Curriculum Vitae

Name:	Paul William John GLOVER Ph.D., M.Sc., B.Sc.(Hons), ARCS		
Current post:	Professor of Petrophysics		
Correspondence Address: Telephone: Fax: Email:	Département de Géologie et de Génie Géologique Faculté des Sciences et de Génie, Université Laval Cité Universitaire, Sainte-Foy, Québec (QC), G1V 0A6, CANADA. +1-(418)-656-5180 (office, direct, voicemail) +1-(418)-656-7339 paglover@ggl.ulaval.ca Website: http://www2.ggl.ulaval.ca/personnel/paglover/Home.htm		
Home: Telephone:	1379, Chemin Royal, StPierre d'Île d'Orléans (QC) G0A 4E0, CANADA. +1-(418)-262-7617		
DOB: Family Situation:	27th February 1963Nationality: BritishMarriedLanguages: English, French, German (3 yrs), Japanese (3 yrs)		

Executive Summary

- Experience: 24 years experience; 19 years in 5 universities and 3 continents, 11 years in oil industry posts.
- **Research orientation:** Petrophysics, Reservoir characterisation, fluid flow and rock mechanics.
- **Research profile:** Fully trained petrophysicist. Extensive experience with all types of rock physics and rock mechanics techniques including routine and special core analysis, and all core-flooding methods. Particular focus on electrical methods and theoretical petrophysics. Full experience with the theory and practice of down-hole logging and exploration geophysics.
- Research students: 50 funded research students and postdocs from 16 countries since 1993.
- **Funding:** >\$2.3M research funding since 2000.
- Publications: 355 research contributions (66 in high quality peer-reviewed journals).
- **Teaching:** 24 years of experience with 99 course.years given; covering petroleum geology, reservoir flow and characterisation, geophysics, petrophysics, geostatistics and scientific communication to academia and industry. Experience developing distance learning courses delivered by the web.
- University administration: Experience as MSc and BSc degree coordinator as well as a member of teaching committees, and faculty committees. Experience since 1992 in under-graduate and post-graduate candidate selection, training, advice, and examination.
- **Management:** Experience managing significant research groups, including aspects of safety, personnel, resources, project management, technology transfer and the management of IT infrastructure. Health & Safety management at a departmental level including COSHH administration.
- Links with industry: Non-executive director of Gastem Inc. (Canadian E&P junior, 6 years), BP (5 years), Hydro-Québec, Well Performance Technology & UK NIREX (consultancy).
- **International collaboration:** Active and productive collaborative links worldwide, exemplified by 35% of peer reviewed publications containing overseas contributors.
- **International reputation:** Believed to be excellent globally: founding President of the *Energy*, *Resources and the Environment* Division of the European Geosciences Union (then EGS), and former member of the EGS General Council.
- Communication: 28 newsmedia communications since 2004.

Education

From	То	Institution	Qualification
1985	1988	University of East Anglia, UK	PhD, Experimental Geophysics, 1989
1984	1985	University of Newcastle upon Tyne, UK	MSc, Geophysics and Planetary Physics, 1985
1980	1984	Imperial College of Science and Technology, University of London, UK	BSc, Physics & Geophysics, 1984
1980	1984	Royal College of Science, London, UK	ARCS, 1984
1974	1980	Handsworth Grammar School, UK	12 GCE 'O' Levels (6 grade A), 5 'A' Levels (3A, B, D), Governors' Scholarship, 1981.

Profession	Professional Career					
From	То	Post	Employer			
12/05/02	present Professeur (agrégé) de Pétrophysique Department of Geology and Université Laval, Car Engineering Geology		Université Laval, Canada			
01/01/03	present	Company director (non-executive)	Gastem Inc.			
09/07/01	10/04/02	Professeur Invité Institut des Sciences de la Terre, de l'Environnement et de l'Espace	Université Montpellier II (Laboratoire de Tectonophysique & ISTEEM), France			
01/10/01	19/01/02	Senior lecturer in petrophysics. Director of AU Petrophysics Lab. Department of Geology and Petroleum Geology	University of Aberdeen, UK			
20/01/97	01/10/01	Lecturer in petrophysics and Director of AU Petrophysics Laboratory Department of Geology and Petroleum Geology	University of Aberdeen, UK			
01/07/95	31/12/96	Senior Research Fellow/Fluid Flow. Department of Flow in Geomaterials	Institute of Fluid Sciences, Tohoku University, Japan.			
01/03/95	15/06/95	Petrophysics Consultant	Independent Geophysical Consultant working for BP and WPT.			
01/03/92	28/02/95	NERC Postdoctoral Research Fellow Department of Earth Sciences	University College London, UK			
01/01/91	06/03/92	Lead Petroleum Engineer Grade 9 Geology and Exploration Department	British Petroleum Research Centre, Sunbury-on-Thames, UK			
01/11/88	01/01/91	Petroleum Engineer Grade 7 Geology and Exploration Department	British Petroleum Research Centre, Sunbury-on-Thames, UK			
01/09/87	01/05/88	Part-time Lecturer Department of Environmental Sciences	University of East Anglia, UK			

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Research Orientation

- The electrical, hydraulic, mechanical and micro-structural properties of rocks, paying particular attention to the physical processes involved.
- Fluid flow in porous and fractured reservoirs by experiment, modelling and field measurements.
- Application of reservoir fluid flow to gas and oil exploitation, geothermal and water resources and the transport and remediation of dissolved chemically toxic and radioactive contaminants in aquifers.
- The use of the electro-kinetic behaviour of rocks and surface conduction to predict reservoir water saturation and permeability.
- The use of the electro-kinetic behaviour of rocks to monitor fluid flow in reservoirs remotely.
- Shale gas.
- Sub-surface sequestration of carbon dioxide.
- Development of new laboratory petrophysical and downhole logging techniques.
- Development of a modern petrophysical theory.
- Integration of laboratory, borehole, production engineering, seismic data and field measurements for improved reservoir characterisation.
- Causes of high electrical conductivity in the lower continental crust and implications for the petrology and structure of the continental crust.
- The role of rock properties in understanding anthropogenic perturbations to the environment.
- The application of electro-kinetic processes to earthquake mechanisms and fluid flow near volcanoes.
- Archaeometry.

Publications

Please see the full Publications List

A full list of publications is at <u>http://www2.ggl.ulaval.ca/personnel/paglover/Publications.htm</u> A full list of conferences organised is at <u>http://www2.ggl.ulaval.ca/personnel/paglover/Conferences.htm</u> A full list of posters/presentations given is at <u>http://www2.ggl.ulaval.ca/personnel/paglover/Presentations.htm</u> Many of the abstracts, posters, papers and powerpoint presentations are available to download directly.

