



# Hands Across History



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

Volume XI, Letter I

February 2015

## Flying On Gas Fumes Not Recommended

By Jim Eckles, Editor

Ross Palmer called me soon after the new year as he was finishing reading *Pocketful of Rockets*. He wanted to share some of the experiences the book reminded him of from decades ago.

First of all, he wanted to say that he partially grew up in Lincoln, Nebraska as well. His father was in the Air Force and was stationed at the old Lincoln Air Base. In fact, when his father was eventually transferred, Ross was allowed to stay in Lincoln to finish his last year of high school at Lincoln High – a rival of my old school.

One thing he noted was that he didn't realize the base was protected by Nike missiles until he read about them in the book.

Eventually Ross was drafted into the Army and was an early computer specialist. He was assigned to work on the Army's development of the TACFIRE – a hugely complex tactical fire direction system for artillery – in the mid 70s. This in turn got him to White Sands where testing on the system was being conducted.

By the time Ross got to WSMR he was an experienced pilot. At the time the club was a thriving operation with several planes housed at Condran Field and dozens of members. By joining the club, WSMR personnel could learn to be small aircraft pilots and use the club planes once they were licensed.

One day, Ross and a student, Capt. Dudley Revie, set out from WSMR to take a plane to the Las Cruces airport for its required maintenance. The process was simple. The student flew the plane to be left in Cruces while Ross followed in a four-seater to bring him back, an ex military T-41. This was a Cessna 172

with a larger than normal engine made especially for the military but which had been retired and issued to the flying club. It was also Friday the 13<sup>th</sup>.

Before setting out, Ross did the required checks on his plane to include checking the level of gas in the tanks. He said the plane was equipped with low-fuel warning lights but they were notoriously ineffective. In fact, they usually started lighting up when the tanks were still over half full. So, before every flight the pilot had to visually inspect the level of fuel onboard.

He said he looked into the dark interiors of the tanks and thought they looked more than half full – plenty for the flight to and from Las Cruces.

see Flying UFOs page 3



Ross Palmer today with his own plane, a Cessna 182. Courtesy photo.

# WSMR Historical Foundation Elects New Officers

During its January board of directors meeting, the White Sands Missile Range Historical Foundation finalized the election of new officers for the coming year. The results are: President = Eddie Kennedy; Vice President = Frances Williams; Secretary = Bob Lipinski; Treasurer = Jon Gibson.

Also at the meeting, the board heard from Darren Court, Museum Director, about his recent trip with his boss Gerry Veara to visit the Center for Military History in Washington, D.C. One interesting item they gleaned was that with over 90,000 visitors last year, the WSMR Museum is at the top in number of visits within the Army museum system.

The visit to Washington also highlighted the need for the museum to have an updated story line. The story line is the outline for what will be displayed and how it fits into the big Army story. With a story line that fits into the larger Army story, the museum will be better situated to request help and funding from the Center for Military History. For instance, the center can provide professional designers who can devise the arrangement and layout of displays to fit a museum's particular footprint.

Also discussed were the new tighter restrictions for people entering all military facilities. Recently published rules in the WSMR newspaper say that visitors without Department of Defense ID cards will have to undergo a background check at the gate before being issued a pass. According to Veara, the trickle down to how it will affect museum visitors is not known yet.



Frances Williams, left, as new vice president of the foundation presents Sharon Reese, the out-going president with a plaque thanking Sharon for all of her work.

## It's Time For The Foundation's Spring Golf Tournament

Doug Messer has scheduled the Foundation's annual spring golf tournament for May 22 at the missile range's golf course. As usual, the tournament will be a four-man scramble format - playing the best ball after each shot.

The cost per person is \$55 or \$220 per team. The event will begin with a shotgun start at 9 a.m. The fee includes a lunch after play finishes. Also, we usually have free donuts on hand during check-in at 8:30.

