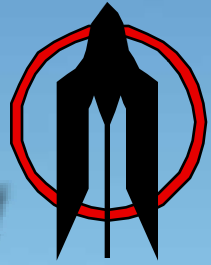


TRIPOLI GERLACH

Research Rocketry



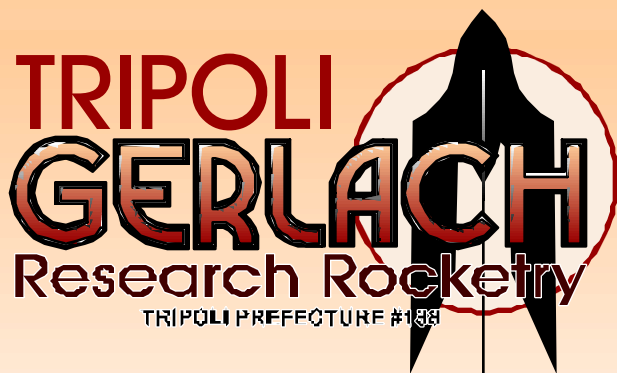
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THE MEMBERS OF TRIPOLI GERLACH
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Tripoli Gerlach was founded as a National Prefecture
under the Tripoli Rocketry Association, Inc. Devoted
to Research Rocketry and the Black Rock Desert area
of Nevada, we welcome all National Tripoli
Members, no matter their location or Certification
Level.

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send them to Tripoli Gerlach Headquarters. Visit
our WebSite on-line at:

WWW.TRIPOLIGERLACH.ORG

ON THE COVER Tripoli Gerlach member
Gerald Muex, Jr is a consistant flyer at Black Rock.
He's into big high altitude vehicles and proves
every year he's the man that can - The Spam Man!

Gerald was also Prefect of Tripoli Vegas and a
member of Tripoli's Board of Directors.

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THE EDITOR

Well here's another 24 page issue. As stated we will run
20 pages unless we get stuff that warrants the addition
of 4 more pages.

We present THUNDER MOUNTAIN, a place so many
of us may have past while heading for the Black Rock
Playa - yet have never even seen it.

This issue also centers on LDRS, how it came to be and
how it happened. We ran a story a few issue back on
Lucerne Dry Lake in California, often called the Birth
Place of High Power. This issue will explain how those
early rocketeers had to travel hundreds of miles to
practice the new rocketry to bring back to Lucerne for
everyone to pursue.

The story of how LDRS evolved its name and how the
very first LDRS came to be held in Ohio before
becoming a traveling event as it is today.

We are open to publishing articles from Tripoli Gerlach
Members, actually from anyone. All submission can be
sent to Tripoli Gerlach Headquarters, address above, or
E-Mailed to Tom; address to the left.

We are also open to any advertisers. Rates are really
reasonable - just ask!

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presented.

MEMBER'S NOTIFICATIONS

The annual Member's Meeting of Tripoli Gerlach will be held September 19th at 7pm in the WayBack Room at Bruno's. This is the meeting where we will conduct our yearly business, nominate and elect our officers and announce the results of our HAMSTER DANCE Launch of 2014.

Our business is brief. We did not take advantage of Tripoli's PIP for 2014 and we will discuss its use for 2015.

Also it was brought up to rotate Prefects each year. Since the majority of Members are Prefects, or were Prefects, or could be Prefects, this should pose no problem.

Don't forget to notify Tom to attend the Annual Meeting as we need a head count for the Spaghetti Dinner.

HAMSTER DANCE CHANGES

The HAMSTER DANCE IV waiver is applied for. We have requested a 15,000' AGL ceiling. There will be a few changes this year, the big one being "If you break the waiver you are disqualified". Remember this launch is not to be taken serious - other than safety.

The other possible change comes with Tripoli creating a blanket permit with the BLM. With this permit we must send the BLM \$5 for every person attending HAMSTER DANCE whether you're a flyer or spectator.

We are currently trying to work around this since HAMSTER DANCE is a small event and only requires a "Letter of Agreement" with the BLM. Watch your E-Mails and the WebSite for more on this.



