CURRICULM VITAE

ANDRZEJ (ANDREW) K. WOJTANOWICZ

Occupation Employer	Texaco Endowed Environmental Chair Petroleum Engineering Department Louisiana State University
	Baton Rouge, LA 70803
Contact	(225) 578-6049; awojtan@lsu.edu
Date of birth	March 31, 1943 Krakow, Poland
Nationality	Polish (Permanent US resident)
Marital status	Married - Leokadia (Loda) Glodek
	Children - Monika (1980), Anna and Robert (1985)
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	Baton Rouge, LA 70808
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EDUCATION

AGH University of Science and Technology - Krakow, Poland

- D. Sc. Petroleum Engineering, 1996
- Ph.D. Petroleum Engineering, 1973
- M. Sc. Mining Specialization in Petroleum Engineering, 1967
- B.S. Mining Specialization in Petroleum Engineering, 1965
- B.S. Geology Specialization in Geophysics, 1968

PROFESSIONAL QUALIFICATIONS

- Registered Professional Engineer in Petroleum Engineering in the State of Louisiana (since 1994);
- Registered Professional Engineer in Petroleum Engineering in the State of Oklahoma (1992-93);
- Registered Professional Engineer in Environmental Engineering in the State of Louisiana (since 1994);
- Drilling Engineer UN Roster of Experts United Nations Technical Assistance Service (since 1982)

PROFESSIONAL EXPERIENCE

Texaco Endowed Environmental Chair and Professor

Louisiana State University, Department of Petroleum Engineering, Baton Rouge, LA 70803 (January 1998-present)

Visiting Distinguished Professor

The University of Chogqing (CQU), College of Resources and Environmental Science, Chongqing, China

(Se	ptember 2018-December 2018)
Sa	batical leave of absence from LSU; Developed new graduate-level Course, "Unconventional
	Gas Development;" Initiated collaborative research program Environmentally-safe
Extraction of	Shale Gas between LSU, CQU, and Chongqing Institute of Geology and
Mineral Resources,	Co- directed experimental research project on triaxial stress-dependent
shale gas permeabili	ty.
Visiting Distinguis	hed Professor of Petroleum Engineering
The Petrole	eum Institute, Department of Petroleum Engineering, Abu Dhabi, UAE.
(Jı	ly 2008-January 2009)
Sa	batical leave of absence from LSU; Developed new Senior Design Course, "Design of
Re	servoir Management Strategy with Bottom Water Coning Problem;" Submitted two
research	proposals to the local oil industry; Well Integrity Consortium -not funded,
and Smart Water Si	nk Well Completions - funded.
Professor	
Louisiana S	tate University, Department of Petroleum Engineering , Baton Rouge, LA 70803
(A	ugust 1995-January 1998)
De	veloped graduate-level course, PETE 7201, "Mathematical Modeling of Reservoir Flow
Sy	stems." Provided technical support to DOE Petroleum Technology Transfer Council
pro	ogram.
Associate Professor	•

Louisiana State University, Department of Petroleum Engineering, Baton Rouge, LA 70803 (August 1992-August 1995)

Developed a new senior-level course, PETE 4087, "Environmental Control in Petroleum Engineering." Devised and researched a new technology for subsurface control of oilfield waters.

Conoco Environmental Fellow

Conoco Inc., Production Research and Development, 1000 S. Pine, Ponca City, OK 74603 (September 1991 - August 1992)

Developed technology and analytical testing procedures for dewatering water-base drilling fluids. Created a computer-aided method to design drilling fluid management process and economics.

Visiting Scholar

Heriot Watt University, Edinburgh, Scotland, June – August, 1988

Developed a methodology for experimental analysis of rock permeability damage by drilling fluids.

Associate Professor (1989 - 91), and Assistant Professor (1984 - 89)

Louisiana State University, Department of Petroleum Engineering, Baton Rouge, LA 70803 Taught the undergraduate courses: PETE 4045 Drilling Engineering, PETE 4086 Advance Drilling Engineering, PETE 4059 Drilling Fluids; and the graduate courses: PETE 7202 Well Testing and PETE 7241 Environmental Control in Petroleum Engineering, Contributed two new programs to the department's research agenda: "Environmental control

technology for petroleum engineering" and "Borehole mechanics"

Visiting Assistant Professor

New Mexico Institute of Mining and Technology, Petroleum Engineering Department Socorro, NM 87801

(January 1, 1983 - June 14, 1984)

Taught the undergraduate courses: PET 461 Computer Applications in Petroleum Engineering Analysis and Design, PET 444 Reservoir Engineering; and the graduate course: PET 564 Transient Well Test Analysis. Conducted research in numerical simulation of drilling operations and drilling optimization.

Drilling Fluids Technologist

NL Baroid Petroleum Services, Inc., Eastern Hemisphere Operations Division, London, England (October 1980 - December 1982)

Provided technical service for offshore and land drilling locations in Europe and Africa such as: preparation of drilling mud and hydraulic programs, on-site trouble shooting of technical problems regarding drilling fluids, solids control equipment, and pressure control procedures, and on-site routine service in drilling mud engineering.

Drilling Engineering Supervisor

General Water Authorities, Tripoli, Libya

(June 1978 - September 1980)

Worked with the team of experts from the United Nation's Food and Agriculture Organization, FAO. Supervised field operations of well drilling and completion countrywide in Libya (70% of the work time). Designed deep water wells (30% of the work time).

Assistant Professor

Technical University of Mining and Metallurgy, Department of Petroleum Engineering, Krakow, Poland

(October 1973 - June 1978)

Taught undergraduate courses in the oilwell drilling and completion engineering; and graduate courses in oilwell design, drilling optimization, and completion design. Was annually responsible for the two-month field training for undergraduate students; Assisted

Polish oil companies in several field projects on drilling, completion and evaluation of petroleum reservoirs. Performed research projects on well planning methodology, modelling of drilling mechanics, and optimization of drilling process.

Instructor

Technical University of Mining and Metallurgy, Petroleum Engineering Department, Krakow, Poland (April 1967 - October 1973)

Taught the undergraduate courses: Mud Engineering, Rock Mechanics, Drilling and Completion, and Reservoir Engineering. Supervised the field training sessions for undergraduate students. Conducted research on drill string mechanics and rock bit mechanics.

Drilling Engineer-Trainee

Geological Exploration Company, Warsaw, Poland

(September 1971 - March 1972)

Received an on-the-job training in supervision of oilfield drilling and completion operations, well planning and design, equipment selection, and evaluation.

Coal Miner-Trainee

Coal Mine "Katowice," Katowice, Poland

(September 1961 - February 1962) Worked as a worker in the underground coal mine.

SCHOLARLY ACTIVITY

- Invited lecturer of webinar, Environmental Control Technology in Petroleum Engineering," for the SPE student chapter of Universidad del Noreste (UNE) in Mexico, October 2021
- Invited lecturer of Schlumberger webinar "Development of Wellhead Intervention Techniques for Combating Gas Flow Behind Casing," August 30, 2019;
- Invited lecturer of seminar," Technology for Wellhead Control of Annular Well Integrity," at the DrillWell IRIS meeting in Stavanger, Norway, September 14, 2019
- Invited lecturer of graduate seminar, "Loss of Annular Well Integrity Mechanism, Diagnosis and Remediation," Petroleum Engineering Department of Colorado School of Mines, March 15, 2019
- Invited lecturer of graduate seminar, "Testing and Remediation of Sustained Casing Pressure," at Institute of Petroleum Technology, Faculty of Science & Technology University of Stavanger, Norway Sept. 24, 2019
- Member of Scientific Advisory Committee of DrillWell Drilling and Well Centre for Improved Recovery) in Stavanger, Norway (2015 2019)
- Guest Editor of Special Issue of J. Energy Resources Technology, *Recent Studies of Petroleum Wells and Reservoirs*, comprising best papers from OMAE 2012 and OMAE 2013 conferences December 2014, Vol.136, No.4
- External examiner for the School for Graduate Studies & Research of The University of the West Indies MS Thesis: "A Quantitative Numerical Simulation Study of the Effect of Reduced THP and the Use of Novel Technology to Optimize Production." by Mark Rattinsingh, March 2013.
- Expert Tele-interview by the Chevron's Heavy Hydrocarbon Soil Remediation Group (HHSRG) on technology for heavy oil production August 16, 2013
- Invited Speaker of a seminar, "Gas Migration at Wells," The AGH University of Science and Technology in Krakow, Poland, May 27, 2013.
- Invited Lecturer of three 20-hour courses for undergraduate, Master, and PhD students "Drilling Mechanics," "Drilling Hydraulics," and "Well Design," The AGH University of Science and Technology in Krakow, Poland, May, 2013.
- External examiner of MS Thesis, "Development of a Software Tool to Simulate the Use of Ejectors in Gas Production Boosting," submitted by Kofi Condrington to the School for Graduate Studies & Research of The University of the West Indies, June 2012
- Editor-in Chief of Journal of Energy Resources Technology Transaction of ASME (Jan. 1, 2001- Dec. 31, 2011)
- Invited lecturer of four lectures given at Xian Shiyou (Petroleum) University in Xi-an, China, November 21-25, 2011.
- External Examiner of MS Thesis, "Increasing the Fracture Strength of Permeable Formation via Mini-fracture Manipulation," submitted by Varune Maharaj to the School for Graduate Studies & Research of The University of the West Indies, August, 2011.
- Member of International Editorial Advisory Committee of the West Indian Journal of Engineering (ISSN 0511-5728), May 2011 – April, 2014.
- Invited lecturer of a 7-day short course at Al-Farabi Kazakh National University, (KAZNU) in Almaty, Kazakhstan, June 1 9, 2010.
- Invited Speaker, "Use of DWS Technology in Tambaredjo Oilfield A Feasibility Study," Staatsolie, Saramaca, Suriname, November 7-10, 2010
- Reviewer for the Research Council of Norway of two proposals, "Well sealed well," and, "Diagnosing and handling magnetic contamination in drilling fluids to improve drilling efficiency,"- November 2010
- External Examiner for the University of The West Indies, School for Graduate Studies and Research of MS Thesis, "Evaluating the Performance of Horizontal Open-hole Gravel Packs in Gas Wells in Trinidad using Downhole Gauge Data," December, 2009.
- Member of Panel of Experts of Polish National Research and Development Center appointment effective July 15, 2009
- Reviewer for the Research Council of Norway of two proposals, "Diagnosing and handling magnetic contamination in drilling fluids to improve drilling efficiency," and, "Reduction of non-productive time by in-depth analysis of wellbore restrictions based on real-time drilling data,"- December 2009
- Invited Speaker, "Downhole Water Sink Technology and Applications for the National Oil Company of Suriname, Staatsolie, Paramaribo, Suriname, August 21-22, 2009
- Reviewer for the Research Council of Norway of proposal, "Filter Cake Behavior-Towards Designed Filter Cakes," November 2008

- Invited speaker at the U.S. Oil & Gas Technology Summit 2008, Stimulation of Bottom Water-Invaded Wells with Dual Completions, Natchez, MS April 7-8, 2008
- Global Selection Panelist for the King Abdullah University of Science and Technology (KAUST), Washington DC, Feb 20-21, 2008
- External Examiner for the University of The West Indies, School for Graduate Studies and Research of the final exam of PENG 6010 Enhanced Oil Recovery, April-May, 2008.
- Invited lecturer to Petroleum Institute (PI), and Abu Dhabi for Onshore Oil Operations (ADCO), Abu Dhabi, January 18-26, 2007;
- Reviewer for Well CAP accreditation program of IADC (2007);
- External Examiner of MS Thesis, "Analysis of Solid Expandable Tubulars in the Well Construction Process," for the University of The West Indies, School for Graduate Studies and Research November, 2007.
- Reviewer for the Research Council of Norway of proposal, "Well Integrity-Annular Pressure Buildup Mechanism," November 2007
- Invited lecturer of a short course, "Causes and Results of Excessive Water Production at Wells," at ENAEP 2007 -Third Energy and Oil Meeting of Ecuador, Quito, Ecuador, August 23 - 24, 2007;
- Invited lecturer of a 5-day short course at the Kazakhstan National University, Almaty, Kazakhstan, Dec. 9 20, 2007
- Reviewer of research proposals for the Norwegian Research Council (2007 present)
- Panelist and Invited Speaker at the SPE ATW, "*Water and Gas Shut-off in the Gulf States*," Muscat, Oman, January 21-24, 2007
- External Examiner of MS Thesis, "*New Perforating and Gravel Packing Technique for Optimized Well Completions in Trinidad*," for the University of The West Indies, School for Graduate Studies and Research May, 2007.
- Invited lecturer of a Graduate Seminar, *Dual Completions for Well Conformance Contro*, The University of Tulsa, Department of Petroleum Engineering, April 20, 2007.
- Invited lecturer of a Graduate Seminar, *Modified Oil Well Completions for Conformance Control*, Texas A&M University Department of Petroleum Engineering, September 12, 2006.
- Invited speaker of a seminar, *Wells with Bottomhole Brine Drainage DWS Technology*, Baton Rouge, Louisiana Department of Conservation - Capital Area Ground Water Conservation Commission, Baton Rouge, Louisiana, March 14, 2006
- Invited lecturer of four seminars, Downhole Water Separation in Petroleum Wells, Downhole Water Sink Technology, LSU Department of Petroleum Engineering, and , Journal of Energy Resources Technology -ASME Transactions, China University of Geosciences – Petroleum Engineering Departments in Beijing and Wuhan, PRC, April 14 -24, 2006.
- Member of Editorial Board for *Archives of Mining Sciences* a quarterly of Polish Academy of Sciences (March, 2006 present)
- Invited lecturer of a Graduate Seminar, *Petroleum Wells with Dual-Completion for Controlled Water Inflow Downhole Water Sink Technology*, University of Oklahoma - Mewborn School of Petroleum and Geology Engineering, October 28, 2005.
- Instructor of a four-day course, "Sustained Casing Pressure (SCP) Mechanism, Regulations, Diagnosis, and Remedial Methods," Oil and Gas Institute, Krakow, Poland, June 27-29, 2005.
- Instructor of a one-day course, "Subsurface Separation of Produced Water in Wells," for National Engineering Laboratory in Glasgow, Aberdeen, U.K., April 20, 2004.
- Instructor of a five-day course, *Water Coning Control in Wells*, at Central University of Ecuador, Quito, Ecuador, November 24-28, 2003.
- Instructor of a five-day course, *Mechanical Control of Produced Water*, at Mexican Institute of Petroleum, Mexico City, Mexico, August 11-15, 2003.
- Instructor of a one-day course, *Environmental Control in Petroleum Drilling and Production*, at the University of Bologna, Italy, June 5, 2003
- Member of International Advisory Board for *Archives of Mining Sciences* a quarterly of Polish Academy of Sciences (2004 2006)
- Member of the Scientific Committee for 14th International Scientific and Technical Conference, "New Methods and technologies in Petroleum Geology, Drilling, Reservoir and Gas Engineering," in Zakopane, Poland, June 11-13, 2003
- Associate Technical Editor of Journal of Energy Resources Technology Transaction of ASME (1997 2000)

- Invited Speaker of Graduate Seminar, *Controlled Water Inflow to Oilwells for Recovery Enhancement,* University of Texas at Austin, November 19, 2001
- Instructor of SPE Continuing Education one-day course, *Sustained Casing Pressure (SCP) Diagnosis and Removal*, SPE Delta section, New Orleans, LA, November 28, 2001
- Instructor of SPE Continuing Education one-day course, *Dual Completions to Control Water Coning in Wells,* SPE Delta section, New Orleans, LA, May 24, 2001
- Editor of Special Series, *Advances in Well Control Technology*, for Turkish Journal of Oil and Gas, June September, 1997
- Member of Editorial Board of Turkish Journal of Oil and Gas (1995 2001)
- Member of Scientific Committee and Reviewer at 2nd Symposium on Petroleum Geology, Croatian Academy of Sciences, Zagreb, Croatia, January 2000
- Instructor of Professional Development Seminar, "Environmental Control in Petroleum Engineering," Professional Development Seminar Series of LSU, Baton Rouge, LA, May 1-2, 2000.
- Chairman of the Earth Sciences and Energy Review Panel, Texas Higher Education Coordinating Board, Texas Advanced Research & Technology Program, Austin, TX, August 15-17, 1997.
- Reviewer for SPE Advanced Technology Series: Health, Safety, and Environment Special Issue, 1996.
- Guest Editor of the special issue of Journal of Petroleum Science and Technology, (Elsevier), *Environmental Control Technology in Petroleum Engineering*, Vol. 11, No. 1, April 1994.
- Visiting Professor, The University of Tulsa, graduate course PE 7863, *Introduction to Oilfield Environmental Control Technology*, Summer 1993.
- Member of the Proposal Review Panel (1992 and 1993) of the Waste Management Education and Research Consortium of US DOE, Los Alamos National Laboratories, Sandia National Laboratories, and three universities in New Mexico.
- Instructor of five-day course, *Environmental Control Technology in Petroleum Engineering*, University of Zagreb, Croatia, June 8-12, 1998.
- Invited Speaker, *Subsea Blowout Bridgeover Potential*, at the MMS Gulf of Mexico Region, 19th Information Transfer Meeting, New Orleans, LA, November 30, 1999.
- Invited Speaker, *Cement Vibration/Pulsation in Wells*, at the MMS Gulf of Mexico Region, Regional Operations Technical Assessment Committee, New Orleans, LA, July 8, 1998.
- Invited lecturer graduate seminar, *Water Coning Control in Wells with Downhole Water Sink Completions*, University of Texas at Austin, Department of Petroleum Engineering, October 12, 1998.
- Invited speaker at the Petroleum Technology Transfer Council (PTTC), *Advanced Technologies for Managing Water Production in Welk*, Columbus, Ohio, March 10, 1998.
- Invited speaker at Water Management Technology Workshop, *Downhole Water Sink Technology for Water Control Recovers More Oil*, PDVSA/INTEVEP, Caracas, Venezuela, November 24-25, 1999.
- Invited speaker at Well Productivity Workshop, *Water Control with Downhole Water Sink Technology Overview and Case Histories*, PDVSA/INTEVEP, Caracas, Venezuela, March 11-12, 1999.
- Director of the Workshop: Environmental Protection in Petroleum Industry, Dubrovnik, Croatia, June 14-18, 1999.
- Invited speaker: SPE/AADE Forum, *Optimizing Solids Control Technology for Today's Environment*, Lafayette, LA, Feb. 25-26, 1991.
- Invited lecturer of one-day seminar, *Model and Software Applications of the Mud Management System Analysis*, Conoco Inc., Houston, TX, February 22, 1993.
- Panelist at the Panel Discussion, *Methods for Handling Drill Cuttings*, Annual Conference of American Association of Drilling Engineers," Houston, TX, April 22-23, 1993.
- Chairman of 1990 American Filtration Society Technical Conference, *Environmental and Productivity Merits* of Separation in Petroleum Engineering, Baton Rouge, LA, October 29-30, 1991.