To get yourself or your team registered, contact Doug at

575-430-2951. Doug travels a lot so if he doesn't answer, leave him a message and he'll call you back. You can also reach Doug by email at [dmesser99@gmail.com](mailto:dmesser99@gmail.com)

## It Will Be 70 Years This July

That's right, White Sands Missile Range will celebrate 70 years of existence on July 9 this year. Also, July 16 will mark the 70th anniversary of the world's first atomic bomb explosion at Trinity Site.

## 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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# Flying UFOs — CONTINUED FROM PAGE 1

On the return flight to White Sands the usual route was to follow Highway 70 and then, after flying through the pass, cut to the southeast to land at Condron Field. As Ross flew through the pass, the engine on his plane just quit. He went through the usual process of trying to restart it but nothing worked.

Turns out he was out of gas, a very big booboo for a pilot. Luckily he had cleared the pass at an altitude of over 9,000 feet and had plenty of glide time. He followed Highway 70 as it curved north and then straightened out as it made the long descent to the access road. He figured the highway was going to be about the best emergency landing strip you could find.

It was mid-day and there wasn't much traffic on the road, just a few semi-trucks. Ross was able to keep the plane in the air almost all the way to the access road and set it down there. A truck driver who they had just swooped over before landing was very helpful. He quickly realized what was happening and stopped in the middle of the two lanes and blocked all eastbound traffic.

Ross said there was a small cleared area just east of where the access road met the highway and he was able to pull the plane off the road. When he and his student got out of the plane they were met with the blare of fire department and military police sirens coming from the main post. He had been in touch with personnel at Condron through the whole procedure and they eventually lost contact with Ross. They assumed the worst and called all the emergency numbers on the chart. Eventually the state police and sheriff's department arrived as well.

Later, the sheriff's deputy asked Ross just how fast he might have been going when his plane touched down on the highway. Back then the speed limit was 55 miles per hour. The deputy couldn't hold it back long and a big grin spread across his face at Ross's predicament. It wouldn't be the first joke at Ross's expense.

When the fire guys got there, the responders suited up and deployed their hoses as if the plane was going to suddenly burst into flames. Ross had to reassure them that the plane was fine and that, being out of gas, it certainly wasn't going to explode.

An MP took Ross to Condron where they filled a couple of jerry cans with fuel. They poured the fuel in both tanks and prepared to fly the plane over to Condron. Of course, this meant taking off from Highway 70. The state police officer said he'd take care of that and asked Ross how much highway he needed. Ross said a couple thousand feet ought to do it.

So the policeman, with lights flashing, led Ross down the highway to the east. Ross figured they actually went a mile. At that point the officer blocked the road, Ross turned the plane around and took off heading west.

After that there were reports to file and consequences. Ross was immediately grounded. He had to talk to the FAA

safety official in El Paso who turned out to be the nice guy. After discussing the incident, the official said that he figured the Army was going to do more than enough to punish Ross and that their little discussion would be the only blowback from the FAA.

In reality, the Army's response was not horrible either. Ross had to go to Maj. Gen. Tobiason's office to get chewed out. Tobiason's first statement was, "So you're the guy who put my airplane in the middle of my highway." In addition, he had to give several safety briefing and construct dipsticks, custom calibrated, for each of the club's planes so there wouldn't be any guessing in the future.

It is interesting that another of Ross's stories was about flying. This was a UFO he and his fellow soldiers constructed one night. In those days, dry cleaners would drape flimsy plastic bags over the cleaned clothes when they were ready for pickup. This plastic was incredibly thin and lightweight.

Ross and his friends took one of these bags and constructed a light frame made of straws to insert into the bag. The frame kept the sides of the bag apart and provided a platform to mount a bunch of those little birthday candles. In other words, they made a hot air balloon.

They lit the candles and it worked great. The makeshift balloon climbed to a few hundred feet and then drifted north in a slight breeze. This took it near the main gate where the military police saw a strange light in the sky. Sirens were soon blaring as the MPs responded to the sighting. Ross said they were laughing hysterically at this point.