Number of articles	Type of publication or communication	
1	Editorships	
70	66 peer-reviewed publications in high quality journals and 4 more soon to be submitted.	
16	Conference sessions convened or conferences organised.	
123	Presentations at conferences and symposia.	
110	Published and referenceable abstracts.	
4	Special editorships, guest editorships, books etc.	
30	Miscellaneous, including commercial reports.	
354	TOTAL	

Research Supervision

Student	Date	Level	Subject
J. Ghaoui	2011-2012	BSc Lead supervisor	Reservoir fluid flow: The frequency-dependent streaming potential of disaggregated reservoir materials.
J.L. Déziel	2011-2012	BSc Lead supervisor	Gas flow: Modelling the flow of radon caused by permafrost melt.
D.H. Ahmat	2009-2011	MSc Sole supervisor	Shale gas: Shale gas potential of the St Lawrence lowlands.
G. Auger	2010-2011	BSc Lead supervisor	Reservoir fluid flow: Measurement of the frequency- dependent streaming potential of reservoir rocks.
E. Tardif	2008-2010	MSc Co-supervisor	Reservoir fluid flow: Frequency dependent electro-kinetic properties of rocks.
G. Cyr	2008-2010	BSc Sole supervisor	Seismology: Electro-kinetics and synthetic earthquakes.
G. Lalande	2008-2009	BSc Co-supervisor	Reservoir fluid flow: Frequency dependent electro-kinetic properties of rocks.
M. Al Jafaar	2005-2009	PhD External	Reservoir fluid flow: Measurement of streaming potential for oilfield monitoring in intelligent wells.
E. Walker	2006-2009	PhD Lead supervisor	Reservoir fluid flow: The impedance and electro-kinetic properties of porous and fractured geological media.
M. Jodouin	2007-2008	BSc Co-supervisor	Reservoir fluid flow: Frequency dependent electro-kinetic properties of rocks.
N. Déry	2004-2008	MSc Sole supervisor	Reservoir characterisation: Impedance spectroscopy of reservoir rocks & glass-beads: Measurement and modelling.
B. Carlier	2007	BSc Co-supervisor	Reservoir structural dynamics: Tectonic modelling of reservoirs using a high speed centrifuge.
G. Handschuh	2007	BSc Co-supervisor	Reservoir structural dynamics: Tectonic modelling of reservoirs using a high speed centrifuge.
M. Blouin	2006-2007	BSc Sole supervisor	Gas flow: Modelling the flow of radon caused by permafrost melt.
MC. Bergeron	2004-2005	BSc Sole supervisor	Reservoir fluid flow: Monitoring LNAPL pollution in reservoirs using impedance spectroscopic measurements.
A. Oullet- Simard	2004	BSc Sole supervisor	Reservoir fluid flow: Measurement of complex electrical conductivity of rocks.
F. Einaudi	1999-2004	PhD Co-supervisor	Rock characterisation: Petrophysical properties of rocks from the ODP.
S. Marcil	2002-2003	BSc Sole supervisor	Reservoir characterisation: Development of an AC theory for surface electrical conductivity in rocks.
LG. Fortin	2002-2003	BSc Sole supervisor	Reservoir characterisation: Stochastic simulation of porous media.
S. Ogilvie	1999-2002	Postdoc	Reservoir fluid flow: Fluid flow in rough fractures.

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		Sole supervisor	
E. Isakov	1999-2002	Postdoc Sole supervisor	Reservoir fluid flow: Fluid flow in rough fractures.
H. Al-Qassab	1999-2002	PhD Sole supervisor	Reservoir modelling: Integrated reservoir modelling.
S. Cuddy	1999-2002	PhD Sole supervisor	Reservoir characterisation: Fuzzy logic, neural networks and genetic algorithms for advanced wireline log analysis.
P. Taylor	1997-2002	MSc Sole supervisor	Reservoir characterisation: Complex electrical properties of partially saturated rocks.
A.D. Andrade	2000-2001	MSc Sole supervisor	Reservoir characterisation: Predicting porosity and hydrocarbon saturation of rock formations during drilling using genetic algorithms and fuzzy logic.
A. Gower	1999-2000	MSc Lead supervisor	Reservoir characterisation: Analysis and Application of FOIL Functions for predicting Reservoir Properties.
S. Ogilvie	1997-2000	PhD Co-supervisor	Reservoir characterisation: Micro to reservoir scale petrophysical characterisation of deformation bands in porous Permian sandstones, Inner Moray Firth and the southern North Sea.
W. Heelan	1999	BSc Sole supervisor	Reservoir characterisation: Characterisation of materials for the resonance enhanced drilling project.
P. Bormann	1999	BSc Sole supervisor	Reservoir characterisation: The distinction and characterisation of trough and planar cross-bedding from FMI images.
J. Wojewoda	1998-1999	Postdoc Co-supervisor	Reservoir drilling: Resonance enhanced ultrasonic drilling.
A. Krivstov	1998-1999	Postdoc Co-supervisor	Reservoir drilling: Resonance enhanced ultrasonic drilling.
M. Al-Kharoosi	1998-1999	MSc Sole supervisor	Reservoir characterisation: Conversion of laboratory capillary pressure data to reservoir conditions.
S. Mamedova	1998-1999	MSc Sole supervisor	Reservoir characterisation: Permeability prediction in the Andrew field UKCS blocks 16/27&16/28 northern N. Sea.
R. Martin	1998-1999	MSc Sole supervisor	Reservoir characterisation: Facies and permeability prediction from wireline logs.
K. Frew	1998-1999	MSc Sole supervisor	Reservoir characterisation: Facies and permeability pre- diction using fuzzy mathematics Britannia Field, North Sea.
E. Pulcrano	1998-1999	MSc Sole supervisor	Reservoir characterisation: Quantitative petrophysical evaluation of the porosity system and fluid saturation distribution in the fractured Caledonian granite reservoir at Well 16/03a-11 on the margin of the S.Viking Graben (UK).
G. Bächle	1998-1999	MSc Sole supervisor	Reservoir characterisation: Geological and petrophysical characterisation of the Lochaline sandstone.
M. Mahtot	1998-1999	PhD Co-supervisor	Reservoir characterisation: The behaviour of Archie's law in porous media.
A. McLellan	1998-1999	MSc	Mining geology: An investigation into the occurrence of

		Co-supervisor	graphite around granite aureoles.		
K. Mair	1997-1998	PhD External	Rock mechanics: Experimental studies of fault zone development in a porous sandstone.		
G. ABlanco	1997-1998	MSc Sole supervisor	Reservoir characterisation: Lithofacies prediction in the Magnus Field (Northern North Sea).		
S. McMahon	1997-1998	MSc Sole supervisor	Reservoir characterisation: Sand-shale and fluid content discrimination of late Jurassic reservoirs from Block 15/17, UK North Sea.		
F. Harrison	1996-1997	PhD Co-supervisor	Reservoir characterisation: Seismic response of variations in sedimentary facies.		
T. Coombes	1996-1997	MSc Internal	Reservoir characterisation: Comparative analysis of water saturation models, Dunbar Field, UKCS.		
C. Hamblett	1996-1997	MSc Sole supervisor	Reservoir characterisation: The effect of diagenesis on porosity and permeability within the Bruce Field, Blocks 9/8a, 9/9a, &9/9b, UKCS Bruce-Beryl embayment.		
L. Kilda	1996-1997	MSc Sole supervisor	Reservoir characterisation: Petrophysical evaluation of the Vilklyciai and Pociai Oil Fields, Gargzdai, Lithuania.		
I. Al-Zadjali	1996-1997	MSc Sole supervisor	Reservoir characterisation: Comparison of the controls on porosity and permeability of reservoir rock analogues using petrophysical, petrographical and geochemical analysis.		
L. Powrie	1996-1997	MSc Co-supervisor	Reservoir characterisation: The prediction of Hg injection capillary pressure from NMR relaxation times.		
R. Hikima	1993-1996	PhD Co-supervisor	Reservoir fluid flow: Modelling the effect of shear displacements of rough fractures in rocks on fluid flow.		

Please note: The BSc students are only listed here if they were supported by a research contract.

