

PERSONAL INFORMATION

Full Name: Musaed N. J. Al-Awad
Academic Title: Professor
Nationality: Saudi
Date of Birth: 1962



SOCIETIES

- Society of Petroleum Engineers International (SPE).
- Saudi Society of Petroleum Engineers (SPE-SAS).
- International Society for Rock Mechanics (ISRM).
- Middle East National Group for Rock Mechanics (MERM).
- Saudi Society for Geosciences (SSGS).

ADDRESS

- Petroleum and Natural Gas Engineering Department, College of Engineering, King Saud University, P.O. Box 800, Riyadh 11421, Saudi Arabia.
- Tel.: +966 11 4676885 +966 11 4676878
- Fax.: +966 11 4674422
- E-mail: malawwad@ksu.edu.sa or mnj.alawwad@gmail.com
- Website: <http://fac.ksu.edu.sa/malawwad>

EDUCATION

- Ph.D., Heriot-Watt University, College of Engineering, Edinburgh, Scotland, United Kingdom, October 1994.
- M. Sc., King Saud University, College of Engineering, Riyadh, Kingdom of Saudi Arabia, June 1990.
- B.Sc., King Saud University, College of Engineering, Riyadh, Kingdom of Saudi Arabia, June 1987.

PROFESSIONAL EXPERIENCE AND INTERESTS

- **Petroleum Related Rock Mechanics Research**
 - Sand Control Issues.
 - Wellbore Instability Analysis.
 - Permeability-Stress Relationship.
 - Basic Rock Properties.
 - Mechanical Properties of Reservoir Rocks.
 - Shale Characterization.
 - Underbalanced Drilling.
- **Oil Well Drilling Engineering Research**
 - Drilling Fluids.
 - Hard Set Cement Properties.
 - High Angle and Horizontal Well Orientation Analysis.
- **Groundwater Resources Engineering Research**
 - Management of groundwater aquifers.

- Water injection in oil reservoirs.
- **Undergraduate and Postgraduate Teaching Experience**
 - PGE 471: Oil Well Drilling Engineering I.
 - PGE 472: Oil Well Drilling Engineering II.
 - PGE 476: Oil Well Drilling Laboratory.
 - PGE 490: Exploration Techniques for Oil and Gas.
 - PGE 491: Petroleum Economics and Legislations.
 - PGE 544: Rock Mechanics.
 - PGE 520: Advanced Drilling Engineering.
 - PGE 552: Special Topics in Drilling Engineering.
 - PGE 544: Petroleum Economics and Legislations.
 - PGE 455: Transportation of Petroleum and natural Gas.
 - PGE 498 & PGE 499: B.Sc. Capstone Graduation Project - Parts I & II.
 - PGE 600: Master Theses.
 - SFE 531: Safety in Oil and Gas Operations.

UNIVERSITY & COMMUNITY SERVICES

- Chairman, Department of Petroleum and Natural Gas Engineering, College of Engineering, King Saud University, Riyadh, Saudi Arabia, Sept. 4, 1996 - June 29, 2002.
- Chairman, Department of Petroleum and Natural Gas Engineering, College of Engineering, King Saud University, Riyadh, Saudi Arabia, April 28, 2008 – Jan. 1st, 2016.
- Member of the Council of College of Engineering, King Saudi University, Riyadh, Saudi Arabia, Sept. 4, 1996 – June 29, 2002, and from June 17, 2003 – now.
- Member of the Directing Board of the Research Center – College of Engineering- King Saud University.
- M.Sc. Thesis Advisor and/or Examiner for Several Postgraduate Students in the Department of Petroleum and Natural Gas Engineering.
- Reviewing Research Proposals, Patents for the Benefit of King Abdul-Aziz City for Science and Technology (KACST) Under the Annual Grant Research Projects Programme.
- Reviewing Several Research Articles for Journals and Conferences.
- Reviewing Several Promotion Applications for Saudi Universities.
- Part-time Consultant, King Abdul-Aziz City for Science and Technology (KACST), Petroleum and Petrochemical Industries Institute.
- Supervising Senior B.Sc. Graduation projects.
- Member of the College's Academic Accreditation Board.
- Member of scientific committees of several conferences.
- Member of the College and University Quality Assurance and Accreditation Boards.
- Part-time Consultant, King Saud University, Vice Rector for Educational and academic Affairs Office, Academic Plans for Scientific Colleges, 2010-2012.
- Member of the Saudi Society for Geosciences.
- Member of King Saud University Scientific Council Nov. 2014 - Sep. 2017.
- Member of the Saudi National Committee for the World Petroleum Congress (WPC), 2010-Now.