SERVICE TO COMMUNITY/UNIVERSITY

Chair of Promotion and Tenure Committee LSU Craft and Hawkins Dpt. Petroleum Engineering (2019-present)

Graduate Advisor of LSU Craft and Hawkins Dpt. Petroleum Engineering (1993 - 2019)

Chair of the PS-69 Academic Misconduct Inquiry Committee (2013-2014)

Member of COE Professorship Selection Committee 2010 - 2014

Member of LSU COE Research Advisory Council: 2003 - 2008

Member of LSU COE Graduate Council; 2000 - 2008

Member of LSU COE Promotion and Tenure Committee; 1999 - 2014

LSU Faculty Senator (2000 - 2003)

 Invited speaker: "LSU Petroleum Engineering Capabilities for Developing State Economy," to the LA Dpt. of Economic Development – Petrochemical and Oil & Gas Clusters, Baton Rouge, La, December 10, 2001
 Member of COE Committee for Concentration and Environmental Hazard Engineering program (2000-2001)
 Member of LSU Advisory Team to LA Department of Natural Resources, Office of Conservation, regarding the

Oilfield Waste Emergency Rule; Interagency Agreement #2250-98-02 (1998-99)

Member of Dean Search Committee, LSU College of Engineering (1999-2000)

Member of the College policy Committee of the LSU College of Engineering (1995 - 97).

Ad-hoc Advisor to Mississippi Department of Environmental Quality, Office of Geology (1997).

Served as a judge at the Louisiana Science and Engineering (State) Fair, April 11, 1997.

Served as a judge at the Louisiana Science and Engineering (State) Fair, April 12, 1996

Invited Speaker at the meeting of the Mississippi Section of SPE, September 21, 1995.

SERVICE TO PROFESSION

ACTIVITY

- Chairman and Organizer of Petroleum Technology Symposium at ASME OMAE 2018 37th International Conference on Ocean, Offshore, and Arctic Engineering, Madrid, Spain, June 17 – 22, 2018
- Chairman and Organizer of Petroleum Technology Symposium at ASME OMAE 2017 36th International Conference on Ocean, Offshore, and Arctic Engineering, Trondheim, Norway, June 25 – 30, 2017
- Chairman and Organizer of Petroleum Technology Symposium at ASME OMAE 2016 35nd International Conference on Ocean, Offshore, and Arctic Engineering, Busan, South Korea, June 19 – 24, 2016
- Member of Organizing Committee (Student Challenge & Environmental Subcommittees) for 2017 SPE Health, Safety, Security, Environment & Social Responsibility Conference-North America, New Orleans, April 18-20, 2017
- Chairman and Organizer of Petroleum Technology Symposium at ASME OMAE 2015 34th International Conference on Ocean, Offshore, and Arctic Engineering, St. John's, NL, Canada, May 31 – June 5, 2015
- Member of Student Challenge Subcommittee for the 2015 E&P Health, Safety, Security, and Environmental Conference Americas, Denver, Colorado, March 16-18, 2015
- Chairman and Organizer of Petroleum Technology Symposium of ASME OMAE 2014 33rd International Conference on Ocean, Offshore, and Arctic Engineering, San Francisco, June 8-13, 2014
- Chairman and Organizer of Petroleum Technology Symposium of ASME OMAE 2013 32nd International Conference on Ocean, Offshore, and Arctic Engineering, Nantes, France, June 9-14, 2013
- Chairman and Organizer of International Panel Discussion, "Students vs. Young Professionals," at SPE Americas 2013, E&P Health/Safety/Security/Environmental (HSSE) conference in Galveston, TX, March 18-12, 2013.
- Chairman and Organizer of Student Poster Presentation Contests at SPE Americas 2013, E&P HSSE conference in Galveston, TX, March 18-12, 2013.
- Chairman and Organizer of Petroleum Technology Symposium at ASME OMAE 2012 31st International Conference on Ocean, Offshore, and Arctic Engineering, Rio de Janeiro, Brazil, July 1- 6, 2012
- Liaison of ASME Petroleum Division Executive Committee for OMAE conferences, 2011 present
- Chairman and Organizer of Environmental Student Paper Contest at 2011 SPE Americas Health Safety Security Environmental Conference, Houston, Texas, March 21-223, 2011
- Member of SPE HSE Advisory Committee 2008-present
- Member of SPE Award Committee for Distinguished Accomplishment of Petroleum Engineering Faculty – 2008- 2013
- Member of SPE Health, Safety, and Environment Award Committee, and SPE HSE Advisory Committee, 2007 2010;
- Program Committee Member for the SPE/E&P Environmental & Safety Conference, San Antonio, TX, March 23-25, 2009;
- Program Committee Member and Session Chair at the SPE/EPA/DOE E&P Environmental and Safety Conference, Galveston, TX, March 5-7, 2007;
- Organizer and Chairman of Student Environmental Paper Contest Session at SPE/EPA/DOE E&P Environmental and Safety Conference, Galveston, TX, March 5-7, 2007;
- SPE Distinguished Lecturer for 2003-04 season delivered 31 lectures worldwide;
- Program Committee Member and Session Chair at the SPE/EPA/DOE E&P Environmental Conference, Galveston, TX, March 7-9, 2005;
- Organizer and Chairman of Student Environmental Paper Contest Session at SPE/EPA/DOE E&P Environmental Conference, Galveston, TX, March 7-9, 2005;
- Organizing Committee Member and Session Chair at SPE Advanced Technology Workshop (ATW),

Improved Asset Value Through Better Water Management, Langkawi, Malaysia, September 19-22, 2004;

- Steering Committee Member and Session Chair at the SPE 2003 Environmental Forum, "Eliminating Wastes and Emissions from Exploration and production Operations and Services," Park City, UT, July 13-18, 2003;
- Session Chair and Speaker at the SPE Advanced Technology Workshop, "Oil and Gas Field Waste Disposal," Houston, TX, March 25-27, 2003;
- Program Committee Member and Session Chair at the SPE/EPA/DOE E&P Environmental Conference, San Antonio, TX, March 10-12, 2003;
- Organizer and Chairman of Student Environmental Paper Contest Session at SPE/EPA/DOE E&P Environmental Conference, San Antonio, TX, March 10-12, 2003;
- Chairman Operating Committee on Environmental Concerns; Petroleum Division of ASME (December, 1998 present);
- Director of Workshop 10, Gas Engineering, at the Petroleum Engineering Summer School, Dubrovnik, Croatia, June 3-7, 2002;
- Planning Committee Member and Environmental Symposium Chair for ETCE 2002 in Houston, TX, February 4-6, 2002;
- Editor in Chief of ASME Transactions Journal of Energy Resources Technology from 2001 to 2011
- Session Chairman at Petroleum Engineering Summer School Workshop 9: *Optimization of Oil and Gas Production*, Dubrovnik, Croatia, June 11-15, 2001;
- EHS Program Committee member and Session Chair at SPE Annual Technical Conference and Exhibition in New Orleans, LA, Sep. 30-Oct.3, 2001;
- Steering Committee Member for The 12th International Scientific and Technical Conference, "New Methods and Technologies in Petroleum Geology, Drilling, Reservoir and Gas Engineering," at University of Mining and Metallurgy, Krakow, Poland, June21-22, 2001;
- Steering Committee Member for International Oil &Gas Conference, "New Technologies for Enhancement of Oil and Gas Production and Final Recovery," Oil Council of Croatian Academy of Science, Zadar, Croatia, Oct. 2-5, 2001;
- Planning Committee Member and Symposium Chair for ETCE 2001 in Houston, TX, February 5-7, 2001;
- Organizer and Chairman of Student Environmental Paper Contest Session at SPE/EPA/DOE E&P Environmental Conference, San Antonio, TX, February 26-28, 2001;
- Program Committee Member and Session Chair at the SPE/EPA/DOE E&P Environmental Conference, San Antonio, TX, February 26-28, 2001;
- Session Chairman at Petroleum Engineering Summer School Workshop 7: *Lifecycle Oil and Gas Well Management*, Dubrovnik, Croatia, June 12-16, 2000;
- Symposium Chairman and Program Committee Member ASME-ETCE 2000 Conference, New Orleans, LA, February 14-17, 2000;
- Member of SPE Technical Committee on Environment, Health, & Safety (1999 three year appointment);
- Session Chairman and Steering Committee Member SPE /Forum IV: "Environmental Concerns for the New Millennium," Breckenridge, CO, July 18-23, 1999;
- Director of Petroleum Engineering Summer School Workshop 5: Environmental Protection in the Petroleum Industry, Dubrovnik, Croatia, June 14-18, 1999;
- Session Chairman and Programming Committee Member for SPE/EPA E&P Environmental Conference, Austin, TX, March 1-3, 1999;
- Steering Committee member and Session Chair ASME-ETCE 1999 conference, Houston, TX. February 1-3,1999;
- Member of SPE Education and Accreditation Committee (1998 2000);
- Chairman of two sessions at the ASME Energy Technology Conference and Exhibition, ETCE'98, Houston, TX, February 2-4, 1998;
- Chairman of the Session: "Pollution Prevention and Clean Technology," at 1997 SPE/EPA Exploration & Production Environmental Conference, Dallas, TX, March 3-5, 1997;
- Member of the Program Committee for 1999 SPE/EPA E&P Environmental Conference in Austin, TX, February 28 March 3, 1999., Safety, and Environment in Oil and Gas E&P, New Orleans, LA, June 9-12, 1996;
- Chairman of the Session, "Evaluation and Risk Management: Drilling and Completion 11," at the Third International Conference on Health Committee on Engineering Workforce Supply and Demand (1995-1997);
- Member of the ASTM Orleans, LA, June 9-12, 1996;

- Member of the Program Committee D-34.18, Subsurface Deep Well Waste Injection (1996-97);
- Member of the Program Committee for the Third International Conference on Health, Safety and Environment in Oil and Gas E&P, New Committee for 1997 SPE/EPA E&P Environmental Conference in Dallas, TX, March 3-5, 1997;
- Moderator of Panel Discussion at the DOE Petroleum Technology Transfer Council Workshop: "Produced Water Management Workshop," Baton Rouge, LA, September 28, 1995;
- Chairman of the Plenary Session at the International Conference on Application of Mathematical Methods in Science and Technique, Krakow, Poland, June 20-21, 1995;
- Chairman of a Session, "Innovative Technologies," at the SPE/EPA Exploration and Production Environmental Conference, Houston, TX, March 27-29, 1995;
- Member of Program Committee for 1995 SPE/EPA Exploration and Production Environmental Conference, Houston, TX, March 27-29, 1995;
- Member of Program Committee for 1995 SPE Environmental Forum of the Evangeline Section of SPE, Lafayette, LA, February 9-10, 1995;
- Member of the APE Work Group on Dewatering, API Committee 13, January, 1995;
- Chairman of a session, "Environmental-Control Technology," at SPE Environmental Forum, "Pollution Prevention in E&P Operations," Snowmass Village, CO, July 17-22, 1994;
- Member of Steering Committee of SPE Forum Series in North America for 1994;
- Chairman of a technical session at the Ninth SPE Symposium on Formation Damage Control. Lafayette, LA, Feb.22-23, 1990;
- Chairman of American Filtration Society conference, "Environmental and Productivity Merits of Separation in Petroleum Engineering," at the AFS Fall Meeting in Baton Rouge, LA, Oct. 29-30, 1991;
- Chairman of a technical session at 1989 Fall Meeting of American Filtration Society, "Filtration and Separation on Oil and Gas Drilling and Production Operations," Houston, TX, Oct.29-30 1989.

SOCIETY MEMBERSHIP

Society of Petroleum Engineers - Senior Member No. 73458-2 (1980 - present) American Society of Mechanical Engineers (1997 - present) ASTM - Member of the ASTM Committee D-34.18, Subsurface Deep Well Waste Injection (1996-97). Pi Epsilon Tau - Honorary Member since 1985

TECHNICAL SUPPORT

Staatsolie – National Oil Company of Suriname (2016-2017) Redman Management Company, LLC, Houston, TX (2015-2016) High Plains Operating Company L.L.C. (2010 – 2014) Staatsolie – National Oil Company of Suriname (2008-2009) Three Forks Energy, LLC, Houston, Texas (2008) Pluspetrol Norte S.A., Lima, Peru (2007-08) Hailey, McNamara, Hall, Larmann & Papale, LL.L.P, Matairie, Lousiana (2006) Mako Rentals, Inc., Bourg, Lousiana, (2006) Noble E&D Ltd., Houston, TX (2001-2002) Petro Canada, Mississauga Ontario, Canada, (2002) Nexen Petroleum International, Ltd., Calgary, Canada (2001-2004) PanCanadian Petroleum, Ltd., Calgary, Canada (2000-2003) The William G. Helis Company, L.L.C., New Orleans, LA (1999-2000) Navratil et al. L.L.P. - Attorneys and Counselors at Law (1998-2000) Soiltech Environmental Systems, Inc. (1999-2000) Harrington Oil, Inc., Jackson, MS (1999) PDVSA/ENTEVEP, Caracas, Vanezuela (1998) Sonat Exploration Co., Houston, TX (1998) Penzoil E&P Co., Houston, TX (1998) Spirit Energy76 - Unocal, Sugarland, TX (1998) Shell E&P Technology Co., Houston, TX (1998) Chevron Petroleum Technology Co., La Habra, CA (1998) Centrilift / Baker-Hughes, Houston, TX (1998) Mobil E&P Technical Center, Dallas, TX (1998)

C-FER, Edmonton, Alberta, Canada (1997) Hollimon Oil Corporation, San Antonio, TX (1997) Maxus Energy Corporation, (1996) Texaco EPTD, Houston, TX (1995-96) Unocal Corporation, Anchorage, AK (1995) Energy Management Corporation, Jackson, MS (1995-96) Gulf Canada Resources, Calgary, Canada (1995) Tellus Energy Group, LLC, Jackson MS (1996) Fite Oil and Gas, Inc., Shreveport, LA (1995) Technical Advisory Service for Attorneys (TASA) Louisiana Dept. of Environmental Quality (1990) Nippon Steel Corporation, Japan (1989-92) L.S. & A. Environmental Inc., New York, NY (1992-94) Conoco, Inc., Houston, TX (1991-93)

COURSE INSTRUCTION

- *"Gas Migration at Wells Flow after Cementing and Sustained Casing Pressure,"* ETC instructor of short course for Consol Energy Inc., Canonsburg, PA, December 12, 2012
- "Unconventional Containment of Deepwater Well's Blowout", and, "Unconventional Production of Heavy Oil with Bottom Water," short courses taught at Workshop 34: "Unconventional Oil and Gas Exploration & Production and Processing" of the Petroleum Engineering Summer School of Inter-University Center, Dubrovnik, Croatia, June 11-15, 2012.
- *"Gas Migration at Wells Flow after Cementing and Sustained Casing Pressure,"* Instructor of SPE Continuing Education half-day course for SPE Delta Section, Covington, LA, April 19, 2012.
- "Well's Productivity Impairment in Heavy Oil with Bottom Water," a short course at Workshop 34: "Unconventional Oil and Gas Exploration & Production and Processing," of the Petroleum Engineering Summer School at Inter-University Center, Dubrovnik, Croatia, June 11 - 15, 2012
- "Heavy Oil Resources and Methods Cold Production and Water Problems," a short course at Workshop 29/30: "Exploration and Production of Hydrocarbon Reserves from Unconventional Deposits," at the Petroleum Engineering Summer School of Inter-University Center, Dubrovnik, Croatia, June 14-18, 2010.
- "Oil By-passing and Mechanical Control of Produced Water at Wells," Instructor of SPE Continuing Education half-day course for SPE Delta Section, New Orleans, LA, April 29, 2010.
- "Surface Facilities for Water Handling and Discharge," a short course at Workshop 27/28: "Surface Facilities for Transport, Water Handling and Discharge," at the Petroleum Engineering Summer School of Inter-University Center, Dubrovnik, Croatia, June 15-19, 2009.
- "Oil Bypassing and Mechanical Control of Produced Water in Wells," a short course at Workshop 23/24: "New Aspects of Formation Damage and Water Control," at the Petroleum Engineering Summer School of Inter-University Center, Dubrovnik, Croatia, June 11-15, 2007.
- "Stimulation of Watered-out, Inactive/Marginal Wells with Dual Completions," a half-day Workshop, Petroleum Technology Transfer Council (PTTC), Shreveport, Louisiana, May 23, 2006.
- "Peak Oil Controversy and Mitigation Concepts on World Energy Supply," a short course at Workshop 19: "The Big Future Picture of Petroleum Engineering," at the Petroleum Engineering Summer School of Inter-University Center, Dubrovnik, Croatia, June 5-9, 2006.
- "Stimulation of Watered-out, Inactive/Marginal Wells with Dual Completions," a half-day Workshop, Petroleum Technology Transfer Council (PTTC), Lafayette, Louisiana, May 24, 2005.
- "Sustained Casing Pressure (SCP) Mechanism, Regulations, Diagnosis, and Remedial Methods," three-day short course, Oil and Gas Institute, Krakow, Poland, June 27-29, 2005.
- "External Integrity of Well Completions Gas Migration and Sustained Casing Pressure," a short course at Workshop 18: "Contemporary Oil and Gas Well Completion and Workover Jobs" at the Petroleum Engineering Summer School of Inter-University Center, Dubrovnik, Croatia, June13-17, 2005.
- "Productivity and Economic Potential of Inactive/Marginal Wells in Louisiana," a half-day Workshop, Petroleum Technology Transfer Council (PTTC) New Orleans, Louisiana, December 7, 2004.
- "Subsurface Separation of Produced Water in Wells," one day short course organized by National Engineering

Laboratory, Aberdeen, U.K., April 20, 2004.