Research Funding since 2000

Date	Funding source	Project	Amount
2012-2013	NSERC Research Tools and Instruments - Category 1 Frequency-dependent electro-kinetic measurements during rock and soil deformation: Essential equipment (pending).		\$167,365
2012-2015	NSERC Discovery Grants (individual)	Hydrocarbon and water reservoir characterisation and remediation using AC and DC electrokinetics: Laboratory measurement and theory.	\$165,000
2011-2013	American Chemical Society Petroleum Research Fund	Determination of reservoir rock properties using electro-kinetic methods (pending).	\$60,000
2012-2012	Imperial Oil	Delineation and monitoring the in situ (bio)remediation of soil impacted by recalcitrant petroleum hydrocarbons using impedance spectroscopy and electrokinetic measurements (pending).	
2011-2012	NSERC Research Tools and Instruments - Category 1	Frequency-dependent electro-kinetic measurements during rock and soil deformation: Essential	\$150,000

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		equipment.			
2007	NSERC Research Tools and Instruments - Category 1	The measurement and application of electro-kinetic measurements in hydrocarbon-bearing rock fractures.	\$62,100		
2006-2008	Schlumberger Information Solutions	Provision of professional software: Interactive Petrophysics.	\$132,678		
2006-2010	NSERC Discovery Grants (Individual)	Unification of fluid flow and electrical conduction in rocks and soils.	\$159,000		
2006-2008	Schlumberger Information Solutions	Provision of professional software: Interactive Petrophysics.	\$229,254		
2003-2005	Paradigm Geophysical Inc.	Provision of professional software: Geolog FE.	\$93,450		
2003-2005	Schlumberger Information Solutions	Provision of professional software: Interactive Petrophysics.	\$132,678		
2003	NSERC Research Tools and Instruments - Category 1	Impedance spectroscopy of reservoir rocks.	\$77,160		
2003-2004	NSERC Discovery Grants (individual)	Unification of fluid flow and electrical conduction in fractured rocks.	\$60,000		
2000-2002	NERC, Micro-to-Macro Thematic Programme	The scaling properties of fluid flow through rough fractures.	\$814,341		
	Total since 2000 (including pending)\$2,353,026				

Teaching - Courses Delivered in Geoscience and Reservoir Engineering

All courses at Université Laval were given in French. Many of the recent courses have dedicated websites or material available on-line. Please see <u>http://www2.ggl.ulaval.ca/personnel/paglover/Teaching.htm</u>

Date	Title	Level	Description	Institution
1988	ENV 103 Mathematics for Environmental Scientists	BSc.	Lecturer/course co- ordinator	
1988	ENV 212 Exploration Geophysical Field Techniques	BSc.	Lecturer	University of East
1988	Computing for Environmental Scientists	BSc.	Lecturer/course co- ordinator	Anglia
1988	Undergraduate research projects	BSc.	Research supervisor in geology and geophysics	
1989- 1992	Special Core Analysis	Industry	Lecturer/course co- ordinator	British Petroleum Research Centre
1992- 1995	B254 Earth Physics	BSc.	Lecturer/course co- ordinator	
1992- 1995	Undergraduate research projects	BSc.	Research supervisor in geology, global geophysics and exploration geophysics	University College London
1992- 1995	Presenting and Writing Scientific Papers in English	BSc.	Lecturer/course co- ordinator	
1995 - 1997	Presenting and Writing Scientific Papers in English	MSc.	Lecturer/course co- ordinator	Tohoku University, Sendai, Japan

			• •	Faul Glover, September 2011
1998 - 2001	Presenting and Writing Scientific Papers in English	BSc. & MSc.		
1997 - 2001	GL3503 Petroleum Geology	BSc.		
1997 - 2001	GL4505 Petroleum Geophysics	BSc.	Lecturer/course co-	
1997 - 2000	GL4006 Petrophysics and Geological Well Log Interpretation	BSc.	ordinator	University of Aberdeen
1997 - 2001	Formation Evaluation & Reservoir Fluid Flow	MSc.		
1997 - 2001	Petrophysics	MSc.		
1997 - 2000	Degree co-ordinator	MSc.	Director of studies	
1999 - 2001	Degree co-ordinator	BSc.	Director of studies	
	Recent courses are li	sted by year with	student numbers where av	ailable.
2002	GLG-17523 Global geophysics	BSc.	Lecturer	Université Laval
2003	GGL-66565 Petrophysics	MSc. & PhD.	Lecturer/course co- ordinator	Université Laval
	 GGL-21436 Research project in industry I GGL-21544 Research project in industry II GLG-19683 Research 	BSc. BSc. BSc.		
2004	 project in industry GLG-21437 Research project in industry II GLG-13202 Research project in department 	BSc. BSc.	Lecturer/course co-	Université Laval
2004	 GLG-21441 Research project in department II GGL-21440 Design in 	BSc. BSc.	ordinator	
	geological engineering II • GGL-10356 Applied	BSc.		
	 geology II GGL-21438 Techniques and practice in geo- engineering 	BSc.		
	 GGL-66565 Petrophysics 	MSc. & PhD.		
	• GGL-21436 Research project in industry I	BSc.		
	 GGL-21544 Research project in industry II GLG-19683 Research 	BSc. BSc.		
2005	 GLG-21437 Research 	BSc.	Lecturer/course co- ordinator Univer	Université Laval
	project in industry IIGLG-13202 Research	BSc.		
	project in departmentGLG-21441 Research	BSc.		

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	project in department II • GGL-21440 Design in geological anging II	BSc.		
	 geological engineering II GLG-17523 Global geophysics 	BSc.		
	GGL-66565 PetrophysicsResearch methodology	MSc. & PhD. MSc. & PhD.		
	GGL-21436 Research	BSc.		
	 project in industry I GGL-21544 Research project in industry II 	BSc.		
	 GLG-19683 Research project in industry 	BSc.		
	• GLG-21437 Research project in industry II	BSc.		
2006	• GLG-13202 Research project in department	BSc.	Lecturer/course co- ordinator	Université Laval
	• GLG-21441 Research project in department II	BSc.		
	GGL-21440 Design in geological engineering II	BSc.		
	GLG-17523 Global geophysics	BSc.		
	GGL-66565 Petrophysics	MSc. & PhD.		
	GGL-1004 Global geophysics	BSc.		
	• GGL-2601 Analysis and	68 students BSc.	Lecturer/course co- ordinator	Université Laval
	modelling of natural systems (geostats)	58 students		
2007	GGL-2700 Geological	BSc.		
	analysis of well logs	6 <i>students</i>		
	 GGL-7451 Petrophysics GLG-7001Research 	MSc. & PhD.		
	methodology	MSc. & PhD.		
	GGL-1004 Global geophysics	BSc.		
	geophysicsGGL-2601 Analysis and	80 students BSc.		
	modelling of natural	60 students		
2008	systems (geostats)GGL-2700 Geological	BSc.	Lecturer/course co-	Université Laval
2000	analysis of well logs	5 students	ordinator	Chryerone Lavar
	GGL-7451 Petrophysics	MSc. & PhD.		
	• GLG-7001Research	1 <i>student</i> MSc. & PhD.		
	methodology	2 students		
	• GGL-1004 Global	BSc.		
	geophysicsGGL-2602 Applied	82 students BSc.		
	geophysics	27 students		
2009	GGL-2700 Geological	BSc	Lecturer/course co-	Université Laval
	analysis of well logs	7 students BSc.	ordinator	
	GGL-2601 Analysis and modelling of natural	53 students		
	systems (geostats)			
	• GGL-7451 Petrophysics	MSc. & PhD.		

