



Titus Murray

Titus is a structural geologist with extensive experience in the study and characterisation of faulted and fractured reservoirs in over 30 countries. Titus aims to provide services and tools that improve oil and gas discovery and production as well as groundwater industries. A vital part of this is the development of new algorithms to describe structures and fluid flow. Most recently, he has started an active Research and Development program to develop technology to characterise groundwater flow across and through faults.

Another critical part of his practice involves 2D and 3D Structural restorations. These projects are either;

- Offshore frontier exploration based on deep seismic data
- Onshore complex fold and thrust belts based on borehole and outcrop data.

Before setting up practice in Sydney (now Mittagong New South Wales), he worked for

- Midland Valley a structural geological R&D group in Glasgow Scotland
- UK Nirex the British Nuclear Waste disposal company
- Maptek, an Australian Pioneer in 3D geologic modelling for the mining industry.



Titus mapping faulted granite Long Hải Vietnam
<http://www.gigapan.com/gigapans/159734>

2002 – Present

Director
Faultseal Finance Pty Ltd &
Southern Highlands Structural Geology Pty
Ltd
Sydney, Australia

FaultSeal is a well-established, Sydney based, a technology company providing leading-edge structural geological technology to the Oil and Gas industry. Experience gained analysing fields, dry-wells and prospects in over 40 countries have allowed Titus to apply this to the development of techniques and tools. To enhance the process of fault seal analysis.

During the time at FaultSeal he has developed and commercialised the FaultRisk software tool. FaultRisk has seen extensive usage of customers including NOC's Super Majors and Independents as well as government groups. FaultRisk has licensed to Halliburton who are reselling the software as a Plugin for DecisionSpace Desktop. Software augmented through training courses for exploration and development.

More recently, a significant Research and Development Program targeting the role of faults on groundwater flow. Specifically, in the realms of aquifer management, CO2 sequestration groundwater exploration and mining impacts. With this, a new Brand Southern Highlands Structural Geology (SHSGEO) was established.

February 1997 – February 2002 Senior Structural geologist
Midland Valley Exploration
Glasgow, Scotland

Midland Valley Exploration (MVE) is the foremost Oil and gas Structural Geology R&D groups in the world. They are based in Glasgow and lead by Prof. Alan Gibbs. Titus undertook the critical roles of Manager Asia Pacific, then Account Manager for ExxonMobil. These commercial roles were balanced with time spent consulting and developing new techniques and technologies. During this time Titus was instrumental in developing strain related fracture modelling within MVE.

1994 – February 1997 3D Geological/Hydrogeological Modeler
UK Nirex
Oxfordshire England

Nirex was the United Kingdom Government-owned company responsible for the disposal of the UK's intermediate and low-level radioactive waste. Here Titus built a range of models of the crystalline basement from the very small scale to regional scale. These models were a core component of the interpretation of geology, well test and stress studies. He was also responsible for building a range of discrete fracture network, basin modelling and reservoir simulation grids.

1991 – 1994 Principle Consultant Oil & Gas
Maptek Pty Ltd
Australia and UK

Titus gained extensive 3D modelling experience while working in Australia and the UK for Maptek, the leading provider of 3D modelling software to the mining industry. At Maptek he managed the development of an oil and gas production-geology mapping system and then marketed this product internationally.

While developing and marketing the software, he researched and addressed the issues of fault seal and fracture analysis. In addition to working in the oil and gas work, he supported clients in the minerals and coal sectors. This involved ore body modelling and the development of fracture/fault analysis tools for geotechnical geologists.

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Titus Murray Studied Geology, Geophysics and Computer Science at Flinders University Australia (1984-1991).