- "Water Coning Control in Wels Downhole Water Sink Technology," five-day course at the Central University of Ecuador, Quito, Ecuador, November 24-28, 2003.
- "Mechanical Control of Produced Water Downhole Separation Technology," five day course at the Mexican Petroleum Institute, Mexico City, FD, August 11-15, 2003.
- "Environmental Control in Petroleum Drilling and Production Operations," a one day course at the University of Bologna, Italy, June 5, 2003.
- "Effects of Modified Completions on Productivity of Gas Wells in Reservoirs with Water Support," a short course at Workshop 10: Gas Engineering, Petroleum Engineering Summer School of the Inter-University Center, Dubrovnik, Croatia, June 3-8, 2002.
- Instructor of SPE Continuing Education one-day course, *Sustained Casing Pressure (SCP) Diagnosis and Removal*, SPE Delta Section, New Orleans, LA, November 28, 2001.
- Instructor of SPE Continuing Education one-day course, *Dual Completions to Control Water Coning in Wells*, SPE Delta section, New Orleans, LA, May 24, 2001.
- "Productivity Testing and Optimization in Oilwells with Water Coning Control," a short course at Workshop 9: Optimization of Oil and Gas Production, Petroleum Engineering Summer School of the Inter-University Center, Dubrovnik, Croatia, June 11-15, 2001.
- "Downhole Water Separation Technology," a one-day Workshop, Petroleum Technology Transfer Council (PTTC) Central Gulf Region, Baton Rouge, Louisiana, March 2, 2000.
- *"Environmental Control Technology in Petroleum Engineering,*" a five day course at the University of Zagreb, Croatia, June 8-12, 1998.
- Instructor of one-day course at LSU Petroleum Engineering Research and Technology Transfer Laboratory, *"Hydraulic Fracturing,"* (1998)
- Instructor (annualy) of two five-day courses, "*Drilling Engineering*," and "*Drilling Fluids*," for Rike Services International, New Orleans, Louisiana, 1987 1991.
- Worldwide instructor of the five-day courses, "*Environmental Control in Drilling Engineering*," for the Oil and Gas Consultants International, Tulsa, OK, 1991-1997.

Instructor of a five-day course, "*Environmental Control in Drilling Engineering*," for Petrobras, Salvador, Brazil, 1990, and to seven oil companies, in Quito, Ecuador, 1990.

Instructor of a five-day course, "Well Testing," for INA-Naftaplin in Dubrovnik, Yugoslavia, June, 1990.

AWARDS

- ASME Fellow, 2021
- ASME OOAE Division Special Achievement / Service Award June, 2021
- 35-year Service Award, Louisiana State University January, 2019
- OMAE Conference Appreciation Award June, 2016
- ASME Dedicated Service Award June, 2015
- 30-year Service Award, Louisiana State University May, 2014
- 2013 OMAE Appreciation Award for Petroleum Technology Symposium Chair
- LSU Tiger Athletic Foundation 2013 Undergraduate Teaching Award
- ASME Certificate of Appreciation for Service as Editor of J. Energy Resources Technology 2000-2011
- Distinguished Professor of Xian Shiyou (Petroleum) University in Xi-an, China November, 2011
- 25-year Service Award, Louisiana State University -May 2009
- SPE Distinguished Achievement Award for Petroleum Engineering Faculty for 2008
- Honorable Annual Recognition by The Petroleum Institute Abu Dhabi, UAE, November 25, 2008
- Honorary Professorship in Technical Sciences President of Poland, December, 2005
- SPE Health Environment and Safety Award 2003
- 20-year Service Award, Louisiana State University May 2004
- SPE Distinguished Lecturer for the 2003 2004 Season
- 2002 Frank Walk Service Award from ASME International Petroleum Division February 2002
- 2002 Eckard Service Award from ASME International Petroleum Division February 2002

- 2001 Frank Walk Service Award from ASME International Petroleum Division February 2001
- 2001 Samuel L. Collier Award from ASME International Petroleum Division February 2001
- 2000 Eckard Service Award from ASME International Petroleum Division February 2000
- 1999 Frank Walk Service Award from ASME International Petroleum Division February 2000
- 15-year Service Award, Louisiana State University May 1999
- 75-Anniversary Medallion Award from ASME International Petroleum Division 1999
- 1996 Special Meritorious Award for Engineering Innovation, Petroleum Engineer International May 6, 1996
- 1995-96 Faculty Appreciation Award, Engineering Council of LSU April 17, 1996
- 1995-96 Distinguished Faculty Award, LSU Alumni Association May 7, 1996
- 1994-95 Faculty Appreciation Award, The Engineering Council of LSU April 22, 1995
- 10-year Service Award, Louisiana State University May 1994
- 1987 Summer Faculty Research Stipend (\$4000), LSU Council on Research
- Annual Award of the Applied Research Council, Technical University of Mining and Metallurgy 1969, 1973, 1974, 1975, and 1976.

FUNDED RESEARCH

PROJECTS

The Petroleum Institute in Abu Dhabi, UAE - \$417,000
Smart Water Sink Well Technology for Naturally Fractured Reservoirs with Water Problems -
three year project for $2014 - 2019$ (collaboration with PI – Dr. A. Alsumanti)
Albemarle Corporation - \$60,000
Sustained Casing Pressure (SCP) Remediation with Annular Intervention Method," - continuing
funding for the SCP Program consortium's project in 2015
Albemarle Corporation - \$120,000
Sustained Casing Pressure (SCP) Remediation with Annular Intervention Method," - a consortium
project funded in 2013 for two (2012-2014)
National Natural Science of China - \$8,000
Mechanistic Study of Bilateral Water Sink (BWS) Effect on Enhancing Oil Recovery in Heavy
Oil with Bottom Water," - one year project for 2014 (collaboration with Chinese University of
Petroleum, Beijing – Dr. W. Qin)
Pluspetrol Angola Corporation - \$40,000
Heavy Oil Development in Massambala Field – one year project for 2013
DWSTI Consortium - \$45,000
Downhole Water Loop (DWL) Well System Limitations due Injectivity Damage - Theory and
Application – annual project for 2013
Shell Oil Company – \$265,000
Sustained Casing Pressure Program – a consortium project funded in 2011 for three years (2011-
2014)
China National Offshore Oil Corporation - \$14,000
Feasibility of Downhole Water Sink Well Completions in LF 13-1 Oilfield in China
 pilot project for a potential member of DWSTI consortium in 2009
DWSTI Consortium - \$40,000
Modification of DWS Technique for Horizontal and Multi-functional Wells in Heavy Oil with
Bottom Water - annual project for year 2008
DWSTI Consortium - \$60,000
Design and Assessment Method for DWS Intervention Projects – annual project for year 2007
DWSTI Consortium - \$65,000
Principles and Methods for Assessment of DWS in Watered-out Oil Wells - annual project for year 2006
DWSTI Consortium - \$65,000
Stimulation of Marginal Well Productivity with Dual Re-completions and Water Drainage – an
annual project for year 2005
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	DWSTI Consortium - \$65,000
	Development of Applied DWS Technology – an annual project for year 2004
	DWSTI Consortium - \$65,000
	Development of Methods and Procedures for Field Deployment of DWS Well Designs – an
	annual project for year 2003;
	Louisiana Board of Regents (Louisiana Education Quality Trust Fund, LEQTF) Program; Industrial Ties
	Research Subprogram, ITRS – \$276,534 (for 3 years:)
	Technology for Inactive Wells Valuation and Recovery of By-passed Reserves in Louisiana – a
	three-year project: 2003-2006;
	DWSTI Consortium - \$75,000
	Principles and Design method for Integration of Dual Completion Design with Reservoir and Well
	<i>Performance</i> - an annual project for year 2002; Gas Research Institute - \$240,000 for the LSU team; (1999-2001)
	<i>Improving Gas Well Cementing Through Cement Vibration</i> - a joint two-year research project of
	three companies (CTES, Inc., Westport, and LSU - total funding: \$1,300,000;
	DWSTI Consortium - \$90,000
	Principles and design methods for DWS Completions of Gas and Horizontal Wells with Water
	Coning Problems - an annual project for year 2001;
	DWSTI Consortium - \$75,000
	DWS Well Selection and Production Optimization Method for Maximum Performance - an annual
	project for year 2000;
	DWSTI Consortium - \$90,000
	Principles and Design Method for DWS Well Completions with Commingled Inflow of Oil and Water, on any subscript project for every 1999.
	<i>Water</i> - an annual research project for year 1999; DWSTI Consortium - \$135,000
	Principles and Design Method for DWS Well with Segregated Inflow of Oil and Water- an annual
	research project for year 1998;
	Downhole Water Sink Technology Initiative (DWSTI), (1998 - present)
	An industry-funded LSU consortium of member-companies contributing \$15,000/member-
year.	
y cui i	Principal investigator and project director
	(1998 funding - \$135,000; 1999 funding - \$90,000; 2000 funding - \$75,000);
	Minerals Management Service - \$1,700,000 (1994 -2000)
	Development of Improved Procedures for Detecting and Handling Underground Blowouts in a
	Marine Environment - A 6-year contract No. 14-35-0001-30749; Co-Principal Investigator
	with A.T. Bourgoyne, Jr. and O. Allen Kelly
	Conoco Inc \$80,000
	Dewatering Technology of Water-Base Drilling Fluids - Conoco Environmental
	Fellowship1991-92 - a one-year project with 100% time involvement at the Conoco Research
	Center in Ponca City, OK;
	US Environmental Protection Agency - \$118,754
	LSU Hazardous Research Center
	Contract No. CR 813 888, FY 1988/91
	Co-PI with S.D. Field, LSU Civil Engineering
	Burlington Resources Foundation - \$60,000
	Development of Laboratory Research in Borehole Mechanics - development project, 1989-94;
	Louisiana Board of Regents - \$83,213
	LA Education Quality Support Fund
	Contract No. LEQSF (1988-90)-RD-B-4 FY 89/90
	US Department of Energy, \$75,000
	Sandia Laboratories
	Contract No. 63-4797 FY 88/90
	Co-PI with A.T. Bourgoyne, Jr.

US-Yugoslav Joint Board on Scientific and Technological Cooperation, \$17,000 Contract No. YU/US 778, FY 1989/91
Faculty Pass-Through Grant, \$20,000 LSU Center for Energy Studies FY 87/88 No. 87-02-17
Faculty Pass-Through Grant, \$20,000 LSU Center for Energy Studies FY 86/87 No. 86-01-04
Faculty Pass-Through Grant, \$20,000 LSU Center for Energy Studies FY 85/86 No. 85-01-01
Louisiana Department of Conservation, \$218,000 Contract No. 21400-85-12, FY 1985/86

EQUIPMENT

Renovation of undergraduate Drilling Fluids Laboratory (\$100,000) Baker- Hughes Company, September 2010. Microtox System (\$14,000) Microbics Research Grant (\$7,500) for Petroleum Engineering Environmental Control Laboratory from Microbics Corporation, Carlsbad, CA Field-size, drilling mud processing equipment, \$1,000,000 For Petroleum Engineering Environmental Control Laboratory from petroleum-related industry (free loan from 1985-89) Instrumentation for Particle-Size Measurements in Drilling Fluids, \$48,000 For Petroleum Engineering Environmental Control Laboratory From Louisiana Department of Conservation (1985) HP-HT Microbit Drilling Machine, \$400,000 For Research in Borehole Mechanics From NL Baroid (1989) Magnetic Susceptibility Balance, \$3,000 For Petroleum Engineering Environmental Control Laboratory From Amoco Production Company (1990)

RESEARCH FOCUS

Well Design Methodology - Drilling/ Completion/Production

- drilling optimization
- casing programs
- * dual completion performance

Environmental-Control Technology for Petroleum Engineering

- * in-situ control of produced water
- * drilling fluid volume/toxicity control
- * prevention of migration outside wells
- well injection for disposal
- environmental risk

Borehole Mechanics

- * near-well zone effects and their diagnosis
- * borehole friction
- * drilling mechanics and hydraulics

PUBLICATIONS

BOOKS:

- New chapters: *Chapter 3.7*, "Sustained Casing Pressure," pp. 72-95, *Chapter 4.3*, "Control of produced Water Volume," pp. 117-148; A.K. Wojtanowicz, in 3-rd edition of "Environmental Technology in the Oil Industry," editor: S. Orszulik, Springer Science – Springer International Publishing, Switzerland, 2016
- 2. *Chapter 13*, "Drilling Waste Control Mud Dewatering, "A. K. Wojtanowicz, in "Advancement in Environmental Engineering," editor: N. Gaurina Medjimurec, OGI Global, 2015, 17 pp.
- Chapter 8, "Risk and Remediation of Irreducible Casing Pressure at Petroleum Wells," A. K.
 Wojtanowicz, in "Risk Analysis for Prevention of Hazardous Situations in Petroleum and natural Gas Engineering," editors: D. Matanovic, N. Gaurina - Medjimurec, and K. Simon, OGI Global, 2014.
- 4. "Cold Production of Heavy Oil with Bottom Water," W. Qin, A.K. Wojtanowicz, and C.D. White, Lambert Academic Publishing, GmbH & Co, Saarbrucken, Germany, 2012.
- 5. "Oil Bypassing by Water Invasion Mechanisms and Remediation," J.C. Hernandez, and A.K. Wojtanowicz, VDM Publishing House Ltd., 2011.
- "Integrity of Petroleum Wells Offshore in Shallow Sediments Subsea," D. Zhou, and A.K. Wojtanowicz, Verlag Lambert Academic Publishing AG & Co. KG, 2009, 241 pp.
- Chapter 2, "Environmental Control Technology for Oilfield Processes"; Chapter 3, "Environmental Control of Well Integrity"; Chapter 4, "Environmental Control of Drilling Fluids and Produced Water"; Chapter 5, "Oilfield Waste Disposal Control"; A.K. Wojtanowicz, in "Environmental Technology in the Oil Industry," editor: S. Orszulik, Springer Science, 2008.
- *Chapter 8*, "Oilfield Pit Management, Closure, and Remediation," A.K. Wojtanowicz, in "Environmental Engineering for Exploration and Production Activities," SPE Monograph Series, 1999.
- *Chapter 3*, "Environmental-Control Technology in Petroleum Drilling and Production," A.K. Wojtanowicz, in "Environmental Technology in the Oil Industry," editor: S. Orszulik, Chapman and Hall, 1997. 110 pp.
- Chapters: "Drilling Muds and Completion Fluids," "Mud Pumps," "Rotary Equipment," "Drilling Bits and Downhole Tools," A.K. Wojtanowicz, in "Practical Petroleum Engineer's Handbook," editor W. Lyons, Gulf Publishing Company, 1996.
- 11. *Chapter 5*, "Computer-Aided Casing Optimization," A.K. Wojtanowicz, and E.E. Maidla, in "Casing Design: Theory and Practice," editors: S.S. Rahman and G.V. Chilingarian, Elsevier, 1995.
- 12. "Optimization of Drilling Process," University Press of Technical University of Mining and Metallurgy, Krakow, 1975, 275 pp. (in Polish).

REFEREED JOURNALS

1. "Determination of the Optimal Rotating Time for a Rock Bit," A.K. Wojtanowicz, S. Miska, *Mining Archives, Polish Academy of Science,* Bull. 3, Vol. 17, 1972. (in Polish).

- 2. "Theoretical Study on the Dynamical Process of Plunging the Rock Bit Tooth," S. Miska, A. Wojtanowicz, *Mining Archives, Polish Academy of Science*, Bull. 1, Vol. 17, 1972. (in Polish).
- 3. "Optimal Bit Program for Definite Drilling Conditions," S. Miska, A.K. Wojtanowicz, *Mining Archives, Polish Academy of Science*, Bull. 2, Vol. 18, 1973. (in Polish).
- 4. "Identification of Drilling Process," A. K. Wojtanowicz, *Polish Academy of Science, Mining Committee*, Mining Bull. 13, 1974. (in Polish).
- 5. "Optimal Bit Programs for the Domestic Rock Bits," A. K. Wojtanowicz, *Zeszyty Problemowe Gornictwa, Polish Academy of Science*, Bull. 1, Vol. 12, 1974. (in Polish).
- 6. "Comparison Study of Solid-Liquid Separation Prior to Oilfield Pit Closure," A.K. Wojtanowicz, S.D. Field, M.C. Osterman, *Journal of Petroleum Technology*, July 1987.
- "Oilwell Completion Fluid Solids Interaction with an Unconsolidated Oil Reservoir," A.K.
 Wojtanowicz, Z. Krilov, J. P. Langlinais, *Particulate Science and Technology, an International Journal*, Vol. 5, No. 2, 1987.
- 8. "Minimum-Cost Casing Design for Vertical and Directional Wells," A.K. Wojtanowicz, E.E. Maidla, *Journal of Petroleum Technology*, October 1987; also *Transactions of AIME*, 1988.
- "The Development Study of a Centrifuging Technique for Oilfield Production Pit Closure," M. C. Osterman, A. K. Wojtanowicz, S. D. Field, *Transactions of the ASME, Journal of the Energy Resources Technology*, December 1987.
- "Experimental Determination of Formation Damage Pore Blocking Mechanisms," A.K. Wojtanowicz,
 Z. Krilov, J. P. Langlinais, *Transactions of the ASME Journal of the Energy Resources Technology*,
 March 1988.
- "Author's Reply to Discussion of Minimum-Cost Casing Design for Vertical and Directional Wells," A.K. Wojtanowicz, *Journal of Petroleum Technology*, April 1988.
- 12. "A Field Method for Assessing Borehole Friction for Directional Well Casing," E.E. Maidla, A.K. Wojtanowicz, *Journal of Petroleum Science and Engineering*, Vol. 1 (4), October 1988.
- 13. "Modern Solids Control: Centrifuge Dewatering-Process Study," A.K. Wojtanowicz, *SPE Drilling Engineering*, September 1988; also *Transactions of AIME*, 1988.
- "Biodegradation of Oilbased Drilling Muds and Production Pit Sludges," R. E. Marks, S. D. Field, A. K. Wojtanowicz, *Transactions of ASME, Journal of Energy Resources Technology*, Vol. 110, No. 3, September 1988.
- "Formulation and Assessment of a Completion Fluid for the Unconsolidated Gas Bearing Formations Offshore Adriatic Sea," Z. Krilov, A.K. Wojtanowicz, J. P. Langlinais, *Oil and Gas European Magazine*, January 1989.
- 16. "Statistical Assessment and Sampling of Drilling Fluid Reserve Pits," A. K. Wojtanowicz, S. D. Field, Z. Krilov, and F. L. Spencer, Jr., *SPE Drilling Engineering*, June 1989.

