

Farizal Hakiki

PhD Student

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Educations

PhD in Earth Science & Engineering, specialisation: Fluid Earth Systems

King Abdullah University of Science and Technology, Saudi Arabia, August 2015-present

Thesis : *(being developed)*

Advisor : Prof. J. Carlos Santamarina (carlos.santamarina@kaust.edu.sa)

BS in Petroleum Engineering (with Honours/Cum Laude),

Institut Teknologi Bandung, Indonesia, August 2010-March 2014

Thesis : *Mathematical Model of Organically Cross-Linked Polymer Gelation Time to EOR Application*

Advisor : Prof. Pudjo Sukarno (psukarno@tm.itb.ac.id)

Experiences

Oil and Gas Recovery for Indonesia (OGRINDO) Research Consortium, Bandung, Indonesia

1. Research Assistant on joint-research with Pertamina EP (Jun-Dec 2014):

- *Surfactant Technology Development Study in Tempino & Kenali Asam Field*

Advisor: Dr. Taufan Marhaendrajana (tmarhaendrajana@tm.itb.ac.id)

2. Research Assistant on Polymer Team (Feb 2013-Aug 2015):

- *Polymer Injection Study Using Reservoir Simulation*
- *Polymer Modelling for Water Shut-Off Application*
- *Study on PVA and PAM for Water Shut-Off Polymers*
- *Study on Epoxy for Water Shut-Off Polymer*

Advisor: Prof. Septorato Siregar (septo@tm.itb.ac.id)

Institut Teknologi Bandung, Bandung, Indonesia

1. Research Assistant on joint-research with Pertamina UTC (Jan-Aug 2015):

- *EOR Screening Software, Predictive Model, Production Optimisation and Risk Analysis*

Advisor: Dr. Zuher Syihab (zuher.syihab@tm.itb.ac.id)

2. Research Assistant on joint-research with Pertamina EP (Mar-Jun 2014)

- *Associated Gas Optimisation in Tanjung Field*
- *Multilayer Well Production Evaluation in Tanjung Field*

Advisor: Prof. Pudjo Sukarno (psukarno@tm.itb.ac.id)

3. Teaching Assistant (Aug 2011-May 2014)

- TM4024 Reservoir Data Processing by Dr. Asep K. Permadi
- TM2108 Fluid Properties & Experiment by Dr. Zuher Syihab
- TM2121 Partial Diff. Eq. for PE by Dr. Taufan Marhaendrajana
- TK3082 Intro. to Transport Phenomenon by Dr. Utjok W R Siagian
- MA2073 Partial Diff. Eq. Technique by Dr. Agus Y Gunawan

- FI1101 Fundamental of Physics by Dr. Rachmat Hidayat

VICO (Virginia Indonesia Oil Co.LLC), Muara Badak, East Borneo, Indonesia
Intern Student (Jan-Feb 2014)

- *A Study on Permanent Coiled Tubing Gas Lift (PCTGL) Application in Monobore Completed Well of VICO Indonesia*

