



# Hands Across History

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



Volume VII, Letter I

February 2011

## Life At North Oscura Peak And Why There Are All Those Old Tires At The Cliff Bottom

By Jim Andress

Back in the late 1950s, North Oscura Peak (NOP), just above Trinity Site, was one of the prime instrumentation sites on White Sands. It is strategically located on the Oscura Mountain ridge and provides excellent 360-degree visibility. It provided a particularly good view of the 90-mile impact area (between Mockingbird Gap and the northern boundary) and was ideal as a radio and instrumentation site.

I got to know NOP and the north range very well during this time. I was employed by the Radio Installation Group in the Communications Division of what was then called WSSA (White Sands Signal Agency). As an "Electronic Equipment Installer/Repairer," I spent close to two years in the north range, on TDY, installing microwave radio, ground-to-air and mobile radio, cabling and whatever else was needed.

The main mission on NOP was to provide radar support in the north range, as well as general communications support for the J-10 telemetry station. There was also a small frequency monitoring station, along with relay facilities for mission aircraft, mobile radio nets, and the newer microwave radio relay for traffic into the Stallion area.

The J-10 station was a prime telemetry receiving site for the north range, as well as a radio relay site for instrumentation data from Green River into Range Control on the main post and for King I at Holloman Air Force Base.

During my time, J-10 was operated by the contractor Land-Air.

When working at NOP, I usually stayed in Carrizozo or Socorro, big towns in those days. I can guarantee the two or three motels we found there never heard of four or five star ratings. Occasionally I stayed in the military barracks at NOP, if there was space available.

It was an awfully long drive back and forth in those days. My motor pool issued '57 Chevy pickup didn't have a heater, so the winter trips were occasionally uncomfortable.

At the other end of the spectrum, air conditioners in military trucks were, of course, never allowed so summer trips were a bit uncomfortable as well. Fall was usually the best time to be out.

Also, since a motor pool in southern New Mexico wasn't "authorized" to issue or even buy tire chains, I had

to go to a local auto store to buy such items myself and then turn in the cost as a travel expense. Things like this were hard for the cubicle-bound, expense account people to accept but I always got reimbursed, belatedly some times. Occasionally, my colleagues with the RCA Service Company, who worked with us on contract, would buy stuff and donate it to the cause.

As I think back on our mission and dealing with the ever-present Army bureaucracy, I am struck by how well our TEAM worked together. Over the years at these remote sites, both on and off range, when we were out there constructing facilities, supporting a mission or whatever, there were usually several different types of workers. It was common for contractors from different companies, military personnel and civil servants like myself from different organizations all there for a common cause, to get a job done.

Then, in spite of all the preliminary planning and engineering, when we got to the field, things didn't always come together as expected. So everybody worked together as a single team sharing ideas, tools, equipment, time and we got the job done in spite of management restrictions.

Anyway, when going to and from NOP I usually took the back road via Oscura Range Camp because it was much shorter. On the other hand it was a steep, crooked, little dirt road that was slick in wet or snowy weather, especially in a pickup.

To overcome this traction and stability problem, I accumulated a pile of big rocks at the bottom of the main hill north of ORC. I loaded them into the bed of the truck on each trip up and unloaded them on the way down.

If I stayed at NOP, the summer days were awfully long. Movies and cards with the military guys soon got tiresome. Because of that I know I put in a lot of unpaid overtime because there wasn't much else to do after quitting time.

On the way to NOP along Highways 54 and 380, I'd often stop and pick up abandoned auto tires. It was interesting to drop them off of the cliff edge of NOP and see how far they would go. Often they went far enough to disappear from sight. I wonder if anyone ever came across them and pondered how tires would just appear in the desert.

see Good Food At NOP, page 3

# Let's Build An Addition & Thanks To You Who've Helped

By Sharon Reese, President  
WSMR Historical Foundation

I hope this newsletter finds all of you healthy and ready for a new year! The Foundation is off to what I think will be a very productive year.

We have over \$400K in our Museum building fund and want to start construction of an approximately 6,000 square feet addition to the facility. The addition will house the current displays from the current area.

Every time it rains Darren Court, Museum Director, has to make sure the displays are covered or moved to avoid water damage. It is a situation no museum needs.

