

## Carl Marvin Wiggins III

Carl was born 5 Aug 1941 in Jackson, MS to C Marvin Wiggins Jr. and Mary Cecelia Waddell. He attended elementary school in Baton Rouge, LA, high school in Beaumont, TX and graduated from Lamar State College of Technology (now Lamar University) in Beaumont with a BS in Physics in 1964. He received his MS in Physics from Sam Houston University in Huntsville, TX in 1966 and was a PhD Candidate in Physics at New Mexico State University in Las Cruces, New Mexico until 1973. Carl married Caroline Olson of Brazoria, TX in 1965 and they had a son, Jonathon, born in Las Cruces in 1969.

At 13 while in the 8<sup>th</sup> grade, Carl took his first job: delivering the Beaumont Enterprise and Journal newspapers on a neighborhood route morning and afternoons. In the summer before his senior year in high school, Carl began working in Beaumont grocery stores first as a sacker, then a shelf stocker and finally as a checker. The grocery store jobs enabled him to pay for college tuition and books at Lamar. For three summers during his undergrad college years he worked for Sun Oil Company which paid much better. He began the first summer cutting weeds and hauling drill pipe with other summer hires on Belle Isle off the LA coast south of Morgan City and finished that summer working in Sun's Production Laboratory in Beaumont. The next two summers found him working as a "jug hustler" on Sun Oil seismograph crews in Anahuac, TX, Norman, OK and Shamrock, TX. Probably his most exciting experience was driving the dynamite truck from Anahuac to Norman during the summer lightning storms and tornadoes in OK. During the summer after his first year in graduate school at Sam Houston, Carl was able to parlay his Sun Oil experience and physics background to land a job with Geophysics Associates International of Houston. His job was to help install and then operate geophysical survey instruments on a 100-ft ship operating in the Pacific off of the continental shelf. The equipment included the first ever commercial use of the LaCosta & Romberg continuously recording surface ship gravity meter and first Varian proton precession magnetometer. He worked two 6-hr shifts a day. The ship ran 1-mile grid lines between Tijuana, Mex on the south and Pt. Magu, CA on the north out to about 100 miles offshore. At summer's end, he married Caroline.

Carl began his professional career with BDM, a professional science and engineering professional services firm, in Albuquerque, NM, in 1973. Over the next 32 years, while BDM merged with Ford Aerospace, TRW Mission Systems and finally with Northrop Grumman Corporation, growing from a small company of 30 to one with over 100,000 employees, Carl grew with it. He began as a project scientist and over his career served as a line manager, program manager, marketing and business development manager and senior principal scientist. During his career, Carl performed many projects for the US Army, Navy, Air Force, and a number of National Laboratories including Oak Ridge, Los Alamos, Lawrence Livermore and Sandia. Carl also served commercial clients including the Electric Power Research Institute

(EPRI) and a number of electric utility companies in the US and Canada. One of his areas of expertise was applied electromagnetics, especially EMI/EMC/EMP susceptibilities and vulnerabilities of missile, aircraft, ship, satellite and electric power station electronic and control systems where he helped develop techniques to improve their survivability against nuclear- and non-nuclear-induced electromagnetic threats. His other areas of expertise included tactical and strategic high energy laser system modeling and simulation and the development of ground- and air-based robotic multi-sensor fusion systems for countermine and counter-IED applications. Carl published and presented more than 100 papers in peer-reviewed technical journals, transactions and forums (IEEE, SPIE, etc.). Carl holds US and foreign patents for an Advanced Cable Fault Locator that his team developed for EPRI. He retired from Northrop Grumman in Fairfax, VA in July 2005.

Carl unretired in October 2005 when he joined Sensor Concepts & Applications, Inc., Glen Arm, MD. SCA was a small company primarily engaged in the test and evaluation of nuclear scanning systems for radiographic imaging of commercial cargo entering the US via seaports and land border crossings. The clients were the US DOD Counter Narco-Terrorism Project Office (CNTPO), US Border Protection Agency, US Army, Transportation Security Administration and the DOD Domestic Nuclear Detection Office. On one project, Carl was tasked to catalog, tag, disassemble, transport and store the Pulsed Fast Neutron Analysis (PFNA) system facility (a \$23M Congressionally-mandated technology demonstration project) at the Isleta border crossing in El Paso, TX. As part of this effort he was required to completely remove the entire structure including its radiation shielding, return the site to its original desert condition, and conduct an Environmental Assessment to certify that there was no impact to the environment. On other projects Carl was project developer and manager where he helped plan, develop special test equipment and then support nuclear inspection system testing. Carl supported test and evaluation of three, large-scale, emerging non-intrusive inspection technologies being developed by Rapiscan, SAIC and L-3/Varian for DNDO and CBP clients. These were 3-month long tests conducted at sites in Mountain View and Vista, CA and Las Vegas, NV. At the end of one of these tests, Carl helped disassemble and store the L-3/Varian gamma ray inspection system at the National Test Facility (Nevada Test Site). Carl retired from SCA in June 2012.

Carl was active in public service with the Boy Scouts of America, Albuquerque, NM from 1976 – 1981 where he was a Cub Scout Pack Leader, Assistant Scoutmaster and then Scoutmaster of BSA Troop 496. Later Carl served on the BSA District Council in Albuquerque.

Carl and Caroline Wiggins are now both retired and reside in Friendswood, TX. Carl enjoys photography, reading and genealogy, especially family research. He currently serves as the webmaster for the Cradle of Texas Chapter SAR website that he developed and now maintains.