- Accreditation Consultant for College of Computer Science and Information Technology, King Saud University, Riyadh, Saudi Arabia, 2010.
- Delivering a 3 days Training Course: “Sand Control and Mitigation.”, Kuala Lumpur, Malaysia, UNI Training Courses, 26-28 July 2010.
- Participating in TV program on Oil and Gas Issues (CNBC).
- Teaching Safety in Oil and Gas Operations Course for Civil Defense in Saudi Arabia.
- Consultant for KSU Vice Rector for Scientific and Academic Affairs, 2010-2013.

AWARDS

- King Saud University Scholarship for Postgraduate Studies, 1990.
- The Best Professor in Petroleum and Natural Gas Engineering in Asia for 2013, Asian Education Leadership awards, UAE, 2013.
- College of Engineering Award for Leaders in ABET Accreditation, 2010.
- College of Engineering Award for Leaders in ABET Accreditation, 2015.
- College of Engineering Award for Leaders in NCAAA Accreditation, 2015.
- Journal of Petroleum Science and Engineering Award for Reviewing, Elsevier, Amsterdam, The Netherlands, March 2016.

TRAINING COURSES ATTENDED

- “Institutional Quality Assurance”, National Commission for Academic Accreditation & Assessment, Riyadh, Saudi Arabia, 2006.
- “Applied Rock Mechanics”, Petroskills, London, 2009.
- “Outcome Base Education”, King Saud University, 2010.
- “Recruiting, Developing, and Retaining a Faculty for the 21st Century”, By the Academic Leadership Development Workshop, Ministry of Higher Education, Riyadh, Saudi Arabia, 2011.
- “Global Sand Management and Control Interactive Workshop”, Praxis Global Research, Istanbul, Turkey 2011.
- “Essentials for Blackboard Education System”, King Saud University, Riyadh, Saudi Arabia, 2013.

PhD and M. SC. THESES

1. **Musaed N. J. Al-Awad:** M.Sc. Thesis: “Rheology, Thermal Stability and Corrosivity of Saudi Clays from Central Province”, King Saud University, Riyadh, Saudi Arabia, 1990.
2. **Musaed N. J. Al-Awad:** Ph.D. Thesis: “Physico-Chemical Analysis of Shale-Drilling Fluid Interaction and Its Application in Borehole Stability Studies”, Heriot-Watt University, Edinburgh, U.K., 1994.

LIST of PUBLICATIONS

86. Musaed N. J. AlAwad and Hawwas A. Mohammed: “Engineering Management and Inspection Schedule of Petroleum Well Integrity”, Poster, the 22nd World Petroleum Congress (WPC22), Istanbul, Turkey, July 9 to 13, 2017.
85. Musaed N. J. AlAwad and Fattah, K. A.: "Utilization of Shredded Waste Car Tyres as a Fracture Seal Material (FSM) in Oil and Gas Drilling Operations", Journal of Petroleum and Gas Engineering, DOI: 10.5897/JPGE2017.0267, Vol. 8, no. 3, pp.21/28, 2017.

