

Dr. Hazim Abass

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1. Areas of Interest: R&D in Petroleum Engineering disciplines, Applied geomechanics in energy resources; oil and gas, geothermal, CCUS, and gas storage. Applied hydraulic fracturing in oil and gas and geothermal reservoirs. Designing lab-scale testing procedures then field pilots to deploy new technologies. Teaching/training short courses in the same technical areas.

2. Academic Experience Adjunct Faculty at the University of Houston [Hazim Abass | UH Department of Petroleum Engineering](#) and former professor at the Colorado School of Mines [Hazim H. Abass - Petroleum Engineering Department \(mines.edu\)](#). Currently (2019-Present), teaching graduate courses at the U. of Houston, USA, and the CUPB, China. Taught graduate & undergraduate courses in well completion, well stimulation, applied rock mechanics, and R&D for innovative technology. Identifying field challenges and develop research projects aiming at innovative solutions. As a fulltime professor (2014-2017), taught well stimulation, formation damage, and R&D for innovative technologies.

2. Industry Experiences: International research centers with long stays in the USA, South America, and the Middle East; Saudi Aramco (2001-2014), as the Unconventional-Resources Champion identifying technical challenges for which advanced research programs are developed toward practical solutions. He managed ten-million dollars projects to develop and deploy petroleum engineering technologies from R&D platform to field implementations. Earlier experiences include; Consultant for PDVSA, Venezuela (1996-2001), geomechanics team leader at Halliburton Technology Center in Duncan, Oklahoma (1988-1996), and a petroleum engineer at the Northern Petroleum Organization in Iraq (1977-1978).

3. Distinguished Achievements: International awards; the 2015 Int'l SPE/AIME Honorary Membership (<http://www.spe.org/awards/honorary.php>), 2012 SPE Int'l Award- Completion Optimizations and technology <http://www.spe.org/awards/cot.php>, the 2012 SPE Middle East Regional award- Completion Optimizations and Technology <http://www.spe.org/awards/regional-completions-optimization-technology-awards-recipients.php>, the 2009 SPE Intl Award- Distinguished Member <http://www.spe.org/awards/distinguished.php>, and the 2008 SPE Middle East Regional award- production operations <http://www.spe.org/awards/regional-production-operations-awards-recipients.php>. He has enabled the geomechanics discipline into practical applications to solve petroleum engineering problems qualified him to serve as SPE Distinguished Lecturer for the 2011/2012 educating petroleum engineers on "the use and misuse of applied rock mechanics in petroleum engineering. He has more than 100 publications, patents and books: <https://patents.justia.com/inventor/hazim-h-abass> and the other publications may be found under [Hazim H Abass - Google Scholar](#)

EDUCATION

1972 - 1976	BS.	Petroleum Engineering and Minerals, University of Baghdad, Iraq.
1982 - 1984	MS.	Petroleum Engineering, Colorado School of Mines, Golden, Colorado, U.S.A. Thesis: Reservoir Eng Study of the North Point Bolivar Field of the Texas Gulf Coast. Thesis advisor: Professor D.M. Bass
1985 - 1988	Ph.D.	Petroleum Engineering, Colorado School of Mines, Golden, Colorado, U.S.A. Thesis: A Study of Water-Coning Problems in Petroleum Production. Developed a reservoir simulator, built an experimental model, and developed a new theoretical equation to predict critical production rate. Thesis advisor: Professor D.M. Bass

TEACHING EXPERIENCE

2019 – Present	Teaches graduate classes at the U. of Houston, USA, at the PDPU, India, and at the CUPB, China.
2018 – Present	Teaches petroleum engineering short courses for industry.

