

CURRICULUM VITAE

NAME	David Aron
NATIONALITY	British
DATE OF BIRTH	2 December 1948
QUALIFICATIONS	<p>B.Sc.(Hons) Chemical Engineering University of Manchester Institute of Science and Technology (1970)</p> <p>M.Sc. History of Science and Technology University of Manchester (1971) Dissertation: "Academic Research and Innovation in the Petrochemicals Industry".</p> <p>Diploma in Accounting and Finance Association of Certified Accountants (1976)</p> <p>M.Sc. Petroleum Engineering Imperial College, University of London (1979) Dissertation: "Alternative Utilization of North Sea Associated Gas".</p> <p>C.Eng. Chartered Engineer (1983)</p>
PROFESSIONAL SOCIETIES	<p>Chairman London Section of Society of Petroleum Engineers (2000-2001)</p> <p>Fellow, Energy Institute</p> <p>Fellow, Institution of Chemical Engineers</p> <p>Member, Institution of Gas Engineers and Managers</p> <p>Member SPE Projects, Facilities & Construction Advisory Committee, 2003-2019</p> <p>Regional North Sea Award SPE Projects, Facilities & Construction 2016</p>

Member, Society of Petroleum Evaluation Engineers

Member, Association of International Petroleum Negotiators

Member, Academy of Experts

PAPERS

"The Secondary Recovery Project at Ogharefe Field, Nigeria", Journal of Petroleum Technology, April 1984

"The Role of Long Term Production Testing in Reservoir Evaluation", Proceedings of 2nd Annual Landward Oil and Gas Conference, March 1986, London

"Reservoir Engineering Aspects of Condensate Field Development", at Development of Condensate Fields Conference, September 1988, London

"The Development of North Sea Gas Condensate Reservoirs" at Development of Gas and Condensate Fields Conference, June 1990, Krasnodar, USSR

"The Integrated Team Approach to Oil and Gas Development" at Development of Oil and Gas Fields: Modern Situation, Problems and Perspectives Seminar, Oil and Gas Research Institute, March 1991, Moscow, USSR

"Gas Contracting Following the Introduction of Competition into the U.K. Gas Market". SPE 24239 presented at the SPE Oil and Gas Economics, Finance and Management Conference, April 1992, London.

"The Comparison Between the Competitive and Negotiated Gas Contract" at Regulation and Marketing in the UK Gas Industry, October 1993, London.

“Managing Gazprom’s interface between its domestic market with Europe and the Former Soviet Union” at The Impact of Gazprom on the European Gas Market, February 1997, London.

“Reserve Acquisition Development and Production Strategies” at Reserve Acquisitions in Oil and Gas, September 1997, London

“The Baltic Downstream Oil Market: The Potential for LUKoil” at LUKoil in the FSU & World Markets, October 1997, London.

“Understanding Gazprom’s Strategies for Gas Sales into Europe and the UK and the Likely Impact on Pricing - Key Markets and Volumes in the Short & Long Term” at UKGAS '97, October 1997, London

“The Impact of Russian and Algerian Gas on the European Gas Market” at The Commercial Impact of Norwegian Gas on the UK and European Gas Markets, June 1998, London

“Examining the Reliability of Buying Long-Term Russian Contracts and Outlining the Impact of Russian Gas on Pricing and Supply Throughout Europe” at Pricing, Supply and Trading in a Liberalised & Changing European Gas Market, July 1999, Amsterdam.

“European Gas Storage and Alternatives” at European Gas Storage and Storage Alternatives, March 2000, London.

“Data Issues Related to the Re-Development of Mature Oil Fields”, SPE Applied Technology Workshop on Reservoir Management and Monitoring, London, April 2008.

“Development Planning: East Africa Oil and Gas”, 4th Conference on the Petroleum Potential and Investment Opportunities in East Africa, Mombasa, Kenya, March 2009

“East Africa Gas and Potential Markets”, East Africa Petroleum Conference and Exhibition, Kampala, Uganda, February 2011

“Upstream Gas Exploration and Gas Demand” 17th Annual Balkan and Black Sea Petroleum Association Conference, Vienna, April 2011

“Key Policy Developments and Regulatory Considerations”, Tight and Shale Gas Summit, Budapest, Hungary, October 2011

“The Potential for Unconventional Oil and Gas in Europe”, 18th Annual Balkan and Black Sea Petroleum Association Conference, Vienna, May 2012.