84. Musaed N. J. AlAwad and K. A. Fattah: "Superior Fracture Seal Material Using Crushed Date Palm Seeds For Oil And Gas Well Drilling Operations.", Journal of King Saud University / Engineering Sciences, Online Article no. JKSUES229, February 22, 2017.
83. Musaed N. J. AlAwad: "A Rock Mechanical Model for Overbalanced, Managed Pressure, and Underbalanced Drilling Applications", International Journal of Rock Mechanics and Geomechanics for Gas, Petroleum and Water, Vol. 1, no. 2, February 2016.
82. Musaed N. J. AlAwad: "Preventing Reservoir Sand Movement into the Wellbore Using Locally Developed Filter.", 2011 Global Sand Management and Control Praxis Interactive Technology Workshop, Istanbul, Turkey, 14 – 17 March, 2011.
81. Musaed N. J. AlAwad: "A Rock Mechanical Model for Overbalanced, Managed Pressure, and Underbalanced Drilling Applications.", 9th Asian Rock Mechanics Symposium (ARSM9), Bali, Indonesia, 18 to 20 October 2016.
80. Musaed N. J. AlAwad and Hawwas A. Mohammed: "Engineering Management and Inspection Schedule of Petroleum Well Integrity", Journal of Emerging Technologies in Engineering and Applied Sciences (JETEAS), Volume 7, No. 3, 109/117, June 2016.
79. Musaed N. J. AlAwad: "New Frontiers in Petroleum Engineering", Journal of King Saud University, Engineering Sciences, Journal of KSU, Engineering Sciences Volume 28, p.121 to 122, July 2016.
78. Omar Almisned, A. AlQuraishi, and M. AlAwad: "Effect of Triaxial In Situ Stresses and Heterogeneities on Absolute Permeability of Laminated Rocks.", Journal of Petroleum Exploration and Production Technology, DOI: 10.1007/s13202/016/0263/5, June 2016.
77. Imtiaz AbdulJaleel and Musaed N. J. AlAwad: "Application of Rock Scratching Tests in Borehole Instability.", A paper was prepared for presentation at the 48th US Rock Mechanics / Geomechanics Symposium held in Minneapolis, MN, USA, 1 to 4 June 2014.
76. Musaed N. J. AlAwad and Imtiaz AbdulJaleel: "Development of Simple Rock Scratching Cell for UCS Estimation.", The Eighth Asian Rock Mechanics Symposium (ARMS8) – Sapporo, Japan October 14 to 16, 2014.
75. AbdulRahman AlQuraishi, M. AlQarni, Hamdan AlYami, Mufarreah Tale, and Musaed AlAwad: "Investigation of Fluids Properties, Grain Size, and Drag Forces Effects on Sand Production." Marrakech Oil and Gas Conference and Exhibition, 1 to 3 October, 2013.
74. Musaed N. J. AlAwad and Imtiaz AbdulJaleel: "Development of a Scratching Cell for Predicting Near Wellbore Rock Strength.", SPE Paper No. 169649, SPE/PAPG Annual Technical Conference, Islamabad, Pakistan, November 26 to 27, 2013.
73. Musaed N. J. AlAwad: "Evaluation of Mohr Coulomb Failure Criterion Using Unconfined Compressive Strength", The Seventh Asian Rock Mechanics Symposium, Seoul, Korea, 15 to 19 October 2012.
72. Musaed N. J. AlAwad and Brian G. D. Smart: "Modified Failure Criteria for Shales.", The Eighth Asian Rock Mechanics Symposium (ARMS8) in Conjunction with the Seventh Sino Rock Symposium, Shanghai, China, June 18 to 20, 2013.
71. Essa Shokir, Musaed AlAwad, AbdulRahman AlQuraishi, and O. ElMahdy: "Compressibility Factor Model of Sweet, Sour, and Condensate Gases using Genetic Programming.", Chemical Engineering Research and Design, Volume 90, Issue 6, p.785 to 792, June 2012.
70. Musaed N. J. AlAwad: "Petroleum and Natural Gas Engineering Overview for Non Specialists.", Textbook, VDM Verlag, ISBN10: 3639250354, ISBN13: 978 3639250350, June 4, 2010.

69. AbdulRahman AlQuraishi, O. AlMisned, and Musaed AlAwad: "Relative Permabilities of Homogenous and Heterogeneous Laminated Rock Samples Under Hydrostatic and Triaxial Stresses.", Journal of KSU, Engineering Sciences, Vol. 22, No. 2m p.101 to 110, 2010.
68. Musaed AlAwad, Adel Hemeida, Emad AlHomadhi, AbdulBari Arefi, M. Amro, and M. BinZaquota: "A Case Study on ABET Accreditation Requirements and Preparation", Symposium on Engineering Education 2009, UAE University, AlAin, United Arab E., May 2009.
67. Musaed N. J. AlAwad: "Evaluation of Mohr Coulomb Failure Criterion Using Unconfined Compressive Strength." The First Southern Hemisphere International Rock Mechanics Conference, Perth, Australia, September 16 to 19, 2008.
66. Musaed AlAwad, Abdulrahman AlQuraishi, Omar Almisned and Kamal Haroon: "Potential Standard Saudi Sandstone for Applied Studies of Petroleum and Natural Gas Engineering." SPEKSA 08048, SPE Saudi Arabia Technical Symposium, KSA, May 10 to 12, 2008.
65. Musaed N. J. AlAwad: "View Point Analysis of the Importance of the Middle East Oil and Natural Gas (in Arabic)." The 12th Symposium of Faculty of Law in Mansoura University, Mansoura, Egypt, April 2 to 3, 2008.
64. A. AlQuraishi, O. Almisned and M. AlAwad: "Effect of Combined In Situ Stresses and Hetrogenities on Relative Permeability of Reservoir Rocks." The Saudi Meeting on Oil and Natural Gas Exploration and Production Technologies, KSA, 2008.
63. Musaed N. J. AlAwad: "Evaluation of Mohr Coulomb Failure Criterion Using Uniaxial Compressive Strength." The Saudi Meeting on Oil and Natural Gas Exploration and Production Technologies (OGEP2008), Riyadh Saudi Arabia, 6 to 8 2008.
62. Musaed AlAwad, A. AlQuraishi, O. Almisned and K. Haroon: "Evaluation of Some Sandstone Outcrops in Saudi Arabia for Potential Use in Applied Studies of Petroleum and Natural Gas Engg.", The 3rd Saudi Science Conf.: College of Science, KSU, March 2007.
61. Musaed N. J. AlAwad: "Relationship between Excessive Production Rate and Produced Groundwater Quality.", WSTA Seventh Gulf Water Conference, 19 to 23 November 2005, State of Kuwait.
60. Musaed N. J. AlAwad and Talal Y. AlAhaidib: "Estimating the Amount of free Sand in the Yielded Zone around Vertical and Horizontal Oil Wells.", SPESA0526, The 2005 SPE Technical Symposium of Saudi Arabia Section held in Dhahran, KSA, 14 to 16 May 2005.
59. Musaed N. AlAwad: "Relationship between Excessive Pressure Drawdown and Groundwater Quality.", The International Conference on Water Resources and Arid Environment, Prince Sultan Research Center for Environment, Water & Desert, KSU, Dec. 5 to 8, 2004.
58. Musaed N. J. AlAwad and Talal Y. AlAhaidib: "Prediction of Sand Free Oil Production from a Saudi Oil Reservoir.", The 7th Offshore Mediterranean Conference and Exhibition (OMC2005), Ravenna, Italy, March 16 to 18, 2005.
57. Talal Y. AlAhaidib and Musaed N.J. AlAwad: "Prediction of Sand Free Oil Production from a Saudi Oil Reservoir." The First forum of the World Petroleum Congress, Beijing, China, October 17 to 20, 2004.
56. Musaed N. AlAwad, Omar Almisned and Abdulrahman AlQuraishi: "Application of Horizontal Drilling Technology in Groundwater Projects", WSTA Sixth Gulf Water Conference, pp. 147 to 153, Riyadh, Saudi Arabia, 8 to 12 March, 2003.
55. Mohammed Amro, AbdelAlim Elsayed, E. AlHomadhi, M. AlSaddique and Musaed N. AlAwad: "Investigation of Polymer Adsorption on Rock Surface of High Saline Reservoirs.", The Chemical Engineering & Technology Journal, WILY VCH, Vol. 27, No. 7, 2002.

