FNU SURIAMIN

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EDUCATION

University of Oklahoma | Norman, OK, U.S.A.
Ph.D. in Geology
Dissertation: Integrated reservoir characterization of a mixed siliciclastic-carbonate system, Mississippian strata of northern and central Oklahoma (Advisor: Dr. Matthew J. Pranter)

Colorado School of Mines | Golden, CO, U.S.A.
M.Sc. in Geology | Summa cum Laude
Thesis: Facies, diagenesis, and geochemistry of the Eocene Green River Formation carbonates in the Piceance Creek Basin, Colorado (Advisor: Dr. J. Frederick "Rick" Sarg)

Padjadjaran University | Jawa Barat, Indonesia
B.E. in Geology Engineering | cum Laude

EXPERIENCE

Senior Research Geologist (Geologist IV), January 2018 - Present
Oklahoma Geological Survey, Norman, Oklahoma, U.S.A.
- Serve the people of Oklahoma by providing information and technical assistance to operators, consultants, and the public through workshops, reports, and publications.
- Assess underground geo-energy resources in Oklahoma (particularly geological storage for CO_2 and hydrogen)
- Conduct petrophysical analyses of multiple Oklahoma formations.
- Pursue research on machine learning/artificial intelligence on geosciences.
- Conduct investigations of petroleum-producing areas in Oklahoma through data acquisition, management, and analysis.

Graduate Research Assistant, February 2017 – January 2018
Reservoir Characterization and Modeling Laboratory (RCML) and
School of Geosciences, University of Oklahoma, U.S.A.
- Investigated lithofacies and diagenetic control of reservoir quality of the Mississippian strata in the Anadarko Basin, central Oklahoma.
- Conducted petrophysical analysis, rock typing, and modeling of the Mississippian strata in the Anadarko Basin, central Oklahoma.

Petrophysicist (Consultant), January 2017 – February 2017
Madagascar Oil Company – P.T. Sumber Geotehnik, Jakarta, Indonesia
- Conducted petrophysical analysis of heavy oil reservoirs in the Tsimiroro oil field.

Graduate Research / Teaching Assistant, August 2014 – January 2017
Reservoir Characterization and Modeling Laboratory (RCML) and
School of Geosciences, University of Oklahoma, U.S.A.
- Investigated lithofacies and stratigraphic control on pore architecture of the Mississippian limestone and chert reservoirs, northern Oklahoma.
- Teaching Assistant for *Introduction to Geology*, *Subsurface Methods*, *Petrophysics*, and *Reservoir Characterization and Modeling*.

Wellsite Geologist (Consultant), June 2014 – August 2014
Murphy Oil Corporation (Murphy Semai Oil Co. Ltd), Indonesia
- Involved in drilling 2 exploration wells in offshore Papua, Indonesia for Mesozoic sandstone reservoirs.
- Analyzed, evaluated, and described formations while drilling using cuttings, gas, formation

evaluation measurement while drilling, and wireline data.
- Supervised formation evaluation contractors (mudlogging, MWD/LWD, and wireline logging).
- Compared data gathered during drilling with pre-drill prognoses and updated correlations onsite.
- Kept detailed records, prepared reports, completed daily, weekly, and post-drilling report logs.
- Kept drilling superintendents and operations geologists informed regarding all formation evaluation operations.
- Short-term consulting position before leaving to pursue Ph.D. degree in U.S.A.

Operations Geologist / Petrophysicist, January 2013 – June 2014
Petrofac Malaysia Limited, Malaysia
- Optimized well placement to develop a mature field of PM304 block.
- Conducted petrophysical analysis of clastic reservoirs to determine porosity, permeability, and fluid saturation.
- Conducted reservoir connectivity and fluid distribution analysis to determine reservoir compartmentalization.
- Planned drilling program, casing design, BHA selection, drilling fluid optimization, completion strategy, and well testing objective with drilling and completion engineers.
- Prepared geological well prognoses, formation evaluation program, integrated pore pressure prediction, and shallow hazard site investigation for appraisal and development wells.
- Planned, supervised, and quality controlled formation evaluation data acquisition including wireline and MWD/LWD logs, mud log, core measurements (routine and SCAL), formation pressure measurements (including fluid sampling and LFA).
- Resigned to pursue Ph.D. degree in U.S.A.

