

Jonathan Redfern
Academic (Teaching & Research) Professor
Earth and Environmental Sciences - Academic & Research
Type of address: Postal address.
Dept of Earth and Environmental Science
Williamson Building, Oxford Road, Manchester
M139PL
Manchester
United Kingdom
Email: jonathan.redfern@manchester.ac.uk



Employment

Professor of Petroleum Geoscience

Academic (Teaching & Research) Professor
Earth and Environmental Sciences - Academic & Research
The University of Manchester
1 Aug 2019 → present

External Examiner

Universiti Teknologi Petronas
Perak Darul Ridzuan, Malaysia
1 Jan 2021 → 1 Jan 2024

External Examiner

University of Aberdeen
Aberdeen, United Kingdom
1 Jan 2021 → 1 Jan 2024

External Examiner

University College Dublin
Dublin, Ireland
1 Sept 2016 → 1 Sept 2019

External Examiner

University Of Malaya
Kuala Lumpur, Malaysia
1 Jun 2015 → 1 May 2018

Research outputs

Architecture of Oxfordian coral buildups along the Atlantic margin of Morocco

Duval-Arnould, A. M. L. F., Bulot, L. G., Charton, R., Jain, S., Masrour, M., Pomar, L., Redfern, J., Simmons, M. & Schröder, S., May 2024, In: Journal of African Earth Sciences. 213, 105206.

Integrated multi-proxy source-to-sink analysis of Late Barremian (Lower Cretaceous) clastic systems in the Essaouira-Agadir Basin

Roquette, E., Lovell-Kennedy, J., Muniz Pichel, L., Schröder, S., Charton, R., Millar, I., Frau, C. & Redfern, J., May 2024, In: Journal of African Earth Sciences. 213, 105205.

Dolomitization of early-post rift Lower Jurassic carbonate platforms along the Moroccan Atlantic Margin: Origin and significance

Al-Sinawi, N., Hollis, C., Duval-Arnould, A. M. L. F., Koeshidayatullah, A., Schröder, S. & Redfern, J., 1 Mar 2024, In: Journal of African Earth Sciences. 211, 105167.

A new sedimentary and biostratigraphic framework for the Callovian-Oxfordian transition on the Atlantic margin of Morocco
Duval-Arnould, A. M. L. F., Bulot, L. G., Masrour, M., Simmons, M., Bonnot, A., Charton, R., Redfern, J. & Schröder, S., 1 Feb 2024, In: Journal of African Earth Sciences. 210, 105164.

Controls on preservation of organic matter during the Cenomanian Ocean Anoxic Event II (OAE2) and Turonian global sea-level rise: Agadir Basin, Morocco

Wang, J., Redfern, J., Bulot, L. G. & Taylor, K., 1 Nov 2023, In: Journal of African Earth Sciences. 207, 105069.

Identifying local vs. regional drainage using multiproxy provenance tracers - Tracking the Moroccan Late Triassic fluvial system

Lovell-Kennedy, J., Roquette, E., Schröder, S., Charton, R. & Redfern, J., 1 Apr 2023, In: Journal of African Earth Sciences. 200, 104866.

"I hate sand ... it gets everywhere" – Phanerozoic sedimentary recycling from NW Africa

Lovell-Kennedy, J., Roquette, E., Schröder, S. & Redfern, J., 10 Oct 2022, In: Basin Research.

Controls on fluid flow in the distal deepwater, Offshore Niger Delta

Ashong, E., Redfern, J. & Huuse, M., 15 Aug 2022, In: SEG Technical Program Expanded Abstracts. 2022-August, p. 1354-1358 5 p.

Coevolution of diagenetic fronts and fluid-fracture pathways

Koeshidayatullah, A., Al-Sinawi, N., Swart, P. K., Boyce, A., Redfern, J. & Hollis, C., 3 Jun 2022, In: Nature Scientific Reports. 12, 1, 9278.

Kilometre-scale coral carpets on mixed carbonate-siliciclastic platforms; a sedimentological study from the Lower Cretaceous of northwestern Africa

Bryers, O., Bulot, L. G., Duval-Arnould, A. M. L. F., Hollis, C. & Redfern, J., 1 Feb 2022, In: Paleogeography and Paleoclimatology. 587, 110792.

