C U R R I C U L U M   V I T U E

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Personal information:

Birth date: June 21, 1985
Place of Birth: Libya
Citizenship: Libyan
Gender: Male
Civil status: Single
References: Available upon request
Languages: Arabic and English

Academic Qualifications:

- Master degree in Petroleum engineering (1st Class Honours), Heriot-Watt University,   Scotland & Universiti Teknologi PETRONAS, Malaysia, (Oct 2011)
- Bachelor of Science in Petroleum Engineering, Tripoli University (Al-Fatah University) Libya (Nov 2008).

Key skills

- Wide knowledge of reservoir characterization and heterogeneity modeling
- Reservoir surveillance and economic analysis
- Data management, Data analysis, modelling and models evaluations
- Ample knowledge of data assimilation especially stochastic processes
- Upstream and midstream projects economical evaluation and budgets preparation and reviewing
- Machine learning (supervised and unsupervised learning)
- Ample knowledge in estimation theory (constant and random parameters estimation)

Profile   An ambitious, self-motivated, troubleshooter and hardworking petroleum engineering graduate, who has obtained several petroleum engineering degrees. Furthermore an engineer with wide academic background through being in charge of performing many researches, seminars and tasks. Having the ability of functioning well under pressure either alone or among team with high level works being produced. A good communicator with exceptional communication, presentation and interpersonal skills enhanced through work experience as a lecture, production technologist and through academic class presentations, seminars and technical reports & presentation. A confident and excellent team worker with the ability to achieve tasks when working unsupervised alone. In quest for employment in the domain of Petroleum engineering by having sound knowledge of Reservoir engineering, FDP, working experience and software skills where I can effectively contribute these skills for the growth of the organization which would provide an opportunity to enhance my learning experience.

Professional Experiences

Period : 03/2016 – Present
Job Title : Sr. Oil and Gas Production Specialist
Organization : Libyan National Oil Corporation

Reporting to general director of exploration and production in Libya. Observing, monitoring and managing the production operation in Libyan fields. Job description includes day-to-day monitoring of production targets and Responsibilities include but not limited to:

- Part of the process of developing production plans framework, methodology and monitoring the adherence to the approved strategies. Partially in charge of preparing and/or approving the necessary designs to build and operate wells, gathering stations, pipelines and storage capacity in coordination with the production from the fields connected to this network.
- Involved in approving the budgets of developing and maintenance of the Libyan fields production facilities and judicious the utilization of budgets for maintaining the integrity of system and ensuring the operations executed in cost effective manner.
- Building full data base for all Libyan fields that compatible with Schulmberger OFM software in order to continuously monitoring the field performance against targeted production rates, where filed performances and operating conditions are regularly optimized to achieve field's production KPIs. Using analytical techniques to evaluate well/field production performance and suggests solutions for de-bottlenecking when needed in order to uplift the production output and prolong the life of the Libyan fields operations.
- Design spreadsheet to screen/rank development options based of techno economic factors. Most construal systems used worldwide are included such as Libyan EPSA4, Malaysian PCS, and Iraqi and Iranian contracts for exploration and production contracts in addition to EPSA4, tariff, BOT, PSC and rental contract used for production management contracts. Moreover, generating projects necessary economics for different scenarios of field's Capex& OPEX sensitivity, production profiles, OIP, reserves, oil price, inflation rate and hurdle rate.
- Ensure the adherence to safety and environmental regulations.
- Provide feedback on plans implementations and using positive reinforcement methods to encourage and motivate engineers to ensure the process of continuous improvement.
- Review all operators' plans & documents, including but not limited, five years plan, annual reservoir status report and annual reserve update .Identify companies' system gaps and review field's problematic wells with its recommended ways of re-activation and approve the needed budget.
- Analysing reservoir/production data & workflows, identifying gaps and proposing solution &action plans to improved field production, optimized well production profiles / bridge gaps in reservoir management workflow.
- Participating in mapping EOR road map for operators

Period : 12/2016 – 2/2017
Job Title : Visiting lecture
Organization : Benghazi University, Libya

Responsibilities include;
- Supervised bachelor degree student throughout working on their final graduation project and worked on deriving PVT properties (formation volume factor, gas solubility and bubble point pressure) correlations for AGOCO's fields using backward propagation artificial neural network.