- 2014 - 2017 Taught Petroleum Engineering graduate and undergraduate courses at the Colorado School of Mines.
- 2001 - 2014 My commitment at Saudi ARAMCO to mentor young engineers earned me the mentorship award in 2008.
- 2005 - 2007 Taught several 2-month SAT courses to high school students at the Adult Education Program of Saudi Aramco, Dhahran, Saudi Arabia.
- 1996 - 2000 Taught short courses and workshops, at the PDVSA learning center (CIED), on well completion, stimulation, well logging and applied geomechanics. Assigned to the MIP program (Integrated Methodology for Productivity), which is a 4-month course on production analysis.
- 1988 - 1995 Instructor at the Halliburton Energy Institute, taught short courses to Halliburton's employees and customers on applied rock mechanics in Petroleum Engineering. Participated in teaching a 1-hr credit at the Stanford University in 1994 and a 3-hr credit class at the Oklahoma Universities in 1995, both were on Hydraulic Fracturing.
- 1988 - 1988 Taught advanced reservoir simulation (PE-614) at the Petroleum Engineering Department of the Colorado School of Mines.
- 1981 - 1987 As a graduate student, I taught lab sessions and worked as a Teaching Assistant in well logging, rock properties and well testing. Learned much from my M.Sc. and Ph.D. advisors; Dr. Daniel M. Bass and Dr. Hossein Kazemi at the Colorado School of Mines.

WORK EXPERIENCE

June 2019 – Present

Consultant and Adjunct Faculty at the University of Houston.

teaching graduate courses at the U. of Houston, USA, at the PDPU, India, and at the CUPB, China.

August 2018 – June 2020

Halliburton Technology Advisor in Oman and Affiliate Professor at Colorado School of Mines.

Identify potential geomechanics-related opportunities across the business lines

- Identify clients' geomechanics challenges, draw R&D roadmap to solve a problem and/or develop new technology, and then secure management approval for research programs. Once approved and the research suggests new service products (i.e. procedures, tools, or software), work with field engineers and clients on field deployment.
- Work with the geomechanics community within the company and lead annual brainstorming sessions to establish new R&D projects toward achieving the strategic company's objectives.
- Upon identifying promising business opportunities, participate in delivering technical presentations to customers.
- Published technical papers and earned patents based on business added value.
- Interact with academia and coordinate sponsored research projects to be aligned with research objectives.
- Chaired the 2018 SPE Forum on Geomechanics.
- Deliver technical presentations to employees and customers.
- Publish technical papers and submit patents based on business added value.
- Mentor young professionals for talent development as consideration for future replacement.
- Interact with academia and coordinate research projects to be aligned with technology objectives.
- Teach geomechanics courses to Halliburton employees.

August 2014 – 2017

Professor, Petroleum Engineering Department, Colorado School of Mines, Golden, Colorado, USA

- Teach undergraduate and graduate courses: Well Completion and Stimulation, Formation Damage, R&D for Innovative Technology, Experimental Research for PE.
- Advisor for 5 MS and 6 PhD students
- Has graduated 2 PhD and 3 MS. Plan to graduate 1 PhD in 2018, 1 PhD in 2019.

- Research Program Director of the \$1 MM KOGAS project on development of a shale gas field in Canada.
- Director of the Fracturing & Acidizing Applied Technology
- Coordinator of the Halliburton Fellowship Program

Sept 2001 – June 2014

Senior Petroleum Eng. Consultant, Advanced Research Center, Saudi Aramco, Saudi Arabia

- Led the Unconventional Resources (tight sand & carbonate, shale gas, heavy oil) team within the Production Technology Division of the Advanced Research Center of Saudi Aramco, and conduct research in the area of applied rock mechanics in petroleum engineering specifically in stimulation, sand control, reservoir engineering, well completion, and wellbore stability.
- Was the champion for the unconventional resources R&D program.
- Established a research role through providing leadership to the Rock Mechanics Group. The rock mechanics area has evolved from service into solution provider and the Rock Mechanics Lab becomes a vital post for visitors' tours.
- Examples of research projects included shale stability, acid-fracture closure, and cooling effect on resin coated proppant, stress-dependant permeability in tight gas reservoirs, hydraulic fracturing of openhole horizontal wells, sanding tendency and sand control, and acid fracturing vs. proppant fracturing in carbonate formation.
- Provided leadership to stimulate advanced research concepts such as shale stability, acid vs proppant fracturing in carbonate formation, sanding tendency and sand control, stress-dependent reservoir completion, high power laser applications in tight gas reservoirs, hydraulic fracturing of openhole horizontal wells, propellant fracturing, and plasma fracturing.
- Explored advanced technologies related to smart fluids, unconventional fracturing, thermal stimulation, High Power laser, and waterless fracturing.
- Communicated with field proponents to initiate team efforts to solve complex problems related to drilling, completion, stimulation, and reservoir characterization. Work with international companies to initiate joint industry projects and evaluate new technologies.
- Represented Saudi Aramco in joint industry projects, consortia, academic collaboration, and SPE organization.
- Earned international awards, published technical papers and added granted patents to the portfolio of Saudi Aramco
- Provided technical consultations to field engineers in the area of petroleum production engineering.
- Acquired new geomechanics lab equipment to tolerate the aggressive research activities especially in developing unconventional reservoirs. Examples are fracture conductivity Lab, core anisotropy and natural fracture characterization, and on-bench loading frame to determine mechanical properties. Developed and added new lab testing capabilities to strengthen the research dimension and introduced advanced testing procedures.
- Mentored young engineers by planning for every member in the group to cultivate a focused technical area.
- Identified, interviewed, and hired Expats.