Then the glowing balloon drifted back to the south with an easterly angle. As the candles started to wink out, the balloon descended east of the post out in the desert. When it landed, a candle lit the bushes on fire. Ross said their joke suddenly became very serious as they had just started a range fire - people were going to notice.

The men quickly grabbed every fire extinguisher they could find and headed to the still small fire. Ross said they were able to put the fire out and, this is an important point, do it without the MPs coming out to investigate.

Ross left the Army from White Sands and went to work in the computer field. He is long retired and lives in Las Cruces where he plays double bass in the New Horizons Symphony and Mesilla Valley Concert Band.

He still flies his own airplane he has owned for over 30 years, a Cessna 182.

## Donation In Name Of Karen Douds

A donation has been made in remembrance of Karen Doud, who served as Treasurer and President of the White Sands Missile Range Museum Foundation. She was an avid supporter of the Museum and gave unselfishly of her time to maintain the legacy that the Museum foundation represents, i. e., to preserve the history of WSMR and pay tribute to those who contributed to the success of its mission. May her memory be for a blessing. From Frances F. Williams



# Gun Probe Was Used To Study Winds

By Bruce Kennedy

In 1965 I was working in the Plans and Programs office of the Data Collection Directorate. My job was to review new projects coming to WSMR and to coordinate requirements with the various range support groups. One of the new programs requiring support was Gun Probe, an extended barrel canon designed to place radar chaff to an altitude of about 200,000 feet.

The Atmospheric Sciences Laboratory had acquired the canon from the Army Ballistic Research Laboratory as part of the High Altitude Research Program, project HARP. Its purpose was to measure winds in the stratosphere.

The projectile was a sub-caliber bullet fired at a quadrant elevation of 88 degrees. It contained a timed fuze that activated a small explosive charge that expelled the chaff. The range radars tracked the bullet to apogee then continued to track the chaff after expulsion. Wind speed and direction as a function of altitude were derived from the radar data.

Besides finding a gun emplacement location (the Small Missile Range was selected), and arranging for radar track, the program manager, Ed Williamson, asked for a measurement of muzzle velocity. The only tool in the WSMR inventory that could provide that data was called the Velocimeter, which was a modified Hawk tracking radar.

I consulted with some electronic technicians in Measurements Division and they recommended using an EPUT meter, an electronic counter that measured event per unit time. This simple solution required drilling two holes in the gun barrel about a foot apart near the muzzle and inserting

wire switches to which the EPUT meter was attached. As the bullet hit the first switch the counter would start. When the second switch was hit, the counter would stop. Knowing the time and distance the muzzle velocity could be calculated.

As fate would have it I transferred to ASL shortly afterward. Ed Williamson asked me to set up the muzzle velocity system which I did. The muzzle speeds typically registered about 5000 feet per second.

Have you ever heard of Dr. Gerald Bull? He was probably the best artillery designer in the world. His dream was to place a satellite in orbit using large diameter artillery tubes. He did some design work for the Ballistic Research Lab under Project Harp, and that eventually resulted in the Gun Probe project at WSMR.

Dr. Bull, a Canadian, spent some time in prison for providing some of his advanced artillery tubes and projectiles to South Africa during an arms embargo. After his release, he moved to Brussels, and tried to convince Saddam Hussein to fund development of a canon that could eventually permit the dictator to bombard Israel. A short time later he was murdered at his Brussels apartment. I suggest going to Google and learn more about this brilliant man.

Allow me to bore the reader with some technical detail on the gun probe system. First, the barrel was 30 feet long. This was achieved by attaching a barrel extension to the existing tube. Next, the interior was machined out to produce a smooth bore. Third, a sub-caliber projectile was designed

see [Moving To The Rockies](#), page 5



The Gun Probe cannon being placed in an unorthodox position at the Small Missile Range. Courtesy photo.

