

## Curriculum Vitae



**Name**                    **Noaman Abdelfattah El-Khatib**

**Mailing Address** : P.O.Box 72  
Eastern Daims , Khartoum,  
College of Petroleum Engineering and Technology  
Sudan University of Science and Technology  
Sudan

**Tel:** 0912292474                    0922645526 ( Mobile)

**e-mail** nkhatibafm@gmail.com

**Nationality:** Palestinian.

**Date of Birth:** June 3, 1941

**Religion:** Muslim.

**Marital Status:** Married, 5 children

**Occupation:** Professor of Petroleum Engineering., Sudan University of Science and Technology, Khartoum, Sudan

**Field of Specialization:** Petroleum Reservoir Engineering.

**Research Interests** Reservoir Modeling and Simulation  
Well Test Analysis  
Waterflooding  
Enhanced Oil Recovery  
Thermal Oil Recovery Methods  
Phase Behavior  
Reservoir Characterisation  
Geostatistics

**Professional Societies:**

Member, Society of Petroleum Engineers,( Member SPE 25-Year Club)

## **Educational Record:**

Ph.D. Chemical & Petroleum Engineering, University of Pittsburgh (1973).

Dissertation Title : A Mathematical Model for Thermal Oil Recovery by Forward In-Situ Combustion Process.

M.S. Petroleum Engineering, University Pittsburgh (1971)

Thesis Title : Immiscible Fluid-Fluid Displacement in Porous Media with Capillary Effects.

B.Sc. Petroleum Engineering, Cairo University (1963)

## **Employment History**

May 2005 - Professor, Petroleum Engineering Dept., College of Petroleum Engineering and Technology, Sudan University for science and Technology, Khartoum, Sudan.

Aug. 2001 – April 2005 Retired Professor – Part Time Independent Consultant, Riyadh, Saudi Arabia

June 1988 –Aug. 2001 Professor, Petroleum Engineering Dept., King Saud University, Riyadh, Saudi Arabia

June 1982-May 1988 Associate Professor, Petroleum Engineering Dept., King Saud U. , Riyadh, Saudi Arabia

Oct. 1976-June 1982 Assistant Professor, Petroleum Eng. Dept., King Saud U. , Riyadh, Saudi Arabia

Nov. 1973-Oct. 1976 Assistant Professor, Petroleum Eng. Dept., Cairo University, Cairo, Egypt

Jan. 1969-July 1973 Teaching Assistant, Chemical and Petroleum Eng. Dept., Univ. of Pittsburgh, Pittsburgh, Pa., U.S.A.

Oct. 1963-Oct. 1969 Teaching Assistant, Petroleum Eng. Dept., Cairo University, Cairo, Egypt. (On study leave Oct. 1965-Sept. 1973)

## **Teaching Experience**

### **1- At Cairo University (Nov., 1973-Sept., 1976)**

Teaching the following subjects:

Introduction to Petroleum Engineering  
Properties of Petroleum Reservoir Fluids  
Petroleum Reservoir Engineering  
Petroleum Transportation and Storage.

Participated in supervising and discussing of graduation projects for B.S. students.

Participated in teaching "Petroleum Reservoir Engineering" for graduate students (M.S. level).

## **2- At King Saud University**

Teaching the following subjects:

### **a) Undergraduate**

- Properties of Reservoir Rocks
- Properties of Reservoir Fluids
- Reservoir Engineering
- Well logging
- Well Test Analysis
- Reservoir Modeling
- Computer Applications in Petroleum Engineering
- Waterflooding
- Enhanced Oil Recovery
- Petroleum Economics
- Petroleum Transportation
- Technical Report Writing
- Seminars

### **b) Graduate**

- Fluid Flow Through Porous Media
- Tertiary Oil Recovery
- Waterflooding
- Seminar

Participated in supervising and discussing graduation projects for B.Sc. students.  
Supervised and discussed M.S. Theses.

