

Professor Ken Sorbie - CV

Kenneth Stuart Sorbie

Professor

Institute of Petroleum Engineering

Flow Assurance and Scale Team (FAST) Edinburgh Research Partnership in

Engineering & Mathematics

ERPem - Energy & Resource Management

Brief CV

Ken Sorbie is the Cairn Energy Professor of Petroleum Engineering in the Institute of Petroleum Engineering (IPE) at Heriot-Watt University (HWU). He has a first degree in Chemistry from Strathclyde University (1972) and a DPhil in Theoretical Chemistry/Applied Mathematics from the University of Sussex (1975). Following this, he did postdoctoral research at Cambridge University working on theoretical aspects of semi-classical molecular quantum theory. He has worked in oil related research for over 30 years, firstly with the Department of Energy (now DECC) laboratory at AEE Winfrith where he led a group working on improved oil recovery, flow through porous media and reservoir simulation and, since 1988, at Heriot-Watt U. Ken has a wide range of research interests in Petroleum Engineering - described below. He also teaches Reservoir Simulation on the HWU Masters course which he has taught previously in Edinburgh, at the HWU Centre in Tomsk, in Kazakhstan and elsewhere.

Current Research

Ken's current research is in 3 main areas: (i) on the fundamentals of multi-phase flow through porous media, and (ii) on oilfield chemistry, particularly mineral scale formation and control, and (iii) in Improved Oil Recovery (IOR/EOR) both by gas injection (WAG) and chemical methods such as a polymer, surfactant etc.. Previously, Ken has also worked on several aspects of reservoir description, reservoir simulation and upscaling.

Ken currently has active projects on the basic science and pore-scale modelling of two- and three-phase flow in porous media, including (i) a project with a specific focus on the mechanisms of WAG processes; (ii) a project on applying image reconstruction methods to generate pore network models which can be used for 2 and 3 phase flow calculations and (iii) a project on polymer flooding. In the oilfield chemistry area, Ken is PI of the Flow Assurance and Scale Team (FAST) joint industry project (JIP). This 3 year (2010 – 2013), £2million FAST project is sponsored by an industrial consortium of over 20 companies and was first launched as a JIP by Ken in 1989 and the project has been continuously active since that time. The current phase of the project (FAST 4) currently has 22 industrial sponsors; Ken is Co-PI with Profs. Mackay (HWU) and Neville (Leeds U.). Since joining Heriot-Watt U. in 1988, Ken and his close research collaborators have raised around \$30m of research funding.

He has published over 320 technical papers on his research (which are all downloadable in pdf format from the IPE website and a book, Polymer Improved Oil Recovery (in 1991 and also downloadable).

Honours and Awards

1. Ken was appointed as a Society of Petroleum Engineering (SPE) Distinguished Lecturer in 2000 – 2001 lecturing on Oilfield Scale Prevention.
2. In 2001, he was elected a Fellow of the Royal Society of Edinburgh (FRSE).
3. Ken was awarded the Society of Core Analysts (SCA) 2004 Technical Achievement Award which he received at the SCA annual conference in Dubai, UAE. (http://www.scaweb.org/about_awards.shtml)
4. In 2008, Ken was awarded the SPE IOR Pioneer Award for his contributions to Improved Oil Recovery which was presented at the SPE IOR Meeting in Tulsa, Oklahoma in April 2008 (<http://www.speior.org/pioneer.asp>).
5. Ken was nominated as the Cairn Energy Professor of Petroleum Engineering in 2008.
6. Since 2010, Ken has been a Visiting Professor at the China University of Petroleum at Qindao, China.
7. He has been invited to accept a Lifetime Achievement award from The Royal Society of Chemistry (RSC Speciality Chemicals) for his contribution to Oilfield Chemistry research and teaching, which he will collect in November 2013 at the 30th Anniversary RSC Meeting on Chemistry in the Oil Industry in Manchester, UK.

Teaching and Short Courses

MSc TEACHING COURSE

RESERVOIR SIMULATION: I have taught this 10 day course on Reservoir Simulation since 1988. I wrote the original notes and I have presented the course (with colleagues) at Institute of Petroleum Engineering, Heriot-Watt U. in Edinburgh. It has also been presented at many of the Approved Learning Units (ALUs) around the world e.g. in Tomsk, Russia, Qindao in China, in Almaty in Kazakhstan, Dubai, Malaysia etc. The course notes are available as a Distance Learning (DL) module in the IPE Petroleum Engineering DL Course. It can also be taught as a Short Course as part of CPD.

SPECIALISED SHORT COURSES

- 1. INTRODUCTION TO OILFIELD SCALE (with Professor Eric Mackay):** This course presents a 2-3 day introduction to the basics of mineral scale formation and prevention in the oilfield. How such common scales as calcium carbonate (CaCO_3) and barium sulphate (BaSO_4) form and how they are prevented using chemical scale inhibitors and other methods are reviewed in some detail. Both topside and downhole scale management are discussed including how to design scale inhibitor "squeeze" treatments using the HW software (SQUEEZE 7) which was originally written by Ken. This course is an Society of Petroleum engineers (SPE) Approved short course for CPD. Ken usually teaches this course with his colleague, Professor Eric Mackay, but both Eric and Ken can also deliver this entire course on their own. This course has been presented >50 times over the last couple of decades.
- 2. OILFIELD SCALE - MASTERCLASS (with Professor Eric Mackay):** This advanced 2-3 day course is for professionals who require a more in-depth understanding of the formation and prevention of Oilfield Scale e.g. well technologists, oilfield chemists, production engineers, reservoir engineers, service company personnel etc. The course goes into much more technical detail than the Introductory course above. Hands-on squeeze design modelling using the SQUEEZE software is usually included. However, when this course has been presented, it has often been modified to meet the specific interests/needs of the particular course attendees. In various forms, this has been presented ~20 times. Both Ken Sorbie and Eric Mackay present this course together and separately (depending on the specific blend of topics).
- 3. FUNDAMENTALS OF THREE PHASE FLOW IN SYSTEMS OF NON-UNIFORM WETTABILITY (with Dr M.I.J. van Dijke):** This 2-3 day advanced course presents a review of recent research on the basic (mainly pore level) physics of three phases (gas/oil/water) in a porous medium. Some of this material is well known but much is recently developed theory by various contemporary researchers including the present authors. The fundamental physics of three-phase flow is studied on several different scales, including the intra-pore scale (capillary entry pressures), the scale of a bundle or network of pores and, to some degree, the continuum or Darcy scale (relative permeabilities). On all of these scales three-phase flow is intrinsically different from two-phase flow, in that the relevant three-phase flow parameters cannot straightforwardly be derived from (a combination of) the two-phase parameters, as is often assumed. This course has been presented about 20 times over the last 15 years.
- 4. INTRODUCTION TO ENHANCED OIL RECOVERY (EOR);** This 2-3 day course presents a review of the main Enhanced Oil Recovery (EOR) methods under the heading Gas based, Chemical and Thermal, although only the first two (Gas and CEOR) are dealt with in detail. The level is suitable for anyone who has a reasonable technical level in petroleum/reservoir engineering. The course goes into some detail of the mechanisms of oil recovery by gas injection and WAG and all the known recovery mechanisms are reviewed. Likewise for Chemical EOR (CEOR), polymer flooding, surfactant/polymer flooding and alkali/surfactant/polymer (ASP) flooding are all reviewed in detail. This course has been given about 15 times to date.
- 5. POLYMER FLOODING - SPECIALISED WORKSHOP/COURSE:** 3 years ago, a major operating company asked Ken to put together a detailed state-of-the-art 2 day workshop/course on all aspects of polymer flooding. This was delivered over a 2 day period along with some detailed follow up sessions. This was very well received and the course can be presented more widely (and has been for other companies).
- 6. RESERVOIR PHYSICS:** This 2-4 day course has been slowly assembled by Ken over the last decade, having its roots in a course "The Fundamentals of Multi-phase Flow Through Porous Media" which Ken has delivered many times over the last 20 years. This Reservoir Physics course focuses only on the fluid flow aspects of flow through porous media, and not on the "rock physics" such as acoustics etc. The course takes a basic physics approach to the well known concepts in fluid flow and simulation of flow in oil reservoirs such as capillarity (capillary pressure), wettability, relative permeability etc. The main objective of this course is to explain the fundamental physics/chemistry of the processes and show how an understanding of these basics can explain most of what we observe in flow through porous media. Having said this, we also indicate where the physics/chemistry is unknown and certain phenomena are difficult or impossible to predict.

Outside Interests

Outside work, Ken enjoys walking in the Scottish Mountains and he ran the Edinburgh Marathon in 2005 and 2006, and in May 2011 he ran the Edinburgh half-marathon. He has survived the 200 mile Coast to Coast walk across England in July 2011 and the 190 mile Offa's Dyke walk along the Welsh/English border in 2012. Ken also thinks he knows something about music, although this is often questioned by his daughters and his friends.

Book and Course Notes

K. S. Sorbie, Polymer Improved Oil Recovery, CRC Press, 1991.

K.S. Sorbie, Reservoir Simulation Notes, Institute of Petroleum Engineering, Heriot-Watt University.

K.S. Sorbie and M.I.J. van Dijke, Fundamentals of Three Phase Flow in Systems of Non Uniform Wettability, Course Notes, 2006 (revised).

Publications

JOURNAL PAPERS (1989 - 2013)

Scaling analysis of hydrogen flow with carbon dioxide cushion gas in subsurface heterogeneous porous media

Wang, G., Pickup, G., Sorbie, K. & Mackay, E., 8 Jan 2022, In: International Journal of Hydrogen Energy. 47, 3, p. 1752-1764 13 p.

Gradient descent algorithm to optimize the offshore scale squeeze treatments

Azari, V., Vazquez, O., Mackay, E., Sorbie, K. & Jordan, M., Jan 2022, In: Journal of Petroleum Science and Engineering. 208, Part B, 109469.

Modelling the impact of Alkaline-surfactant and Alkaline-surfactant-polymer flooding processes on scale precipitation and management

Al Kalbani, M., Jordan, M., Mackay, E., Sorbie, K. & Nghiem, L., Oct 2021, In: Journal of Petroleum Science and Engineering. 205, 108777.

Oxazolidine-Based H₂S and Mercaptan Scavengers: Uncovering the Myths

Wylde, J. J., Taylor, G. N., Sorbie, K. S., Samaniego, W. N. & Allan, B. N., 19 Aug 2021, In: Energy and Fuels. 35, 16, p. 12993–13010 18 p.

Impact of Acrylate and 2-Acrylamido-Tertiary-Butyl Sulfonic Acid Content on the Enhanced Oil Recovery Performance of Synthetic Polymers

Beteta, A., Nurmi, L., Rosati, L., Hanski, S., McIver, K., Sorbie, K. S. & Toivonen, S. K., 11 Aug 2021, In: SPE Journal. 26, 4, p. 2092-2113 22 p.

The Impact of Rheology on Viscous Oil Displacement by Polymers Analyzed by Pore-Scale Network Modelling

Salmo, I. C., Sorbie, K. S. & Skauge, A., 13 Apr 2021, In: Polymers. 13, 8, 1259.

Multi-physics approach to modelling near-miscible CO₂-WAG process

Wang, G., Pickup, G. E., Sorbie, K. S., Mackay, E. J. & Skauge, A., Mar 2021, In: Journal of Petroleum Science and Engineering. 198, 108165.

Scavenging Alkyl Mercaptans: Elucidation of Reaction Mechanisms and Byproduct Characterization

Wylde, J. J., Taylor, G. N., Sorbie, K. S. & Samaniego, W. N., 19 Nov 2020, In: Energy and Fuels. 34, 11, p. 13883–13892 10 p.

On the Modelling of Immiscible Viscous Fingering in Two-Phase Flow in Porous Media

Sorbie, K. S., Al Ghafri, A. Y., Skauge, A. & Mackay, E. J., Nov 2020, In: Transport in Porous Media. 135, 2, p. 331-359 29 p.

Formation, Chemical Characterization, and Oxidative Dissolution of Amorphous Polymeric Dithiazine (apDTZ) during the Use of the H₂S Scavenger Monoethanolamine-Triazine

Wylde, J. J., Taylor, G. N., Sorbie, K. S. & Samaniego, W. N., 20 Aug 2020, In: Energy and Fuels. 34, 8, p. 9923–9931 9 p.

Surface Chemistry of Phosphonate Scale Inhibitor Retention Mechanisms in Carbonate Reservoirs

Jarrahian, K., Singleton, M., Boak, L. & Sorbie, K. S., 5 Aug 2020, In: Crystal Growth and Design. 20, 8, p. 5356-5372 17 p.

Mechanistic Investigation of Adsorption Behavior of Two Scale Inhibitors on Carbonate Formations for Application in Squeeze Treatments

Jarrahian, K. & Sorbie, K. S., 16 Apr 2020, In: Energy and Fuels. 34, 4, p. 4484-4496 13 p.

Synthesis and Reaction Byproduct Characterization and Mechanistic Understanding of Hemiformal Based Hydrogen Sulfide Scavengers

Wylde, J. J., Taylor, G. N., Sorbie, K. S. & Samaniego, W. N., 16 Apr 2020, In: Energy and Fuels. 34, 4, p. 4808-4821 14 p.

Analytical Solutions for a 1D Scale Inhibitor Transport Model with Coupled Adsorption and Precipitation

Stamatiou, A. & Sorbie, K. S., Apr 2020, In: Transport in Porous Media. 132, 3, p. 591-625 35 p.

Qualification of New Methods for Measuring In Situ Rheology of Non-Newtonian Fluids in Porous Media

Jacobsen, J. G., Shaker Shiran, B., Skauge, T., Sorbie, K. S. & Skauge, A., 14 Feb 2020, In: Polymers. 12, 2, 452.

Barium Sulfate Scaling and Control during Polymer, Surfactant, and Surfactant/Polymer Flooding

Al Kalbani, M. M., Jordan, M. M., Mackay, E. J., Sorbie, K. S. & Nghiem, L., 1 Feb 2020, In: SPE Production and Operations. 35, 1, p. 68-84 17 p.

Building a Fundamental Understanding of Scale-Inhibitor Retention in Carbonate Formations

Jarrahian, K., Sorbie, K., Singleton, M., Boak, L. & Graham, A., 1 Feb 2020, In: SPE Production and Operations. 35, 1, p. 85-97 13 p.

Detailed Assessment of Compositional and Interfacial Tension Effects on the Fluid Behaviour During Immiscible and Near-Miscible CO₂ Continuous and WAG Displacements

Wang, G., Pickup, G. E., Sorbie, K. S. & Mackay, E. J., Feb 2020, In: Transport in Porous Media. 131, p. 805-830 26 p.

Numerical study of CO₂ injection and the role of viscous crossflow in near-miscible CO₂-WAG

Wang, G., Pickup, G., Sorbie, K., Mackay, E. & Skauge, A., Feb 2020, In: Journal of Natural Gas Science and Engineering. 74, 103112.

Rigorous Carbonate and Sulfide Scale Predictions: What Really Matters?

Ness, G. & Sorbie, K. S., 21 Nov 2019, In: Energy and Fuels. 33, 11, p. 10765-10774 10 p.

Analysis of Compositional Effects on Global Flow Regimes in CO₂ Near-Miscible Displacements in Heterogeneous Systems

Wang, G., Pickup, G. E., Sorbie, K. S. & Mackay, E. J., Sep 2019, In: Transport in Porous Media. 129, 3, p. 743-759 17 p.

Iron sulfide inhibition and interaction with zinc and lead sulfides

Al-Harbi, B. G., Graham, A. J. & Sorbie, K. S., Aug 2019, In: SPE Production and Operations. 34, 3, p. 551-563 13 p.