Jon Gibson, your Foundation treasurer, and I met with Col. Christopher Wicker, the missile range's Garrison Commander and members of his staff on Jan. 13. This was basically a strategy meeting outlining what we, the Foundation, would like to do with our funds.

The ideas presented had no apparent obstacles from the Staff Judge Advocate's office or the Resource Management office. The Directorate For Public Works will provide architectural drawings and an estimate early in February. As soon as these are complete we will hold another meeting with Col. Wicker and company to discuss our next course of action.

We can thank the CGs New Year Reception for our introduction to a U.S. senator's staffer who has offered her assistance. The Foundation Board is working with Elizabeth Driggers in Tom Udall's local office to see what grants we may apply for to support our construction dollars and for the interior requirements, in particular displays.

Soliciting donations from businesses and pledges for future contributions will start after we have more definitive information from the Garrison. This way if we can show that work is in progress, what additional funding will be required, a date for starting construction and a completion date. We believe this more detailed information will help in our meetings and presentations to prospective contributors.

We have compiled a listing of prospective contributors and will meet to discuss the listing as well as assigning members to each prospective contributor.

If you have ideas for prospective contributors, please get in touch. You can reach me through our editor's email address at [nebraska1950@comcast.net](mailto:nebraska1950@comcast.net) or at the mailing address below.

Also, please note our donor's list on Page 7. These companies and individuals have been most generous. THANK YOU ALL.....

I will keep you posted on our endeavors in the next newsletter.

## Hall Of Fame Nominations Due Soon

White Sands Missile Range 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. Past honorees include such individuals as Wernher von Braun, the famous German rocket scientist, and Dr. Clyde Tombaugh, the astronomer who discovered Pluto.

For information on nominating an individual contact Terry Garcia at the missile range's Incentive Awards Office at (575) 678-3221 or email her at [terry.garcia@us.army.mil](mailto:terry.garcia@us.army.mil) and request the White Sands Hall of Fame Pamphlet. In addition to the nominating forms, the pamphlet outlines the guidelines and procedures for the hall of fame. The pamphlet also is available by contacting the White Sands Missile Range Public Affairs Office at [WSMRPAO@conus.army.mil](mailto:WSMRPAO@conus.army.mil)

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.

Last year no one was selected for induction.

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.

The Hall of Fame is inside the Museum building.

## 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.

White Sands Pioneer Group  
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White Sands Historical Foundation  
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# Good Food At NOP ——— CONTINUED FROM PAGE 1

On the way up the mountain, we saw all kinds of wild-life to include an occasional mountain lion crossing the road. They were sleek, beautiful animals with their long tails.

Once the military personnel stationed at NOP had somehow trapped a bobcat, built a big cage, and kept it for quite awhile. If you pushed a stick or tree branch into the cage, the cat would take one swipe at it with a paw and shatter it – in retrospect, a poor way to tease the animal.

One real plus for working on NOP was the mess hall. That's right, there was a military mess hall basically out in the middle of nowhere on the missile range and it was a first class facility. There was nothing like it between Albuquerque and El Paso.

In my time it was managed by Sgt. Malone. He often supplemented the regular ration with goodies and extras he personally purchased in town. He occasionally served a buffet in the evening as an enhancement to the movies or other entertainment. He simply was an outstanding chef, practicing his profession to the benefit of not only the assigned personnel, but to anyone else who had the time to drive up the mountain close to mealtime.

The occasional trip back and forth to Stallion was usually broken up by a stop at Bingham on Highway 380, then a ways west of the present location and on the north side of the road. It was a one building facility and had an old gravity feed gas "pump" – probably one of the few still operated in New Mexico at the time. It was always a fascination to visit contractors who we took to the north range on business.

With WSMR being a research and development (R&D) facility, the early day instrumentation facilities themselves were often in an R&D stage. I recall one day while we were furnishing radio support for a J-10 telemetry mission, I stood at an equipment rack for a half an hour or so and held a RF coax cable in just the right position so as to eliminate an intermod interference signal into a telemetry circuit. We learned a lot that day about co-locating sensitive telemetry equipment and other types of radio equipment. In fact, in those days, the WSMR instrumentation folks sort of wrote the book on lots of instrumentation interface circuitry – most of which has been refined and prevails in practice today. Just another day at NOP.