### **Consulting Experience:**

1. Part-time consultant at the Directorate for Scientific Research of King Abdulaziz City for Science and Technology (KACST), Nov. 1981-Oct. 1983.
2. Member of the Work Group on Natural Resources and its Applications at KACST, 1979-1982
3. Member of the Advisory Panel at KACST to select research proposals of the AR-4 & AR-5 programs for funding (1982-1983).
4. A member of the Petroleum and Petrochemical group in the integrated workshop organized by KACST in January 1981 to explore establishing specialised research institutes.
5. Consulting for OGMC (Oil Gas and Mines Company) in Yemen ( July 2004)  
Evaluation of Alwaya well #1 in Alwaya Reservoir, Naifah Formation , Block 41 , Yemen.

### **Short Courses:**

Coordinated and participated in presentation of the following short courses.

1. Petroleum Reservoir Evaluation, King Saud University, 1991, in connection with the activities of the Third Saudi Engineering Conference, Nov. 1991.
2. Natural Gas Production and Simulation, King Saud University, in connection with the activities of the Symposium on Production and Processing of Natural Gas, March 1992.
3. Introduction to Reservoir Engineering, King Saud University, presented to Saudi Aramco Oil Company in Dhahran, 1992, 1993.

### **Honours & Awards:**

1. UNRWA Scholarship (1958-1963) for undergraduate study at Cairo University.
2. DAAD Stipend (1965) to study German language at Goethe Institut, Kochel am See - Bayern, West Germany.
3. DAAD Stipend (1966-1968) to study at the Academy of Mines (Bergakademie), Clausthal-Zellerfeld, West Germany.
4. Teaching Assistantship (1969-1973), Chemical and Petroleum Engineering Department, University of Pittsburgh, Pittsburgh, Pa. U.S.A

### **Foreign Languages:**

English, German

### **Grants:**

1. Co-investigator in the KACST supported project AR-3-012 on "Enhanced Oil Recovery for Saudi Oil Fields by Surfactant-polymer Flooding". (1981-1984), Total funding SR.801,000.
2. Principal Investigator : "Waterflooding Performance of Stratified Reservoirs". Research project No. 4/400, Research Center, College of Engineering, King Saud University, SR.15000.
3. Principal Investigator : "Development of Modified Methods for Performance Prediction of Oil Reservoirs". Research project No. 10/1402, Research Center, the College of Engineering, King Saud University, SR.15000.
4. Principal Investigator : "Development of Modified PVT Correlations for Sudanese Oil Reservoirs". Research project supported by the Ministry of Higher Education, Sudan , 2006..

## **Research and Publications**

### **I – Research Reports:**

- [1] Noaman El-Khatib, "A General Mathematical Model for Oil Recovery Processes," Research Report No. PE-2/1400, Research Center, the College of Engineering, King Saud University, Dec. 1979.
- [2] Noaman El-Khatib, "Waterflooding Performance of Stratified Reservoirs," Research Report No. PE-2/1404 – Research Center, the College of Engineering, King Saud University, Nov. 1983.
- [3] Noaman El-Khatib, "Development of a Modified Method for Performance Prediction of Depletion Drive Oil Reservoirs," Research Report No. PE-1/1405, Research Center, The College of Engineering, King Saud University, Dec. 1984.
- [4] Ahmad Totonji, Noaman El-Khatib, Mahmoud Dokla, and Mohammed Sayyoub, "Enhanced Oil Recovery of Saudi Oil Fields by Surfactant-Polymer Flooding," Final Report, Vol. I and II, SANCST project AR-3-012, 1984.

### **II – Paper Published in Refereed Journals:**

- [1] Noaman El-Khatib, "The Relative Permeabilities of an Idealized Model of Two-phase Flow in Porous Media," *Appl. Math. Modeling*, Vol. 4, No. 6, Dec. 1980, p.463.
- [2] Noaman El-Khatib, "Discussion On: The Simulation of the In-situ Combustion Process in One Dimension," *J. Cnd. Pet. Tech.*, Nov.-Dec., 1982, 124.
- [3] Noaman El-Khatib, "The Effect of Crossflow on Waterflooding Performance of Stratified Reservoirs," *Soc. Pet. Engrs. J.*, Vol. 25, No. 2, April 1985, p.291.
- [4] Noaman El-Khatib, "Author's Reply to Discussion of the Effect of Crossflow on Waterflooding of Stratified Reservoirs," *SPE Reservoir Engineering*, Vol. 25, No. 4, Aug. 1985, p.614.
- [5] Noaman El-Khatib, "Author's Reply to Further Discussion of the Effect of Crossflow on Waterflooding of Stratified Reservoirs," *SPE Reservoir Engineering*, Vol. 1, No. 1, Jan. 1986, p.74.
- [6] Totonji, A, M.H. Sayyoub, M.E. Dokla, and Noaman El-Khatib, "A Laboratory Study on Enhanced Oil Recovery from Safaniya Oil Field by Surfactant/Polymer Flooding," *Journal of Engineering Sciences*, Vol. 11, No. 2, 1985, p.285.
- [7] Totonji, A., M.E. Dokla, M.H. Sayyoub and Noaman El-Khatib, "Effect of High Salinity on Interfacial Tension, Phase Behavior, and Adsorption in Surfactant-Oil-Brine Systems," *Journal of Engineering Sciences*, Vol. 13, No. 1, p.171.