“East Mediterranean Gas Developments”, 23rd Annual Balkan and Black Sea Petroleum Association Annual Conference, Vienna, April 2017

PUBLICATIONS

"Gas Contracts in the European Context" published in European Community Energy Law by Graham & Trotman/Martinus Nijhoff, 1994.

COURSES GIVEN

"Introduction to Oilfield Exploration and Production" College of Petroleum Studies, Oxford.

"Gas Contracts", Centre for Petroleum & Mineral Law & Policy, University of Dundee.

EXPERIENCE

1988 - Present

Managing Director, Petroleum Development Consultants.
Consulting company providing expertise in energy policy, oil and gas developments.

Major projects are shown on the following list

2019 – Present, Nigeria

Expert witness on arbitration between international operator and local affiliate regarding operation of joint venture.

2019 – Present Egypt

Expert witness on arbitration involving one of the LNG export terminals.

2019 Australia

Providing expert determination of an LNG pricing dispute.

2018 UK

Expert witness for UK Government regarding tax treatment of gas cavern storage.

2018 – Present Trinidad & Tobago

Expert witness on arbitration dispute regarding confiscation of an oil licence.

2016 - 2017 Hungary

Expert witness on gas operational dispute onshore Hungarian gas fields UNCITRAL arbitration.

2016 - 2018 Trinidad & Tobago

Expert witness on arbitration regarding gas supply contract UNCITRAL London tribunal.

2016 – 2018 Algeria

Technical expert regarding the construction of LNG liquefaction plant in North Africa for ICC arbitration.

2016 – 2017 Kenya

Team Leader on major World Bank consultancy project to undertake an Institutional Review for Kenya's petroleum institutions.

2015 – 2016 Egypt

Providing technical support to Egyptian Gas Company in development of offshore Zohr gas field.

2015 Honduras

Led World Bank project to provide Technical Support to Strengthen the Government of Honduras Capacity to Manage and Monitor the Hydrocarbons Sector

2015 – 2018 Croatia

Expert on international tribunals (ICSID and UNCITRAL) regarding investments in oil company

2014-2015 Peru

Led project supporting Ministry of Energy and Mines assessment of gas reserves and resources.

2014 Azerbaijan

Reservoir engineering expert on licence valuation. the UK High Court.

2013 – 2014 Iraq

Expert witness case in international arbitration in Geneva involving valuation of an oil and gas licence in Kurdistan.

2013 – 2014 Jordan

Led team evaluating performance of BP with respect to the Risha tight gas field on behalf of the Ministry of Energy and Mineral Resources.

2013 Germany

Carried out due diligence of oil storage facility.

2013 – UK

Expert witness for refinery rating valuation

2012-2013 Kenya

Led team carrying out preliminary design for inland LPG storage and bottling facilities.

2012-2013 Kenya

Led team evaluating new petroleum storage facility, Mombasa.

2012 – 2013 Cameroon

Led project on LPG and condensate market study for Cameroon LNG

2012 – 2014, Indonesia

Project Director for preparation of Gas Development Master Plan for Government of Indonesia financed by AusAID

2011 – 2012, Israel

Advisor to Ministry of Energy and Water on strategy for development of offshore gas reserves in Israel

2011, Norway

Expert witness in arbitration covering the use of a tanker for processing naphtha and treatment of waste

2011, Mauritius

Expert witness on contamination of fuel oil tanker cargo

2011, Colombia

Leading project to develop regulatory structure for exploration and production of non-conventional hydrocarbons

2011, Egypt

Evaluation of onshore and offshore licences for potential purchase

2010, Nigeria

Attendance at data room and evaluation of potential oil and gas licences

2010, Sudan

Expert witness for arbitration regarding dispute on sale and purchase of an interest in an oil production sharing agreement

2010 European Union

Emergency oil stocks project for Energy Commission Vienna covering eight EU applicant countries and three observer countries.