ANNUAL MEMBER'S MEETING and SPAGHETTI DINNER With MEAT BALLS

September 19th, 7pm
Bruno's WayBack Room



Please fill out this form completely. It is necessary to supply us with your TRA number and certification level. Membership runs from January to December. Renewal will be January 1st,

YEARLY DUES ARE \$20.00

Make Check for \$20 Payable to

DAVE ROSE
13385 Lincoln Way

If at all possible please E-Mail your photo to be posted to:

justom@rimworld.com

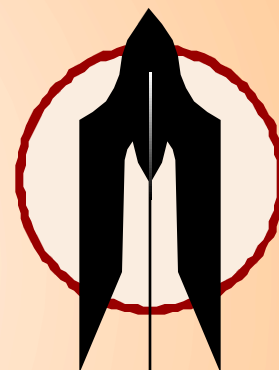
MEMBERSHIP APPLICATION

NAME _____ TRA# _____
ADDRESS _____ CERT LEVEL _____
CITY _____ STATE _____ ZIP _____ EXP DATE _____
E-MAIL _____ @ _____
PHONE (____) _____ CAN WE PUBLISH (YES) (NO) _____
HOME PREFECTURE _____
PERSONAL WEBSITE _____

As a member I will abide by all rules set forth by the Prefecture as well as those set forth by the National Organization. I pledge to pursue a commitment to the Prefecture's designated Launches & Activities and support the Prefecture to the best of my ability.

SIGNATURE _____

DATE _____



TRIPOLI GERLACH
Research Rocketry
TRIPOLI GERLACH

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THUNDER MOUNTAIN

One Man's Junk Is Another Man's Treasure



Many of us, driving Highway 80 from the east heading for Black Rock and skirting the Black Rock Desert after passing the town of Winnemucca, have passed a unique area dedicated to art and the American Indian. The highway sign says "Thunder Mountain" with no other indication. As you pass it, IF you see it, it registers as just another place of life's abandonment in the western desert. Another place at the end of the road for many past travelers.

Thunder Mountain is anything but..

It is the life's work of one Frank Van Zant. Five acres jam-packed with exotic folk art and architectural oddities that he created over a period of three decades beside Interstate Highway 80 in Pershing County.

Frank Van Zant, also known as Chief Rolling Mountain Thunder, described his roadside art park variously as a museum, a monument to the American Indian, a retreat for pilgrims aspiring to the "pure and radiant heart." Many of his neighbors feared Van Zant; others revered him as a spiritual guru.

Frank Dean Van Zant was born in Okmulgee, Oklahoma on November 11, 1921. Okmulgee is Indian country, and although his surname is Dutch, Van Zant considered himself a full-blooded member of the Creek nation.

Frank's son Dan Van Zant is now owner and caretaker of Thunder Mountain Monument and is trying to restore and maintain his father's monument to the American Indian.

All this began when Frank and his young bride Ahtrum heading west in the fall of 1968, looking to find a place in the sun. 130 miles northeast of Reno, near a onetime railroad station named Imlay, his 1946 Chevy pickup truck broke down. He couldn't get it running again, and so he decided to set up camp in the sagebrush. Presently the owner of the property happened along and made him an offer he couldn't refuse.

What inspired Frank to start building his Thunder Mountain Monument?

According to Dan, when his father was young he had once seen "a bottle house out in the desert, someplace around Death Valley. And he said he just fell in love with it. He said that he wanted to do that someday."

Frank Van Zant's three-story monument started out as a one-room travel trailer, which he gradually rocked over until it came to resemble Barney Rubble's stone-age bungalow.



As materials became available, he added corridors and stairways leading to upstairs bedrooms formed of daub-and-bottle walls and slate ceilings. He turned automobile windshields into picture windows, scrap iron and galvanized pipe into rebar, concrete and chicken wire into ornamental statuary. Virtually every square foot of the monument's exterior is covered with friezes and bas-relief tableaux depicting historic massacres and/or bureaucratic betrayals visited upon the American Indian. The roof is adorned with still more statues and multiple arches, the tallest of which soars fifty feet into the sky. At the very top is perched a carved wooden eagle.



Even as the monument was under construction, it was joined by various bizzaro outbuildings, including the roundhouse and the hostel house, a 40x60-foot work shed, an underground hut, guest cabins and a quixotic children's playground straight out of a Tim Burton movie. Soon Thunder Mountain became a popular hangout for hippie artisans and counterculture characters--much on the order of the Meta Tantay

commune established in East Carlin by the Cherokee Medicine Man John "Rolling Thunder" Pope. During the late Sixties and early Seventies, interest in living the Indian way ran high, and there were more dropped-out disciples and vision questers roaming about Northern Nevada than just one Chief Thunder could accommodate.



In its day the interior of the main building held all the amenities of home - it was home. These pictures show it could have been a nice place to live - for some



As the 1970's drew to a close and the political pendulum began to swing to the right, Thunder Mountain fell into disrepair. In 1983 the three-story hostel house burned to the ground; then the underground hut caved in. By and by the last of the hippie artisans drifted back to suburbia.