Later on I was involved in another communications development at NOP. In the late 1960s, National Range telemetry folks found it necessary to upgrade the microwave radio relay network interconnecting Green River and WSMR. This involved J-10 as one of the relay stations.

Due to the unusually long 125-mile radio path between J-10 and Mt. Taylor, out northeast of Grants, N.M., the telemetry people and their equipment contractor, Collins Radio Co., decided to use a couple of radio path enhancement techniques, one of which was known as space diversity. This involved using two receive antennas spaced vertically many feet apart. Since the J-10 site was located on the edge of a steep cliff, it was decided to locate one antenna at ground level adjacent to the equipment building and place the other

antenna down over the cliff to get the required vertical separation.

This arrangement allowed the lower antenna to be mounted on a small stub structure on the cliff side and eliminated the need to erect a tall tower to mount the upper antenna. This unique solution saved money by not constructing a tower but more importantly eliminated the potential interference and signal blockage a large tower might create for the large parabolic telemetry antenna on site. It worked great.

Prior to actually installing this relay link, because of the unusually long path, it was decided to run some test signals. It would have been poor engineering to install all the equipment and then not have a good stable receive signal for the telemetry data.

My group had a truck equipped to make this type of measurement, so we took it to Mt. Taylor, as the transmit site. We set up J-10 with the receivers, signal recording and monitor equipment.

We had expected to have the measurement program completed before the winter snows came. However, that year there was a very early and very heavy snow that made it impossible to drive the truck out. It was trapped in the snow at our radio site.

Since this was a motor pool truck, the military management at WSMR became highly distressed about losing a truck – for several months – yet knowing exactly where it was. "Get that truck back here NOW," was the order.

Of course, no one at WSMR had adequate snow removal or recovery equipment, nor the resources to rent it, to plow the route several miles up on Mt. Taylor. We replied, "You go get it". They tried – couldn't.

Even the helicopters we often used to service the site couldn't land due to the deep snow and weather. Then, of all things, the weather worsened. "Sorry," was followed by lots of paper work.

Next spring we checked out a new battery for the truck, drove up to Mt. Taylor, and started the truck. We drove it back to WSMR without incident. End of saga. The radio link worked well.

***EDITOR'S NOTE:** You can see a photo of NOP and J-10 on the back cover of the newsletter. An arrow is pointing to the antenna Jim refers to.*

## **Bataan Memorial March On March 27**

The annual Bataan Memorial March will be held at White Sands as usual on March 27. Two routes are offered again this year. The "green" route is the original 26.2 course while the "blue" route is 15.2 miles.

Registration by mail will close on March 12 while internet registration will run until March 20.

There is NO registration at the site and all marchers MUST pick up their bib numbers, chips and other materials at WSMR on the Friday or Saturday before the event.

For complete information and the registration forms visit the Bataan website at: <http://www.bataanmarch.com>

## Way Back When

# Our Big, Beautiful, Yellow V-2 Rocket

By Doyle Piland

From the WSMR Museum Archives

Across the parking lot north of the Museum is the V-2 rocket display building. It is a very nice modern facility which complements Missile Park and provides rest room facilities for those visiting Missile Park. The V-2 rocket on display inside has been restored and is one of the most complete V-2 rockets in the world. Well, that is not the way it used to be Way Back When....

The V-2 rocket, painted with a white and black pattern was displayed across Headquarters Avenue in front of the headquarters building for about 50 years. The sun, rain, sand storms, etc. over those years caused significant deterioration.



**The V-2 exhibit building - just north of the Museum.**

It was removed from its pedestal on September 12, 2002 and taken to the laboratories of The Kansas Cosmo-sphere and Space Center in Hutchinson, Kansas for a complete refurbishment. It returned in early May 2004 and is on display in the specially designed shelter building at the edge of Missile Park. It is now fully protected from sun, rain sand storms, etc.

The paint scheme was changed from white and black to yellow and black, to match the color of the first V-2 fired at White Sands Proving Ground on April 16, 1946. When the V-2 was refurbished, the skin on one side was left off as an educational cutaway. This left the internal parts such as the rocket motor, the two fuel tanks, the pumps and all the plumbing, visible through the underlying framework. Then, the fuel tanks

and rocket motor were also cut away revealing the inside for visitors to see.