Geoscientist / Petrophysicist / Operations Geologist, March 2007 – January 2013
ExxonMobil Exploration Company (Mobil Cepu Limited), Indonesia and U.S.A.
- Involved in several projects: Makassar Strait Deep Water - Indonesia, Cepu Carbonate - Indonesia, Coal Bed Methane - Indonesia, Block 15 Kissanje - Angola, and La Barge - U.S.A.
- Conducted subsurface geological mapping to generate accurate exploration plays and prospects.
- Integrated geological, geophysical, and engineering data to establish the best plan of development (POD) for the Cepu field.
- Performed open- and cased-hole log interpretation (exploration, appraisal, and development wells).
- Involved in fast drilling borehole management.
- Experience in: clay reactivity measurement (DCM), real time pore pressure hunting, gas-while-drilling analysis, coring operation, open and cased hole wireline logging, pipe-conveyed-logging, logging-while-fishing, MWD/LWD operation, pressure test and live fluid analysis, witness and QC data (logs, pressure, directional, mudlog, and gas data), wireline retrievable coring, coring on the fly, managed pressure drilling (mud-cap drilling), and core description.
- Pursued a master degree in geology at Colorado School of Mines.

MWD / LWD Field Professional, October 2005 – March 2007
Halliburton Sperry Sun Drilling Services, Jakarta, Indonesia
- Involved in drilling oil and gas wells (vertical, deviated, and horizontal) for several clients including Medco Indonesia, Medco Maeco Langsa, EMP, Total Indonesia, ConocoPhillips, and Chevron Geothermal.
- Assembled Halliburton Sperry-Sun MWD/LWD tools (positive pulse, negative pulse, and electromagnetic telemetry) for transmitting subsurface data, pressure while drilling tool, density tool, neutron tool, sonic tool, resistivity, and gamma ray tools.
- Assisted directional drillers in drilling deviated/horizontal wells (geo-steering).
- QA/QC LWD and MWD logs and directional survey data.
- Generated daily and end-of-well reports.

Laboratory Technician, May 2005 – October 2005
Corelab Indonesia, Jakarta, Indonesia
- Loaded biostratigraphic data (Foraminifera, Calcareous Nano-plankton, Pollen, Spore, etc.) into Stratabug.
- Performed core handling, preparation, preservation, and photography.
- Acquired core gamma log.
- Conducted routine core analysis.
- Quantitatively analyzed samples for palynofacies analysis.

PROFESSIONAL AFFILIATIONS
- Society of Petrophysicists and Well Log Analysts (SPWLA)
- Association of American Petroleum Geologists (AAPG)
- Society of Exploration Geophysicists (SEG)
- Oklahoma City Geological Society (OCGS)
- International Association of Mathematical Geosciences (IAMG)

RESEARCH
Publications

Book Chapters
1. **Suriamin, F**., and Tingwei Ko, *submitted*, Geological Characterization of Unconventional Shale-Gas Reservoirs, in R. G. Moghanloo, Ed., *Unconventional Shale Gas Development Lessons*, Elsevier

2. De Lima, R. P., and **F. Suriamin**, *accepted*, Application of Convolutional Neural Networks for the Classification of Siliciclastic Core Photographs, in S. Bhattacharya, Ed., *Data Analytics in Energy Resources Exploration*, Elsevier.

Peer-reviewed Articles
1. **Suriamin F**., M. J. Pranter, 2021, Lithofacies, depositional, diagenetic controls on reservoir quality of the Mississippian mixed siliciclastic-carbonate system, eastern Anadarko Basin, Oklahoma, USA, *Interpretation*, v. 9, p. 1 – 42.

2. De Lima, R.P., **F. Suriamin**, K. J. Marfurt, M. J. Pranter, 2019, Convolution Neural Networks as aid in core lithofacies classification, *Interpretation*, v. 7, no. 3, p. SF27–SF40.

3. **Suriamin, F**., M. J. Pranter, 2018, Stratigraphic and lithofacies control on pore characteristics of Mississippian limestone and chert reservoirs of north-central Oklahoma, *Interpretation*, v. 6, no. 4, p. T1001 – T1022.

4. Sarg J. F., **Suriamin**, K. Tanavsuu-Milkeviciene, J. D. Humphrey, 2013, Lithofacies, stable isotope, and stratigraphic evolution of microbial and associated carbonates, Green River Formation (Eocene), Piceance Basin, Colorado: *AAPG Bulletin*, v. 9, p.1937-1966.

