

Fifty years of SPE membership - and still counting!



A reservoir engineer by background with a strong 'hands-on' approach, **Simon McDonald's** experience and expertise encompasses all aspects of reservoir evaluation and field development planning and management, anchored by a good understanding of geoscience issues and a strong commercial perspective.

He started his career with several overseas assignments with Shell International, before moving into consulting in the UK, with a time as an engineering manager with an oil and gas company with assets in the Arabian Gulf and North Africa.

Simon was a founder of ERC Equipose and is currently Principal Strategic Adviser for Sproule ERCE. At the beginning of 2025, Simon was recognised as a member of the SPE Legion of Honour with 50 years' continuous membership.

Who is Simon McDonald? Please tell us about yourself and walk us through your career

I was born in Liverpool and grew up on The Wirral, where I developed a lifelong interest in sailing as a member of West Kirby Sailing Club.

I studied Civil Engineering at Leeds University in the early 1970s, when the offshore oil and gas industry was taking off; all the UK engineering magazines and periodicals were reporting extensively on the investments being made in platforms and pipelines for the likes of Brent, Forties, Ninian and other large new fields and discoveries.

In my second year, I took an introductory course in Petroleum Engineering, and it was then that I joined the SPE, which had a membership at the time of around 20,000, 90% of whom were US based. The SPE has since grown into a truly international organisation, with some 70% of its professional membership¹ now based outside the US.

During my final year exams, I pivoted away from Civil Engineering to study for an M.Sc. in Petroleum Engineering at Imperial College London, where David Wilson was the Reader in Petroleum Engineering. David became a lifelong colleague, mentor and friend and, until this year, was Chairman of ERCE.

After graduating from Imperial, I joined Shell International as a Reservoir Engineer and spent nine years abroad with my wife Sarah: first in The Hague, then Doha, Qatar and finally Assen, North Holland. I was fortunate to have great mentors in Shell, and to be involved in several world-class projects, including leading the development plan for 16 sour gas fields to a new desulphurisation plant in East Holland, and participating in the appraisal drilling of the giant North Field in Qatar (which continued to expand in

size with each additional well and is now the source of gas for Qatar's LNG exports around the world).

I authored the reserves report for the North Field in 1981, presenting a fourfold increase in gas reserves to 300 trillion cubic feet (more recent estimates after completion of appraisal reportedly show the reserves to have grown to over 900 trillion cubic feet, making the North field the largest non-associated gas field in the world).

Sarah and I look back fondly on our time with Shell. The first two of our three children were born while we were overseas. We travelled widely, made an extensive network of friends (many of whom we are still in touch with) and I enjoyed playing rugby in Holland, and sand yachting, wind surfing and dinghy racing in Qatar.

We returned to the UK in 1985, when I joined the petroleum consultancy firm ERC as Principal Reservoir Engineer, where David Wilson was the Technical Director. These were exciting and challenging times, working in a much smaller company without the backup resources of a global multi-national. Unusually, all the reservoirs I had worked on with Shell had been carbonate, while most of the reservoirs in the North Sea and elsewhere are sandstone, so I had to learn quickly 'on the job'.

ERC grew rapidly and became a leader in the reporting of reserves and resources on the back of its selection for providing independent Petroleum Engineer's Reports (now known as Competent Person's Reports), included in the privatisation prospectuses for Britoil, Enterprise Oil and British Gas, and some high-profile takeover transactions (including Britoil by BP, and Ultramar by Lasmo). There were no internationally recognised standards

¹ Excluding students. The professional membership of the SPE in 2024 totaled some 70,000.



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for the reporting of offshore reserves and resources at the time (the SPE-sponsored PRMS was not introduced until 2007²) and so we came up with our own.

I was Managing Director of ERC at the time it came under the ownership of Petroleum Geo Services (PGS) in the mid-1990s. Shortly after, PGS and David Wilson set up Atlantis, an oil and gas company with assets in the Middle East and Tunisia, and I joined as Engineering Director. I was responsible for the engineering aspects of the development of two low permeability gas fields offshore the UAE, as well as Atlantis' non-operated interests offshore Tunisia, including development of a marginal oilfield producing to an FPSO.

With the sale of Atlantis by PGS in 2003, David and I resumed trading as consultants under the ERC name. I operated out of a summerhouse (known as "the shed") in my garden. We quickly re-established ourselves in the world of international reserves and resources reporting, acquiring several marquee

clients. All the geoscience input to our work was sub-contracted under a joint venture agreement with Equipoise, whose principals we had worked with on the privatisations in the 1980s, and we used an extensive network of consulting engineers with whom we had built relationships over many years. The business logic for merging the two companies became overwhelming as we grew, and so ERC Equipoise (ERCE) came into being in 2010, with me as Engineering Director.

The past 15 years have seen many changes as ERCE has grown and evolved. We operate in most of the major petroleum producing areas of Europe, Africa, the Middle East, Asia and Australia, and have offices in Kuala Lumpur, Perth and Calgary. Building on the core skills of our traditional oil and gas focussed reservoir evaluation consulting and expert services business, ERCE now provides many evolving clean energy technologies, including carbon capture and storage, geothermal, hydrogen, lithium, helium and wind energy.

² The Petroleum Resource Management System (PRMS) provides definitions and a related classification system used internationally to support project and portfolio management requirements. PRMS is referenced for national reporting and regulatory disclosure in many jurisdictions. PRMS was updated in 2018. Reference.



Simon (#89604) racing in the 1981 Qatar National Laser Championship, West Bay, Doha.

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In March 2025, ERCE joined with Sproule, a Canadian headquartered petroleum consultancy with offices in Holland and Mexico, in a strategic merger that offers more opportunities for our clients and employees as our new company, Sproule-ERCE, extends its reach around the world.

