

KENNETH (KEN) W. WISIAN Ph.D. (Major General, USAF, retired)
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PROFESSIONAL EXPERIENCE

Present

Associate State Geologist, Texas
Associate Director, Environmental Division, Bureau of Economic Geology, The Univ. of Texas at Austin
Research Scientist, Center for Space Research
Lecturer, Aerospace Engineering and Engineering Mechanics Department
Affiliate, Center for Planetary Systems Habitability
Fellow, British Interplanetary Society
National Academies of Sciences, Engineering, and Medicine, Gulf Research Program, Health and Resilience Board

- Leading research efforts across a wide range of fields, from induced seismicity to renewable energy resources to remote sensing and disaster resiliency
- Current Research Project
 - Geothermal Entrepreneurship Organization <https://www.texasgeo.org/>, DOE funded

2018-2020

Executive Director – Disaster Research Program, Center for Space Research, The Univ. of Texas at Austin

- Leading new program focusing researchers across the UT System on manmade and natural disaster related work
- Supporting start-up research center in Urban Air Mobility and Autonomous Aerial Vehicles
- Led the creation of an international research partnership on disasters with NIED (Japan)

2017

Chief Architect – Defense & Government, SparkCognition (an AI start-up)

- Artificial Intelligence (AI) / Machine Learning (ML) applied to defense and government
- Teaming with DoD, prime contractors, scientists and engineers to develop solutions using state of the art AI

2015-2017

Senior Deputy Director – Coastal Protection & Disaster Recovery
Texas General Land Office

- Responsible for environmental and economic resiliency and restoration of coastal Texas & disaster recovery for the entire state
- Responsible for execution of billions of dollars of federal and state funds for research, resiliency projects and disaster recovery
- 24/7 State lead for oil spill response in coastal waters
- Five field offices plus Austin headquarters, total >150 personnel
- Led agency from “ad hoc” project execution to strategic master-planning, treating the coast as a complex whole
- Continual engagement with elected leaders at all levels (including legislative testimony)

2011–2015

Major General USAF/TXANG
Deputy Adjutant General of Texas
Commander, Texas Air National Guard

- Direct charge of 3200 personnel, \$500M facilities and equipment, \$100M budget at 5 facilities (incl. 3 schools)
- Deputy in charge for 24,000 personnel, \$1B facilities and equipment, \$250M budget in locations across Texas
- Innovator: designed and fielded significant emergency response resources
- Strategist: positioned the Texas Air National Guard (TXANG) to capitalize on the growth in cyber warfare and UAS/ drones
- Government/congressional relations expert: successfully fought for and protected resources in a declining budget
- International partnership builder: led international military engagements with Czech, Chilean and Mexican militaries
- Infrastructure protection and contingency response planning for Texas

1993-2011

Colonel USAF/TXANG, Wing, Group, Squadron & Base Commander

- Wing Commander, 147RW: direct charge of 1000 personnel, \$150M facilities and equipment, \$35M budget
 - 24/7 combat operations (MQ-1 Predator) from home base, ground-breaking innovations in new form of war
 - Led mixed, full-time/part-time, military, union, federal civil service and state employee force
 - Took over a Wing in disarray – patiently, steadily rebuilt morale and culture
- Joint Reserve Base Commander (mayor of a small town): support of 5000 personnel from all branches of DoD
 - Supported three 24/7 no-fail national defense and rescue missions
- Visionary leader: developed and executed programs to position units with next-gen and disaster response capabilities
- Combat and command time in Iraq, Afghanistan and the Balkans: Bronze Star, Air Medal, Aerial Achievement Medal

- Instructor (classroom and in-air for 20+ years) responsible for Air Force continuing education and curriculum development

1993-2001 Post doc, graduate student, instructor, Southern Methodist University

- Responsible for leading edge applied physics research from concept to execution to peer-reviewed publication
 - Published more than two dozen papers and reports (10 as lead author) in geophysics
 - An editor and coordinator for World Geothermal Congress 2000
 - Field lead for several multi-institution and multi-national projects
 - Conducted contract research for geothermal, water, minerals and energy industries
 - Led graduate student team for teaching undergraduate courses

