



# Hands Across History



A joint newsletter for the White Sands Historical Foundation and the White Sands Pioneer Group.

Volume XII, Letter I

February 2016

## Paul & Joy Arthur Make Stunning Donation

In early January, the White Sands Missile Range Historical Foundation received a remarkable surprise in the form of a check for \$337,912. The donation was from the Paul and Joy Arthur estate and is intended to support the construction of a new building for the missile range's museum - to replace the temporary buildings now used for the exhibit hall.

The co-trustees for the "Rear Admiral Paul K. Arthur, Ret. and Joy L. Arthur Living Trust" are daughter Lia F. Brodnax and son Gregory V. Arthur. According to Lia, the money clearly demonstrates the love the Arthurs had for White Sands Missile Range. She added that the greatest thanks they could receive would be to see the money used for the museum soon.

Paul and Joy spent entire careers at the missile range

and were always involved in its activities as well as trying to preserve the incredible history found at White Sands. Their vision is to showcase the hard work of so many over the decades in a modern facility that is enjoyable and informative to visit.

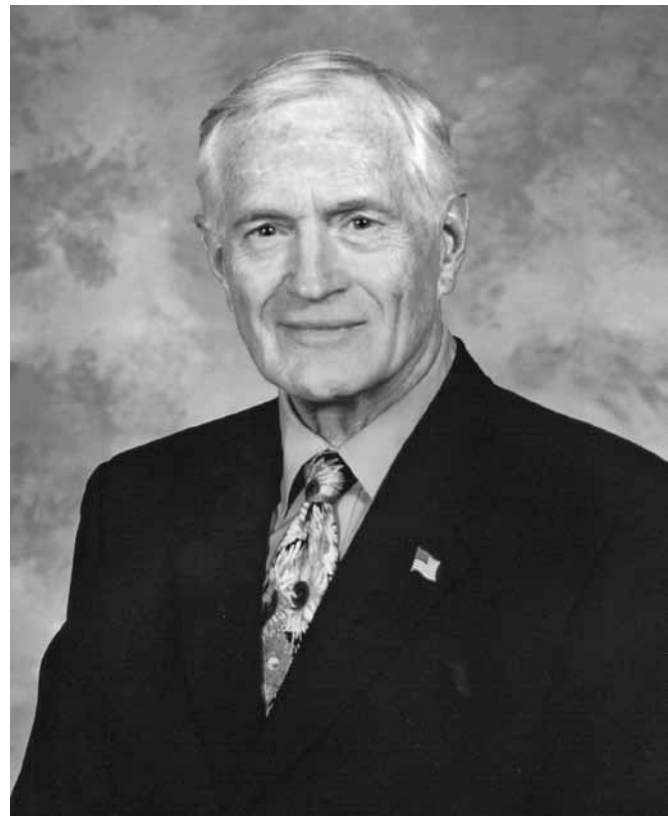
The Foundation plans to add the money to the half million dollars already generously donated by numerous businesses and individuals. This year, the money will be put to work as the Foundation will work with leaders at White Sands to start the process of building a new museum building.

Both Paul and Joy were elected to the missile range's Hall of Fame in 2005, the first husband and wife to be so honored. Joy's title for the hall of fame is "Research Electronic Engineer" while Paul's is "Tester-Director-Mentor."

see **Distinguished Careers**, page 3



Joy Arthur's Hall of Fame portrait.



Paul Arthur's Hall of Fame portrait.

# Tribute To The White Sands Dynamic Duo

By Frances Williams

Paul and Joy Arthur were the consummate professionals, competent, industrious, committed to their work and always focused on mission accomplishment. When they came to work at WSMR, I was working in Logistics as the Accountable Property Officer for Aircraft and Automotive spare parts, and while this was a non-traditional job for a woman, I was awed by the fact that WSMR had a woman engineer, something I had never met before.

I met Paul briefly when he came to the Motor Pool and was impressed by his courtesy and his calm demeanor. I did not interact with him until I became the Federal Women's Program Manager and he was the Deputy Director of the Army Missile Test Directorate. When I became the EEO Officer, we had occasion to discuss the strides made in his organization with regard to the hiring, training and promotions of women and minorities.

At his luncheon I was really bowled over by the testimony of women and minorities who spoke of his support and the encouragement he provided as a mentor and supervisor both in and outside of WSMR. They attributed their success to his interest and guidance in their progress and their future.