- 17. "Laboratory Study of Borehole Sliding Friction Using Dynamic Filtration Apparatus," E. E. Maidla, and A. K. Wojtanowicz, *SPE Drilling Engineering*, September 1990.
- 18. "Chemical Conditioning of Drilling Fluids Prior to Dewatering," A. K. Wojtanowicz and Yawen Ye, *Fluid/Particle Separation Journal*, Vol. 3, No. 3, Sept. 1990.
- 19. "Minimum-Cost Well Drilling Strategy Using Dynamic Programming," A. K. Wojtanowicz, E. Kuru, *Transactions of ASME Journal of Energy Resources Technology*, Vol. 115, December 1993.
- "Mathematical Modelling of PDC Bit Drilling Process Based on a Single-Cutter Mechanics," A. K. Wojtanowicz, and E. Kuru, *Transactions of ASME Journal of Energy Resources Technology*, Vol. 115, December 1993.
- 21. "A Theoretical Method for Detecting In-Situ PDC Bit Dull and Lithology Change," E. Kuru, and A.K. Wojtanowicz, *Journal of Canadian Petroleum Technology*, Vol. 31, No. 7, Sept. 1992.
- "Cumulative Bioluminescence-A Potential Rapid Test of Drilling Fluid Toxicity: Development Study,"
 A. K. Wojtanowicz, B.S. Shane and A. V. Stiffey, SPE Drilling Engineering, March 1992.
- "Advanced Biological Treatment and Separation of Hazardous Constituents from Petroleum Sludges,"
 Field, S. D., Marks, R. E., and A. K. Wojtanowicz, *Journal of Hazardous Materials*, 1991, 0304-3894/91.
- 24. "Biological Treatment of Petrochemical Wastes for Removal of Hazardous Polynuclear Aromatic Hydrocarbon Constituents," Marks, R.E., Field, S.D., Wojtanowicz, A.K. and Britenbeck, G.A., *Journal of Water Science & Technology*, Vol. 25, No. 3, 1992, 0273-1223/92.
- 25. "Oilfield Environmental Control Technology: A Synopsis," A.K. Wojtanowicz, *Journal of Petroleum Technology*, February, 1993.
- 26. "A Compound Effect of Cutting Depth and Bit Dull on Cutter's Temperature for Polycrystalline Diamond Compact Bits," E. Kuru, and A.K. Wojtanowicz, *Transactions of ASME Journal of Energy Resources Technology*, Vol. 115, June 1993.
- 27. "Friction Under PDC Cutter and Its Implication in Bit Life Prediction," E. Kuru and A.K. Wojtanowicz, *Oil and Gas European Magazine*, Vol. 18, 4/1992.
- 28. "Segregated Production Method for Oil Wells with Active Water Coning," A.K. Wojtanowicz, Hui Xu, and Z. Bassiouni, *Journal of Petroleum Science and Engineering, Special Issue, "Environmental Control Technology in Petroleum Engineering*," Vol. 11, No. 1, April 1994.
- 29. "An Experimental Study of Friction Induced by PDC Cutters During Rock Cutting," E. Kuru and A.K. Wojtanowicz, *International Journal of Rock Mechanics and Mineral Sciences*, Vol. 32, No. 3, 1995.
- "Downhole Water Loop A New Completion Method to Minimize Oil Well Production Watercut in Bottom-water-drive Reservoirs," A.K. Wojtanowicz and H. Xu, *The Journal of Canadian Petroleum Technology*, Vol. 34, No. 8, October 1995.
- 31. "A Drilling Mud Management Strategy Using Computer-Aided Life-Cycle Analysis," Ohara, S., and Wojtanowicz, A.K., Oil Gas-European Magazine, No. 4, December, 1995, 30-35.

- 32. "An In-Situ Method for Downhole Drainage-Injection of Formation Brine in a Single Oil-Producing Well," A.K. Wojtanowicz, and E. Shirman, in "Deep Injection Disposal of Hazardous and Industrial Wastes," J.A. Apps, and Chin-Fu Tsnag, editors, Academic Press, 1996, 403-420.
- 33. "In-Situ Segregated Production of Oil and Water A Production Method with Environmental Merit: Field Application," M. Swisher, and A.K. Wojtanowicz, SPE Advanced Technology Series: Health, Safety, Environment, Vol.4, No.2, August 1996
- 34. "Testing Protocol and Economic Analysis of Mud Dewatering for Closed-Loop Drilling Systems," A.K. Wojtanowicz, *Journal of Canadian Petroleum Technology*, Vol.36, No. 3, March 1997, 51-62.
- 35. Evaluation of Corrosion Inhibitor for Low-pH Ammonium Nitrate-Methanol Completion Fluid, Z. Krilov, T.Soric, M.Tomic, and A. K. Wojtanowicz, SPE Production and Facilities, February 1997, 4-9.
- 36. "Environmental Control of Drilling Mud Discharge Through Dewatering in Cold Weather Climates: Effect of Ambient Temperature," A.K. Wojtanowicz, and Yawen Ye, *J. Canadian Petroleum Technology*, Vol. 37, No. 5, May 1998, 35-40.
- "Optimization of Drilling Mud Conditioning for Chemically-Enhanced Centrifuging," A.K.
 Wojtanowicz, and Y. Ye, *Journal of Canadian Petroleum Technology*, Vol. 37, No. 5, May 1998, 41-46.
- "Oilwell Cement Pulsing to Maintain Hydrostatic Pressure A Search for Design Model," W. M. Manowski, and A.K. Wojtanowicz, *Transactions of ASME - Journal Energy Resources Technology*, Vol. 120, No 3, 1998.
- 39. "Borehole Failure Resulting from Formation Integrity (Leak-Off) Testing in Upper Marine Sediments Offshore," A. K. Wojtanowicz, and Desheng Zhou, *Transactions of ASME - Journal Energy Resources Technology*, Vol. 120, No. 2, June 1998, 111-117.
- "Leak Detection in Liquid Subsea Flowlines with no Recorded Feed Rate," J.M. Dinis, A.K.
 Wojtanowicz, and S.L. Scott, *Transactions of ASME Journal Energy Resources Technology*, Vol. 121, No. 3, September 1999, 161-166.
- 41. "Leak-off Pressure Estimation from Cementing and Casing Data," D. Zhou, and A.K.Wojtanowicz, SPE J. Petroleum Technology, August 2000, 26-28
- 42. "More Oil Using Downhole Water Sink Technology: A Feasibility Study," A.K. Wojtanowicz, and Ephim I. Shirman, *SPE Production and Facilities*, 15 (4), November 2000, 234-240
- 43. "Life Cycle Management of Drilling Mud Systems," A. K. Wojtanowicz, *Nafta*, 52 (4), April 2001, 125-134
- Inflow Performance and Pressure Interference in Dual-Completed Wells with Water Coning Control," A.K Wojtanowicz, and E.I.Shirman, J. Energy Resources Technology-Transactions ASME, Vol. 124, December 2002.
- 45. "Analysis of Leak-off Tests in Shallow Marine Sediments," D. Zhou, and A.K. Wojtanowicz, J. Energy Resources Technology-Transactions ASME, Vol. 124, December 2002.

- 46. "Improving Primary Cementing through Annual Cement Pulsation A Qualitative Analysis," V.S. Chimmalgi, and A.K. Wojtanowicz, *Oil Asia Journal*, 2003, 21-16
- 47. "Sustained Casing Pressure Occurrence and Removal," A.K. Wojtanowicz, *Nafta i Gaz*, Vol.20/1, 2003, 247-264.
- "Reversal of Water Coning in Wells with Downhole Water Sink Completion Experimental Analysis," E.
 I. Shirman, and A. K. Wojtanowicz, *Mining Archives* Transactions of Polish Academy of Sciences, Vol. 49, Issue 4, 2004, 437-452.
- "Assessment of Downhole Water Sink Technology for Controlling Water Inflow at Petroleum Wells" A. K. Wojtanowicz, and M. Armenta, J. Energy Resources Technology-Transactions ASME, Vol. 126, December 2004, 334 – 341.
- 50. "Water Cone Reversal in Oil Wells An Analytical and Experimental Study," A. K. Wojtanowicz, and E. I. Shirman, *Mining Archives* Transactions of Polish Academy of Sciences, Vol. 50, Issue 1, 2005, 3-16.
- "Incremental Recovery Using Dual-Completed Wells in Gas Reservoirs with Bottom Water Drive; A Feasibility Study," M. Armenta, and A. K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 44, No. 6, June 2005, 53-61.
- 52. "Design of Cement Pulsation Treatment in Gas Wells Model and Field Validation," V.S. Chimmalgi, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 44, No. 6, June 2005, 36-45.
- 53. "Dual Gas Lift in Wells with Downhole Water Sink Completions," L. Marcano, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 44, No. 12, December 2005, 49-54.
- 54. "Prediction of Bypassed Oil with Correlations in Side-Water Drive Reservoirs," J.C. Hernandez, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 45, No. 7, July 2006, 1-4.
- "West Delta Block 84 Methodology and Analysis of a Previously Orphaned Field," W.C. Kimbrell, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 45, No. 8, August 2006, 1-6.
- 2. "Un-recovered Oil by Vertical Wells with Water Coning Assessment, Prediction, and Remediation," A.K. Wojtanowicz, and J.C. Hernandez, AGH University Press: *Drilling, Oil and Gas*, Vol. 2, 2008.
- 57. "Maximum Revenue for Oilwells with Optimized Downhole Water Drainage," O. Arslan, C.D. White, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 47, No. 5, May 2008, 56-62.
- 58. "Cement Seal Failure at Casing Shoe in Shallow Marine Sediments," D. Zhou, and A.K. Wojtanowicz, J. Energy Resources Technology-Transactions ASME, Vol. 131, June 2009, 23101-1 through 8.
- 59. "Vertical Interference Test in Wells with Downhole Water Sink Completions," E. Shirman, and A.K. Wojtanowicz, J. Energy Resources Technology-Transactions ASME, Vol. 131, Sept. 2009, 033103-1 through 11.
- "A New Method for Improved Heat Calculations in Heavy Oil Steam Flood Design," W. Qin, and A. K. Wojtanowicz, *Mining Archives* – Transactions of Polish Academy of Sciences, Vol. 54, Issue 4, 2009, 787-802.
- 61. "Shallow Casing Shoe Integrity Test Interpretation Technique," A.K. Wojtanowicz, and D. Zhou, J. Petroleum Science and Engineering (2010), Elsevier, Vol. 70, Issue 3-4, February 2010, 182-197

- 62. "Theoretical and Experimental Investigation of Water-in-Oil Transverse Dispersion in Porous Media," Shengkai Duan, and A.K. Wojtanowicz, SPE Reservoir Evaluation & Engineering, June 2010, 423-437.
- "Scaling Analysis of Wells with Downhole Water Loop Completion for Bottom Water Control," L. Jin, A.K. Wojtanowicz, G. Afonja, and W. Li, J. Canadian Petroleum Technology, Vol. 49, No. 11, Nov. 2010, 81-90.
- 64 "Oilfield Waste Control," A.K. Wojtanowicz, Exploration & Production Oil & Gas Review, Vol. 8, Issue 1, 2010. pp. 118-122.
- 65. "Optimization of Large Gas Pipeline Network A Case Study in China," L. Jin, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 49, No. 4, April 2010, 36-43.
- "Performance Analysis of Wells with Downhole Water Loop (DWL) Installation for Water Coning Control," L. Jin, and A.K. Wojtanowicz, J. Canadian Petroleum Technology, Vol. 49, No. 6, Jun. 2010, 38-45.
- 67. "An Analytical Model for Water Coning Control Installation in Reservoir with Bottom Water," L. Jin, A.K. Wojtanowicz, and R. Hughes, J. Canadian Petroleum Technology, Vol. 49, No. 5, May. 2010, 65-70.
- "Improved Recovery of Heavy Oil with Bottom Water Using Downhole Water Sink (DWS) Technology," A.K. Wojtanowicz, and W. Qin, Drilling Oil & Gas Quarterly, AGH University of Science & Technology Press, Vol. 27, No.1-2, Krakow, Poland, 2010, 467-483.
- "Environmental Risk of Sustained Casing Pressure," A.K. Wojtanowicz, and Koray Kinik, Drilling Oil & Gas Quarterly, AGH University of. Science & Technology Press, Vol. 28, No.1-2, Krakow, Poland, 2011, 459-468.
- 70. "Annular Pressure Reduction During Primary Cementing," D. Zhou, and A.K. Wojtanowicz, J. Energy Resources Technology Transactions ASME, September 2011, Vol. 133/031003, 8 pp.
- 71. "Dynamic Growth of Water Saturation around Oil Wells by Water Coning and Transverse Dispersion", S. Duan, X. Li, and A.K. Wojtanowicz, Journal of Petroleum Science and Engineering Vol. 78 (2011) 447–453, doi:10.1016/j.petrol.2011.06.015
- 72. "Numerical Modeling of the Effects of Disproportionate Permeability Reduction Water-Shutoff Treatments on Water Coning," B. E. Bekbauov, A. Kaltayev, A.K. Wojtanowicz, and M. Panfilov, J. Energy Resources Technology-- Transactions ASME, March 2013, Vol. 135/011101, 10 pp.
- 73. "Experimental and Theoretical Study of Counter-current Oil–water Separation in Wells with In-situ Water Injection," L. Jin, and A.K. Wojtanowicz, J. Petroleum Science and Engineering, Elsevier, v. 109, 2013, pp. 250-259.
- 74. "Analytical Design of Water-free Production in Horizontal Wells using Hodograph Method," W.Qin, A.K. Wojtanowicz, and C.D. White, Archives of Mining Science, Vol. 58, No.2, 2013, pp. 287-300.
- 75. "New Cold-Production Technique for Heavy Oil with Strong Bottom-Water Drive," W. Qin, A.K. Wojtanowicz, and C. D. White, SPE Journal, 2014, Vol. 19, No.2, p. 270-279.
- 76. "Progression of Injectivity Damage with Oily Wastewater in Linear Flow," L. Jin, A.K. Wojtanowicz, Petroleum Science Springer Verlag, Vol. 11, 2014, pp. 550-562 (DOI 10.1007/s12182-013-0371-0) <u>https://link.springer.com/article/10.1007/s12182-013-0371-0</u>
- "Enhancing Oil Recovery with Bottom Water Drainage Completion," E.I. Shirman, A.K. Wojtanowicz, and H. Kurban, J. Energy Resources Technology–Transactions ASME, December 2014, Vol. 136, No. 4, 042906, 7 pp.

- 78. "Probabilistic Assessment of the Temperature-Induced Effective Fracture Pressure," K. Kinik, A.K. Wojtanowicz, and F. Gumus, SPE Drilling & Completions, March, 2016, pp. 40-52 <u>https://www.onepetro.org/download/journal-paper/SPE-170316-PA?id=journal-paper%2FSPE-170316-PA</u>
- 79. "Performance of Low Solid Bentonite Drilling Fluids Modified by Cellulose Nanoparticles," Journal of Natural Gas Science & Engineering, Elsevier, K. Song, Q. Wu,* M. Li, A.K. Wojtanowicz, L.D. X. Zhang, S. Ren, and T. Lei, Journal of Natural Gas Science & Engineering, Elsevier, JNGSE-D-16-01403R1, 2016
- 80. "Pilot-size Process Visualization: Gravity Fluid Displacement Method to Stop Annular Gas Migration," E., A.K. Wojtanowicz, Journal of Natural Gas Science and Engineering, Elsevier, v. 29, 2016, pp. 223-23180.
- "Pressure Buildup Test Analysis in Wells with Sustained Casing Pressure," R. Xu, and A.K. Wojtanowicz, Journal of Natural Gas Science and Engineering, Elsevier, v. 38, 2017, pp. 608-620 http://dx.doi.org/10.1016/j.jngse.2016.12.033
- 82. "Pilot-Scale Experimental Study and Mathematical Modeling of Buoyant Settling of Immiscible Heavy Fluid in Mud to Stop Annular-Gas Migration Above Leaking Cement," E. Demirci, and A.K. Wojtanowicz, SPE Journal, July 2017: <u>https://doi.org/10.2118/180145-PA</u>.
- "Criteria and Risk of Integrity Loss for Wells with Sustained Casing Pressure," T. Yao, and A.K. Wojtanowicz, Oil & Gas Quarterly, AGH University of Science & Technology Press, Vol. 34, No.2, Krakow, Poland, 2017, 639-655 <u>http://dx.doi.org/10.7494/drill</u>
- 84 "Determination and Implication of Ultimate Water Cut in Well Spacing Design for Developed Reservoirs with Water Coning," S. Prasun, and A.K. Wojtanowicz, J. Energy Resources Technology–Transactions ASME, August 2018, Vol. 140, 082902, 12 pp. 140(8): 082902. doi: <u>https://doi.org/10.1115/1.4039743</u>
- 85. "Analysis of Gas Migration in Sustained-Casing-Pressure Annulus by Employing Improved Numerical Model," Y. Zhou, A.K. Wojtanowicz, X. Li, and Y. Miao, Journal of Petroleum Science and Engineering, Elsevier, vol 169, 2018, pp. 58-68.
- 86. "Improved model for gas migration velocity of stagnant non-Newtonian fluids in annulus," Y. Zhou, A.K. Wojtanowicz, X. Li, Y. Miao, and Y. Chen, Journal of Petroleum Science and Engineering, Elsevier, vol 168, 2018, pp. 190-200.
- 87. "Semi-analytical Prediction of Critical Oil Rate in Naturally Fractured Reservoirs with Water Coning," S. Prasun, and A.K. Wojtanowicz, Journal of Petroleum Science and Engineering, Elsevier, 2019, https://www.sciencedirect.com/science/article/pii/S0920410519305364
- 88. "Stabilized Water-Cut in Carbonate Naturally-Fractured Reservoirs with Bottom Water with an Implication in Well Spacing Design for Recovery Optimization," S. Prasun, and A.K. Wojtanowicz, J. Energy Resources Technology–Transactions ASME, March 2020, 142(3): <u>https://doi.org/10.1115/1.4045922</u>
- 89. "Permeability and Effective Stress in Dipping Gas Shale Formation with Bedding Experimental Study", Y. Chen, C. Jiang, G. Yin, A. K. Wojtanowicz, and D. Zhang, J. Energy Resources Technology–Transactions ASME, October 2020, Vol 142, Issue 10, 11 pp. <u>https://doi.org/10.1115/1.4046791</u>
- 90. "Gas Slippage in Heterogeneously-stressed Shale: An Experimental Study," Y. Chen, C. Jiang, J. Y. Leung, A. K. Wojtanowicz, D. Zhang, Journal of Petroleum Science and Engineering, Elsevier, Vol. 195, December 2020, 107620, <u>https://doi.org/10.1016/j.petrol.2020.107620</u>
- 91. "Multiscale Characterization of Shale Pore-fracture System: Geological Controls on Gas Transport and Pore Size Classification in Shale Reservoirs," Y. Chen, C. Jiang, J.Y. Leung, A. K. Wojtanowicz, and D. Zhang, Journal of Petroleum Science and Engineering, Elsevier, 2021, Vol. 202, July 2021, 108442 <u>https://doi.org/10.1016/j.petrol.2021.108442</u>