In many ways, White Sands Proving Ground/White Sands Missile Range is most remembered for the V-2 rocket program of the late 40s and early 50s. So, let's take a look at some of "our" V-2 rocket's history. How did it end up here on display?

The "Vergeltungswaffe 2" (Retaliation Weapon) or V-2, or A-4 as it was originally called, was designed and tested at Peenemünde located on the Baltic Sea at the mouth of the river Peene on the island of Usedom. On August 17-18, 1943 came a massive Royal Air Force air raid on Peenemünde

This raid and those that followed forced the Germans to look for "hardened" underground production locations for the V-2. The facility chosen was the Mittelbau, which refers to a complex of factories, storage depots, facilities and prisoner camps, some underground, that were used from August 1943 until April 1945 to manufacture and test the V-2 rocket near the town of Nordhausen in central Germany.

In late summer of 1944, just before the start of the V-2 campaign, a small repair station was set up in an old potash mine at Kleinbodungen, near Bleicherode. This station worked at recycling V-2s that had been returned by the rocket launching units as a result of misfiring, damage during transport, or other factors that made them unusable by the launching batteries. By October, the V-2 attacks had begun and Kleinbodungen began receiving defective missiles back from the front lines.

When the White Sands Missile Range Museum's V-2 was being refurbished, Rod Givens of the Kansas Cosmo-sphere and Space Center's restoration facility, noted that the German serial number of the rocket was FZ04/20919.

**see Rocket Recall, page 5**



**The V-2 as you enter the building. The control compartment is open so visitors can see the various components. Photo by Jim Eckles.**



# Rocket Recall ——— CONTINUED FROM PAGE 4

Givens passed this serial number on to the International V-2 Research Group (<http://www.v2rocket.com/>), which searched through various records and found some of the history of this particular rocket.

According to records found in London and Munich archives, #20919 came off the assembly line from Mittelwerk (underground manufacturing facility, part of the Mittelbau complex) around the 21st of December, 1944.

Rockets, with serial numbers before and after #20919 were launched at the end of 1944 by the Battalion 836 of Gruppe Süd (Group South) in the Westerwald frontier. Rocket #20919 was sent out to the firing sites in Westerwald, where German units targeted Antwerp, Belgium. However, because of some technical defect, it was sent back for maintenance at Kleinbodungen.

On April 10, 1945, tanks and infantry of the US 83rd Armored Reconnaissance Battalion overran the German rear guard elements and fought with occasional Panther tanks. One of the platoons cleared the V-2 repair facility at Kleinbodungen, and found a number of V-2 rockets, complete except for warheads, lying on jigs. Among the rockets captured that day by the Americans was #20919.

The White Sands Missile Range Museum's V-2 is unique in that it was actually sent out to be fired "in anger"

at Antwerp by the Germans rocket batteries but, because of some defect, it came back to the repair facility before it was captured by the Americans.

In late 1945, 300 railroad freight cars of V-2 components captured in Europe arrived at White Sands. From 1946 to 1952, a total of 75 V-2 rockets or modified V-2s (65 V-2s, 4 Hermes IIs, and 6 Bumpers) were fired here.

The use of these rockets launched the United States into the Space Age. It should be noted that #20919 apparently was not repaired in Germany and still had its defect when it arrived in the U.S. because it was never fired at White Sands either.

The V-2s provided the U.S. with valuable experience in the assembly, pre flight testing, handling, fueling, launching and tracking of large missiles. The scientific experiments conducted aboard the V-2 gave us new information about the upper atmosphere, gave us our first photographic look back at the earth from space, gave us the first large two-stage rocket (Bumper) and carried the first biological experiments into space.

Interestingly, the architect of the V-2 rocket was Dr. Wernher von Braun who based much of his design on the pioneering work done by Dr. Robert Goddard during the 1930s near Roswell, New Mexico.