1996 - 2001

Halliburton Consultant assigned to the Intevep-PDVSA, Los Teques, Venezuela

- Provided technical expertise and field support to solve identified petroleum engineering challenges from a rock mechanics point of view.
- The main technical areas included wellbore stability during drilling, stimulation design, perforation optimization, sand control, heavy oil production, and petrophysics.
- Recommended research on industry-based challenges.
- Introduced several technologies and attended their deployment field operations.

- Designed treatments for wellbore stability, sand control, sand production prediction, optimization of sand control methods including critical production rate, gravel packing, FracPac, oriented perforation or combination of those methods.
- Provided technical consultation related to applied rock mechanics: fracturing design, sand production control, wellbore stability, and in-situ stress measurements.
- Taught short courses at the PDVSA training center, applied rock mechanics in petroleum engineering.

1988 - 1995

Halliburton Research Center, Oklahoma, USA

Team Leader, Stimulation Department

- Performed and supervised research on coalbed methane, horizontal well fracturing, wellbore stability, perforation optimization, sanding tendency, and in-situ stress field measurements.
- Work globally across the PSLs in the area of geomechanics applications at the wellbore, reservoir, and pore levels to solve challenges in drilling, completion, stimulation, production, injection, and reservoir engineering.
- Provided field consultation as related to the above technical areas.
- Supervised the rock mechanics team as we conduct research and technical services to provide mechanical properties and special testing procedures to field engineers as related to hydraulic fracturing design, wellbore stability, cement strength, sand production, and calibration of dynamic rock properties obtained from logging.
- Designed and acquired laboratory equipment to perform tests on large scale rock blocks.
- Mentor young professionals for talent development as consideration for future replacement. Work with identified professionals to excel.

1987 - 1988

Colorado School of Mines, Colorado, USA

Assistant Director of the Petroleum Engineering Research Consortium

- Developed research proposals in the area of reservoir engineering, reservoir simulation, well completion and stimulation
- Contacted petroleum companies to capture field problems that require R&D proposals.
- Managed projects, including timing and budgeting of approved research programs.

1981 - 1987

Colorado School of Mines, Colorado, USA

Graduate Student & Teaching/Research Assistant

As a graduate student, taught lab sessions and worked as Teaching Assistant in several classes of petroleum engineering.

1977 - 1979

North Petroleum Company, Kirkuk, Iraq

Petroleum Engineer

- Worked on well logging jobs to as related to petrophysical properties.
- Worked as mud engineer to design hydraulic mud system for safe drilling operations.
- Performed field tasks related to well testing, well completion, and well productivity analysis.