- 92. "Second-order Correction of Klinkenberg Equation and its Experimental Verification on Gas Shale with Respect to Anisotropic Stress." Y. Chen, C. Jiang, J.Y. Leung, A. K. Wojtanowicz, D. Zhang, C. Zhong, Journal of Natural Gas Science and Engineering, Elsevier, 2021, 89: 103880. <u>https://doi.org/10.1016/j.jngse.2021.103880</u>
- "Production Mechanism Study of Wells Producing form Heavy Oil Reservoirs with Bottom Water Drive," W. Qin, P. Luo, J. Meng, H. Li, Y. Ding, and A.K. Wojtanowicz, Fresenius Environmental Bulletin, 2021, Vol. 30, No. 06B/2021 pp.7789-7797 file:///C:/Users/awojtan/Downloads/FEB 06B 2021 Pp 07146-07972%20(3).pdf
- 94. "Prediction of Pressure Increase during Waste Water Injection to Prevent Seismic Events," L. Jin, A.K. Wojtanowicz, and J. Ge, MDPI Energies, Special Issue "Circular Economy and Environmental Protection in the Upstream Petroleum Industry," Energies 2022, 15(6), 2101. <u>https://doi.org/10.3390/en15062101</u>
- 95. "Water Leak Control for the Oil-producing Wells Using Downhole Water Sink Technology," W. Qin, P. Luo, L. Guo, and A.K. Wojtanowicz, Journal of Environmental Management, Elsevier, 2022, 301 (2022) 113834. 8 pp. <u>https://www.sciencedirect.com/science/article/pii/S030147972101896X</u>
- 96. "Improved Method for Testing Integrity Loss of Wells with Sustained Casing Pressure," M. Kazemi, and A.K. Wojtanowicz, MDPI Energies, Special Issue "Circular Economy and Environmental Protection in the Upstream Petroleum Industry," Energies 2022, 15(10), 3632. <u>https://doi.org/10.3390/en15103632</u>
- 97. "Well Placement Optimization through the Triple-Completion Gas and Downhole Water Sink-Assisted Gravity Drainage (TC-GDWS-AGD) EOR Process," W. J. Al-Mudhafar, D.A. Wood, D.A. Al-Obaidi, and A.K. Wojtanowicz, Energies 2023, 16(4), 1790. <u>https://doi.org/10.3390/en16041790</u>
- 98. "Design and Field-scale Demonstration of the Buoyant-kill Process for Restoring Integrity of Wells with Sustained Casing Pressure," E. Demirci, and A.K. Wojtanowicz, Frontiers Energy Research, Advanced Clean Fuel Technologies, Advances in Geomechanics and Wellbore Integrity of Unconventional Reservoirs, Volume 11, November 2023. https://doi.org/10.3389/fenrg.2023.1309207
- 99. "Leveraging Designed Simulations and Machine Learning to Develop a Surrogate Model for Optimizing the Gas-Water-Gravity-Drainage Process to Improve Clean Oil Production," W. J. Al-Mudhafar, D.N. Rao, A.K. Wojtanowicz, MDPI Processes 2024, Volume 12, Issue 6, 1174. https://dx.doi.org/10.3390/pr12061174
- 100. "Global Regulations and Practices for Well Integrity Management: a Review," M. Schulz1, M.Talukdar, I. Pfander, G. Lackey, L. Röckel, A.K. Wojtanowicz, F. Schilling, P. Blum, J. Petroleum Exploration and Production Technology April 2025, 15:90 <u>https://doi.org/10.1007/s13202-025-01997-7</u>

TRADE JOURNALS / REPORTS

- "Physical and Chemical Phenomena Around the Borehole Associated with Drilling for Oil or Gas," L.
 Szostak, W. Wantuch, A. K. Wojtanowicz, *Technika Poszukiwan* No. 30, 1969. (in Polish).
- 2. Solutions to the Problem of Stability Loss in the Bottom Part of Drill String," A.K. Wojtanowicz, *Technika Poszukiwan* No. 35, 1970. (in Polish).
- 3. "Mathematical Modeling of Cone Bit Tooth Motion," S. Miska, A. K. Wojtanowicz, *University Press of the Technical University of Mining and Metallurgy*, No. 290, Mining Vol. 31, 1971. (in Polish).
- 4. "Optimum Bit Weight and Rotary Speed in Macroscopically Homogenous Sections of a Borehole," A.
 K. Wojtanowicz, S. Miska, *University Press of the Technical University of Mining and Metallurgy*, No. 375, Special Series No. 37, Vol. 3, Krakow, 1972. (in Polish).
- 5. "A New Approach to the Theory of Rock Bit Program," S. Miska, A. K. Wojtanowicz, *Technika*

Poszukiwan, No. 41, 1972. (in Polish).

- 6. "System Analysis of the Drilling Process," A. K. Wojtanowicz, *University Press of the Technical University of Mining and Metallurgy*, No. 77, Special Series Vol. 523, 1975. (in Polish).
- "Characterization of a Drilling Program Using the Methodology of Technical Design," A. K.
 Wojtanowicz, *University Press of the Technical University of Mining and Metallurgy*, No. 77, Special Series Vol. 523, 1975. (in Polish).
- 8. "Borehole Stability Assessment from Field Data," A. K. Wojtanowicz, S. Geron, *Technika Poszukiwan Geologicznych*, No. 1, 1981. (in Polish).
- 9. "Technical Specifications for Deep Water-Wells Drilling in Libya," A. K. Wojtanowicz, *Technika Poszukiwan Geologicznych*, No. 1, 1981. (in Polish).
- 10. "Reaming Technique in Abrasive and Hard Rocks," A. K. Wojtanowicz, *Technika Poszukiwan Geologicznych*, No. 2, 1981. (in Polish).
- 11. "Balanced Formation Pressure Method for Drilling Artesian Wells," A. K. Wojtanowicz, *Technika Poszukiwan Geologicznych*, No. 4, 1981. (in Polish).
- "An Experimental Evaluation of the Alternative Methods for Deliquifying Drilling Muds and Mud Pits," A. K. Wojtanowicz, report submitted to Louisiana Department of Natural Resources, October, 1986.
- "Fluid Dynamics of Oil Storage and Production Cycles in the Weeks Island Strategic Petroleum Reserve," Part I, "Literature Survey," Part 2, "Design of the Laboratory Analog," A. K. Wojtanowicz, A. T. Bourgoyne, Jr., and S. Acharya, report submitted to Sandia National Laboratories, SPR Geotechnical Division, September 1989.
- 14. "Environmental Control of Drilling Fluids through Dewatering Field Applications," A. K.Wojtanowicz, report submitted to Louisiana Department of Environmental Quality, December, 1989.
- "Fluid Dynamics of Oil Storage and Production Cycles in the Weeks Island SPR," Part 3, "Laboratory Study of Crude Oil/Brine System," Part 4, "Visual Analog Study of Fill-Hole Drifts," A.K. Wojtanowicz, and A.T. Bourgoyne, Jr., report submitted to Sandia National Laboratories, SPR Geotechnical Division, July, 1990.
- 16. "Development of a Novel Method for Predicting Drilling Fluid Toxicity," report submitted to the Louisiana Board of Regents (LEQSF fund), March, 1991.
- "Fluid Dynamics of Oil Storage and Production Cycles in the Weeks Island SPR," Part 5, "Evaluation of Fill-Hole Completions," A.K. Wojtanowicz, report submitted to Sandia National Laboratories, SPR Geotechnical Division, July, 1991.
- "Dewatering Technology of Water-Base Drilling Fluids: Principles-Assessment-Prospects," A. K. Wojtanowicz, Research report No. 104-500-1-92, Conoco, Inc., Ponca City, OK, January 1992.
- 19. "Drilling Mud Dewatering-Performance and Assessment," A.K. Wojtanowicz, Drilling Technology Symposium 1992, Conoco, Inc., Production Technology, Box 2197, Houston, TX 77252.

- 20. "Dewatering Technology of Water-Base Drilling Fluids: Measurements and Design Studies," A.K. Wojtanowicz, Research Report No. 104-500-2-92, Conoco, Inc., Ponca City, OK, July 1992.
- 21. "Dewatering Technology of Water-Base Drilling Fluids: Mud Management System Prediction and Design MMM Software," A.K. Wojtanowicz, Research Report No. 104-500-3-92, Conoco, Inc., Ponoca City, OK, August 1992.
- "Drilling Mud Dewatering Performance and Assessment," A.K. Wojtanowicz, Drilling Technology Symposium, 1992 Presentation Abstracts, Production Technology Report No. T-5-92 Conoco Inc., P.T. Houston, TX, June 17, 1992.
- 23. "Environmental-Control Technology in Petroleum Engineering," Poster presented at SPE Forum, "Pollution Prevention in E&P Operations," Snowmass Village, CO, July 17-22, 1994.
- 24. "Formation Damage in Horizontal Wells Caused by Polymer mud," Z. Krilov, A.K. Wojtanowicz, and M. Tomic, Poster at the Formation Damage Control Symposium, Lafayette, LA, February 14-15, 1996.
- 25. "Finite Element Analysis of Soft Sediment Behavior During Leak-Off Tests," A. K. Wojtanowicz, and D. Zhou, Proceedings LSU/MMS Well Control Workshop, Baton Rouge LA, November 19-20, 1996.
- 26. "Cement Slurry Vibration Top Cement Reciprocation Model," A. K. Wojtanowicz, and W. Manowski, Proceedings LSU/MMS Well Control Workshop, Baton Rouge LA, November 19-20, 1996.
- 27. "Mapping of the Gas Flow Hazard After Cementing," A. K. Wojtanowicz, S. Nishikawa, Proceedings LSU/MMS Well Control Workshop, Baton Rouge LA, April 1, 1998.
- "Flow After Cementing A New Prevention Method," W. Manowski, and A.K. Wojtanowicz, Proceedings LSU/MMS Well Control Workshop, Baton Rouge LA, April 1, 1998.
- 29. "Leak-Off Testing in UMS," A. K. Wojtanowicz, and D. Zhou, Proceedings LSU/MMS Well Control Workshop, Baton Rouge LA, April 1, 1998.
- "Principles and Design Method for DWS Well Completion with Segregated Inflows of Oil and Water," Final Report, submitted to DWSTI membership, December 15, 1998.
- "Experimental Study of Sustained Casing Pressure Remediation Procedures," S. Nishikawa, and A.K. Wojtanowicz, Proceedings LSU/MMS/IADC Well Control Workshop, Baton Rouge LA, May 24-25,1999.
- 32. "Water Control with Downhole Water Sink Technology Overview and Case Histories," A.K. Wojtanowicz, presented at the PDVSA/INTEVEP Well Productivity Workshop, Caracas, Venezuela, March 11-12, 1999.
- 33. "Joint Industry Project at LSU Develops New Technology for Water Control Downhole Water Sink Technology," A.K. Wojtanowicz, presented at SPE Gulf Coast Section - Improved Recovery Group luncheon, Houston, TX, May 5, 1999.
- 34. "DWS Technology Principles, Performance, and Design Concepts," A.K. Wojtanowicz, presented at

the DWSTI Workshop, Unocal, Houston, TX, May 6, 1999.

- "Predicting Casing Shoe Strength in Shallow Marine Sediments," D. Zhou, and A.K. Wojtanowicz, Proceedings LSU/MMS/IADC Well Control Workshop, Baton Rouge LA, May 24-25,1999.
- 35. "Source Separation and Reduction of Produced Water with Downhole Water Sink Technology," A.K.
 Wojtanowicz, presented at Workshop 5 *Environmental Protection in the Petroleum Industry*, Dubrovnik, Croatia, June 14-18, 1999.
- 36. "Subsea Well Blowout Bridgeover Prediction Mechanistic Analysis," A.K. Wojtanowicz, presented at the MMS Gulf of Mexico 19th Information Transfer Meeting (ITM), New Orleans, LA, November 30, 1999.
- 37. "Downhole Water Sink Technology for Water Control Recovers More Oil," A.K. Wojtanowicz, presented at the PDVSA/INTEVEP Water Management Technology Workshop, Caracas, Venezuela, November 24-25,1999.
- 38. "Principles and Design Method for DWS Well Completions with Commingled Inflow of Oil and Water," Final Report submitted to DWSTI membership, December 15, 1999, 130 pp.
- 39. "Downhole Water Sink (DWS) Technology Performance," A.K. Wojtanowicz, presented at PTTC Central Gulf Region Workshop, Baton Rouge, LA, March 2, 2000.
- 40. "Downhole Water Sink A Well Completion for Water Coning Control," A. K. Wojtanowicz, SPE "Focus" Group Meeting of SPE Delta Section, New Orleans, Louisiana, May 23, 2000.
- 41. "Reservoir Recovery Advantage of Dual Completions with Downhole Water Sink (DWS)," A. K. Wojtanowicz, International Down Hole Processing Group Workshop, New Orleans, Louisiana, September 11-13, 2000.
- 42. "DWS Well Selection and Optimization Method for Maximum Performance," Final Report submitted to DWSTI Membership, December 15, 2000, 95 pp.
- 43. "Gas Flow in Wells after Cementing," A.K. Wojtanowicz, W. Manowski, and S. Nishikawa, LSU Final Report submitted to MMS, Baton Rouge, LA, Sept. 5, 2000.
- "Strength and Fracture Gradients for Shallow Marine Sediments," A.K. Wojtanowicz, A.T. Bourgoyne, Jr., D. Zhou, and K. Bender, LSU Final Report submitted to MMS, Baton Rouge, LA, November 15, 2000.
- 45. "Top Cement Pulsation for Prevention of Flow after Cementing," A.K. Wojtanowicz, J.R. Smith, W. M. Manowski, and J. Martin, LSU Final Report submitted to MMS, Baton Rouge, LA, September 15, 2000.
- 46. "Diagnosis and Remediation of Sustained Casing Pressure in Wells," A.K. Wojtanowicz, S. Nishikawa, and R. Xu, LSU Final Report submitted to MMS, Baton Rouge, LA, July 31, 2001.
- 47. "Water Control in Gas Wells through Modifications in Well Completions," A. K Wojtanowicz, International Down Hole Processing Group Meeting, Calgary, Alberta, Canada, June 25-27, 2001.
- 48. "Principle and Design Methods for DWS Completions in Gas in Horizontal Wells with Water Coning Problems," Final Report submitted to DWSTI Membership, December 31, 2001, 184 pp.

- 49. "Cement Pulsation Improves Gas Well Cementing," K. Newman, A.K. Wojtanowicz, and B.C. Gahan, World Oil, July 2001, pp. 89 – 94.
- 50. "Improving Gas Well Cementing through Cement Vibration," Final report submitted to Gas technology Institute (GTI) through CTES, August 10, 2001 (3 MS Thesis, 2 Papers, 2 Reports, and software)
- 51. "LSU Petroleum Engineering Capabilities for Developing State Economy," presented to the LA Dpt. of Economic Development Petrochemical and Oil & Gas Clusters, Baton Rouge, La, December 10, 2001
- 52. "Improving Gas Well Cement Jobs with Cement Pulsation," K. Newman, A.K. Wojtanowicz, and B.C. Gahan, *Gas Tips*, Fall 2001, pp. 29 33.
- 53. "Water Control in Gas Wells through Modifications in Well Completion," A. K. Wojtanowicz, invited presentation at International Down Hole Processing Group Workshop, Calgary, Canada, June 24 27, 2001.
- 54. "Productivity of Dual Well Completions with Downhole Water Sink (DWS)," A. K. Wojtanowicz, invited presentation at International Down Hole Processing Group Workshop, Milan, Italy, June 4 6, 2002.
- 55. "Principle and Design Methods for Integration of DWS Wells with Reservoir Performance," Final Report submitted to DWSTI Membership, January 31, 2003, 122 pp.
- 56. "Energy from High-Water-Cut Waste Oil Emulsions An Emerging Technology," W. Begell, A. Dolinski, V.Kremnev, Y.Shafeyeva, and A.K. Wojtanowicz. SPE 80591 presented at SPE Advanced Technology Workshop, "Oil and Gas Field Waste Disposal," Houston, TX, March 25-27, 2003.
- 57. "Smart Dual Completions for Downhole Water Control in oil and Gas Wells," invited presentation at the O&GIQ Produced Water Management conference, Houston, Texas, April29-30, 2003.
- 58. "Downhole Water Sink Technology Development and Applications," A.K. Wojtanowicz, and Z. Bassiouni, invited presentation at the PTTC Session of AAPG/SPE Joint Western Regional Meeting, Long Beach, California, May 22, 2003.
- 59. "Development of Methods and Procedures for Field Deployment of DWS Well Designs," Final Report submitted to DWSTI Membership, January 15, 2004, 172 pp.
- 60. "New Stimulation Technique for Stripper Wells with High Water Production," A. K. Wojtanowicz, and W.C. Kimbrell, presented at the Stripper Well Consortium (SWC) Meeting, Golden, Colorado, May 24, 2004.
- 61. "Control of Excessive Water Production in Wells," A.K. Wojtanowicz, invited presentation at Institute of Oil and Gas Production Technology Oil and Natural Gas Corporation (ONGC), Mumbai, India, April 2, 2004.
- 62. "Downhole Control of Produced Water in Wells," A.K. Wojtanowicz, invited presentation at the ENI Center for Upstream O & G Technologies in San Donato Milanese, Italy, June 25, 2004.
- "Technology for Inactive Wells Valuation and Recovery of By-passed Reserves from Water-drive Reservoirs in Louisiana," 2003-04 Annual Progress Report submitted to LA Board of Regents, July 21, 2004, 140 pp.
- 64. "Development of Applied DWS Technology," Final Report submitted to DWSTI Membership, January 31, 2005, 112 pp.
- 65. "Stimulation of Marginal Well Productivity with Dual Recompletions and Water Drainage," Final Report submitted to DWSTI Membership, March 15, 2006, 164 pp.