# Moving To The Rockies — CONTINUED FROM PAGE 4

that was long, slender, and had rear fins for in-flight stability. This was certainly not your standard artillery projectile.

To propel the bullet up the barrel a sleeve, called a sabot, was designed to hold the projectile tightly inside the barrel, act as a seal for the expanding explosive gases, and prevent the bullet from coming in contact with the smooth bore. After the projectile exited the muzzle, the sabot fell away.



**This is the gun probe just after leaving the barrel of the cannon. The five odd pieces are the sabot falling away. At its apogee of 37 miles, the probe would open to dispense a payload of chaff that a radar could track. Courtesy photo.**

The propellant was contained in a standard 5-inch brass casing. The gun carriage could only elevate the barrel to about 45 degrees elevation, so the entire canon had to be propped up on a stand in order to achieve a firing elevation of 88 degrees. Because the barrel was so long and was prone to slight bending, it was fitted with outrigger bars that could be adjusted to correct sag.

I have included a photograph of the projectile just after it left the muzzle. It was taken using a WSMR image motion compensation camera, which produced a single image. The detail is spectacular.

The gun probe project was primarily a proof of concept.

An attempt was made to develop an electronic payload that would measure air temperature, but the high g-forces produced during the firing destroyed the electronics. Eventually, a practical use for the system surfaced.

Research scientists at the Colorado State University were interested in studying the effects of the Rocky Mountains on stratospheric winds. Enter the gun probe. Together with the university, we proposed establishing a firing site at the former Camp Hale just outside of Leadville, Colorado. This required lengthy coordination with the U.S. Forest Service, owner of Camp Hale, and the Federal Aviation Administration for airspace waivers.

We transported the gun and supporting M33 radar to the site and began installation. A local bulldozer operator built an earthen ramp to elevate the gun, and I rented a crane from a construction crew at the new ski resort at Vail. The first lift of the gun by the crane almost ended in disaster. As the gun was being lifted, the crane began to tip over. The operator immediately saw his problem and dropped the gun. No harm. On the second try he successfully placed the gun on the berm.

We had two restrictions placed on our testing: the Forest Service insisted on a particular firing azimuth and impact location, and the FAA constrained us to firing only at midnight when trans-continental flights were at a minimum. A hot line telephone connection was established between Camp Hale and the FAA control center just north of Denver.

To insure that the impact would be in the selected area I set up a surveying theodolite and took an observation on Polaris, the north star. The best time to “shoot” Polaris was at 2 am. To prepare for that late night/early morning task our crew spent the day at the two nearby trout ponds. At midnight we had a fish fry. Wonderfully fresh fish. I shot the star at 2 am, and we all went back to our rooms in Leadville. From the measurement of true north we were able to align the gun barrel to the correct azimuth which assured bullet impact in the designated area.

Before the tests began, I developed a severe case of vertigo and had to head home to El Paso to recover. So, I missed all of the fun of conducting the tests. It took me a month to recover, but the tests continued and successfully collected wind data in the stratosphere over the Rocky Mountains.

Would the gun-launched atmospheric measurement system ever replace rockets? No! The standard rocket was the ARCAS manufactured by the Atlantic Research Corporation, and the Arcasonde payload. It was subsequently replaced by the Loki and the Datasonde payload manufactured by the Space Data Corporation.

This system was less expensive than the ARCAS and eventually replaced the ARCAS for routine firings. I bring this up because the gun probe was only capable of measuring winds. The technology at the time was not advanced enough to produce a payload that could survive a 50,000 g shock at firing. The gun probe system was relegated to a demonstration effort and was eventually phased out.

# Hall of Fame Nominations Are Due March 31

White Sands is now accepting nominations from all sources until the end of March for its hall of fame.

The hall of fame was established in 1980 to honor former missile range personnel who made lasting contributions of an outstanding nature. 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.

The hall of fame really has a great deal of diversity as far as the 52 folks now in it. 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," the phrase missile range leaders have thrown around for decades.