54. Musaed N. J. AlAwad: "Anisotropy Factor for Swelling Rocks.", The 2nd International Conference on Geotechnical and Geoenvironmental Engineering in Arid Lands (GEO2002), King Saud University, pp.239 to 243, Riyadh, Saudi Arabia, 6 to 9 October 2002.
53. Mohammed M. Amro and Musaed N. J. AlAwad: "Removal Techniques of Oil from Marine and Soil Environments.", Symposium on Maritime Disaster Management, King Fahd University for Petroleum and Minerals (KFUPM), pp. 67 to 79, January 19 to 21, 2002.
52. Musaed AlAwad: "Simple Correlation to Evaluate Mohr Coulomb Failure Criterion using Uniaxial Compressive Strength.", Les Rencontres Scientifiques de l'IFP Géomécanique en Simulation de Reservoir Workshop Intl, 5 to 7 décembre 2001, IFP, France, 2001.
51. Musaed N.J. AlAwad: "Relationship Between Reservoir Productivity and Pore Pressure Drop.", Les Rencontres Scientifiques de l'IFP Géomécanique en Simulation de Reservoir Workshop International, 5 to 7 décembre 2001, IFP, France, 2001.
50. AbdelAlim H. ElSayed, Musaed N. J. AlAwad and Emad AlHomadi: "Two New Components for Sand Consolidation Techniques.", SPE Paper No. 68225 Presented at the 2001 SPE Middle East Oil Show Held in Bahrain, 17 to 20 March 2001.
49. AlSaddique, M. A., Hamada, G. M. and AlAwad, M. N. J.: "Engineering Coring and Core Data Analysis.", Emirates Journal for Engineering Research, Vol. 6, No. 1, pp. 39 to 49, 2001.
48. Musaed N. J. AlAwad: "Relationship Between Reservoir Productivity and Pore Pressure Drop.", Journal of King Saud University, Engineering Sciences, Vol. 13, No. 1, pp. 137 to 152, 2001.
47. M. Khairy, M. AlAwad, M. AlSaddigui, E. AlHomadhi, A. AlSoughayier and M. Shebl: "Molasses Affects Surface and Interfacial Forces, pH and Phase Behavior of Crude Oil/Brine.", Oil and Gas European Magazine Vol. 4, pp. 10 to 11, 2001.
46. Hamada, G. M. and Musaed N. J. AlAwad: "Evaluating Uncertainty Archie's Water Saturation Equation Parameters Determination Methods.", 2001 SPE Middle East Oil Show, Bahrain, 17 to 20 March 2001.
45. Musaed N. J. AlAwad: "The Mechanism of Sand Production Caused by Pore Pressure Fluctuation." Oil & Gas Science and Technology Journal – Revue de l'IFP, pp. 339 to 345 , Vol. 56, No. 4, 2001.
44. AbdelAlim ElSayed, Musaed AlAwad, Emad AlHomadhi and M. AlSaddique: "Potential Use of Blast Furnace Slag and Steel Making Slag for Consolidation of Friable SandstoneReservoirs.", Journal of KSU, Engineering Sci., Vol. 13, No. 2, pp. 271 to 28, 2001.
43. AbdelAlim H. ElSayed, M. N. AlAwad, M. S. AlBlehed and M. A. AlSaddiqui: "Productivity and Economical Feasibility of Multilateral Wells in Comparsion of A Horizontal Well.", Engineering Journal of the University of Qatar, Vol. 13, pp. 53 to 78, 2000.
42. Musaed AlAwad, E. AlHomadhi and AlSaddique M. : "Engineering Methods for the Measurement of Physical and Mechanical Properties, Water Reserve and Flow Rates for Underground Water Aquifers.", 1st Workshop in Water Resources Protection, KSA, April 2000.
41. Musaed N. J. AlAwad and Mohammed Amro: "Prediction of Pressure Drop Required for Safe Underbalanced Drilling.", Journal of Engineering, Vol. 10, No. 3, pp. 111 to 118, 2000.
40. A. M. Hemeida and Musaed N. J. AlAwad: "Using Local Gravel to Control Sand Production in a Saudi Oil Field.", Journal of Engineering and Applied Science, Faculty of Engineering, Cairo University, Vol. 48, No. 5, pp. 1009 to 1020, October, 2001.