Year	Quarter	Project Type	Basin	City	Fault Seal	Restoration
2018	Q2	Field workshop	Onshore Bonaparte Basin		Fault Seal	Restoration
		Structural Framework	Kurdistan	UAE	Fault Seal	Restoration
		Prospect Risking	New Zealand	Sydney	Fault Seal	Restoration
		Prospect Risking	Kurdistan	UAE	Fault Seal	Restoration
		Thirlmere Lakes	Sydney	Sydney	Fault Seal	Restoration
2018	Q1	Regional Restoration	Kimberley	Canberra		Restoration
2017	Q4	Prospect Risking	Otway	Brisbane	Fault Seal	
		Prospect Risking	Senegal	Edinburgh	Fault Seal	
	Q3	Compartment Review	New Zealand	Brisbane	Fault Seal	
		Thirlmere Lakes	Sydney	Sydney	Fault Seal	Restoration
	Q2	Geoscience Australia Faultseal R&D	Darling Basin	Canberra	Fault Seal	Restoration
Q1	Compartment Review	GOM	Houston	Fault Seal		
2016	Q4	Fault Framework Review	Perth Basin	Sydney	Fault Seal	
	Q3	Geoscience Australia Faultseal R&D	Darling Basin	Canberra	Fault Seal	Restoration
	Q2	Prospect Risking	Senegal	Edinburgh	Fault Seal	
	Q1	Prospect Risking	Gulf of Thailand	Bangkok	Fault Seal	
2015	Q4	Nautilus Training	Sarawak	Miri		
		Prospect Risking	Bering Sea	Stavanger	Fault Seal	
	Q2	Prospect Risking	Gulf of Thailand	Bangkok	Fault Seal	
		Compartment Review	Cuu Long	HCMC	Fault Seal	
Q1	Prospect Risking	New Zealand	Sydney	Fault Seal		
2014	Q4	Prospect Risking	Gulf of Thailand	Bangkok	Fault Seal	
		Nautilus Training	Sarawak	Miri		
		Structural Restoration	South China Sea	Kuala Lumpur		Restoration
	Q3	Prospect Risking	Papua New Guinea	Sydney	Fault Seal	
		Prospect Risking	Nam Con Son	HCMC	Fault Seal	
		Prospect Risking	Gulf of Thailand	Bangkok	Fault Seal	
		Compartment Review	Sarawak	Kuala Lumpur	Fault Seal	
	Q2	Structural Restoration	Perth Basin	Perth		Restoration
		Structural Restoration	Sarawak	Kuala Lumpur		Restoration
		FaultSeal Training	Sarawak	Miri		
		Prospect Risking	Indus	Pakistan	Fault Seal	
		Prospect Risking	Nam Con Son	HCMC	Fault Seal	
	Q1	FaultSeal Training	Nam Con Son	HCMC		
Prospect Risking		Deep Water Sabah	Kuala Lumpur	Fault Seal		
Structural Restoration		Deep Water Sabah	Kuala Lumpur		Restoration	
FaultSeal Training		Kuala Lumpur	Kuala Lumpur			
2013	Q4	Prospect Risking	Chad	Calgary	Fault Seal	
		FaultSeal Training	Chad	Calgary		
		Training	Deep Water Sabah	Kuala Lumpur		
		Prospect Risking	Gulf of Thailand	Bangkok	Fault Seal	
		Training		Houston		
	Q3	Prospect Risking	Papua New Guinea	Brisbane	Fault Seal	
		Prospect Risking	Papua New Guinea	Sydney	Fault Seal	
		Prospect Risking	Gulf of Thailand	Bangkok	Fault Seal	
		Training	Gulf of Thailand	Bangkok		
	Q2	Prospect Analysis	Papua New Guinea	Brisbane	Fault Seal	
		Prospect Analysis	Newfoundland	Houston	Fault Seal	
		Prospect Analysis	Papua New Guinea	Cairns	Fault Seal	
	Q1	Structural Restoration	Papua New Guinea	Cairns		Restoration
Prospect Analysis		Papua New Guinea	Brisbane	Fault Seal		
FaultSeal Training		US	Houston			
2012	Q4	Prospect Analysis	Gulf of Thailand	Bangkok	Fault Seal	
		FaultSeal Training	Gulf of Thailand	Bangkok		
		Structural Restoration	Papua New Guinea	Cairns		Restoration
		Prospect Analysis	Papua New Guinea	Brisbane	Fault Seal	

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	Q3	FaultSeal Training		Kuala Lumpur		
		Structural Restoration	Papua New Guinea	Cairns		Restoration
	Q2	FaultSeal Training		Kuala Lumpur		
		FaultSeal Training		Kuala Lumpur		
		Structural Restoration	Papua New Guinea	Cairns		Restoration
		Prospect Analysis	Malay Basin	Sydney	Fault Seal	
		FaultSeal Training		Kuala Lumpur		
Prospect Analysis	Niger Delta	Sydney	Fault Seal			
Q1	Prospect Analysis	Nam Con Son	Sydney	Fault Seal		
2011	Q4	Compartment Review	Newfoundland	St Johns	Fault Seal	
		Prospect Analysis	Nam Con Son	Sydney	Fault Seal	
	Q3	Compartment Review	Newfoundland	St Johns	Fault Seal	
		Prospect Analysis	Cut Long	Sydney	Fault Seal	
	Q2	Compartment Review	Newfoundland	St Johns	Fault Seal	
		FaultSeal Training	Newfoundland	St Johns		
	Q1	Compartment Review	Newfoundland	St Johns	Fault Seal	
		FaultSeal Training	Houston	Houston		
2010	Q4	FaultSeal Training		Perth		
		FaultSeal Training		Aberdeen		
		FaultSeal Training		Houston		
	Q3	Prospect Analysis	Niger Delta	Houston	Fault Seal	
		Prospect Analysis	Los Janos	Colombia	Fault Seal	
	Q2	Prospect Analysis	Niger Delta	Houston	Fault Seal	
		Prospect Analysis	Vienna Basin	Houston	Fault Seal	
	Q1	Compartment Review	Newfoundland	St Johns	Fault Seal	
		Prospect Analysis	Niger Delta	Houston	Fault Seal	
	2009	Q4	Prospect Analysis	Nam Con Son	HCMC	Fault Seal
Prospect Analysis			GOM	Sydney	Fault Seal	
Q3		Compartment Review	South China Sea	Sydney	Fault Seal	
		FaultSeal Training	Sarawak	Miri		
		Prospect Analysis	Nam Con Son	HCMC	Fault Seal	
Q2		Structural Restoration	East Java Sea	Sydney		Restoration
		Prospect Analysis	Los Janos	Sydney	Fault Seal	
Q1		FaultSeal Training	Niger Delta	Geneva		
		Structural Restoration	East Java Sea	Sydney		