

TONY KENNAIRD

OBJECTIVE

Over a period of forty years with Core Lab and thirty-five years in the Asia-Pacific region, Tony supervised and/or managed laboratories in six locations (London, Singapore, Kuala Lumpur, Jakarta, Perth, Ho Chi Minh City), taught clients in the use of laboratory instruments and provided lectures and industry seminars in the following countries: India, Bangladesh, China, Burma (Myanmar), Thailand, Malaysia, Brunei, Singapore, Mongolia, Japan, Australia, New Zealand, Papua New Guinea, Taiwan, Philippines, Vietnam, Indonesia, South Korea.

Tony has been seconded as a direct consultant to many clients on subjects as diverse as reserves estimation and formation damage. Heavy involvement in research and design of laboratory procedures and equipment has led to the publication/presentation of more than 40 technical papers, industry talks and articles over the years.

SUMMARY OF QUALIFICATIONS

- Tony has analysed clastic and carbonate formations from all over the world.
- He has published more than 40 technical papers and notes on the subject of core analysis.
- Tony has frequently presented topics at SPE and SPWLA luncheon and dinner functions.
- He has also conducted numerous industry training schools.

SPECIAL SKILLS

- Detailed expertise in core analysis specification and measurement.
- Can recommend analyses to address specific problems and help to resolve any measurement issues.

PROFESSIONAL EXPERIENCE

July 2016 onward	THE PETROPHYSICIST LTD. <i>Independent Petrophysical Consultant</i>	FRANCE
	Looking for new problems to solve and people to help.	
2005 to 2016	CORE LABORATORIES, <i>Technical Director Rock Properties, Asia-Pacific</i>	AUSTRALIA.
	<ul style="list-style-type: none">■ Chairman of CoreLab's worldwide Core Analysis Development Committee 2005-8■ Marketing responsibilities, Asia-Pacific Region■ Development and Transfer of new technology■ Provision of Core Analysis schools to the industry	
1995 to 2004	CORE LABORATORIES, <i>Regional Manager Australia, New Zealand, Papua New Guinea</i>	AUSTRALIA.
	<ul style="list-style-type: none">■ Responsible for technical developments in Perth laboratory■ Administrative functions in Perth laboratory■ Technical support■ Marketing responsibilities■ Responsible for set-up of ISO documentation and gaining ISO accreditation■ System Manager for ISO-9001 quality system.	
1993 to 1994	CORE LABORATORIES, <i>Director of Technology Applications (Asia Pacific)</i>	SINGAPORE.
	<ul style="list-style-type: none">■ Providing industry seminars.	

- Lecturing on Core Lab Instruments to potential clients.
 - Developing small-bore viscosimeter.
 - Developing elevated pressure pour-point apparatus.
 - Setting up joint venture laboratory in Vietnam.
 - Training clients on use of Core Laboratories equipment.
- 1992 to 1993 CORE LABORATORIES, MALAYSIA.
Director of Technology Applications (Asia Pacific)
- Directing introduction and development of new technology.
 - Providing industry schools.
 - Providing in-house training on advanced topics.
 - Managing rock properties and petrology groups.
 - Composing technical programmes for Advanced Rock Property Services.
 - Problem-solving for clients concerning reserves and production evaluation.
 - Setting up core analysis equipment in China.
- 1990 to 1992 CORE LABORATORIES, MALAYSIA.
Operations Manager
- Managing all laboratory operations.
 - Providing industry schools.
 - Evaluating new services.
 - Expert speaker at well-logging symposium in Perth.
 - Design of Formation Damage test techniques.
- 1985 to 1990 CORE LABORATORIES, SINGAPORE.
Area Manager, Special Core Analysis Technology
- Introducing new rock properties technology.
 - Quality control of rock properties groups.
 - Providing industry schools.
 - Appearing as guest speaker at SPE and SPWLA functions.
 - Contracting to Thai Shell to help prove-up increased reserves.
 - Consulting to Huffco (now Vico) Indonesia on reserves estimations.
 - Consulting to JTOC Malaysia on formation damage problems.
 - Writing technical papers and notes for various seminars and symposia.
 - Helping set up Core Analysis facility in Shekou, People's Republic of China.
 - Designing analytical technique for end-point water-gas relative permeability measurement.
 - Training personnel in Perth, Australia, on Special Core Analysis.
 - Relief laboratory manager in Perth and Jakarta.
 - Setting up core analysis equipment in Kuwait.
- 1981 to 1985 CORE LABORATORIES, SINGAPORE.
Manager Core Analysis Services
- Managing Core Analysis and Chemistry laboratories.
 - Providing industry schools.
 - Developing Standard Operating Procedures (SOP's).
 - Guest speaker for SPE functions.
 - Training all Special Core Analysis divisions in the region (Singapore, Indonesia, Malaysia, People's Republic of China, Australia).

