

## AEGC 2023 Poster Program

13 - 18 March 2023

Brisbane Convention and Exhibition Centre | Exhibition Hall

Poster Location	Paper Title	Submitting Author	Theme/SubTheme	Paper ID
1	Experimental Investigation and Geochemical Interpretation of In-situ Formed Carbonated Brine/Sandstone Interaction: Implication of CO <sub>2</sub> Geo sequestration	Dr Duraid Al-bayati	Integrated Geosciences - Petroleum Geoscience - Geochemistry	1
2	Interpretation of gravity and magnetic data on the hot dry rocks (HDR) delineation for the enhanced geothermal system (EGS) in Gonghe town, China	Mr Tom Zhao	Sustainability - Geothermal	7
3	The complex petroleum system of the Rankin Trend and Brigadier Trend, Northern Carnarvon Basin, Australia. New insights from the Triassic Mungaroo Formation in Ironbark-1.	Mr Vincent Dykmans	Integrated Geosciences - Petroleum Geoscience - Case Studies	34
4	Understanding potential resource prospectivity: 1-D burial and thermal history modelling of the Adavale Basin	Ms Tehani Palu	Integrated Geosciences - Petroleum Geoscience -Basin modelling	40
5	Electromagnetic response of MVT Pb-Zn deposits on the Lennard Shelf, Canning Basin	Mr Alex Zhan	Geophysics -Electrical and EM methods	44
6	GSWA Regional Petrophysics Data Acquisition (RPDA)	Mrs Cristina Angheluta	Integrated Geosciences - Minerals Geoscience - Undercover exploration	48
7	Pre-stack seismic inversion for windfarm applications	Dr Esben Dalgaard	Sustainability - Geosciences for Energy Transition	52
8	Environmental controls on the resilience of Scott Reefs, NWS, Australia since the Miocene: Insights from 3D seismic data	Ms Carra Williams Williams	Geophysics - Seismic interpretation	57
9	EFFICIENT IRRIGATION MANAGEMENT FOR SUSTAINABILITY OF AGRICULTURE AND ENVIRONMENT	Ms Rajwinder Kaur Rajwinder Kaur	Integrated Geosciences - Environmental Geology and Agriculture	59
10	Structure and burial history of the South Nicholson Basin, NE Australia	Mr Harikrishnan Nalinakumar	Integrated Geosciences - Petroleum Geoscience -Basin modelling	60
	INTEGRATED MEASURES FOR SOIL AND WATER MANAGEMENT	Ms Rajwinder Kaur Rajwinder Kaur	Integrated Geosciences - Environmental Geology and Agriculture	61
12	MagResource: An environmentally conscious, geophysical approach to resource definition	Dr James Austin	Integrated Geosciences - Minerals Geoscience - Case studies	67
	Delineation of Regolith Zones in Nickel Laterite using Electromagnetic Imaging: Ravensthorpe, Western Australia.	Miss Lucy Soares dos Santos	Geophysics -Electrical and EM methods	75
	Textural Effects in Spectral Induced Polarization Measurements of Electron-Conducting Minerals: Disseminated Versus Veinlet Minerals	Ms Nuray Oncul	Integrated Geosciences - Minerals Geoscience - Mineral exploration	96
15	Using seismic trace density for optimal 3D seismic survey design	Dr Mostafa Naghizadeh	Geophysics - Seismic methods	112
	hisights for hydrocarbon exploration in igneous province: Tectono-magmatic evolution of the Browse Basin, Northwest Shelf	Mr Kosuke Tsutsui	Integrated Geosciences - Regional Studies	117
	Is the Aki and Richards Approximation Really Practical to Estimate AVO Responses?: Case study of the Browse Basin	Mr Satoshi Ishikawa	Geophysics - Subsurface characterization and reservoir physics	119
	Geomechanical simulation to model creep deformation of Salt formation	Miss Princy Agrahari	Sustainability - Geosciences for Energy Transition	129
	Regional mapping of the disruption of source magnetization estimates by near-surface magnetizations	Dr Clive Foss	Geophysics - Potential fields methods	145
	Sweet-spots for estimation of source magnetisation direction	Dr Clive Foss	Geophysics - Potential fields methods	146
	Evaluation of 3-component fluxgates as sensors for drone infill of regional aeromagnetic anomalies over small and shallow sources	Dr Clive Foss	Geophysics - Remote Sensing and Drone Geophysics	148