I can hardly believe that I have been a continuous member of SPE for 50 years; the time has passed so quickly. I have been fortunate that my career has coincided with the rapid growth of the industry, and the introduction of new technologies for evaluating and cost effectively developing oil and gas fields. I am lucky to have been guided by some excellent engineers in my early years, and to have had the opportunity to assess and evaluate hundreds of fields and discoveries in most of the oil and gas basins in the world. I have met and worked with many experts in their fields, and worked with some outstanding teams, including colleagues with many diverse backgrounds and experiences.

Why did you become involved with the Society of Petroleum Evaluation Engineers (SPEE)?

In North America, it has long been the case that to be an oil and gas evaluation practitioner one must be licenced to practice by the state. There is a strict process to secure a licence, including a degree in engineering, passing an examination and several years' experience, with an ongoing commitment to 16 hours per annum of formal continuous professional development. The opportunities to become professionally recognised as a practicing professional petroleum engineer outside of North America were until recently very limited.

Over 15 years ago, in response to international regulators taking a greater interest in the reporting of reserves in the public domain and looking to impose a more formal recognition process for competence to report publicly, a group of like-minded evaluation engineers started holding informal meetings in London to discuss reserves evaluation matters. We called ourselves The London Dining Club! I don't know why, as we never dined, but we did occasionally imbibe after our get-togethers.

We approached the Society of Petroleum Evaluation Engineers (SPEE), based in Houston, and enquired whether we could become affiliated. The SPEE is a self-regulating professional organisation focussed on

the specialised field of oil and gas reserves definitions, reserves evaluations and fair market value and, with the SPE, is one of the sponsoring organisations of PRMS. To qualify for SPEE membership, applicants must have a degree in engineering or geology, at least 10 years' experience in the evaluation of oil and gas properties, and the sponsorship of three members of good standing. SPEE membership, which has an enforceable code of conduct, meets all the requirements now expected by several regulatory authorities for the reporting of reserves and resources.

We received an enthusiastic response, as the SPEE Board was looking to extend its reach internationally, although first the members had to change the society's by-laws which at the time precluded any chapters outside of North America!

And so, in 2010, I was a founding member of the Europe Chapter of the SPEE, the first chapter established outside North America. The chapter holds quarterly meetings and hosts presentations and discussions on all matters to do with reserves and resources reporting. I served on the Executive Committee of the Europe Chapter and was then honoured to be elected by members to the main Board of SPEE and, subsequently, appointed to its Executive Committee. I organised the first annual conference outside North America in London in 2017 and was President of the Society in 2018.

My involvement with SPEE has been such a rewarding experience, broadening my horizons, deepening my understanding of reserves evaluation issues and leading to many new friendships.

As a Director and Principal of ERCE, how do you balance technical excellence with commercial growth in a consultancy business?

ERCE has always prided itself on the technical excellence of its personnel and reports; we like to believe this is one of the factors which differentiates us from our competitors. We take great pride in listening to and understanding our clients' requirements and tailoring our proposals and work programmes to deliver exactly what they need.

The petroleum consultancy business is highly competitive, with several long-established firms offering comparable services to ERCE. The business



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is also cyclical, both in the short run (workloads are typically higher around year-end during the annual reporting period for oil and gas companies and often softer during the summer months) and the long run (for example, periods of commodity price strength (2005-2014) or weakness (1986-2000)).

While the most important asset of a consultancy is its personnel, these are also the highest contributor to its cost base. It is therefore critical to be able to grow and service one's clients efficiently during peak periods at the same time as ensuring profitability in periods of lower activity. ERCE manages this cyclicity by setting staffing levels sufficient to service the "low activity" workload and employing independent consultants we have known and trusted over many years to service the peaks.

Looking back on your milestone of 50 consecutive years of membership with SPE, what are you most proud of in those years, and what would you have done differently?

At my advanced age, my competence in the use of today's advanced software for evaluating well tests, interpreting fluid properties and running reservoir simulators is almost non-existent. However, ERCE's technical staff still recognise the breadth and depth of my technical and commercial experience and often seek my advice as a sounding board to guide them in their work. It gives me great pleasure to continue to be useful.

There is quite a catalogue of field evaluations that I have got quantitatively 'wrong' during my career so it could be argued that, with the benefit of hindsight, I should have done these differently. However, PRMS requires disclosure of reserves at Proved (1P, or P90), Proved plus Probable (2P, or P50) and Proved plus Probable plus Possible (3P, or P10) levels of confidence; so, if I am doing my job right, over the length of my career statistically 10 per cent of my estimates should be not low enough (the usual measure of 'wrong', especially by bankers) and 10 per cent should be not high enough!

What advice would you give young professionals in the oil and gas sector?

I believe it is just as important for young professionals in the early stages of their career to recognise not only their strengths but also their

weaknesses, and to use this to guide their choices along the way. I realised at an early stage that my skills and interests were more suited to technical work than management, which lead me away from the excellent grounding I received from Shell and in the direction of consulting.

It is so important to keep learning, to stay curious, and to keep abreast of the latest techniques, particularly as the world transitions away from oil and gas to clean energy sources in the coming decades.

What next for Simon McDonald?

I am now working part time, which allows me to spend more time with Sarah and our family (including our four grandchildren) and to enjoy my hobbies and interests: golf, sailing, history, travelling, current affairs and spending time in our holiday home in Cornwall.

My role is now focussed on mentoring the excellent younger engineers in Sproule-ERCE and assisting the management with client interaction and company representation. I enjoy this hugely and have no plans to retire, for so long as Sproule-ERCE will have me!



Simon welcoming delegates to the 54th Annual Meeting of the SPE at the Geological Society, London, June 2017.