Hands Across History

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

Volume XVII, Letter II May 2021

Good News, Bad News, And Winds Of Change

By Frances Williams, President

I have some good news and some bad news. The good news its that Mary Beth Reinhart, who is a board member of the WSMR Historical Foundation, and also an icon to White Sands Missile Range, an active member of the Chamber of Commerce for military and civilian affairs, an active community worker in Las Cruces and Dona Ana County, is the recipient of the President's Award from the Chamber of Commerce. Mary Beth was employed at WSMR as Director of Morale and Welfare and was responsible for bringing the Bataan Death March to WSMR. The marathon started with about 75 people and has now grown to ten thousand with participants from all over the world. This event has been an economic boon to not only WSMR but our local businesses. She is a member of the WSMR Hall of Fame and has been recognized publicly and privately for her many contributions which add to our quality of life.

The bad news is that David Soules, a member of the WSMR Historical Foundation, passed away very suddenly at an early age. David managed one of the largest contracts at WSMR for many years, but most notably he was a conservationist and was one of the people responsible for establishing the Organ Mountains-Desert Peak National Monument which added 500,000 acres of protected wilderness to New Mexico. David was a great asset to the Foundation, lending his enormous intellectual ability to our discussions and planning, a man of integrity, and great guy who will be sorely missed by the many lives he touched.

The museum is continuing with its changes to make way for the many new exhibits which will be installed in the near future. Darren Court , the Curator of the museum and Jenn Jett, our amazing archivist, have a lot going and have their hands full waiting for the museum to be emptied in preparation for the new look. Because of the membership and donations received by the Historical Foundation, 4,000 square feet was added to the museum. I want to reiterate that we gave the museum almost one million dollars to make this happen. The Center for Military History is also providing additional funds for the museum, and I think the WSMR museum will be one of the best in the Army.

The area where the memorial bricks are placed has been expanded. These brick sales have contributed significant revenue to the Foundation, so think of buying a brick to memorialize an event, someone close to you or your family and friends.

We also have a new website for the Foundation and e-mail account. That email address is: WSMRHISTORICALFOUNDATION@GMAIL.COM. In the future we will be placing information on the website for purchasing merchandise.

Hall of Fame nominations have been received and are now being sent to the Review Board for action. Public Affairs has been given the lead in handling this event. Dolores Archuleta who has done an outstanding job for many years for this event, will be the Foundation's coordinator.

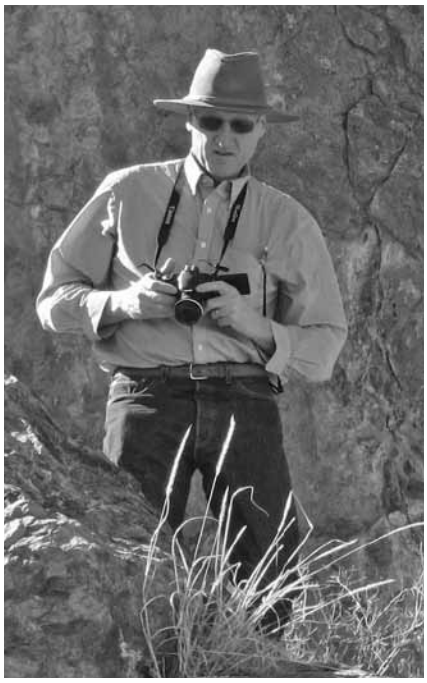
The Foundation Board now has a strategic plan in place. Because of the changes in the museum as well the new emphasis the Center for Military History has placed on education and reaching out to educational institutions, we will be requesting our membership and donors to support these new initiatives and adopt one of these projects. Specific information on these projects will be provided in our next newsletter. Thanks to all for their continued support off the WSMR Historical Foundation and the WSMR Museum

David Soules Leaves Large Hole In Foundation

The White Sands Missile Range, its Historical Foundation, the community of Las Cruces and wild places in New Mexico lost a remarkable person on March 26 when David Soules died suddenly at the age of 63.