Joy was a shining example of what a woman could become as she would not permit limits to be placed on what she could and could not do. She was the first female engineer to

be hired at WSMR. In 1958 that was an oddity.

In spite of the fact that she was working in an all male environment, she did not become "one of the boys," keeping her persona and identity in tact as an engineer. When we were both shown as "Missile Maids" in a newspaper article, we spoke briefly about the fact that we never saw men depicted as "Missile Boys."

Knowing her views, I tried incessantly to have Joy speak at conferences and seminars as a role model for women and to demonstrate that women could become engineers and scientists. She refused my requests because she wanted only to be known as an engineer and not a "female engineer." However, she served as an example to all of us as to what could be possible and that barriers could be overcome if you had the dedication of purpose to pursue whatever it is you wanted to be and not allow limits to be placed on your dreams and expectations.

Joy was also a very devoted wife and mother. She and Paul were life partners and although they worked in separate organizations at WSMR their life's work touched us in so many different ways, contributing to the success of WSMR, to the defense of our nation and in fact in many ways making this world a better and safer place. May their memory be for a blessing.

## Redstone Correction And More Information About The 500K Test Stand

In the last *Hands Across History* newsletter (November 2015), I used some material from Sidney Cole to write about the 500K Static Test Stand. Since the Redstone missile played such a large role in the life of 500K, I included a few sentences about the missile. In that section I made the mistake of repeating Encyclopedia Astronautica's note that there were Redstone firings from Fort Wingate.

Carlos Bustamante called to set the record straight, pointing out that there were plans to shoot Redstones from Wingate but that it never happened.

At the same time, I was digging through old *Wind and*

*Sand* newspapers and came across an intriguing little article in the May 19, 1961 issue. The piece said that in August 1959 the "Post Engineer Projects Office received a request (crash basis) from the WSMR Ordnance Mission Branch to install a flame deflector and accessories at the 500K Static Test Stand." It went on to say the test was for motors "used in today's Project Mercury" and the results were "perfect."

Project Mercury looked at several configurations of Redstone/Jupiter. It would be interesting to know exactly what was tested at 500K in Aug/Sep 1959. If you know, please contact me. **Jim Eckles, Editor**

## Statement of Purpose and Membership

The "Hands Across History" newsletter is published by the White Sands Missile Range Historical Foundation and the White Sands Pioneer Group (WSPG). Both nonprofit organizations aim to preserve the accomplishments of White Sands Missile Range.

The newsletter is intended to keep members of both groups informed about current events and share information of common interest. The edi-

tor is Jim Eckles. He can be contacted by email at [nebraska1950@comcast.net](mailto:nebraska1950@comcast.net) or at either address below.

Membership to either organization is open to anyone who shares their goals. However, details of membership (dues, etc.) differ between the two groups. For more information, please contact the appropriate organization and we will send it via the Post Office or email.

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White Sands, N.M. 88002

White Sands Historical Foundation  
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# Distinguished Careers — CONTINUED FROM PAGE 1

The write-ups for their induction speak for themselves and are reprinted below.

Joy Arthur was born in Manila, Philippines, on Dec. 2, 1935. She earned a bachelor's degree in electrical engineering from Purdue University in 1956. She began working at WSMR in May 1958 developing instrumentation and was the first female engineer to work at White Sands.

In 1962, she transferred to what is now known as the Army Research Laboratory Survivability and Lethality Analysis Directorate, Information Electronic Protection Division. There, she evolved as a national leader in supporting Army systems to determine their vulnerabilities to electronic warfare countermeasures.

Joy innovated techniques to increase the dispersion efficiency of chaff and demonstrated absorbing chaff, environmentally degradable chaff, illuminated chaff, chaff rockets and rounds.

She designed, developed and demonstrated jamming technology. This included a missile-borne X-band jammer with a hydrazine-driven power supply and a multi-spectral jammer using explosively detonated inert gasses.

Her numerous other projects included determining the vulnerabilities of Army weapons such as the Patriot and MLRS, protecting against frequency-agile laser threats, developing non-lethal weaponry, creating radio-frequency decoys that simulate helicopters and detecting the unintentional radiated emissions from electronic systems and underground facilities.