39. AbdelAlim H. ElSayed and Musaед N. J. AlAwad: "Petroleum Engineering Teaching: Theory and Application (in Arabic). The First Saudi Technical Conference and Exhibition, pp. 32 to 45, Riyadh 18 to 22 Nov. 2000.
38. Musaед N. J. AlAwad: "Effect of Production Induced Stresses on Reservoir Productivity.", The Engineering Journal of the University of Qatar, Vol. 14, No. 3, pp.23 to 43, 2001.
37. Musaед N. J. AlAwad and AbdelAlim H. ElSayed: "Experimental and Modeling of Friable Sandstone Oil Reservoir Consolidation Using Steel Making Slag.", The Engineering Journal of the University of Qatar, Vol. 14, No. 3, pp.1 to 22, 2001.
36. AbdelAlim H. ElSayed, Musaед N. J. AlAwad, AlBlehed M. S. and AlSaddique, M. A.: "An Economical Model for Assessing the Feasibility of MultiLateral Wells.", Journal of King Saud University, Engineering Sciences, Vol. 13, No. 1, pp. 153 to 177, 2001
35. Musaед N. J. AlAwad: "Simple Correlation to Evaluate Mohr Coulomb Failure Criterion Using Uniaxial Compressive Strength.", Journal of King Saud University, Engineering Sciences, Vol. 14, No. 1, pp. 137 to 145, 2001.
34. G. Hamada, M. S. AlBlehed and M. N. J. AlAwad: "Nuclear Magnetic Resonance Log Evaluation of Low Resistivity Sandstone Reservoirs By Passed by Conventional Logging Analysis.", SPE 64406, the SPE Asia Pacific Oil and Gas Conf., Australia 2000.
33. Musaед N. AlAwad and Ahmed O. AlQasabi : "Characterization and Testing of Saudi Barite for Potential Use in Drilling Operations." Journal of King Saud University, Engineering Sciences, Vol. 13, No. 2, pp. 287 to 299, 2000.
32. M. AlSaddiqui, G. Hamada, and Musaед N. J. AlAwad: "State of the Art: Review of Coring and Core Analysis Technology.", Journal of King Saud University, Engineering Sciences, Vol. 12, No. 1, pp. 117 to 138, 2000.
31. AlBlehed, M. S., Hamada, G. M., AlAwad, M. N. J. and AlSaddique, M. A.: "Horizontal Wells Find Varied Applications in Saudi Arabia.", Oil & Gas Journal, pp. 47 to 52, May 8, 2000.
30. Hamada, G. M., M. S. AlBlehed, and Musaед N. J. AlAwad: "NMR Logs Find Reservoirs By passed by Conventional Analysis.", Oil and Gas Journal, Vol. 97, No. 39, pp.75 to 80, September 27, 1999.
29. Adel M. H. and Musaед N. J. AlAwad: "Rheological Properties of High Viscosity Saudi Crude Oil.", Journal of Engineering, India, Vol. 9, No. 3, pp. 51 to 60, Dec., 1999.
28. Musaед N. J. AlAwad and Emad S. AlHomadhi: "Contribution of Petroleum Engineers in The Current Development in Saudi Arabia.", The Great Universal Symp. Held at KSU on the Occasion of the First Centenary of the Foundation of KSA, October 1999.
27. Musaед N. J. AlAwad: "Prediction of Critical Pipe Running Speed During Tripping in Drilling Operations.", Journal of King Saud University, Engineering Sciences, Vol. 11, No. 1, pp. 131 to 149, 1999.
26. AbdelAlim H. ElSayed, Musaед N. J. AlAwad, AlSaddique M. A. and AlBlehed, M. S.: "Effect of Drilling Fluids Contamination on Saudi Reservoir Rocks Wettability.", Engineering Journal of Qatar University, Vol. 11, pp. 49 to 64, 1999.
25. Musaед N. J. AlAwad, AbdelAlim H. ElSayed and Saad ElDin M. Desouky: "Factors Affecting Sand Production from Unconsolidated Sandstone Saudi Oil and Gas Reservoir.", Journal of KSU, Engineering Sciences, Vol. 11, No. 1, pp. 151 to 174, 1999.
24. Musaед N. J. AlAwad, Omar A. Almisned, AlSaddiqui M. A., Abdulrahman A. Alquraishi and Emad S. AlHumadhi: "Formulation of Drilling Fluids Using Clay Minerals Deposited in KSA.", The First National Symp. on Materials Science, KSU, Riyadh, Nov., 1998.

