# **Dr. IMRAN AHMAD**

DOUBLE GOLD MEDALIST

Ph.D. in GEOLOGY

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## **QUALIFICATION:**

Degree	Subject	Year	Percentage	Position in class/batch	Institute/Board
Ph.D.	Geology	2023			Quaid-I-Azam University, Islamabad.
M. Phil	Geology	2016	80%	First Position in Batch	Quaid-I-Azam University, Islamabad.
BS/M.Sc.	Geology	2008	80.62%	First Position in Batch	University of Peshawar
H.S.S.C	Pre-Engineering	2004	75.09%	First Position in class	B.I.S.E Swat
S.S.C	Science Group	2002	82.12%	First Position in class	B.I.S.E Swat

## **DISTINCTIONS:**

Award	Awarded by	Year	On account of	
Gold Medal	University of Peshawar	2008	Over all first position in 4-years	
Gold Wedai	Oniversity of Teshawai		BS in Geology	
		2008	On securing highest score in all	
Presidential Award of Pakistan	Government of Pakistan		the public sector universities of	
(Nominee)	Government of Fakistan		Khyber Pakhtunkhwa Province,	
			Pakistan	
Position Holder Certificate	Department of Geology,	Geology, 2008 Obtained highest ma		
rosition floider Certificate	University of Peshawar		Obtained highest marks	
		2008	Obtained 86% marks in my	
Merit Certificate	University of Peshawar		field of specialization (Final	
			year in Structural Geology)	
Position Holder Certificate	Govt. Degree College,	2004	First position in the college	
1 osition Holder Certificate	Mingora Swat	2004	(Pre-Engineering Group)	
Position Holder Certificate	Madyan Public School, 200		First position in the school	
1 osition Holder Certificate	Madyan Swat	2002	(Science Group)	
Talent Certificate	FLORIDA STATE	2010	Field experience	
Talent Certificate	UNIVERSITY, USA			
T. 1 C C	EDINBURGH	2010	Field experience	
Talent Certificate	UNIVERSITY, UK			
	Quaid-I-Azam	2016	First position in class/batch	
Gold Medal/Chancellor Medal	University, Islamabad	2016	with 80% marks.	

### PHD RESEARCH WORK/THESIS:

DETAILED INVESTIGATIONS OF KINGRIALI FORMATION (TRIASSIC) IN THE KOHAT AND POTWAR SUB-BASINS, PAKISTAN: IMPLICATIONS ON GENESIS, DISTRIBUTION AND RESERVOIR CHARACTERIZATION

### **FUTURE INTEREST**

Carbonate Sedimentology (Paleozoic Dolomites in Pakistan)

Hydrogeology (Groundwater Resource Management of Malakand Division)

### **GEOLOGICAL FIELD WORK EXPERIENCE:**

I conducted detailed geological field work to the following geological sections/ranges/areas which covers stratigraphy of the area, regional and local geological structures, geological and structural mapping, high resolution sequence stratigraphy, paleontology and sedimentary depositional systems of Pre-Cambrian to Quaternary successions.