1982-1992 Captain USAF, B-52 Navigator/Bombardier, Flight Test Navigator

- Responsible for daily technical mission execution and leading-edge Developmental / Operational Test & Evaluation
 - Senior operator, instructor & evaluator at largest USAF bomber unit (2nd Bomb Wing, 8th AF, Strategic Air Command)
 - Graduate of the USAF Test Pilot School
 - Chief Test Navigator AC-130U / MC-130H - Led systems integration testing of one of the most complicated weapon systems in Air Force
 - Responsible for a team of dozens of engineers and flight crew in test planning, execution, analysis and reporting

1979-1982 Undergraduate Research Assistant, Univ. of Texas, McDonald & NASA Kuiper Airborne Observatories

- Responsible for public education, state of the art scientific equipment construction, programming, and data analysis

EDUCATION

1999	Ph.D. in Geophysics, Southern Methodist University
2004	M.S. in Strategic Studies, US Army War College
1990	M.S. in Geology, Centenary College of Louisiana
1990	Graduate, US Air Force Test Pilot School
1982	B.A. in Physics, University of Texas at Austin

AWARDS, HONORS, SIGNIFICANT ACHIEVEMENTS

2019	Fellow, British Interplanetary Society
2018	Developed (w/ University of Texas at Austin) Innovation short course for senior military leaders
2015-16	Developed (w/ University of Texas at San Antonio) Cyber Warfare short course for gov/mil/civil executives
2014	CAPSTONE General and Flag Officer Course, National Defense University
2013	Harvard, Kennedy School: Senior Executives in National and International Security course
2005&08	Afghanistan deployments, leadership roles, combat missions, Bronze Star Medal
2005&08	Hurricane disaster responses, Texas and Louisiana, leadership roles, operational missions
2003	Iraq deployment, combat missions, Air Medal
2003	Airborne commander, initial NASA shuttle Columbia search & rescue
2002-03	Created first in nation full Night Vision Qualification program for a National Guard C-130 unit
2002	Institute for National Security Studies grant to study India & Pakistan's Nuclear Doctrine and Deterrence
2000	Contributing editor, <i>Proceedings of the World Geothermal Congress 2000</i>
1999	Finalist, NASA biennial astronaut selection
1997-98	Albritton & Champlin research awards (Southern Methodist University)
1996-00	Multiple Balkan theater deployments, leadership roles, combat missions
1995	T.E. Williams Research Award for excellence in field research (Southern Methodist University)
1992-99	Roy M. Huffington Fellowship (Southern Methodist University)
1988	Sigma Gamma Epsilon Geology Honor Society
1982-83	Distinguished or Outstanding Graduate of Advanced Navigator, Navigator/Bombardier & B-52 training
1979-82	USAF ROTC scholarship, Distinguished Graduate
1981	National Sojourners Award (Shriners)

MEMBERSHIPS & CHARITIES

British Interplanetary Society - Fellow
 American Institute of Aeronautics and Astronautics – Senior Member
 Texas Military Forces Museum Foundation – President
 US Global Leadership Coalition – Texas Advisory Committee
 World Affairs Council

National Guard Associations of the US and Texas
Air Force Association
The Long Now Foundation
Armand Bayou Nature Center - past Board of Directors
Native Prairie Association of Texas - past Board of Directors