David worked on the missile range for over 35 years as an engineering and upper management contract employee. His interest in history led him to the White Sands Missile Range Historical Foundation where he served on the board of directors and as vice president. For years he donated his time and money to preserving the history of White Sands.

He will be sorely missed as he was always the calm presence and the voice of reason during board meetings. Whenever David spoke, he was articulate and organized. Everyone listened and, most of the time, we followed his advice and lead.



David on one of his desert hikes. This one to Foster's Hole near Hatch.

In his private life he was an avid outdoorsman with interests in hunting, fishing and preservation of wilderness. In fact, when he died, he was serving on New Mexico's game commission. During the years leading up to the designation of the Organ Mountains – Desert Peaks National Monument, David was a leading member of the team promoting and gathering the information needed for the declaration. David was a key researcher finding out what cultural, historic and natural wonders were to be found within the boundaries of the monument. To help others find the cool things in the monument, David co-authored the book "Exploring Organ Mountains – Desert Peaks National Monument" which is available locally and on Amazon.

Recent Honor Donations To The WSMR Foundation

In The Name Of.....

Marvin Brotherton - An engineer for the Instrumentation Dir. and the Chairman for the White Sands Missile Range Credit Union Board of Directors for many years. ***from Frances Williams***

Linda Richards - The Secretary to the Chief of Staff and later headed the Incentive Awards Program for WSMR. ***from Frances Williams***

David Soules - Member of the WSMR Community, serving as the Director of the TRAX Contract and a member of the Historical Foundation Board ***from Frances Williams & Jim Eckles***

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 editor is Jim Eckles. He can be contacted by email at nebraska1950@comcast.net or at either address below.

Membership to either organization is open to anyone who shares their goals.

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Making History 75 Years Ago At White Sands

By Jim Eckles

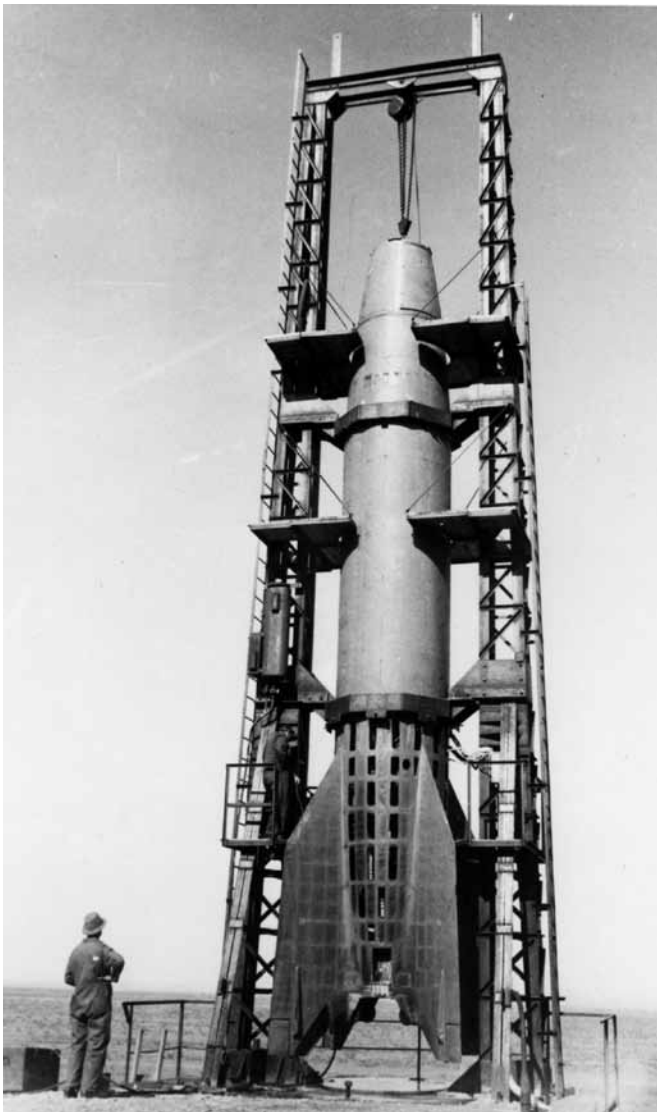
EDITOR'S NOTE: An abbreviated version of this story appeared in the Las Cruces Sun-News in March. This is the unabridged article.