- ➤ Khyber Ranges (Khyber Agency) in the vicinity of Peshawar, Khyber Pakhtunkhwa (KP).
- Warsak Alkaline Igneous Complex, Peshawar District, KP
- Nowshera Reef Complex, Peshawar Basin, KP
- > Gajju Ghundai Volcanic Complex, Swabi District, KP
- Malakand Ranges (Malakand Igneous & Metamorphic Complexes), Malakand District, KP
- Dir Meta Volcanics, Upper and Lower Dir Districts, KP
- Swat Metamorphic and Igneous Complexes, Swat District, KP
- Shangla Melange Zone, Suture Zone and Fossil Subduction Complex, Shangla District, KP
- ➤ Kohistan Island Arc Igneous and Metamorphic Complexes, From Besham to Gilgit.
- Yasin Group Meta Sediments, Yaseen Valley, Gilgit Baltistan
- Chalt Meta Volcanic Complex, Chalt, Gilgit Baltistan
- > Utror Meta Volcanics and Paleozoic Succession of Kalam Group, Swat District, KP
- Ambela Alkaline Igneous Complex, Buner and Mardan Districts, KP
- > Shewa Shahbaz Garhi Igneous Complex, Mardan District, KP
- Attock Cherat Ranges and Geology of Nizampur Basin, Nowshera District, KP
- ➤ Kala Chitta Ranges of the Lesser Himalayan System of Pakistan, Attock & Rawalpindi Districts
- Khanpur Hill of the Lesser Himalayan System of Pakistan, Southern Hazara, KP
- Margalla Hill Ranges in the vicinity of Islamabad
- Mansehra Granitic Complex, Mansehra District, KP
- Galliat Geological Section, From Abbottabad to Murree along Nathya Gali Road, Punjab & KP.
- ➤ Khair-e-Murat Ranges of NPDZ, Sub Himalayas, Fateh Jang, Punjab
- Potwar Plateau: From Margalla Hills upto Salt Ranges, Punjab.
- ➤ Khewra Gorge Section, Eastern Salt Ranges, Punjab
- Kallar Kahar Road Section, Eastern Salt Ranges, Punjab
- Nammal Gorge Section, Central Salt Ranges, Punjab
- > Zaluch Nala and Kalabagh Section, Western Salt Ranges, Punjab
- Chichali Nala and Khisore Ranges, Trans-Indus Ranges, Punjab & KP
- ➤ Kothal, Laachi, Panoba and Bahadar Kheil Sections, Kohat Fold & Thrust Belt, Kohat & Karak
- Orakzai Agency, Kohat Sub Basin, FATA
- > Samana Ranges, Hangu District, KP
- Northern Suleiman Ranges, From FR D.I.Khan (KP) to Zhob (Baluchistan)
- Loralai, Qilla Saif Ullah, Dokki and Harnai Geological Sections, Baluchistan
- ➤ Kashmir Basin, in the vacinity of Muzaffarabad City, AJK
- Nilawahan Gorge, Pale section and Gharibwal section, Eastern Salt Rane, Punjab

#### PROJECTS & SUPERVISION:

- ➤ I have supervised more than hundred research students in different fields (Geology) for the partial fulfillment of BS degree in geology.
- As a Co-Principal Investigator in a research project "Detailed investigations of diagenetic modifications in Kawagarh Formation (Turonian) and Samana Suk Formation (Callovian) in the Hazara basin, NW Pakistan: Implications on reservoir characterization and diagenetic modeling" (successfully completed).
- ➤ Groundwater Estimation and Determination of its Probable Recharge Source in the Lower Swat District, Khyber Pakhtunkhwa, Pakistan; By using Analytical Data and Linear Regression Algorithms.
- ➤ Geology of Chichali Nala with special emphasis on the Paleoenvironmental analysis and diagenetic study of Callovian-Bathonian Samana Suk Formation, Trans Indus Ranges, Punjab, Pakistan.
- > Structural and Stratigraphic study of Darra Village in the vicinity of Old Khanpur, Southern Hazara, Khyber Pakhtunkhwa, Pakistan.
- Structural Mapping and Stratigraphic study of Khurram Paracha and Adjoining areas in the vicinity of Taxila, Eastern Kala Chitta Ranges, Rawalpindi, Pakistan.
- > Structural and Stratigraphic Study of Talhaar Village in the Vicinity of Pir Sohawa, Margalla Hill Ranges, Khyber Pakhyunkhwa, Pakistan.
- Paleoenvironmental and diagenetic analysis of the Jutana Dolomite, Khewra Gorge Section, Eastern Salt Ranges, Punjab, Pakistan.
- > Structural Analysis of Margala Hills & Northern Potwar Deformed Zone, Punjab, Pakistan.
- Role of Main Boundary Thrust in the deformation of Kahi area in the vicinity of Nizampur, Khyber Pakhtunkhwa, Pakistan.
- Geological mapping and seismic interpretation for the confirmation of subsurface geological structures, Northern Suleiman Ranges, Mughal Kot, FR D.I.Khan, Pakistan
- Geological Mapping and Structural setup of Tarar Village in the Vicinity of Khanpur, Southern Hzara, Khyber Pakhtunkhwa, Pakistan.
- Engineering Properties of Materials (Soil Aggregates and Asphalt) for Northern By-Pass Road Project, Peshawar, Khyber Pakhtunkhwa, Pakistan.
- > Case Study of Northern By-Pass Road Project Peshawar for Material Testing, Peshawar, Khyber Pakhtunkhwa, Pakistan
- Field Geologist in a Research Project "Source Rock Mapping & Investigation for Hydrocarbon Potentials in FATA areas" Pakistan.
- > Structural and Tectonic Evolution of Khanpur Valley (A part of Hill Ranges in Southern Hazara), Khyber Pakhtunkhwa, Pakistan.
- Fracture Evaluation and Hydrocarbon Potentials in Suleiman Anticline of Northern Suleiman Ranges, Western Himalayan Orogeny, Khyber Pakhtunkhwa, Pakistan.
- Being a field expert, I conducted two detailed and extensive field work in two different PhD-Projects with scholars from foreign Universities (One from Edinburgh University, UK and second from Florida State University, USA), on Jurassic to Eocene sequences of Mughal Kot Geological Section, Pakistan and received merit certificates from these foreign universities.
- ➤ Geological feasibility survey conducted for the construction of 22-kilometer road in Chagharzi, District Buner, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Shah Deri, District Swat, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Chuprial, District Swat, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Shakar Dara, District Swat, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Taleegram, District Swat, Pakistan.