Joy retired in February 2005 after 46 years of inventive and proactive service to the country.

Paul Arthur was born in Kansas City, Mo., on Jan. 14, 1931. He graduated from Lafayette High School, Ohio, in 1948 and enlisted in the U.S. Navy. After four years, he left active duty and began a lifetime in the Naval Reserve, where he rose to the rank of rear admiral and mentored generations of sailors and leaders.

Paul earned a bachelor's degree in electrical engineering from Purdue University in 1956 and began working that year as an electronics engineer in the WSMR Missile Flight Safety Office. He transferred to the Army Materiel Test and Evaluation Directorate in 1962.

Strong leadership abilities and a willingness to accept increasingly challenging roles pushed Paul up the ladder of hierarchy at WSMR. He served as Chief of the High Altitude Air Defense Projects Branch, Chief of the Air Defense Test Division, Deputy Director and Director of the Materiel Test Directorate and Deputy Commander and Commander of the White Sands Test Center. Paul inevitably rose to the highest civilian position at WSMR, Technical Director and Deputy to the Commanding General, from which he retired in October 2004 after an incredible 55 years of service to the United States.

Paul's service was characterized by his customer focus and exceeding mission requirements. He was known for his relentless drive to ensure the installation's ability to meet the nation's future test-and-evaluation demands. In this quest, he became a statesman, meeting with legislators and working with the Range Commanders Council, the Bureau of Land Management, the New Mexico State Land Office and the New Mexico Space Commission.

*See page 7 for a list of past and current donors to the Museum*

## WSMR Hall Of Fame Nominations Are Due By March 31

White Sands Missile Range is now accepting nominations from all sources until March 31 for its Hall of Fame.

The Hall of Fame was established in 1980, and the purpose is to give appropriate and perpetual recognition to those members of the WSMR workforce, military and civilian, who have made singularly significant contributions to the mission on the Range and to the surrounding communities. It is the highest award the missile range can bestow on one of its own.

Past honorees include such individuals as Wernher von Braun, the famous German rocket scientist, and Dr. Clyde Tombaugh, the astronomer who discovered Pluto. But you don't have to be a world-class scientist to be recognized in the hall of fame. If anything, Tombaugh and von Braun are the exceptions.

"We've had a lot of wonderful, hard-working people who have worked at WSMR, but this honor is reserved for

the few who have gone above and beyond the call of service during their tenure at WSMR," said WSMR Commander Brig. Gen. Timothy Coffin.

The hall of fame includes 52 members. It contains both men and women, both civilian and military personnel, both government and contractor employees and a huge mix of professions – everything from chaplain to missile flight safety to public affairs to professional engineer to equal employment opportunity to "mover and shaker." It is the embodiment of "Team WSMR."

For information on nomination procedures or to request an updated copy of the White Sands Hall of Fame Guide, call the WSMR Public Affairs Office, (575) 678-1134. The guide contains the forms, guidelines and procedures for nomination.

All former military, civilian and contractor personnel who have served at White Sands are eligible for nomination.

# Nelson Photos Donated To Archives

By Jim Eckles, Editor

This is a plea for our readers to take time this year and label those photographs you have been collecting. If you don't, you might as well throw them in the trash now or use them as fuel in your fireplace. The bottom line is that your family won't care if they don't know anything about what is in the photos and by the time the images get to WSMR or some other place that might appreciate them, no one will be left to identify the people and equipment.

The photographs on these pages are from two scrapbooks put together by Robert Nelson who retired from OMEW at White Sands in 1979. He started at White Sands in 1946 so he was on the ground to see some of those first V-2s fired.

According to one of his retirement papers, "he installed and operated the first timing system on the range." He was also involved in developing some of the range's early instrumentation before going over to a tenant, the Office of Missile Electronic Warfare.

The two scrapbooks were given to the WSMR Historical Foundation by Nelson's son Jim who lives in Las Vegas. He said in his letter that very few of the people in the photos are identified, almost none of the equipment is labeled and he has no idea who or what is pictured, except for a few images of his father.