Period : 9/2015 – 2/2016
Job Title : Visiting lecture
Organization : College of Engineering Technology Janzour, Libya

Responsibilities include:

- Lecturing some modules such as reservoir simulation and contributor in the research process by supervising bachelor degree students throughout working on their final graduation project.
- One of Dissertations: "the impact of the vertical heterogeneity on waterflooding performance in stratified reservoirs"
  - Involved carrying out a Reservoir simulation study and mathematical modelling of the water flooding in such reservoirs.
  - Studying the effect of the cross flow which caused by the viscous force and combined it with the impact of the gravity segregation.
  - Examine all predictive mathematical models limitations due to the lacking of the ability to include all the process govern forces.
  - Analysing the degree of vertical permeability heterogeneity effect on the performance by development a three-dimensional simulation models, spatial and space discretization and massive simulation runs and visualization data.

Period : 1/2012 – 2/2016
Job Titl : Assisting lecture
Organization : Sebha University, Libya
Responsibilities include but not limited to:

- Taught different modules to bachelor students such as:

  - Computer Programming language (Fortran) and its application in petroleum engineering such as building codes for production rate history matching and programming pressure diffusivity equation solutions
  - Fluid flow through porous media.
  - Reservoir simulation and train the students on building dynamic 3D reservoir simulation models using Eclipse and Petrel.
  - Transit pressure analysis with guiding students on carrying the interpretation using F.A.S.T well test software.
  - Reservoir management by covering classical reservoir analysis tools and carrying normal economic analysis & risked analysis by implementing sensitivity analysis and Monte Carlo simulation.

- I was constantly being part of research process carried by petroleum engineering department. Throughout this period I was in charge either as main supervisor or co-supervisor of some graduation projects focusing on examining the physics of reservoir drive mechanism, reservoir characterization and modelling, designing and optimizing the production system, waterflooding performance in heterogeneous reservoirs and reservoir management. Some of these accomplished projects:

  - Simulation study of miscible Co_2 flooding in stratified reservoir: first of all, building EOS for miscible Co_2 condition by tuning PVT and MMP result obtained from well A-78 for AGIP Oil Company. Secondly 3D dynamic simulation model was built in order to study the effect of vertical heterogeneity on continues miscible Co_2 flooding and WAG (water alternative miscible Co_2 flooding). Last but not least sensitivity analysis of WAG parameters was carried.

- o Vertical heterogeneity effect on conning phenomena: the second comparative SPE model was used in this study. The vertical heterogeneity was modelled by using Log normal distribution to create the needed scenarios in order to examine the stratification effect on the conning.
  - o Monitoring and predicting the reservoir performance using the dynamic material balance.
  - o Reservoir characterization using transient pressure tests.
  - o The effect of upscaling on the accuracy of the simulation model.
- The head of quality control section in petroleum engineering department.

Period   **: 09/2010- 03/ 2011**
Job Title   **: Reservoir engineering trainee**
Organization   **: Petronas Carigali, Kuala Lumpur, Malaysia**

I have been involved in preparing full development plan for Malaysian offshore field operated by Petronas Company named Gmelah Merah. I was solely responsible to carry out reservoir engineering analysis which include:

- Gathering reservoir engineering data and characterize the reservoir heterogeneity.
- Re-evaluate the original oil in place figure.
- Study the contribution of each drive mechanism in delivering the crude oil under natural depletion strategy using IPM' suit.
- Dynamic simulation data preparation such as finding the best representative Facies based on porosity-permeability relationship and capillary forces variation. In addition to preparing a representative rock-fluid and fluid-fluid interaction properties (i.e. relative permeability and capillary curve for each Facies). Last but not least studying pressure-depth profile through the reservoir and PVT properties.
- Initialize the dynamic reservoir simulation model.
- Running massive simulation scenarios to find the best depletion strategy and transfer the result (include but not limited to wells geometry & numbers and generating short & long term production and injection profiles based on well and reservoir performances in the line with reservoir management guidelines) to the other disciplines. Working with Prod. Tech. engineer in order to design the wells with optimum lifting method to deliver all the fluids that withdrawn from the reservoir to the wellbore.
- Working closely with the economist to evaluate shortlisted depletion plans and decide the best plan that serve company goals and maximizing the company overall business value chain.
- Preparing reservoir management plan and initial reservoir surveillance procedures.