2010 Saudi Arabia

Team leader for gas and LPG distribution regulation project, Ministry of Petroleum and Mines

2010 Mozambique

Reservoir engineering review of development expansion of the Temane and Pande gas fields for Standard Bank, South Africa

2009 Tanzania

Led gas pipeline development pre-feasibility study on behalf of an operator and the Tanzania Petroleum Development Corporation

2009 France & UK

Led due diligence project for gas storage projects on behalf of European Investment Bank.

2009 Tanzania

Leading bulk petroleum procurement project for Energy & Water Utilities Authority

2009 Papua New Guinea

Preparation of development study for onshore gas discoveries and conversion via a floating vessel to LNG.

2009 UK

Acted as an expert witness for a High Court dispute regarding access to Palmers Wood an onshore oil field

2008 Romania

Preparation of conceptual development study for re-development of onshore gas field.

2007 -2008 Brunei

Acted as expert witness at Singapore International Arbitration on case regarding seismic acquisition

2007 Kenya

Leading E & P licensing terms project for National Oil Company, Kenya.

2007 Russia

Expert witness on claim valuation for the Vankor oil field, East Siberia

2006 – 2011 Australia

Expert witness for Australian Tax Office regarding tax claim covering the Bass Strait offshore oil and gas fields.

2006 Argentina

Led preparation of field re-development plan for Lunlunta Carrizal field on behalf of RepsolYPF. Leading work to carry out recommendations on behalf of RepsolYPF.

2006 UK

Advised Office of Electricity and Gas Regulation (OFREG) in Northern Ireland on technical aspects of price regulation for Phoenix gas transmission & distribution company

2005-2006 Malaysia/Vietnam

Expert witness for oil construction case involving Hyundai vs Talisman for offshore oil field. Held at London International Court of Arbitration.

2005 – 2006 Romania

Managed construction of production facilities, flowlines and export gas line for three onshore gas fields.

2005 – 2006 Abu Dhabi

Led project preparing Field Master Plans for two giant offshore oil fields for ADMA-OPCO state oil company.

2005 Kyrgyzstan

Led due diligence for European Bank on fuel and storage development including preparation of the business plan

2004 – 2010 Israel

Advising the Natural Gas Authority on the development of the Israel gas industry particularly covering gas transportation and gas distribution franchises. Advised on development of Tamar gas field.

2004 – 2005 Kenya

Led project developing LPG supply and demand and preliminary design of LPG import and distribution infrastructure.

2004 Kazakhstan

Carried out technical review of problems incurred at the Karachaganak Field during start-up on behalf of the Republic of Kazakhstan.

2003 – 2004 European Union

Project Director of EU funded project to evaluate the compliance of 155 EU refineries with European directives on air pollution.

2003 – 2005 Pakistan

Project Director of Downstream oil reform projects covering both pricing and standards. Project being carried out for Ministry of Energy/World Bank.

2003 Ukraine

Advised Ministry of Energy on potential use of the Odessa Brody oil pipeline and prepared summary of recommendations for Ukraine President.

2003 Poland

Led study carrying out overall gas supply and demand as part of development onshore gas field

2003 Kyrgyzstan

Led sale of 50% of KPC oil company including refinery and E & P acreage

2003 Russia

Led project on gas reform and development on behalf of the Russian Ministry of Energy and European Delegation, Moscow. Developed alternative scenarios for development of the gas system.

2003 Lebanon

Developed Lebanon Hydrocarbons Sector Strategy including refinery options and gas supply including gas pipeline imports and a grass roots LNG plant.

2003 Mediterranean Region

Managing workshops for MEDA countries (Algeria, Tunisia, Egypt, Morocco, Jordan, Israel, Palestine, Syria, Turkey, Cyprus, Malta, Lebanon) covering refining, upstream and downstream oil & gas

2003 Georgia

Development of market strategy for export of oil products through Poti Port on behalf of the EBRD.

2003 - Lithuania

Acted as expert witness at International Court, Copenhagen regarding a dispute on lost profits for a joint-venture oil production.

2001-2003 Ireland

Supporting the development of the Seven Heads gas field covering in particular gas sales, gas transportation, gas processing and the development of the Irish gas Code of Operations

2001-2002 Croatia

Leading team of engineers and economists developing models of gas pricing and petroleum product pricing for regulation for the Ministry of Economy, financed by the World Bank.