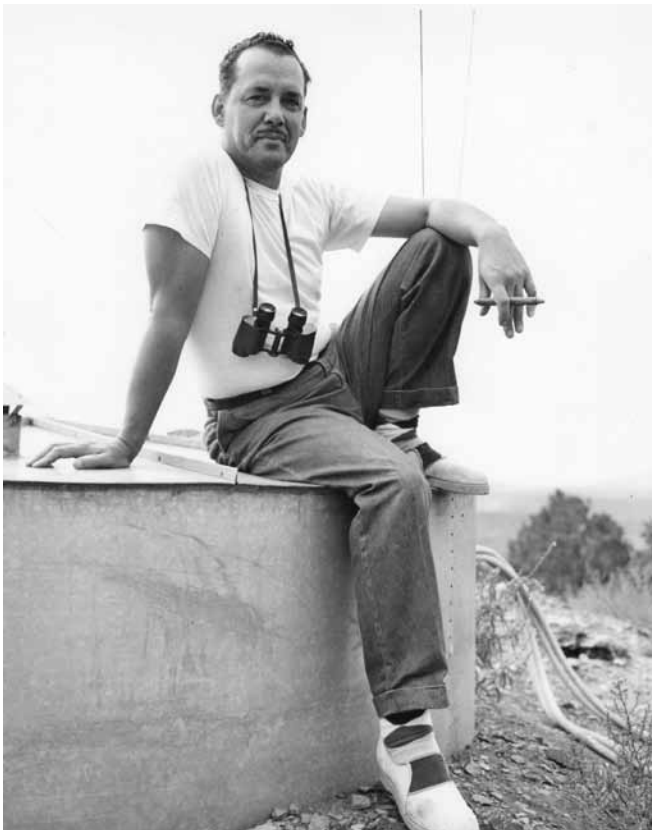
Like most family members, Jim Nelson has no interest in the photos because he knows nothing about them. Most of

the photos are excellent prints of personnel and equipment but require someone who worked in Nelson's organization during the early days to identify what's there.

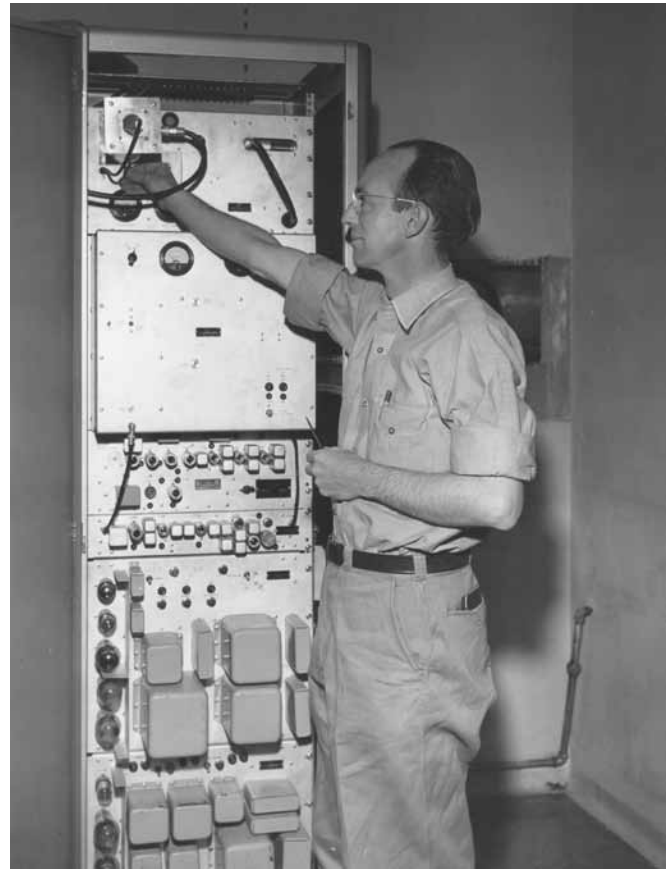
Jim hopes they will be appreciated by the Foundation and the museum archives, where they will end up.

Of course, this advice applies to family photos as well. If you don't label your great grandparents and others in your photos, your kids or their kids are just going to shrug their shoulders and sell the whole box of pictures at a flea market for \$5.

If you have information on any of these photos, send me the info and I will append it to the appropriate photo with a stickie note before turning it over to the archives.



Unknown co-worker.



We know this photo was taken in Feb. 1956



There were lots of totally unsexy images of equipment.

# More Nelson Photographs — CONTINUED FROM PAGE 4



This image is from the one scrapbook titled "Instrumentation Timing." I assume these men worked with or for Bob Nelson. There are many photos like this.