Experimental Investigation of the Interaction between a Phosphate Ester Scale Inhibitor and Carbonate Rocks for Application in Squeeze Treatments

Jarrahian, K., Boak, L. S., Graham, A. J., Singleton, M. A. & Sorbie, K. S., 16 May 2019, In: Energy and Fuels. 33, 5, p. 4089-4103 15 p.

The Effect of pH and Mineralogy on the Retention of Polymeric Scale Inhibitors on Carbonate Rocks for Application in Squeeze Treatments

Jarrahian, K., Sorbie, K. S., Singleton, M. A., Boak, L. S. & Graham, A. J., May 2019, In: SPE Production and Operations. 34, 2, p. 344-360 17 p.

The impact of field measurements and data-handling procedures on carbonate- And sulfide-scale prediction

Ness, G. & Sorbie, K. S., May 2019, In: SPE Production and Operations. 34, 2, p. 361-372 12 p.

A new approach to combined sulfide- and carbonate-scale predictions applied to different field scenarios

Ness, G., Sorbie, K. S., Singleton, M. A., Silva, D., Hinrichsen, C., Wang, Q. & Chang, F. F., 1 Aug 2018, In: SPE Production and Operations. 33, 3, p. 498-508 11 p.

Analytical Solutions of a One-Dimensional Linear Model Describing Scale Inhibitor Precipitation Treatments

Sorbie, K. S. & Stamatiou, A., Jun 2018, In: Transport in Porous Media. 123, 2, p. 271–287 17 p.

Influence of Terpolymer Based on Amide, Carboxylic, and Sulfonic Groups on the Barium Sulfate Inhibition

Carvalho, S., Palermo, L., Boak, L. S., Sorbie, K. S. & Lucas, E., 19 Oct 2017, In: Energy and Fuels. 31, 10, p. 10648-10654 7 p.

Dynamic pore-scale network model (PNM) of water imbibition in porous media

Li, J., McDougall, S. R. & Sorbie, K. S., Sep 2017, In: Advances in Water Resources. 107, p. 191-211 21 p.

A systematic investigation of factors affecting the formation of zinc sulfide (ZnS)

Graham, A. J., Singleton, M. A., Sorbie, K. S. & Collins, I. R., 1 Aug 2017, In: SPE Production and Operations. 32, 3, p. 314-324 11 p.

Solubility and Inhibition Efficiency of Phosphonate Scale Inhibitor_Calcium_Magnesium Complexes for Application in Precipitation Squeeze Treatment

Valiakhmetova, A., Sorbie, K. S., Boak, L. S. & Shaw, S., 1 Aug 2017, In: SPE Production and Operations. 32, 3, p. 343-350 8 p.

Iron Sulfide Scale Management in High-H₂S and -CO₂ Carbonate Reservoirs

Verri, G., Sorbie, K. S., Singleton, M. A., Hinrichsen, C., Wang, Q., Chang, F. F. & Ramachandran, S., Aug 2017, In: SPE Production and Operations. 32, 3, p. 305-313 9 p.

A rigorous general workflow for accurate prediction of carbonate and sulphide scaling profiles in oil and gas wells

Verri, G., Sorbie, K. S. & Silva, D., Jul 2017, In: Journal of Petroleum Science and Engineering. 156, p. 673-681 9 p.

Pore-scale modelling of wettability alteration during primary drainage

Kallel, W., Van Dijke, M. I. J., Sorbie, K. S. & Wood, R., Mar 2017, In: Water Resources Research. 53, 3, p. 1891-1907 17 p.

The impact of vapor/liquid-equilibria calculations on scale-prediction modeling

Ribeiro, A. S., Silva, D., Mackay, E. J. & Sorbie, K. S., 1 Feb 2017, In: SPE Production and Operations. 32, 1, p. 64-72 9 p.

Inversion of the lattice network wettability subjected to the capillary pressure of the entire flooding cycle: Hamiltonian Monte Carlo posterior sampling and prediction of the relative permeability

Juri, J. E., Van Dijke, M. I. J. & Sorbie, K. S., Oct 2016, In: Journal of Petroleum Science and Engineering. 146, p. 1037–1062 26 p.

Modelling the effect of wettability distributions on oil recovery from microporous carbonate reservoirs

Kallel, W., Van Dijke, M. I. J., Sorbie, K. S., Wood, R., Jiang, Z. & Harland, S., Sep 2016, In: Advances in Water Resources. 95, p. 317–328 12 p.

The use of PPCA in scale-inhibitor precipitation squeezes: Solubility, inhibition efficiency, and molecular-weight effects

Farooqui, N. M. & Sorbie, K. S., Aug 2016, In: SPE Production and Operations. 31, 3, p. 258-269 12 p.

Quantifying flow in variably wet microporous carbonates using object-based geological modelling and both lattice-Boltzmann and pore network fluid flow simulations

Harland, S. R., Wood, R. A., Curtis, A., Van Dijke, M. I. J., Stratford, K., Jiang, Z., Kallel, W. & Sorbie, K. S., Oct 2015, In: AAPG Bulletin. 99, 10, p. 1827–1860 34 p.

The analysis of chemical processes in reservoirs on the basis of the identification of injection-water fraction in produced brine

Ishkov, O., Mackay, E. & Sorbie, K. S., Aug 2015, In: SPE Production and Operations. 30, 3, p. 229-235 7 p.

Droplet fragmentation: 3D imaging of a previously unidentified pore-scale process during multiphase flow in porous media

Pak, T., Butler, I. B., Geiger, S., van Dijke, M. I. J. & Sorbie, K. S., 17 Feb 2015, In: Proceedings of the National Academy of Sciences. 112, 7, p. 1947-1952 6 p.

Structure, stoichiometry, and modeling of mixed calcium magnesium phosphonate precipitation squeeze-inhibitor complexes

Shaw, S. S. & Sorbie, K. S., Feb 2015, In: SPE Production and Operations. 30, 1, p. 6-15 10 p.

Synergistic properties of phosphonate and polymeric scale-inhibitor blends for barium sulfate scale inhibition

Shaw, S. S. & Sorbie, K. S., Feb 2015, In: SPE Production and Operations. 30, 1, p. 16-25 10 p.

Inversion of lattice network structure subjected to carbonate mercury intrusion capillary pressure: Hamiltonian Monte Carlo posterior sampling

Juri, J. E., Van Dijke, M. I. J. & Sorbie, K. S., Jan 2015, In: Transport in Porous Media. 106, 1, p. 73-106 34 p.

Structure, stoichiometry, and modeling of calcium phosphonate scale-inhibitor complexes for application in precipitation-squeeze processes

Shaw, S. & Sorbie, K. S., May 2014, In: SPE Production and Operations. 29, 2, p. 139-151 13 p.

Scale prediction for iron, zinc and lead sulphides and its relation to scale test design

Okocha, C. & Sorbie, K. S., 1 Jan 2014, In: NACE - International Corrosion Conference Series.

Structure of residual oil as a function of wettability using pore-network modelling

Ryazanov, A., Sorbie, K. S. & van Dijke, R., Jan 2014, In: Advances in Water Resources. 63, p. 11-21 11 p.

Polyphosphino Carboxylic Acid (PPCA) scale inhibitor for application in precipitation squeeze treatments: the effect of molecular weight distribution

Farooqui, N. M., Grice, A., Sorbie, K. S. & Haddleton, D., 2014, In: NACE - International Corrosion Conference Series.

Scale-inhibitor consumption in long-term static barium Sulfate inhibition efficiency tests

Shaw, S. & Sorbie, K. S., Nov 2013, In: SPE Production and Operations. 28, 4, p. 376-386 11 p.

Representation of multiscale heterogeneity via multiscale pore networks

Jiang, Z., van Dijke, R., Sorbie, K. S. & Couples, G. D., Sep 2013, In: Water Resources Research. 49, 9, p. 5437-5449 13 p.

Higher order FE-FV method on unstructured grids for transport and two-phase flow with variable viscosity in heterogeneous porous media

Schmid, K. S., Geiger, S. & Sorbie, K. S., May 2013, In: Journal of Computational Physics. 241, p. 416-444 29 p.

Can network modeling predict two-phase flow functions?

Sorbie, K. S. & Skauge, A., Dec 2012, In: Petrophysics. 53, 6, p. 401-409 9 p.

The effects of barium sulfate saturation ratio, calcium and magnesium on the inhibition efficiency - part II: Polymeric scale inhibitors

Shaw, S., Sorbie, K. S. & Boak, L. S., Nov 2012, In: SPE Production and Operations. 27, 4, p. 390-403 14 p.

Stochastic pore network generation from 3D rock images

Jiang, Z., van Dijke, R., Wu, K., Couples, G. D., Sorbie, K. S. & Ma, J., Sep 2012, In: Transport in Porous Media. 94, 2, p. 571-593 21 p.

The effects of barium sulfate saturation ratio, calcium, and magnesium on the inhibition efficiency - part I: phosphonate scale inhibitors

Shaw, S., Sorbie, K. S. & Boak, L. S., Aug 2012, In: SPE Production and Operations. 27, 3, p. 306-317 12 p.

Direct numerical simulation of pore-scale reactive transport: applications to wettability alteration during two-phase flow

Zaretskiy, Y., Geiger, S. & Sorbie, K. S., Apr 2012, In: International Journal of Oil, Gas and Coal Technology. 5, 2-3, p. 142-156 15 p.

Analytical solutions for co- and counter-current imbibition of sorbing, dispersive solutes in immiscible two-phase flow

Schmid, K. S., Geiger, S. & Sorbie, K. S., Mar 2012, In: Computational Geosciences. 16, 2, p. 351-366 16 p.

A two-phase near-wellbore simulator to model non-aqueous scale inhibitor squeeze treatments

Vazquez, O., Mackay, E. & Sorbie, K. S., Mar 2012, In: Journal of Petroleum Science and Engineering. 82-83, p. 90-99 10 p.

Initial stages of barium sulfate formation at surfaces in the presence of inhibitors

Mavredaki, E., Neville, A. & Sorbie, K. S., Nov 2011, In: Crystal Growth and Design. 11, 11, p. 4751-4758 8 p.

Assessment of barium sulphate formation and inhibition at surfaces with synchrotron X-ray diffraction (SXRD)

Mavredaki, E., Neville, A. & Sorbie, K., 15 Feb 2011, In: Applied Surface Science. 257, 9, p. 4264-4271 8 p.

Semianalytical solutions for cocurrent and countercurrent imbibition and dispersion of solutes in immiscible two-phase flow

Schmid, K. S., Geiger, S. & Sorbie, K. S., 2011, In: Water Resources Research. 47, 2, W02550.

Efficient flow and transport simulations in reconstructed 3D pore geometries

Zaretskiy, Y., Geiger, S., Sorbie, K. & Förster, M., Dec 2010, In: Advances in Water Resources. 33, 12, p. 1508-1516 9 p.

New developments in the analysis of scale inhibitors

Boak, L. S. & Sorbie, K. S., Nov 2010, In: SPE Production and Operations. 25, 4, p. 533-544 12 p.

Thermodynamic modelling of calcium naphthenate formation: model predictions and experimental results

Mohammed, M. A. & Sorbie, K. S., 20 Oct 2010, In: Colloids and Surfaces A: Physicochemical and Engineering Aspects. 369, 1-3, p. 1-10 10 p.

Sensitivity study of naphthenic acids from flow assurance deposits characterized by low-resolution mass spectrometry

Shepherd, A. G., Sorbie, K. S., Thomson, G. B. & Westacott, R. E., 19 Aug 2010, In: Energy and Fuels. 24, 8, p. 4387-4395 9 p.

Pore-scale simulation of WAG floods in mixed-wet micromodels

Van Dijke, M. I. J., Lorentzen, M., Sohrabi Sedeh, M. & Sorbie, K. S., Mar 2010, In: SPE Journal. 15, 1, p. 238-247 10 p.

Effect of pH and scale inhibitor concentration on phosphonate-carbonate interaction

Baraka-Lokmane, S. & Sorbie, K. S., Jan 2010, In: Journal of Petroleum Science and Engineering. 70, 1-2, p. 10-27 18 p.

Effect of pH and scale inhibitor concentration on phosphonate-carbonate interaction

Baraka-Lokmane, S. & Sorbie, K. S., 2010, In: Journal of Petroleum Science and Engineering. 70, 1-2, p. 10-27 18 p.

Naphthenic acid extraction and characterization from naphthenate field deposits and crude oils using ESMS and APCI-MS

Mohammed, M. A. & Sorbie, K. S., 5 Oct 2009, In: Colloids and Surfaces A: Physicochemical and Engineering Aspects. 349, 1-3, p. 1-18 18 p.

Two-phase pore-network modelling: existence of oil layers during water invasion

Ryazanov, A., Van Dijke, M. I. J. & Sorbie, K. S., 1 Oct 2009, In: Transport in Porous Media. 80, 1, p. 79-99 21 p.

Coupled adsorption/precipitation of scale inhibitors: experimental results and modeling

Kahrwad, M. A. M., Sorbie, K. S. & Boak, L. S., Aug 2009, In: SPE Production and Operations. 24, 3, p. 481-491 11 p.

Thermodynamic modeling of naphthenate formation and related pH change experiments

Mohammed, M. A., Sorbie, K. S. & Shepherd, A. G., Aug 2009, In: SPE Production and Operations. 24, 3, p. 466-472 7 p.

Electrodeposition of a calcareous layer: effects of green inhibitors

Martinod, A., Neville, A., Euvrad, M. & Sorbie, K. S., May 2009, In: Chemical Engineering Science. 64, 10, p. 2413-2421 9 p.

In-situ monitoring the inhibiting effect of polyphosphinocarboxylic acid on CaCO₃ scale formation by synchrotron X-ray diffraction

Chen, T., Neville, A., Sorbie, K. S. & Zhong, Z., Mar 2009, In: Chemical Engineering Science. 64, 5, p. 912-918 7 p.

Can green scale inhibitors replace phosphonate scale inhibitors? Carbonate coreflooding experiments

Baraka-Lokmane, S., Sorbie, K., Poisson, N. & Kohler, N., Jan 2009, In: Petroleum Science and Technology. 27, 4, p. 427-441 15 p.

Analysis of the mechanism of transport and retention of nonaqueous scale-inhibitor treatments in cores using novel tracer techniques

Shields, R. A., Singleton, M., Sorbie, K. S. & Guan, H., 1 Feb 2008, In: SPE Production and Operations. 23, 1, p. 56-62 7 p., 100518-PA.

Low salinity oil recovery - An experimental investigation

Lager, A., Webb, K. J., Black, C. J. J., Singleton, M. & Sorbie, K. S., Feb 2008, In: Petrophysics. 49, 1, p. 28-35 8 p.

Assessment of CaCO₃ inhibition by the use of sXRD on a metallic substrate

Martinod, A., Neville, A., Sorbie, K. & Zhong, Z., 2008, In: NACE - International Corrosion Conference Series. p. 83511-835112 751602 p.

Criteria for three-fluid configurations including layers in a pore with nonuniform wettability

Van Dijke, M. I. J., Piri, M., Helland, J. O., Sorbie, K. S., Blunt, M. J. & Skjæveland, S. M., Dec 2007, In: Water Resources Research. 43, 12, W12S05.

Efficient extraction of networks from three-dimensional porous media

Jiang, Z., Wu, K., Couples, G. D., Van Dijke, M. I. J., Sorbie, K. S. & Ma, J., Dec 2007, In: Water Resources Research. 43, 12, W12S03.

Placement using viscosified non-Newtonian scale inhibitor slugs: The effect of shear thinning

Sorbie, K. S., Mackay, E. J., Collins, I. R. & Wat, R., Nov 2007, In: SPE Production and Operations. 22, 4, p. 434-441 8 p.