2010	 GGL-1004 Global geophysics GGL-2601 Analysis and modelling of natural systems (geostats) GGL-7451 Petrophysics GLG-7001Research methodology 	BSc. 89 students BSc. 66 students MSc. & PhD. 1 student MSc. & PhD. 9 students	Lecturer/course co- ordinator	Université Laval
2011	 GGL-1004 Global geophysics GGL-2601 Analysis and modelling of natural systems (geostats) GGL-2700 Geological analysis of well logs GGL-7451 Petrophysics GLG-7001Research methodology 	BSc. 98 students BSc. 81 students BSc. 4 students MSc. & PhD. MSc. & PhD. 7 students	Lecturer/course co- ordinator	Université Laval

I have designed GGL-1004 Global geophysics to be given as a distance learning course since 2008. Please access the web site <u>https://cours.ggl.ulaval.ca/2010a/glg-1004_83878</u> and use the "IDUL" «visiteur» and the "Mot de passe" «visiteur» to have full access to the 2010 site.

University Administration

Post	Role	Date
BSc degree administrator Aberdeen University	Degree publicity, recruitment, admission, student orientation and course advice, pastoral care and special needs, course administration, course assessment, timetabling and structure, collection of assessment data and graduation. Member of departmental and faculty teaching committees.	1997 - 2000
MSc degree administrator Aberdeen University	Degree publicity, recruitment, admission, student orientation and course advice, pastoral care and special needs, course administration, course assessment, timetabling and structure, collection of assessment data. Member of departmental and faculty teaching committees. Liaison with industry. Assessment and management of industrial bursaries.	1999 - 2001
Chairman of the departmental management committee (UER) Université Laval	This committee is the executive board for the academic department, to which the executive staff (the Head of department) reports. It concerns itself with all aspects of the academic department, and is the highest level at which decisions may be made in the department.	2003- 2004
BSc (Geology) Teaching committee Université Laval	Departmental teaching committee for the degree of geology, including recruitment, admission, course administration, course assessment, timetabling and structure.	2007- 2011
BSc (Engineering geology) Teaching committee Université Laval	Departmental teaching committee for the degree of geology, including recruitment, admission, course administration, course assessment, timetabling and structure.	2007- 2011
Undergraduate Student Research Award Assessment Committee NSERC/ Université Laval	This is a devolved NSERC funding body committee that sits at a faculty level. It judges grant applications and recommends funding.	2008- 2010

Management

Post	Role	Date
Manager of the Université Laval Petrophysics Laboratory	Safety, resource and project management, technology transfer (12 researchers in last 5 yrs).	May 2002 - present
Director of the Aberdeen University Petrophysics Group	Personnel, resource and project management, technology transfer management (10 staff).	1997 - 2001
Ex-manager of the Aberdeen University Petrophysics Laboratory	Safety, resource and project management, technology transfer management (7 staff). Annual budget: approx. 500k GBP pa. incl. salaries.	1997 - 2001
Joint facility manager, CT scanning unit, British Petroleum	Management of IT infrastructure associated with the BP X-Ray tomography scanner	1991 - 1992
Health and Safety Manager, British Petroleum	Health & Safety management of the research group including COSHH administration.	1988 - 1992
Academic roles at University College London, Aberdeen University & Université Laval	Full roles in undergraduate and post-graduate candidate selection, training, advice, and examination as well as teaching committees.	1992 – 1995 1997 – 2001 2002 - present

Experimental and Engineering Experience

My career progress has seen the design and construction of state of the art apparatuses for making measurements of the physical properties of rocks. The following short list describes the major projects:

- Design, construction and testing of pressure vessels (steel, polymer and composite), leadthroughs and piping systems to generate up to 1 GPa pressure using oil or gas pressure media.
- Design, construction and testing of electrical systems to control and measure pressure, temperature, acoustic, thermal, electrical and electro-kinetic measurements in core experiments.
- Design, construction and testing of all types of core-flooding experiments (water and gas, ambient and reservoir condition, steady state and transient, single phase, two phase and three phase flow).
- Design, construction and testing of reservoir condition fluid flow rigs with saturation monitoring by X-Ray CT and using radioactive absorption.
- Design, implementation, testing and use of software code for use on a Cray XMP supercomputer for modelling fluid flow through rough fractures in rocks.
- Design of software to analyse fluid flow though rough fractures in rocks (available online at <u>http://www2.ggl.ulaval.ca/personnel/paglover/Software.htm</u>).
- Design and construction of a rig to carry out imaging and flow measurements on rock fractures in rocks.
- Design, installation and testing of rock mechanics equipment (triaxial, uniaxial and hydrostatic) allowing the measurement of the physical properties of rocks (mechanical, fluid flow, electrical and acoustic) in drained and undrained reservoir rock samples.
- The design, construction, testing and use of a miniature triaxial pressure cell for the deformation of samples containing a window for viewing the sample during deformation.
- General engineering support of a large wind-tunnel at the Institute of Fluid Flow of Tohoku University.
- Design, construction and testing of rigs to allow measurements of impedance spectroscopy and capillary pressure on cores of reservoir rock at reservoir temperatures and pressures.
- Design, construction, testing of a bench-top percussive drilling rig.
- The design, construction, testing and use of basic petrophysics equipment including a high pressure saturation rig, a helium pycnometer, and a nitrogen permeameter.
- Design and construction of a scientific rig to carry out impedance spectroscopy and electro-kinetic
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measurements on reservoir rocks and unconsolidated reservoir materials.

• Design, construction and testing of two apparatuses for measuring the electro-kinetic properties of reservoir rocks and unconsolidated materials using an electro-magnetic drive.

The developments are shown at http://www2.ggl.ulaval.ca/personnel/paglover/Laboratory.htm were all designed and caused to be made by the applicant.

Professional Highlights -

2011	Invitation to head and develop a section within the European Geoscience Union on History, Art and Philosophy in Geosciences (HARP).
May 2011	NSERC grant obtained (\$165,000).
May 2010	Principal convenor of the EGU Union session entitled US4 " <i>History, culture, art and religion in the geosciences.</i> " in Vienna, as well as the associated public panel and audience discussion. This is an initiative of the applicant aimed at broadening the subjects covered by the EGU annual congress.
Summer 2009	Gastem/NSERC <i>distinguished lecture tour of Europe</i> "Measurements, modelling and applications of the electro-kinetic properties of rocks" Universities in Austria, Hungary, Switzerland, France, Italy and the UK.
May 2009	Principal convenor of two sessions at the annual EGU meeting in Vienna, entitled MPRG7 " <i>The Transport Properties of Geomaterials: Theory, Modelling, Measurement, Application and Integration</i> " and ERE14 " <i>Archaeometry: The use of geoscientific techniques to probe the archaeological environment</i> ."
June 2009	Co-convenor of a session at the joint AGU meeting in Toronto entitled GA13 " <i>Integrated</i> and Multi-scale Studies in Petrophysics and Applied Geophysics".
May 2008	Co-convenor (with A. Endres) of a session entitled SS2 " <i>Rock physics: Tying geophysics to geology.</i> " at GAC/MAC 2008 Québec, 2008.
May 2008	Principal convenor of a session at the annual EGU meeting in Vienna, entitled MPRG7 <i>"The Transport Properties of Geomaterials: Theory, Modelling, Measurement, Application and Integration"</i> .
May 2007	Principal convenor of a session at the annual EGU meeting in Vienna, entitled ERE9 <i>"Archaeometry: The use of geoscientific techniques to probe the archaeological environment ."</i>
May 2005	Two large NSERC grants obtained (equipment and research, \$212,100).
May 2004	Appointed Professor agrégé by Université Laval, Québec (backdated to May 2002)
May 2002	Appointed to Visiting Professor at Université Laval, Québec.
2002-2003	Invited specialist researcher at the Université Montpellier II (ISTEEM, Laboratoire de Tectonophysique), France.
2000-2001	Member of the General Council of the European Geophysical Society.
2000-2001	Founder and Chairman of the European Geophysical Society initiative and cross- disciplinary working group on Energy, Resources and the Environment.
April 2001	Principal convenor at the European Geophysical Society Congress in Nice in 2001 for the session "SE4.06: <i>Rheology and properties of the lithosphere, rocks and faults: Micro-to-macro behaviour of rock transport properties</i> ".
April 2000	Principal convenor at the European Geophysical Society Congress in Nice in 2000 for the session "SE33: Open Session on the Physical Properties of Geomaterials".

