Biographical Data

Lyndon B. Johnson Space Center
Houston, Texas 77058

National Aeronautics and Space Administration

HARRISON H. SCHMITT (PH.D.)
NASA ASTRONAUT (FORMER)

PERSONAL DATA: Born July 3, 1935, in Santa Rita, New Mexico. Married to Teresa Fitzgibbon. Recreational interests writing, skiing, fishing, carpentry, hiking, handball, squash and running.

EDUCATION: Graduated from Western High School, Silver City, New Mexico; received a bachelor of science degree in science from the California Institute of Technology in 1957; studied at the University of Oslo in Norway from 1957 to 1958; received a doctorate in geology from Harvard University in 1964.

ORGANIZATIONS: The Geological Society of America (Honorary Fellow); The American Geophysical Union (Fellow); The American Association for the Advancement of Science (Fellow); The American Institute of Aeronautics and Astronautics (Fellow); Sigma XI; American Association of Petroleum Geologists (Fellow); The American Institute of Mining, Metallurgical and Petroleum Engineers (Honorary Member); New Mexico Geological Society (Honorary Member); The American Astronautical Society.

SPECIAL HONORS: Fulbright Fellowship in Norway (1957 to 1958); Kennecott Fellowship in Geology at Harvard University (1958 to 1959); Harvard Fellowship (1959 to 1969); Parker Traveling Fellowship at Harvard University (1961 to 1962); National Science Postdoctoral Fellowship, Department of Geological Sciences, Harvard University, (1963 to 1964); Johnson Space Center Superior Achievement Award (1970); NASA Distinguished Service Medal (1973); Fairchild Fellow, Caltech (1973 to 1974); California Institute of Technology, Distinguished Graduate (1973); Honorary Fellow of the Geological Society of America (1973); Arthur S. Fleming Award (1973); Honorary Doctorate of Engineering from Colorado School of Mines (1973); Republic of Senegal's National Order of the Lion (1973); Honorary Life Membership of New Mexico Geological Society (1973); Honorary Member of Norwegian Geographical Society (1973); Honorary Fellow American Institute of Mining, Metallurgical and Petroleum Engineers (1973); Honorary Fellow of The Geological Society, London (1974); Honorary Doctorate Degree from Rensselear Polytechnic Institute (1975); Honorary Doctorate Degree from Franklin and Marshall College (1977); International Space Hall of Fame (1977); Fellow American Institute of Aeronautics and Astronautics (1977); Engineer of the Year Award, National Society of Professional Engineers, Legislative Recognition Award (1981); National Security Award, highest Civil Defense Award (1981); Honorary Doctorate of Astronautical Science from Salem College (1982); NASA Distinguished Public Service Medal (1982); Lovelace Award, Society of NASA Flight Surgeons (1989); G.K. Gilbert Award, Planetary Geology Division, Geological Society of America (1989); Award for Excellence, Presbyterian Healthcare Foundation (1990); Aviation Week Legend Award (2002); American Association of State Geologists Pick and Gavel Award (2008); and Honorary Fellow of the Geological Society of America; American Institute of Mining, Metallurgical and Petroleum Engineers; and Geological Society of London. In recognition of past service, the U.S. Department of State in July 2003 established the Harrison H. Schmitt Leadership Award for U.S. Fulbright Fellowship awardees. He also traveled in Europe in 2009 as a speaker and specialist for the State Department. In 2007, Schmitt was awarded the first Eugene M. Shoemaker Memorial Award by Arizona State University and is the first recipient of the National Space Society's Gerard K. O'Neill Memorial Space Settlement Award. He recently has been awarded the 2010 inaugural Columbia Medal by the Aerospace Division of the American Society of Civil Engineers.

EXPERIENCE: Schmitt was a teaching fellow at Harvard in 1961 where he assisted in teaching a course in ore deposits. Prior to his teaching assignment, he did geological work for the Norwegian Geological Survey on the west coast of Norway and for the U.S. Geological Survey in New Mexico and Montana. He also worked for two summers as a geologist in southeastern Alaska.

Before joining NASA, he was with the U.S. Geological Survey's Astrogeology Center at Flagstaff, Arizona. He was project chief for lunar field geological methods and participated in photo and telescopic mapping of the moon, and was among USGS astrogeologists instructing NASA astronauts during their geological field trips.

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He has logged more than 2,100 hours flying time; 1,600 hours in jet aircraft.

Dr. Schmitt was selected as a scientist-astronaut by NASA in June 1965. He later completed a 53-week course in flight training at Williams Air Force Base, Arizona. In addition to training for future manned space flights. He was instrumental in providing Apollo flight crews with detailed instruction in lunar navigation, geology, and feature recognition. Schmitt also assisted in the integration of scientific activities into the Apollo lunar missions and participated in research activities requiring geologic, petrographic, and stratigraphic analyses of samples returned from the moon by Apollo missions.