23. AbdelAlim H. ElSayed, Musaед N. J. AlAwad and AlSaddiqui M. A.: "Alteration of Saudi Reservoir Rocks Wettability Due to Drilling Fluids Contamination.", Journal of King Saud University, Engineering Sciences, Vol. 11, No. 2, pp. 263 to 277, 1999.
22. Hamada, G. M. and Musaед N. J. AlAwad: "TDT Monitors Gas Saturation in Heterogeneous Reservoir.", Oil and Gas Journal, pp. 55 to 60, May 25, 1998.
21. Hamada, G. and M. AlBlehed, M. AlAwad, and M. AlSaddiqui: "Petrophysical Evaluation of Low Resistivity Sandstone Reservoirs with Nuclear Magnetic Resonance Log.", Journal of Petroleum Science & Engineering, pp. 129 to 138, Vol. 2, No. 2, April 2001.
20. Musaед N. J. AlAwad: "Rheology and Corrosivity of Drilling Fluids Formulated from AlGhatt Saudi Clays.", Technical Note, Journal of King Saud University, Engineering Sciences, Vol. 10, No. 2, pp. 285 to 299, 1998.
19. Musaед N. J. AlAwad: "Rock Mechanics Applications In Petroleum Engineering Practices.", Oil and Gas European Magazine (International Edition of ERDOIL ERDGAS KOHIL), Germany, Vol. 4, No.1 , pp. 18 to 20, December 1998.
18. Saad Eldin M. Desouky, and Musaед N. J. AlAwad: "A New Laminar Transition Criterion for Yield Pseudoplastic Fluids.", The Journal of Petroleum and Science & Engineering, Vol. 19, No. 3&4, pp. 171 to 176, March 1998.
17. Musaед N. J. AlAwad, and Omar A. Almisned: "Rock Failure Criteria A Key for Predicting Sandfree Production Rates.", Journal of Egyptian Engineers, Vol. 36, No. 2, pp.53 to 58, 1997.
16. Adel M. Hemeida and Musaед N. J. AlAwad: "Stimulation of Sandstone Formations by Mud Acid.", AlAzhar Engineering Fifth International Conference, Cairo, Egypt, pp. 310 to 318, December 19 to 22, 1997.
15. Musaед N. J. AlAwad: "The Investigation of The Source of Sand Produced from Competent Sandstone Reservoirs.", The Second Jordanian Mining Conference, Jordanian University, Amman, Jordan, pp. 393 to 405, April 26 to 29, 1997.
14. Musaед N. J. AlAwad, and Nabih A. AlSayed: "Effect of Drilling Induced Stresses on Formation Productivity.", The 5th Intl. Conf. on Mining, Petroleum and Metallurgical Engineering, Suez Canal University, Egypt, pp. 71 to 84, Feb. 24 to 26, 1997.
13. Musaед N. J. AlAwad: "Investigation of Factors Affecting The Stability of Horizontal Oil and Gas Wells.", 1997 SPE Technical Symposium, Saudi Aramco, Dhahran, pp. 79 to 90, June 8 to 10, 1997.
12. Musaед N. J. AlAwad: "Rheological Properties and Corrosion of Drilling Fluids Formulated from AlGhatt Clays.", Journal of Engineering and Applied Sciences, Cairo University, Egypt, Vol. 44, No. 6, pp. 1173 to 1188, December 1997.
11. AbdelAlim H. ElSayed, and Musaед N. J. AlAwad: "Effect of Partially Hydrolyzed Polyacrylamide (PHPA) Mud Contamination on Reservoir Rocks Wettability.", Oil and Gas European Magazine, Vol. 2, pp. 10 to 11, June 1997.
10. Musaед N. J. AlAwad, and Saad Eldin M. Desouky: "Prediction of Sand Production from A Saudi Sandstone Reservoir.", Oil & Gas Science Technology Journal Revue De L' Institute Francias Du Petrole, Vol. 52, No. 4, pp. 1 to 8, July&August, 1997.
9. Musaед N. J. AlAwad, AlSaddiqui, M. A., and AlGassier, M. M.: "Synthetic (Man made) Sandstone Suitable for Petroleum Engineering Studies.", Journal of Egyptian Engineers, Vol. 36, No. 3, pp. 26 to 29, 1997.
8. Musaед N. J. AlAwad: "A Laboratory Study of Factors Affecting Primary Cement Sheath Strength.", Journal of King Saud University, Engineering Sciences, Volume 9, No.1, pp.113 to 128, 1417H. 1997.

