GAMA FIRDAUS

979-402-9184 **gamafirdaus@mines.edu**

PROFILE

PhD student with industry experience; looking to gain more hands on experience in the area of petrophysics and reservoir engineering, to support the reserve evaluation team in the upstream oil and gas industry. My professional experiences coupled with activities in organizations have made me a strong team player with good technical skills, leadership, and high adaptability.

EDUCATION

Colorado School of Mines, Golden, CO **Dec 2020**

PhD in Petroleum Engineering GPA: 3.83

- Graduate Research in the Physics of Organics, Carbonates, Clays, Sands and Shales (OCLASSH) Group
- Research: Pore structure analysis of organic-rich mudrocks using the measurements of electrical and acoustic properties

Texas A&M University, College Station, TX **Aug 2015**

MS in Petroleum Engineering GPA: 3.71

- Graduate Research Assistant in the Multi-Scale Formation Evaluation (MSFE) Group
- Thesis: Laboratory Measurements of Electrical Resistivity of Kerogen in Organic-Rich Mudrocks.
- Research activities:
  - Isolated pure kerogen using the combination of physical and chemical methods
  - Measured electrical resistivity of organic-rich mudrocks and isolated kerogen samples
  - Quantified the impact of mineralogy and thermal maturity of kerogen on electrical resistivity of organic-rich mudrocks using XRD, Rock-Eval pyrolysis, and TEM imaging
  - Quantified the tortuosity of kerogen and pyrite from a 3D pore-scale images obtained from Micro-Computed Tomography scan

Institut Francais du Petrole, Paris, France **July 2013**

MS in Petroleum Economics & Management GPA: 3.75

- Research topic: "*Why Are the Companies Still Drilling in Bakken?*"
- Recipient of the International Total Graduate Scholarship

Institut Teknologi Bandung, Bandung, Indonesia **July 2012**

BS in Petroleum Engineering GPA: 3.51

- Recipient of the Total Undergraduate Scholarship

TECHNICAL AND LANGUAGE SKILLS

Computer: Techlog, Matlab, ImageJ, Petrel, Eclipse, Microsoft Excel, PowerPoint, Word, Outlook.

Laboratory: Vinci Permeameter, GCTS Interface Test, Rock-Eval 6, Thermogravimetric Analysis, High Resistance Electrometer, High Frequency Impedance Analyzer, Sieve Shaker, XRD, EDXRF, kerogen extraction, and Micro CT Scan

Communication: Oral presentation skills, corporate field data presentation experience, client visit reporting, academic and technical writings, international and multi-discipline group management.

International: Multilingual: English, Indonesian, Malay, basic French

LEADERSHIP AND ACTIVITIES

Society of Petroleum Engineers, Colorado School of Mines – Director of SPE Joint Session **Apr 2017 – Present**

Society of Petroleum Engineers, Institut Teknologi Bandung – President **Aug 2011 – Jul 2012**

- Received the SPE International Gold Standard Award 2012
- Recruited over 230 new members from an initial of 120 members (an increase of 290%)
- Pioneered the first career fair event and workshop ever held by SPE ITB Student Chapter
- Successfully raised 1500 USD of organizational income within 10 months

Indonesian Student Association, Texas A&M University – Vice President **Aug 2014 - 2015**

Society of Petrophysicists and Well Log Analysts, Texas A&M University - Treasurer **Sep 2014 – Aug 2015**

Oxford International Model United Nations, United Kingdom **September 2011**

Soccer Club Member: ITB, IFP, TAMU, CSM **Sep 2008 – Present**

Golf Club Pondok Indah Member **Jan 2016 – Present**

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INDUSTRY EXPERIENCE

W. D. Von Gonten Laboratories – Rock Mechanics Intern **May 2017 – Aug 2017**

- Slabbed, saw cut, and cored rock samples for rock interface testing
- Quantified the contact area of the core interface using pressure paper and numerical modeling
- Measured the rock interface friction coefficient using the GCTS Interface Rock Testing equipment
- Finished a total of 80+ rock interface tests for 6 clients within 3 months
- Constructed a new procedure of core preparation and interface testing for more reliable results

Tiger Energy Services – Wireline Engineer **Oct 2015 – Dec 2016**

- Responsible for onshore and offshore downhole video / camera operations
- Presented field operation data to secure a $33,000 project in an offshore gas well
- Analyzed the client's well problems and provide the most suitable well service requirement
- Constructed and developed the company's website utilizing wordpress

Texas A&M University (in collaboration with W.D. Von Gonten Laboratory) **– Laboratory Scientist** **May – Aug 2014**

- Developed an electrical resistivity measurement technique on organic-rich shales and extracted kerogen samples
- Measured dielectric constants of organic-rich shales at a frequency from 1 kHz to 1 GHz
- Measured the kerogen quality of a sample using Thermogravimetric Analysis device and Rock-Eval 6
- Performed XRD and EDXRF measurements to analyze the mineralogy and elements of the rock sample
- Conducted TEM imaging of a kerogen sample to detect presence of graphite at different temperatures and maturity level

Texas A&M University, College Station, TX

Graduate Teaching Assistant, Jan - Apr 2014

- Subject: PETE 321 - Formation Evaluation
- Coached students in interpreting well logs using Techlog to estimate porosity, mud salinity, water and hydrocarbon saturations, and Vshale, to detect the lithology of certain zones, and to decide the production zone
- Provided students with petrophysical and well logging concepts
- Constructed homework solutions for the class
- Graded homework and exams

Chevron Pacific Indonesia – Reservoir Engineer Intern **May – Jul 2011**

- Analyzed pressure profile of steam injection wells (9, 7, 5 spots, and inverted spots pattern)
- Evaluated the pressure and temperature profile of 34 producer wells and 7 injector wells
- Studied Steam Assisted Gravity Drive (SAGD) and transport of heat through porous media

Schlumberger – Well Testing Intern **Jun – Jul 2010**

- Examined the performance of 15k psi sand separator, 10k psi fluid separator, 5 meter surge tanks, and coflexip
- Analyzed the efficiency of pressure valves in the pressure lab
- Measured flow rate of water, oil, gas in 3 phase fluid separator using flow meter chart
- Studied the integrated well testing process prior to completion of the well and during production period

SELECTED TECHNICAL PUBLICATIONS

1. **Firdaus, G**. and Heidari, Z., 2015. Quantifying Electrical Resistivity of Isolated Kerogen from Organic-Rich Mudrocks using Laboratory Experiments. Presented at the Society of Petroleum Engineers (SPE) Annual International Meeting, Houston, Texas, 28-30 September. SPE 175078.
2. Chen, H., **Firdaus, G**., and Heidari, Z., 2014. Impact of Anisotropic Nature of Organic-Rich Source Rocks on Electrical Resistivity Measurements. Presented at the Society of Petrophysicists and Well Log Analysts (SPWLA) 55th Annual Logging Symposium, Abu Dhabi, United Arab Emirates, 18-22 May.
3. Yang, A., **Firdaus, G**., and Heidari, Z., 2016. Electrical Resistivity and Chemical Properties of Kerogen Isolated from Organic-Rich Mudrocks. *Geophysics* 81 (6): D643-D655.