He was the backup lunar module pilot for Apollo 15.

On his first journey into space, Dr. Schmitt occupied the lunar module pilot seat for Apollo 17, the last scheduled manned Apollo mission to the United States, which commenced at 11:33 p.m. (CST), December 6, 1972, and concluded on December 19, 1972. He was accompanied on the voyage of the command module "America" and the lunar module "Challenger" by Eugene Cernan (spacecraft commander) and Ronald Evans (command module pilot). In maneuvering "Challenger" to a landing at Taurus-Littrow, which is located on the southeast edge of Mare Serenitatis, Schmitt and Cernan activated a base of operations facilitating their completion of 3 days of exploration. This last Apollo mission to the moon for the United States broke several records set by previous flights and include: longest manned lunar landing flight (301 hours, 51 minutes); longest lunar surface extravehicular activities (22 hours, 4 minutes); largest lunar sample return (an estimated 115 Kg, 249 lb); and longest time in lunar orbit (147 hours, 48 minutes). Apollo 17 ended with a splashdown in the Pacific Ocean approximately 0.4 miles from the target point and 4.3 miles from the prime recovery ship, USS TICONDEROGA.

Dr. Schmitt logged 301 hours and 51 minutes in space, of which 22 hours and 4 minutes were spent in extravehicular activity on the lunar surface.

In July of 1973 Dr. Schmitt was appointed as one of the first Sherman Fairchild Distinguished Scholars at the California Institute of Technology. His appointment was extended to run through July 1975. This appointment ran concurrently with his other activities at NASA.

In February 1974, Schmitt assumed additional duties as Chief of Scientist-Astronauts.

Dr. Schmitt was appointed NASA Assistant Administrator for Energy Programs in May 1974. This office has the responsibility for coordinating NASA support to other Federal Agencies conducting energy research and development and for managing NASA programs applying aeronautics and space technology to the generation, transmission, storage, conservation, utilization and management of energy for terrestrial applications.

In 1975, after 2 years managing NASA's Energy Program Office, Schmitt fulfilled a long-standing personal commitment by entering politics. Elected in 1976, he served a 6-year term in the U.S. Senate beginning in 1977. Senator Schmitt, the only "natural scientist" in the Senate since Thomas Jefferson, was vice president of the United States and president of the Senate and worked as a member of the Senate Commerce, Banking, Appropriations, Intelligence, and Ethics Committees. In his last 2 years in the Senate, Schmitt held the position of chairman of the Commerce Subcommittee on Science, Technology, and Space and of the Appropriations Subcommittee on Labor, Health and Human Services, and Education. He later served on the President's Foreign Intelligence Advisory Board, the President's Commission on Ethics Law Reform, the Army Science Board, as co-chairman of the International Observer Group for the 1992 Romanian elections, and as vice chairman of the U.S. delegation to the 1992 World Administrative Radio Conference in Spain. He is on the Maguire Energy Institute's Board of Advisors, and served as co-chair of NASA's Human Planetary Landing Systems Capabilities Road-mapping effort from 2004 to 2005.

Harrison Schmitt became chairman of the NASA Advisory Council in November 2005 and served until October 2008. He led the council's deliberations on issues related to Aeronautics, Audit and Finance, Biomedicine, Exploration (human flight systems development), Human Capital, Science and Space Operations. He also consults, speaks, and writes on policy issues of the future; the science of the moon and planets; the history of space flight and geology, space exploration, space law, climate change and the American Southwest. Presently, he is chair emeritus of The Annapolis Center (risk assessment) and is adjunct professor of engineering at the University of Wisconsin - Madison, teaching "Resources from Space." Schmitt became a consultant to the Fusion Technology Institute at the University of Wisconsin in 1986, advising on the economic geology of lunar resources and the engineering, operational, and financial aspects of returning to the moon. He is on the staff of the Institute for Human and Machine Cognition of Pensacola, Florida. Current board memberships include Orbital Sciences Corporation, Edenspace Systems Corporation, PhDx Systems, Inc., and The Heartland Institute and, as a retired director, he continues as an emeritus member of the Corporation of the Draper Laboratory. He has also served as a member of the Energy Department's Laboratory Operations Board. In 1997, Schmitt co-founded and became chairman of Interlune-Intermars Initiative, Inc., advancing the private sector's acquisition of lunar resources and Helium-3 fusion power and clinical use of medical isotopes produced by fusion-related

processes. He is the author of “Return to the Moon” (Springer-Praxis, 2006) that describes a private enterprise approach to providing lunar Helium-3 fusion energy resources for use on Earth.

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