7. Musaed N. J. AlAwad: "Effect of Mud Filter Cake Efficiency on Wellbore Stability During Drilling Operations.", Journal of Engineering and Applied Sciences, Faculty of Engineering, Cairo University, Vol. 43, No. 5, pp. 1065 to 1076, October, 1996.
6. Musaed N. J. AlAwad and B.G.D. Smart: "Characterization of Shale Drilling Fluid Interaction Mechanisms Related to Wellbore Instability.", Journal of King Saud University, Volume 8, Engineering Sciences No. (2), pp. 187 to 215, 1996.
5. Musaed N. J. AlAwad, Dahab A.S. and ElDahshan M.E.: "Testing of Drilling Fluids Formulated From Tabuk Formation Clays.", The Second Arabian Corrosion Conference, Kuwait, pp. 111 to 125, October 12 to 15, 1996.
4. Musaed N. J. AlAwad and B.G.D. Smart: "Modified Failure Criteria for Shales.", The Arabian Journal for Science and Engineering, ASJE 21:4A, pp. 77 to 94, October 1996.
3. Musaed N. J. AlAwad and B.G.D. Smart: "The Influence of Mud Weight and Orientation on the Stability of Inclined Boreholes.", AlAzhar Engineering Fourth International Conference, Cairo, Egypt, pp. 190 to 202, December 16 to 19, 1995.
2. Musaed N. J. AlAwad and B.G.D. Smart: "Physico Chemical Modeling of Shale Drilling Fluid Interaction Under Simulated Downhole Stresses.", AlAzhar Engineering Fourth International Conference, Cairo, Egypt, pp. 173 to 189, December 16 to 19, 1995.
1. Musaed N. J. AlAwad, Dahab, A.S. and ElDahshan, M.E.: "Testing Drilling Fluids Formulated from Tabuk Formation Clays." The 2nd Arabian Corrosion Conference, Kuwait Institute for Scientific Research, pp. 111 to 125, Kuwait, October 12 to 15, 1996.

SUPERVISED THESIS

1. M.Sc. Thesis Advisor for Eng. Kamal A. Haroon: "Evaluation of Some Sandstone Outcrops in Saudi Arabia for Potential Use in Petroleum and Natural Gas Engineering Applied Studies.", Petroleum and Natural Gas Engineering Department, College of Engineering, King Saud University, Completed, September 2004 G.
2. M.Sc. Thesis Advisor for Eng. Talal Y. AlAhaidib: "Prediction of Sand-Free Oil Production Rate in a Saudi Oil Reservoir.", Petroleum and Natural Gas Engineering Department, College of Engineering, King Saud University, Completed, September 2004 G.
3. M.Sc. Thesis Advisor for Eng. Hamdan Qahsan H. AlYami: "A Laboratory Study for Potential Fabrication of a Filter to Prevent Sand Production from Oil Wells", Completed, May 2014.
4. M.Sc. Thesis Advisor for Eng. Imtiaz Ali AbdulJaleel: "Development of a Simple Scratching Cell for Predicting Unconfined Compressive Strength (UCS) of Rocks", Completed, April, 2014.
5. M.Sc. Thesis Advisor for Engineer Hawwas Abdullah Mohammed: "Engineering Management of Petroleum Well Integrity", Completed, April 2015.
6. M.Sc. Thesis Advisor for Engineer Ahmed AlGobany: "Development of a Fracture Seal Material Using Crushed Date Palm Seeds for Oil and Gas Well Drilling Operation", in progress, 2017.

