



Curriculum Vitae

STEVEN PAUL COX



Summary

A highly experienced Reservoir Engineer, with a background in both operations and studies, and a firm belief in the value of traditional analytical RE tools.

Nationality:	British	Date of birth:	31st May 1957
Marital status:	Single	Telephone:	+44-1656-788789
Address:	2 Highfield Court Porthcawl CF36 3BZ	e-mail:	Steve_P_Cox@Hotmail.co.uk Steve@benachie.demon.co.uk

Qualifications

Imperial College (Royal School of Mines), London: 1979: M.Sc. in Petroleum Engineering; Diploma of the Imperial College

Positions held

LTRO ltd

July 2003 to Present

Addax Petroleum Services, Geneva

Apr. 2004 to Oct. 2004

Provided Reservoir Engineering input and support to infill drilling and barrel chasing opportunities in Addax's mature productive acreage offshore Calabar in the Niger Delta (OPL98/OML123). Developed proposals for six new infill/development wells and four workovers targeting 10 MMstb of additional reserves. The first of these wells is sequenced to be drilled in 2005.

Shell UK Exploration & Production, Aberdeen

Feb. 1996 to Jun. 2003

Senior Reservoir Engineer on contract to the Brent Field Development Department. The position initially involved five months working in RE operations in an integrated team - the Brent LTRO (Locate Target Remaining Oil) Team - dedicated to preparing proposals for challenging, low-reserve wells.

This was followed by a move for two years into the Brent RE Studies group. Projects successfully completed included a major study using the Brent Full Field Model (FFM) to determine the optimum timing for stopping water injection and beginning the Brent Field depressurisation project. A number of smaller sector models were also developed to look at specific processes in more detail, e.g. optimal location of horizontal wells in thinning oil rims and stability of tilted gas-oil contacts, largely in support of the LTRO effort.

In mid-1998 I rejoined the LTRO Team on a full-time basis. In addition to generating the ideas and targets needed to keep four platform rigs and three hoists busy, this small, highly-integrated team was tasked with maintaining an overview of the Brent field reservoir performance during depressurisation. The LTRO Surveillance Mapping process was identified as the most reliable tool for sub-surface management of the Brent depressurisation, thereby securing the largest remaining NPV of any asset within the Shell group and safeguarding 1.5 Tscf of additional gas reserves. The RE focus was on the development of classical material balance methods, aimed particularly at explaining the observed gas cap performance with a view to understanding the critical gas saturation and estimating developed gas

reserves by well. These tools and observations have been employed by the Brent Studies group in calibrating the FFM, which is used in parallel with the LTRO “back-of-the-envelope” calculations to plan the field development. The Team was closely involved with virtually every aspect of running the world’s largest offshore brown field project.

Aug. 1993 to Jan.1996

Career break. A short period (May 1994-July 1994) was spent working on contract as IT Petroleum Engineer in Shell Nigeria's Eastern Division.

Shell UK Exploration & Production, London

Feb. 1992 to Jul. 1993

Senior Reservoir Engineer in the Appraisal and Development Group working in the Guillemot Integrated PE Team leading up to Annex B submission. The Guillemot development involved four fields with twelve reservoirs in the Central North Sea. Full field simulation models were constructed of Guillemot C and D to examine the merits of various development options for the main accumulations. A novel approach to aquifer modelling was used for the Guillemot/Gannet area Forties aquifer, which had been a major source of uncertainty in the economics of the development plan, as the viability of the project depended heavily on the requirements for water injection.

Shell International (SIPM, now SIEP), The Hague

Jun. 1989 to Feb.1992

Reservoir Engineer in Shell's Central Office Integrated PE Studies Team (also sometimes called the “Global Studies Team”). Projects carried out included simulation of horizontal well performance in a high viscosity crude environment, rejuvenation plans for two mature onshore oil fields, and creating an optimised development plan for a major new offshore oil field with 250 MMstb of reserves.

Shell Nigeria (SPDC), Warri

Jul. 1986 to Jun.1989

Held two positions, beginning as Senior Reservoir Engineer (Operations, Projects and Gas), and eventually progressing to Head of Reservoir Engineering, Northern Area Fields Team. The Niger Delta environment was highly operational at this time and relied on traditional analytical analysis techniques much more heavily than on reservoir simulation. A lot of effort was spent on RFT pressure and fluid sample data acquisition to help reserve estimation in the stacked Niger Delta sandstone reservoirs. Also responsible for implementation of the RE aspects of the large Utorogu non-associated gas reservoir development.

Shell UK Exploration & Production, London

Aug. 1983 to Jul.1986

Joined a specialised team studying the prospects for improving recovery from Shell Expro's North Sea oil fields. The scope of the project was a target oil volume in excess of 2 billion stb, and a lot of effort was put into acquiring more reliable remaining oil saturation data to firm up this volume. Evaluations concentrated on immiscible gas injection and recovery improvement by gravity drainage using both analytical techniques and multiphase reservoir simulation. A new PVT description of the complex depth-dependent Brent and Statfjord reservoir fluids incorporating the variation in properties with depth was developed using an EOS approach (and this still forms the basis for the PVT properties used in the field today).

Nederlandse Aardolie Maatschappij (NAM), Assen

Mar. 1982 to Aug. 1983

Wellsite Petroleum Engineer in the Operations Engineering Department. Working full-time on drilling rigs and hoists, this involved responsibility for all PE-related activities on various types of wells. The duties included ensuring, with the Toolpusher, that all drilling and completion activities were conducted according to the agreed programme in a safe and efficient manner.

Nederlandse Aardolie Maatschappij (NAM), Assen

Nov. 1979 to Mar. 1982

Reservoir Engineer for NAM’s offshore gas interests. Particular expertise was developed in pressure transient analysis and the simulation of very low permeability (μD) gas reservoirs. The scope of the work ran to a gas supply contract for 18 MMm³/d from the K/L block producing fields and RE support for up to five mobile rigs drilling exploration, appraisal and development wells.