Oct. 1999	Vice-President (without portfolio), Aberdeen Formation Evaluation Society.
Oct. 1999	NERC Micro-to-Macro grant awarded (\$414,341) for research into the scaling properties of fluid flow through rough rock fractures.
Oct. 1998	CMPT grant awarded (\$120,000) : Resonance enhanced ultrasonic drilling of rocks.
Aug. 1998	Vice-President (Publicity), Aberdeen Formation Evaluation Society.
April 1998	Principal convenor at the European Geophysical Society Congress in Nice for the session "SE41: Electro-magnetic and Electro-kinetic Properties of Rocks: Integration of Laboratory, Borehole and Field Measurements".
1997	Invited lecture tour of Germany. "Causes of High Electrical Conductivity in the Crust."
Dec. 1996	Invited Keynote Speaker at the Fall Meeting of the American Geophysical
	Union. Subject: "An Electrical Conductivity Reference Earth Model - Experimental constraints on the electrical conductivity of the crust."
June 1995	Senior Research Fellow, Institute of Fluid Sciences, Tohoku University, Japan, at the invitation of the Japanese Ministry of Science.
March 1995	Principal convenor at the European Geophysical Society Congress in Hamburg in 1995 for the session "SE14: Integrated Experimental Measurements and Theoretical Description of Rock Transport Properties".
April 1996	Guest Editor for Surveys in Geophysics special volume on rock transport properties.
Nov. 1994	Invited Lecturer to the "Rock Fracture Mechanics and Fractals" Symposium and Workshop, Tokyo and subsequent lecture tour in Japan.
1993-1994	Editor of the proceedings volume of, and co-organiser of the meeting "Crack Systems
	<i>in Rocks: Fundamentals and Applications in Crustal Dynamics and Reservoir Engineering</i> ", with P.G. Meredith, and P.R. Sammonds.
Dec. 1992	Publication in NATURE of work on the electrical conductivity of fluid saturated graphite bearing rocks under high confining pressures, pore fluid pressures, and temperatures.
1991-1992	Joint supervisor of the British Petroleum CT Scanner installation at Sunbury-on-Thames, U.K., with responsibility for computing and image analysis of post-scan data.
1990-1992	Lead scientist for British Petroleum in the European Community funded multi-exploration company research project entitled "Injection de Gaz Non Miscibles dans les Reservoirs Fissurés ou Épais de la Mer du Nord", with IFP, TOTAL, CFP, AGIP, ELF Aquitaine, and Petrofina. This involved the supervision of a small team designing, and operating three phase water and gas flooding experiments, together with tri-monthly international meetings of the companies for scientific reporting and research planning.
1991	Lead scientist at BP of a small team investigating the feasibility of three phase micro- visualisation by solidification of post-flood fluids.
1988-1990	Research Scientist at BP : The electrical properties of core materials at reservoir conditions.
1988	Part-time Lecturer at the School of Environmental Sciences, University of East Anglia, U.K., teaching mathematics for scientists, exploration and global geophysics, and computing to undergraduate students.

Membership of Academic and Professional Bodies

Activity	Responsibility	Dates
Journal, Surveys in Geophysics, Kluwer Academic Press	Member of the Editorial Board	2001 - 2005
Aberdeen Formation Evaluation Society, SPWLA Chapter	Vice-president Ordinary member	1998 – 2001 Since 1997
European Geophysical Society- European Geosciences Union	President of the ERE Division Member of the General Council Chairman of HARP Ordinary member	2000 – 2002 2000 – 2002 From 2012 Since 1987
Society of Exploration Geophysicists	Associate member	Since 2005
EHPRG	Ordinary member	Occ. Since 1987
British HPTA	Ordinary member	Occ. Since 1987
American Geophysical Union	Ordinary member	Since 1990

Media

I believe that a good academic has a duty to communicate his/her science to the widest possible audience. Here are the most recent contributions made to the general media. Many of the items can be read or heard on my website at http://www2.ggl.ulaval.ca/personnel/paglover/Press.htm

Title	Medium	Date	Туре
La fonte du pergélisol, une menace pour la santé.	Le Soleil	31/05/2008	
Vers un Québec gazier ?	Le Soleil	03/03/2010	
Séquestration du carbone: peu de risques environnementaux, selon les experts.	Le Soleil	18/04/2010	
Marée noire: Désastre à notre démesure.	Le Soleil	18/06/2010	
Marée noire: Il n'y aura pas de solution «propre».	Le Soleil	18/06/2010	
Marée noire: Une richesse qui part en fumée.	Le Soleil	18/06/2010	Newspaper
Sur le promesses et les périls de l'exploitation du gaz de schiste, entrevue avec Pascale Guéricolas	Au fil des événements	02/09/2010	
Gaz de schiste : quelques «trous» dans la loi actuelle.	Le Soleil	20/09/2010	
Gaz de schiste: sous-sol "propre" dans les basses terres.	Le Soleil	30/09/2010	
Gaz de shale : ce que disent les rapports de forage	Le Soleil	30/09/2010	
Chaleur de fer au centre de la terre	Le Soleil	11/09/2011	
The Haiti earthquake, Interview with Jackie Czernin	CBC Radio 1 - Breakaway	13/01/2010	
The Haiti earthquake and its aftershocks, Interview with Jackie Czernin	CBC Radio 1 - Breakaway	20/01/2010	Radio
The Chile earthquake and its tsunami, Interview with Jackie	CBC Radio 1 -	01/03/2010	

Curriculum vitae, Paul Glover, September 2011

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Czernin	Breakaway		
The Deepwater Horizon disaster, Interview with Jackie Czernin	CBC Radio 1 - Breakaway	17/05/2010	
Are the recent global earthquakes chance, or not? Interview with Ian Hamilton	CBC Radio syndication	09/03/2010	
Le gaz de schiste au Québec, Interview with René Bélanger	CIHO FM 96.3 Charlevoix	02/09/2010	
De l`eau dans le gaz (Gaz de schiste), Interview with Janic Tremblay	CBC Radio Canada - Les années lumières	12/09/2010	
Exploitation of the potential Old Harry reservoir, Interview by Hélène Fauteux	CFIM Radio des Iles de la Madeleine	06/10/2010	
The Great Sendai Earthquake and tsunami, Interview with Jackie Czernin	CBC Radio 1 - Breakaway	11/03/2011	
Retour sur le monde, Le récit d'un québécois qui a vécu au Japon, Entrevue avec Diane Martin	Radio Canada, Première Chaîne	11/03/2011	
The Great Sendai Earthquake: Aftershocks and nuclear problems, Interview with Jackie Czernin	CBC Radio 1 - Breakaway	15/03/2011	
The Great Sendai Earthquake and tsunami, Interview with Justin Hayward	CBC National News	11/03/2011	
Discovery of hydrocarbons at Ste. Anne Desmaures	TVA/V-Tele	18/11/2009	
The Great Sendai Earthquake and tsunami, Interview with Mitsumi Takahashi	CTV Montréal midday news	11/03/2011	
The Great Sendai Earthquake and tsunami, Interview	Global news	11/03/2011	Television
The Great Sendai Earthquake and tsunami, Interview	CBC Montréal news	11/03/2011	10101151011
The Great Sendai Earthquake and tsunami, Interview with Kai Nagata	CTV Ontario	11/03/2011	