Period   **: 02/2009- 09/ 2009**
Job Title   **: Junior Reservoir engineering**
Organization   **: Waha oil Company, Tripoli -Libya**

Carrying out some classical reservoir tools in order to assess the reservoir performance and bridging any identified gaps by suggest solutions, these include:

- Reviewing Well-test analysis, Material Balance, Production logging (PLT) interpretations for assigned reservoirs.
- Undertook review of shut wells status and made recommendations for reactivation such as water shut-off, re-perforation and stimulation.
- Performed Material Balance technique to evaluate aquifer performance and allocate the contribution of each drive mechanism. Recently, carrying these duties using Mbal software.
  Carrying some synchronized activities such as generating production forecast using classical reservoir tools (decline curve and material balance) or correlating production-time relation using non-linear regression or artificial intelligent techniques. Using output production profiles to generate full economic analysis in order to Screen /rank development options based of techno economic factors
- Interpret well testing and pressure transient analysis to proposed action plan for well production enhancement. Industry standard software's were used i.e. Pan-System and F.A.S.T well test

- Reviewed structure map, hydrocarbon map and calculate OOIP using volumetric method.
- Performing inflow/outflow analysis to optimize well productivity.

Conferences Papers:
- Ahmed I. Omar, Abdulmoain M. Elhenshiri, Abdullah A. Elsherif (Dec, 2016) "Simulation Study of Miscible Co2 Flooding in Stratified Reservoirs" The 1st International Conference on Chemical, Petroleum, and Gas Engineering (ICCPGE 2016), 20th – 22th December 2016, Alkhoms-Libya. This research was conducted by utilizing Winprop to tune the equation of state which used to represent fluid properties under different reservoir condition and GEM as the simulator. (The Paper is available per request for further details since it is not online)
- Mohammed A. Samba, Ahmed I. Omar, (Sep, 2016) "Numerical Simulation Study for Vertical Heterogeneity Effect on Conning Phenomena" The Second Scientific Conference for Petroleum Recourses & industries, Brega-Libya.
- Ahmed I. Omar (Sep 2015), " Modelling Water Flooding Behaviour in Multilayer Reservoirs" Scientific Conference of Oil and Gas, Ajdabiya -Libya
- Omar H. El-Ayadi, Ahmed I. Omar (2009) "Factors Influencing Crude Oil Compressibility in Undersaturated reservoirs" the First International Conference and Exhibition on Chemical and Process Engineering, Tripoli-Libya.

Journal Publication:
- Ahmed I. Omar, Zhangxin Chen, Abdulhadi Khalifa "Predicating Water-Flooding Performance in Stratified Reservoirs Using a Data-Driven Proxy Model" Journal of Petroleum & Gas Engineering,vol.8(7),pp. 60-78, Sep,2017.
  CMG package heavily used in this technical paper especially (IMEX,Winprop and Cmost) in Order to build reservoir model and generate data set for mining. (The paper available online)

Computer skills:
Softwares:
- Competent in Microsoft word, Excel, PowerPoint and Outlook
- Schlumberger Eclipse, Pvti, petrel & OFM
- F.A.S.T well test
- Weatherford WellFlo
- IPM' , Mbal
- CMG (IMEX,GEM,Cmost and Winprop)
- Surfer & digger

Programming languages:
- Python (Numpy, Scipy, Matplotlib, Sicikt-Learn, Keras, Pandas, Seaborn and tensor flow)
- (Fortran and Basic Matlab)

Industry Courses:
o	Data Analysis with Python	Online course,2019
o	Machine learning with python	Online course,2019
o	Economic Aspects of Petroleum Projects	BGC,Tripoli, 2018
	Under Different international fiscal system	
o	Reservoir Simulation	Petronas Carigali, Malaysia,2011
o	Reservoir Management	Petronas Carigali, Malaysia,2011
o	Enhanced Oil Recovery	EOR Research Centre, UTP, Malaysia,2010
o	Petroleum Economics	UTP, Malaysia,2010
o	Production Technology	UTP, Malaysia,2010
o	Advanced Reservoir Engineering I	NOC, Tripoli,2008
o	Advanced Reservoir Engineering II	NOC, Tripoli,2008

<u>Memberships:</u>

- Society of Petroleum Engineers
- Member in Libyan earth's science association
- Reviewer for Journal of Pure and Applied Sciences.