



WALTER E. POQUIOMA
Reservoir Development Engineer, Consultant
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EDUCATION

B.S., Electro-Mechanical Engineering, 2011, University of Cape Town, South Africa
M.S., Petroleum Engineering, 2015, The University of Tulsa, OK, USA

RELEVANT EXPERIENCE

Reservoir Development Engineer, Kelkar and Associates, Inc. , 2015 – Present

Developed new Petrel Plugin (CONNECT-PermMatch, LINK-AutoGrid and LINK-AutoGridPlus) The Plug-in is created using C# language with the OCEAN platform of Schlumberger

Upgraded the functionality of existing Petrel plug-in (CONNECT-UpGrid) to correctly calculate the Upscaling Design for Structure Grid model.

Team member for development of new Petrel Plug-in (CONNECT-WellOpt) to design of infill well location using the Fast Marching Method.

Research and Teaching Assistant, The University of Tulsa, Tulsa, OK 2013-2015

Performed Research on Well Placement Optimization. Objective is to increase NPV through optimization of well placement in a reservoir and the set of well controls, to investigate and bench mark different optimization algorithms such as the CMA-ES, Differential Evolution and Particle Swarm Optimization, and to develop new methods of parameterizing well placement problem.

Lead experiments related to capillary pressure, viscosity, porosity and relative permeability measurements

Intern, Schlumberger – Artificial Lift Services, Houston, TX, 2014

Developed C++ software for Pattern Recognition of ESP failures.

Research Intern, UTC's Robotics and Agents Research Laboratory, Cape Town, South Africa, 2011

Designed a new controller interface for a remotely controlled submarine

Calibrated of the stepper motor used for a remotely controlled parafoil

Engineering Intern, Hewlett Packard, Cape Town, South Africa, 2011

Gained experience in Ink Manufacturing process and its quality control

Engineering Intern, BMW, Cape Town, South Africa, 2009

Solved problems associated with the operation and maintenance of cars

Engineering Intern, MRE and Gulliver Engineering, Cape Town, South Africa, 2008

Gained experience in the process of fitting, turning, and welding

SKILL

Computers : Eclipse, PIPESIM, C#, .Net, Ocean, C++, FORTRAN, Matlab, VBA, PHP, Mathematica, PowerShell, Excel, Microsoft Word, Power Point, Pro-Engineer, SolidWorks, LaTeX.

Optimization: Particle Swarm Optimization, Covariance Matrix Adaptation Evolution Strategy, Genetic Algorithm and Differential Evolution.

Pattern Recognition : Neural Network, Fuzzy Logic and Hierarchical Clustering

Languages : Fluent in English and Spanish

HONORS and AWARDS

Warren S. Churchill Teaching Fellowship

PUBLICATIONS

Forouzanfar, F., Poquioma, W. E., and Reynolds, A. C., "A Covariance Matrix Adaptation Algorithm for Simultaneous Estimation of Optimal Placement and Control of Production and Water Injection Wells", SPE 173256, Reservoir Simulation Symposium, Houston, USA, 23-25 February 2015.