Evaluating the segmented post-rift stratigraphic architecture of the Guyanas continental margin

Casson, M., Jeremiah, J., Calvès, G., Goyet, F. D. V. D., Reuber, K., Bidgood, M., Reháková, D., Bulot, L. & Redfern, J., 1 Aug 2021, In: Petroleum Geoscience.

Cenozoic to modern-day source to sink systems of Senegal: A record of provenance, transport, recycling and climate controls

Mounteney, I., Casson, M., Ruston, J., Millar, I., Dethie, N. & Redfern, J., 1 Jun 2021, In: Journal of African Earth Sciences. 178, p. 1-16 16 p., 104150.

Sharp-based shoreface sandstones in the Early Carboniferous sediments of the Awaynat Wanin area (western Libya)

Redfern, J., Frohlich, S., Petitpierre, L., Bodin, S. & Vachtman, D., 1 Jun 2021, In: Journal of African Earth Sciences. 178, p. 1 12 p.

Syn-depositional Mesozoic siliciclastic pathways on the Moroccan Atlantic margin linked to evaporite mobilisation

Redfern, J., Charton, R., Kluge, C., Bertotti, G., Fernandez-Blanco, D., Duval-Arnould, A. M. L. F. & Bryers, O., 1 Jun 2021, In: Marine and Petroleum Geology. 128, 105018.

Controls and timing of Cenomanian-Turonian organic enrichment and relationship to the OAE2 event in Morocco, North Africa

Wang, J., Bulot, L. G., Taylor, K. G. & Redfern, J., 4 Mar 2021, In: Marine and Petroleum Geology. 128, p. 105013

Early post-rift depositional systems of the Central Atlantic: Lower and Middle Jurassic of the Essaouira-Agadir Basin, Morocco

Duval-Arnould, A. M. L. F., Schröder, S., Charton, R., Joussiaume, R., Razin, P. & Redfern, J., 1 Mar 2021, In: Journal of African Earth Sciences. 104164.

Deep sea rock record exhumed on oceanic volcanic islands: the Cretaceous sediments of Maio, Cape Verde
Casson, M., Bulot, L. G., Jeremiah, J. & Redfern, J., 1 May 2020, In: Gondwana Research. 81, p. 252-264 13 p.

The interaction of tectonics, climate and eustasy in controlling dolomitization: A case study of Cenomanian–Turonian, shallow marine carbonates of the Iberian Basin
Newport, R., Segura, M., Redfern, J. & Hollis, C., 14 Jan 2020, (E-pub ahead of print) In: Sedimentology.

Cretaceous continental margin evolution revealed using quantitative seismic geomorphology, offshore northwest Africa
Casson, M., Calvès, G., Redfern, J., Huuse, M. & Sayers, B., 2020, In: Basin Research.

Constraining Mesozoic early post-rift depositional systems evolution along the eastern Central Atlantic Margin
Arantegui Gonzalez, A., Jerrett, R., Schröder, S., Bulot, L. G., Gatto, R., Monari, S. & Redfern, J., 15 May 2019, In: Sedimentary Geology. 386, p. 31-51 21 p.

The influence of base-salt relief, rift topography and regional events on salt tectonics offshore Morocco
Pichel, L. M., Huuse, M., Redfern, J. & Finch, E., 1 May 2019, In: Marine and Petroleum Geology. 103, p. 87-113 27 p.

A revised chronostratigraphic framework for the Aptian of the Essaouira-Agadir Basin, a candidate type section for the NW African Atlantic Margin
Luber, T. L., Bulot, L. G., Redfern, J., Nahim, M., Jeremiah, J., Simmons, M., Bodin, S., Frau, C., Bidgood, M. & Masrour, M., 1 Jan 2019, In: Cretaceous Research. 93, p. 292-317 26 p.

Late Barremian–early Aptian ammonite bioevents from the Urgonian-type series of Provence, southeast France: Regional stratigraphic correlations and implications for dating the peri-Vocontian carbonate platforms
Frau, C., Tendil, A. J. B., Lanteaume, C., Masse, J. P., Pictet, A., Bulot, L. G., Luber, T. L., Redfern, J., Borgomano, J. R., Léonide, P., Fournier, F. & Massonnat, G., Oct 2018, In: Cretaceous Research. 90, p. 222-253 32 p.

Detrital zircon age and provenance constraints on late Paleozoic ice-sheet growth and dynamics in Western and Central Australia
Martin, J. R., Redfern, J., Horstwood, M. S. A., Mory, A. J. & Williams, B. P. J., 2018, In: Australian Journal of Earth Sciences.