2000 United Kingdom

Led technical team supporting Ofgem (the UK gas and electricity regulator) in determining the price control for Transco the monopoly transmission and distribution company.

2000 Poland

Evaluation of marketing of gas from offshore Baltic examining both the commercial and physical constraints of the Polish gas system

1999-2000 Vietnam

Managed large World Bank project to support PetroVietnam the state oil & gas company in its negotiations with BP Amoco/Statoil/ONGC. The project covers two offshore gas fields, a 400km pipeline, an onshore terminal and the sale of gas to a number of power stations.

1999 Ukraine

Provided an assessment of the Ukraine gas market and future prices to allow reserves to be allocated for a domestic producer.

1999 Kazakhstan

Acted as expert witness for the Government of Kazakhstan in a case for a \$600 million claim regarding joint venture agreement and production sharing agreement.

1999 United Kingdom

Carried out a competitor analysis study of UK gas marketing companies for a major European gas company.

1999 Sharjah, United Arab Emirates

Reviewed on behalf of the Arab Banking Corporation future work plans of Crescent Petroleum in support of a bank loan.

1999 Saudi Arabia

Wrote a report for the European Community entitled "Impact of the Potential Entry of Saudi Arabia to the World Trade Organisation on the European Petrochemical Industry".

1998 Qatar

Carried out a market study on potential gas sales from the North field the world's largest gas field. Covered both the potential for local pipeline exports and the LNG export trade.

1998 Romania

Advisor to Petrom the national oil and gas company on privatisation and led team to develop the business plan. This plan included consideration of exploration and production (onshore, offshore and international) two major refineries, transportation and gasoline stations.

1998 United Kingdom

Carried out study into the use of a partly depleted onshore gas field for conversion into a gas storage facility. Study reviewed the technical and commercial requirements for gas sales and a valuation of the field.

1998 Libya

Carried out feasibility study for the development of the En Naga North discovery onshore Libya

covering all aspects of the project including wells, surface facilities, project planning, cost analysis and economics.

1998 Ukraine

EU TACIS project on Development of an Energy Plan for Crimea - oil and gas expert. Prepared paper on development of the Crimea gas industry particularly covering development of the Black & Azov Sea gas reserves.

1998 Ukraine

Review of gas reserves offshore and onshore Crimea for two 50MW gas powered stations for EBRD. Detailed evaluation of the reserves and deliverability of the complex undeveloped onshore Fontanovskoye gas condensate field. Developed gas supply and demand model for Crimea market.

1997 New Zealand

Analysis for a client of the domestic gas customer market in the UK and the lessons to be learnt on the costs of customer acquisition and retention.

1997-8 Ukraine

World Bank Technical Assistance on Deregulation and Opening of the Gas Market on behalf of the State Oil and Gas Committee and Ukrgazprom. Project involved developing proposals for the introduction of gas balancing and gas auctions as part of the move towards a competitive gas market in Ukraine and in the context of a potential loan from the World Bank to the Government of Ukraine subject to the introduction of these reforms.

1997 United Kingdom

Advisor to ABB developer of 395 MW Scunthorpe Power Station on gas supply contract and connection to the Transco gas pipeline system.

1997 Western Europe

Development of strategy document for major European gas company for future development of Western European gas distribution companies in the context of the European Gas Directive.

1997 Russia

Evaluated oil and gas reserves for Sakhalin Petroleum plc and provided a report on the possible development of these reserves.

1997 United Kingdom

Development of a short-term and long-term supply and demand based spot gas pricing model for a major participant in the UK gas industry. PDC provided gas industry knowledge to the project and developed the offshore gas supply curves.

1997 Spain

Prepared initial gas contracting strategy for new gas fired powered projects in Spain. The study involved evaluating possible gas supply alternatives and paid particular attention to the Draft European Gas Directive.

1997 United Kingdom

Outline development plan for a gas condensate field in the UK North Sea for Kerr McGee Oil to evaluate future prospectivity of exploration plans.

1992-7 United Kingdom

Led development of Bell Gas as an independent gas marketer supplying approximately 5,000 industrial and commercial sites in the UK. Acted as Managing Director for Bell Gas. Led a group of independent gas companies in their negotiations with OFGAS (the UK gas regulator) and Transco (the UK gas pipeline monopoly) related to the development of the Network Code.