- 66. "Technology for Inactive Wells Valuation and Recovery of By-passed Reserves from Water-drive Reservoirs in Louisiana," 2005-06 Annual Progress Report submitted to LA Board of Regents, July 31, 2006, 127 pp.
- 67. "Principles and Methods for Assessment of DWS in Watered-out Oil Wells," Annual Report 2006, submitted to DWSTI Membership, April 15, 2007, 175 pp.
- "Technology for Inactive Wells Valuation and Recovery of By-passed Reserves from Water-drive Reservoirs in Louisiana," 2006-07 Annual Progress Report submitted to LA Board of Regents, June 30, 2007, 117 pp.
- 69. "Design and Assessment Method for DWS Intervention Projects," Annual Report 2007, submitted to DWSTI Membership, June 30, 2008, 159 pp.
- 70. "Technology for Inactive Wells Valuation and Recovery of By-passed Reserves from Water-drive Reservoirs in Louisiana," Final Report submitted to LA Board of Regents, July 22, 2008, 314 pp.
- 71. "Hydrodynamic Transition Zone at OWC in Non-Darcy Flow," S. Duan, and A.K. Wojtanowicz, Poster presented at Abu Dhabi International Petroleum Engineering Conference (ADIPEC 2008), Abu Dhabi, UAE, November 3-6, 2008
- 72. "Modification of DWS Technique for Horizontal and Multi-functional Wells in Heavy Oil with Bottom Water," Annual Report 2008, submitted to DWSTI Membership, May 31, 2009, 122 pp.
- 73. "Stimulating Watered-out Oil Wells by *in-situ* Bottom Water Drainage," *Network*, Petroleum Technology Transfer Council, Vol. 16, No.1, March 2010, p.9
- 74. "Development of Injectivity Damage Due to Oily Waste Water in Linear Flow," SPE-168130 presentation at SPE Formation Damage Symposium, Lafayette, LA, February 27, 2014.
- 75. "Buoyant Kill of Sustained Casing Pressure (SCP)," Well Integrity & Asset Digitalization Conference, DecomWorld, Houston, Texas, April 15-16, 2014.
- 76. "Study of Gravity Displacement Method for Removal of Sustained Casing Pressure," Third Annual Deepwater & Mature Well Abandonment Summit 2014," DecomWorld, Houston, Texas, December 3-4, 2014.
- 77. "Annular Intervention Technique for Removal of Sustained Casing Pressure," Practical Well Integrity Forum, HansonWade, Houston, Texas, December 9-10, 2014.
- 78. "Determination and Implication of Ultimate Water Cut in Well-Spacing Design for Reservoirs with Water Coning," presented (by S. Prasun) at 20th Annual GOM Deepwater Technical Symposium, New Orleans, Louisiana, August 21-23, 2016
- 79. "My Research Program," A.K. Wojtanowicz, presented to faculty of the College of Resources and Environmental Science, Chongqing University, September 20, 2018
- 80. "Environmental Control Technology Research Program," presented to faculty of Chongqing Institute of Geology and Natural Resources, November 22, 2018
- 81. "Well Integrity Loss due Gas Flow behind Casing Mechanism, Diagnosis, and Remediation," graduate seminar presented at Colorado School of Mines, Petroleum Engineering Department, March 15, 2019
- 82. "Testing and Remediation of Sustained Casing Pressure," graduate seminar presented at Institute of Petroleum Technology, Faculty of Science & Technology University of Stavanger, Norway, Sept. 24, 2019

- 83. "Development of Wellhead Intervention Techniques for Combating Gas Flow Behind Casing," webinar presented to Schlumberger on August 30, 2019
- 84. "Technology for Wellhead Control of Annular Well Integrity," invited presentation for the DrillWell IRIS international research consortium in Stavanger, Norway, Sept. 14, 2019

CONFERENCE PROCEEDINGS

- "Drilling Bit Rotating Time Prediction Method," S. Miska, A. K. Wojtanowicz, *Proceedings of the 1971 Annual Engineering Science Conference* at the Technical University of Mining and Metallurgy, Krakow, 1971. (in Polish).
- "Off-line Computer Application in Drilling Optimization," A. K. Wojtanowicz, *Proceedings of the 1974* Annual Engineering Science Conference at the Technical University of Mining and Metallurgy, Krakow, October 1974. (in Polish).
- "A New Approach to Drilling Optimization with Mechanical-Hydraulics Interaction Consideration," S. Miska, L. Szostak, A. Wojtanowicz, *Proceedings of the 1978 Annual Meeting of the Polish Academy of Sciences*, Mining Committee, 1978. (in Polish).
- "Minimum-Cost Casing Design for Vertical and Directional Wells," A. K. Wojtanowicz, E. Maidla, paper SPE 14499, *Proceedings of SPE Eastern Regional Conference*, Morgantown, WV, November 1985.
- "Deliquification of Oilfield Drilling Slurries and Production Sludges," S. D. Field, A. K. Wojtanowicz and K. Cange, *Proceedings of the 41st Industrial Waste Conference*, May 13-15, 1986, Purdue University, Lewis Publishers, 1987.
- 6. "Spatial Distribution of Materials and Chemicals in Drilling Reserve Pits and Its Relation to Pit Closure Regulations," A. K. Wojtanowicz, S. D. Field, F. Spencer, *Proceedings of the National Conference on Drilling Muds*, Environmental and Groundwater Institute, Norman, OK, May 1986, pp. 63-91.
- "Particles Characterization Study on Completion Fluids Interaction with Unconsolidated Reservoirs,"
 A. K. Wojtanowicz, Z. Krilov, J. P. Langlinais, *The 17th International Annual Meeting of the Fine Particle Society*, San Francisco, CA, July-August, 1986.
- "Comparison Study of Solid-Liquid Separation Techniques for Oilwaste Pit Closures," A. K.
 Wojtanowicz, S. D. Field, M. C. Osterman, paper SPE 15361 presented at the SPE Annual Technical Conference, October 5-8, 1986.
- "Modern Solids Control: Centrifuge Dewatering Process Study," A. K. Wojtanowicz, *paper SPE/IADC 16098, Proceedings of the SPE/IADC 1987 Drilling Conference*, New Orleans, Louisiana, March 15-18, 1987, pp. 417-428.
- "Dynamic Drilling Strategy for PDC Bits," A. K. Wojtanowicz, R. Kuru, paper SPE/IADC 16118, *Proceedings of the SPE/IADC 1987 Drilling Conference*, New Orleans, Louisiana March 15-18, 1987, pp. 595-612.
- "Biodegradation of Oil-Based Drilling Muds and Production Pit Sludges," R. E. Marks, S. D. Field, A. K. Wojtanowicz, *Proceedings of the Tenth Annual Energy-Sources Technology Conference and Exhibition, Drilling Symposium 1987*, ASME, Dallas, Texas, February 15-18, PD-Vol. 7, pp. 1-8.

- "Field Method for Assessing Borehole Friction for Directional Well Casing Design," E. E. Maidla, A. K. Wojtanowicz, paper SPE 15696, *Proceedings of the 1987 SPE Middle East Oil Technical Conference and Exhibition*, Manama, Bahrain, March 7-10, 1987, pp. 85-96.
- "Study on the Effect of Pore Blocking Mechanism on Formation Damage," A. K. Wojtanowicz, Z. Krilov, J. P. Langlinais, paper SPE 16233, *Proceedings of the 1987 SPE Production Operations Symposium*, Oklahoma City, Oklahoma, March 8-10, 1987, pp. 449-464.
- "Development Study of a Centrifuging Technique for Oilfield Production Pit Closure," M. C. Osterman,
 A. K. Wojtanowicz, S. D. Field, *Proceedings of the Tenth Annual Energy-Sources Technology Conference and Exhibition*, Drilling Symposium 1987, ASME, Dallas, Texas, February 15-18, 1987, PD Vol. 7, pp. 9-26.
- 15. "Oil Reduction in Spent Drilling Muds by Biotreatment," R. E. Marks, S. D. Field, A. K. Wojtanowicz, *Proceedings of the Third National Conference on Drilling Muds*, Environmental and Groundwater Institute, Norman, OK, May 28-29, 1987.
- "Biodegradation of Oil-Based Drill Cuttings and Production Pit Sludges," R. E. Marks, S. D. Field, A. K. Wojtanowicz, *Proceedings of the 42nd Industrial Waste Conference*, May 12-14, 1987, Purdue University, Lewis Publishers, 1988.
- 17. "Field Comparison of 2-D and 3-D Methods for the Borehole Friction Evaluation in Directional Wells,"
 E. E. Maidla, A. K. Wojtanowicz, paper SPE 16663, *Proceedings of the 1987 SPE Annual Technical Conference and Exhibition*, Dallas, TX, September 27-30, 1987.
- "Diagnostic Model for Particle Mobilization and Capture in Reservoir Rock," A. K. Wojtanowicz, J. P. Langlinais, Z. Krilov, *The 18th Annual Meeting of the International Fine Particle Society*, Boston, MA, August 3-7, 1987.
- "Biological Treatment for Closure of Oilfield Production Pits and Enhancement of Secondary Dewatering Process," R. E. Marks, S. D. Field, A. K. Wojtanowicz, paper presented at the 60th Annual Conference of the Water Pollution Control Federation, Philadelphia, PA, October 4-8, 1987.
- "A New Method for PDC Bit Instantaneous Wear Determination from Bottomhole Data," E. Kuru, A. K. Wojtanowicz, paper SPE 11192, *Proceedings of the IADC/SPE 1988 Drilling Conference*, Dallas, TX, Feb. 22-March 2, 1988.
- "Statistical Assessment and Sampling of Drilling Fluid Reserve Pits," A. K. Wojtanowicz, Z. Krilov, S. D. Field, F. L. Spencer, Jr., paper IADC/SPE 17245, *Proceedings of the IADC/SPE 1988 Drilling Conference*, Dallas, TX, Feb. 22-March 2, 1988.
- 22. "Prediction of Casing Running Loads in Directional Wells," E. E. Maidla, and A. K. Wojtanowicz, paper OTC 5791, *Proceedings of the 20th Offshore Technology Conference*, Houston, TX, May 2-5, 1988.
- "Biological Treatment of Petroleum and Petrochemical Hazardous Wastes, S. D. Field, and A. K. Wojtanowicz, *Proceedings of the Second Annual Symposium on Hazardous Waste Research*, Baton Rouge, LA, Oct. 25-26, 1988.
- "Low pH Ammonium Nitrate/Methanol Completion Fluid-An Alternative for Calcareous, Argillaceous 31 Revised: January 20, 2022

Sand Formations," Z. Krilov, A. K. Wojtanowicz, and J. P. Langlinais, paper SPE 18497 presented at the *1989 SPE International Symposium on Oilfield Chemistry*, Houston, TX, Feb. 8-10, 1989.

- "Biological Treatment of Petrochemical Sludges," S. D. Field, R. E. Marks, D. Ours, and A. K.
 Wojtanowicz, paper presented at the *Annual Research Symposium on Remedial Action, Treatment and Disposal of Hazardous Waste*, USEPA, Cincinnati, OH, April 10-12, 1989.
- Biological Treatment of Petrochemical Sludges," S. D. Field, R. E. Marks, D. Ours, and A. K. Wojtanowicz, Proceedings of the Third Annual Symposium on Hazardous Waste Research, Baton Rouge, LA Oct. 17-18. 1989.
- "A Compound Effect of cutting Depth and Bit Drill on Cutting Temperature for Polycrystalline Diamond Compact Bits," E. Kuru, and A. K. Wojtanowicz, *Proceedings of the 13th Annual Energy Sources Technology Conference and Exhibition, Drilling Technology*, ASME, January, 1990.
- "Drilling Fluids Dewatering: Application Survey and Case History Economics," A. K. Wojtanowicz, and J. M. Griffin, *Proceedings of the National Meeting on Filtration and Separation*. Houston, TX, Oct. 30-Nov.1, 1989. American Filtration Society, March, 1990.
- "Quantitative Analysis of Rock Permeability Damage by Particle Deposition Using Multiple Regression Model," A.K. Wojtanowicz, Yan Chen-Xig, and A.C. Todd, *Proceedings of the National Meeting on Filtration and Separation.* Houston, TX, Oct. 30- Nov. 1, 1989. American Filtration Society, March 1990.
- "Chemical Destabilization of Drilling Fluids Prior to Dewatering," A.K. Wojtanowicz, and Yawen Ye, *Proceedings of the National Meeting on Filtration and Separation*. Houston, TX, Oct. 31-Nov. 1, 1989. American Filtration Society, March, 1990.
- "Biodegredation Partitioning of Benzo(a) Pyrene in Liquid/Solid Systems," R.E. Marks, S.D. Field, and A.K. Wojtanowicz, *Proceedings of the 45th Annual Purdue Industrial Waste Conference*. May 8-10, 1990.
- "Measurement of Permeability and Bulk Modulus of Visoelastic Networks in a Centrifugal Field," J.M. Griffin, and A.K. Wojtanowicz, *Proceedings of the 1990 Fall Meeting of American Filtration Society*, Baton Rouge, LA, Oct.29-30, 1990.
- "Formation Damage Study Using Computed Tomography," Z. Krilov, B. Goricnik, and A.K. Wojtanowicz, *Proceedings of the 1990 Fall Meeting of American Filtration Society*, Baton Rouge, LA, Oct. 29-30, 1990.
- "Potential of Source Separation and Recycling in Petroleum Engineering," A.K. Wojtanowicz,
 Proceedings of the 1990 Fall Meeting of American Filtration Society, Baton Rouge, LA, Oct. 29-30, 1990.
- "Advanced Biological Treatment of Petrochemical Sludges," Field, S.D., Wojtanowicz, A.K., and R.E. Marks, *Proceedings of the 4th Annual Symposium*, Hazardous Waste Research Center, Louisiana State University, Baton Rouge, LA, Oct.23-24, 1990.
- "Cumulative Bioluminescence-A Potential Rapid Test of Drilling Fluid Toxicity: Development Study,"
 A.K. Wojtanowicz, B.S. Shane, and A.V. Stiffey, *Proceedings of the 1991 SPE/IADC Drilling*

Conference, Amsterdam, The Netherlands, March 11-14, 1991.

- 37. "Environmental Control Potential of Drilling Engineering: An Overview of Existing Technologies,"
 A.K. Wojtanowicz, paper SPE/IADC 21954, *Proceedings of the 1991 SPE/IADC Drilling Conference*, Amsterdam, The Netherlands, March 11-14, 1991.
- 38. "Oilwell Coning Control Using Dual Completion With Tailpipe Water Sink," A.K. Wojtanowicz, Hui Xu, and Z. Bassiouni, paper SPE 21654, *Proceedings of the SPE Production Operations Symposium*, Oklahoma City, Oklahoma, April 7-9, 1991.
- 39. "Environmental Control of Drilling Mud Discharge Through Dewatering in Cold Weather Climate: Effect of Ambient Temperature," A.K. Wojtanowicz, Y. Ye, paper SPE 22069, *Proceedings of the SPE International Arctic Technology Conference*, Anchorage, Alaska, May 29-31, 1991.
- "Oilwell Environmental Control Technology-A Synopsis," A.K. Wojtanowicz, paper SPE 22815,
 Proceedings of the 1991 SPE Annual Technical Conference and Exhibition, Dallas, TX, October 6-9, 1991.
- 41. "Biological Treatment of Petrochemical Wastes for Removal of Hazardous Polynuclear Aromatic Hydrocarbon Constituents," R.E. Marks, S.D. Field, A.K. Wojtanowicz, and G.A. Britenbeck, *presented at the Second International Conference on Waste Management in the Chemical and Petrochemical Industries*, New Orleans, LA, June 17-20, 1991.
- 42. "Sensitivity and Reproducibility of a New Biluminescent Bioassay and Its Application to the Monitoring of Low-Toxicity Waste Streams," B.S. Shane, A.K. Wojtanowicz, P.N. Greenlaw, and A.V. Stiffey, *presented at the 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Seattle, WA, November 3-7, 1991.
- 43. "Bench-Scale Performance of Suspended-Growth Biological Treatment Processes for Petrochemical Sludges" S.D. Field, R.E. Marks, and A.K. Wojtanowicz, *Proceedings of Gulf Coast Hazardous Substance Research Center Conference*, Lamar University, Beaumont, TX, February 21-22, 1991.
- "Advanced Biological Treatment of Hazardous Constituents, in K051 Wastes," Marks, R.E. Field, S.D.,
 A.K. Wojtanowicz and G.A. Breitenbeck, *Proceedings of the 46th Annual Industrial Waste Conference*, Purdue University, Lafayette, IN, May 1991.
- 45. "Quantitative Determination of Solids Invasion and Formation Damage Using CAT Scan and Barite Suspensions," Z. Krilov, I. Steiner, B. Goricnik, A.K. Wojtanowicz, S. Cabrajac, paper SPE 23102, *Proceedings of the Offshore Europe '91 Conference*, Aberdeen, UK, September 3-6, 1991.
- 46. "Evaluation of Corrosion Inhibitor for Low pH Ammonium Nitrate-Methanol Completion Fluid," Z. Krilov, T. Soric, M. Tomic, A.K. Wojtanowicz, paper SPE 23003, Proceedings of the *SPE 1991 Asia Pacific Conference*, Perth, W. Australia, November 4-7, 1991.
- 47. "Laboratory Investigation Using Electrocoagulation to Destabilize and Dewater Drilling Fluids," J.M. Griffin, and A.K. Wojtanowicz, *Proceedings of the Drilling Fluids Technology Conference of American Association of Drilling Engineers,* Houston, TX, April 22-23, 1992.
- 48. "Friction Under PDC Cutter and its Implications in PDC Bit Life Prediction," E. Kuru, and A.K. Wojtanowicz, *Proceedings of the 9th Petroleum Congress, Ankara, Turkey*, February 17, 1992.