- Developing innovative methods of Core Analysis.

1976 to 1981

CORE LABORATORIES,
Laboratory Technician/Laboratory Supervisor

ENGLAND.

- Supervising Core Analysis laboratory
- Developed cool solvent and Big Bertha cleaning systems
- Performing Analytical Chemistry processes.
- Operating Core Analysis equipment.
- Writing Standard Operating Procedures (SOP's).
- Setting Core Laboratories equipment in Homs, Syria.

1971 to 1976

GENERAL

ENGLAND.

- Obtained Diploma of Education (teaching qualification).
- Travel industry.
- Construction industry.
- TOEFL Consultant.

EDUCATION

1968 – 1971

UNIVERSITY OF LONDON
B.Sc. Special Honours

ENGLAND

EXTERNAL PUBLICATIONS

1. Kennaird, T., “Core and Log Data Integration” FESAus Log and Core Master Class, Perth, October, 2016.
2. Kennaird, T., “Vagaries of Laboratory Water-Oil Relative Permeability Data” SPE Workshop—Optimal Characterisation Using Core Analysis Data and Models, Singapore, December 2015
3. Kennaird, T., “Relative Permeability: Can we trust the data?” FESAus SCAL Master Class, Perth, November 2015
4. Kennaird, T., “Petrophysical Applications of Macro and Micro CT-Scanning” SPE Workshop—Optimal Characterisation Using Core Analysis Data and Models, Singapore, December 2015
5. Kennaird, T., “CT Scanning at Various Scales of Measurement” FESAus SCAL Master Class, Perth, November 2015
6. Kennaird, T., “Relative Permeability Measurement Techniques for Core Samples: Applications to Conventional and Unconventional Reservoirs” SPE WA Lecture Series, Perth, March 2014
7. Kennaird, T., “Permeability Measurement Considerations for Reservoir Modelling” FESAus Technical Meeting, Perth, May 2014
8. Kennaird, T., “Core Analysis Considerations for Thin-Bedded Reservoirs” FESAus Master Class—Thin Bed Formation Evaluation, Perth, November 2014
9. Kennaird, T., “Carbonate Core Analysis” EAGE Workshop on Offshore Carbonate Gas Field E & P in Asia and Middle East, Langkawi, Malaysia, November 2014
10. Kennaird, T., “Core Analysis of Unconventional Reservoirs” FESAus Master Class-Unconventional Gas, Perth, November 2011.
11. Kennaird, T., “Capillary Pressure Correlations using the High-Pressure Mercury Injection Technique: Advantages and Uncertainties” FESAus Gas Petrophysics Topical Conference, Perth, September 2011
12. Kennaird, T., “Capillary Pressure Correlations: Considerations and Case Histories” FESAus and SPE Capillary Pressure Master Class, Perth, May 2010