Conference Papers
1. **Suriamin, F**., and M. J. Pranter, 2020, Proximal to Distal Variability of Mississippian Lithofacies, Diagenetic Processes, and Reservoir Quality within a Mixed Siliciclastic-Carbonate System, Northern and Central Oklahoma, USA, Unconventional Resources Technology Conference. Doi: 10.15530/urtec-2020-2562.

2. De Man E., A. Gantyno, **Suriamin Huang**, K. Petersen, E. Saferi, R. Widiarti, S. Wertanen, S. Rahardjanto, 2012, CBM Operational lessons learned – Barito Basin, Indonesia. The 36th IPA Annual Convention and Exhibition, Jakarta.

3. De Man E., F. Ashby, J. Bacheller, A. B. Cahyono, J. Corthay, P. Hillock, **Suriamin**, S. Wilmot, 2011, Deep-water site investigation – Makassar Straits (Indonesia). The 35th IPA Annual Convention and Exhibition, Jakarta.

Conference Abstracts

1. **Suriamin, F**., M. J. Pranter, 2017, Lithofacies and pore-structure characterization of the Mid-Continent Mississippian limestone and chert reservoirs, Grant County, Oklahoma, AAPG – Mid Continent Section Meeting, Oklahoma.

2. **Suriamin, F**., M. J. Pranter, 2017, Stratigraphic and facies control on porosity and pore types of Mississippian limestone and chert reservoirs: an example from north-central Oklahoma, AAPG – Mid-Continent Section Meeting, Oklahoma.

3. **Suriamin, F**., M. J. Pranter, 2017, Petrophysical properties from quantitative multiscale pore-structure characterization in an unconventional carbonate reservoir: an example from the Mid-Continent Mississippian Limestone, AAPG Annual Convention and Exhibition, Houston.

4. **Suriamin, F**., M. J. Pranter, 2016, Investigation of petrophysical-property heterogeneity for electrofacies classification in carbonate reservoirs. AAPG Annual Convention and Exhibition, Calgary.

5. **Suriamin, F**., M. J. Pranter, 2015, Integrating standard petrophysical analysis with statistical measures of petrophysical heterogeneity to estimate petrofacies in Mississippian carbonates, north – central Oklahoma, AAPG – Mid Continent Section Meeting, Tulsa.

6. Feng, J., Sarg J. F., K. Tanavsuu-Milkeviciene, **Suriamin Huang**, 2014, Climate History, Lake Evolution, and Prediction of Organic Richness, Green River Formation, Piceance Basin, Colorado, AAPG Annual Convention and Exhibition, Pennsylvania.

7. Feng, J., Sarg J. F., K. Tanavsuu-Milkeviciene, **Suriamin Huang**, 2012, Climate History, and Lake Evolution Controls on Oil Shale Organic Richness - Green River Formation, Piceance Creek Basin, AAPG Annual Convention and Exhibition, Long Beach.

8. **Suriamin**, J. F. Sarg, K. Tanavsuu-Milkeviciene, 2011, Lacustrine carbonate and evaporites – facies evolution and diagenesis: Eocene Green River Formation, Piceance Creek Basin, Colorado. AAPG Annual Convention and Exhibition, Houston.

9. Sarg J. F., K. Tanavsuu-Milkeviciene, F. JuFang, **Suriamin Huang**, 2011, Climate history, lake evolution, and predicting organic richness of the Green River Formation, Piceance Creek Basin, Colorado. 31st Oil Shale Symposium, Golden, Colorado.

Dissertation

Suriamin, F., 2020, Integrated reservoir characterization of a mixed siliciclastic-carbonate system, Mississippian strata of northern and central Oklahoma, Ph.D.'s dissertation, University of Oklahoma, 369 p.

Company Internal Reports

1. **Suriamin**, 2017, Petrophysical study of the Tsimiroro heavy oil field at Madagascar, P.T. Sumber Geotehnik (Madagascar Oil), Jakarta, Indonesia.

2. **Suriamin**, 2014, End of Well Report of Serai-1, Murphy Oil Corporation, Jakarta, Indonesia.

3. **Suriamin**, 2014, End of Well Report of Bawang Putih-1, Murphy Oil Corporation, Jakarta, Indonesia

4. **Suriamin**, 2013, End of Well Report of East Cendor-1, Petrofac Malaysia Limited, Kuala Lumpur, Malaysia.

5. **Suriamin**, 2013, End of Well Report of East Cendor-1 ST-1, Petrofac Malaysia Limited, Kuala Lumpur, Malaysia.

6. **Suriamin**, 2013, End of Well Report of Cendor Graben-1, Petrofac Malaysia Limited, Kuala Lumpur, Malaysia.