Last year the first personnel from the Army Research Lab, Donald Hooek and Joseph Trammel, were inducted into the hall of fame.

For information on nomination procedures or to request a 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.

To get into the hall of fame a nominee must have been responsible for significant and lasting deeds or achievements in support of the missile range mission. The contributions may be in various areas such as research, cost savings, technological advances, safety, public relations, equal opportunity or heroic deeds.

All former military, civilian and contractor personnel who once served at White Sands are eligible for nomination. No one currently working at the range is eligible.

Submit nominations to:

*U.S. Army White Sands Missile Range  
Chief of Staff  
ATTN: TEDT-WS-CS (Hall of Fame)  
White Sands Missile Range, NM 88002*

## Some Suggestions For Submitting A Nomination

By Jim Eckles, Editor

I was at a meeting recently concerning the WSMR Hall of Fame Guide and it was suggested I write up suggestions for preparing a hall of fame nomination. Apparently, many of the submissions are a flood of fairly meaningless documents or they lack the meat necessary for the review committee to make a sound decision.

First of all, I should explain that I've been hovering around the hall of fame mechanisms for decades now. I've chaired the White Sands Pioneer Group's review group many years. This is the group that previews the nominations and makes a recommendation, up or down, on each nomination.

The logic for this review is that the Pioneer Group can muster enough old timers who may have actually known the nominee or about his or her accomplishments to provide some useful insight to the command's voting committee. This was deemed a good idea because, typically, the command committee which is made up of the range's top leadership, usually doesn't know much about the missile range's past. They have to rely on the nomination package and the Pioneer Group input.

Also, I've been a voting member of the command committee, representing Public Affairs. Also, for some reason, while working in Public Affairs, I wound up organizing and doing the detail work for a lot of inductions.

Finally, I've written a few of these nominations for people who have actually gotten elected to the hall of fame.

Suggestion #1. Get help. Too many of these nominations are attempted by loved ones or friends who really don't understand what the nominee did or they try to do it in secret

so the person doesn't know what is going on. In lieu of a meaningful explanation in the submission, they provide raw material and expect the reviewers to figure it out. Doesn't work. You need information about the person's accomplishments and why they were meaningful. You need the person's personnel file if you can get - asking them for it is one way. You need to find the nuggets of information and put those in the package. Some work associate from the nominee's past might be able to help.

Suggestion #2. The review people in both groups really don't want to see copies of evaluations, award certificates, etc. In fact, in my experience, they are always trying to limit what is submitted to 3 or 4 pages. They do not want to wade through a mountain of paper that doesn't speak to them. In fact, they won't bother. You need to help them.

Suggestion #3. Find the good stuff - grab it and jettison the rest. It is in the mountain of paper you want to submit but won't. Take the real examples of the nominee's great work and succinctly write up what he or she did, how it made a difference to the mission, and support it with a quote from an evaluation or an award certificate. If John Doe designed a new camera widget or lead an effort to save millions of dollars, explain what it was. The quotes from the evaluation or award are then the proof that he or she did them and that they are, indeed, important.

Suggestion #4. Make sure everything is specific. I've seen a lot of packages where nominators sought an endorsement from their congressman thinking it would impress. It doesn't. What you get from the congressman is a typical generic/politician-speak letter that basically says nothing.

Good luck.

# Old WSMR Newspaper Website Now Open

By Adriana Salas, Missile Ranger Writer

Nearly 40 years of WSMR's rich history is now encapsulated on a website for the public to view, free of charge.

The website holds newspaper issues of the *Wind and Sand* and the *Missile Ranger* from 1950-1990. The project was spearheaded by the Directorate of Public Works Environmental Division's Cultural Resource Program.

"It's complete. We invite you to take some time and enjoy the rich past of White Sands Missile Range, found in this tremendous resource," said Bill Godby, WSMR Stewardship archeologist and project lead.