	Non-destructive bulk remanent magnetization measurement from outcrop magnetic field mapping	Dr Clive Foss	Geophysics - Potential fields methods	149
	Comparison between downhole and core gamma measurements for lithology logging and stratigraphic correlation	Mr Sekelo Mutelekesha	Integrated Geosciences - Minerals Geoscience - Mineral exploration	150
	GEOELECTRICAL RESEARCH ACTIVITIES TO SUPPORT GROUNDWATER INVESTIGATIONS, KESABEN VILLAGE, LEBAKSIU DISTRICT, TEGAL REGENCY, CENTRAL JAVA	Dr Aryono Adhi	Geophysics - Near surface and Environmental geophysics	153
	Application of machine learning for inversion of surface wave dispersion graphs	Mr Anatolii Pakhomenko	Geophysics - Engineering geophysics - Al and Machine Learning	159
	Combining seismic interpretation, gravity inversion and forward modelling finds new structures in the Otway Basin.	Mr Matt Boyd	Integrated Geosciences - Deep crustal studies and Tectonics	171
	Insights Into Wettability and Relative Permeability Curves of Coal	Miss Wen Xi	Integrated Geosciences - Coal Geoscience - Coal Exploration	202
	Gravity modelling of crooked line traverses to constrain Southeast Lachlan Crustal Transect 2 D seismic reflection interpretations in the Australian Alps	Mr Phil Skladzien	Geophysics - Potential fields methods	202
	From pointwise data toward a continuous description of 3D stress tensor: an example from the Northern Bowen Basin	Dr Mojtaba Rajabi	Integrated Geosciences - Structural Geology and Geomechanics	204
	Prediction of geomechanical properties from geophysical logs using machine learning approach	Mr Rasoul Ranjbarkarami	Integrated Geosciences - Structural Geology and Geomechanics	221
	Automated permeability prediction from basic petrophysical logs	Mr Puskar Pramanik	Geophysics - Engineering geophysics - Al and Machine Learning	222
	Advanced Petrophysical Applications and Data Integration to Discriminate Primary and Secondary Pyritisation for Prospecting	Mr Borzou Zein	Integrated Geosciences - Minerals Geoscience - Sedimentary basin minerals	239
	LithoSurfer – A unique relational database platform for exploration data	Dr Fabian Kohlmann	Data science and multi-disciplinary integration	239
	Compositional geostatistics for modelling of coal seam and associated ply properties	Mr Kane Maxwell	Integrated Geosciences - Coal Geoscience - Case Studies	242
	Application of Wireline Petrophysical Data in Quantitative Stress and Geotechnical Analysis for Stability Risk Assessment	Dr Roland Dashti		244
			Integrated Geosciences - Structural Geology and Geomechanics	252
	Adding rocks to data: Integrating drill core imagery and down-hole data with machine learning.	Dr Rian Dutch	Data science and multi-disciplinary integration	254
	Practical education in data acquisition for geophysicists	Dr Anton Kepic	Sustainability - Future geoscience career opportunities and challenges	
	Land DAS streamer for rapid seismic acquisition	Mr Andrej Bona	Geophysics - Seismic acquisition	266
	Evolution of regional-scale airborne magnetic and radiometric data in the NT	Ms Tania Dhu	Integrated Geosciences - Regional Studies	281
	Depositional environment and genesis of acid drainage of some Coal deposits in South Africa	Dr Lindani Ncube	Integrated Geosciences - Environmental Geology and Agriculture	287
	A combined approach to improve prospectivity analysis – integrating geological knowledge and Machine Learning	Dr Mark Rieuwers	Data science and multi-disciplinary integration	289
	Practical observations of the use of airborne electromagnetic surveys in covered terrains	Mr Jarrad Luce	Geophysics - Undercover exploration	293
43	Petrophysical Characteristics of the Gawler Craton	Mr Tim Keeping	Integrated Geosciences - Minerals Geoscience - Undercover exploration	294