Placement using viscosified non-Newtonian scale inhibitor slugs: the effect of shear thinning

Sorbie, K. S., Mackay, E. J., Collins, I. R. & Wat, R., Nov 2007, In: SPE Production and Operations. 22, 4, p. 434-441 8 p.

The kinetics of sulphate deposition in seeded and unseeded tests

Boak, L. S. & Sorbie, K. S., Nov 2007, In: SPE Production and Operations. 22, 4, p. 442-450 9 p.

Prediction of three-phase relative permeabilities using a pore-scale network model anchored to two-phase data

Svirsky, D., van Dijke, M. I. J. & Sorbie, K. S., Oct 2007, In: SPE Reservoir Evaluation and Engineering. 10, 5, p. 527-538 12 p.

Following the formation of CaCO₃ scale formation by in-situ WAXS

Chen, T., Neville, A., Sorbie, K. & Zhong, Z., May 2007, In: Journal of Optoelectronics and Advanced Materials. 9, 5, p. 1250-1253 4 p.

Consistency of three-phase capillary entry pressures and pore phase occupancies

van Dijke, M. I. J. & Sorbie, K. S., Feb 2007, In: Advances in Water Resources. 30, 2, p. 182-198 17 p.

Quantification of longitudinal dispersion by upscaling Brownian motion of tracer displacement in a 3D pore-scale network model

Acharya, R. C., van Dijke, M. I. J., Sorbie, K. S., Van der Zee, S. E. A. T. M. & Leijnse, A., Feb 2007, In: Advances in Water Resources. 30, 2, p. 199-213 15 p.

In-situ monitoring the inhibiting effect of DETPMP on CaCO₃ scale formation by synchrotron-ray diffraction

Chen, T., Neville, A., Sorbie, K. & Zhong, Z., 2007, In: NACE - International Corrosion Conference Series. p. 70531-705314 634784 p.

Using in situ synchrotron radiation wide angle X-ray scattering (WAXS) to study CaCO₃ scale formation at ambient and elevated temperature

Chen, T., Neville, A., Sorbie, K. & Zhong, Z., 2007, In: Faraday Discussions. 136, p. 355-365 11 p.

3D stochastic modelling of heterogeneous porous media - Applications to reservoir rocks

Wu, K., Van Dijke, M. I. J., Couples, G. D., Jiang, Z., Ma, J., Sorbie, K. S., Crawford, J., Young, I. & Zhang, X., Dec 2006, In: Transport in Porous Media. 65, 3, p. 443-467 25 p.

Comparison of nonaqueous and aqueous scale-inhibitor treatments: experimental and modeling studies

Guan, H., Sorbie, K. S. & Mackay, E. J., Nov 2006, In: SPE Production and Operations. 21, 4, p. 419-429 11 p.

Simulation of WAG floods in an oil-wet micromodel using a 2-D pore-scale network model

van Dijke, M. I. J., Sorbie, K. S., Sohrabi Sedeh, M. & Danesh, A., Jun 2006, In: Journal of Petroleum Science and Engineering. 52, 1-4, p. 71-86 16 p.

Cusp at the three-fluid contact line in a cylindrical pore

van Dijke, M. I. J. & Sorbie, K. S., 15 May 2006, In: Journal of Colloid and Interface Science. 297, 2, p. 762-771 10 p.

Experimental and modeling study of Newtonian and non-Newtonian fluid flow in pore network micromodels

Perrin, C. L., Tardy, P. M. J., Sorbie, K. S. & Crawshaw, J. C., 15 Mar 2006, In: Journal of Colloid and Interface Science. 295, 2, p. 542-550 9 p.

How minimum inhibitor concentration (MIC) and sub-MIC concentrations affect bulk precipitation and surface scaling rates

Graham, A. L., Boak, L. S., Neville, A. & Sorbie, K. S., Feb 2006, In: SPE Production and Operations. 21, 1, p. 19-25 7 p.

Existence of fluid layers in the corners of a capillary with non-uniform wettability

Van Dijke, M. I. J. & Sorbie, K. S., 15 Jan 2006, In: Journal of Colloid and Interface Science. 293, 2, p. 455-463 9 p.

Green inhibitors: mechanisms in the control of barium sulfate scale

Inches, C. E., Sorbie, K. S. & El Doueiri, K., 2006, In: NACE - International Corrosion Conference Series. p. 64851-648523 583673 p.

Using synchrotron radiation wide angle X-ray scattering (WAXS) to study the inhibiting effect of polyphosphonocarboxylic acid (PPCA) on CaCO₃ scale formation

Chen, T., Sorbie, K., Neville, A. & Zhong, Z., 2006, In: NACE - International Corrosion Conference Series. p. 63861-638613 574753 p.

Influence of PPCA inhibitor on CaCO₃ scale surface deposition and bulk precipitation at elevated temperatures

Chen, T., Neville, A., Yuan, M. & Sorbie, K. S., Sep 2005, In: Progress in Natural Science: Materials International. 15, 13, p. 35-41 7 p.

Influence of PPCA inhibitor on CaCO₃ scale surface deposition and bulk precipitation at elevated temperature

Chen, T., Neville, A., Yuan, M. & Sorbie, K., Sep 2005, In: Progress in Natural Science: Materials International. 15, SUPPL., p. 35-41 7 p.

Free energy balance for three fluid phases in a capillary of arbitrarily shaped cross-section: Capillary entry pressures and layers of the intermediate-wetting phase

Van Dijke, M. I. J., Lago, M., Sorbie, K. S. & Araujo, M., 1 Sep 2004, In: Journal of Colloid and Interface Science. 277, 1, p. 184-201 18 p.

Three-phase flow WAG processes in mixed-wet porous media: pore-scale network simulations and comparison with water-wet micromodel experiments

Van Dijke, M. I. J., Sorbie, K. S., Sohrabi Sedeh, M., Tehrani, A. D. & Danesh, A., Mar 2004, In: SPE Journal. 9, 1, p. 57-66 10 p.

Pore-scale modelling of three-phase flow in mixed-wet porous media: Multiple displacement chains

van Dijke, M. I. J. & Sorbie, K. S., Sep 2003, In: Journal of Petroleum Science and Engineering. 39, 3-4, p. 201-216 16 p.

Pore-scale modelling of three-phase flow in mixed-wet porous media: multiple displacement chains

Van Dijke, M. I. J. & Sorbie, K. S., Sep 2003, In: Journal of Petroleum Science and Engineering. 39, 3-4, p. 201-216 16 p.

Three-phase capillary entry conditions in pores of noncircular cross-section

Van Dijke, M. I. J. & Sorbie, K. S., 15 Apr 2003, In: Journal of Colloid and Interface Science. 260, 2, p. 385-397 13 p.

The influence of formation calcium and magnesium on the effectiveness of generically different barium sulphate oilfield scale inhibitors

Graham, G. M., Boak, L. S. & Sorbie, K. S., Feb 2003, In: SPE Production and Facilities. 18, 1, p. 28-44 17 p.

Pore-scale network model for three-phase flow in mixed-wet porous media

Van Dijke, M. I. J. & Sorbie, K. S., Oct 2002, In: Physical Review E. 66, 4, p. 046302/1-046302/14 046302.

Analysis of three-phase pore occupancies and relative permeabilities in porous media with variable wettability

Van Dijke, M. I. J. & Sorbie, K. S., Aug 2002, In: Transport in Porous Media. 48, 2, p. 159-185 27 p.

An analysis of three-phase pore occupancies and relative permeabilities in porous media with variable wettability

Van Dijke, M. I. J. & Sorbie, K. S., Aug 2002, In: Transport in Porous Media. 48, 2, p. 159-185 27 p.

Anchoring methodologies for pore-scale network models: Application to relative permeability and capillary pressure prediction

McDougall, S. R., Cruickshank, J. & Sorbie, K. S., Jul 2002, In: Petrophysics. 43, 4, p. 365-375 11 p.

Anchoring methodologies for pore-scale network models: application to relative permeability and capillary pressure prediction

McDougall, S. R., Cruikshank, J. & Sorbie, K. S., Jul 2002, In: *Petrophysics*. 43, 4, p. 365-375 11 p.

Wettability effects in a sandstone reservoir and outcrop cores from NMR relaxation time distributions

Guan, H., Brougham, D., Sorbie, K. S. & Packer, K. J., Jun 2002, In: *Journal of Petroleum Science and Engineering*. 34, 1-4, p. 35-54 20 p.

Relation between interfacial tensions and wettability in three-phase systems: consequences for pore occupancy and relative permeability

Van Dijke, M. I. J. & Sorbie, K. S., Apr 2002, In: *Journal of Petroleum Science and Engineering*. 33, 1-3, p. 39-48 10 p.

The relation between interfacial tensions and wettability in three-phase systems: Consequences for pore occupancy and relative permeability

van Dijke, M. I. J. & Sorbie, K. S., Apr 2002, In: *Journal of Petroleum Science and Engineering*. 33, 1-3, p. 39-48 10 p.

Comparison of two-phase dynamic upscaling methods based on fluid potentials

Darman, N. H., Pickup, G. E. & Sorbie, K. S., Mar 2002, In: *Computational Geosciences*. 6, 1, p. 5-27 23 p.

A comparison of two-phase dynamic upscaling methods based on fluid potentials

Darman, N. H., Pickup, G. E. & Sorbie, K. S., 2002, In: *Computational Geosciences*. 6, 1, p. 5-27 23 p.

Local analysis of changing force balances in immiscible incompressible two-phase flow

Stephen, K. D., Pickup, G. E. & Sorbie, K. S., Oct 2001, In: *Transport in Porous Media*. 45, 1, p. 63-88 26 p.

The local analysis of changing force balances in immiscible incompressible two-phase flow

Stephen, K. D., Pickup, G. E. & Sorbie, K. S., Oct 2001, In: *Transport in Porous Media*. 45, 1, p. 63-88 26 p.

Three-phase capillary pressure and relative permeability relationships in mixed-wet systems

Van Dijke, M. I. J., McDougall, S. R. & Sorbie, K. S., Jul 2001, In: *Transport in Porous Media*. 44, 1, p. 1-32 32 p.

Upscaling immiscible gas displacements: quantitative use of fine-grid flow data in grid-coarsening schemes

Darman, N. H., Durlofsky, L. J., Pickup, G. E. & Sorbie, K. S., Mar 2001, In: *SPE Journal*. 6, 1, p. 47-56 10 p.

Saturation-dependencies of three-phase relative permeabilities in mixed-wet and fractionally wet systems

Van Dijke, M. I. J., Sorbie, K. S. & McDougall, S. R., 2001, In: *Advances in Water Resources*. 24, 3-4, p. 365-384 20 p.

Pore-scale network modelling of flow propagators derived from pulsed magnetic field gradient spin echo NMR measurements in porous media

Damion, R. A., Packer, K. J., Sorbie, K. S. & McDougall, S. R., Dec 2000, In: *Chemical Engineering Science*. 55, 24, p. 5981-5998 18 p.

Scale dissolver application: production enhancement and formation damage potential

Jordan, M. M., Graham, G. M., Sorbie, K. S., Matharu, A. P., Tomlins, R. & Bunney, J. R., Nov 2000, In: *SPE Production and Facilities*. 15, 4, p. 288-295 8 p.

Empirical measures of wettability in porous media and the relationship between them derived from pore-scale modelling

Dixit, A. B., Buckley, J. S., McDougall, S. R. & Sorbie, K. S., Jul 2000, In: *Transport in Porous Media*. 40, 1, p. 27-54 28 p.

Mixing of injected, connate and aquifer brines in waterflooding and its relevance to oilfield scaling

Sorbie, K. S. & Mackay, E. J., Jul 2000, In: *Journal of Petroleum Science and Engineering*. 27, 1-2, p. 85-106 22 p.

Modeling scale-inhibitor treatments in horizontal wells: application to the Alba Field

Mackay, E. J., Matharu, A. P., Sorbie, K. S., Jordan, M. M. & Tomlins, R., May 2000, In: SPE Production and Facilities. 15, 2, p. 107-114 8 p.

Modelling of scale inhibitor treatments in horizontal wells: Application to the Alba field

Mackay, E. J., Matharu, A. P., Sorbie, K. S. & Jordan, M. M., May 2000, In: SPE Production and Facilities. 15, 2, p. 107-114

Modelling scale inhibitor squeeze treatments in high crossflow horizontal wells

Mackay, E. J. & Sorbie, K. S., 2000, In: Journal of Canadian Petroleum Technology. 39, 10, p. 47-51 5 p.

Estimation of critical gas saturation during pressure depletion in virgin and waterflooded reservoirs

McDougall, S. R. & Sorbie, K. S., Aug 1999, In: Petroleum Geoscience. 5, 3, p. 229-233 5 p.

Pore-scale modelling of wettability effects and their influence on oil recovery

McDougall, S. R., Sorbie, K. S., Dixit, A. B. & Buckley, J. S., Feb 1999, In: SPE Reservoir Engineering. 2, 1, p. 25-36 12 p.

Pore-level investigation of relative permeability hysteresis in water-wet systems

Dixit, A. B., McDougall, S. R. & Sorbie, K. S., Jun 1998, In: SPE Journal. 3, 2, p. 115-123 9 p.

A review of up-scaling and cross-scaling issues in core and log data interpretation and prediction

Corbett, P. W. M., Jensen, J. L. & Sorbie, K. S., 1998, In: Geological Society Special Publications. 136, p. 9-16 8 p.

Application of network modelling techniques to multiphase flow in porous media

McDougall, S. R. & Sorbie, K. S., Jul 1997, In: Petroleum Geoscience. 3, 2, p. 161-170 10 p.

The application of network modelling techniques to multiphase flow in porous media

McDougall, S. R. & Sorbie, K. S., Jul 1997, In: Petroleum Geoscience. 3, 2, p. 161-169 9 p.

Implication of high-pressure/high-temperature reservoir conditions on selection and application of conventional scale inhibitors: Thermal-stability studies

Graham, G. M., Jordan, M. M., Graham, G. C., Sablerolle, W., Sorbie, K. S., Hill, P. & Bunney, J., Jun 1997, In: JPT, Journal of Petroleum Technology. 49, 6, p. 632-633 2 p.

Scale inhibitor squeeze strategies in horizontal wells

Sorbie, K. S., Wesselingh, E. M., Yuan, M. D., Lemanczyk, R. Z. & Todd, A. C., May 1997, In: Journal of Canadian Petroleum Technology. 36, 5, p. 27-35 9 p.

Viscous fingering in five-spot experimental porous media: New experimental results and numerical simulation

Zhang, H. R., Sorbie, K. S. & Tsibuklis, N. B., Jan 1997, In: Chemical Engineering Science. 52, 1, p. 37-54 18 p.

Network analogues of wettability at the pore scale

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., 1997, In: Geological Society Special Publications. 122, p. 19-35 17 p.

Scaleup of two-phase flow in porous media using phase permeability tensors

Pickup, G. E. & Sorbie, K. S., Dec 1996, In: SPE Journal. 1, 4, p. 369-382 14 p.

The effects of heterogeneity and wettability on oil recovery from laminated sedimentary structures

Huang, Y., Ringrose, P. S., Sorbie, K. S. & Larter, S. R., Dec 1996, In: SPE Journal. 1, 4, p. 451-460 10 p.

Use of geology in the interpretation of core-scale relative permeability data

Ringrose, P. S., Jensen, J. L. & Sorbie, K. S., Sep 1996, In: SPE Formation Evaluation. 11, 3, p. 171-176 6 p.

Development of a regime-based framework for the analysis of wettability experiments

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., Mar 1996, In: Chemical Engineering Research and Design. 74, A2, p. 206-219 14 p.

The development of a regime-based framework for the analysis of wettability experiments

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., 1996, In: Chemical Engineering Research and Design. 74, 2, p. 206-219 14 p.