- "An Experimental Study of Friction Induced by PDC Cutters During Rock Drilling," E. Kuru, and A.K. Wojtanowicz, paper CIM 92-29 Proceedings of the *43rd Annual Technical Meeting of the Petroleum Society of CIM*, Calgary, Canada, June 7-10, 1992.
- 50. "A New In-Situ Method to Minimize Oilwell Production Watercut Using Downhole Water Loop," A.K Wojtanowicz, and Hui Xu, paper CIM 92-13, Proceedings of the *43rd Annual Technical Meeting of the Petroleum Society of CIM*, Calgary, Canada, June 7-10, 1992.
- 51. ""Dry" Drilling Location An Ultimate Source Reduction Challenge: Theory, Design and Economics,"
 A.K. Wojtanowicz, SPE 26013, Proceedings of the SPE/EPA E&P Environmental Conference, San Antonio, TX, March 7-10, 1993.
- 52. "An In-situ Method for Downhole Drainage Injection of Formation Brine in a Single Oil-Producing Well," A.K. Wojtanowicz, and E. Shirman, Proc. Int. Symp., "Scientific and Engineering Aspects of Deep Injection Disposal of Hazardous and Industrial Wastes," Lawrence Berkeley Laboratory, Berkeley, CA, May 10-13, 1994.
- "Optimization of Drilling Mud Conditioning for Chemically-Enhanced Centrifuging," A.K.
 Wojtanowicz, and Y. Ye, paper CIM 94-18, Proc. 45-th Ann. Tech. Meeting Petrol. Soc. CIM, Calgary, Canada, June 11-15, 1994.
- Testing Protocol and Economic Analysis of Mud Dewatering for Closed-Loop Drilling Systems," A.K.
 Wojtanowicz, paper CIM 94-19, Proc. 45-th Ann. Tech. Meeting Petrol. Soc. CIM, Calgary, Canada,
 June 11-15, 1994.
- 55. "In-Situ Segregated Production of Oil and Water A Production Method With Environmental Merit: Field Application," M. Swisher, and A.K. Wojtanowicz, paper SPE 29693, Proc. 1995 SPE/EPA Exploration and Production Environmental Conference, Houston, TX, March 27-29, 1995.
- 56. "A Drilling Mud Management Strategy Using Computer-Aided Life-Cycle Analysis," Ohara, S., and Wojtanowicz, A.K., Proc. of the Fourth International Conference on Application of Mathematics in Science and Technology, Krakow, Poland, June 20-21, 1995.
- 57. "New Dual Completion Method Eliminates Bottomhole Water Coning," Swisher, M.D., and
 Wojtanowicz, A.K., SPE paper 30697, Proc. SPE Annual Technical Conference and Exhibition, Dallas,
 TX, October 22-25, 1995, 549-555.
- 58. "Formation Damage in Horizontal Wells Caused by Polymer Mud," Krilov, Z., Wojtanowicz, A.K. and Tomic, M., SPE paper 31135, Proc. SPE Formation Damage Control Symposium, Lafayette, LA, February 14-15, 1996, 607-613.
- 59. "Analytical Modeling of Crossflow into Wells in Stratified Reservoirs: Theory and Field Application," Shirman, E.I., and Wojtanowicz, A.K., Proc. 7th Intl. Scientific and Technical Conference, "New Methods and Technologies in Petroleum Geology, Drilling, and Reservoir Engineering," Krakow, Poland, June 20-21, 1996.
- "Water Cone Hysteresis and Reversal for Well Completions Using the Moving Spherical Sink method,"
 E.I. Shirman, and A.K. Wojtanowicz, SPE 37467, Proc. 1997 Production and Operation Symposium, Oklahoma City, Oklahoma, 9-11 March, 1997, 611-616.

- 61. "HP/HT Testing of the Filter Cake-Rock Bonds," A.E. Zeringue, A.K. Wojtanowicz, and R.W. Duncan, Proc. 1997 American Filtration Society Technical Conference, Lafayette, LA, June 15-16, 1997, 88-102.
- "Water Coning Reversal Using Downhole Water Sink-Theory and Experimental Study," Shirman, E.I., and Wojtanowicz, A.K., SPE 38792, *Proc. 72nd Annual Technical Conference and Exhibition of SPE*, San Antonio, Texas, October 5-8, 1997.
- "Oilwell Cement Pulsing to Maintain Hydrostatic Pressure A Design Model," W. M. Manowski, and A.K. Wojtanowicz, *Proc. 1998 ASME Energy Sources Technology Conference*, Houston, Texas, Feb. 2-4, 1998.
- 64. "Borehole Failure Resulting from Formation Integrity (Leak-Off) Testing in Upper Marine Sediments Offshore," A. K. Wojtanowicz, and Desheng Zhou, *Proc. 1998 ASME Energy Sources Technology Conference*, Houston, Texas, Feb. 2-4, 1998.
- "More Oil with Less Water Using Downhole Water Sink Technology: A Feasibility Study," E. I. Shirman, and A. K. Wojtanowicz, SPE 49052, Proc. SPE Annual Technical Conference & Exhibition, New Orleans, LA, 27-30 October, 1998.
- 66. "Controlling Water Production/Coning A Case History," M.Swisher, and A. K. Wojtanowicz, Proc. ETEC Conference and 69th Annual meeting of IPAA, New Orleans, LA Nov. 11-14, 1998. Also published on the web: <u>http://www.pttc.org/98casestuds/casestudy1.htm</u>
- "Leak Detection in Liquid Subsea Flowlines with no Recorded Feed Rate," J.M. Dinis, A.K.
 Wojtanowicz, and S.L. Scott, ETCE 99-6678, Proc. 20th Annual ETCE Conference and Exhibition, Houston, TX, Feb. 1-3, 1999.
- "Pressure Pulsation of Cement for Improved Well Integrity Field method and Theoretical Model," A.K. Wojtanowicz, and W. Manowski, Proc. 10th Int. Scientific & Technical Conference: *New Methods and Technologies in Petroleum Geology, Drilling and Reservoir Engineering,* Krakow, Poland, June 24-25, 1999, Vol. 2, 421-436.
- 69. "Downhole Water Sink (DWS) Completion Enhance Oil Recovery in Reservoirs with Water Coning Problem," A.K. Wojtanowicz, E.I. Shirman, and H. Kurban, SPE 56721, Proc. 1999 SPE Annual Technical Conference & Exhibition, Houston, TX, Oct. 3-6, 1999, 333-340.
- "Estimation of Leak-off Pressure Gradient from Cementing and Casing Data," D. Zhou, and A.K.
 Wojtanowicz, SPE 56760, Proc. 1999 SPE Annual Technical Conference & Exhibition, Houston, TX, Oct. 3-6, 1999, 747-757.
- "New Model for Pressure Reduction in Annulus During Primary Cementing," D. Zhou, and A.K. Wojtanowicz, IADC/SPE 59137, Proc. IADC/SPE 2000 Drilling Conference, New Orleans, LA, Feb. 23-25, 2000.
- 72. "Maximum Deliverability of Dual-Completed Wells with Downhole Water Sink (DWS) Analytical and Experimental Study," E.I. Shirman, and A.K. Wojtanowicz, ETCE/OMAE 2000 Conference, New Orleans, LA, Feb. 14-17, 2000.
- 73. "Interpretation of Leak-Off Test in Shallow Marine Sediments," D. Zhou, and A.K. Wojtanowicz,

ETCE/OMAE 2000 Conference, New Orleans, LA, Feb. 14-17, 2000.

- 74. "Investigation of Electrical Treatment of Water- Base Drilling Fluids for Centrifugal Dewatering," J.M. Griffin, and A.K. Wojtanowicz, ETCE/OMAE 2000 Conference, New Orleans, LA, Feb. 14-17, 2000.
- 75. "Vertical Interference Testing Method Using Dual Completions with Downhole Water Sink," L.R. Ramos, E. Shirman, and A. K. Wojtanowicz, SPE 62921, 2000 Annual Technical Conference and Exhibition of SPE, Dallas, TX, Oct. 1-4, 2000.
- 76. "Life-Cycle Management of Drilling Mud Systems," Proceedings of Petroleum Engineering Summer School; Workshop 7: "Lifecycle Oil and Gas Management," Inter-University Center, Dubrovnik, Croatia, June 12-16, 2000.
- 77. "Diagnosis of Excessive Water Production," L. Ramos, A.K. Wojtanowicz, and E. Shirman, 11-th International Scientific and Technical Conference: "New Methods and Technologies in Petroleum Geology, Drilling, and Reservoir Engineering," Krakow, Poland, June 29-30, 2000, 79-92.
- 78. "Shallow Casing Shoe Integrity Interpretation Technique," SPE/IADC 6777, A. K. Wojtanowicz, and D. Zhou, SPE/IADC Drilling Conference, Amsterdam, The Netherlands, Feb. 27-March 1, 2001, 219-228.
- 79. "Assessment and Inclusion of Capillary Pressure/Relative Permeability Histeresis Effects in Downhole Water Sink (DWS) Well Technology for Water coning Control," S.O. Inikori, and A.K. Wojtanowicz, ETCE2001-17100, Engineering Technology Conference on Energy, Houston, TX, Feb. 5-7, 2001.
- "Experimental Assessment of Methods to Maintain Bottom Hole Pressure After Cement Placement," J. Martin, J.R. Smith, and A.K. Wojtanowicz, ETCE2001-17133, Engineering Technology Conference on Energy, Houston, TX, Feb. 5-7, 2001.
- "Diagnosis of Sustained Casing Pressure from Bleed-off/Buildup testing Patterns," R. Xu, and A.K. Wojtanowicz, SPE 67194, SPE Production Operations Symposium, Oklahoma City, OK, March 24-27, 2001.
- 82. "Experimental Assessment of the Bleed-and-Lube Method for Removal of Sustained Casing Pressure,"
 S. Nishikawa, A.K. Wojtanowicz, and J.R. Smith, CIPC 2001-41, Petroleum Society's Canadian International Petroleum Conference 2001, Calgary, Alberta, Canada, June 12 – 14, 2001.
- "Contaminated Water Production in Old Oilfields with Downhole Water Separation: Effects of Capillary Pressure and Relative Permeability Histeresis," S.O. Inikori, and A.K. Wojtanowicz, SPE 66536, SPE/EPA/DOE E&P Environmental Conference, San Antonio, TX, Feb. 26-28, 2001.
- 84. "Productivity Testing and Optimization in Oil Wells with Water Coning Control A Short Course," Proceedings of Petroleum Engineering Summer School; Workshop 9: "Optimization of Oil and Gas Production," Inter-University Center, Dubrovnik, Croatia, June 11-15, 2001.
- "Well Cementing Diagnosis from Top Cement Pulsation Record," M.R. Kunju, and A.K. Wojtanowicz, SPE 71387, Proceedings of 2001 SPE Annual Technical Conference and Exhibition, New Orleans, LA, Sept. 30 – Oct. 3, 2001.
- 86. "Effect of 2-phase Oil-Water Flow and Friction Pressure Loss in the Wellbore on Water Cresting in Horizontal Wells", S.O. Inikori, and A.K. Wojtanowicz, ETCE2002/Prod-29165, Proceedings of 2002

25th ASME Annual Engineering Technology Conference on Energy, Houston, February 4-5, 2002.

- 87. "Severity of Water Coning in Gas Wells," M. Armenta, and A.K. Wojtanowicz, SPE 75720, SPE Gas Technology Symposium, Calgary, Alberta, Canada, Apr.30-May 2, 2002.
- 88. "Design of Cement Pulsation Treatment in Gas Wells Model and Field Validation," V.S. Chimmalgi, and A. K. Wojtanowicz, Petroleum Society's Canadian International Petroleum Conference 2002, Calgary, Alberta, Canada, June 11-13, 2002.
- 89. "Dual Gas Lift in Wells with Downhole Water Sink Completion," L. Marcano, and A.K. Wojtanowicz, Petroleum Society's Canadian International Petroleum Conference 2002, Calgary, Alberta, Canada, June 11-13, 2002.
- 90. "New Concepts of Dual-Completion for Water Cresting Control and Improved Oil Recovery in Horizontal Wells," S. O. Inikori, and A.K. Wojtanowicz, SPE 77416, SPE Annual Technical Conference and Exhibition, San Antonio, Texas, Sep.29-Oct.2, 2002.
- 91. "Water Control in Oil Wells With Downhole Oil-Free Water Drainage and Disposal," S. O. Inikori,, A.K. Wojtanowicz, and S.S. Siddiqi, SPE 77559, SPE Annual Technical Conference and Exhibition, San Antonio, Texas, Sep.29-Oct.2, 2002.
- 92. "A Study of Water Coning Control in Oil Wells by Injected or Natural Flow Barriers Using Scaled Model and Numerical Simulator," S.S. Siddiqi, and A.K. Wojtanowicz, SPE 77415, SPE Annual Technical Conference and Exhibition, San Antonio, Texas, Sep.29-Oct.2, 2002.
- 93. "Transient Pressure Unloading A Model of Hydrostatic Pressure Loss in Wells After Cement Placement," S. Nishikawa, and A.K. Wojtanowicz, SPE 77754, SPE Annual Technical Conference and Exhibition, San Antonio, Texas, Sep.29-Oct.2, 2002.
- 94. "Cement Pulsation Treatment in Wells," A.K. Wojtanowicz, J.R. Smith, D. Novakovic, V.S. Chimmalgi, K.N. Newman, D.Dusterhoft, and B. Gahan, SPE 77752, SPE Annual Technical Conference and Exhibition, San Antonio, Texas, Sep.29-Oct.2, 2002.
- 95. "Diagnostic Testing of Wells with Sustained Casing Pressure An Analytical Approach," R. Xu, and A.K. Wojtanowicz, Petroleum Society Canadian International Petroleum Conference 2003, Calgary, Alberta, Canada, June 10-12, 2003.
- 96. "Improving Primary Cementing Through Annular Cement Pulsation A Qualitative Analysis," V.S. Chimmalgi, and A.K. Wojtanowicz, Proceedings Petrotech 2003 5-th Intl. Petrol;eum Conference and Exhibition, New Delhi, India, January 9-12, 2003.
- 97. "Energy from High-Water-Cut Waste Oil Emulsions An Emerging Technology," W. Begell, A.Dolinski, V.Kremnev, Y.Shafeyeva, and A.K. Wojtanowicz. SPE 80591, SPE/EPA/DOE Exploration and Production Environmental Conference, San Antonio, TX, March 10-12, 2003.
- 98. "Inflow Performance Methods for Evaluating DWS Completions vs. Conventional Wells in Oil Reservoirs with Water Production Problems," O. Arslan, A.K. Wojtanowicz, and C.D. White, CIPC 2003-195, Petroleum Society Canadian International Petroleum Conference 2003, Calgary, Alberta, Canada, June 10-12, 2003.
- 99. "Sustained Casinghead Pressure Occurrence and Removal," A.K. Wojtanowicz, 14-th International Scientific and Technical Conference: "New Methods and Technologies in Petroleum Geology, Drilling,

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and Reservoir Engineering," Zakopane, Poland, June 11-13, 2003.

- 100. "Incremental Recovery Using Dual-Completed Wells in Gas Reservoirs with Bottom Water Drive; A Feasibility Study," M. Armenta, and A.K. Wojtanowicz, CIPC 2003-194, Petroleum Society Canadian International Petroleum Conference 2003, Calgary, Alberta, Canada, June 10-12, 2003.
- 99. "Completion Length Optimization in Gas Wells," M. Armenta, C.D. White, and A.K. Wojtanowicz, CIPC 2003-192. Petroleum Society Canadian International Petroleum Conference 2003, Calgary, Alberta, Canada, June 10-12, 2003.
- 100. "Rediscovering Non-Darcy Effect in Gas Reservoirs," M. Armenta, and A.K. Wojtanowicz, SPE 84071, SPE Annual Technical Conference and Exhibition, Denver, CO, Oct. 5-8, 2003.
- 101. "Improved Techniques to Alleviate Sustained Casing Pressure in a Mature Gulf of Mexico Field," SPE
 84556, K. Soter, F. Medine, and A.K. Wojtanowicz, SPE Annual Technical Conference and Exhibition, Denver, CO, Oct. 5-8, 2003.
- "Petroleum Wells with Controlled Water Inflow Downhole Water Sink Technology," A.K.
 Wojtanowicz, and M. Armenta, Proceedings of 2nd Produced Water Workshop by National
 Engineering Laboratory in Glasgow U.K., Aberdeen, Scotland, April 21-22, 2004
- 103. "Operating Dual-Completed Wells to Increase Gas Recovery in Low-Productivity Gas Reservoirs with Water Production Problem," M. Armenta, and A.K. Wojtanowicz, CIPC 2004-172, Petroleum Society's 5-th Canadian International Petroleum Conference 2004, Calgary, Alberta, Canada, June 8-10, 2004.
- 104. "Identifying Potential in Inactive Wells With Innovative Technology," W.C. Kimbrell, and A.K. Wojtanowicz, CIPC 2004-271, Petroleum Society's 5-th Canadian International Petroleum Conference 2004, Calgary, Alberta, Canada, June 8-10, 2004.
- 105. "Early Water Production and Bypassed Oil in Edge-Water –Drive Reservoirs," O. Arslan, A.K. Wojtanowicz, A. Kumar, and C.D. White, CIPC 2004-269, Petroleum Society's 5-th Canadian International Petroleum Conference 2004, Calgary, Alberta, Canada, June 8-10, 2004.
- 106. "Nodal Analysis for Oil Wells with Downhole Water- Sink Completion," O. Arslan, C.D. White, and A.K. Wojtanowicz, CIPC 2004-242, Petroleum Society's 5-th Canadian International Petroleum Conference 2004, Calgary, Alberta, Canada, June 8-10, 2004.
- 107. "Risk Analysis Method of Continuous Air Emissions from Wells with Sustained Casinghead Pressure," S. Duan, and A.K. Wojtanowicz, SPE 94455-STU, SPE/EPA/DOE Exploration and Production Environmental Conference, Galveston, Texas, March 7-9, 2005.
- 108. "West Delta Block 84 Methodology and Analysis of a Previously Orphaned Field," W.C. Kimbrell, and A.K. Wojtanowicz, CIPC 2005-235, Petroleum Society's 6-th Canadian International Petroleum Conference 2005, Calgary, Alberta, Canada, June 7-9, 2005. 13 pp.
- 109. "Surface-Induced Removal of Sustained Casinghead Pressure by Sealing the Well's Leaking Cement with Condensate from Flowing Gas," S. Duan, and A.K. Wojtanowicz, CIPC 2005-205, Petroleum Society's 6-th Canadian International Petroleum Conference 2005, Calgary, Alberta, Canada, June 7-9, 2005. 9 pp.
- 110. "Maximum Revenue for Oil Wells with Optimized Downhole Water Drainage," O. Arslan, C.D. White, and A.K. Wojtanowicz, CIPC 2005-197, Petroleum Society's 6-th Canadian International Petroleum

Conference 2005, Calgary, Alberta, Canada, June 7-9, 2005. 13 pp.