SPE POSITIONS & SERVICES

Event	Location	Date	Contribution
SPE	Colorado Spring, Colorado	July 9-12, 2018	Chair for the 2018 Forum Series: https://www.spe.org/events/en/2018/forum/18fus1/committee.html
SPE	International	2015	Chair for the 2015 International Technical Award Committee-Completion Optimization and technology Award Committee

SPE	International	1985-Present	Member of the SPE in good standing since joining the society.
SPE	International	1995-Present	Technical Editor of the SPE-Production and Operations.
SPE International Award Committee	New Orleans, USA	2 July 2013	Member of the Completion Optimization and technology Award Committee- 3-year term
SPE Workshop: Advanced Carbonate Production	Istanbul, Turkey	22-25 June 2014	Steering Committee Co Chairman
SPE Forum Series: Overcoming Challenges in Developing Shale and Tight Gas Reservoirs	Abu Dhabi, UAE	17-20 March 2014	Steering Committee Co-chairman
SPE Workshop: The Role of Technology in developing Overcoming Challenges in Developing Unconventional and Tight Gas Reservoirs	Abu Dhabi, UAE	16 March 2014	Committee member
SPE Forum Series: Overcoming Challenges in Developing Shale and Tight Gas Reservoirs	Dubai, UAE	28-31 Oct. 2013	Steering Committee member
SPE ATW: Unconventional Gas Fracturing: Leveraging Experience from Success and failure	Dubai, UAE	5-7 Nov. 2012	Steering Committee member
SPE ATW: Tight Gas Fracturing: Closing the Gap between Expectation and Results	Kuwait	20-22 Nov. 2011	Committee member
SPE-Saudi Chapter	Dhahran, Saudi Arabia	9-11 May, 2009	Technical Committee member and session Chair of the Tight Gas session
SPE Young Professional Technical Symposium	Dhahran, Saudi Arabia	29-30 March, 2008	1) Subcommittee member; reviewed and evaluated abstracts for the Young Professionals Technical Symposium. 2) Acted as a judge to select best paper for the Production Operations Session.
Event	Location	Date	Contribution
SPE ATCE	Anaheim, California, USA	10-14 November	2007 SPE Outstanding Technical Award – Production & Operation.
SPE ATW: Wellbore Integrity	Perth, Australia	14-17 Oct., 2007	Discussion leader of the session “Well Design for Wellbore Integrity”.
SPE Saudi Arabia Section Technical Symposium	Dhahran, Saudi Arabia	21-23 May, 2006	Program Coordinating Committee
SPE Forum Series on “Understanding and Modeling the Near Wellbore	Dubrovnik, Croatia	4-9 Sept. 2005	1) Steering committee member. 2) Session manager for “Enhancing Performance”
SPE 13 th Middle East Oil Show (MEOS)	Manama, Kingdom of Bahrain	9-12 June, 2003	Technical Session Chair

SPE ATCE	Houston, Texas, USA	26 - 29 Sept. 2004	2004 SPE Outstanding Technical Award – Production & Operation.
SPE 13 th Middle East Oil Show (MEOS)	Bahrain	9-12 June, 2003	Technical Session Chair
SPE-Section Technical Symposium	Dhahran, Saudi Arabia	7-9 June, 2003	Subcommittee member reviewing abstracts.

SPE International AWARDS

Type	Location	Event	Date
2015 SPE/AIME international Honorary Membership	Houston, Texas, USA	2015 SPE Annual Technical Conference and Exhibition	Sept 29, 2015
2012 SPE international Completions Optimization and Technology	San Antonio, Texas, USA	2012 SPE Annual Technical Conference and Exhibition	October 8-10, 2012
2011/2012 SPE Distinguished Lecturer	Denver, Colorado, USA	SPE-ATCE	30 Oct - 2 Nov, 2011
Outstanding Technical Editor SPE Production & Operations	JPT	JPT	December 2010
SPE-SPE International Award-Distinguished Member	New Orleans, Louisiana, USA	SPE-ATCE	4 - 7 October 2009
Outstanding Technical Editor SPE Production & Operations	Anaheim, California, USA	SPE-ATCE	11-14 November 2007
Outstanding Technical Editor SPE Production & Operations	Denver, Colorado, USA	SPE-ATCE	5 – 8 Colorado, 2003

SPE Regional Awards

Type	Location	Event	Date
2012 SPE Middle East Regional Technical Award- Completion Optimization and Technology	Kuwait	2012 SPE Middle East Regional Awards	11 December 2012
SPE-Middle east Regional Award for Production and Operations	Abu Dhabi, United Arab Emirates	ADIPEC	3 - 6 November 2008