- [8] Noaman El-Khatib, "Simulation of Infinite Composite Reservoirs," *Appl. Math. Modeling*, Vol. 11, June 1987, p.185.
- [9] Noaman El-Khatib, "A Non-linear Regression Method for Interference Test Analysis," *The Arabian Journal for Science and Engineering*, Vol. 12, No. 3, July 1987, p.365.
- [10] Noaman El-Khatib, "A New Approach to Interference Test Analysis," *SPE Formation Evaluation*, Vol. 2, No. 4, Dece. 1987.
- [11] Noaman El-Khatib, "Simulation of Systems with Infinite Dimensions," *Journal of Engineering Science*, Vol. 14, No. 1, 1988, p.167.
- [12] Noaman El-Khatib, "Discussion of Modification of Welge's Method of Shock Front Location in Buckley-Leverett Problem for Non-zero Initial Condition," *SPE Reservoir Engineering*, Vol. 1, No. 4, July 1986, p.431.
- [13] Noaman El-Khatib, "Discussion of a Test for Detecting Rock Property Non-uniformities in Core Samples," *SPE Formation Evaluation*, Vol. 1, No. 4, Aug. 1986, p.424.
- [14] Noaman El-Khatib, "Discussion of Tarmat Behavior Under Water Injection in a Reservoir with Two Intersecting Faults," *SPE Reservoir Engineering*, Vol. 3, No. 4, Nov. 1988.
- [15] Noaman El-Khatib, "Discussion of the Relationship Between Radius of Drainage and Cumulative Production," *SPE Formation Evaluation*, Vol. 3, No. 4, Dec. 1988.
- [16] Noaman El-Khatib, "Interference and Pulse Test Analysis by Nonlinear Regression," *The Journal of Cnd. Pet. Tech.*, Vol. 29, No. 4, July-Aug., 1990, pp.41-46.
- [17] Noaman El-Khatib, "Discussion of Pulse-Testing Response for Unequal Pulse and Shut-in Periods," *SPE Formation Evaluation*, Vol. 5, No. 3, Sept. 1990.
- [18] Noaman El-Khatib, "Discussion of Adaptive-implicit Method in Thermal Simulation," *SPE Reservoir Engineering*, Vol. 6, No. 4, Nov. 1991, p.511.
- [19] Noaman El-Khatib, "Further Discussion of Pulse-testing Response for Unequal Pulse and Shut-in Periods," *SPE Formation Evaluation*, Vol. 6, No. 4, Dec. 1991.
- [20] Noaman El-Khatib, "Reserve Estimate for Geopressured and Water Drive Gas Reservoirs," *Journal of King Saud University, Engineering Sciences*, Vol. 7, 1995, Special Issue on Production and Processing of Natural Gas, p.17.
- [21] Noaman El-Khatib, "Waterflooding Performance of Communicating Stratified Reservoirs with Log-Normal Permeability Distribution," *SPE Reservoir Evaluation and Engineering*, Vol.2, No. 6, Dec. 1999, PP. 542-49.

- [22] Noaman El-Khatib, " Immiscible Displacement of Non-Newtonian Fluids in Stratified Reservoirs," *SPE Reservoir Evaluation and Engineering*, Vol.9, No. 4, Aug.. 2006, PP.356-65.