For a March 15, 1946 German V-2 rocket demonstration, Lt. Col. Harold Turner, first commander of White Sands Proving Ground, invited 500 military personnel and 100 Las Cruces community leaders to watch. Although it was a static firing, meaning the rocket was bolted down, it was the first time a V-2 rocket motor was ignited on American soil. After hearing so much about the German vengeance weapon during WWII, visitors expected to see and feel a show of power. They got more than they expected.

By inviting Las Cruces civilians like mayor Edwin Mechem and city manager Jesse Isaacks, as well as members of the Chamber of Commerce, Rotary, Kiwanis and Lions Clubs, Turner was trying to make up for the Army's poor public relations effort when White Sands was being established in the summer of 1945. Using economic good news, he was quick to point out that the 100K Static Test Stand, where the test would take place, was built by Las Cruces contractor Hayner and Burn.

This facility had a steel framework on top to hold the V-2 rocket in place. It stood on a huge concrete block with a channel in it that would

See Steel Plates Sailing Like Frisbees, page 4



The V-2 anchored on the 100K Static Test Stand for the March 15 test. WSMR Museum Archives

From left to right standing in front of a sandbag shelter at 100K are: Maj. Gen. Gladeon Barnes, Deputy Chief of the Army Ordnance Corps; Lt. Col. Harold Turner, White Sands Commander; unidentified; Col. Holger Toftoy, head of the Rocket Development Division within the Ordnance Corps. WSMR Museum Archives

Steel Plates Sailing Like Frisbees —— CONTINUED FROM PAGE 3

deflect the engine's flames and exhaust into the desert. With the engine expected to run for 60 seconds and exhaust gases reaching 5,000 F., to keep the concrete from literally melting and eroding away, White Sands engineers bolted heavy steel plates in the channel. They were overlaid with each other like shingles on a roof with each plate being three feet by three feet and a half-inch thick. They weighted about 185 pounds each. Robert Bolles, a General Electric engineer working on the V-2 program at White Sands, called it a "brute force" effort.

On the 15th, The V-2 engine burned perfectly for 57 seconds and visitors standing 300 yards away could feel the heat and vibration as the supersonic exhaust gases sent shock waves out from the stand. Unfortunately, the steel plates quickly started to glow red-hot and the incredible pressures from the exhaust ripped the bolts and plates right out of the concrete walls. Cherry-red steel plates were thrust sailing out into the desert toward the visitors who scattered like quail. The *Las Cruces Sun-News* reported the plates were blown into he desert "like so many straws." The plates landed short but did start brush fires within 200 yards of the test stand.

Lt. Col. Turner was closer and standing with Maj. Gen. Gladeon Barnes, his Washington-level boss within the Ordnance Corps. Later Turner said he had never seen a general dive under a truck so fast.

Given that Barnes was the upper-level overseer for White Sands Proving Ground it made sense that we was there for this "first." He would retire the next month after a long career in the Army. Also attending was Col. Holger Toftoy, one of the officers involved in the program to extract V-2 scientists and equipment from Germany at the close of WWII. Tofty would eventually reach the rank of major general and command Redstone Arsenal during the 1950s when von Braun and most of the German paperclip scientists took up residence there after being secluded in the Southwest for several years.

For a later test in the stand, Bolles said they lined the concrete throat with tank tracks. Bolles reported it was a tactic he learned from consulting

See Water Sprinkler Solved The Problem, page 4

The 100K Static Test Stand probably right after the March 15, 1946 test of a V-2 rocket's propulsion system. At the base of the stand is a group of military personnel inspecting the throat and where the steel plates flew out at the hundreds of visitors. At the top, are other personnel looking over the site. Behind the V-2 is a sandbag bunker which eventually was replaced with a small blockhouse. WSMR Museum Archives

Water Sprinkler Solved The Problem —— CONTINUED FROM PAGE 4

The test of just the power system for a Corporal missile in the 100K Test Stand at a later date. An outrigger had to be added to accommodate the system. Other motors tested here included the Air Force's Bomarc and the sustainer for the Nike Ajax. The checker board structure to the left is the blockhouse. WSMR Museum Archive.