**This view of the V-2 shows the cutaway side. Note the simulated carbon vanes that protrude into the exhaust area of the engine. By rotating the vanes and deflecting the exhaust one way or another, the V-2's control system kept the big rocket stable in early flight until it reached a high enough speed for the fins to work. Photo by Jim Eckles.**

# Pioneer Group Update - Luncheon On Hold

Austin Vick indicates the Pioneer Group needs members to renew their memberships for 2011. Checks can be mailed to: PO Box 318, White Sands, NM 88002.

Pioneer Group Reminder: Nominations for the WSMR Hall of Fame are due March 31, which is just around the corner. Please consider seriously someone worthy of this recognition.

Hall of Fame recipients -- someone was kind enough to recognize you by submitting your nomination and through your outstanding leadership you set the example in your work place - who was that person who followed in your footsteps that now deserves to be recognized?

The Pioneer Group's "**Then and Now**" luncheon is currently on hold because of a lawsuit filed against Felix Baumgartner's Red Bull sponsors. Baumgartner was about ready for an attempt to break Joe Kittinger's high altitude parachute jump record and do it where Kittinger set the original record - WSMR.

In 1960, as part of the Air Force's tests of equipment

and human beings in space-related environments, Capt. Joe Kittinger jumped from a balloon at 102,500 feet above WSMR and survived to tell the tale. That record still stands.

Baumgartner is a famous skydiver who, with Red Bull's financial support, planned to jump from a balloon at 120,000 and shatter the old record. Kittinger has been an active supporter of Baumgartner during the preparation.

The jump team was also working with NASA as they developed a new space suit that would protect Baumgartner during his many minutes of free fall.

According to a National Geographic Adventure website, the project is on hold because a promoter claims Red Bull stole the idea from him and he has filed a lawsuit to get his share of the estimated hundreds of millions of dollars to be realized from the jump. There is no word on when the project might resume. Our luncheon was tied to the group being at WSMR for their attempt.

*EDITOR'S NOTE: Is this the future of turning space research and development over to private enterprise?*

## Kennedy Question From Last Newsletter is Answered

By Jim Eckles, Editor

In the last issue of *Hands Across History* I reproduced part of a page from what we believe was Maj. Gen. Thorlin's program for the President Kennedy visit. He or someone else had penciled in data about the different missiles demonstrated that day.

The question was, "what did the numbers represent?"

I received two phone calls with what appears to be the correct answer. The first was from Robert Myers, the WSMR geologist, and the second was from Bob Lipinski, retired Army colonel and current member of the Foundation Board.

Both indicated they were not certain about all the missiles, but from their knowledge of some of the missile systems, the numbers were indicative of the yields of the various nuclear weapons that could be placed on the missiles.

I checked on the web and found articles about these old missiles to include what nuclear weapons went on those that could be so equipped. Information about the old nukes

was readily available on the web as well. And it wasn't from WikiLeaks.

We assume, that since most of the briefings were not classified that day, weapon yield info was left out. It was up to Thorlin to provide that information to the president on a one-to-one basis.

Here a rhetorical question concerning JFK's visit to watch all manner of missiles PUBLICLY demonstrated. Did you realize the show was only about half a year after the Cuban missile crisis?

It is easy to imagine that after the Cuban showdown, Americans and our allies may have wondered about our country's capabilities in dealing with the Soviet Union. Having the president publicly watch a massive display of firepower was just the message needed to reassure everyone.

Normally information about these systems would have been hard to come by let alone letting the news media film the shots. It would have been great to have been a fly on the wall during all the decision making and planning for the event.

## Many Broomstick Scientists Obviously Enjoyed Their Time At WSPG

*EDITOR'S NOTE: The Broomstick Scientists sound like they were an unruly lot. This is a military badge one of the members wrote up for their group. Actually many were scientists and engineers who were drafted into the Army as enlisted men to help develop a variety of missile systems.*

Today, the U.S. Army announced the creation of the COMBAT BROOMSTICK BADGE.

This award is given all Broomstick Scientists of the 1st Ordnance Guided Missile Support Battalion/9393rd Technical Service Unit, WSPG, New Mexico for service above

and beyond the call of duty, who bravely suffered valiantly through untold hours of Kitchen Police, cots being upturned, scrubbing catsup bottles, etc. Also for playing croquet, enduring weekends in Juarez, Mexico; weeks, even months, of Temporary Duty (TDY) at civilian installations in such end of the world places at Pasadena, Calif.; Washington, D.C.; Schenectady, N.Y., etc.