Halliburton Awards

Type	Location	Event	Date
Contributing Member of the Halliburton Technical Personnel Recognition Program	Duncan, Oklahoma, USA	Program ceremony	1995
Chapter Author for the “Petroleum Well Construction” Economides,	Duncan, Oklahoma, USA	Book Publication Ceremony	1998

Walters, and Dunn-Norman			
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Saudi Aramco Awards

Type	Location	Event	Date
EXPEC-ARC Recognition Award for outstanding achievements-Mentorship and Team Player	Dhahran, Saudi Arabia	Annual Departmental Meeting	January 2011
EXPEC-ARC 2 certificates of recognition: Milestone & Effective Publication Awards	Dhahran, Saudi Arabia	Annual Departmental Meeting	January 2009
EXPEC-ARC Mentorship Award	Dhahran, Saudi Arabia	Annual Departmental Meeting	January 2008
Best Presentation Award	Kuwait	GCC Workshop on Tight Gas Sand	18-19 Nov, 2008
Technical Committee Award	Manama, Bahrain	6 th Int. Conf. & Exhib.- Chemistry in Industry	27-29 September, 2004
Technical Recognition Award	Dhahran, Saudi Arabia	2004 Recognition Award Ceremony	2004

PUBLICATIONS

I. Books

1. Chapter 14 (Hydraulic Fracturing: Experimental Modeling) of the book entitled "Hydraulic Fracture Modeling" edited by Dr. Yu-Shu Wu, published by Elsevier Inc., 2018
2. Chapter 5 (Rock Mechanics) of Petroleum Well Construction, edited by Michael Economides, Larry Watres, and Shari Dunn-Norman, John Wiley and Sons, New York, 1998.
3. Chapter 2 of FracPac Completion Services, Stimulation and Sand Control Techniques for High-Permeability Oil and Gas Wells, Halliburton Energy Services Publication F3351, 1994, Houston, TX, U.S.A.
4. Chapter 1 of Stimulation Technology Review, Fracturing Horizontal and Deviated Wells, Halliburton Energy Services Publication F3340, 1994, Houston, TX, U.S.A.
5. Chapter 2 of Near Wellbore Rock Mechanics, Fracture Characterization from a Rock Mechanics Perspective, ProTechnics, Houston, TX, U.S.A., 1994.

II. Peer Reviewed Publications

Theses

1. Abass, H.H.: "North Point Bolivar Field - Reservoir Engineering Study on the Texas Gulf Coast, "Colorado School of Mines, Library, Master Thesis ER-2871, 1984, Golden, Colorado.
2. Abass, H.H.: "A Study of Water-Coning Problems in Petroleum Production," Colorado School of Mines, Library, Ph.D. Thesis T3367, 1987, Golden Colorado.

Journal Papers

1. Yousif, M.H., Abass, H.H., Selim, E.D., and Sloan, E.D.: "Experimental and Theoretical Investigation of Methane Gas Hydrate Dissociation in Porous Media," SPE Production Engineering, February, 1991 (SPE 18320).
2. Abass, H.H., Hedayati, S., and Meadows, D.L.: "Non-Planar Fracture Propagation from a Horizontal Wellbore - Experimental Study,"SPE Production & Facilities, August, 1996, PP 133-137 (SPE 24823).
3. Abass, H.H.: "Oriented Perforating Helps Ensure Successful Well Completions," Oil and Gas Journal, Oct. 9, 1995, pp. 80-85.