Editorships

1. Glover, P.W.J., Surveys in Geophysics, Kluwer, member of the editorial board, 2001 – 2005.

Refereed Publications (70 items)

- 2. Glover, P.W.J., F.J. Vine, R.G. Ross, & G. Turner, The measurement of electrical resistivity of rocks under simulated crustal conditions, In High Pressure Geosciences and Materials Synthesis, Ed. H. Vollstädt, Akademie Verlag, Berlin, 46 49, 1988.
- 3. Glover, P.W.J., Ross, R.G. & Jolly, H., The measurement of saturated rock electrical conductivity at lower crustal temperatures and high pressures, High Press. Res., 5, 705 707, 1990.
- 4. Glover, P.W.J., Vine, F.J. & Ross, R.G., Measurements of saturated basic and acidic rock electrical conductivities at lower crustal temperatures and high pressures, High Press. Res., 5, 735 737, 1990.
- 5. Glover, P.W.J., & Ross, R.G., A method of measuring the electric conductivity of saturated rocks in a high pressure cell subjected to high temperatures, High Temp. High Press., 22, 533 539, 1990.
- 6. **Glover, P.W.J.** & Vine, F.J., Electrical conductivity of carbon bearing granulite at raised temperatures and pressures, Nature, 360, 723 726, 1992. [pdf]
- 7. **Glover, P.W.J.** & Vine, F.J., Electrical conductivity of the continental crust, Geophys.Res.Lett., 21(22), 2357 2360, 1994.
- 8. Glover, P.W.J., Meredith, P.G., Sammonds, P.R. & Murrell, S.A.F., Ionic surface electrical conductivity in sandstone, J.Geophys.Res., 99(B11), 21635 21650, 1994.
- 9. Glover, P.W.J., P.G. Meredith, P.R. Sammonds, & S.A.F. Murrell, Measurements of complex electrical conductivity and fluid permeability in porous rocks at raised confining pressures, In Rock Mechanics in Petroleum Engineering, Proceedings of EUROCK '94, SPE/ISRM International Conference, Delft, The Netherlands, Balkema, Amsterdam, 29 36, 1994.
- 10. Glover, P.W.J. & Vine, F.J., Beyond KTB Electrical conductivity of the deep continental crust, Surveys in Geophysics, 16, 5 36, 1995.[pdf]
- 11. Glover, P.W.J., Baud, P., Darot, M. Meredith, P.G., LeRavalec, M., Zoussi, S., & Reuschlé, T., Alpha/beta phase transition in quartz monitored using acoustic emissions, Geophys.J.Int., 120, 775 782, 1995. [pdf]
- 12. Glover, P.W.J., Minerals on Stamps (Short Paper), Geology Today, 12(6), 223-229, 1996. [pdf]
- Glover, P.W.J., Gomez, J.B., Meredith, P.G., Boon, S.A., Sammonds, P.R., & Murrell, S.A.F., Modelling the Stress/Strain Behaviour of Saturated Rocks Undergoing Triaxial Deformation using Complex Electrical Conductivity Measurements, In Integrated Experimental Measurements and Theoretical Modelling of Rock Transport Properties, ed. Glover, P.W.J., Surveys in Geophysics Spec. Vol., 17, 307-330, 1996. [pdf]
- 14. **Glover, P.W.J.,** (Editor), Integrated Experimental Measurements and Theoretical Modelling of Rock Transport Properties, Surv. in Geophys., Spec. Vol., 17(3), Kluwer, Amsterdam, 1996.
- 15. **Glover, P.W.J.,** Graphite and electrical conductivity in the lower continental crust: A review, Phys.Chem.Earth, 21(4), 279-287, 1996.[pdf]
- 16. **Glover, P.W.J.** & K. Hayashi, Modelling fluid flow in rough fractures: Application to the Hachimantai geothermal HDR test site, Phys.Chem.Earth, 22(1-2), 5-11, 1997. [pdf]
- Glover, P.W.J., J.B. Gomez, P.G. Meredith, K. Hayashi, P.R. Sammonds & S.A.F. Murrell, Damage of saturated rocks undergoing triaxial deformation using complex electrical conductivity measurements: Experimental results, Phys.Chem.Earth, 22(1-2), 57-61, 1997. [pdf]

- Gomez, J.B., P.W.J. Glover & P.G. Meredith, Damage of saturated rocks undergoing triaxial deformation using complex electrical conductivity measurements: Mechanical modelling, Phys.Chem.Earth, 22(1-2), 63-68, 1997. [pdf]
- 19. Glover, P.W.J., K. Matsuki, R. Hikima & K. Hayashi, Fluid flow in fractally rough synthetic fractures, Geophys.Res.Lett., 24(14), 1803-1806, 1997.
- 20. Revil, A. & **Glover, P.W.J.**, Theory of ionic surface electrical conduction in porous media, Phys.Rev.B, 55(3), 1757-1773, 1997. [pdf]
- 21. Revil, A. & Glover, P.W.J., Nature of surface electrical conductivity in natural sands, sandstones, and clays, Geophys.Res.Lett., 25(5), 691-694, 1998.
- 22. Glover, P.W.J., K. Matsuki, R. Hikima & K. Hayashi, Synthetic rough fractures in rocks, J.Geophys.Res., 103(B5), 9609-9620, 1998.
- 23. Glover, P.W.J., K. Matsuki, R. Hikima & K. Hayashi, Fluid flow in synthetic rough fractures and application to the Hachimantai geothermal HDR test site, J.Geophys.Res., 103(B5), 9621-9635, 1998. [pdf]
- 24. Revil, A., P. Pezard & **P.W.J. Glover**, Streaming potential in porous media. I. Theory of the zeta-potential, J. Geophys. Res., 104(B9), 20021-20031, 1999.
- 25. Glover, P.W.J., K. Matsuki, R. Hikima & K. Hayashi, Characterizing rock fractures using synthetic fractal analogues, Geothermal Sci. & Tech., 6, 83-112, 1999.
- 26. Al Qassab, H.M., Fitzmaurice, J., Al-Ali, Z.A., Al-Khalifa, M.A., Aktas, G.A. & **Glover, P.W.J.**, Crossdiscipline integration in reservoir modeling: The impact on fluid flow simulation and reservoir management, Society of Petroleum Engineers, SPE 62902, 1-12, 2000.[pdf]
- 27. Cuddy, S.J. & **Glover, P.W.J.**, The Application of Fuzzy Logic and Genetic Algorithms to Oil Exploration, In: Developments in Soft Computing, Physica Verlag, pp. 167-174, 2000.
- 28. Ogilvie, S.R., J.M. Orribo & **P.W.J. Glover**, Novel and Conventional techniques for analyzing the petrophysical properties of deformation bands, Dialog, 8(3), October 2000. [pdf]
- 29. Glover, P.W.J., Gómez, J.B. & Meredith, P.G., Fracturing in saturated rocks undergoing triaxial deformation using complex electrical conductivity measurements: Experimental study, Earth Planet. Sci. Lett., 183(1-2), 201-213, 2000. [pdf]
- Glover, P.W.J., Pous, J., Queralt, P., Muñoz, J.-A., Liesa, M. & Hole, M.J., Integrated two dimensional lithospheric conductivity modelling in the Pyrenees using field-scale and laboratory measurements, Earth Planet. Sci. Lett., 178(1-2), 59-72, 2000. [pdf]
- 31. Glover, P.W.J., Hole, M.J. & Pous, J., A modified Archie's Law for two conducting phases, Earth Planet. Sci. Lett., 180(3-4), 369-383, 2000. [pdf]
- 32. Al Qassab, H.M., Fitzmaurice, J., Al-Ali, Z.A., Al-Khalifa, M.A., Aktas, G.A. & **Glover, P.W.J.**, Crossdiscipline integration in reservoir modeling: The impact on fluid flow simulation and reservoir management, Journal of Petroleum Technology, Nov 2000, 32-34, 2000.[pdf]
- 33. Ogilvie, S.R. & **Glover, P.W.J.**, High resolution petrophysical measurements of deformation bands in porous sandstones, Phys. Chem. Earth., Part A, 26(1-2), 27-32, 2001. [pdf]
- 34. Ogilvie, S.R., Isakov, E., **Glover, P.W.J.** & Taylor, C.W., A New High Resolution Optical Method for Obtaining the Topography of Fracture Surfaces in Rocks, Proceedings of the 8th European Congress for Stereology and Image Analysis, Image Analysis and Stereology, 20 (2) SUPPL. 1, Sept, 386-391, 2001.
- 35. Isakov, E., **Glover, P.W.J.** & Ogilvie, S.R., Use of Synthetic Fractures in the Analysis of Natural Fracture Apertures, Proceedings of the 8th European Congress for Stereology and Image Analysis, Image Analysis and Stereology, 20 (2) SUPPL. 1, Sept, 366-371, 2001.[pdf]
- 36. Isakov, E., Ogilvie, S.R., Taylor, C.W. & **Glover, P.W.J.**, Fluid flow through rough fractures in rocks I: High resolution aperture determinations, Earth Planet. Sci. Lett. 191 (3-4), 267-282, 2001. [pdf]