- Geological feasibility survey conducted for construction of Police Station at Kingergali, District Buner, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Sar Thana, District Swat, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Besham, District Shangla, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Miandam, District Swat, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Behrain, District Swat, Pakistan.
- ➤ Geological feasibility survey conducted for construction of Police Station at Lajbok, District Dir, Pakistan.

### PREVIOUS/PRESENT EMPLOYEMENT:

Turadidandiana	Dooition Hold	Period	
Institution	Position Held	From	То
University of Malakand, Chakdara, Dir (Lower), Khyber Pakhtunkhwa	Assistant Professor (BPS-19)  Regular/Permanent	1 <sup>st</sup> March 2018	Till Date
Bacha Khan University, Charsadda, Khyber Pakhtunkhwa.	Lecturer in Geology (BPS-18) Regular/Permanent	15 <sup>th</sup> August, 2011	28 <sup>th</sup> February 2018
National Centre of Excellence in Geology, University of Peshawar, Peshawar, Khyber Pakhtunkhwa	Research Associate (BPS-18) Contract	1 <sup>st</sup> May, 2009	13 <sup>th</sup> August, 2011
National Centre of Excellence in Geology, University of Peshawar, Peshawar, Khyber Pakhtunkhwa	Research Assistant (BPS-16) Contract	1 <sup>st</sup> January, 2009	30 <sup>th</sup> April, 2009

### **PUBLICATIONS:**

- 1. Mumtaz SHAH, AHMED Waqar, ALI ASghar, HAIDER Naghma, and AHMED Imran, Bedding parallel dolomite in the Samana Suk Formation (Callovian) southern Hazara basin, NW Pakistan: Preliminary investigations of field relationships, petrographic studies, geochemistry and petrophysical characteristics. Geologie-Geochimie-Geophysique, IFP Energies nouvelles Aug 2014.
- **2.** Mumtaz SHAH, ALI ASghar, HAIDER Naghma, AHMED Imran and Khan U. Emaad, Effect of igneous intrusions on the reservoir properties of Khyber Limestone (Devonian), Peshawar Basin (NW Pakistan). Presented in PAPG-SPE Annual Technical Conference Nov. 2014.
- 3. Mumtaz Muhammad Shah; Emad Ullah Khan; M. Gulraiz Akhter; Asghar Ali; Naveed Ahsan; Imran Ahmed; Naghma Haider, EFFECT OF IGNEOUS INTRUSIONS ON THE RESERVOIR CHARACTERIZATION OF KHYBER LIMESTONE (DEVONIAN), KHYBER PAKHTUNKHWA, NORTH-WEST PAKISTAN". Submitted to Arabian Journal of Geoscience.
- **4.** Shah, M.M, Khan, E.U, Ali, A, Ahsan, N, Ahmed, I, Effect of igneous intrusions on the reservoir properties of Khyber Limestone (Devonian), Peshawar Basin (NW Pakistan). ICS 2014 Geneva. Effect of igneous intrusions on the reservoir properties of Khyber limestone