RESEARCH REPORTS

1. **Musaed N.J. Al-Awad:** "Physical and Mathematical Modeling of Sand Production Problem in Hydrocarbon Reservoirs.", Research Project No. P03/17/18, Research Center, College of Engineering, King Saud University, 1997.

2. **Musaed N. J. Al-Awad** and Omar Almisned: "Potential Application of Saudi Clays in Drilling Fluids.", A Research Project Funded by King Abdul-Aziz City for Science and Technology (KACST), Limited Grant Program (LG-2-41) , 1998.
3. Abdel-Alim Hashem, **Musaed N. J. Al-Awad**, and Omar Almisned, G. M. Hamada and Emad S. Al-Homadhi: "Developing a New Slurry to Prevent Sand Production from Unconsolidated Sandstone Oil & Gas Reservoirs.", A Research Project Funded by the Research Center at The College of Engineering, KSU, 1998.
4. Khairy M. A., **Musaed N. J. Al-Awad**, Mohammed Al-Siddiqui, Omar Almisned and A. M. Shebl: "Enhancement of Oil Recovery by Stimulating Growth of Indigenous Microbial Population Under Reservoir Conditions.", A Research Project Funded by the Research Center at The College of Engineering, KSU, 1998.
5. **Musaed N. J. Al-Awad** and Ahmed O. Al-Qasabi: "Potential Application of Barite Depositions in Saudi Arabia As a constituent in oil, gas and water wells Drilling Fluids.", A Research Project (No.23/421) Conducted to the Advantages of the Research Center at The College of Engineering, KSU and SABIC, 2000.
6. M. Khairy, Abdulrahman AlQuraishi, Mansour S. Al-Malik and **Musaed N. J. Al-Awad**,: "Effect of Pore Pressure and Oil Composition on Relative Permeability and Wettability of Sandstone. A Research Project (38/21) Funded by the Research Center at the College of Engineering, KSU, 27/11/2000.
7. Omar A. Almisned, Abdulrahman A. AlQuraishi, and **Musaed N. J. Al-Awad**: "Effect of In-Situ Stresses and Heterogeneities on Relative Permeability of Some Saudi Reservoirs.", Funded by The Petroleum and Petrochemical Industries Research Institute, KACST, A Two Years Project (Starting Date: September 9, 2002).
8. **Musaed N. J. Al-Awad**: Writing a Book Titled: "Introduction to Petroleum and Natural Gas Engineering.", Funded by the Research Center, College of Engineering, King Saudi University, 5/1427 H.
9. Dr. Eissa Mohamed Shokir, **Musaad N.J. Al-Awad**, and Abdulrahman A. AlQuraishi: "Novel Models for Compressibility Factors of Natural, Sour and Condensate Reservoir Gases Using Artificial Intelligence: Genetic Programming and Neural Networks", Project No. ENE341-2, The National Plan for Science and Technology, King AbdulAziz City for Science and Technology, March 2012.
10. **Musaed N. J. Al-Awad**, AbdulRahman Ali AlQuraishi, Eissa Mohamed Shokir, Mohammed Morsy, AND AbdulAziz Bin Laboun: "Feasibility Study Of CO2 Capture and Storage In Saudi Arabia", Project No. 08-ENV356-2, The National Plan for Science and Technology, King AbdulAziz City for Science and Technology, March 2012.
11. AbdulRahman A. Al-Quraishi, **Musaed N. J. Al-Awad**, Mohammed AlQarni, Hamdan AlYami, and Mufarreah Tale: "Development of a New Filter for Sand Control in Oil and Gas Wells", King AbdulAziz City for Science and Technology, 2014.
12. AbdulRahman Ali AlQuraishi, **Musaed N. J. Al-Awad**, Mohammed AlQarni, and Hamdan AlYami: "Novel Techniques for Sand Production Control", King AbdulAziz City for Science and Technology, Grant No. 32-661, 2011.
7. **Musaed N. J. AlAwad** and . Imtiaz Ali AbdulJaleel: "Development of a Simple Scratching Cell for Predicting Unconfined Compressive Strength (UCS) of Rocks", 2014.
13. **Musaed N. J. AlAwad** and Klid A. Fattah: "Development of a Fracture Seal Material Using Shredded Waste Car Tyres for Oil and Gas Well Drilling Operation.", 2017.

14. Musaed N. J. **AlAwad** and Khalid A. Fattah: “Development of a Fracture Seal Material Using Crushed Date Palm Seeds for Oil and Gas Well Drilling Operation.”, 2017 ongoing project.