1996 Hungary

PHARE Assistance for Harmonisation in the Energy Field: Establishing an Understanding of EU Energy Sector Crisis Rules in Hungary

1996-7 Lithuania

PHARE Assistance to the Development of Energy Regulatory Framework. This involved an assessment of the restructuring of the oil and gas industries in Lithuania. Worked on the development of the establishment of a new independent multi-sectoral Energy Regulatory

Authority covering the gas, electricity and district heating industries.

1996 Turkey

Evaluation of the fuel security aspects for a planned CHP station to meet financial close requirements. Analysis of the Turkish gas and oil markets.

1996 Tunisia

Evaluation of onshore and offshore oil exploration and production assets for possible purchase by UK oil independent.

1995-96 Russia

Acted as oil and gas expert in a European Community funded TACIS project to provide Energy Policy Advice for the Region of St Petersburg. This covered the gas supply and demand for the city gas company and the regional gas company as well as a refinery and oil distribution.

1995 Lithuania

Developed Emergency Fuel Oil Plan for the Ministry of Energy funded by the European Community PHARE programme.

1995 Turkey

Acted for an international bank in evaluating the long-term gas supply and demand situation in Turkey for the development of a new gas fired power station. Reviewed the gas contract between the state oil and gas company and the developers.

1994-95 Belarus

Acted as the oil and gas expert in a European Community funded TACIS project to develop an energy strategy. This covered the upgrade of two major refineries, consideration of the strategic role of the main Russian export gas pipeline to Western Europe and an evaluation of the potential for domestic oil production. This work was presented to the Belarus Minister of Energy at a seminar in London.

1994-95 Zambia

Evaluated the financing of oil stocks as part of a major World Bank rehabilitation project of the Tanzania-Zambia oil pipeline. This project was carried out in conjunction with the Department of Economics, Aberdeen University.

1993 Lithuania

Acted as the oil and gas expert in a European Community funded PHARE project to develop an energy strategy. This covered all aspects of the upstream and downstream industry including the upgrade of a large refinery and development of an oil reserve development strategy.

1991 United Kingdom

Acting for buyer attending data room for Beryl Oil Field

1986 - 1988

Chief Development Engineer, Tricentrol
Responsible for development policy for a number of UK oil and gas fields including Amethyst, Murdoch, Pickerell, Ravenspurn North, Wytch Farm and Ettrick. Represented the company on various Operating Committees, technical and project committees. Negotiated gas sales, transportation and unitisation agreements. Provided technical and commercial support for a major financing package. Supervised technical staff.

1984 - 1986

Senior Petroleum Engineer, Tricentrol
Provided a full re-evaluation of company's reserves. Introduced reservoir simulation and negotiated acquisition of software. Responsible for company test programme in New Zealand.

1982 - 1984

Advanced Petroleum Engineer, Marathon
Participated in the preparation of the development plan of North Brae, the first gas condensate field to be recycled in the UK. Responsible for the test programmes for the appraisal of the East Brae and Central Brae fields. Represented the company in technical discussions related to the development of the Valiant South, Vulcan and Welland UK North Sea gas fields.

- 1981 - 1982 Joint Venture Co-ordinator, Marathon
Involved in exploration and production in Abu Dhabi, Indonesia, Netherlands, Norway and UK.
- 1979 - 1981 Petroleum Engineer, Marathon
Responsible for all reservoir engineering for Ogharefe field, Nigeria. Conducted a number of economic evaluations. Evaluated reserves for development plan of Kakap field, Indonesia. Represented company during development of Heimdal field, Norway. Tested the East Brae UK North Sea discovery well.
- 1977 - 1978 Senior Planning Engineer, Bechtel
Responsible for planning the construction of the Murchison field topsides in UK and Netherlands. Considerable site experience at fabrication yards in the UK and Netherlands.
- 1976 - 1977 Planning Engineer, CJB Offshore
Responsible for planning of construction of topsides for Ninian South and Central platforms, UK North Sea. Responsible for planning completion of steel jacket at Nigg Bay. Site experience of Highland Fabricators yard at Nigg Bay.
- 1975 - 1976 Planning Engineer, Foster Wheeler
- 1973 - 1975 Technical Manager, Plastic Constructions Ltd
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