- 37. Ogilvie, S.R., Isakov, E., **Glover, P.W.J.** & Taylor, C.W., Use of Image Analysis and Finite Element Analysis to Characterise Fluid Flow in Rough Rock Fractures and their Synthetic Analogues. Proceedings of the 8th European Congress for Stereology and Image Analysis, Image Analysis and Stereology, 20 (2) SUPPL. 1, Sept, 504-509, 2001. [pdf]
- 38. Ogilvie, S.R. & **Glover, P.W.J.**, High Resolution Petrophysical measurements of Deformation Bands in Sandstones, Phys. Chem. Earth, Part A, 26 (1-2), 27-32, 2001. [pdf]
- 39. Ogilvie, S.R. Orribo, J.M. & Glover, P.W.J., The influence of deformation bands upon fluid flow using profile permeametry and positron emission tomography. Geophys. Res. Lett. 28 (1), 61-64, 2001. [pdf]
- 40. Ogilvie, S.R. & **Glover, P.W.J.**, The petrophysical properties of deformation bands in relation to their microstructure, Earth Planet. Sci. Lett., 193 (1-2), 129-142, 2001. [pdf]
- 41. Al Qassab, H.M., Al-Khalifa, M.A., Aktas, G.A., Fitzmaurice, J., Al-Ali, Z.A. & **Glover, P.W.J.**, Crossdiscipline integration in reservoir modeling: The impact on fluid flow simulation and reservoir management, SAJT, Summer 2001, 45-57, 2001.[pdf]
- 42. Cuddy S.J. & **Glover P.W.J.**, The Application of Fuzzy Logic and Genetic Algorithms to Reservoir Characterization and Modeling , in Soft Computing for Reservoir Characterization and Modeling Series: Studies in Fuzziness and Soft Computing, 80, Eds. P.M. Wong, F. Aminzadeh, M. Nikravesh, 219-242, ISBN 3-7908-1421-0, 2002. [pdf]
- 43. Ogilvie, S.R., Isakov, E. & **Glover, P.W.J.,** Advances in the Characterization of Rough Fractures in Reservoir Rocks, First Break (Technical article), 20(4), 233-239, 2002. [pdf]
- 44. Ogilvie, S., Isakov, E., Taylor, C. & **Glover, P.W.J.**, A new high resolution optical method for obtaining the topography of fracture surfaces in rocks, Image Anal. Stereol., 21, 61-66, 2002. [pdf]
- 45. Ogilvie, S.R., Isakov, E., Taylor, C.W. & **Glover, P.W.J.**, Characterisation of Rough-Walled Fractures in Crystalline Rocks, in Hydrocarbons in Crystalline Rocks, SP214, Eds. Petford N. & McCaffrey K.J.W., Geological Society of London Special Publication, 248 pp., ISBN: 162391378, 2003. 2005
- Einaudi, F., Pezard, P.A., Iledefonse, B. & Glover, P.W.J., Electrical properties of slow spreading ridge gabbros from ODP Hole 1105A, SW Indian Ridge, in Petrophysical Properties of Crystalline Rocks, eds., P.K. Harvey, T.S. Brewer, P.A. Pezard & V.A. Petrov, Geological Society Special Publication 240, 179-193, 2005.
- 47. Ogilvie, S.R., Isakov, E. & **Glover, P.W.J.**, Fluid flow through rough fractures. II: A new matching model for rough rock fractures, Earth Planet. Sci. Lett., 241, 454-465, 2006. [pdf]
- K. Matsuki, K., Chida, Y., Sakaguchi, K. & Glover, P.W.J., Size effect on aperture and permeability of a fracture as estimated in large synthetic fractures, Int. J. Rock Mech. & Min. Abstr., 43, 726-755, 2006.
- 49. Glover, P.W.J., Zadjali, I. & Frew, K., Permeability prediction from MICP and NMR data using an electrokinetic approach, Geophysics, 71, F49, 2006. [pdf]
- 50. Glover, P.W.J., & P. Bormann, The characterization of trough and planar cross-bedding from borehole image logs, J. Appl. Geophys., 62(2), 178-191, 2007. [pdf]
- Glover, P.W.J., Discussion and Reply Comment on "Permeability prediction from MICP and NMR data using an electrokinetic approach (P. W. J. Glover, I. I. Zadjali, and K. A. Frew, 2006, Geophysics, 71, no. 4, F49–F60), Geophysics, 72, X3-X5, 2007. [pdf]
- Glover, P.W.J. & Adám, A., Correlation between crustal high conductivity zones and seismic activity and the role of carbon during shear deformation, 2008, J. Geophys. Res., 113, B12210, doi:10.1029/2008JB005804. [pdf]
- 53. **Glover, P.W.J.,** The Use of Electrical Surveying and Predictive Deconvolution in the Search for Anglo-Saxon Grubenhäuser at New Bewick, Northumberland, UK, in J.-F. Moreau, R. Auger, J. Chabot, A. Herzog (eds), 2009, Proceedings, 36th International Symposium on Archaeometry, Quebec, 2006,

Université Laval, CELAT, Cahiers d'archéologie du CELAT no. 25, Série Archéométrie no. 7, ISBN 978 2-920576-98-8, 11-17, 2009. [pdf] published monochrome version, [pdf] draft in colour, [pdf] draft in black and white.