Fishing in the Central Atlantic, an earliest Cenomanian ichthyodectiform from DSDP Site 367, Cape Verde Basin
Casson, M., Cavin, L., Jeremiah, J., Bulot, L. G. & Redfern, J., 2018, In: Journal of Vertebrate Paleontology. p. 1-5

The applicability of modern tidal analogues to pre-vegetation paralic depositional models
Bradley, G-M., Redfern, J., Hodgetts, D., George, A. D. & Wach, G. D., 2018, In: Sedimentology.

A revised ammonoid biostratigraphy for the Aptian of NW Africa: Essaouira-Agadir Basin, Morocco
Luber, T. L., Bulot, L. G., Redfern, J., Frau, C., Arantegui Gonzalez, A. & Masrour, M., Nov 2017, In: Cretaceous Research. 79, p. 12-34 23 p.

The influence of shortening and sedimentation on rejuvenation of salt diapirs: A new Discrete-Element Modelling approach
Muniz Pichel, L., Finch, E., Huuse, M. & Redfern, J., 30 Sept 2017, In: Journal of Structural Geology. 104, p. 61-79

Sedimentology of the Essaouira Basin (Meskala Field) in context of regional sediment distribution patterns during upper Triassic pluvial events
Mader, N. K., Redfern, J. & El Ouataoui, M., 1 Jun 2017, In: Journal of African Earth Sciences. 130, p. 293-318 26 p.

Examining the interplay of climate and low amplitude sea-level change on the distribution and volume of massive dolomitization: Zebbag Formation, Cretaceous, Southern Tunisia
Hollis, C., Newport, R., Bodin, S. & Redfern, J., 19 May 2017, In: The Depositional Record. p. 38-59

Controls on reservoir quality in exhumed basins – an example from the Ordovician sandstones, Illizi basin, Algeria
English, K. L., English, J. M., Bonnell, L. M., Redfern, J., Lander, R. H., Hollis, C., Guirdham, C., Garnham, J. & Yahia Cherif, R., Feb 2017, In: *Marine and Petroleum Geology*. 80, p. 203-227 25 p.

Challenges in characterizing subsurface paralic reservoir geometries: a detailed case study of the Mungaroo Formation, North West Shelf, Australia
Heldreich, G., Redfern, J., Legler, B., Gerdes, K. & Williams, B. P. J., 2017, In: *Geological Society Special Publication*.

Intraplate uplift: new constraints on the Hoggar dome from the Illizi basin (Algeria)
English, K., Redfern, J., Bertotti, G., English, J. M. & Yahia Cherif, R., 25 Feb 2016, In: *Basin Research*. p. 1 17 p.

Salt tectonics offshore Morocco - New insights from numerical modelling and 2D seismic interpretation
Pichel, L. M., Huuse, M., Finch, E. & Redfern, J., 1 Jan 2016, *78th EAGE Conference and Exhibition 2016 - Workshop Programme*. EAGE Publishing BV

Remobilization of deep basin brine during exhumation of the Illizi Basin, Algeria
English, K., English, J. M., Redfern, J., Hollis, C., Corcoran, D., Oxtoby, N. & Yahia Cherif, R., 2016, In: *Marine and Petroleum Geology*. 78, p. 679-689

Seismic characterization of a Bottom Simulating Reflection (BSR) and plumbing system of the Cameroon margin, offshore West Africa
Le, A. N., Huuse, M., Redfern, J. & Irving, D., Dec 2015, In: *Marine and Petroleum Geology*. 68, p. 629 647 p.

Controls on facies evolution in low accommodation, continental-scale fluvio-paralic systems (Messak Fm, SW Libya)
Wood, J. D., Bodin, S., Thomas, M. F. H. & Redfern, J., 2014, In: *Sedimentology*. 303, p. 49-69 20 p.

The late Carboniferous basal Grant Group unconformity, Canning Basin, Australia: a complex surface recording glacial tectonic and halotectonic processes
Al Hinai, J. & Redfern, J., 2014, In: *Australian Journal of Earth Sciences*. 61, 5, p. 703-717 14 p.

Dynamic sedimentary conditions during periods of enhanced sequestration of organic carbon in the central southern Tethys at the onset of the Cenozoic global cooling
Jiménez, B. Á., Bodin, S., Wood, J., Calvert, S. E., Mutterlose, J., Petrizzo, M. & Redfern, J., 2013, In: *Sedimentary Geology*. 290, p. 60-84 24 p.