Today the concrete base of the 100K Static Test Stand is still there, along with the small blockhouse up on top and to the left. Photo by the author.

The 100K blockhouse as seen today after WSMR's Cultural Resource Management Program recently refurbished the structure. This part of the building faced the test stand and it is 18 inches of reinforced concrete while the backside walls are cinder block construction. Photo courtesy Bill Godby.

the Germans after the steel plate fiasco. It didn't work as the bottom of the tracks were not anchored and the exhaust blew them around like laundry on the line during a spring wind storm. Eventually General Electric found the more refined technique of spraying copious amounts of water into the exhaust plume and cooling it. The sprinkler system could deliver 900 gallons of water per minute.

The next step in the new V-2 program was to actually launch a rocket from the newly constructed firing facility six miles east of the main post, now called Launch Complex 33. The complex was the site of WAC Corporal firings in October of 1945, the first vehicles launched at White Sands. By the way, if you've never looked at a map of the area, the complex sits right on the eastern edge of the Dona Ana County. If you walk a hundred feet east of the old V-2 Gantry, you are in Otero County.

Community reps were not invited this time. Turner told the news media he was hoping the first V-2 would reach an altitude of over 100 miles with a firing on April 15. Because this was the first launch, he said that only a small number of military witnesses would be allowed since the protective concrete blockhouse was quite small inside.

See First Fllight On April 17, page 6

First Flight On April 17 —— CONTINUED FROM PAGE 5

Also, the *Las Cruces Sun-News* quoted Turner as saying the April flight was "a preliminary to a demonstration scheduled for newspapermen the next month." Obviously, Turner and the Army were anxious to show off the German technology that was captured at the end of the war. Information was freely given.

On April 17, the *Sun-News* reported some civilians who were caught in the roadblock on U.S. Highway 70, five miles east of San Augustin Pass, got to see the test. They reported they saw the V-2 lift off, wobble as it got up a few miles and then fall to the ground east of the launch area. In fact, the rocket only reached an altitude of 3.4 miles after officials remotely shut off the fuel flow because it was behaving erratically. It crashed with a resounding two-step explosion – first was the kinetic impact of the vehicle (an intense, quick explosion like TNT going off) and then the explosion of the alcohol and oxygen propellants as their tanks were ripped open, vaporized and ignited (a slower explosion with far less overpressures).

Those few dozen witnesses in the blockhouse got quite a surprise. The blockhouse walls are 10-feet thick with only two windows at that time, far too small for more than three or four people to look out. Also, because of the wall thickness, it is like looking out through a tube and as soon as the V-2 rose a hundred feet in the air it was out of sight. So, the crowd headed for the door to get a better view outside.

By the time the first people got outside and looked up, the V-2 had been terminated and was heading back down. With no visual reference points in the big empty sky, the first group thought the rocket was headed back at them. They rushed to re-enter the blockhouse, while others were still trying to get out. It was a moment of chaos. Luckily, the V-2 crashed miles to the east and no one was hurt. The incident did result in an order that no one could leave the blockhouse until the safety officer approved. An armed guard was placed at the door to make sure the edict was obeyed.

For the second V-2 launch, on May 10, the Army and Lt. Col. Turner invited the world to watch - through the eyes of the news media. According to Turner, "nearly 100 newspapermen and photographers, representing many of the nation's leading newspapers, newsreels, magazines and press associations" were there to be briefed on Army plans and watch the firing. KOB radio in Albuquerque was even scheduled to broadcast it live. Visiting military VIPs included Britain's Field Marshal Henry Maitland Wilson, Sixth Army commander Gen. Joseph Stilwell, Vice Chief of Naval Operations Adm. Dewitt Ramsey and the Army Air Force's Maj. Gen. Curtis LeMay. News of the event would be featured all across America in the days following the launch.