- 54. **Glover, P.W.J.**, What is the cementation exponent? A new interpretation, 2009, The Leading Edge, January 2009, 82-85. [pdf]
- 55. Glover, P.W.J. & Walker, E., A grain size to effective pore size transformation derived from an electrokinetic theory, Geophysics, 74(1), E17-E29, 2009. [pdf]
- 56. **Glover, P.W.J.,** The discovery of an Anglo-Saxon Grubenhaus at New Bewick, northern UK using electrical surveying and predictive deconvolution, Archaeometry, 52(2), 320-342, 2010. [pdf]
- 57. Glover, P.W.J. & Jackson, M.D., Borehole electro-kinetics, The Leading Edge, 29(6), 724-728. [pdf].
- 58. **Glover, P.W.J.**, Nonlinear electrical conductivity response of shaly-sand reservoir, Current Science, 99(3), 283-285, 2010. [pdf]
- 59. Glover, P.W.J., Ransford, T.J. & Auger, G., A simple method for solving the Bussian equation for electrical conduction in rocks, Solid Earth, 1, 85-91, 2010. [pdf]
- 60. Walker, E. & **Glover, P.W.J.**, Characteristic pore size, permeability and the electrokinetic coupling coefficient transition frequency in porous media, Geophysics, 75(6), E235--E246, 2010. [pdf], doi: 10.1190/1.3506561
- 61. **Glover, P.W.J.,** A generalised Archie's law for *n* phases, Geophysics, 75(6), E247-E265, 2010. [pdf], doi: 10.1190/1.3509781
- 62. Glover, P.W.J. & Déry, N. Dependence of streaming potential on grain diameter and pore radius for quartz glass beads, Geophysics, 75(6), F225-241, 2010. [pdf], doi: 10.1190/1.3509465
- 63. Tardif, E., Glover. P.W.J. & Ruel, J., Frequency-dependent streaming potential of Ottawa sand, submitted to J. Geophys. Res. B. [pdf] doi:10.1029/2010JB008053

Accepted

64. **Glover, P.W.J.**, Walker, E. and Jackson, M.D., Streaming potential coupling coefficients in reservoir rocks: A theoretical model, submitted to Geophysics.

Submitted

- 65. Glover, P.W.J., What is the saturation exponent? A new interpretation, submitted to Petrophysics.
- 66. **Glover, P.W.J.,** Tardif, E. & Ruel, J., Frequency-dependent streaming potential of porous media: Conceptual design, submitted to International Journal of Geophysics.
- 67. **Glover, P.W.J.,** Tardif, E. & Ruel, J., Frequency-dependent streaming potential of porous media: Experimental measurement of unconsolidated materials, submitted to International Journal of Geophysics.

In Preparation

- 68. Glover, P.W.J., Connectedness and relative permeability, in preparation for Geophysics.
- 69. Déziel., J.-L., **Glover, P.W.J.** & M. Blouin, Increased domestic radon exposure caused by permafrost thawing due to global climate change, in preparation for Nature.
- 70. Cyr, G., **Glover, P.W.J.** and Novikov, V., An electro-kinetic mechanism for artificial earthquakes, in preparation for Geophys. Res. Lett.
- 71. **Glover, P.W.J.**, Magnetic susceptibility of ancient and modern potsherds using a fast, cheap and portable probe, in preparation for Archaeometry.

Conference Organisation (16 items)

- 72. Conference Organisation Co-convenor of the international scientific meeting "Crack Systems in Rocks: Fundamentals and Applications in Crustal Dynamics and Reservoir Engineering", with P.G. Meredith, and P.R. Sammonds, University College London, London, UK, April, 1994.
- 73. Principal convenor of session **SE14** "Integrated Experimental Measurements and Theoretical Description of Rock Transport Properties" at the 20th European Geophysical Society Congress, Hamburg, Germany, April, 1995.
- 74. Principal convenor of session **SE41** "Electro-magnetic and Electro-kinetic Properties of Rocks: Integration of Laboratory, Borehole and Field Measurements" at the 23rd European Geophysical Society Congress, Nice, France, 20th 24th April, 1998.
- 75. Principal convenor of session **SE33** "Open Session on the Physical Properties of Geomaterials" at the 25th European Geophysical Society Congress, France, 25-29th April, 2000.
- 76. Principal convenor of session **ERE1** "Environmental challenges associated with hydrocarbon production: remediation, improved extraction and sensitive exploitation" at the 26th European Geophysical Society Congress, France, 26-30th March, 2001.
- 77. Principal convenor of session **SE4.06** "Rheology and properties of the lithosphere, rocks and faults: Microto-macro behaviour of rock transport properties" at the 26th European Geophysical Society Congress, France, 26-30th March, 2001.
- 78. Principal convenor of Society Symposium **EGS1** "Striking the balance between energy and resource provision and the environment in the 3rd millemium" at the 26th European Geophysical Society Congress, France, 26-30th March, 2001.
- 79. Section Chairman for the **Energy, Resources and the Environment** Section sessions ERE1, ERE2, ERE3 at the 26th European Geophysical Society Congress, France, 26-30th March, 2001.
- 80. Principal convenor of session entitled **ERE9** "Archaeometry: The use of geoscientific techniques to probe the archaeological environment ." at EGU 2007, Vienna, May 2007.
- 81. Principal convenor of session entitled **MPRG7** "The Transport Properties of Geomaterials: Theory, Modeling, Measurement, Application and Integration" at EGU 2008, Vienna, May 2008.
- 82. Co-convenor (with A. Endres) of session entitled **SS2** "Rock physics: Tying geophysics to geology." at GAC/MAC 2008 Québec, 2008.
- 83. Principal convenor of session entitled **MPRG7** "The Transport Properties of Geomaterials: Theory, Modeling, Measurement, Application and Integration" at EGU 2009, Vienna, May 2009.
- 84. Principal convenor of session entitled **ERE14** "Archaeometry: The use of geoscientific techniques to probe the archaeological environment ." at EGU 2009, Vienna, May 2009.
- 85. Co-convenor (with Li Zhen Chang, Michel Chouteau, Anthony Endres) GA13 "Integrated and Multi-scale Studies in Petrophysics and Applied Geophysics" at AGU/GAC/MAC Joint Meeting 2009, Toronto, 2009
- 86. Principal convenor of the Union session entitled **US4** "History, culture, art and religion in the geosciences." at EGU 2010, Vienna, May 2010.
- 87. Principal convenor of the Union session entitled **SPM1.57** "History, culture, art and religion: Panel and audience discussion (public)." at EGU 2010, Vienna, May 2010.

I am currently designing a new grouping within the EGU dedicated to history, art, religion and philosophy within the Earth Sciences, to build on the success of items 86 and 87 above. It is hoped to convene a number of sessions under this new grouping in 2013.

Presentations at Conferences and Symposia (123 items)

- 88. **Glover, P.W.J.,** F.J. Vine, R.G. Ross, & G. Turner, The measurement of electrical resistivity of rocks under simulated crustal conditions, 25th EHPRG International Conference on High Pressure Geosciences and Material Sciences, 25 27 August 1987, Potsdam, East Germany, 1987.
- 89. **Glover, P.W.J.,** R.G. Ross, & H. Jolly, The measurement of saturated rock electrical conductivity at lower crustal temperatures and high pressures, 12th AIRAPT & 27th EHPRG International Conference on High Pressure Science and Technology, 17 21 July 1989, University of Paderborn, Germany, 1989.
- 90. Glover, P.W.J., F.J. Vine, & R.G. Ross, R.G., Measurements of saturated basic and acidic rock electrical conductivities at lower crustal temperatures and high pressures, 12th AIRAPT & 27th EHPRG International Conference on High Pressure Science and Technology, 17 21 July 1989, University of Paderborn, Germany, 1989.
- 91. **Glover, P.W.J.** & F.J. Vine, Electrical conductivity measurements made under hydrostatic pressure, High Pressure Technology Association one day discussion meeting on High Pressure Research in Earth Sciences, University College London, 5th July 1990, 1990.
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