### **III – Papers Published in Conference Proceedings**

- [1] Noaman El-Khatib, "The Permeability of Uniform Packings of Spheres from the Solution of Navier–Stokes Equation," paper 11–1 presented at the 28th Canadian Chemical Engineering Conf., Halifax, Oct. 1978.
- [2] Noaman El-Khatib, "A Graphical Method for the Solution of Immiscible Displacement in Porous Media," paper 11–3 presented at the 28th Canadian Chemical Engineering Conf., Halifax, Oct. 1978.
- [3] Noaman El-Khatib and Paul F. Fulton, "Factors Affecting Oil Recovery by Forward In–situ Combustion," paper 1–4 presented at the 29th Canadian Chemical Engineering Conf., Sarnia, Sept. 1979.
- [4] Noaman El-Khatib, "A General Mathematical Model for Oil Recovery Processes," *Proceed. of the 11th Annual Modeling and Simulation Conf.*, Pittsburgh, Vol. 11, Part 3, May 1980, p.1153.
- [5] Noaman El-Khatib, "The Relative Permeabilities of an Idealized Model of Two–phase Flow in Porous Media," *Proceed. of the 30th Canadian Chemical Engineering Conf.*, Edmonton, Alberta, Octo. 1980.
- [6] Noaman El-Khatib, " Injectivity Variation During Waterflooding in Linear Heterogeneous Systems," *Proceed. of the 13th Annual Modeling and Simulation Conf.*, Pittsburgh, Vol. 13, Part 4, April 1982, p.1431.
- [7] Noaman El-Khatib, "A Modified Method for Performance Prediction of Depletion Drive Oil Reservoirs," paper 82–33–04 presented at the 33rd Ann. Tech. Meet. of the Petroleum Soc. of CIM, Calgary, June 1982.
- [8] Noaman El-Khatib, "The Effect of Drainage Area and Production Rate on the Performance of Depletion Drive Oil Reservoirs," paper SPE 11019 presented at the 57th Ann. Fall Tech. Conf. and Exhib. of SPE–AIME, New Orleans, La, Sept. 1982.
- [9] Noaman El-Khatib, "The Effect of Crossflow on Waterflooding Performance of Stratified Reservoirs," *Proceed. of the 3rd SPE Middle East Conf.*, Bahrain, March 1983.
- [10] Noaman El-Khatib, "A New Approach to Well Test Analysis," paper SPE 13733, *Proceed. of the 4th SPE Middle East Oil Conf.*, Bahrain, March 1985, p.421.

- [11] Noaman El-Khatib, "Enhanced Oil Recovery Methods; Principles, Potential and Limitations," paper # 175, preprints of the 2nd Saudi Engineers Conf., Dhahran, Nov. 1985, p.1755.
- [12] Noaman El-Khatib, "Estimation of Reservoir Properties from Well Test Analysis Using Non-linear Regression," 2nd Symp. on Geotechnical Problems in Saudi Arabia, Riyadh, Nov. 1988.
- [13] Noaman El-Khatib, "New Correlations for Time-lags and Pressure Response Amplitude in Pulse Test Analysis," Proceed. of the 7th SPE Middle East Oil Conf., Bahrain, Nov. 16-19, 1991.
- [14] Noaman El-Khatib, "Some Aspects of the Flow of Non-Newtonian Fluids Through Porous Media," Mediterranean Petroleum Conf., Tripoli, Libya, Jan. 19-22, 1992.
- [15] Noaman El-Khatib, "Reserve Estimate for Geopressed and Water Drive Gas Reservoirs," Symp. on Production and Processing of Natural Gas, the College of Engineering, King Saud University, Feb. 29 - March 2, 1992.
- [16] Noaman El-Khatib, "Development of a Modified Capillary Pressure J-Function," paper SPE Proceed. of the 9th SPE Middle East Oil Conf. Bahrain, March 11-14, 1995.
- [17] Noaman El-Khatib, "Waterflooding Performance of Communicating Stratified Reservoirs with Log-Normal Permeability Distribution," paper SPE 37696 presented at the 10th SPE Middle East Oil Conf., Bahrain, March 15-18, 1997, p.167.
- [18] Noaman El-Khatib, "A Fast and Accurate Method for Parameter Estimation of Archie Saturation Equation," paper SPE 37744 presented at the 10th SPE Middle East Oil Conf., Bahrain, March 15-18, 1997, p.541.
- [19] M.S. Al-blehed, N.A. El-Khatib, and S.E.M. Desouky : "A Derivative Approach to Modeling Oil Demand," Paper presented at the Fifth Al-Azher Engineering International Conference, Cairo ,19-22 Dec. 1997
- [20] Noaman El-Khatib : "Transient Pressure Behavior of Composite Reservoirs with Moving Boundaries," paper SPE 53153 presented at the 11th SPE Middle East Oil Conf., Bahrain, Feb. 20-23, 1999.
- [21] Noaman El-Khatib : "A New Stream-Tube Model for Waterflooding Performance in 5-Spot Patterns," paper SPE 53186 presented at the 11th SPE Middle East Oil Conf., Bahrain, Feb. 20-23, 1999.
- [22] Noaman El-Khatib : "The Application of Buckley-Leverett Displacement to Waterflooding in Noncommunicating Stratified Reservoirs," paper SPE 68076 presented at the 12th SPE Middle East Oil Conf., Bahrain ,17-20 March 2001.