Thunder Mountain became deserted, although curious visitors continued to trickle in off the freeway--as did more than a few vandals. Nocturnal thrill seekers would belay themselves down the chimney into the



To this day the interior walls still hold Indian images and spirits.



monument's main chamber, where they would drink beer and tell ghost stories. Water was also invading the structure, thanks to a porous roof. Piece by piece, Frank Van Zant's monument to the American Indian was going the way of the buffalo and the carrier pigeon.

Although his father had willed him the property in his suicide note, it took awhile for Dan Van Zant to gain legal custody. His next goal was to somehow preserve and protect the place--but how?

"My first thoughts were that I would just donate it to the state of Nevada," he says. "They could make it a state park. And a person who was director of the state parks division actually came out, met with me, and he walked the property. He basically was pretty candid; he just said, 'This place is a mess.'"



What is Indian Desert Art without cars - dah!



Dan Van Zant and his wife Margie have since hauled away a couple hundred pickup loads of trash--what his father would have called building material.

"That was what he used to build with," says Dan. "He had it scattered around so he could see what he had."

Today the bone yard is confined to just a 400-square foot area against the west wall of the burned-down hostel house, and Dan estimates there's enough used lumber in the pile to build a visitor's center. He'd also like to install an underground irrigation system so he can keep the shade trees alive and green up the grounds. "Green it up, put in some park benches, picnic tables, and make it a little more appealing to the general public." And so a Visitor's Center was built.



While there is no admission to Thunder Mountain Dan regards today's visitors contributions as nothing short of miracles - like many said to have occurred upon the patch of land his father held sacred. Once, back when the monument was fully occupied by improvident hippie artisans, there arose a food shortage. The story goes that the chief did an Indian dance and offered up a prayer. Later that same day, a semi-trailer truck loaded with frozen food crashed on the highway. The driver, grateful to be alive, told the group to help themselves to the spilled groceries. Did the Indian Spirits intervene or did the hippies run out on the highway nekkid?!



Frank Van Zant never planned too far ahead, preferring to rely on divine providence. His son Dan, confident that the Great Spirit still abides at Thunder Mountain, is determined to see that his father's life's work will not soon fade away.



ROCKET RESEARCH INSTITUTE SMOKE CREEK AND THE BEGINNING OF LDRS



In the Beginning

In order to find the roots of today's' High Power Rocketry event Known as LDRS we have to Journey back to the very beginnings of rocketry itself, and then ,fast forward to around 1956.

Long before there was such a thing as High Power Rocketry (as we know it today), and long before there was a nationally organized Tripoli Rocketry Association, there were essentially two varieties of rocket builders: the professionals, and researchers who got paid for their efforts, and amateurs who did not. The dividing line between amateurs and professionals was somewhat blurred, and not very well defined, as many of them were simply gifted researchers who had no funding. Some were affiliated with colleges or universities, and some were independent operators who worked out of their residences, or a dedicated workshop. In the late 1920's and early 1930's there just wasn't a lot of money available to spend on rockets. So, you had to be financially well off, like some members of the American Rocket Society, or find someone like Harry Guggenheim to bank-roll your operation.

After World War II, all that changed. Technical information on how to build rockets and rocket motors had filtered down to the general public, and much of the formerly "classified material" compiled during the war, began to appear in periodical publications, such as

Popular Science, and Popular Mechanics Magazine. By the early 1950's, many people had developed an interest in rockets, and had become proponents of space flight. Some even thought they could build their own rockets. Some did build rockets, and some died trying.

The New Messiah:

A young engineer at White Sands Missile Range named G. Harry Stine, who had written a magazine article about amateur rocket building received a letter from a fireworks enthusiast named Orville Carlisle, who owned a shoe store in Norfolk, Nebraska. Carlisle, who had built several rockets for his brother, who was a model airplane enthusiast, told Harry Stine about a "new-type" of rocket that he had developed, and convinced Harry that perhaps they should meet and discuss his "invention". Together, they saw the commercial potential for developing a safer form of rocket than those currently being produced in backyards, garages, and basements. After getting some financial help, Carlisle seized upon the idea of patenting the model rocket, and the hobby of model rocketry, as we know it today was born. Well almost.

Fact is, that much of the technical information, including the patent drawing, descriptions, and embodiments, strangely resembled the illustrations, and text excerpted from a book published in 1948, by a young rocket enthusiast named George S. James,

entitled "Model Rocket Building For Modelers".

George had previously founded both the Glendale Rocket Society (GRS), and the Reaction Research Society (RRS). He would eventually go on to found the Rocket Research Institute (RRI); but that's another story unto itself°. Anyway, the book was re-released, and copyrighted in 1952, which is when Carlisle purchased a copy for one dollar.