Capillary trapping mechanisms in water-wet laminated rocks

Huang, Y., Ringrose, P. S. & Sorbie, K. S., Nov 1995, In: SPE Reservoir Engineering (Society of Petroleum Engineers). 10, 4, p. 287-292 6 p.

The Extended Washburn Equation and Its Application to the Oil/Water Pore Doublet Problem

Sorbie, K. S., Wu, Y. Z. & McDougall, S. R., 15 Sep 1995, In: Journal of Colloid and Interface Science. 174, 2, p. 289-301 13 p.

Impact of wettability on waterflooding: pore-scale simulation

McDougall, S. R. & Sorbie, K. S., Aug 1995, In: SPE Reservoir Engineering. 10, 3, p. 208-213 6 p.

Linear viscous fingering: New experimental results, direct simulation and the evaluation of averaged models

Sorbie, K. S., Zhang, H. R. & Tsibuklis, N. B., Feb 1995, In: Chemical Engineering Science. 50, 4, p. 601-616 16 p.

Geology, geometry and effective flow

Pickup, G. E., Ringrose, P. S., Corbett, P. W. M., Jensen, J. L. & Sorbie, K. S., 1995, In: Petroleum Geoscience. 1, 1, p. 37-42 6 p.

Flow regimes in miscible displacements in heterogeneous correlated random fields

Sorbie, K. S., Feghi, F., Pickup, G. E., Ringrose, P. S. & Jensen, J. L., Apr 1994, In: SPE Advanced Technology Series. 2, 2, p. 78-87 10 p.

Permeability tensors for sedimentary structures

Pickup, G. E., Ringrose, P. S., Jensen, J. L. & Sorbie, K. S., Feb 1994, In: Mathematical Geology. 26, 2, p. 227-250 24 p.

Sulphate scale precipitation arising from seawater injection: a prediction study

Yuan, M., Todd, A. C. & Sorbie, K. S., Feb 1994, In: Marine and Petroleum Geology. 11, 1, p. 24-30 7 p.

Immiscible flow behaviour in laminated and cross-bedded sandstones

Ringrose, P. S., Sorbie, K. S., Corbett, P. W. M. & Jensen, J. L., Apr 1993, In: Journal of Petroleum Science and Engineering. 9, 2, p. 103-124 22 p.

Analytical method for evaluating the effective molecular diffusion coefficient within porous media

Sorbie, K. S. & Tomlinson, C. J., 1993, In: Chemical Engineering Science. 48, 10, p. 1813-1818 6 p.

Generalization of the Poiseuille law for one- and two-phase flow in a random capillary network

O'Carroll, C. & Sorbie, K. S., 1993, In: Physical Review E - Statistical Physics, Plasmas, Fluids, and Related Interdisciplinary Topics. 47, 5, p. 3467-3476 10 p.

Relevant reservoir characterization: Recovery process, geometry, and scale

Ringrose, P. S., Sorbie, K. S., Feghi, F. A., Pickup, G. E. & Jensen, J. L., 1993, In: In Situ. 17, 1, p. 55-82 28 p.

The effect of pH on the flow behavior of xanthan solution through porous media

Sorbie, K. S. & Huang, Y., 15 Mar 1992, In: *Journal of Colloid and Interface Science*. 149, 2, p. 303-313 11 p.

Rheological and transport effects in the flow of low-concentration xanthan solution through porous media

Sorbie, K. S. & Huang, Y., Aug 1991, In: *Journal of Colloid and Interface Science*. 145, 1, p. 74-89 16 p.

The inclusion of molecular diffusion effects in the network modelling of hydrodynamic dispersion in porous media

Sorbie, K. S. & Clifford, P. J., 1991, In: *Chemical Engineering Science*. 46, 10, p. 2525-2542 18 p.

Depleted layer effects in polymer flow through porous media. II. Network calculations

Sorbie, K. S., 15 Oct 1990, In: *Journal of Colloid and Interface Science*. 139, 2, p. 315-323 9 p.

Depleted layer effects in polymer flow through porous media. I. Single capillary calculations

Sorbie, K. S., 15 Oct 1990, In: *Journal of Colloid and Interface Science*. 139, 2, p. 299-314 16 p.

The rheology of pseudoplastic fluids in porous media using network modeling

Sorbie, K. S., Clifford, P. J. & Jones, E. R. W., Jul 1989, In: *Journal of Colloid and Interface Science*. 130, 2, p. 508-534 27 p.

Dispersion and polydispersity effects in the transport of xanthan in porous media

Brown, W. D. & Sorbie, K. S., 1989, In: *Macromolecules*. 22, 6, p. 2835-2845 11 p.

CONFERENCE PAPERS (1988 TO DATE)

Differences in the upscaling procedure for compositional reservoir simulations of immiscible and miscible gas flooding

de Souza Rios, V., Skauge, A., Sorbie, K., Wang, G., Schiozer, D. J. & dos Santos, L. O. S., 19 Oct 2021, *SPE Reservoir Simulation Conference 2021*. Society of Petroleum Engineers, SPE-203970-MS

Microbial Ecology Metrics to Assess the Effect of Biocide on Souring Control and Improve Souring Modelling

Shi, X., De Rezende, J. R. & Sorbie, K., 16 Jun 2021, *SPE International Oilfield Corrosion Conference and Exhibition 2021*. Society of Petroleum Engineers, SPE-205037-MS

Impacts of gas trapping and capillarity on oil recovery by near-miscible CO₂-wag

Wang, G., Pickup, G., Sorbie, K., MacKay, E. & Skauge, A., Sep 2020, *ECMOR XVII*. EAGE Publishing BV, p. 1-11 11 p.

Polymer Chemical Structure and its Impact on EOR Performance

Beteta, A., Nurmi, L., Rosati, L., Hanski, S., McIver, K., Sorbie, K. S. & Toivonen, S., 30 Aug 2020, *SPE Improved Oil Recovery Conference 2020*. Society of Petroleum Engineers, SPE-200441

An experimental determination of hydrogen sulfide scavenging capacities and mechanisms in iron-bearing minerals

Graham, A., Salleh, I., Ibrahim, J., Khairuddin, K., Singleton, M. & Sorbie, K., 24 Jun 2020, *SPE International Oilfield Scale Conference and Exhibition 2020*. Society of Petroleum Engineers, SPE-200677-MS

A rigorous procedure to predict coupled carbonate and sulfide scales in different field scenarios

Ness, G. & Sorbie, K. S., 24 Jun 2020, *SPE International Oilfield Scale Conference and Exhibition 2020*. Society of Petroleum Engineers, SPE-200684-MS

Iron sulfide scale formation: A new anaerobic setup and new insights

Alduailej, Y. K. & Sorbie, K. S., 24 Jun 2020, *SPE International Oilfield Scale Conference and Exhibition 2020*. Society of Petroleum Engineers, SPE-200660-MS

Iron sulfide scale inhibition: Limitations at sour conditions

Alduailej, Y. K. & Sorbie, K. S., 24 Jun 2020, *SPE International Oilfield Scale Conference and Exhibition 2020*. Society of Petroleum Engineers, SPE-200706-MS

Squeeze design optimization by considering operational constraints, numerical simulation and mathematical modelling

Azari, V., Vazquez, O., Mackay, E., Sorbie, K., Jordan, M. & Sutherland, L., 24 Jun 2020, *SPE International Oilfield Scale Conference and Exhibition 2020*. Society of Petroleum Engineers, SPE-200687-MS

A Rigorous Method for Special Core Analysis SCAL Data Correction in the Presence of Capillary End Effects

Goodarzian, S. & Sorbie, K. S., 2020, *SPE Europec Featured at 82nd EAGE Conference and Exhibition*. Society of Petroleum Engineers, SPE-200610-MS

Critical review on sulphide scale formation, removal and inhibition

Al-Harbi, B., Graham, A., Aljeaban, N. & Sorbie, K., 2020.

Modelling the impact of alkaline-surfactant and alkaline-surfactant-polymer flooding processes on scale precipitation and management

Al Kalbani, M. M., Jordan, M. M., Mackay, E. J., Sorbie, K. S. & Nghiem, L. X., 2020, *SPE International Oilfield Scale Conference and Exhibition 2020*. Society of Petroleum Engineers, SPE-200690-MS

Iron sulfide and zinc sulfide inhibition and scale inhibitor consumption

Alharbi, B., Aljeaban, N., Graham, A. & Sorbie, K. S., 11 Nov 2019, *Abu Dhabi International Petroleum Exhibition and Conference 2019, ADIP 2019*. Society of Petroleum Engineers, SPE-197688-MS

Prediction of Souring in Infill Wells using Standalone Extended 2D Simulator for a Malaysian Offshore Field

Salleh, I. K., Panuganti, S. R., Misra, S., Ibrahim, J. M. M., Hamza, N., Sorbie, K. S., Cruickshank, J. & Tewari, R. D., 11 Nov 2019, *Abu Dhabi International Petroleum Exhibition and Conference 2019*. Society of Petroleum Engineers, SPE-197173-MS

Inhibition and interaction between iron sulphide, zinc sulphide and lead sulphide

Alharbi, B., Aljeaban, N., Graham, A. & Sorbie, K., 13 Oct 2019, *SPE Kuwait Oil and Gas Show and Conference 2019*. Society of Petroleum Engineers, SPE-198175-MS

Analysis of near-miscible CO₂-WAG displacements: The distinction between compositional and interfacial tension effects

Wang, G., Pickup, G., Sorbie, K., Mackay, E. & Skauge, A., 10 Apr 2019, *SPE Reservoir Simulation Conference 2019*. Society of Petroleum Engineers, SPE-193907-MS

Analysis and simulation of polymer injectivity

Jacobsen, J. G., Alzaabi, M., Tormod, S., Sorbie, K. & Skauge, A., 8 Apr 2019, *20th European Symposium on Improved Oil Recovery*. EAGE Publishing BV

Barium sulphate scaling and control during polymer, surfactant and surfactant-polymer flooding

Al Kalbani, M. M., Jordan, M. M., Mackay, E. J., Sorbie, K. S. & Nghiem, L., 8 Apr 2019, *Society of Petroleum Engineers - SPE International Conference on Oilfield Chemistry 2019*. Society of Petroleum Engineers, SPE-193575-MS

Building a fundamental understanding of scale inhibitor retention in carbonate formations

Jarrahian, K., Sorbie, K., Singleton, M., Boak, L. & Graham, A., 8 Apr 2019, *SPE International Conference on Oilfield Chemistry 2019*. Society of Petroleum Engineers, SPE-193635-MS

Mobilization of by-passed oil by viscous crossflow in EOR processes

Sorbie, K. S. & Skauge, A., 8 Apr 2019, *20th European Symposium on Improved Oil Recovery*. EAGE Publishing BV

Modelling the Transition between Immiscible and Miscible WAG

Skauge, A., Sorbie, K. S. & Van Dijke, M. I. J., 8 Apr 2019, *20th European Symposium on Improved Oil Recovery*. EAGE Publishing BV

Numerical Study of Polymer Flow in Porous Media using Dynamic Pore Network Modelling

Zamani, N., Cecilie Salmo, I., Sorbie, K. & Skauge, A., 8 Apr 2019, *20th European Symposium on Improved Oil Recovery*. EAGE Publishing BV

The impact of H₂S on carbonate scaling risk. A field case study

Ness, G., Sorbie, K., Lugo, N. & Kelly, C., 8 Apr 2019, *SPE International Conference on Oilfield Chemistry 2019*. Society of Petroleum Engineers, SPE-193583-MS

Experimental investigation of hydrogen sulfide scavenging capacities and mechanisms in iron-bearing minerals

Graham, A., Singleton, M., Salleh, I. K., Khairuddin, K., Ibrahim, J. & Sorbie, K., 18 Sep 2018, *1st EAGE/IFPEN Conference on Sulfur Risk Management in Exploration and Production*. EAGE Publishing BV

Laboratory investigation of zinc and lead sulphide inhibition

Al-Harbi, B. G., Graham, A. J. & Sorbie, K. S., 7 Feb 2018, *SPE International Conference and Exhibition on Formation Damage Control, 7-9 February, Lafayette, Louisiana, USA*. Society of Petroleum Engineers, SPE-189572-MS

The Effect of pH and Mineralogy on the Retention of Polymeric Scale Inhibitors on Carbonate Rocks for Precipitation Squeeze Treatments

Jarrahian, K., Sorbie, K. S., Singleton, M. A., Boak, L. S. & Graham, A. J., 7 Feb 2018, *SPE International Conference and Exhibition on Formation Damage Control, 7-9 February, Lafayette, Louisiana, USA*. Society of Petroleum Engineers, SPE-189519-MS

Carbonate and sulphide scale prediction modelling in auto-scaling processes: Procedure for the calculation of reservoir fluid compositions and scale profiles in production systems using topside data

Silva, D. J., Sorbie, K. S., Ness, G. & Mackay, E. J., 2018, *SPE International Oilfield Scale Conference and Exhibition 2018*. Society of Petroleum Engineers, SPE-190711-MS

Development of an UV-Vis spectrophotometric method for accurate determination of aqueous sulphides in exotic scale studies

Alduailej, Y., Boak, L. S., Alharbi, B., Graham, A. J., Sorbie, K. S., Oduro, H., Alkhalidi, M. & Alqathami, S., 2018, *SPE International Oilfield Scale Conference and Exhibition 2018*. Society of Petroleum Engineers, SPE-190702-MS

Impact of polymer EOR and salinity on barium sulphate scale risk

Al Kalbani, M. M., Mackay, E. J., Sorbie, K. S. & Nghiem, L., 2018, *SPE International Oilfield Scale Conference and Exhibition 2018*. Society of Petroleum Engineers, SPE-190724-MS

Introduction of kinetic effects into the thermodynamic modelling of CaCO₃ scale precipitation

Silva, D. J., Sorbie, K. S. & Mackay, E. J., 2018, *SPE International Oilfield Scale Conference and Exhibition 2018*. Society of Petroleum Engineers, SPE-190737-MS

Iron sulphide inhibition and interaction with zinc and lead sulphide

Al-Harbi, B. G., Graham, A. J. & Sorbie, K. S., 2018, *SPE International Oilfield Scale Conference and Exhibition 2018*. Society of Petroleum Engineers, SPE-190743-MS

Rigorous carbonate and sulphide scale predictions: What really matters?

Ness, G. & Sorbie, K. S., 2018, *SPE International Oilfield Scale Conference and Exhibition 2018*. Society of Petroleum Engineers, SPE-190726-MS

The analysis of compositional effects on global flow regimes in CO₂ near-miscible displacements in heterogeneous systems

Wang, G., Pickup, G. E., Sorbie, K. S. & Mackay, E. J., 2018, *SPE Improved Oil Recovery Conference 2018*. Society of Petroleum Engineers, SPE-190273-MS

The Impact of Field Measurements, Data Handling Procedures and Software Selection on Carbonate and Sulphide Scale Predictions

Verri, G. & Sorbie, K. S., 7 Nov 2017, *SPE Symposium: Production Enhancement and Cost Optimisation, 7-8 November, Kuala Lumpur, Malaysia*. Society of Petroleum Engineers, SPE-189218-MS

Zinc and lead interactions in combined sulphide scales

Al-Harbi, B. G., Graham, A. J. & Sorbie, K. S., 3 Apr 2017, *SPE International Conference on Oilfield Chemistry 2017*. Society of Petroleum Engineers, p. 1030-1046 17 p.

Iron sources in sour wells: Reservoir fluids or corrosion?

Verri, G. & Sorbie, K. S., 2017, *Corrosion Conference and Expo 2017*. NACE International, Vol. 7. p. 5097-5111 15 p. (NACE - International Corrosion Conference Series).