7. **Suriamin**, 2008, End of Well Report of Jambaran-1, Mobil Cepu Limited, Jakarta, Indonesia.

Invited Talks
- "*Introduction to Well Coring*", Tulsa Rock and Mineral Society, July 2018
- "*An Overview of Coal Bed Methane*", Padjadjaran University, AAPG Student Chapter, Feb 2012

Grants
Research Grants Funded as PI or Co-PI or Senior Scientist
- $C_MC_SC_FC_B$—Critical Minerals in Coaly Strata of the Cherokee-Forest City Basin. DOE, $1,500,000 to Kansas Geological Survey, $99,000 to Oklahoma Geological Survey, **$26,832** to **Fnu Suriamin**, 08/2021 – 08/2023.
- From Site to State Design of an Integrated CCUS Operation in a Complex Geological Structure in Osage County Oklahoma, DOE, $500,000 to OU, **$20,625** to **Fnu Suriamin** (Co-PI), 08/2021 – 08/2022.
- Field evaluation of the Caney Shale as an emerging unconventional play, southern Oklahoma. DOE, to Oklahoma State University, **$ 314,191** to OU, **1-month salary/year** for **Fnu Suriamin** (Co-PI), 01/2020 – 01/2023.
- Zircon provenance of Meramec silt-size quartz. Funded by Warwick Energy Resources. (**$ 4,500** to **Fnu Suriamin** (PI)).
- Carbon Utilization and Storage Partnership (CUSP) for the Western USA, DOE, $277,906 to OU, **$5,000** to **Fnu Suriamin** (Co-PI), 12/2019 – 12/2022.

Student Research Grants
- Robert K. Goldhammer Fellowship for Technical Excellence (**$ 2,000**)   08/2019
- IAMG Computer and Geoscience Research Grant (**$ 2,500**)   09/2017
- SPWLA Petrophysical Research Grant (**$ 1,000**)   08/2015
- AAPG Jon R. Withrow Named Grant (**$ 1,000**)   08/2015
- AAPG Gene P. Morrell Memorial Scholarship (**$ 1,000**)   08/2015
- Harold Kleen Memorial Endowed Fellowship (**$ 1,500**)   08/2014
- ExxonMobil Indonesia Geosciences Scholarship (**$ 150,000**)   08/2007
- Yayasan Wijaya Scholarship (**$ 600**)   05/1996

In-Kind Contributions
- Acquired ~**$300,000** in software (Geolog and Wellcad) for Mewbourne College of Earth and Energy at the University of Oklahoma.

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Google Scholar: https://scholar.google.com/citations?user=nwfu8pQAAAAJ&hl=en

TEACHING

Mentor, University of Oklahoma, 2014 - present
▪ Assist students in core description, petrophysics, and machine learning

Teaching Assistant
Biostratigraphy, Padjadjaran University, Indonesia, Spring 2003
▪ Guided students to identify planktonic and benthic foraminifera
Introduction to Geology, University of Oklahoma, Spring 2015
▪ Provided an introduction to geological sciences
▪ Addressed mineral and rock identification, origin of continents, geologic mapping, plate tectonics, erosion by rivers and glaciers, and history of life
Petrophysics, University of Oklahoma, Spring 2015
▪ Assisted students with petrophysical analyses using Interactive Petrophysics software
Reservoir Characterization and Modeling, University of Oklahoma, Spring 2015
▪ Mentored students with reservoir characterization and modeling concepts and methods

Instructor
Petrology, Padjadjaran University, Indonesia, Fall 2002
▪ Addressed the core concepts of mineralogy and petrology, including crystal structure, formation and grouping of minerals and soils, definition, origin, structure and classification of igneous, sedimentary and metamorphic rocks
Subsurface Methods (invited lecturer), University of Oklahoma, Fall 2016
▪ Introduced principles of logging tools
▪ Introduced basic well-log interpretation methods

SERVICE

Professional Society Service

10/2021	Session Chair – AAPG – Mid-Continent Section, Tulsa, Oklahoma
09/2021	Session Chair – SEG - AAPG International Meeting for Applied Geoscience & Energy (IMAGE), Denver, Colorado.
08/2020 – Present	Vice Chair (appointed) for AAPG Tight Oil and Gas Committee, Energy Minerals Division
01/2018-Present	Manuscript Reviewer for *Interpretation, Journal of Marine and Petroleum Geology, Energies, Applied Sciences.*
05/2018-05/2018	Session Reviewer, AAPG Annual Meeting, Salt Lake City, Utah
09/2015-09/2015	Session Reviewer, AAPG Mid-Continent Section Meeting, Tulsa, Oklahoma