The project took over two years to complete. The digitization of the project included: scanning of the old newspaper issues, developing key searches on the website, and continuously working on the site to make it as user friendly as possible. Prior to the digitization project, old issues of the installation newspaper were just stored in a back room at the Public Affairs office.

Now users can browse through years of old papers through the convenience of their personal computer by visiting [wsmrhistoric.com](http://wsmrhistoric.com), which is hosted by Epsilon Systems Solutions Inc.

Although the website covers newspaper issues from 1950-1990, there are some missing issues that Godby hopes he can get with the help of the community. Godby said there are still entire years that are missing from the collection. A list of the missing issues can be found on the right hand side of the website's main page. There are currently no issues available from 1954 through 1955. Godby said he hopes whoever may have copies of the issues from the missing years will come forward and help us complete the digitization.

"We're trying to solicit anyone who is sitting on papers," Godby said.

With the available historic issues that have now been digitized, users have a choice of accessing them in high resolution, low resolution, or in "Flip" format. The "Flip" format

allows users to digitally "flip" through an issue with the same feel as a real newspaper, with just a click of a mouse. Users can also download whole issues and save them as a convenient PDF file. Godby is also sharing the database information with the WSMR Museum website and with NMSU library's Archives and Special Collections. He said he hopes to ultimately create a kiosk that can be placed at the WSMR Museum where people can come in and search through old issues during their visit to the museum.

"My intention is to make this resource widely available to as many people as possible for the purpose of research and general searching," Godby said. "I also feel the depth and breadth of this history will create new possibilities for students conducting research on topics such as the Cold War and military life at WSMR in the 1950s and 60s."

He said the digitization of the old issues will also be an exceptional tool for looking at old Las Cruces. Many businesses long gone from the area can be seen advertising in the paper, like the Organ Drive-In Theater, Baker Drug Store or Len's Coffee House. Unlike most newspaper archiving systems, which charge to retrieve old issues, this archiving system is free of charge for the entire public.

The digitization project also serves to satisfy requirements identified in the National Historic Preservation Act. As WSMR moves into the future, old technology and buildings are continuously being demolished and scrapped to make room for new technology and infrastructure to support current missions, Godby said. To offset the loss, the Cultural Resources Program agrees to take on projects like the digitization. Godby said his main role is to ensure the Garrison meets Federal Historic Preservation regulations.

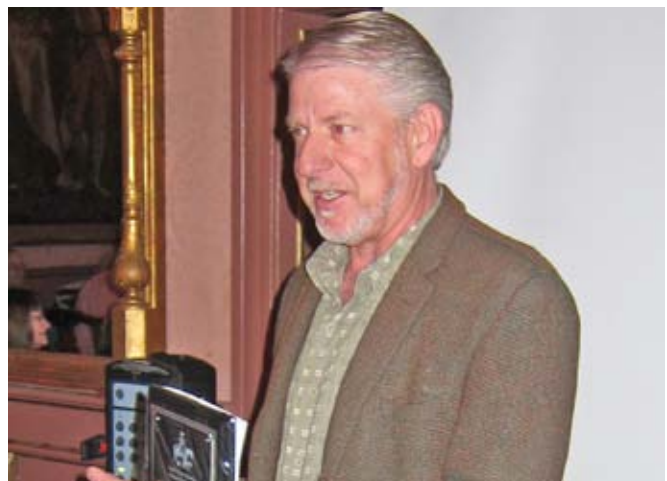
Funding for projects like this and others, including oral histories, information brochures, and displays are all provided by IMCOM.

If you have an old newspaper issue that fits the criteria of the missing issues on the website, please contact Bill Godby at 678-6003 or by email at [william.c.godby.civ@mail.mil](mailto:william.c.godby.civ@mail.mil).

## County Historical Society Recognizes 500K Static Test Stand

For the first time in its 50-year history, the Dona Ana County Historical Society has recognized a structure at White Sands Missile Range as a "Building Worthy of Preservation" and as a "Building with Historical Significance." A plaque with the designation for the 500K Static Test Stand was presented to missile range archaeologist Bill Godby at the society's annual awards luncheon on Jan. 31.