Those eligible may acquire the badge by sending in proof of their eligibility such as soap/sweat stained fatigues, empty tequila bottles, restaurant tabs from TDY locations and two (2) tops from empty NIKE missile shipping crates.

# The White Sands Missile Range Historical Foundation

## Thanks Its Many Benefactors For Their Generous Support Of

### The Capital Fund

## For The White Sands Missile Range Museum And Learning Center



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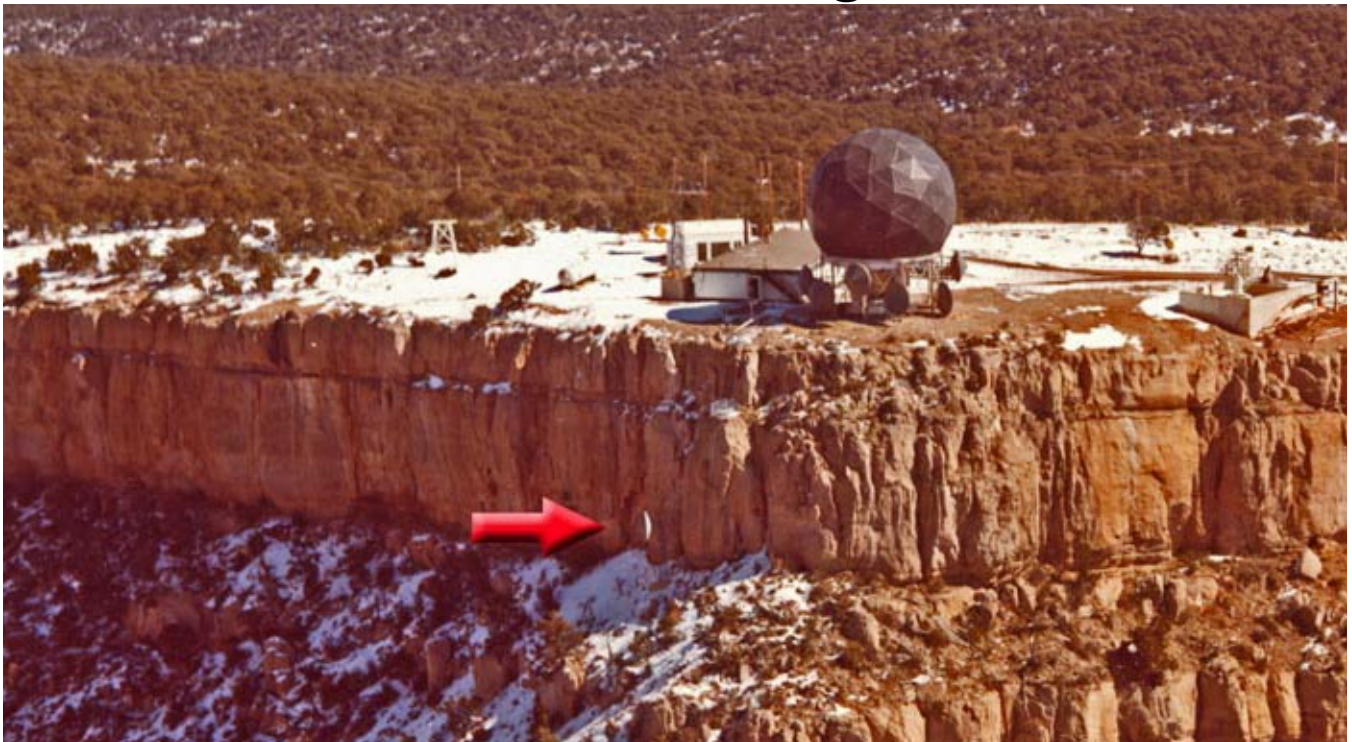
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**Hands Across History  
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## **The Back Page**



**This is the Jig 10 telemetry site atop North Oscura Peak Jim Anress wrote about in his front-page article. The arrow points to a little sliver of light which is the edge of the antenna mentioned in the piece. U.S. Army Photo.**