Soon, a company called Model Missiles Incorporated, with Harry Stine at the helm, was making model rockets, under Carlisle's patent, and had licensed several other companies to make them, as well. One of them, Central Rocket Company of Waupaca, Wisconsin, not only distributed the so called "rock-a-chute" type motors, but also published a manual on motor making, with the title "Solid Fuel Motors For Model Rockets". While reference was made to a propellant with a formulation almost identical to black powder, their featured propellant of choice was a mixture of potassium perchlorate and red yacca gum. CRC also sold a huge assortment of loading tooling, and convolute paste-board tubes for making the motors. Eventually, Harry tired of running MAE, and sold the operation to Vern Estes, who with his dad, owned a



George James, one of the RRI founders, checks a batch of Asphalt and Pottasium propellant at the RRI facility circa 1965

fireworks company that had begun to automate several of their production lines. One of the machines, was readily adaptable for making model rocket motors, which was something Harry was unable to do; as all of his motors were "handmade" and labor costs were making each subsequent month less, and less profitable.

Carlisle was content to collect royalties on his patent, and continued in the shoe business, spending his free time on the love of his life (fireworks). He even set up a fireworks museum behind his shoe store, which was a fairly successful business unto itself.

While the Carlisle / Stine / Estes success story is fairly well known, the out-come of the story might well have been different if these two books had not been written.

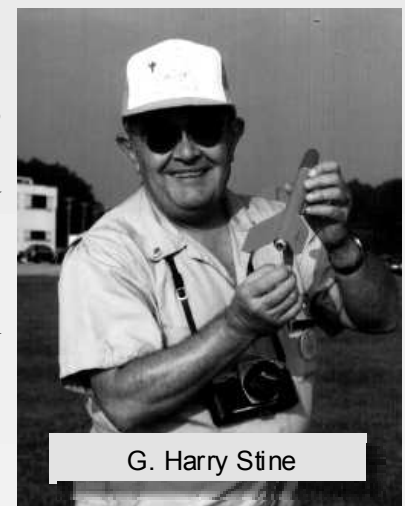
My Rocket Can Lick your Rocket:

So, by the late 1950's, there were now four groups of rocket builders in America:

The professionals, modelers, supervised amateurs, and a group so often referred to as "basement bombers". The professionals pretty much believed that both model, and amateur rocketry was a lot of childish nonsense; and what's worse, (according to a study published by the American Rocket Society) was that the amateurs stood a "one in seven chance of being killed or seriously injured for



Orville Carlisle



G. Harry Stine



Vern Estes

every year that they participated in this extremely hazardous hobby". Just exactly how this actuarial bench-mark was arrived at is somewhat unclear, but time has proven that they were wrong.

The modelers got off a little easier, as they were just categorized as foolish, instead of being both foolish and dangerous. Unfortunately, the modelers tended to mistakenly lump the supervised amateurs, and "basement bombers" into the same category: amateur rocketeers and basement bombers being synonymous with one another. We could go into details to explain how this perception evolved, but we believe, again, that history has also proven this image to be in error.

Both the modelers and professionals alike, seemed (at the time) to have forgotten their humble beginnings, and that they both evolved from "amateur rocketry": The modelers, even more so than the professionals.

As we all probably know, during the period from the early 1960's, up until the late 1970's, model rocketry experienced a true renaissance. It grew by leaps and bounds, through the efforts of manufacturers such as Estes, Centuri, Cox, Coaster Corporation etc. (to name a few).

The efforts of the National Association of Rocketry (NAR), and their chief spokes-person G. Harry Stine, were also a major factor in the development of model rocketry. Harry was everywhere. There is plenty of historical information available on this topic without belaboring it in this short treatise. The NAR had developed an excellent safety record, and a workable safety code, which was quite enviable by anyone's standards.

Soon, model rocketry rapidly eclipsed all other forms of rocketry, including the professionals. There were millions of model rockets being built and flown. It was by all accounts, actually enjoying more success than the real space program. Unfortunately, the well-meaning NAR safety code was not flexible enough to accommodate those hobbyists who had tired of "gluing part A, to Part B, along Line C".

Disenchantment:

Towards the end of the 1970's, many of these disenchanting racketeers started looking for new venues beyond those offered by "C" and "D" sized model rockets. Some, took up the pursuit of "amateur rocketry", While others simply tried to work within the system, or at least close to it, and began to cluster, and

stage large numbers of these motors, and eventually used the "E" and "F" size motors when they became available. At some point, even clusters of "E" and "F" motors were not big enough to satisfy the appetite of some racketeers, who took up the task of building their own motors. This, of course, was strictly "verboden" under the existing NAR Model Rocket Safety Code, and the recently drafted NFPA fire codes of the day.