- [23] Noaman El-Khatib, " Estimation of Aquifer Parameters using Numerical inversion of Laplace Transform," Paper SPE 81428 , 13th SPE Middle East Oil Conference , Bahrain June 9-12, 2003.
- [24] Noaman El-Khatib, " Effect of Gravity on Waterflooding Performance of Stratified Reservoirs," Paper SPE 81465 , 13th SPE Middle East Oil Conference , Bahrain, June 9-12, 2003.
- [25] Noaman El-Khatib, " Immiscible Displacement of Non-Newtonian Fluids in Stratified Reservoirs," Paper SPE 93394, 14th SPE Middle East Oil Conference, Bahrain, March 12-15, 2005.
- [26] Noaman El-Khatib " Simultaneous Estimation of Aquifer Parameters and Original Hydrocarbons In Place from Production Data using Numerical Inversion of Laplace Transform," Paper SPE 104603, to be presented at the 15<sup>th</sup> SPE Middle East Oil Conference, Bahrain, March 11-14, 2007.

#### **IV – Books**

- [1] Totonji, A., N. El-Khatib, M.E. Dokla and M.H. Sayyoub, "Enhanced Oil recovery of Saudi Oil Fields by Surfactant Polymer Flooding," Publisher: King Abdulaziz City for Science and Technology, Riyadh, 1990.

## **References:**

- 1– **Dr. S.M. Farouq Ali**  
Professor of Petroleum Engineering (retired)  
Heavy Oil Recovery (H.O.R) Tech. Ltd  
117 Laurier Dr.  
Edmonton, Alberta, T5R 5P6  
Tel. (780) 461–2944      Fax: (780) 461–8494  
E-mail [farouq@telusplanet.net](mailto:farouq@telusplanet.net)  
Canada
  
- 2– **Dr. Emad Al-homaidhi**  
Head of Petroleum Engineering Department  
College of Engineering  
King Saud University  
P.O.Box 800  
Riyadh 11421  
Saudi Arabia  
Tel.: 966 1 467 6879      Fax 966 1 467 4422  
E-mail [ehomadhi@ksu.edu.sa](mailto:ehomadhi@ksu.edu.sa)
  
- 3– **Dr. Mustafa Onur**  
Professor of Petroleum Engineering  
Istanbul Technical University  
Department of Petroleum Engineering  
80626 Maslak, Istanbul  
Turkey.  
Tel. (90) (212) 285–6269  
          (90) (212) 285–0676  
E-mail: [onur@itu.edu.tr](mailto:onur@itu.edu.tr)
  
- 4– **Dr. Mahmoud K. Dabbous**  
President , IPR Group of Copanies  
909 Hidden Ridge #500  
Irving, TX 75038-3822  
U.S.A  
Phone (972) 257-1900  
Fax. (972) 756-1044  
E-mail [IPR@IPRGOC.com](mailto:IPR@IPRGOC.com)
  
- 5– **Dr. Fouad Khalaf**  
Professor of Petroleum Engineering  
Cairo University  
Giza, Cairo, Egypt  
Tel. (202) 570–3276      Office  
          (202) 330–0068      Home  
E-mail [madik@aucegypt.edu](mailto:madik@aucegypt.edu).