PUBLICATIONS

- Wisian, K.W. and J.W. Traphagan, The Search for Extraterrestrial Intelligence: A Realpolitik Consideration, *Space Policy* 52C, 101377, <https://doi.org/10.1016/j.spacepol.2020.101377>, 2020.
- Traphagan, J.W. and K. W. Wisian, Protocols for Encounter with Extraterrestrials: lessons from the Covid-19 Pandemic, *J. Brit. Inter. Planet. Soc.* 73(7), July 2020. https://www.bis-space.com/membership/jbis/2020/JBIS-v73-no07-July-2020_r0cgh4.pdf
- Wisian, K.W. On SETI, International Law, and Realpolitik Centauri Dreams, <https://www.centauri-dreams.org/2020/05/22/on-seti-international-law-and-realpolitik/>, May 22, 2020.
- Wisian, K.W., First Contact in Space Protocols, *Centauri Dreams*, <http://www.centauri-dreams.org/?p=35612>, May 13, 2016.
- Wisian, K.W., Military Planning for Interstellar Flight, 100 Year Starship 2014 Symposium Conference Proceedings, 100 Year Starship, pp. 311-322, 2014.
- Wisian, K.W., and D.D. Blackwell, Numerical Modeling of Basin and Range Geothermal Systems, *Geothermics*, v.33:6, pp. 713-741, 2004.
- Wisian, K.W., D.D. Blackwell, and M. Richards, Correlation of surface heat loss and total energy production for geothermal systems, *5th International Workshop on Heat Flow and the Lithosphere Structure*, Geophysical Institute, Academy of Sciences of the Czech Republic, 2001.
- Wisian, K.W., Insights into extensional geothermal systems from numerical modeling, *Proceedings of the World Geothermal Congress 2000*, CD-ROM, 2000.
- Wisian, K.W. Numerical Modeling Basin and Range Geothermal Systems, Ph.D. Dissertation, 177p. 1999.
- Wisian, K.W., D.D. Blackwell, and M. Richards, Heat flow in the Western United States and extensional geothermal systems, *Proceedings of the 24th Annual Stanford Workshop on Geothermal Reservoir Engineering*, 219-226, 1999.
- Blackwell, D.D., K.W. Wisian, D Benoit, and B. Gollan, Structure of the Dixie Valley Geothermal System. a "typical" Basin and Range Geothermal System, from thermal and gravity data, *Geothermal Resources Council Transaction*, v.23 pp. 525-531, 1999.
- Wisian, K.W., D.D. Blackwell, and D. Benoit, Thermal Conditions in Beowawe Well Ginn 2-13, *Geothermal Resources Council Transaction*, v.22, 1998.
- Wisian, K.W., D.D. Blackwell, S. Bellani, J.A. Henfling, R.A. Norman, P.C. Lysne, A. Förster and J. Schrötter, Field comparison of conventional and new technology temperature logging systems, *Geothermics*, v.27:2, pp. 131-141, 1998.
- Matava, K, R.K. Nishimori, D.D. Blackwell, and K.W. Wisian, Salt Domes as Vertical Migration Pathways for Basin Fluids, American Geophysical Union fall session, *EOS*, v. 79, 1998.
- Blackwell, D.D., K.W. Wisian, and G.R. Beardsmore, Application of temperature logging technology to increasing the accuracy of basin thermal models, *Applications of Emerging Technologies, Unconventional Methods in Exploration v.5*, Institute for the Study of Earth and Man, Dallas Texas, 1997.
- Blackwell, D.D., K.W. Wisian, R.K. Nishimori, and R.J. McMullen, Using high-quality temperature logs to investigate the thermal structure of sedimentary basins, *CSPG-SEPM Joint Convention Program and Abstracts*, p. 42, 1997.
- Wisian, K.W., D.D. Blackwell, B. Teplow, and T. Meidev, Interpretation of geophysical data for the Vale Oregon, geothermal system, *Geothermal Resources Council Transaction*, v.20, pp. 435-438, 1996.
- Wisian, K.W., D.D. Blackwell, S. Bellani, J.A. Henfling, R.A. Norman, P.C. Lysne, A. Förster and J. Schrötter, How hot is it? (a comparison of advanced technology temperature logging systems), *Geothermal Resources Council Transaction*, v.20, pp. 427-434, 1996.
- Blackwell, D.D., K.W. Wisian, and J.L. Steele, Geothermal Regime in the Central and Eastern United States East of the Rocky Mountains, *Proceedings of the World Geothermal Congress*, pp. 649-653, 1995.
- Blackwell, D.D., J.L. Steele, and K.W. Wisian, Results of Geothermal Resource Evaluation For the Eastern United States, *Geothermal Resources Council Transactions*, Vol. 18, pp. 161-164, 1994.
- Blackwell, D.D., S. Kelley, and K.W. Wisian, Thermal Regime of Sedimentary Basins Based on Precision Temperature Logs of Deep Wells, *Proceedings: VIIIth International Symposium on the Observation of the Continental Crust Through Drilling*, pp. 277-280, 1994.