- (Devonian), Peshawar Basin (NW Pakistan) Extended Abstract accepted for oral presentation in a conference of American Association of Petroleum Geoscientist.
- 5. Iram Gul, Nosheen Hashim, Shafiqur Rehman, Imran Ahmad, Groundwater contamination in district Nowshera, Khyber Pakhtunkhwa, in the wake of super-flood 2010. Journal of Science, Technology and Development (35): 131-140, 2016
- 6. Nosheen Hashim, Iram Gul, Muhammad Ali, S. Shafiqur Rehman, Imran Ahmad, Assessment of Physico-Chemical Characteristics of Soil in 2010 Flood Affected and Non-Affected Areas of District Nowshera, Khyber Pakhtunkhwa. Conference paper, held in August 2016.
- 7. Abdullah; Imran Ahmad; Waqas Anwar; Bahrul Amin and IrfanUllah, Structural analysis of Talhaar area in the vicinity of Pirsohawa, Khyber Pakhtunkhwa, Pakistan. Journal of Himalayan Earth Sciences International Conference 2016.
- **8.** AHMAD Imran & Shah, M.M., Diagenetic Studies and its Implications on the Reservoir Character of the Anisian-Norian (Triassic) Kingriali Formation, Salt Range (Pakistan). Paper accepted for oral presentation in AAPG conference held in September 2016 at Cancun, Mexico.
- 9. Shah, M.M & Ahmad, I., Effect of Diagenesis and its Implications on the Reservoir Character of the Anisian-Norian (Triassic) Kingriali Formation, Salt Range (Pakistan). Journal of Himalayan Earth Sciences International Conference 2016.
- **10. Ahmad, I.**, Shah, M. M., Janjuhah, H. T., Trave, A., Antonarakou, A., & Kontakiotis, G. (2022). Multiphase Diagenetic Processes and Their Impact on Reservoir Character of the Late Triassic (Rhaetian) Kingriali Formation, Upper Indus Basin, Pakistan. *Minerals*, 12(8), 1049.
- **11. Ahmad, I.**, Gul, I., Irum, S., Manzoor, M., & Arshad, M. (2022). Accumulation of heavy metals in wild plants collected from the industrial sites—potential for phytoremediation. *International Journal of Environmental Science and Technology*, 1-12.
- 12. Said Mukhtar Ahmad<sup>1,2</sup>, Imran Ahmad<sup>1</sup>, Matee Ullah<sup>1</sup>, Aurangzeb<sup>3</sup>, Syed Muhammad Waseem Sajjad<sup>1</sup>, Nazir Ul Islam<sup>2</sup>, (2020). Microfacies Analysis and Depositional Environment of Middle Jurassic Samana Suk Formation, Chichali Nala Section, Surghar Range, Pakistan. *Int. J. Econ. Environ. Geol. Vol.*, 11(4), 00-00.
- **13.** Khan, N., **Ahmed, I.**, Ishaq, M., u Jan, I., Khan, W., Awais, M., ... & Khan, B. (2020). Reservoir potential evaluation of the Middle Paleocene Lockhart Limestone of the Kohat Basin, Pakistan: petrophysical analyses. *International Journal of Economic and Environmental Geology*, 11(1), 1-9.
- **14.** Shah, M. M., Rahim, H. U., Hassan, A., Mustafa, M. R., & **Ahmad, I**. (2020). Facies control on selective dolomitization and its impact on reservoir heterogeneities in the Samana Suk Formation (middle Jurassic), Southern Hazara Basin (NW Himalaya, Pakistan): an outcrop analogue. *Geosciences Journal*, *24*, 295-314.
- **15.** Khan, A., Hafeez, S., Khan, N., Siyar, S. M., **Ahmad, I.**, Khan, M. A., ... & Ali, F. (2022). Organic geochemical investigations of the Triassic Mianwali Formation in Surghar Range, Upper Indus Basin, Pakistan. *Journal of Himalayan Earth Sciences Volume*, *55*(1), 34-39.
- **16.** Gul, I., Manzoor, M., **Ahmad, I**., Kallerhoff, J., & Arshad, M. (2022). Phytoaccumulation of cadmium by Pelargonium× hortorum—tolerance and metal recovery. *Environmental Science and Pollution Research*, 1-10.
- 17. Shah, M. M., Ahmad, I., Cantarero, I., Martín-Martín, J. D., Travé, A., & Janjuhah, H. Evolution of Diagenetic Processes and its Impact on the Reservoir Properties of the Late Triassic Carbonate Successions, Upper Indus Basin, Pakistan. *Upper Indus Basin, Pakistan*.

### **REFERENCE:**

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