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Nationality: Pakistani

Current Address: Babu Mohallah, St No-4, Near Darband Addah

Haripur, KPK, Pakistan

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## PROFILE

- ✓ Geologist with hands-on Experience in the work of Carbonate and Clastic Core Description, Source Rock Evaluation, Basin Modeling, Microporosity prediction, Outcrop as well as Reservoir Characterization
- ✓ Excellent teamwork skills with passion about applying new technologies onsite
- ✓ Solid skills in dealing high challenging projects and working under pressure

## STRENGTHS

|                       |                                    |                              |
|-----------------------|------------------------------------|------------------------------|
| Facies Analysis       | Reservoir Characterization         | Petroleum System - Elements  |
| Microfacies           | Microporosity Prediction           | Burial History               |
| Sequence Stratigraphy | Wireline Logging                   | Thermal Maturity Modeling    |
| Diagenetic History    | Porosity-Permeability Relationship | Petrophysics HC Reserve Est. |

## WORKING EXPERIENCE

### S.B.B. University, Sheringal

Oct 2020 – Present

#### Assistant Professor

#### HOD- Department of Geology

- Take care of all departmental Administrative issues
- Coordination, providing lectures and labs as well as fieldtrips of 5 subjects within the Geology and Petroleum Geology undergraduate programs

### American University Beirut, Lebanon

August 2018 – August 2020

#### Assistant Professor

#### Department of Geology,

#### 1. Provided lectures and practicum of undergraduate courses of Geology and Petroleum Geology

- Fall 2018
  - Petroleum Geology (Geol-225). Taught during Fall 2018 and Fall 2019
- Spring 2019
  - The Earth, Present and Past (Geol-101)
  - Natural Disasters (Geol-104)
  - Stratigraphy (Geol-214)
- Spring 2020
  - Earth Resources and Energy (Geol-205)
  - Stratigraphy (Geol-214)
  - Advance Petroleum Geology (Geol-307)

#### 2. Development and collaboration in research projects funded by AUB

#### 3. Organize external workshops on petroleum geology and hydrogeology

#### 4. Assist students in fieldwork and data analysis using WellCad software

#### 5. Participate in regular departmental meetings to improve the geological curricula

University Technology PETRONAS

June 2014-March 2018

**PETRONAS Research Centre at University Technology PETRONAS CoE, CSI (Centre for Seismic Imaging and Hydrocarbon Prediction)**

July 2017-March 2018

**Researcher**

- Identified and linked the effect of microporosity on permeability and acoustic velocity.
- Working on geo-modeling considering microporosity for Central Luconia, offshore Sarawak, Malaysia
- Improving the regression values for predicting the petrophysical properties for uncored intervals considering measured petrophysical properties from cored intervals

**Shell Research Centre at University Technology PETRONAS SEACaRL (South East Asia Carbonate Research Lab)**

June 2014 – June 2017

**Researcher**

- Worked on core description, petrography, sequence stratigraphy, depositional setting and diagenetic history of Central Luconia, offshore carbonate reservoirs.
- Developed a facies and microfacies scheme for Miocene carbonates of Central Luconia.
- Conducted a qualitative and quantitative analysis of thin sections to identify the distribution of grains, matrix, cement and porosity types within the reservoir intervals.
- Achieved by successfully providing the results on occurrence and formation of microporosity and their distribution on a regional scale.
- Performed a detailed investigation on identifying the cyclicity and depositional sequence in carbonate buildups of Miocene age, Central Luconia along with proposing a new model for reservoir assessment.
- Identified the nature, classification and origin of microporosity in Miocene carbonates.
- Improved the prediction of petrophysical properties e.g., porosity and permeability by considering microporosity.
- Developed a classification scheme for crystallometry, micrite microtexture particles, and micropores and their effect on reservoir properties.
- Investigated the relationship between the developed schemes and petrophysical properties by distributing them systematically in the reservoir intervals.
- Developed petrophysical classes for Miocene carbonate to link the micro-cm scaled study with the feet scaled well logs.
- Proposed a regional petrophysical model considering depositional setting, diagenesis, microporosity, classification of crystallometry, micrite microtexture and micropores.
- **Also teach** undergraduate students in the areas of carbonate geology, geological mapping, wireline logging, and petrophysics
- **Supervise:** Final year student projects in the area of carbonate geology and petroleum geology

Biostratex Sdn Bhd| Malaysia

June 2013 – Aug 2013

**Intern**

- ◆ Carried out in depth analysis of the amount, type and thermal maturity of organic matter as part of the source rock evaluation and basin modeling study at North Luconia Offshore Sarawak

- ◆ Evaluated the hydrocarbon generating potential of the source rocks based on organic geochemistry well data
- ◆ Analyzed burial history and thermal maturity modeling to estimate the timing of optimum maturity for hydrocarbon generation.