LiDAR-based digital outcrops for sedimentological analysis: workflows and techniques
Rarity, U., Lanen, F. X. M. T. V., Hodgetts, D., Gawthorpe, R. L., Wilson, P., Fabuel-Perez, I. & Redfern, J., 2013, In: *Geological Society Special Publication*. 387, p. 153-183

Glaciogenic reservoirs and hydrocarbon systems: An introduction
Huuse, M., Le Heron, D. P., Dixon, R., Redfern, J., Moscariello, A. & Craig, J., 1 Jan 2012, *Geological Society Special Publication*, 368, 1, p. 1-28 28 p.

Early toarcian source-rock potential in the central high atlas basin (central morocco): Regional distribution and depositional model
Bodin, S., Fröhlich, S., Boutib, L., Lahsini, S. & Redfern, J., Oct 2011, In: *Journal of Petroleum Geology*. 34, 4, p. 345-363 18 p.

An integrated study of Permo-triassic basins along the North Atlantic passive margin: implications for future exploration
Redfern, J., Vining, B. A. (ed.) & Pickering, S. C. (ed.), Aug 2011, *Petroleum Geology: From Mature Basins to New Frontiers—Proceedings of the 7th Petroleum Geology Conference*. Vining, B. A. & Pickering, S. C. (eds.). UK: Geological Society

A sedimentological model for the continental upper triassic tadrart ouadou sandstone member: Recording an interplay of climate and tectonics (Argana valley; south-west Morocco)

Mader, N. K. & Redfern, J., Aug 2011, In: *Sedimentology*. 58, 5, p. 1247-1282 35 p.

Toarcian carbon isotope shifts and nutrient changes from the Northern margin of Gondwana (High Atlas, Morocco, Jurassic): Palaeoenvironmental implications

Bodin, S., Mattioli, E., Fröhlich, S., Marshall, J. D., Boutib, L., Lahsini, S. & Redfern, J., 10 Nov 2010, In: *Palaeogeography, Palaeoclimatology, Palaeoecology*. 297, 2, p. 377-390 13 p.

Architectural style and quantification of a submarine channel-levee system located in a structurally complex area: Offshore Nile delta

Catterall, V., Redfern, J., Gawthorpe, R., Hansen, D. & Thomas, M., Nov 2010, In: *Journal of Sedimentary Research*. 80, 11-12, p. 991-1017 26 p.

Timing of early to mid-cretaceous tectonic phases along North Africa: New insights from the Jeffara escarpment (Libya-Tunisia)

Bodin, S., Petitpierre, L., Wood, J., Elkanouni, I. & Redfern, J., Oct 2010, In: *Journal of African Earth Sciences*. 58, 3, p. 489-506 17 p.

A constrained African craton source for the Cenozoic Numidian Flysch: Implications for the palaeogeography of the western Mediterranean basin

Thomas, M. F. H., Bodin, S., Redfern, J. & Irving, D. H. B., Jul 2010, In: *Earth-Science Reviews*. 101, 1-2, p. 1-23 22 p.

Sedimentological and sequence stratigraphic analysis of Carboniferous deposits in Western Libya: Recording the sedimentary response of the northern Gondwana margin to climate and sea level changes

Fröhlich, S., Petitpierre, L., Redfern, J., Grech, P. V., Bodin, S. & Lang, S., Jun 2010, In: *Journal of African Earth Sciences*. 57, 4, p. 279-296 18 p.

Diagenetic evolution of incised channel sandstones: Implications for reservoir characterisation of the lower carboniferous marar formation, ghadames basin, western Libya

Fröhlich, S., Redfern, J., Petitpierre, L., Marshall, J. D., Power, M. & Grech, P. V., Jan 2010, In: *Journal of Petroleum Geology*. 33, 1, p. 3-18 15 p.

Stratigraphic trapping potential in the Carboniferous of North Africa: developing new play concepts based on integrated outcrop sedimentology and regional sequence stratigraphy (Morocco, Algeria, Libya)

Redfern, J., Vining, B. A. (ed.) & Pickering, S. C. (ed.), 2010, *Petroleum Geology: From Mature Basins to New Frontiers—Proceedings of the 7th Petroleum Geology Conference*. Vining, B. A. & Pickering, S. C. (eds.). UK: Geological Society, Vol. 7. p. 725-734

A new approach for outcrop characterization and geostatistical analysis of a low-sinuosity fluvial-dominated succession using digital outcrop models: Upper triassic oukaïmeden sandstone formation, central high Atlas, Morocco

Fabuel-Perez, I., Hodgetts, D. & Redfern, J., Jun 2009, In: *AAPG Bulletin*. 93, 6, p. 795-827 32 p.