13. Kennaird, T., "A Review of the Major Clay Types in Sedimentary Rocks and their Impact on Core Analysis" FESAus Clay Master Class, Perth, July 2010
14. Sidiq H.H., Amin R., Kennaird T., 'A Laboratory Investigation of Water Abatement Chemicals for Potential Use in the Wanaea Oil Field' SPE 117142-PP, IPEC, Abu Dhabi, November 2008.
15. Kennaird, T., "Permeability from Core Analysis" FESAus and SPE Permeability Master Class, Perth, July 2008
16. Kennaird T., Karolia M., and East R., "Shaly Sand Q_v from NMR", 2006 Southeast Asia Petrophysical Conference, Feb 27-Mar 1, 2006.
17. Barr D. and Kennaird T., "The Role of Sedimentology in Accurately Describing Newly Discovered Reservoirs" Geological Society of Malaysia, December 2006.
18. Kennaird T. "Avoiding Pitfalls When Upscaling Core Data" SPESA-0509, SPE Symposium, Saudi Arabia, 14-16 May, 2005.
19. Kennaird T., Singh A. and Karolia M., "The Use of Secondary Drainage Capillary Pressure Curves to Predict Saturation Distributions in Oil Reservoirs" FESWA Symposium on Core to Log Integration, Perth, Oct. 2003.
20. Kennaird T. and Brown J., "Some Key Considerations in Upscaling Core Data" FESWA Symposium on Core to Log Integration, Perth, Oct. 2003.
21. Barr D., Clews P. and Kennaird T., "Integration of Core and Log Data to Provide a Reservoir Description of the Laminaria Formation" FESWA Symposium on Core to Log Integration, Perth, Oct. 2003.
22. Amin R., Kennaird T. and Beresford R., "Advanced LNG Technology" Distribution 2003 Conference, Adelaide, Nov. 2003.
23. Amin R. and Kennaird T., "Gas Sweetening Pre-Pipeline", Discussion Paper written for Pipeline Conference, Darwin, August 2003
24. Mulyadi H., Amin, R., Kennaird, A.F., "Practical Approach to Determine Residual Gas Saturation and Gas-water Relative Permeability" SPE 71523, Oct 2001
25. Barr, D.C., Kennaird, A.F., Fowles, J., Marshall, N.G., and Cutten, V.L., "Determining reservoir continuity in the Laminaria Formation by integrated geological study", APPEA, Hobart, April 2001 (p. 415-428).
26. Mulyadi, H., Amin, R., Kennaird, T., Bakker, G., Palmer, I. Van Nispen, D., "Measurement of Residual Gas Saturation in Water-Driven Gas Reservoirs: Comparison of Various Core Analysis Techniques" SPE 64710, Nov 2000.
27. Kennaird T., "Discrepancies In Log Effective vs Core Effective Porosity for Greensands". Technical Note for circulation to company clients, April 1998.
28. Silveira R., Kennaird T., "Core Analysis Evaluation of Mud Systems", FESWA Coring Symposium, Perth, Oct. 1995.
29. Kennaird T., Kemp G., Singh A., "Permeability: Core Measurement vs Well-Test and Log Prediction", FESWA Coring Symposium, Perth, Oct 1995.
30. Kennaird T., Brown J., Karolia M., "Correlation of Core Data and Wireline Logs", FESWA Coring Symposium, Perth, Oct. 1995.
31. Altunbay M., Barr D., Kennaird T., Manning D., "Numerical Geology - Predicting Depositional and Diagenetic Facies from Wireline Logs using Core Data", SPE 28794. Nov. 1994.
32. Kennaird T, "Identification of Clay Type, Morphology and Habit as an Aid to Prediction of Formation Damage Controls", Geological Society of Malaysia, Symposium on Reservoir Evaluation/Formation Damage, 11 July 1992.
33. Barr D.C., Kennaird T., Altunbay M., "Understanding Reservoir Behaviour Through an Integrated Geological and Engineering Study", Geological Society Malaysia Conference, December 1991.
34. Bowen D.G., Kennaird T., Hill J.A., Frost E.J., "Reservoir Description: A Synergistic Approach to More Accurate Determination of Oil and Gas Reserves", Geol. Soc. Malaysia, Bulletin 27, Nov. 1990 pp 183-210.

35. Kennaird T, Bowen D.G., Bruinsma J.W., "Estimating Reserves in Thinly-Laminated Sands with the help of Petrographic Image Analysis", Geol. Soc. Malaysia, Bulletin 25, December 1989, pp 27-38.
36. Kennaird T, "Reducing Exploration Risk and Enhancing Development Drilling by Use of Capillary Pressure Data", Technical Note for circulation to company clients, June 1989.
37. Kennaird T., "Formation Damage - A Universal Problem", Technical Note for circulation to company clients, May 1988.
38. Kennaird T, "Residual Oil Saturations Determined By Core Analysis", SPE-Sponsored OSEA Conference, Singapore, February 1988.
39. Kennaird T, "Formation Damage Caused by Hydraulic Fracture `Stimulation'". Technical Note for circulation to company clients, August 1988.
40. Kennaird T, "Formation Damage Caused by Drilling Fluids", Technical Note for circulation to company client, June 1988
41. Kennaird T, "Formation Damage Caused by Acid `Stimulation'". Technical Note for circulation to company clients, June 1988.
42. Kennaird T., "Coring with Oil-Base Muds - Advantages For Reserve Calculations", Technical Note for circulation to company clients, Oct. 1987.
43. Kennaird T, "Some Applications of the Combined Use of Core Analysis and Electric Log Data", Geol. Sym., Kuala Lumpur, December 1987.
44. Kennaird T, "Formation Damage Caused by Fines Migration", Technical Note for circulation to company clients, April 1987.
45. Kennaird T, "Advantages of Using the CMS-200 for Routine Core Analysis Measurements", Technical Note for circulation to company clients, June 1987.
46. Kennaird T, "Enhanced Reservoir Evaluation Using State-of-the-Art Core Measurements", Drillbits (Official Publication of Malaysian Chapter of SPE), December 1986.
47. Kennaird T, "Effect of Dissolved Gas on R_w ", Technical Update for circulation to company clients, July 1986.
48. Kennaird T, "Determination of R_w from Cores", Technical Note for circulation to company clients, June 1986.