### QUALIFICATION

- ◆ **Doctor of Philosophy in Petroleum Geoscience.** **Thesis Title:** Sedimentology and Origin of Microporosity in Miocene Carbonate Reservoir, Central Luconia, Offshore Sarawak, Malaysia (November-2014 – March 2018)
- ◆ **Master of Petroleum Geology** (CGPA: 3.18), University of Malaya, Malaysia (2014)
- ◆ **Bachelor of Science Degree in Geology** (CGPA: 3.53), Azad Jammu & Kashmir University, Pakistan (2011)

### INDUSTRIAL AND UNIVERSITIES PROJECTS

**2018-Present-** Geological-microporosity assessment of the Middle East carbonates (Triassic-Miocene) (Levantine Basin)

**2017– Present-** X-Tech Carbonate Research Collaboration with UTP.

**2014-2017-** Nature, Classification and Origin of Microporosity in Miocene Carbonate Reservoir, Central Luconia, and their effect on wireline logs. YUTP- 0153 AA-A14.

**2015-2017-** Geological-Geophysical assessment of the Kinta Valley Limestone a Lafarge quarry in Kuantan, Perak, Malaysia.

**2013-** Sedimentology & Sequence Stratigraphy of Labuan Island, Malaysia.

Objective: Interpret Sequence Stratigraphy and Depositional Environment

**2013-** Development Project: Hydrocarbon Prospectivity of Areas V06-2, V06-3, V06-4, (Block V-88) Southern Offshore Gippsland Basin, Victoria, Australia.

**2013-** Exploration Project: Source Rock Evaluation of KH 1-27, Yemen

**2013-** Prospect Identification and Evaluation of Areas V02-2, V02-3 and V02-4, (Block, VIMP 74) Gippsland Basin, Victoria, Australia

**2013-** Development project: Field Study of Wall Creek, Teapot Dome, U.S.A.

**2013-** Development project: Gooneybird Field F3-FB, Victoria, Australia

**2012-2013-** Field work Bintulu-Miri Sarawak, Malaysia. Field work at Kotaputri, Malaysia: Objective: Interpret Structure and Depositional Environment

**2011-** Field Work on Mafic-Ultramafic complex and Structures of Muzaffarabad, Azad Kashmir to Hunza Valley Gilgit, Pakistan. Objective: Develop tectonic and stratigraphic relationship

**2009-** Field work of Eastern, Central & Western Salt Range, Pakistan. Objective: Develop tectonic and stratigraphic relationship

**2008-** Field Project of North West HI Azad Kashmir, Pakistan. Objective: Develop tectonic and stratigraphic relationship

### PROFESSIONAL AFFILIATION

Regular member of Formation Evaluation Society of Malaysia (Attended all Sessions)

American Association of Petroleum Geosciences

Geological Society of Malaysia

European Association of Geoscientists and Engineering

## SOFTWARES

Interactive Petrophysics V3.5 | Petrel V4.0.1 | WellCad V5.5 | Microsoft Office Suite | PetroMod 2011 | JMicrovision V1.2.5 | 3D Field (Contour mapping and Surface mapping) | Coral Draw (Graphic Suite X6 and X7)

## Awards

1. **Best Paper Award (2019)**. Awarded by the ICCRCFE 2019: International Conference on Carbonate Reservoir Characterization and Formation Evaluation, Montreal, Canada
2. **Higher Achiever Award (2018)**. Awarded by the Centre for Graduate Study in Conjunction with a Postgraduate Award Ceremony at University Technology PETRONAS
3. **Graduate on Time Award (5<sup>th</sup> December 2018)**. On successful completion of PhD in Petroleum Geoscience with Outstanding Performance, awarded by the University Technology PETRONAS

## Administrative Position as HOD Department of Geology Achievements:

### 2021:

1. Successfully conducted 2<sup>nd</sup> Board of Study for Bachelor and Master Programs after 2009 (March, 21)
2. Successfully launch of M. Phil program at the Department of Geology, SBBU
3. Seminar Organized on Minerals Impact on Dir Economy (Venue: S.B.B.U) (23<sup>rd</sup> May 21)