4. Abass, H.H., Mulhem, A.A., Alqam, M.H., and Khan, M.R.: Rock-Mechanics Considerations in Fracturing a Carbonate Formation”, JPT, July 2007, A summary of SPE 102590 presented at the 2006 SPE ATCE.
5. Alqam, M.H., Abass, H.H., Khan, M.R., and Caliboso, e.T.: “Experimental Study on Additives Systems Used for Proppant Flowback Control in Hydraulic Fracturing Treatment”, Saudi Aramco Journal of Technology, Fall, 2008.
6. Hazim Abass, Mirajuddin Khan, and Leopoldo Sierra: Understanding Stress Sensitive Tight Gas Reservoirs”, the Saudi Aramco Journal of Technology, summer 2009, PP 11-21.
7. Hazim H. Abass, Mickey Warlick, Cesar H. Pardo, Mirajuddin R. Khan, Ashraf M. Al-Tahini, Dhafer A. Al-Shehri, Hameed H. Al-Badairy, Yousef M. Al-Shobaili, Thomas Finkbeiner and Satya Perumalla: “Evaluation of Wellbore Stability during Drilling and Production of Open Hole Horizontal Wells in a Carbonate Field”, The Saudi Aramco Journal of Technology , Fall 2009, PP 17-26. (SPE 126157)
8. Hazim Abass, Mohamed Soliman, Ashraf Tahini, Jim Surjaatmadja, David Meadows, and Leopoldo Sierra:”Oriented Fracturing: A New Technique to Hydraulically Fracture Open Hole Horizontal Well”, The Saudi Aramco Journal of Technology, Winter 2009, PP 44-55. (SPE 124483)
9. Ali S. Rabaa, Hazim H. Abass and Talal S. Al-Mousa:”drilling and Completing Horizontal Wells in an Unconsolidated Sandstone Reservoir in Saudi Arabia; A Rock Mechanics View,” The Saudi Aramco Journal of Technology, winter 2009. (SPE 126097)
10. Hyung T. Kwak, Ayman R. Al-Nakhli, Hazim H. Abass, James J. Funk and Bruce Balcom: “New Insights into Microscopic Fluid Rock Interaction: MR-CT Microscopy Approach”, Saudi Aramco Journal of Technology, Winter 2012.
11. Ayman R. Al-Nakhli, Hazim Abass, Mirajuddin Khan, Victor Hilab and Ahmad Rizq: “Chemically-Induced Pressure Pulse to Increase Stimulated Reservoir Volume in Unconventional Reservoirs”, The Saudi Aramco Journal of Technology, Winter 2014.
12. Safari, M., Gandikota, R., Mutlu, Ji, M., Glanville, J., Abass, H.: “Pulsed Fracturing in Shale Reservoirs: geomechanical Aspects, Ductile-brittle Transition and Field Implications,” SPE Journal, June 2015.
13. Zhou Zhou, Todd Hoffman, Doug Bearinger, Xiaopang Li, Hazim Abass: “Experimental and Numerical Study on Spontaneous Imbibition of Fracturing Fluids in the Horn River Shale Gas Formation” SPE Journal Paper (2016); (SPE 171600)
14. Zhou Zhou, Hazim Abass, Xiaopeng Li, and Tadesse Teklu: Experimental investigation of the effect of imbibition on shale permeability during hydraulic fracturing”, Journal of Natural Gas Science and Engineering 29 (2016) 413-430

Granted Patents (<http://patents.justia.com/inventor/hazim-h-abass>)

1. US Patent 9,701,894 (July 11, 2017): “Method for Enhanced fracture cleanup using redox treatment” by Ayman R. Al-Nakhli, Hazim H. Abass, Ahmad S. Al-Otaibi.
2. US Patent 9,557,254 (January 31, 2017): “Portable device and method for field testing proppant”, by Mohammad H. Alqam, Hazim Husain Abass, Hussain A. Al-Shammary, Edwin T. Caliboso.
3. US Patent 9,488,042 (November 8, 2016): “Chemically-Induced Pulsed Fracturing Method”, by Ayman R. Al-Nakhli, Hazim H. Abass, Victor V. Hilab, Mirajuddin R. Khan, Ahmad S. Al-Otaibi.
4. US Patent 9,366,125 (June 14, 2016): “Carbonate based slurry fracturing using solid acid for unconventional reservoirs”, by Hazim H. Abass, Abdulrahman A. Al-Mulhem, Mirajuddin Khan, Victor V. Hilab.
5. US Patent 7,712,525 (May 11, 2010): “Determination of well shut-in time for curing resin-coated proppant particles”, by Hazim H. Abass, Mohammed H. Alqam, Mirajuddin Khan, Abdulrahman A. Al-Mulhem
6. US Patent 7,387,161 (Jun 17, 2008): “Determination of well shut-in time for curing resin-coated proppant particles”, by Hazim H. Abass, Mohammed H. Alqam, Mirajuddin Khan, Abdulrahman A. Al-Mulhem
7. US Patent 5,960,880 (Oct. 5, 1999): "A Method of Stabilizing the Unconsolidated Formation Surface of Fracture during Fracturing", by Philip D. Nguyen, Jimmie D. Weaver, Hazim H. Abass, Steven F. Wilson, Sanjay Vitthal, R. Clay Cole, Bobby K. Bowles