- 111. "Qualification of Un-recovered Reserves due Production Process Dynamics in Water-Drive Reservoirs," J.C. Hernandez, and A.K. Wojtanowicz, CIPC 2005-237, Petroleum Society's 6-th Canadian International Petroleum Conference 2005, Calgary, Alberta, Canada, June 7-9, 2005. 12 pp.
- 112. "Prediction of By-passed Oil with Correlations in Side Water Drive Reservoirs," J.C. Hernandez, and A.K. Wojtanowicz, CIPC 2005-196, Petroleum Society's 6-th Canadian International Petroleum Conference 2005, Calgary, Alberta, Canada, June 7-9, 2005. 4 pp.
- 113. "Candidate Acquisition of Downhole Water Sink Potential (CadWasp) Initial Development of an Expert System for Identifying Candidates for Enhanced Recovery Technologies," W.C. Kimbrell, A.K. Wojtanowicz, and R. Jarred, CIPC 2006-176, Petroleum Society's 7-th Canadian International Petroleum Conference 2006, Calgary, Alberta, Canada, June 13-15, 2006. 14 pp.
- 114. "Enhancing Inactive Well's Recovery Potential a Case History," W.C. Kimbrell, and A.K. Wojtanowicz, CIPC 2006-177, Petroleum Society's 7-th Canadian International Petroleum Conference 2006, Calgary, Alberta, Canada, June 13-15, 2006. 15 pp.
- 115. "Dynamic Growth of Water Saturation around Oil Wells with Water Coning Effect of Transverse Dispersion," S. Duan, and A.K. Wojtanowicz, CIPC 2006-192, Petroleum Society's 7-th Canadian International Petroleum Conference 2006, Calgary, Alberta, Canada, June 13-15, 2006. 10 pp.
- 116. "Assessment of Un-recovered Oil in Dipping Reservoirs from Analysis of Water Cut Development," J.C. Hernandez, and A.K. Wojtanowicz, CIPC 2006-200, Petroleum Society's 7-th Canadian International Petroleum Conference 2006, Calgary, Alberta, Canada, June 13-15, 2006. 11 pp.
- 117. "Effect of Anisotropy on Water Invasion in Edge-Water Drive Reservoirs," J.C. Hernandez, and A.K. Wojtanowicz, CIPC 2006-199, Petroleum Society's 7-th Canadian International Petroleum Conference 2006, Calgary, Alberta, Canada, June 13-15, 2006. 12 pp.
- 118. "Downhole Water Sink Technology for Water Coning Control in Wells," A.K. Wojtanowicz, Proc. 17th Intl. Scientific and Technical Conference, Zakopane, Poland, June 21-23, 2006, AGH University Press, Vol.23 No. 1, Krakow, 2006. p. 575-586.
- 119. "Theoretical Analysis of Bottom Water Invasion at Oil Wells due to Transverse Dispersion," S. Duan, and A.K. Wojtanowicz, SPE 102323, Proc. 2006 SPE Annual Conference and Exhibition, San Antonio, Texas, 24-27 September, 2006.
- 120. "Prediction of Oil Bypassing in Bottom Water Systems Using Dimensionless Groups," J.C. Hernandez, and A.K. Wojtanowicz, CIPC 2007-064, Petroleum Society's 8-th Canadian International Petroleum Conference 2007, Calgary, Alberta, Canada, June 12-14, 2007. 12 pp.
- 121. "Laboratory Investigation of Immiscible Transverse Dispersion Using Hele-Shaw Experiment," S. Duan, and A.K. Wojtanowicz, CIPC 2007-187, Petroleum Society's 8-th Canadian International Petroleum Conference 2007, Calgary, Alberta, Canada, June 12-14, 2007. 11 pp.
- 122. "Optimum Well Completion Strategies in Reservoirs with Bottom and Edge Water Invasion," J.C. Hernandez, and A.K. Wojtanowicz, CIPC 2007-105, Petroleum Society's 8-th Canadian International Petroleum Conference 2007, Calgary, Alberta, Canada, June 12-14, 2007. 13 pp.
- 123. "Well Performance Analysis for Heavy Oil with Water Coning," W. Qin, and A.K. Wojtanowicz, CIPC 2007-162, Petroleum Society's 8-th Canadian International Petroleum Conference 2007, Calgary, Alberta, Canada, June 12-14, 2007. 12 pp.
- 124. "Optimization of Large Gas pipeline Network in China A Feasibility Study," L. Jin, and A.K. Wojtanowicz, CIPC 2008-174, The Canadian International Petroleum Conference/SPE Gas Technology Symposium 2008

Joint Conference, Calgary, Alberta, Canada, June 17-19, 2008. 11 pp.

- 125. "Performance Analysis of Wells with Downhole Water Loop (DWL) Installation for Water Coning Control," L. Jin, and A.K. Wojtanowicz, CIPC 2008-173, The Canadian International Petroleum Conference/SPE Gas Technology Symposium 2008 Joint Conference, Calgary, Alberta, Canada, June 17-19, 2008. 10 pp.
- 126. "Theoretical and Experimental Investigation of Water in Oil Transverse Dispersion in Porous Media," S. Duan, and A.K. Wojtanowicz, SPE 115518, 2008 Annual Technical Conference and Exhibition, Denver, Colorado, Sept. 21-24, 2008, 20pp.
- 127. "Hydrodynamic Transition Zone at OWC in Non-Darcy Flow," S. Duan, and A.K. Wojtanowicz, Proc. The Second International Energy 2030 Conference Abu Dhabi, UAE, November 3-6, 2008, pp. 84-86.
- 128. "Water Problems and Control Techniques in Heavy Oil with Bottom Water," W. Qin, and A. K. Wojtanowicz, SPE 125414-PP, Proc. 2009 SPE Americas E&P Environmental & Safety Conference held in San Antonio, Texas, USA, 23–25 March 2009. 13pp.
- 129. "An Analytical Model for Water Coning Control Installation in Reservoir with Bottom Water," L. Jin, and A.K. Wojtanowicz, R. G. Hughes, CIPC 2008-173, Proc. of the Canadian International Petroleum Conference (CIPC) 2009, Calgary, Alberta, Canada, 16-18 June 2009. 12pp
- "Scaling A Water Coning Control Installation in Bottom Water Drive Reservoir by Inspectional Analysis,"
 L. Jin, A.K. Wojtanowicz, G. Afonja, W. Li, CIPC 2009-099, Proc. of the Canadian International Petroleum Conference (CIPC) 2009, Calgary, Alberta, Canada, 16-18 June 2009. 9pp
- 131. "Coning Control and Recovery Improvement Using In-situ Water Drainage/Injection in Bottom Water -Drive Reservoir," L. Jin, and A.K. Wojtanowicz, SPE-129663, Proc. 2010 SPE Improved Oil Recovery Symposium, Tulsa, Oklahoma, Apr.24-28, 2010. 14pp.
- "Improved Recovery of Heavy Oil with Bottom Water using Downhole Water Sink (DWS) Technology," A.K. Wojtanowicz, and W. Qin, Proc. 21st Oil-Gas AGH 2010 Conference, Zakopane, Poland, May 27-29, 2010. 17 pp.
- 133. "Identifying Environmental Risk of Sustained Casing Pressure," K. Kinik and A.K. Wojtanowicz, SPE 143713, Proc. SPE Americas E&P Health, Safety, Security and Environmental Conference, Houston, Texas, March 21–23 2011. 13 pp.
- 134. "Minimum Produced Water from Oil Wells with Water-Coning Control and Water-Loop Installations," L. Jin, and A.K. Wojtanowicz, SPE 143715, Proc. SPE Americas E&P Health, Safety, Security and Environmental Conference, Houston, Texas, March 21–23, 2011. 19 pp
- 135. "Environmental Risk of Sustained Casing Pressure," A.K. Wojtanowicz, and K. Kinik, Proc. 22nd International Conference - Oil-Gas AGH 2011, Krakow, Poland, June 8-10, 2011. 12 pp.
- 136. "New Cold Production Technique for Heavy Oil with Strong Bottom Water Drive," SPE 146928, W. Qin, A.K. Wojtanowicz, and C.D. White, Proc. SPE Annual Technical Conference and Exhibition, Denver, Colorado, Oct. 30-Nov. 2, 2011, 13 pp.
- 137. "Development of Injectivity Damage Due to Oily Waste Water in Linear Flow," SPE-168130, Lu Jin and A.K. Wojtanowicz, Proc. SPE Formation Damage Symposium, Lafayette, LA, February 27, 2014, 13 pp.
- 138. "Testing Protocol and Analysis Method for Wells with Sustained Casing Pressure," SPE-170693, M. Kazemi, and A.K. Wojtanowicz, 2014 SPE Annual Technical Conference and Exhibition, 27–29 October 2014, Amsterdam, The Netherlands.
- 139. "Temperature-induced Uncertainty of the Effective Fracture Pressures: Assessment and Control," SPE 170316, K. Kinik, F. Gumus, and A.K. Wojtanowicz, 2014 SPE Deepwater Drilling and Completions

40

Conference, Galveston, Texas, 10-11 September 2014.

- 140. "Multi-Lateral Wells with Downhole Water Control and Disposal in Heavy Oil Reservoirs with Bottom Water A Case Study," Y. Alblooshi, and A.K. Wojtanowicz, SPE 171868, Proc. Abu Dhabi International Petroleum Exhibition and Conference, Abu Dhabi, UAE, 10–13 November 2014
- 141. "Laboratory Visualization of Gravity Fluid Displacement in Well Annulus," OMAE2015-42319, E. Demirci, and A.K. Wojtanowicz, Proc. ASME 2015 34th International Conference on Ocean, Offshore and Arctic Engineering OMAE2015, May 31-June 5, 2015, St. John's, Newfoundland, Canada
- 142. "Improving Offshore Recovery of Heavy Oil Underlain by Large Aquifer," W. Qin, P. Luo, and A.K. Wojtanowicz, SPE-179643-MS, Proc. SPE Improved Oil Recovery Conference, Tulsa, Oklahoma, 11–13 April 2016
- Investigation of Well production Mechanism in Heavy Oil Reservoirs Underlain by Strong Bottom Water,"
 W. Qin, A.K. Wojtanowicz, and P. Luo, OMAE 2016-54040, Proc. ASME 2016 35th International Conference on Ocean, Offshore and Arctic Engineering OMAE 2016, June 19-24, 2016, Busan, South Korea
- 143. "Pilot-scale Study of Buoyant Settling of Immiscible Heavy Fluid in Mud A Promising Technique to Stop Annular Gas Migration above Leaking Cement," E. Demirci, and A.K. Wojtanowicz, SPE-180145-MS, Proc. SPE Europec 78th EAGE Conference and Exhibition, Vienna, Austria, 30 May–2 June, 2016
- "Determination and Use of Ultimate Water Cut for Well Spacing Design in Reservoirs with Water Coning,"
 S. Prasun, and A.K. Wojtanowicz, SPE-184075-MS, Proc. SPE Eastern Regional Meeting 2016, Canton, Ohio, 13-15 September, 2016
- 145. "An Analytical Model Predicts Pressure Increase during Waste Water Injection to Prevent Fracturing and Seismic Event," L. Jin, A.K. Wojtanowicz, and J. Ge, SPE-184411-MS, Proc. SPE Health, Safety, Security, Environment & Social Responsibility Conference-North America, in New Orleans, Louisiana, 18—20 April 2017.
- 146. "Development of Well Intervention Fluid for Removal of Sustained Casing Pressure," E. Demirci, K. Butler, and A.K. Wojtanowicz, OMAE 2017-62600, Proc. The 36th International Conference on Ocean, Offshore & Arctic Engineering, OMAE2017, Trondheim, Norway, June 25-30, 2017.
- 147. "Criteria and Risk of Integrity Loss for Wells with Sustained Casing Pressure," T. Yao and A.K. Wojtanowicz, AGH Drilling, Oil and Gas, Vol 34. No. 2, 2017, Proc. 28th Intern Scientific Technical Conference & Exhibition, Drilling Oil Gas AGH, Krakow, 7 9 June, 2017 http://dx.doi.org/10.7494/drill
- 148. "Successful Field Trials of Water Control in High Water Cut Wells Using an Improved Downhole Water Sink/Drainage System," W. Qin, P. Luo, J. Meng, H. Li, T. Mao, A.K. Wojtanowicz, and M. Feng, SPE-188958-MS, Proc. Abu Dhabi International Petroleum Exhibition & Conference, Abu Dhabi, UAE, 13-16 November 2017
- 149. "Multidimensional Evaluation for Safe and Efficient Killing Using Dynamic Kill Method: A Case Analysis in China," Y. Zhou, X. Li, A.K. Wojtanowicz, Y. Miao, and J. Chen, SPE-188636-MS, Proc. Abu Dhabi International Petroleum Exhibition & Conference, Abu Dhabi, UAE, 13-16 November 2017
- 150. "Hybrid Process of Gas and Downhole Water Sink Assisted Gravity Drainage (G&DWS-AGD) to Enhance Oil Recovery in Reservoirs with Water Coning," W.J. Al-Mudhafar, A.K. Wojtanowicz, and D.N. Rao, CMTC-502487-MS, Proc. Carbon Management Technology Conference, Houston, Texas, 17-20 July 2017
- 151. "Stabilized Water-Cut in Carbonate Naturally-Fractured Reservoirs with Bottom Water with an Implication in Well Spacing Design for Recovery Optimization," S. Prasun, and A.K. Wojtanowicz, OMAE2018-78724, Proc. The 37th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2018, Madrid, Spain June 17-22, 2018. 17 pp

- 152. "Full-Scale Testing of Gravity Displacement with Heavy Fluid in Well Annulus to Stop Gas Migration and Reinstate Operations Safety," E. Demirci, and A. K. Wojtanowicz, SPE-190603-MS, Proc. SPE International Conference on Health, Safety, Security, Environment, and Social Responsibility, Abu Dhabi, UAE, 16-18 April 2018
- 153. "Dynamic Water Control in Naturally Fractured Bottom Water-Drive Reservoirs via Downhole Water Sink Well Deployment: First Experimental Study," Y. Alblooshi, A.K. Wojtanowicz, Proc. R&D Petroleum Conference, RDPETRO, ADNOC Abu Dhabi, UAE, May 13-14, 2018
- 154. "Loss and Restoration of Water Coning Control Field Case History and Prediction," A.K. Wojtanowicz, and L. Jin, AGH Drilling Oil Gas, Vol. 35, No. 1, 2018, pp. 343-360 http://dx.doi.org/10.7494/drill.2018.35.1.343
- 155. "Evaluation of Gas and Downhole Water Sink-Assisted Gravity Drainage (GDWS-AGD) Process in Saturated Oil Reservoirs with infinite-Acting Aquifer," W. J. Al-Mudhafar, D. H. Abdullatif, M. S. Al-Jawad, and A. K. Wojtanowicz, SPE-195332-MS, Proc. SPE Western Regional Meeting, San Jose, CA, April 23, 2019
- 156. "Field-Scale Evaluation of Re-Injecting the Associating Produced Gas through the GDWS-AGD EOR Process," W. J. Al-Mudhafar, and A. K. Wojtanowicz, SPE-195470-MS, Proc. SPE Europec at 81st EAGE Annual Conference & Exhibition, London, England, UK, 3 - 6 June, 2019
- 157. "Triaxial Testing of Gas Shale Permeability Dependence on Heterogenous Stress with Respect to Bedding," Y. Chen, C. Jiang, G. Yin, A. K. Wojtanowicz, and D. Zhang, OMAE2019-96836, Proc. The 38th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2019, Glasgow, Scotland, June 9-14, 2019. 10 pp
- 158. "Probabilistic Estimation of Recovery from Naturally-fractured Bottom-water Reservoir with Uncertain Well Placement in Fracture Network," S. Prasun, and A.K. Wojtanowicz, OMAE2019-96836, Proc. The 38th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2019, Glasgow, Scotland, June 9-14, 2019. 16 pp
- 159. "Permeability and Effective Stress in Dipping Gas Shale Formation with Bedding Experimental Study," Y. Chen, C. Jiang, G. Yin, A. K. Wojtanowicz, and D. Zhang, OMAE2019-96707, Proc. The 38th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2019, Glasgow, Scotland, June 9-14, 2019. 13 pp
- 160. "A Comparison Simulation Study of GDWS-AGD EOR Process Performance Using CO2/APG Alternatives in South Rumaila Oil Field, Iraq," W. J. Al-Mudhafar, and A. K. Wojtanowicz, SPE-200418-MS, 2020 SPE Improved Oil Recovery Conference, Tulsa, OK, 18 – 22 April, 2020
- 161. "Second-order Correlation of Klinkenberg corrected Permeability and its Experimental Verification on Heterogeneously - stressed Gas Shale," Y. Chen, C. Jiang, J. Y. Leung, A. K. Wojtanowicz, D. Zhang, and C. Zhong, OMAE2020-18323, Proc. The 39th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2020, Fort Lauderdale, FL, June 28 – July 3, 2020. 10 pp
- 162. "Statistical Assessment of Alternative Methods for Well Recovery Estimation in Naturally Fractured Reservoirs with Fracture Corridors," S. Prasun, and A.K. Wojtanowicz, OMAE2020-19355, Proc. The 39th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2020, Fort Lauderdale, FL, June 28 – July 3, 2020. 7 pp
- 163. "Real Gas Effect on Gas Slippage Phenomenon in Shale," Y. Chen, Y. Leung, C. Jiang, and A. K. Wojtanowicz, OMAE2021-6268, Proc. The 40th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2021, Virtual, Online, June 21-30, 2021, 8 pp

- 164. "Well Testing of Fracture Corridors in Naturally fractured Reservoirs (NFR)," Y. Guo, and A.K. Wojtanowicz, OMAE2021-6268, Proc. The 40th International Conference on Ocean, Offshore & Arctic Engineering OMAE 2021, Virtual, Online, June 21-30, 2021, 12 pp
- 165. "A Multi-Completion Gas and Downhole Water Sink-Assisted Gravity Drainage (MC-DWS-AGD) to Improve Oil Recovery and Reduce Water Cut in Reservoirs with Strong Water Aquifers," D.A..Al-Obaidi, D.A.Wood, W.J. Al-Mudhafar, A.K Wojtanowicz, and A. Merzoug, SPE-213071-MS, Proc. Oklahoma City O&G Symposium, Oklahoma City, OK, April 17 – 19, 2023
- 166. "Hydrodynamic Mechanism of Bottom Water Invasion into Oil Storage within Strategic Petroleum Reserve

 Weeks Island SPR Case," A.K. Wojtanowicz, and A.T. Bourgoyne Jr., OMAE2023-104531, Proc. ASME
 42nd International Conference on Ocean, Offshore & Arctic Engineering OMAE 2023, June 11-16, 2023, Melbourne, Australia
- 167 "Experimental Assessment of Drilling Fluid with Wall Slippage for Wellbore Displacement," J. Johnson, and A.K. Wojtanowicz, OMAE2024-129807, Proc. ASME 43nd International Conference on Ocean, Offshore & Arctic Engineering OMAE 2024, June 9 -14, 2024, Singapore EXPO, Singapore