, EGYPT**

**Scope**

To sustain gas production by drilling new offshore subsea wells in Major fields. The targets are Pliocene turbidites.

**Included Studies**

- PVT analysis and Tunning EOS for more than 100 samples for gas, gas condensate, oil, and water samples.
- Built a Database of SCAL data for fields including Core flood studies, Capillary Pressure, formation Damage and Rock.
- Reservoir Simulation initialization for more than 50 fields including well location optimization, multi segment modelling for smart completion and horizontal wells design with experimental design to capture all uncertainties matrix.
- History matching of wells performance for more than 20 fields for production forecast and Infill drilling.
- Well placement and design optimization using uncertainty packages for maximum recovery.
- Coupled Reservoir Simulation modelling for the full network for full reserve estimation process for the company.

**PROJECT +10 KBOPD FOR BLOCK 18 CONCESSION, YEMEN**

**Scope**

Complete study from reservoir to delivery point to maximize oil and condensate production from mature gas cap and gas condensate fields.

**Included Studies**

- Integrated reservoir studies for 6 oil rim, gas condensate fields with gas injection since 1985.
- Gas Project upgrade analysis of the need of new compressors. Full Nodal analysis and bottle necks detection of the gas fields (Raja-Asaad El-Kamil-...) was done. The purchase of the compressors was not needed as lower costs debottlenecking was done because of the study.
- Evaluation of Gas Injection and Gas Recycling Projects (used new analytical method for correction of Oil rim production volumes and differentiate it from condensate volumes which is produced under continuous gas recycling)
- Identification of bypassed oil areas in the oil rim to be targeted by infill drilling and intervention.
**EARLY MONETIZATION PROJECT, MALAYSIA**

**Scope**

Acceleration of 5 infill wells and Gas Lift optimization for existing wells

**Included Studies**

- Setting WAG and water Injectors patterns design and cycles for existing wells.
- Implementation of Natural Gas lift utilizing existing gas intervals to assist artificial Gas lift for proper gas lift distribution.
- Material selection for DEMP project for harsh CO2 and H2S environment from reservoir souring issue.
- Migrate to smart completion for highly deviated wells and Implementing More Than 50 Smart completion wells.
- Study of implementation of Harsh environment Intervention ESPs for depleting wells
- Auto Gas Lift for deepening the point of injection and maximizing the production rates.

**INTEGRATED RESERVOIR SIMULATION STUDIES FOR MATURE FIELDS IN EGYPT, LIBYA AND SOUTH SUDAN.**

**Scope**

Revisiting mature oil fields for potential infill drilling and intervention to sustain production.

**Included Studies**

- Plan for infill drilling and possible interventions for mature 7 oil Carbonate reservoirs with water flooding since 1975 (NC171 –103C –103B-103T- Aswad- Safsaf and Zella). Block 103 Concession, Libya.
- Infill drilling planning for an offshore oil field in Gulf of Suez, Egypt. It comprises Palaeocene Nubian sands laying over fractured basement.
- Applied smart techniques for fluid identification during field simulation study for heavy oil fields in South Sudan. The main uncertainty was in fluid type as heavy oil was fresh water as connate water making it not easily differentiated by conventional methods.
- Development wells planning for a newly discovered gas field offshore Mauritania.
INTEGRATED ASSET MODELLING FOR OFFSHORE GAS NETWORK, MEDITERRANEAN

Scope

Detecting production bottlenecks in wells, liquid holdups and slugging in the system and optimize configurations for least backpressure with maximum gas rates.

Included Studies

✓ Building Gas Network IAM for more than 70 wells to identify the value of Compressors staging and Re-wheeling.

✓ Screen failure analysis and well operating envelopes for more than 60 lower completions wells.

✓ A study to evaluate the purchase of a new MEG unit using Coupled simulation model and GAP IAM model with Excel to detect the future MEG quantities.

✓ Implementation of a new Export pipeline for the company. The study included the development of operation envelope (Holdup, Erosion, hydrates and wax deposition, Corrosion management) for the pipeline, the impact on reserves using coupled simulation model and company’s integrated asset model (IAM) built on GAP software and the use of Enthalpy and Heat Transfer models in Prosper Software.

✓ Well modelling and performance evaluations workshops.

✓ Tubing sizing for more than 100 of wells to avoid bottleneck the well potentials with cost optimization.

FDP AND PRODUCTION DEBOTTLENECKING FOR WESTERN DESERT OIL WELLS, EGYPT

Scope

Planning for infill wells, reviewing, and optimizing the Workovers and Artificial lift installations

Included Studies

✓ Comprehensive Database and Production Preparation of previous Runs for ESP & SR

✓ Identification of core operational, quality and installation issues limiting Run life of the pumps.

✓ Held a series of Pump performance workshops and peer reviews to discuss the performance well by well.

✓ Operations monitoring including Water flood Management (Well placement review, VRR, sweep Efficiency... etc.) in reservoir and pumping efficiency (ESP, Sucker rod, jet pump, gas lift) evaluation.

✓ PVT and tracer analysis to solve gas condensate and volatile oil allocation problems with other partners.

✓ Static and dynamic Volumetric Assessment of all Jurassic to Cretaceous pay intervals

✓ Extensive review of development options and expected recoveries from tight and thin bedded layers.