Departmental Service - Oklahoma Geological Survey

01/2019-Present	Conference Chair, 2020 Shale Resource Plays of Oklahoma Workshop, Oklahoma Geological Survey
01/2019-11/2019	Committee Member, 2019 Hoxbar Workshop, Oklahoma Geological Survey
01/2018-10/2018	Conference Chair, 2018 STACK Play Workshop, Oklahoma Geological Survey
01/2018-05/2018	Search Committee Member, Junior Research Geologist – Petroleum Search Committee, Oklahoma Geological Survey

University-Level Service – University of Oklahoma

01/2018 – Present	Outreach Lecturer, OU Big Event, MacArthur Middle School, Martin Park Nature Center

SOFTWARE SKILLS

Geolog, Interactive Petrophysics, Petrel, Petra, Wellcad, GEO for Windows, Gravitas – Winlog, Drillwork – Predict, Rstudio, Python.

PROFESSIONAL DEVELOPMENT

- *Bond Log Basics*, online training, U.S.A. | 2020
- *Identifying and fixing vent flows*, online training, U.S.A. | 2020
- *Rock physics and quantitative interpretation (QI)*, Oklahoma, U.S.A. | 2020
- *Petrophysics for Unconventional Reservoirs*, Oklahoma, U.S.A. | 2017
- *Evaluating Oklahoma Unconventional Reservoir: Assessing the Reservoir Rock and Fluid Properties using Traditional Logging Suites*, Oklahoma, U.S.A | 2015
- *Carbonate Depositional Model*, Oklahoma, U.S.A. | 2015
- *Old Well Logs Analysis*, Oklahoma City, U.S.A | 2015
- *Multimin Analysis*, Kuala Lumpur, Malaysia | 2013
- *Horizontal Tools Resistivity Modeling (HTRM)*, ExxonMobil, U.S.A. | 2012
- *Advanced Formation Evaluation Seminar*, ExxonMobil, U.S.A. | 2012
- *Fundamentals of Structural Trap and Seal*, Jakarta, Indonesia | 2012
- *Basic Applied* Geomechanics (GMI), Jakarta, Indonesia | 2011
- *Wellcad Software Training*, Jakarta, Indonesia | 2011
- *Coal Bed Methane Workshop*, Hannover, Germany | 2011
- *Introduction to Geological Operation and Formation Evaluation*, U.S.A. | 2011
- *Bituminous Coal Workshop*, West Virginia, U.S.A. | 2010
- *Modern Carbonate Field Trip*, Heron Island, Australia | 2008
- *VSP Field Training in Cepu Field*, East Java, Indonesia | 2008
- *GEO Software* Training (Geologix), Jakarta, Indonesia | 2008
- *1-Day Petrel Training* at Colorado School of Mines, Colorado, U.S.A. | 2008
- *Logging While Drilling-I*, Singapore.2006
- *Open hole Log Analysis and Formation Evaluation*, Indonesia | 2006
- *Wireline Logging Interpretation*, Bandung, Indonesia | 2005
- *Petrophysical Analysis using GS software*, Bandung, Indonesia | 2005
- *Wellsite Geology Short Course*, Bandung, Indonesia | 2005
- *Subsurface Mapping*, Bandung, Indonesia | 2005
- *Petrophysical Analysis*, Jakarta, Indonesia | 2004
- *Wireline Logging Interpretation*, Bandung, Indonesia | 2003
- *Geological Field Mapping "Undergraduate research"* | Indonesia |2003
- *Landmark Integrated PC based G&G Solution*, Indonesia | 2002
- *Wellsite Geology "Basic Training"*, Yogyakarta, Indonesia | 2002
- *3D, 4D, VSP and Wireline Logging Data Acquisition*, Malang, Indonesia | 2001

AWARDS & HONORS

- Energy Mineral Division – AAPG Award for Excellence in Presentation, U.S.A. 2013
- Phi Beta Delta Award for International Student Achievement, U.S.A. 2009
- The School Delegation to Indonesia's Mathematics Olympiad, Indonesia. 1999
- The School Delegation to Indonesia's Computer Olympiad, Indonesia. 1998
- Winner of Writing Competition, Indonesia. 1996
- Winner of Natural Science Competition, Indonesia. 1993