Advisor: Mr. Satria Andrianata & Ms. Donna Sita Rolanda, Surveillance Engineer

Publications

- [1] **Hakiki, F.**, Maharsi, Dara A. and Marhaendrajana, T. *Surfactant-Polymer Coreflood Simulation and Uncertainty Analysis Derived from Laboratory Study*. [Revised]. Journal of Engineering and Technological Sciences.
- [2] **Hakiki, F.**, Sukarno, P. and Siregar, S. *Mathematical Model Development of Organically Cross-Linked Polymer Gelation Time for Water Shut-Off Application*. [Revised]. Journal of Mathematical and Fundamental Sciences.
- [3] **Hakiki, Farizal** and Rahmawati, Silvy D. *Interaction Model for Two Layers of 3D Bounded Oil Reservoir*. [Accepted]. The 2015 South East Asian Mathematical Society Conference, Yogyakarta, Indonesia, August 2015.
- [4] **Hakiki, Farizal** and Akbar, Alivan. *Stochastic Optimisation of Well Selection on Multilayer Reservoir through CMA-ES*. [Accepted]. The 2015 South East Asian Mathematical Society Conference, Yogyakarta, Indonesia, August 2015.
- [5] Putra, Wira D. K. and **Hakiki, Farizal**. *Mathematical Approach to Model Growth of Bacteria, Biosurfactant Production and IFT-Response for MEOR Optimisation*. [Accepted]. The 2015 South East Asian Mathematical Society Conference, Yogyakarta, Indonesia, August 2015.
- [6] **Hakiki, F.**, Salam, D. D., Akbari, A., Nuraeni, Aditya, W. and Siregar, S. *Is Epoxy-Based Polymer Suitable for Water Shut-Off Application?* [Accepted]. The 2015 SPE Asia Pacific Oil/Gas Conference and Exhibition, Bali, Indonesia, October 2015.
- [7] **Hakiki, F.**, Nuraeni, Salam, D. D., Aditya, W., Akbari, A., Mazrad, Z. A. I. and Siregar, S. *Preliminary Study on Epoxy-Based Polymer for Water Shut-Off Application*. Paper IPA15-SE-025. Proceeding of The 2015 Indonesian Petroleum Association Conference and Exhibition, Jakarta, May, 2015.
- [8] **Hakiki, F.**, Wibowo, A. T., Rahmawati, S. D., Yasutra, A. and Sukarno, P. *An Analytical Model for Multilayer Well Production Evaluation*. [Submitted]. SPE Reservoir Engineering Journal.
- [9] **Hakiki, Farizal**. *A Critical Review of Microbial Enhanced Oil Recovery Using Artificial Sandstone Core: A Mathematical Model*. Paper IPA14-SE-119. Proceeding of the 38th IPA Conference and Exhibition, Jakarta, Indonesia, May 2014.

[10] **Hakiki, Farizal** and Wibowo, Aris T. *Formulation of Rock Type Prediction in Cored Well Using Fuzzy Subtractive Algorithm*. Paper IPA14-SE-118. Proceeding of the 38th IPA Conference and Exhibition, Jakarta, Indonesia, May 2014,

[11] **Hakiki, F.**, Nurwahid, A. and Arifin, Y. N. *Analysis of Brownie Pan Selection by Using Fuzzy Logic: Shape Optimisation and Heat Distribution Approach*. Proceeding of 2013 Mathematical Contest in Modelling of COMAP Inc., Bedford, Massachusetts, USA, February 2013. DOI: 10.13140/RG.2.1.3072.9763.

Honours and Awards

The Best Paper for Student Oral Presenter, IPA Conference and Exhibition, Jakarta, May 2015.

The Best Paper for Student Oral Presenter, IPA Conference and Exhibition, Jakarta, May 2014.

1st Runner Up of SPE Paper Contest, Asia Pacific, March 2014.

Invited Paper of The 11th HISAS Conference, Sapporo, Hokkaido, Japan, February 2014.

2nd Runner Up of SPE Paper Contest, Asia Pacific, 2013-2014.

Invited Participant of 2013 NIDA Green Economy Summer School, Thailand, June 2013.

Honorable Mention Winner Paper, 2013 ICM/MCM, Bedford, Massachusetts, USA, March 2013.

Indonesian Representative of 2012 SPE Education Week, Abu Dhabi, UAE, November 2012.

Deans' Lists of Outstanding Academic Achievement, FTTM ITB, 2010-2012.

BIUS Outstanding Academic Achiever, 2011.

Awardee, BIUS–ITB Undergraduate Full-Scholarship, 2010-2014.

Affiliations

Society of Petroleum Engineers (SPE)

European Association of Geoscientists and Engineers (EAGE)

Indonesian Petroleum Association (IPA)

Indonesian Mathematical Society (IndoMS)

Interests

Mathematical Modeling

Oil & Gas Production Optimisation

Enhanced Oil Recovery (EOR)

Nanotechnology

Skills

- Petroleum Software: CMG, Eclipse, Matbal, Petrel, Pipesim, OLGA, IPM/Petex
- Programming: C++, Pascal, Maple, Matlab, Mathematica