## Published/Accepted Articles

### Journals

1. Salah, M.K., **Janjuhah, H. T.**, Sanjuan, J., (2022). Pore Structure and Particle Size Characterization of Paleogene Rock from Southern Lebanon. **Journal of Earth Science. In press.**
2. Ishfaqe, M., Dai, Q., Haq, N. U., Jadoon, K., Shahzad, S. M., & **Janjuhah, H. T.** (2022). Use of Recurrent Neural Network with Long Short-Term Memory for Seepage Prediction at Tarbela Dam, KP, Pakistan. *Energies*, 15(9), 3123.
3. Wahid, A., Khan, D. M., Iqbal, N., **Janjuhah, H. T.**, & Khan, S. A. (2022). A generalized stability estimator based on inter-intrastability of subsets for high-dimensional feature selection. **Chemometrics and Intelligent Laboratory Systems**, 220, 104457.
4. Makri, P., Hermides, D., Kontakiotis, G., Zarkogiannis, S. D., Besiou, E., **Janjuhah, H. T.**, & Antonarakou, A. (2022). Integrated Ecological Assessment of Heavily Polluted Sedimentary Basin within the Broader Industrialized Area of Thriassion Plain (Western Attica, Greece). **Water**, 14(3), 382.
5. **Janjuhah, H. T.**, Kontakiotis, G., Wahid, A., Khan, D. M., Zarkogiannis, S. D., & Antonarakou, A. (2021). Integrated Porosity Classification and Quantification Scheme for Enhanced Carbonate Reservoir Quality: Implications from the Miocene Malaysian Carbonates. **Journal of Marine Science and Engineering**, 9(12), 1410.
6. Ali, S. K., **Janjuhah, H. T.**, Shahzad, S. M., Kontakiotis, G., Saleem, M. H., Khan, U., & Antonarakou, A. (2021). Depositional Sedimentary Facies, Stratigraphic Control, Paleoecological Constraints, and Paleogeographic Reconstruction of Late Permian Chhidru Formation (Western Salt Range, Pakistan). **Journal of Marine Science and Engineering**, 9(12), 1372.
7. **Janjuhah, H. T.**, Ishfaqe, M., Mehmood, M. I., Kontakiotis, G., Shahzad, S. M., & Zarkogiannis, S. D. (2021). Integrated Underground Mining Hazard Assessment, Management, Environmental Monitoring, and Policy Control in Pakistan. **Sustainability**, 13(24), 13505.