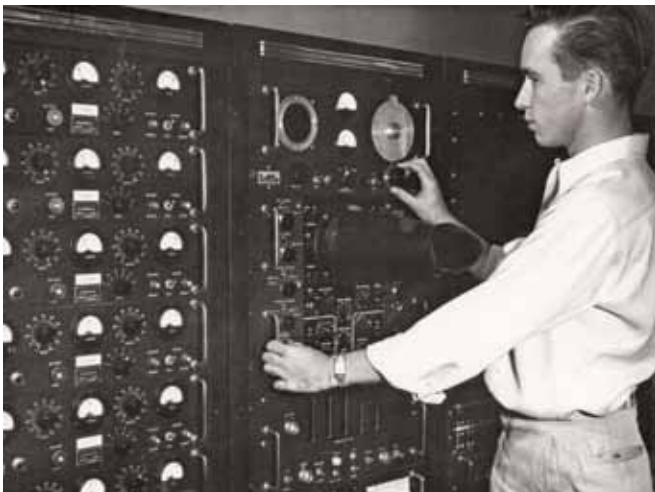
According to Jim Nelson, this is his father at a young age.



There was a date on this one - November 1951



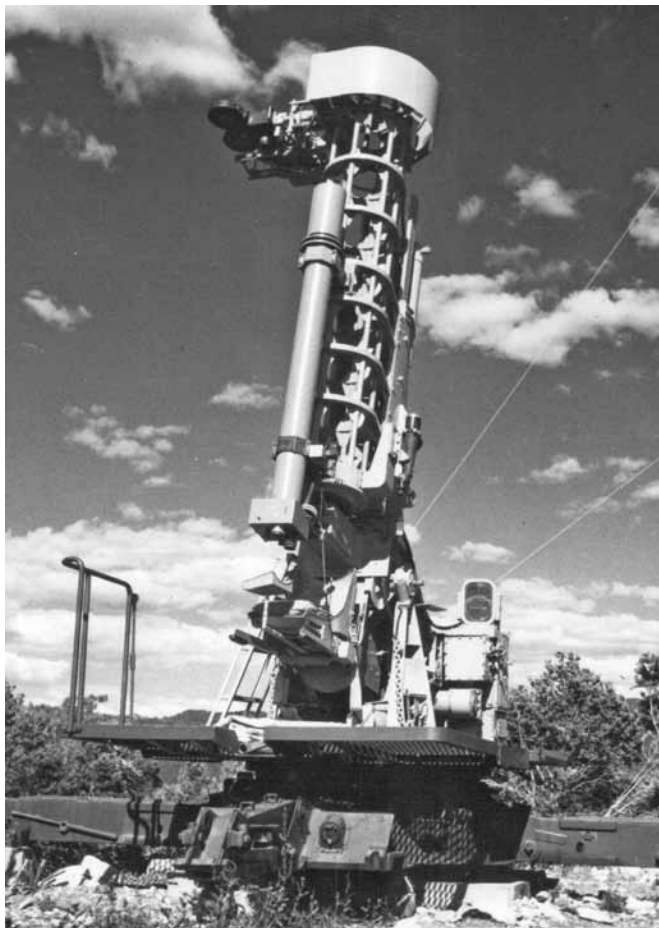
More folks, top and bottom, from the Timing scrapbook.



This one was labeled - Ken Hall, Telemetry, 1 Nov 51.



# Even More Nelson Photographs — CONTINUED FROM PAGE 5



Telescope in the pinon trees.



Hermes A-1 shot from LC-33. No date or time.



**WITH GREAT APPRECIATION THE  
WHITE SANDS MISSILE RANGE HISTORICAL FOUNDATION  
ACKNOWLEDGES THE GENEROSITY AND SUPPORT FROM THE MANY BENEFACTORS  
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## **The Back Page**



**White Sands Proving Ground's display V-2 rocket, known as "Betsy," being examined by Navy bigwigs on the deck of the aircraft carrier Midway during Operation Sandy in 1947. After the show-and-tell, the Midway sailed out into the Atlantic for the launch of a V-2 from its deck on Sept. 6. We believe Betsy is the V-2 that ended up in Missile Park, was restored, and is now on display at the WSMR Museum.**