On May 9th and the morning of the 10th, the media were briefed on the V-2 and Army plans

See Rocket Man Offers To Ride V-2, page 7

The V-2 for the May 10, 1946 is being prepped and fueled as military VIPs pose for photos. The four officers at the bottom left are: Britain's Field Marshal Henry Maitland Wilson, Admiral Dewitt Ramsey, LTC Turner and General Joe Stilwell. WSMR Museum Archive.

Rocket Man Offers To Ride V-2 —— CONTINUED FROM PAGE 6

for their use. There was also speculation on the future of guided missiles as weapons to be used by the United States. Because of the sensitivity of the surrounding communities to the idea of vengeance weapons being fired at White Sands, officials went to great lengths to assure the public that V-2s would not have warheads. One thing Turner did not tell the news media was that a V-2 returning to earth after a high altitude flight and expending all of its propellants could impact the ground with a kinetic energy explosion equal to almost 2,000 pounds of TNT – if it came down pointy-end first the whole way.

At 2:13 p.m. the V-2 blasted off with the visitors watching from the sand dunes only 1,000 yards to the southwest – no room in the blockhouse. The rocket did exactly what it was supposed to do, reaching an altitude of 75 miles and crashing to the ground 39 miles north, in the heart of the proving ground. The rocket was allowed to simply burn up all of its fuel, which took 59 seconds, and continue free flight to the north.

Officials said it was certainly an altitude record for a man-made object sent aloft by the United States and speculated it went even higher than any German launch as they used a flatter trajectory. The event announced that America had entered the Space Age and the news reporters were excited by what they saw. Stories appeared nationwide and across much of the world.

Jack Doherty, writing for his readers back in New York City, said the sound was like "a hundred Seventh Avenue express trains converging on Times Square at once."

Others took information from the Army briefings and wove it into their stories. William Strand, the Chicago Tribune, expanded on the fact that White Sands was going to build a bigger static test stand to handle 150-ton rockets. He hypothesized that such a rocket could deliver a warhead 2,500 miles away. He was describing what would become intercontinental ballistic missiles which were just a decade away.

That larger static test stand turned into the 500K Static Test Stand that was active at the base of Granite Peak near the El Paso gate during the 1950s. It took a couple of years to construct and was the largest in the world when completed. Remarkably it was out of business by 1960.

Another reporter, Edward Bomar, in an Associated Press story recounted that the Army was already looking at using missiles equipped with proximity fuses and directed/guided by radar to kill incoming vehicles like V-2s. That would take decades to make a viable reality.

Also, many reporters wrote about the planned scientific efforts to put instruments and experiments aboard future V-2s to gather data on temperatures, winds, air density, biological effects, pressure and cosmic rays. Some wondered what the Earth would look like from a hundred miles up.

Maybe the most humorous story to come out in May 1946 was that Mark Ridge of Dorchester, MA volunteered to ride the V-2 rocket. He was quoted as saying, that with a special suit, he could survive a ride inside or attached to the outside. The newspapers went looking for comments and found that experts felt there was room in the V-2 for a human being and he probably could survive the 3,500 mph top speed. However, as there was no known means of escaping alive before the rocket crashed to earth there would be no way to survive the flight. There wouldn't have been a thimble full of Mark Ridge to send home to his family if he'd been onboard.

In a report, General Electric described the May 10th impact crater as being 30 feet deep. They said, "No parts of the rocket were to be found in the crater....most of the parts were found at distances up to a thousand feet.....all together, a two-hour search netted about 50 pounds of scrap parts."

Lost in most of the coverage of the demonstration on May 10 was that a WAC Corporal, an American sounding rocket, was launched for the visitors two hours after the V-2 flight. Jet Propulsion Lab personnel lost contact with the rocket at 10 miles up and the flight faded into obscurity.

At the time, the Army announced it would re-assemble and launch a total of 25 V-2s at White Sands. In the end, more than 60 were fired over the next five years.

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The Back Page

V-2 ASSEMBLY reaches final stage in desert hangar. Tail section is being wheeled into place to fit over the motor. On steps at left soldiers are installing the steering mechanism. Behind them is pointed warhead. The mass of pipes coiling around the motor are fuel lines bringing alcohol and oxygen from the middle body of rocket.