PRESENTATIONS

- 2020 *The Overlooked Risk of a SETI Success*, Center for Planetary Systems Habitability, Univ. of Texas at Austin, https://utexas.zoom.us/rec/play/7pN4cr_9_zs3GtWQtwSDU6NwW9S6J6usgykcr_QFzUyzUCUBNwavYLoTarvn11DIF3vRY43AfZ5v7m?continueMode=true
- 2020 Panelist on; *Our Geothermal Future*, Pivot 2020, <https://www.texasgeo.org/pivot2020>
- 2020 *Interview with Ken Wisian*, The Daily JO by John Oberg <https://podcasts.apple.com/us/podcast/019-ken-wisian/id1513017500?i=1000480893816>

2020 *Crisis Leadership* – Human Dimensions of Organization, University of Texas At Austin <https://hdo.utexas.edu/don't-panic!-timeless-principles-for-leading-through-a-crisis/>

2020 *Crisis Leadership* – Incubator ATX, Concordia University, Austin, TX
<https://www.youtube.com/watch?v=BhCgzGXp6uA&feature=youtu.be>

2019 Panel Moderator – *DoD Innovation* (AFWERX, DIU & MD5) for UT McCombs Executive Education, Austin, TX

2018 Water Policy Summit – National Water Center, *Coastal Resiliency: Recent Experiences and a Perspective from Texas*

2017 *Keynote speaker* (on Artificial Intelligence), Weatherford Enterprise Software Conference, Houston, Texas

2016 Texas UAS Summit & Expo - *How Texas State Agencies Utilize Unmanned Aircraft Systems* (Expert Panel), Austin

2015 Starship Congress 2015 – *First contact in space protocols*, Drexel University, Philadelphia, PA

2014 100 Year Star Ship Conference – *Military planning for interstellar flight*, Houston

2006-2019 University of Texas at Arlington College of Business – guest lecturer on leadership

2006-2015 Numerous civic organizations on the National Guard/USAF/US military, Texas

2004 Dickinson College - *On the connections between water resources and conflict*, Carlisle, PA

2001 5th International Workshop on Heat Flow and the Lithosphere Structure, Czech Republic

2000 World Geothermal Congress, Bepu, Japan

1999 24th Annual Stanford Workshop on Geothermal Reservoir Engineering, Stanford, CA

1996-1999 Geothermal Resources Council conference, San Diego, CA

REPORTS

Wisian, K.W., India and Pakistan since 1998 and the United State's Effect on Nuclear Stability, *Institute for National Security Studies*, Jun 2004.

Blackwell, D.D. and K.W. Wisian, Temperature tool calibration and temperature logging at Dixie Valley geothermal field, a report for: Oxbow Geothermal Corporation, 28p., 1998.

Blackwell, D.D. and K.W. Wisian, Gravity analysis of the area of the Dixie Valley, Nevada geothermal system, a report for: Oxbow Geothermal Corporation & Caithness Resources Inc., 32p., 1997.

Blackwell, D.D., G.R. Beardsmore, and K.W. Wisian, Thermal structure of the Bayou Bleu salt dome, Louisiana from precision temperature logs and thermal conductivity measurements, a report for: Mobil Exploration and Production Technology Company, 37p., 1997.

Blackwell, D.D., K.W. Wisian, and M. Richards, Geothermal Resources of the United States based on heat flow and gradient information, Report for DOE contract #C91-103450, 50p., 1996.

Blackwell, D.D. and K.W. Wisian, Interpretation of Thermal Results at Vale, Oregon Geothermal System, a report for: Trans-Pacific Geothermal Corporation, 46 p., 1995.

Blackwell, D.D. and K.W. Wisian, S. Bellani, Temperature Logs at Barrick Goldstrike Mine, Carlin, Nevada, July 17 to July 20, 1995, a report for: Barrick Goldstrike Mines Inc., Hydrology section, 19 p., 1995.

AERONAUTICAL INFORMATION

Rating: Master Navigator, Flight hours: 3800, combat hours: >100, high & medium risk test flight hours: >70

Primary Aircraft Flown: RC-26B, C-130H, B-52G, MC-130H, AC-130U, T-38, F/RF-4