Novel studies on precipitated phosphate ester scale inhibitors for precipitation squeeze application

Valiakhmetova, A., Sorbie, K. S., Jordan, M. M. & Boak, L. S., 2017, *SPE International Conference on Oilfield Chemistry 2017*. Society of Petroleum Engineers, p. 682-699 18 p.

Modelling CaCO₃ scale in CO₂ water alternating gas CO₂-WAG processes

Silva, D., Sorbie, K. S. & Mackay, E. J., 11 May 2016, *SPE International Oilfield Scale Conference and Exhibition, 11-12 May, Aberdeen, Scotland, UK*. Society of Petroleum Engineers, SPE-179893-MS

The Solubility and Dissolution of PCCA_{ca} Complex in Precipitation Squeeze Processes

Farooqui, N. M., Sorbie, K. S. & Boak, L. S., 11 May 2016, *SPE International Oilfield Scale Conference and Exhibition, 11-12 May, Aberdeen, Scotland, UK*. Society of Petroleum Engineers, SPE-179894-MS

A systematic investigation of factors affecting the formation of zinc sulfide ZnS

Graham, A. J., Singleton, M., Sorbie, K. S. & Collins, I. R., 2016, *SPE International Oilfield Scale Conference and Exhibition*. Society of Petroleum Engineers, SPE-179910-MS

Iron sulphide scale management in high H₂S and CO₂ carbonate reservoirs

Verri, G., Sorbie, K. S., Singleton, M. A., Hinrichsen, C., Wang, Q., Chang, F. F. & Ramachandran, S., 2016, *SPE International Oilfield Scale Conference and Exhibition, 11-12 May, Aberdeen, Scotland, UK*. Society of Petroleum Engineers, SPE-179871-MS

Mutual solvent driven inorganic precipitation in the pre-flush stage of squeeze treatments

Arab, M. M., Sorbie, K. S. & Singleton, M., 2016, *SPE International Conference and Exhibition on Formation Damage Control, 24-26 February, Lafayette, Louisiana, USA*. Society of Petroleum Engineers, SPE-179033-MS

Solubility and inhibition efficiency of phosphonate scale inhibitor_{calcium} complexes for application in precipitation squeeze treatment

Valiakhmetova, A., Sorbie, K. S., Boak, L. S. & Shaw, S., 2016, *SPE International Conference and Exhibition on Formation Damage Control, 24-26 February, Lafayette, Louisiana, USA*. Society of Petroleum Engineers, SPE-178977-MS

The impact of vapour-liquid equilibria VLE calculations on scale prediction modelling

Ribeiro, A. S., Silva, D., Mackay, E. J. & Sorbie, K. S., 2016, *SPE International Oilfield Scale Conference and Exhibition*. Society of Petroleum Engineers, SPE-179885-MS

Quantifying the Severity of Silicate Scaling Using ICP-OES Analysis

Boak, L. S., Sorbie, K. S. & Sazali, R. A., 2 Nov 2015.

Molecular Weight Effects in Polymeric Scale Inhibitor Precipitation Squeeze Treatments

Farooqui, N. M., Boak, L. S. & Sorbie, K. S., 3 Jun 2015, *SPE European Formation Damage Conference and Exhibition, 03-05 June, Budapest, Hungary*. Society of Petroleum Engineers, 15 p. SPE-174214-MS

The Effect of pH on Silicate Scaling

Boak, L. S., Sorbie, K. S. & Sazali, R. A., 3 Jun 2015.

Polymer Flooding for EOR in the Schiehallion Field - Porous Flow Rheological Studies of High Molecular Weight Polymers

Shields, R. A., Chapman, E., Mercer, D., Jerauld, G., Sorbie, K. S., Mogford, D. & Cable, A., 14 Apr 2015.

Structure and stoichiometry of mixed divalent metal ($\text{Ca}^{2+}/\text{Mg}^{2+}/\text{Sr}^{2+}/\text{Ba}^{2+}$) phosphonate scale inhibitor complexes for application in precipitation squeeze processes

Shaw, S. S. & Sorbie, K. S., Jan 2015.

The effect of molecular weight distribution on the inhibition efficiency performance of polymeric scale inhibitors during retention

Farooqui, N. M., Sorbie, K. S., Palermo, L. & Lucas, E., Jan 2015, *NACE - International Corrosion Conference Series*. Vol. 2015.

Coupled adsorption/precipitation tests with a phosphonate inhibitor and carbonate substrate

Thomas, W. S., Sorbie, K. S. & Singleton, M., 2014, *SPE International Conference and Exhibition on Oilfield Scale 2014*. Richardson, Texas: Society of Petroleum Engineers, p. 408-419 12 p.

Oilfield scale inhibitors for application in precipitation squeeze treatments: Solubility of the Ca-PPCA complex

Farooqui, N. M. & Sorbie, K. S., 2014, *SPE International Conference and Exhibition on Oilfield Scale 2014*. Richardson, Texas: Society of Petroleum Engineers, p. 584-595 12 p.

Status of fluid flow mechanisms for miscible and immiscible WAG

Skauge, A. & Sorbie, K. S., 2014, *Society of Petroleum Engineers - SPE EOR Conference at Oil and Gas West Asia 2014: Driving Integrated and Innovative EOR*. Society of Petroleum Engineers, p. 891-905 15 p.

Structure, stoichiometry, and modelling of mixed calcium magnesium phosphonate scale inhibitor complexes for application in precipitation squeeze processes

Shaw, S. & Sorbie, K. S., 2014, *SPE International Conference and Exhibition on Oilfield Scale 2014*. Richardson, Texas: Society of Petroleum Engineers, p. 46-63 18 p.

Sulphide scale co-precipitation with calcium carbonate

Okocha, C. & Sorbie, K. S., 2014, *SPE International Symposium and Exhibition on Formation Damage Control 2014*. Richardson, Texas: Society of Petroleum Engineers, p. 757-781 25 p.

Sulphide scale (PbS/ZnS) formation and inhibition tests for a gas condensate field with severe scaling conditions

Okocha, C., Sorbie, K. S., Hurtevent, C., Baraka-Lokmane, S. & Rossiter, M., 2014, *SPE International Conference and Exhibition on Oilfield Scale 2014*. Richardson, Texas: Society of Petroleum Engineers, p. 640-657 18 p.

Synergistic properties of phosphonate and polymeric scale inhibitor blends for barium sulphate scale inhibition

Shaw, S. & Sorbie, K. S., 2014, *SPE International Conference and Exhibition on Oilfield Scale 2014*. Richardson, Texas: Society of Petroleum Engineers, p. 64-78 15 p.

Pore-scale visualisation of two-phase fluid displacement processes in a carbonate rock using X-ray micro-tomography technique

Pak, T., Butler, I. B., Geiger, S., Van Dijke, R., Jiang, Z., Elphick, S. & Sorbie, K. S., 1 Dec 2013, *Society of Petroleum Engineers - SPE Reservoir Characterisation and Simulation Conference and Exhibition, RCSC 2013: New Approaches in Characterisation and Modelling of Complex Reservoirs*. Richardson, Texas: Society of Petroleum Engineers, Vol. 1. p. 595-603 9 p.

Modeling the role of microporosity in flow in carbonates

Harland, S., Wood, R. A., Curtis, A., van Dijke, R., Jiang, Z. & Sorbie, K. S., 10 Jun 2013, *75th European Association of Geoscientists and Engineers Conference and Exhibition 2013: Changing Frontiers: Incorporating SPE EUROPEC 2013*. Houston: EAGE Publishing BV, p. 32-36 5 p.

Scale inhibitor consumption in long-term static barium sulphate inhibition efficiency tests

Shaw, S. & Sorbie, K. S., Apr 2013, p. 1-26. 26 p.

The development and application of techniques for the detailed characterization of a novel series of p-functionalized polymeric scale inhibitors

Kerr, J., Goulding, J. & Sorbie, K. S., Apr 2013, p. 1-17. 17 p.

Structure, stoichiometry, and modelling of calcium phosphonate scale inhibitor complexes for application in precipitation squeeze processes

Shaw, S. & Sorbie, K. S., 2013, *International Symposium on Oilfield Chemistry 2013*. Richardson, Texas: Society of Petroleum Engineers, p. 92-117 26 p.

A simple model of precipitation squeeze treatments

Sorbie, K. S., May 2012, p. 1-14. 14 p.

Coupled adsorption/precipitation experiments: 1. Static results

Ibrahim, J., Sorbie, K. S. & Boak, L. S., May 2012, p. 1-23. 23 p.

Coupled adsorption/precipitation experiments: 2. Non-equilibrium sand pack treatments

Ibrahim, J., Sorbie, K. S. & Boak, L. S., May 2012, p. 1-29. 29 p.

Dual chelant mechanism for the deployment of scale inhibitors in controlled solubility/precipitation treatments

Todd, M. J., Savian, J. & Sorbie, K. S., May 2012, p. 1-14. 14 p.

The effect of pH on static barium sulphate inhibition efficiency and minimum inhibitor concentration (MIC) of generic scale inhibitors

Shaw, S. & Sorbie, K. S., May 2012, p. 1-18. 18 p.

The relation between barite inhibition by phosphonate scale inhibitors and the structures of phosphonate-metal complexes

Shaw, S., Welton, T. D. & Sorbie, K. S., May 2012, p. 1-29. 29 p.

Can network modelling predict two-phase flow functions?

Sorbie, K. S. & Skauge, A., Sep 2011, p. 1-12. 12 p.

Multiscale pore system reconstruction and integration

Wu, K., Jiang, Z., Ma, J., Couples, G. D., van Dijke, R. & Sorbie, K. S., Sep 2011, p. 1-12. 12 p.

The structure of residual oil as a function of wettability alteration using pore-scale network modelling

Sorbie, K. S., Ryazanov, A. & van Dijke, R., Sep 2011, p. 1-12. 12 p.

Analysis of chemical processes in reservoirs based on the identification of injection water fraction in produced brine

Ishkov, O., Mackay, E. J. & Sorbie, K. S., Apr 2011, p. 10 pp. 10 p.

Analytical solutions for co- and countercurrent imbibition of sorbing - dispersive solutes in immiscible two-phase flow

Schmid, K. S., Geiger, S. & Sorbie, K. S., Sep 2010, p. 1-24. 24 p.

Classic and hybrid MCMC methods to approximate pore size distribution of carbonate reservoirs using pore-network models

Juri, J. E., Van Dijke, M. I. J., Sorbie, K. S. & Masalmeh, S. K., Sep 2010, p. 1-25. 25 p.

Pore-scale modeling of chemically induced effects on two-phase flow

Zaretskiy, Y., Geiger, S., Sorbie, K. S. & Foerster, M., Sep 2010, p. 1-20. 20 p.

Impact of fluid distribution on scale inhibitor squeeze treatments in pattern floods and fractured wells

Rakhimov, A. Z., Vazquez, O., Sorbie, K. S. & Mackay, E. J., Jun 2010, p. 15 pp. 15 p.

Pore-network model predictions of multi-phase flow functions for carbonate reservoirs based on accurate matching of the pore size distribution

Juri, J. E., Van Dijke, M. I. J. & Sorbie, K. S., Jun 2010.

Prediction of residual oil saturation in mixed-wet networks using accurate pore shape descriptors

Ryazanov, A., Van Dijke, M. I. J. & Sorbie, K. S., Jun 2010, p. 9 pp. 9 p.

Quantitative characterization of porous rocks: stochastic construction of representative pore networks

Jiang, Z., Wu, K., Sorbie, K. S., Couples, G. D. & Van Dijke, M. I. J., Jun 2010.

Effects of sulphide scales (PbS, ZnS & FeS) on BaSO₄ crystal growth and dissolution

Okocha, C. & Sorbie, K. S., May 2010, p. 8 pp. 8 p.

General coupled kinetic adsorption/precipitation transport model for scale inhibitor retention in porous media: II. Sensitivity calculations and field predictions

Vazquez, O., Sorbie, K. S. & Mackay, E. J., May 2010, p. 11 pp. 11 p.

General coupled kinetic adsorption/precipitation transport model for scale inhibitor retention in porous media: I. model formulation

Sorbie, K. S., May 2010, p. 14 pp. 14 p.

New developments on the analysis of scale inhibitors

Boak, L. S. & Sorbie, K. S., May 2010, p. 1-16. 16 p.

Scale inhibitor squeeze treatment efficiency in unfractured and fractured wells

Ishkov, O., Mackay, E. J. & Sorbie, K. S., May 2010, p. 10 pp. 10 p.

The effects of barium sulphate saturation ratio, calcium and magnesium on the inhibition efficiency: II polymeric scale inhibitors

Shaw, S., Sorbie, K. S. & Boak, L. S., May 2010, p. 1-18. 18 p.

The effects of barium sulphate saturation ratio, calcium and magnesium on the inhibition efficiency: I phosphonate scale inhibitors

Shaw, S., Sorbie, K. S. & Boak, L. S., May 2010, p. 1-16. 16 p.

Mechanism of oil recovery by water-alternating-gas injection at near-miscible conditions in mixed wet systems

Sorbie, K. S. & Van Dijke, M. I. J., Apr 2010, p. 16 pp. 16 p.

Pore-network prediction of residual oil saturation based on oil layer drainage in mixed-wet systems

Ryazanov, A., Van Dijke, M. I. J. & Sorbie, K. S., Apr 2010, p. 16 pp. 16 p.

Proposed pore-scale mechanism for how low salinity waterflooding works

Sorbie, K. S. & Collins, I. R., Apr 2010, p. 17 pp. 17 p.

Statistical characterisation of the pore space based on 3D rock images and stochastic pore network construction

Wu, K., Jiang, Z., Van Dijke, M. I. J., Sorbie, K. S. & Couples, G. D., Apr 2010.

Using synchrotron x-ray diffraction (SXRD) for studying the BaSO₄ formation kinetics and the effect of inhibitors on barite formation

Mavredaki, E., Neville, A. & Sorbie, K. S., Mar 2010, p. 94-101. 8 p.

Dynamic scaling evaluation in gravel packs using low-sulphate seawater

Shields, R. A., Bourne, H., Vazquez, O., Sorbie, K. S. & Singleton, M., Feb 2010, p. 13 pp. 13 p.

A combined numerical-experimental approach to study sub-grid transport processes in real 3D carbonate rocks

Geiger, S., Fricke, C., Schmid, K. S., Zaretskiy, Y., Butler, I., Elphick, S., Sorbie, K. S. & Van Dijke, M. I. J., 2010, *Proceedings of the 72nd European Association of Geoscientists and Engineers Conference and Exhibition 2010 - Incorporating SPE EUROPEC 2010*. Vol. 4. p. 2965-2969 5 p.

A general coupled kinetic adsorption/precipitation transport model for scale inhibitor retention in porous media: I. Model formulation

Sorbie, K. S., 2010, *Society of Petroleum Engineers - 10th SPE International Conference on Oilfield Scale 2010*. p. 295-308 14 p.

A general coupled kinetic adsorption/precipitation transport model for scale inhibitor retention in porous media: II. Sensitivity calculations and field predictions

Vazquez, O., Sorbie, K. S. & Mackay, E. J., 2010, *Society of Petroleum Engineers - 10th SPE International Conference on Oilfield Scale 2010*. p. 309-319 11 p.

Analytical solutions for co-and countercurrent imbibition of sorbing-dispersive solutes in immiscible two-phase flow

Schmid, K. S., Geiger, S. & Sorbie, K. S., 2010.

A proposed pore-scale mechanism for how low salinity waterflooding works

Sorbie, K. S. & Collins, I. R., 2010, *17th SPE Improved Oil Recovery Symposium 2010, IOR 2010*. Vol. 1. p. 760-777 18 p.

Dynamic scaling evaluation in gravel packs using low-sulphate seawater

Shields, R., Bourne, H., Vazquez, O., Sorbie, K. & Singleton, M., 2010, *SPE International Symposium and Exhibition on Formation Damage Control 2010*. Vol. 2. p. 670-682 13 p.