8. US Patent 5,547,023 (August 20, 1996): "Sand Control Well Completion Methods for Poorly Consolidated Formations", by Billy W. McDaniel, Hazim H. Abass
9. US Patent 5,499,678 (March 19, 1996): "Coplanar Angular Jetting Head for Well Perforating", by Jim B. Surjaatmadja, Timothy W. Helton, Hazim H. Abass
10. US Patent Number 5,482,122 (Jan. 9, 1996): "Oriented-Radial-Cores Retrieval for Measurements of Directional Properties", by Hazim H. Abass, Matthew E. Blauch, James J. Venditto
11. US Patent Number 5,431,225 (July 11, 1995): "Sand Control Well Completion Methods for Poorly Consolidated Formations", by Hazim H. Abass, David L. Meadows, John L. Brumley, David E. McMechan, James J. Venditto
12. US Patent Number 5,360,066 (Nov. 1, 1994): "Method for Controlling Sand Production of Formations and for Optimizing Hydraulic Fracturing Through Perforation Orientation", by James J. Venditto, Hazim H. Abass, David E. McMechan, Matthew E. Blauch
13. US Patent Number 5,285,683 (Feb. 15, 1994): "Method and Apparatus for Determining Orientation of a Wellbore Relative to Formation Stress Fields", by Hazim H. Abass, Saeed Hedayati, James J. Venditto
14. US Patent Number 5,265,462 (Nov. 30, 1993): "Method and Apparatus for Determining Permeability, Diffusivity, Porosity and Gas Storage in Gas Containing Substrates", by Matthew E. Blauch, Milton B. Enderlin, Hazim H. Abass, David E. McMechan

Published Patents (<http://patents.justia.com/inventor/hazim-h-abass>)

15. US 20160376884 Published December 29, 2016): "Well Testing", by Ayman R. Al-Nakhli, Hazim H. Abass, and Mirajuddin R. Khan.
16. US 20160264859 (Published September 15, 2016): Composition For Enhanced Fracture Cleanup Using Redox Treatment", by Ayman R. Al-Nakhli, Hazim H. Abass, Ahmad S. Al-Otaibi
17. US 20160160618 (Published June 9, 2016): High Power Laser-Fluid Guided Beam for Open Hole Oriented Fracturing", by Sameeh Issa , Hazim H. Abass
18. US 20150300142 (Published October 22, 2015): "Method for Enhanced Fracture Cleanup Using Redox Treatment", by Ayman R. Al-Nakhli, Hazim H. Abass, Ahmad S. Al-Otaibi.
19. US 2011/0061869 (Published March 17, 2011): "Formation of Fractures Within Horizontal Well", by Hazim H. Abass, Ashraf M. Tahini, Mohamed Y. Soliman, David Meadows.

III. Conference Papers

1. Abass, H.H. and Bass, D.M.: "The Critical Production Rate in Water Coning System," paper SPE 17311, Presented at the SPE Permian Basin Oil and Gas Recovery Conference held in Midland, Texas, March 10-11, 1988.
2. Yousif, M.H., Abass, H.H., Selim, E.D., and Sloan, E.D.: "Experimental and Theoretical Investigation of Methane Gas Hydrate Dissociation in Porous Media," paper SPE 18320, 1988.
3. Abass, H.H., Van Domelen, M.L., and El Rabaa, W.M.: "Experimental Observations of Hydraulic Fracture Propagation through Coal Blocks," paper SPE 21289 presented at the SPE Eastern Regional Meeting, Columbus, Ohio, Oct. 31-Nov. 2, 1990.
4. Abass, H.H., Kim, C.M., and Hedayati, S.: "Experimental Stimulation of Hydraulic Fracturing in Shallow Coal Seams," Presented at 32nd Rock Mechanics Symposium, Norman, Oklahoma, July 12-15, 1991.
5. Kim, C.M., and Abass, H.H.: "Hydraulic Fracture Initiation from Horizontal Wellbore: Laboratory Experiments," Presented at the 32nd Rock Mechanics Symposium, Norman, Oklahoma, July 12-15, 1991.
6. Hedayati, S., Abass, H.H., Soliman, M.Y., and Boyd, D.: "Review of Prefracturing Testing and Effect of Measured Parameters on Fracture Design," Southwestern Petroleum Short Course, Lubbock, TX, 1992.
7. Abass, H.H., Hedayati, S., and Meadows, D.L.: "Non-Planar Fracture Propagation from a Horizontal Wellbore - Experimental Study,"SPE 24823 presented at the 1992 SPE ATCE, Washington DC, October 4-7.