Mixed siliciclastic-carbonate shelf sedimentation-Lower Devonian sequences of the SW Anti-Atlas, Morocco

Lubeseder, S., Redfern, J. & Boutib, L., 15 Mar 2009, In: *Sedimentary Geology*. 215, 1-4, p. 13-32 19 p.

Applications of digital outcrop models: Two fluvial case studies from the Triassic Wolfville Fm., Canada and Oukaïmeden Sandstone Fm., Morocco

van Lanen, X. M. T., Hodgetts, D., Redfern, J. & Fabuel-Perez, I., 2009, In: *Geological Journal*. 44, 6, p. 742-760 18 p.

Structural style and evolution of a late Triassic rift basin in the Central High Atlas, Morocco: Controls on sediment deposition

Baudon, C., Fabuel-Perez, I. & Redfern, J., 2009, In: *Geological Journal*. 44, 6, p. 677-691 14 p.

Miocene igneous activity in the Northern Subbasin, offshore Senegal, NW Africa

Hansen, D. M., Redfern, J., Federici, F., di Biase, D. & Bertozzi, G., Jan 2008, In: *Marine and Petroleum Geology*. 25, 1, p. 1-15 14 p.

Petroleum generation and migration in the Ghadames Basin, north Africa: A two-dimensional basin-modeling study

Underdown, R. & Redfern, J., Jan 2008, In: *AAPG Bulletin*. 92, 1, p. 53-76 23 p.

A regional overview of the late Paleozoic glaciation in Oman

Martin, J. R., Jonathan, R. & Aitken, J. F., 2008, In: *Special Paper of the Geological Society of America*. 441, p. 175-186 11 p.

A review of Permian-Carboniferous glacial deposits in Western Australia

Mory, A. J., Redfern, J. & Martin, J. R., 2008, In: *Special Paper of the Geological Society of America*. 441, p. 29-40 11 p.

The importance of constraining regional exhumation in basin modelling: A hydrocarbon maturation history of the Ghadames Basin, North Africa

Underdown, R. & Redfern, J., Aug 2007, In: *Petroleum Geoscience*. 13, 3, p. 253-270 17 p.

Geochemical evaluation of East Sirte Basin (Libya) petroleum systems and oil provenance

Burwood, R., Redfern, J. & Cope, M. J., 2003, *Geological Society Special Publication/Geol. Soc. Spec. Publ.*. Geological Society, Vol. 207. p. 203-240 37 p.

Canning Basin Grant Group glaciogenic sediments: part of the Gondwanan Permo-Carboniferous hydrocarbon province.

Redfern, J., REDFERN, J. & BPJ, WILLIAMS., 1 Aug 2002, *The Sedimentary Basins of Western Australia 3, Proceedings of the Petroleum Exploration Society of Australia, Perth*. Petroleum Exploration Society of Australia

Introduction - A synthesis of current understanding of the structural evolution of North Africa

Badalini, G., Redfern, J. & Carr, I. D., 2002, In: *Journal of Petroleum Geology*. 25

Activities

Projects

Basins, stratigraphy and sedimentary processes

Brunt, R., Redfern, J., Huuse, M., Schroeder, S., Hodgetts, D., Hollis, C., Kane, I., Jerrett, R., Taylor, K., Flint, S., Gawthorpe, R., Bowman, M. & Bulot, L. G.

GeoEnergy and Energy Transition

Taylor, K., Redfern, J., Hollis, C. & Garwood, R.

Impacts

Development of predictive models for the distribution of hydrocarbon reservoir rocks in rift basins

Robert Gawthorpe (Participant), David Hodgetts (Participant), Jonathan Redfern (Participant), Catherine Hollis (Participant) & Stephen Flint (Participant)

New geological understanding reducing risk and uncertainty to improve economic exploitation of oil and gas resources across North Africa

Jonathan Redfern (Participant), Catherine Hollis (Participant), Mads Huuse (Participant), Kevin Taylor (Participant), Stefan Schroeder (Participant), Emma Finch (Participant) & David Hodgetts (Participant)

Jonathan.redfern@manchester.ac.uk