Effects of sulphide scales (PbS, ZnS & FeS) on BaSO₄ crystal growth and dissolution

Okocha, C. & Sorbie, K. S., 2010, *Society of Petroleum Engineers - 10th SPE International Conference on Oilfield Scale 2010*. p. 101-108 8 p.

Impact of fluid distribution on scale inhibitor squeeze treatments in pattern floods and fractured wells

Rakhimov, A., Vazquez, O., Sorbie, K. S. & Mackay, E. J., 2010, *Society of Petroleum Engineers - 72nd European Association of Geoscientists and Engineers Conference and Exhibition 2010 - Incorporating SPE EUROPEC 2010*. Vol. 3. p. 2343-2358 16 p.

Pore-network prediction of residual oil saturation based on oil layer drainage in mixed-wet systems

Ryazanov, A. V., Van Dijke, M. I. J. & Sorbie, K. S., 2010, *17th SPE Improved Oil Recovery Symposium 2010, IOR 2010*. Vol. 2. p. 1217-1232 16 p.

Pore-scale modelling of chemically induced effects on two-phase flow

Zaretskiy, Y., Geiger, S., Sorbie, K. & Foerster, M., 2010, *ECMOR XII - 12th European Conference on the Mathematics of Oil Recovery*. EAGE Publishing BV

Scale inhibitor squeeze treatment efficiency in unfractured and fractured wells

Ishkov, O., Mackay, E. & Sorbie, K., 2010, *Society of Petroleum Engineers - 10th SPE International Conference on Oilfield Scale 2010*. p. 529-538 10 p.

The mechanism of oil recovery by water-alternating-gas injection at near-miscible conditions in mixed wet systems
Sorbie, K. S. & Van Dijke, M. I. J., 2010, *17th SPE Improved Oil Recovery Symposium 2010, IOR 2010*. Vol. 1. p. 778-793
16 p.

Relationship between pore-scale characteristics and petrophysical properties
Jiang, Z., Wu, K., Couples, G. D., Ryazanov, A., Van Dijke, M. I. J. & Sorbie, K. S., Sep 2009, p. 3 pp. 3 p.

Impact of mutual solvent preflush on scale squeeze treatments: extended squeeze lifetime and improved well clean-up time
Vazquez, O., Mackay, E. J. & Sorbie, K. S., May 2009, p. 14 pp. 14 p.

Modelling the placement of scale squeeze treatments in heterogenous formation with pressurised layers
Vazquez, O., Mackay, E. J. & Sorbie, K. S., May 2009, p. 10 pp. 10 p.

Experimental and numerical modeling studies of viscous unstable displacement
Skauge, A., Sorbie, K. S., Ormehaug, PA. & Skauge, T., Apr 2009, p. 262-273. 12 p.

Reacting ions method to identify injected water fraction in produced brine
Ishkov, O., Mackay, E. J. & Sorbie, K. S., Apr 2009, p. 16 pp. 16 p.

Spectroscopic determination of naphthenic acid composition from various calcium naphthenates field deposits
Mohammed, M. A. & Sorbie, K. S., Apr 2009, p. 10 pp. 10 p.

Towards automation of the history matching process for scale inhibitor squeeze modelling
Vazquez, O., Mackay, E. J. & Sorbie, K. S., Mar 2009, p. 23 pp. 23 p.

Impact of mutual solvent preflush on scale squeeze treatments: Extended squeeze lifetime and improved well clean-up time
Vazquez, O., Mackay, E., Sorbie, K. & Jordan, M., 2009, *8th European Formation Damage Conference 2009 - New Technologies for Conventional and Unconventional Reservoirs*. Vol. 1. p. 491-504 14 p.

Reacting ions method to identify injected water fraction in produced brine
Ishkov, O., Mackay, E. & Sorbie, K., 2009, *Proceedings - International Symposium on Oilfield Chemistry 2009*. Vol. 2. p. 801-816 16 p.

Spectroscopic determination of naphthenic acid composition from various calcium naphthenates field deposits
Ahmed, M. M. & Sorbie, K. S., 2009, *Proceedings - International Symposium on Oilfield Chemistry 2009*. Vol. 2. p. 595-604 10 p.

Using Synchrotron X-Ray Diffraction (SXR) for studying the BaSO₄ formation kinetics and the effect of inhibitors on barite formation
Mavredaki, E., Neville, A. & Sorbie, K. S., 2009, *Neutron and X-Ray Scattering in Advancing Materials Research - Proceedings of the International Conference on Neutron and X-Ray Scattering - 2009*. Vol. 1202. p. 94-101 8 p.

Two-phase pore-network modelling with non-uniform wettability: existence of oil layers
Ryazanov, A., Van Dijke, M. I. J. & Sorbie, K. S., Oct 2008.

Validation of methods for multi-scale pore space reconstruction and their use in prediction of flow properties of carbonate
Wu, K., Ryazanov, A., Van Dijke, M. I. J., Jiang, Z., Ma, J., Couples, G. D. & Sorbie, K. S., Oct 2008, p. 1-12. 12 p.

Shortest path algorithm for pore-scale simulation of water-alternating-gas injection
Van Dijke, M. I. J., Juri, J. E. & Sorbie, K. S., Sep 2008, p. 1-11. 11 p.

Integration of multi-scale networks of heterogeneous porous media and their multi-phase flow prediction
Wu, K., Ryazanov, A., Jiang, Z., Couples, G. D., Van Dijke, M. I. J. & Sorbie, K. S., Jul 2008.

Modeling a surfactant preflush with non-aqueous and aqueous scale inhibitor squeeze treatments
Vazquez, O., Mackay, E. J., Al Shuaili, K. H. N., Sorbie, K. S. & Jordan, M. M., Jun 2008, p. 12 pp. 12 p.

Naphthenic acid extraction and characterization from crude oils and naphthenate field deposits revisited
Ahmed, M. M. & Sorbie, K. S., Jun 2008.

Coupled adsorption/precipitation of scale inhibitors: Experimental results and modelling
Kahrwad, M. A. M., Sorbie, K. S. & Boak, L. S., May 2008, p. 1-10. 10 p.

Study of BaSO₄ formation kinetics and inhibition effect of polyphosphino-carboxylic acid (PPCA) with synchrotron x-ray diffraction (SXR_D)
Mavredaki, E., Neville, A. & Sorbie, K. S., May 2008, p. 6 pp. 6 p.

Thermodynamic modelling of naphthenate formation and related pH change experiments
Mohammed, M. A., Sorbie, K. S. & Shepherd, A. G., May 2008, p. 11 pp. 11 p.

In-situ analyses of CaCO₃ deposition on a metal surface
Martinoda, A., Neville, A., Euvrad, M. & Sorbie, K. S., Apr 2008, p. 1 pp. 1 p.

Pore-scale simulation of WAG floods in mixed-wet micromodels
Van Dijke, M. I. J., Lorentzen, M., Sohrabi Sedeh, M. & Sorbie, K. S., Apr 2008, p. 14 pp. 14 p.

Assessment of CaCO₃ inhibition by the use of SXR_D on a metallic substrate
Martinod, A., Neville, A., Sorbie, K. S. & Zhong, Z., Mar 2008, p. 083511-0835112. 751602 p.

Inhibition mechanisms for sulphide scales
Okocha, C., Sorbie, K. S. & Boak, L. S., Feb 2008, p. 1-5. 5 p.

Modeling a surfactant preflush with non-aqueous and aqueous scale inhibitor squeeze treatments
Vazquez, O., Mackay, E., Al Shuaili, K., Sorbie, K. & Jordan, M., 2008, *Society of Petroleum Engineers - 70th European Association of Geoscientists and Engineers Conference and Exhibition - Incorporating SPE EUROPEC 2008*. Vol. 4. p. 2219-2231 13 p.

Study of BaSO₄ formation kinetics and inhibition effect of polyphosphino-carboxylic acid (PPCA) with Synchrotron X-Ray Diffraction (SXR_D)
Mavredaki, E., Neville, A. & Sorbie, K. S., 2008, *Society of Petroleum Engineers - 9th International Conference on Oilfield Scale 2008 - "Managing Scale Through the Field Lifetime"*. p. 145-150 6 p.

Thermodynamic modelling of naphthenate formation and related pH change experiments
Mohammed, M. A., Sorbie, K. S. & Shepherd, A. G., 2008, *Society of Petroleum Engineers - 9th International Conference on Oilfield Scale 2008 - "Managing Scale Through the Field Lifetime"*. p. 134-144 11 p.

Role of calcium and magnesium in the mechanism of the scale inhibitor retention in carbonate systems
Baraka-Lokmane, S. & Sorbie, K. S., Nov 2007, p. 6 pp. 6 p.

Reconstruction of multi-scale heterogeneous porous media and their flow prediction
Wu, K., Jiang, Z., Couples, G. D., Van Dijke, M. I. J. & Sorbie, K. S., Sep 2007, p. 12 pp. 12 p.

Water alternating gas injection studies

Sohrabi Sedeh, M., Van Dijke, M. I. J., Danesh, A., Sorbie, K. S., Tehrani, A. D. & Al-Abri, M. A., May 2007.

Use of green scale inhibitors for squeeze treatments, carbonate coreflooding experiments

Baraka-Lokmane, S., Sorbie, K. S. & Poisson, N., Apr 2007.

Barite deposition kinetic studies: flow cell experimental results and modelling

Boak, L. S., Sorbie, K. S. & Ziadi, C., Mar 2007, p. 1-10. 10 p.

In-situ monitoring the inhibiting effect of DETPMP on CaCO₃ scale formation by synchrotron x-ray diffraction

Chen, T., Neville, A., Sorbie, K. S. & Zhong, Z., Mar 2007, p. 070531-0705314. 634784 p.

Modelling the transport and retention of non-aqueous scale inhibitor in corefloods

Vazquez, O., Shields, R. A., Mackay, E. J. & Sorbie, K. S., Mar 2007, p. 21 pp. 21 p.

Oilfield scale management in the 21st century

Sorbie, K. S. & Mackay, E. J., Mar 2007.

Thermal stability of selected green scale inhibitors

Inches, C. E., Sorbie, K. S., Christophe, C. & Papirer, L., Mar 2007, p. 27 pp. 27 p.

Modelling of nonaqueous and aqueous scale-inhibitor squeeze treatments

Vazquez, O., Mackay, E. J. & Sorbie, K. S., Feb 2007, p. 10 pp. 10 p.

Sensitivity study on the main factors affecting a polymeric RPM treatment in the near-wellbore region of a mature oil-producing well

Vazquez, O., Singleton, M., Sorbie, K. S. & Weare, R., Feb 2007, p. 14 pp. 14 p.

Analysis of phase displacement paths in gas injection and three-phase flow in water-alternating-gas (WAG) processes

Ivanova, I. S., Sorbie, K. S. & Van Dijke, M. I. J., Oct 2006, p. 5 pp. 5 p.

Low salinity oil recovery - an experimental investigation

Lager, A., Webb, K. J., Black, C. J. J., Singleton, M. & Sorbie, K. S., Sep 2006, p. 12 pp. 12 p.

Predicting 3-D structure of porous media and network extraction

Wu, K., Jiang, Z., Couples, G. D., Van Dijke, M. I. J. & Sorbie, K. S., Jul 2006.

Characterisation of pore sizes and connectivity in 3D porous media

Jiang, Z., Wu, K., Couples, G. D., Van Dijke, M. I. J. & Sorbie, K. S., Jun 2006, p. 8 pp. 8 p.

Criterion for three-fluid configurations including layers in a pore with non-uniform wettability

Van Dijke, M. I. J., Piri, M., Sorbie, K. S. & Blunt, M. J., Jun 2006, p. 10 pp. 10 p.

Analysis of organic field deposits: new types of calcium naphthenate scale or the effect of chemical treatment?

Shepherd, A. G., Thomson, G., Westacott, R., Sorbie, K. S., Turner, M. & Smith, P. C., May 2006, p. 16 pp. 16 p.

Analysis of the mechanism of transport and retention of nonaqueous scale-inhibitor treatments in cores using novel tracer techniques

Shields, R. A., Sorbie, K. S., Singleton, M. & Guan, H., May 2006, p. 8 pp. 8 p.

Development of a nonaqueous scale-inhibitor squeeze simulator

Vazquez, O., Mackay, E. J. & Sorbie, K. S., May 2006, p. 8 pp. 8 p.

Impact of in-situ sulfate stripping on scale management in the Gyda field

Mackay, E. J., Sorbie, K. S., Kavle, V., Sorhaug, E., Melvin, K., Sjørusaether, K. & Jordan, M., May 2006, p. 11 pp. 11 p.

Kinetics of sulfate deposition in seeded and unseeded tests

Boak, L. S. & Sorbie, K. S., May 2006, p. 1-11. 11 p.

Placement using viscosified non-newtonian scale-inhibitor slugs: the effect of shear thinning

Sorbie, K. S., Mackay, E. J., Collins, I. R. & Wat, R., May 2006, p. 10 pp. 10 p.

Scale inhibitor core floods in carbonate cores: chemical interactions and modelling

Baraka-Lokmane, S. & Sorbie, K. S., May 2006, p. 14 pp. 14 p.

Using synchrotron radiation wide-angle x-ray scattering (WAXS) to study the inhibition effect of diethylenetriaminepenta (methylenephosphonic acid) (DETPMP) on CaCO₃ scale formation

Chen, T., Neville, A., Sorbie, K. S. & Zhong, Z., May 2006, p. 9 pp. 9 p.

Water-alternating-gas injection processes

Tehrani, A. D., Danesh, A., Sorbie, K. S., Sohrabi Sedeh, M., Van Dijke, M. I. J. & Al-Abri, M. A., May 2006, p. 7 pp. 7 p.

Effect of phosphonate scale inhibitor (DETPMP) concentration, application pH and adsorption on inhibitor and cation return concentrations in carbonate cores

Baraka-Lokmane, S. & Sorbie, K. S., Apr 2006.

Using synchrotron radiation wide angle x-ray scattering (WAXS) to study the inhibiting effect of polyphosphonocarboxylic acid (PPCA) on CaCO₃ scale formation

Chen, T., Zhong, Z., Neville, A. & Sorbie, K. S., Mar 2006, p. 063861-0638613. 574753 p.

Naphthenate formation in oil production: general theories and field observations

Sorbie, K. S., Shepherd, A. G., Smith, C. & Turner, M., Oct 2005.

Going green - what is involved in inhibiting scale with biodegradable inhibitors?

Vaur, A. L., Neville, A. & Sorbie, K. S., Aug 2005, p. 413-424. 12 p.

Scale inhibitor adsorption onto minerals in oilfield well treatments

Sorbie, K. S., Aug 2005, p. 571-584. 14 p.

Micro-Piv: a new technology for pore scale flow characterization in micromodels

Perrin, C. L., Sorbie, K. S., Tardy, P. M. J. & Crawshaw, J. P., Jun 2005, p. 8 pp. 8 p.

Pore system topology and the prediction of microscale flow properties

Wu, K., Jiang, Z., Couples, G. D., Ma, J., Van Dijke, M. I. J. & Sorbie, K. S., Jun 2005.

Complete theory of scale-inhibitor transport and adsorption/desorption in squeeze treatments

Sorbie, K. S. & Gdanski, R. D., May 2005, p. 13 pp. 13 p.

Coreflooding, simulation and network modelling of water-alternating-gas (WAG) injection

Danesh, A., Sorbie, K. S., Tehrani, A. D., Sohrabi Sedeh, M., Van Dijke, M. I. J. & Al-Abri, M. A., May 2005, p. 15 pp. 15 p.