8. Khan, U., **Janjuhah, H. T.**, Kontakiotis, G., Rehman, A., & Zarkogiannis, S. D. (2021). Natural Processes and Anthropogenic Activity in the Indus River Sedimentary Environment in Pakistan: A Critical Review. **Journal of Marine Science and Engineering**, **9(10)**, 1109.
9. **Janjuhah, H. T.**, Sanjuan, J., Alqudah, M., & Salah, M. K. (2021). Biostratigraphy, Depositional and Diagenetic Processes in Carbonate Rocks from Southern Lebanon: Impact on Porosity and Permeability. **Acta Geologica Sinica-English Edition**, **95(5)**, 1668-1683.
10. **Janjuhah, H. T** and Alansari, A. (2020). Offshore Carbonate Facies Characterization and Reservoir Quality of Miocene Rocks, Central Luconia, Offshore Sarawak, Malaysia. **Acta Geologica Sinica-English Edition**, **94(5)**, 1547-1561.
11. Babasafari, A. A., Bashir, Y., Ghosh, D. P., Salim, A. M. A., **Janjuhah, H. T.**, Kazemeini, S. H., & Kordi, M. (2020). A new approach to petroelastic modeling of carbonate rocks using an extended porespace stiffness method, with application to a carbonate reservoir in Central Luconia, Sarawak, Malaysia. **The Leading Edge**, **39(8)**, 592a1-592a10.
12. **Janjuhah, H. T.**, Alansari, A., & Vintaned, J. A. G. (2019). Quantification of Microporosity and Its Effect on Permeability and Acoustic Velocity in Miocene Carbonates, Central Luconia, offshore Sarawak, Malaysia. **Journal of Petroleum Science and Engineering**, **175**, 108-119.
13. **Janjuhah, H. T.**, Abubaker Alansari, & Priveen Raj Santha (2019). Interrelationship between Facies Association, Diagenetic Alteration and Reservoir Properties Evolution in the Middle Miocene Carbonate Build Up, Central Luconia Malaysia. **Arabian Journal for Science and Engineering**, **44(1)**, 341-356.
14. Alansari, A., Salim, A. M. A., **Janjuhah, H. T.**, Rahman, A. H. B. A., & Fello, N. M. (2019). Quantification of clay mineral microporosity and its application to water saturation and effective porosity estimation: A case study from Upper Ordovician reservoir, Libya. **Journal of Natural Gas Geoscience**.
15. Belhaj, A. F., Elraies, K. A., **Janjuhah, H. T.**, Tasfy, S. F. H., Yahya, N., Abdullah, B., & Alnarabiji, M. S. (2019). Electromagnetic waves-induced hydrophobic multiwalled carbon nanotubes for enhanced oil recovery. **Journal of Petroleum Exploration and Production Technology**, 1-4.
16. **Janjuhah, H. T.**, Sanjuan, J., & Salah, M. (2019). An Overview of the Porosity Classification in Carbonate Reservoirs and Their Challenges: An Example of Macro-Microporosity Classification from the Offshore Miocene Carbonates in Central Luconia, Sarawak, Malaysia. **International Journal of Geological and Environmental Engineering**. **13(5)**, 308-316 (doi.org/10.5281/zenodo.2702789).
17. **Janjuhah, H. T.**, Salim, A. M. A., Alansari, A., & Ghosh, D. P. (2018). Presence of Microporosity in Miocene carbonate platform, Central Luconia, offshore Sarawak, Malaysia. **Arabian Journal of Geosciences**, **11(9)**, 204.
18. **Janjuhah, H. T.**, Alansari, A., Ghosh, D. P., & Bashir, Y. (2018). New approach towards the classification of microporosity in Miocene carbonate rocks, Central Luconia, offshore Sarawak, Malaysia. **Journal of Natural Gas Geoscience**, **3(3)**, 119-133.
19. Alansari, A., Salim, A. M. A., Rahman, A. H. B. A., Fello, N. M., & **Janjuhah, H. T.** (2018). Augmented Wireline Based Lithology and Facies Prediction, For Upper Ordovician Succession, Murzuq Basin, Libya. **Petroleum & Coal**, **60(5)**, 994-1007.
20. Alansari, A., Salim, a. M. A., **Janjuhah, H. T.**, & Fello, n. M. (2018). Enhanced delineation of glacial clastic reservoirs by the application of petroelastic well correlation and seismic inversion: case study. **Petroleum & coal**, **60(3)**, 386-401.
21. Bashir, Y., Ghosh, D. P., Weng Sum, C., & **Janjuhah, H. T.** (2018). Diffraction enhancement through pre-image processing: applications to field data, Sarawak Basin, East Malaysia. **Geosciences**, **8(2)**, 74.
22. **Janjuhah, H. T.**, Gamez Vintaned, J. A., Salim, A. M. A., Faye, I., Shah, M. M., & Ghosh, D. P. (2017). Microfacies and depositional environments of miocene isolated carbonate platforms from



- Central Luconia, Offshore Sarawak, Malaysia. **Acta Geologica Sinica-English Edition**, **91(5)**, 1778-1796.
23. **Janjuhah, H. T.**, Salim, A. M. A., Shah, M. M., Ghosh, D., & Alansari, A. (2017). Quantitative interpretation of carbonate reservoir rock using wireline logs: a case study from Central Luconia, offshore Sarawak, Malaysia. **Carbonates and Evaporites**, **32(4)**, 591-607.
24. **Janjuhah, H. T.**, Salim, A. M. A., & Ghosh, D. P. (2017). Sedimentology and reservoir geometry of the Miocene carbonate deposits in central Luconia, offshore, Sarawak, Malaysia. **Journal of Applied Sciences**, **17(4)**, 153-170.
25. **Janjuhah, H. T.**, Shahzad, S.M., Farooq, F., Haider, T., & Ali, N., (2017). Structural and stratigraphic evaluation of Kashmir Basin at Himalayan core belt, **International Journal of Scientific Research Publications**, **17**: 126-145
26. **Janjuhah, H. T.**, Salim, A. M. A., Ghosh, D. P., & Wahid, A. (2017). Diagenetic process and their effect on reservoir quality in Miocene carbonate reservoir, offshore, Sarawak, Malaysia. **ICIPEG**. pp. 545-558. Springer, Singapore.
27. Al-Hasani, A., Saaed, I. M., Salim, A. M., & **Janjuhah, H. T.** (2017). Advanced Porosity Modeling and Lithology Analysis Based on Sonic Log and Core Data for Arkose Sandstone Reservoir: Habban Field. **ICIPEG**. pp. 617-641. Springer, Singapore.
28. **Janjuhah, H. T.**, Salim, A., Mohammad, A., Ali, M. Y., Ghosh, D. P., Hassan, A., & Hakif, M. (2017). Development of carbonate buildups and reservoir architecture of Miocene carbonate platforms, Central Luconia, offshore Sarawak, Malaysia. In SPE/IATMI, **Society of Petroleum Engineers**. **17**, pp. 1-12.