8. Poulsen, D.K., and Abass, H.H.: "Hydraulic Fracture Modeling in Formations Exhibiting Stress-Dependent Mechanical Properties," paper SPE 26599 presented at the 68th Annual Technical Conference and Exhibition of the SPE, Houston, Texas, Oct. 3-6, 1993.
9. Abass, H.H., Wilson, J.M., Venditto, J.J., and Voss, R.E.: "Stimulating Weak Formation Using New Hydraulic Fracturing and Sand Control Approaches," paper SPE 25494 presented at the Production Operation Symposium, Oklahoma City, OK, March 21-23, 1993.
10. Brahmadeo D., Abass, H.H., Meadows, D.L., Weaver, J.D., and Bennett, B.J.: "A Method To Select Resin-Coated Proppants," Paper SPE 26523 presented at the 68th Annual conference of the SPE, Houston, Texas, Oct. 3-6, 1993.
11. Malekzadeh, D., Azari, M., and Abass, H.H.: "Field Application of a New Well-Testing Concept for Evaluating Damaged and Stimulated Horizontal Wells," paper SPE 26443, presented at the 68th SPE Annual meeting held in Houston, TX, Oct. 3-6, 1993.
12. Brumley, J., Christiansen, C., Jorgenson, L., Kuhlman, R., and Abass, H.H.: "In-Situ Stress Field Determination and Formation Characterization - Offshore Qatar, Case History,": paper SPE/ISRM 28143 presented at the SPE/ISRM (Rock Mechanics in Petroleum Engineering) meeting, EUROCK'94, held in Delft, The Netherlands, on August 29-31, 1994.
13. Abass, H.H., Meadows, D., Brumley, J. and Hedayati, S.: "Oriented Perforations - A Rock Mechanics View," paper SPE 28555, presented at the 69th SPE Annual meeting, to be held in New Orleans, Louisiana, Sept. 26-38, 1994.
14. Surjaatmadja, J.B. and Abass, H.H.: "Elimination of Near-Wellbore Tortuosities by Means of Hydrojetting," paper SPE 28761, presented at the 1994 Asia Pacific Oil & Gas Conference, Melbourne, Australia, Nov. 7-10.
15. Peter, H., Abass, H., Gazi, N., Hunt, J., Shumway, M., and Besler, M.: "A Case History of Completing and Fracture Stimulating A Horizontal well," paper SPE 29443 to be presented at the 1995 SPE Middle East Oil Technical Conference & Exhibition to be held 11-14 March in Bahrain.
16. Abass, H.H. and Brumley, J.L.: "New Techniques for Preventing Sand Production in Oil and Gas Wells," Presented at the Sand Control Consortium in Intevep, Los Teques, Venezuela, 1995.
17. Brumley, J. and Abass, H.: Hydraulic Fracturing of Deviated Wells: Interpretation of Breakdown and Initial Fracture Opening Pressure", SPE 37363 presented at the Eastern Regional Meeting held in Columbus, Ohio, 23-25 Oct. 1996.
18. Deeg, W. F., Brumley, J. L., Abass, H.H.: Hydraulic fracturing of deviated wells: An investigation of pressure trends in fracture propagation during two stages of injection, 67th SPE Western Regional Meeting: a new dawn in the old West: Long Beach CA, 25-27 June 1997.
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III. Reports:

Numerous in-house reports have been generated by the author to solve field problems related to the areas of interest.

LANGUAGES

English, Arabic and Spanish