Evaluation of inorganic scale deposition in an unconsolidated reservoir by numerical simulation

Daher, J. S., Gomes, J. A. T., Rosario, F. F., Bezerra, M. C., Mackay, E. J. & Sorbie, K. S., May 2005, p. 12 pp. 12 p.

Scale inhibitor placement: back to basics ♦ theory and examples

Sorbie, K. S. & Mackay, E. J., May 2005, p. 13 pp. 13 p.

What level of sulphate reduction is required to eliminate the need for scale-inhibitor squeezing?

Boak, L. S., Al Mahrouqi, H. M., Mackay, E. J., Inches, C. E., Sorbie, K. S., Bezerra, M. C. M. & Mota, R. O., May 2005, p. 1-15. 15 p.

Development of an optimal grid coarsening scheme: interplay of fluid forces and higher moments of fine-scale flow data

Darman, N. E., Sorbie, K. S. & Pickup, G. E., Apr 2005, p. 8 pp. 8 p.

Consistency of three-phase capillary entry pressures and pore phase occupancies

Van Dijke, M. I. J. & Sorbie, K. S., Mar 2005, *In: Miller, C. T., et al., eds., Computational methods in water resources: proceedings of the XVth International Conference on Computational Methods in Water Resources (CMWR XV), June 13-17, 2004, Chapel Hill, NC, USA. Amsterdam: Elsevier. Vol. 1. p. 163-174* 12 p.

How minimum inhibitor concentration (MIC) and sub-MIC concentrations affect bulk precipitation and surface scaling rates

Graham, A., Boak, L. S., Neville, A. & Sorbie, K. S., Feb 2005, p. 1-10. 10 p.

Mechanistic study of naphthenate scale formation

Shepherd, A. G., Thomson, G., Westacott, R., Neville, A. & Sorbie, K. S., Feb 2005, p. 10 pp. 10 p.

New 3-D method to characterise the pore structure of deformed rocks

Wu, K., Jiang, Z., Ma, J., Van Dijke, M. I. J., Couples, G. D. & Sorbie, K. S., Sep 2004.

Prediction of three-phase relative permeabilities using a pore-scale network model anchored to two-phase data

Svirsky, D. D., Van Dijke, M. I. J. & Sorbie, K. S., Sep 2004, p. 14 pp. 14 p.

Macroscopic simulation of three phase flow using consistent pore-level model relative permeabilities

Ivanova, I. S., Sorbie, K. S. & Van Dijke, M. I. J., Aug 2004, p. 8 pp. 8 p.

Pore level flow visualisation and network modelling of water-alternating-gas injection

Danesh, A., Sorbie, K. S., Tehrani, A. D., Sohrabi Sedeh, M., Van Dijke, M. I. J. & Henderson, G. D., Jun 2004, p. 1-19. 19 p.

Upscaling of tracer transport including convection and Brownian motion using a 3D network model

Acharya, R. C., Van Dijke, M. I. J., Leijnse, A., Zee, S. E. A. T. M. V. D. & Sorbie, K. S., Jun 2004, *In: Miller, C. T., et al., eds., Computational methods in water resources: proceedings of the XVth International Conference on Computational Methods in Water Resources (CMWR XV), June 13-17, 2004, Chapel Hill, NC, USA. Amsterdam: Elsevier. Vol. 1. p. 115-126* 12 p.

Comparison of non-aqueous and aqueous scale inhibitor treatments: experimental and modeling studies

Hua, G., Sorbie, K. S. & Mackay, E. J., May 2004, p. 14 pp. 14 p.

Direct simulation of WAG floods in an oil-wet micromodel using a 2-D pore-scale network model

Van Dijke, M. I. J., Sorbie, K. S., Sohrabi Sedeh, M. & Danesh, A., May 2004.

Inhibition of BaSO₄ at a Hastelloy metal surface and in solution: the consequences of falling below the minimum inhibitor concentration (MIC)

Graham, A. L., Vieille, E., Neville, A., Boak, L. S. & Sorbie, K. S., May 2004, p. 1-7. 7 p.

Scale inhibitor core floods in carbonate cores: the influence of pH on phosphate-carbonate interactions

Sorbie, K. S. & Baraka-Lokmane, S., May 2004, p. 15 pp. 15 p.

Simulation of WAG floods in an oil-wet micromodel using 2-D pore-scale network model

Van Dijke, M. I. J., Sorbie, K. S., Sohrabi Sedeh, M. & Danesh, A., May 2004.

Controlling factors of EDTA and DTPA based scale solvers against sulphate scale

Mendoza, A., Graham, G. M., Farquhar, M. L. & Sorbie, K. S., Feb 2004, *In: Lakatos, I., ed., Focus on remaining oil and gas reserves. Budapest: Akademiai Kiado.* p. 41-58 18 p.

How scale inhibitors work: Mechanisms of selected barium sulphate scale inhibitors across a wide temperature range

Sorbie, K. S. & Laing, N., 2004, *Proceedings - SPE Sixth International Symposium on Oilfield Scale; Exploring the Boundaries of Scale Control.* p. 447-456 10 p.

Non-aqueous squeeze treatments in sandstones: Core flood studies and modeling

Guan, H., Sorbie, K. S., Yuan, M. D. & Smith, K., 2004, *NACE International Corrosion Conference and Expo.*

Scale inhibitor core floods in carbonate cores: The influence of pH on phosphonate-carbonate interactions

Baraka-Lokmane, S. & Sorbie, K. S., 2004, *Proceedings - SPE Sixth International Symposium on Oilfield Scale; Exploring the Boundaries of Scale Control.* p. 209-223 15 p.

The comparison of non-aqueous and aqueous scale inhibitor treatments: Experimental and modeling studies

Guan, H., Sorbie, K. S. & Mackay, E. J., 2004, *Proceedings - SPE Sixth International Symposium on Oilfield Scale; Exploring the Boundaries of Scale Control.* p. 189-198 10 p.

Development of an optimal grid coarsening scheme utilizing the dynamic properties of the fine-scale flow data

Darman, N. H., Sorbie, K. S. & Pickup, G. E., Sep 2002, p. 8 pp. 8 p.

Missing link between pore-scale anchoring and pore-scale prediction

McDougall, S. R. & Sorbie, K. S., Sep 2002, p. 14 pp. 14 p.

True three-phase capillary entry pressures in pore-scale modelling

Van Dijke, M. I. J. & Sorbie, K. S., Sep 2002, p. 8 pp. 8 p.

Pore-scale modeling of three-phase flow in mixed-wet porous media: outlet boundary conditions

Van Dijke, M. I. J. & Sorbie, K. S., Jun 2002, *In: Hassanizadeh, S. M., et al., eds., Computational methods in water resources: proceedings of the XIVth International Conference on Computational Methods in Water Resources (CMWR XIV), June 23-28, 2002, Delft, the Netherlands. Amsterdam: Elsevier.* Vol. 2. p. 1083-1090 8 p.

Pore-scale modelling of three phase flow in mixed wet porous media: outlet boundary conditions

Van Dijke, M. I. J. & Sorbie, K. S., Jun 2002.

Three-phase flow in WAG processes in mixed wet porous media: comparison of network model and micromodel results for an oil-wet system

Sorbie, K. S., Van Dijke, M. I. J., Sohrabi Sedeh, M., Tehrani, A. D. & Danesh, A., Jun 2002.

Three phase flow in WAG processes in mixed-wet porous media: pore-scale network simulations and comparison with micromodel experiments

Van Dijke, M. I. J., Sorbie, K. S., Sohrabi Sedeh, M., Tehrani, A. D. & Danesh, A., Apr 2002, p. 12 pp. 12 p.

Pore-scale modelling of three-phase flow in mixed-wet porous media: multiple displacement chains

Van Dijke, M. I. J. & Sorbie, K. S., Mar 2002.

Further Development of the Pore Scale Mechanism of Relative Permeability Modification by Partially Hydrolysed Polyacrylamide

Singleton, M. A., Sorbie, K. S. & Shields, R. A., 2002, *Proceedings - SPE Symposium on Improved Oil Recovery*. p. 588-600 13 p.

Anchoring methodologies for pore-scale network models: application to relative permeability and capillary pressure prediction

McDougall, S. R., Cruikshank, J. & Sorbie, K. S., Sep 2001, p. 14 pp. 14 p.

Effects of wettability on three-phase flow in porous media: basic theory and network modelling results

Van Dijke, M. I. J. & Sorbie, K. S., Sep 2001, p. 6 pp. 6 p.

Network modelling of internal and external gas drive

Poulsen, S., McDougall, S. R., Sorbie, K. S. & Skauge, A., Sep 2001, p. 13 pp. 13 p.

Three-phase flow in WAG processes in mixed-wet porous media: basic theory, pore-scale network simulations and comparison with micromodel experiments

Sorbie, K. S. & Van Dijke, M. I. J., Jun 2001, p. 17 pp. 17 p.

Calculation of pseudo functions using potential averaging methods

Darman, N. H., Pickup, G. E. & Sorbie, K. S., Feb 2001, p. 10 pp. 10 p.

Field application of simulation techniques for modelling squeeze treatments in the Dalia Field, Angola

Mackay, E. J., Sorbie, K. S. & Hurtevent, C., Feb 2001.

Non-equilibrium adsorption and precipitation of scale inhibitors: corefloods and mathematical modelling

Zhang, H. R., Mackay, E. J., Chen, P. & Sorbie, K. S., Nov 2000, p. 18 pp. 18 p.

How scale inhibitors work and how this affects test methodology

Sorbie, K. S., Graham, G. M. & Jordan, M. M., Oct 2000.

Probabilistic model for three-phase relative permeabilities in simple pore systems of heterogeneous wettability

Van Dijke, M. I. J. & Sorbie, K. S., Sep 2000, p. 8 pp. 8 p.

Relation between interfacial tensions and wettability in three-phase systems: consequences for pore occupancy and relative permeability

Van Dijke, M. I. J. & Sorbie, K. S., Sep 2000.

Three phase relative permeability relationships in mixed-wet and fractionally-wet porous media

Sorbie, K. S., Van Dijke, M. I. J. & McDougall, S. R., Jun 2000.

Process-based approach for three-phase capillary pressure and relative permeability relationships in mixed-wet systems

Van Dijke, M. I. J., Sorbie, K. S. & McDougall, S. R., Apr 2000, p. 15 pp. 15 p.

Upscaling immiscible gas displacements: Quantitative use of fine grid flow data in grid coarsening schemes

Darman, N. H., Durlinsky, L. J., Sorbie, K. S. & Pickup, G. E., Apr 2000, *Proceedings of the SPE Asia Pacific Conference on Integrated Modelling for Asset Management*. p. 489-502 14 p.

Upscaling immiscible gas displacements: quantitative use of fine grid flow data in grid coarsening schemes

Darman, N. H., Durlinsky, L., Sorbie, K. S. & Pickup, G. E., Apr 2000, p. 14 pp. 14 p.

Brine mixing in waterflooded reservoirs and the implications for scale prevention

Mackay, E. J. & Sorbie, K. S., 2000, p. 10 pp. 10 p.

Non-equilibrium retention of penta-phosphonate (DETPMP), hexa phosphonate (TETHMP) and polycarboxylate (PPCA): examination of the controlling effect of flow rate on inhibitor return concentrations

Chen, P., Graham, G. M. & Sorbie, K. S., 2000.

Modelling of gel diverter placement in horizontal wells

Menzies, N. A., Mackay, E. J. & Sorbie, K. S., Oct 1999, p. 297-309. 13 p.

Oil recovery from waterflooded reservoirs by injecting gas, alternately with water

Sohrabi Sedeh, M., Henderson, G. D., Tehrani, A. D., Van Dijke, M. I. J., McDougall, S. R., Sorbie, K. S., Danesh, A. & Smart, B. G. D., Sep 1999, p. 15 pp. 15 p.

Saturation dependencies of the three phase capillary pressures and relative permeabilities in mixed-wet systems

Van Dijke, M. I. J., McDougall, S. R. & Sorbie, K. S., Jun 1999.

Development of pseudo functions for gravity-dominated immiscible gas displacements

Darman, N. H., Sorbie, K. S. & Pickup, G. E., Feb 1999, p. 473-485. 13 p.

Factors affecting the thermal stability of conventional scale inhibitors for application in HP/HT reservoirs

Dyer, S. J., Graham, G. M. & Sorbie, K. S., Feb 1999, p. 167-177. 11 p.

Mechanism of formation damage and recovery following chemical squeeze application in low permeability water sensitive reservoirs

Graham, G. M., Hill, P., Sorbie, K. S., Carbonne, L. & Stott, L., Feb 1999, p. 4-15. 12 p.

Sulphate scale dissolution: examination of the factors controlling the effectiveness of EDTA and DTPA based on scale dissolvers and their comparative effectiveness against different sulphate minerals

Mendoza, A., Graham, G. M. & Sorbie, K. S., Feb 1999, p. 239-253. 15 p.

The influence of divalent cations on the performance of BaSO₄ scale inhibitor species

Boak, L. S., Graham, G. M. & Sorbie, K. S., Feb 1999, p. 1-6. 6 p.

Evaluation of simulation techniques for modelling squeeze treatments

Mackay, E. J. & Sorbie, K. S., 1999, *Proceedings - SPE Annual Technical Conference and Exhibition*. Vol. 2. p. 373-387 15 p.

Factors affecting the thermal stability of conventional scale inhibitors for application in high pressure/high temperature reservoirs

Dyer, S. J., Graham, G. M. & Sorbie, K. S., 1999, *Proceedings of the 1999 SPE International Symposium on Oilfield Chemistry*. p. 167-177 11 p.

Scale inhibitor selection for application in a chalk reservoir

Wattie, I., Graham, G. M. & Sorbie, K. S., 1999.

Modelling scale inhibitor squeeze treatments in high crossflow horizontal wells

Mackay, E. J. & Sorbie, K. S., Nov 1998, p. 6 pp. 6 p.

Core wettability: should it be equal to the bulk?

Dixit, A. B., Buckley, J. S., McDougall, S. R. & Sorbie, K. S., Sep 1998, p. 12 pp. 12 p.

Physical analysis of immiscible two-phase flow: accurate prediction of the balance of forces as a guide to upscaling

Stephen, K. D., Pickup, G. E. & Sorbie, K. S., Sep 1998, p. 6 pp. 6 p.

Review of up-scaling and cross-scaling issues in core and log data interpretation and prediction

Corbett, P. W. M., Jensen, J. L. & Sorbie, K. S., Aug 1998, *In: Harvey, P.K. and Lovell, M.A., eds., Core-log integration. London: Geological Society.* p. 9-16 8 p.

Pore scale analysis of relative permeability hysteresis in non-uniformly wetted porous media

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., Jun 1998.

Pore-scale modelling of hysteresis phenomena in mixed- and fractionally-wet porous media

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., Jun 1998.

Mineral dissolution by scale treatments across the pH range

Bunney, J. R. & Sorbie, K. S., Mar 1998.

Scale control under HP/HT reservoir conditions

Graham, G. M., Shone, P. & Sorbie, K. S., Mar 1998.

Simulation of scale inhibitor treatments in horizontal wells using existing full field models

Mackay, E. J. & Sorbie, K. S., Mar 1998.

Modeling of scale inhibitor treatments in horizontal wells: application to the Alba field

Mackay, E. J., Matharu, A. P., Sorbie, K. S., Jordan, M. M. & Tomlins, R., Feb 1998, p. 75-90. 16 p.

Scale dissolver application: production enhancement and formation damage potential

Jordan, M. M., Graham, G. M., Sorbie, K. S., Matharu, A. P., Tomlins, R. & Bunney, J. R., Feb 1998, p. 303-311. 9 p.