### Conference Proceedings

29. **Janjuhah, H. T.**, Sanjuan, J., & Salah, M. (May, 2019). An Overview of the Porosity Classification in Carbonate Reservoirs and Their Challenges: An Example of Macro-Microporosity Classification from the Offshore Miocene Carbonates in Central Luconia, Sarawak, Malaysia. **ICCRCFE 2019: 21th International Conference on Carbonate Reservoir Characterization and Formation Evaluation, Montreal, Canada**.
30. Bashir, Y., Babasafari, A., Biswas, A., Hamidi, A., Moussayi Alashloo, S., **Janjuhah, H. T.**, Prasad Ghosh, D., & Chow. W. (March, 2019). Cohesive Approach for High-Resolution Seismic Using Inversion & Imaging in Malaysian Carbonate Field. **International Petroleum Technology Conference, Beijing International Convention Center Beijing, China**.
31. Sambo, C. H., Hermana, M., Babasari, A., **Janjuhah, H. T.**, & Ghosh, D. P. (March, 2018). Application of Artificial Intelligence Methods for Predicting Water Saturation from New Seismic Attributes. In **Offshore Technology Conference. Kuala Lumpur, Malaysia**. (doi:10.4043/28221-MS).
32. Alansari, A., Salim, A. M. A., Hadi, A., Fello, N. M., & **Janjuhah, H. T.** (May, 2018). Enriched Wireline Based Lithology and Electrofacies Prediction; Case Study from Murzuq Basin, Libya. **International Conferences on Geological, Geographical, Aerospace's and Earth Sciences, Bangkok, Thailand**.
33. **Janjuhah, H. T.**, Salim, A. M. A., Alansari, A., Bashir, Y., & Ismail, W. (November, 2017). Approach towards Classification of Microporosity in Miocene Carbonate, Central Luconia, offshore, Sarawak, Malaysia. **1<sup>st</sup> International Congress on Earth Science in SE Asia, Bandar Seri Begawan, Brunei Darussalam**.
34. **Janjuhah, H. T.**, Salim, A. M. A., Ghosh, D. P., & Shah M. M. (June, 2017). Classification of micropores and their effect on reservoir quality, Miocene Carbonate Platform offshore, Sarawak, Malaysia. **Mountjoy II - Carbonate Pore Systems, Mountjoy Carbonate Research Conference, Austin, Texas, USA**.

35. **Janjuhah, H. T., Salim, A. M. A., & Ghosh, D. P. (May, 2017).** Quantification of Microporosity and its Impact on petrophysical properties, Central Luconia, offshore Sarawak, Malaysia. **Proceedings of the 7<sup>th</sup> Biannual Postgraduate Conference, Seri Iskandar, Malaysia.**
36. **Janjuhah, H. T., Salim, A. M. A., & Ghosh, D. P. (November, 2016).** Facies Characteristics and Diagenesis of a Middle Miocene Carbonate Buildups, Central Luconia, Malaysia. **Proceedings of the 6<sup>th</sup> Biannual Postgraduate Conference, Seri Iskandar, Malaysia.**
37. **Janjuhah, H. T., Salim, A. M. A., & Ghosh, D. P. (April, 2016).** Diagenetic History and Reservoir Quality in Miocene Carbonate Reservoirs, Central Luconia, Sarawak, Malaysia. **Proceedings of the 6<sup>th</sup> Biannual Postgraduate Conference, Seri Iskandar, Malaysia.**
38. **Janjuhah, H. T., Salim, A. M. A., & Ghosh, D. P. (November, 2015).** Microfacies and porosity types of Central Luconia, carbonate platform, offshore, Sarawak, Malaysia. **Proceedings of the 6<sup>th</sup> Biannual Postgraduate Conference, Seri Iskandar, Malaysia.**

#### **Book Published**

38. **Hammad Tariq Janjuhah 2017.** Fundamental of Source Rock, Basin Modeling and Seismic Interpretation. **Lambert Academic Publication. ISBN: 978-620-2-02663-5.**

#### **Book in Progress**

- ♦ **Hammad Tariq Janjuhah.** Fundamental of Carbonate Microporosity. **Springer (In Process).**