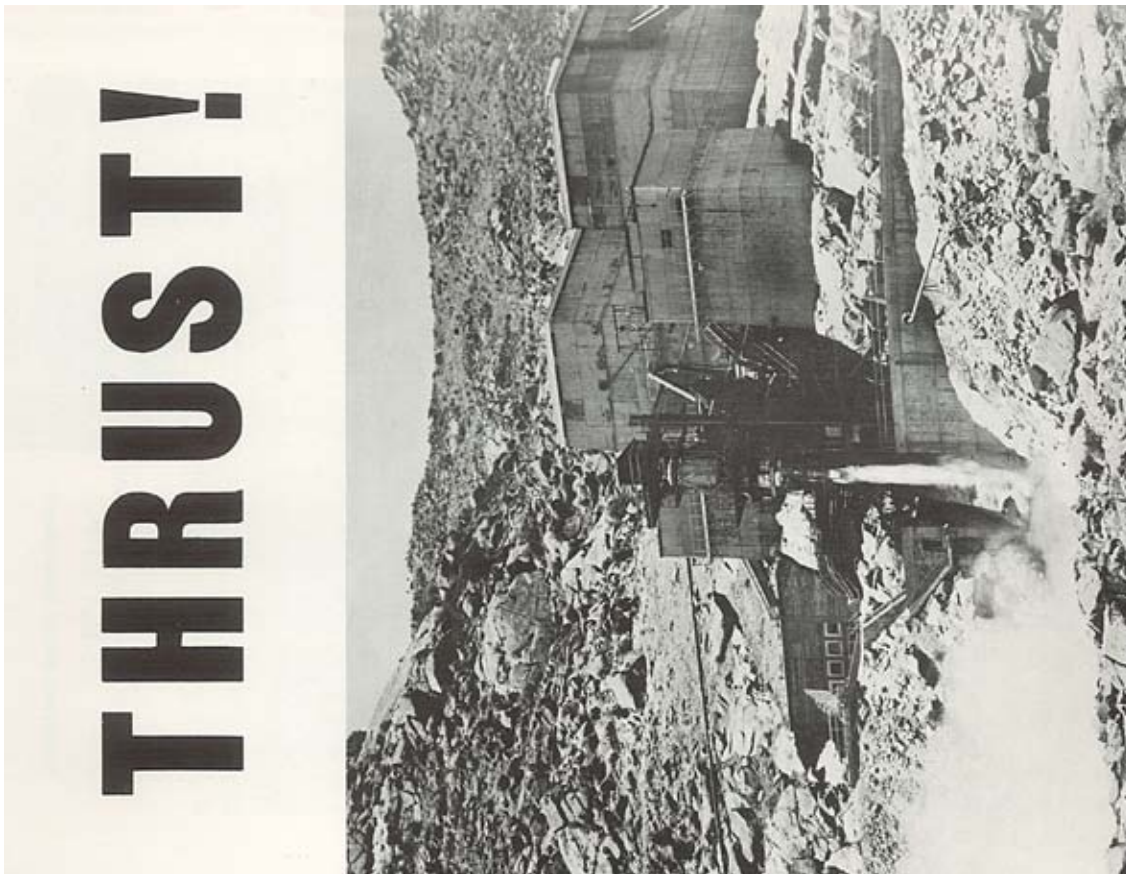
The society's secretary Jim Eckles presented Godby with the plaque. Godby, in the photo to the right, thanked the group and told them his job was not to preserve places but to identify, gather data, and evaluate a structure's significance. It is up to others to make the decisions about destruction or protection. He said that recognition from the historical society will certainly go into the package for making such a decision. See the back for a photo of the 500K poster.





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**A 1956 poster for the 500K Static Test Stand. If anyone actually has a copy of this thing, please contact the editor.**