Analysis of relative permeability hysteresis trends in mixed-wet porous media using network models

Dixit, A. B., McDougall, S. R. & Sorbie, K. S., 1998, *Proceedings of the 1998 11th Symposium on Improved Oil Recovery. Part 2 (of 2).* Vol. 2. p. 25-38 14 p.

Practical solutions to scaling in HP/HT and high salinity reservoirs

Graham, G. M., Dyer, S. J., Sablerolle, W., Graham, G. C. & Sorbie, K. S., 1998.

Scale dissolver application: Production enhancement and formation damage potential

Jordan, M. M., Graham, G. M., Sorbie, K. S., Matharu, A., Tomlins, R. & Bunney, J., 1998, *Proceedings of the 1998 International Symposium on Formation Damage Control.* p. 303-311 9 p.

Scale inhibitor selection for continuous and downhole squeeze application in HP/HT conditions

Graham, G. M., Dyer, S. J., Sorbie, K. S., Sablerolle, W. R., Shone, P. & Frigo, D., 1998, *Production Operation and Engineering. General.* Vol. Pi. p. 645-659 15 p.

Scale management in a water sensitive oil reservoir (the Dunbar field UKCS)

Jordan, M. M., Stott, L. & Sorbie, K. S., 1998.

Effect of interfacial tension upon gas-oil relative permeability measurements: interpretation using pore-scale models

McDougall, S. R., Sorbie, K. S. & Salino, P. A., Oct 1997, p. 791-803. 13 p.

Estimation of critical gas saturation during depressurisation in hydrocarbon reservoirs

McDougall, S. R. & Sorbie, K. S., Oct 1997, p. 6 pp. 6 p.

Physical analysis and simulation of immiscible two phase flow as a strongly non-linear diffusion-convection problem

Stephen, K. D., Pickup, G. E. & Sorbie, K. S., Sep 1997.

Network analogues of wettability at the pore-scale

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., Jul 1997, *In: Lovell, M. A. and Harvey, P. K., eds., Developments in petrophysics. London: Geological Society.* p. 19-35 17 p.

Numerical investigation of gas evolution and bubble migration: from the pore- to the core-scale

McDougall, S. R. & Sorbie, K. S., Jun 1997.

The prediction and avoidance of formation damage induced by scale inhibitor squeeze treatments

Bunney, J. R., Jordan, M. M. & Sorbie, K. S., Jun 1997, p. 219-231. 13 p.

Effects of formation mineralogy and produced water chemistry on inhibitor adsorption in reservoir sandstones

Jordan, M. M., Sorbie, K. S. & Marulier, M., Apr 1997.

Implication of produced water chemistry and formation mineralogy on inhibitor adsorption/desorption in reservoir sandstone and their importance in the correct selection of scale squeeze chemicals

Jordan, M. M., Sorbie, K. S., Marulier, M., Taylor, K., Hourston, K. & Griffin, P., Apr 1997.

Influence of high temperature and high salinity conditions on the testing and potential application of scale inhibitors under harsh HP/HT reservoir conditions

Graham, G. M., Graham, G., Jordan, M. M., Sorbie, K. S., Hill, P., Dyer, S. J. & Littlehailes, I., Mar 1997.

Implication of HP/HT reservoir conditions on the selection and application of conventional scale inhibitors: thermal stability studies

Graham, G. M., Jordan, M. M., Graham, G. C., Sablerolle, W., Sorbie, K. S., Hill, P. & Bunney, J. R., Feb 1997, p. 627-640 . 14 p.

Pore-level investigation of relative permeability hysteresis in water-wet systems

Dixit, A. B., McDougall, S. R. & Sorbie, K. S., Feb 1997, p. 229-240. 12 p.

The influence of formation calcium on the effectiveness of generically different barium sulphate oilfield scale inhibitors

Graham, G. M., Boak, L. S. & Sorbie, K. S., Feb 1997, p. 611-626. 16 p.

Design of polymer and phosphonate scale inhibitor precipitation treatments and the importance of precipitate solubility in extending squeeze lifetime

Jordan, M. M., Sorbie, K. S., Chen, P., Armitage, P., Hammond, P. & Taylor, K., 1997, *Proceedings of the 1997 SPE International Symposium on Oilfield Chemistry.* p. 641-651 11 p.

Disequilibria in fluid/rock interactions: reconciling experimental and thermodynamic coreflooding

Bunney, J. R., Sorbie, K. S. & Jordan, M. M., 1997, *In: Hendry, J.P., et al., eds., Geofluids II '97: contributions to the second international conference on fluid evolution, migration and interaction in sedimentary basins and orogenic belts. London: Geological Society.* p. 275-278 4 p.

How scale inhibitors work and how this affects test methodology

Graham, G. M., Sorbie, K. S. & Jordan, M. M., 1997.

Pore-level investigation of relative permeability hysteresis in water-wet systems

Dixit, A. B., McDougall, S. R. & Sorbie, K. S., 1997, *Proceedings - SPE International Symposium on Oilfield Chemistry.* p. 229-240 12 p.

Reservoir description in the 1990s: a perspective from the flow simulation through layercake parasequence flow units

Corbett, P. W. M., Good, T. R., Jensen, J. L., Lewis, J. J. M., Pickup, G. E., Ringrose, P. S. & Sorbie, K. S., Oct 1996, *In: Glennie, K. W. and Hurst, A., eds., AD1995: NW Europe's hydrocarbon industry. London: Geological Society.* p. 167-176 10 p.

Reservoir description: the new agenda and its importance in field development

Sorbie, K. S. & Corbett, P. W. M., Sep 1996.

Upscaling and cross-scaling of core and log data for interpretation and prediction

Corbett, P. W. M., Jensen, J. L. & Sorbie, K. S., Sep 1996.

Use of capillarity surfaces to predict phase distributions in mixed-wet porous media

McDougall, S. R., Dixit, A. B. & Sorbie, K. S., Sep 1996, p. 345-354. 10 p.

Assessment of chemical disequilibria in oil reservoirs: implications for production- and diagenetic-timescale geochemical modelling

Bunney, J. R., Sorbie, K. S. & Jordan, M. M., May 1996, p. A20.

Complete chemical analysis of produced water by modern inductively coupled plasma spectroscopy (ICP)

Graham, G. M., Sorbie, K. S., Johnston, A. & Boak, L. S., Mar 1996, p. 1-25. 25 p.

Implications of HP/HT reservoir conditions on the selection and application of scale inhibitors - some preliminary results

Jordan, M. M., Sorbie, K. S., Graham, G. M., Taylor, K., Hennessey, S. & Hill, P., Mar 1996.

Visualising the world of chemical/geochemical interactions using atomic force microscopy

Graham, G. M., Hall, C. M. & Sorbie, K. S., Mar 1996, p. 21 pp. 21 p.

Correct selection and application methods for adsorption and precipitation scale inhibitors for squeeze treatments in North Sea oilfields

Jordan, M. M., Sorbie, K. S., Graham, G. M., Taylor, K., Hourston, K. E. & Hennessey, S., 1996, *Proceedings of the International Symposium on Formation Damage Control*. p. 523-542 20 p.

Modelling scale inhibitor squeeze treatments in horizontal wells: Model development and application

Zhang, H. R., Sorbie, K. S. & Mackay, E. J., 1996, *Proceedings of the 1996 2nd International Conference on Horizontal Well Technology*. p. 853-865 13 p.

Pore scale modelling of wettability effects and their influence on oil recovery

Dixit, A. B., McDougall, S. R., Sorbie, K. S. & Buckley, J. S., 1996, *SPE/DOE Improved Oil Recovery Symposium, 21-24 April, Tulsa, Oklahoma*. Society of Petroleum Engineers, p. 501-515 15 p. SPE-35451-MS

Development and accurate assay techniques for poly vinyl sulphonate (PVS) and sulphonated co-polymer (VS-Co) oilfield scale inhibitor

Graham, G. M., Sorbie, K. S. & Boak, L. S., Mar 1995, p. 1-29. 29 p.

Development and application of accurate detection and assay techniques for oilfield scale inhibitors in produced water samples

Graham, G. M., Sorbie, K. S., Boak, L. S., Taylor, K. & Blilie, L., Feb 1995, p. 543-557. 15 p.

The effects of heterogeneity and wettability on oil recovery from laminated sedimentary structures

Huang, Y., Ringrose, P. S. & Sorbie, K. S., 1995, p. 815-827. 13 p.

Upscaling of miscible and immiscible displacement processes in porous media

Zhang, H. R. & Sorbie, K. S., 1995, *Proceedings of the International Meeting on Petroleum Engineering*. Vol. 1. p. 427-440 14 p.

Waterflood recovery and fluid flow upscaling in a shallow marine and fluvial sandstone sequence

Ciammetti, G., Ringrose, P. S., Good, T. R., Lewis, J. M. L. & Sorbie, K. S., 1995, *Proceedings of the 1995 SPE Annual Technical Conference and Exhibition*. Vol. Sigma. p. 845-858 14 p.

X-ray imaging of waterflood fluid saturations in heterogeneous rock slabs

Huang, Y., Ringrose, P. S. & Sorbie, K. S., 1995, *Proceedings of the International Meeting on Petroleum Engineering*. Vol. 2. p. 483-495 13 p.

Application of a scale inhibitor squeeze model to improve field squeeze treatment design

Sorbie, K. S., Yuan, M. & Jordan, M. M., 1994, *Proceedings of the European Petroleum Conference. Part 1 (of 2)*. p. 179-191 13 p.

Geology, geometry, and effective flow

Pickup, G. E., Ringrose, P. S., Corbett, P. W. M., Jensen, J. L. & Sorbie, K. S., 1994, *Proceedings - SPE Annual Technical Conference and Exhibition*. Vol. Omega. p. 93-104 12 p.

Mineralogical controls on inhibitor adsorption/desorption in brent group sandstone and their importance in predicting and extending field squeeze lifetimes

Jordan, M. M., Sorbie, K. S., Jiang, P., Yuan, M., Todd, A. C. & Taylor, K., 1994, *Proceedings of the European Production Operations Conference and Exhibition 1994*. p. 141-153 13 p.

Phosphonate scale inhibitor adsorption/desorption and the potential for formation damage in reconditioned field core

Jordan, M. M., Sorbie, K. S., Jiang, P., Yuan, M. D., Todd, A. C. & Hourston, K. E., 1994, *Proceedings of the International Symposium on Formation Damage Control*. p. 451-464 14 p.

Use of geology in the interpretation of core-scale relative permeability data

Ringrose, P. S., Jensen, J. L. & Sorbie, K. S., 1994, *Proceedings - SPE Annual Technical Conference and Exhibition*. Vol. Omega. p. 881-890 10 p.

Combined effect of capillary and viscous forces on waterflood displacement efficiency in finely laminated porous media

McDougall, S. R. & Sorbie, K. S., 1993, *Proceedings of the SPE Annual Technical Conference and Exhibition. Part 3 (of 5)*. Vol. Sigma. p. 563-578 16 p.

Effect of pH, calcium, and temperature on the adsorption of phosphonate inhibitor onto consolidated and crushed sandstone

Sorbie, K. S., Jiang, P., Yuan, M. D., Chen, P., Jordan, M. M. & Todd, A. C., 1993, *Proceedings of the SPE Annual Technical Conference and Exhibition. Part 3 (of 5)*. p. 949-964 16 p.

Effect of pH on the adsorption and transport of phosphonate scale inhibitor through porous media

Sorbie, K. S., Yuan, M. D., Chen, P., Todd, A. C. & Wat, R. M. S., 1993, *Proceedings of the 1993 SPE International Symposium on Oilfield Chemistry*. p. 149-166 18 p.

Modelling of adsorption and precipitation scale inhibitor squeeze treatments in North Sea fields

Yuan, M. D., Sorbie, K. S., Todd, A. C., Atkinson, L. M., Riley, H. & Gurden, S., 1993, *Proceedings of the 1993 SPE International Symposium on Oilfield Chemistry*. p. 121-136 16 p.

Prediction of waterflood performance in mixed-wet systems from pore-scale modelling and simulation

McDougall, S. R. & Sorbie, K. S., 1993, *Proceedings of the SPE Symposium on Reservoir Simulation*. p. 445-457 13 p.

Scleroglucan behavior in flow through porous media: Comparison of adsorption and in-situ rheology with xanthan

Huang, Y. & Sorbie, K. S., 1993, *Proceedings of the 1993 SPE International Symposium on Oilfield Chemistry*. p. 223-234 12 p.

A method for calculating permeability tensors using perturbed boundary conditions

Pickup, G. E., Jensen, J., Ringrose, P. S. & Sorbie, K. S., Jun 1992.

The dispersive-fingering transition and flow upscaling for miscible displacements in heterogeneous systems

Sorbie, K. S., Feghi, F., Pickup, G. E., Ringrose, P. S. & Jensen, J., Jun 1992.

The use of correlation statistics for modelling immiscible displacements in petroleum reservoirs

Ringrose, P. S., Pickup, G. E., Jensen, J. & Sorbie, K. S., Jun 1992.

Adsorption and in-situ rheological behavior of xanthan solution flowing through porous media

Huang, Y. & Sorbie, K. S., 1992, *Proceedings of the Eighth Symposium on Enhanced Oil Recovery Part 1 (of 2)*. p. 507-520 14 p.

Flow regimes in miscible displacements in heterogeneous correlated random fields

Sorbie, K. S., Feghi, F., Pickup, G. E., Ringrose, P. S. & Jensen, J. L., 1992, *Proceedings of the Eighth Symposium on Enhanced Oil Recovery Part 1 (of 2)*. p. 371-386 16 p.

Gel placement in heterogeneous systems with crossflow

Sorbie, K. S. & Seright, R. S., 1992, *Proceedings of the Eighth Symposium on Enhanced Oil Recovery Part 2 (of 2)*. p. 369-386 18 p.

Laminated clastic reservoirs: The interplay of capillary pressure and sedimentary architecture

Corbett, P. W. M., Ringrose, P. S., Jensen, J. L. & Sorbie, K. S., 1992, *1992 SPE Annual Technical Conference and Exhibition*. Society of Petroleum Engineers, p. 365-376 12 p.

Experimental testing of mobility predictions in averaged models of viscous fingering

Sorbie, K. S., Tsubuklis, N. B. & Dwebi, A., 1991, *Proceedings of the 1991 SPE Annual Technical Conference and Exhibition*. Vol. Gamma. p. 255-270 16 p.

Modelling and design of scale inhibitor squeeze treatments in complex reservoirs

Sorbie, K. S., Yuan, M. D., Todd, A. C. & Wat, R. M. S., 1991, *Proceedings of the SPE International Symposium on Oilfield Chemistry, 20-22 February, Anaheim, California*. p. 243-256 14 p.

Interpretation and theoretical modelling of inhibitor/tracer corefloods

Sorbie, K. S., Todd, A. C., Thornton, A. R. & Wat, R. M. S., 1990, *Proceedings: SPE Annual Technical Conference and Exhibition 1990*. Vol. Pi. p. 697-709 13 p.

Pore-level modelling of gas-condensate flow through horizontal porous media

Mohammadi, S., Sorbie, K. S., Danesh, A. & Peden, J. M., 1990, *Proceedings: SPE Annual Technical Conference and Exhibition 1990*. Vol. Gamma. p. 149-158 10 p.

Miscible displacements in heterogeneous core systems: tomographic confirmation of flow mechanisms

Sorbie, K. S., Wat, R. M. S., Hove, A. O., Nilsen, V. & Leknes, J., 1989, *Proceedings: 1989 SPE International Symposium on Oilfield Chemistry*. p. 311-322 18493 32218183 p.

Network modeling of xanthan rheology in porous media in the presence of depleted layer effects

Sorbie, K. S., 1989, *Proceedings: SPE Annual Technical Conference and Exhibition 1989*. Vol. GAMMA. p. 19651229-19651242 14 p.