All this activity was beginning to raise a few eyebrows back at NAR headquarters, where NAR officials were starting to get increasingly twitchy about members showing up at NAR sanctioned events with Non-NAR hardware. This soon developed into a political "hot potato", with NAR officers asking such pointed questions as, "OK who brought the "G" motor"? Their attempts to mitigate the crisis by creating a network of spies and snitches to "turn-in" those who would knowingly violate the Safety Code, or stray from the straight and narrow path. It created no end of problems, and created a rift of alienation between senior NAR officials, and many of the general membership.

RRI Steps up to the Plate:

A number of these disillusioned rocketeers contacted the Rocket Research Institute of Sacramento, California, which had established the first legal model rocket launching site in California. A cooperative effort between Estes Industries, RRI, and the California State Fire Marshal's office made this possible. Unfortunately, there was nothing the RRI could do to accommodate these folks, because RRI was obligated to follow the NAR safety Code, which had been "incorporated by reference" in to Title 19 of the California Administrative Code.

Finally, in early 1979, some of the more persistent builders of these "larger than normal", Non-NAR model rockets asked if they could attend the biannual RRI supervised amateur rocket launches that were held in Nevada's, Smoke Creek Desert. The RRI had been using this site, with permission of the FAA, and the BLM since 1967. The RRI agreed to allow this activity on a case by case basis.

By late 1979, an ever increasing presence of those folks wishing to launch these "large model rockets", made from Non-NAR approved materials, as well as Non - NAR approved motors, was beginning to manifest itself at these Smoke Creek Desert launches. In 1980, the floodgates opened, and almost as many people showed up at these launches with the higher powered model rockets, as did those attending to launch the much larger



The State of the Art 'Model Rocket Technology' HELIX just before its successful flight at Smoke Creek.



Another HELIX Rocket. The extreme motor cluster can be readily seen at the working end of the rocket.

shortened to High Power Rocketry). Jerry made arrangements through RRI for entire contingents of rocketeers from Southern California to make "mass pilgrimages" to Smoke Creek. He and his magazine even referred to our Smoke Creek launches as "professional launches". While we took this as quite a compliment, it would have been nice if they really were professional launches, because then we would have gotten paid for them.



L to R: Roger Johnson, Richard Morris, Melodi Rosenfield, Korey Kline, Michael Morris and Gary Rosenfield pose with the HELIX. Michael holds the 80 spent Composite Dynamics F40s used in the flight.

traditional "amateur type" rockets.

A New Kind of Rocket In Town

Jerry Irvine's *CALIFORNIA ROCKETRY MAGAZINE* began to spread the word of activities at Smoke Creek; and published several articles describing fairly accurately the activities that took place. Jerry and others began referring to this new form of rocketry as "High Power Model Rocketry" (which was later simply

While there were some problems integrating the two forms of rocket activity into one venue, it was none-the-less accomplished. Kind of like "herding cats", as one RRI member put it, and somewhat "burdensome" and "overly-supervised", as one of the high power



The ACE of SPACE, Korey Kline shows what 'High Power' was like back in the day.



A 'cool' Gary Rosenfield plays around with what would be the future of High Power.



A typical rocket area at Smoke Creek mingled MRT with Experimental - safely.

rocketeers put it.

However, be that as it may, the net result was that they got to do what they wanted to do (launch very large model rockets without interference from the NAR, NFPA, or other organizations opposed to their activities). This was done under the RRI banner of legitimacy (we had Federal Explosives permit and almost unlimited FAA altitude waivers). Also, in those days, there was no such thing as a BLM event permit. Or if there was, no one ever told us about it.

As many as 100 to 200 people, many of them spectators, would show up at one of these events. Basically, when we were not launching large amateur rockets, the range was used by modelers to launch their creations, which by then were sporting "G", "H", even



Bill Barber (L) and Chris Pearson, holding a recovery section, participated in the LDRS founding at Smoke Creek



Model Rocket Technology flourished at Smoke Creek as it developed into High Power, away from the seeing eyes of Lucerne and the NAR.

"J", and "K" sized composite motors. There were even those (mostly fireworks types) who had made huge black powder rockets, and launched them at Smoke Creek. In short, it was the perfect venue and location for this type of activity as long as the RRI safety rules were followed.

The "high power" crowd primarily (staying mostly true to the basic principles of model rocket construction technology) used motors and airframes made from non-metallic components, hoping eventually that the NAR would see the error of its ways, and once again welcome them back into the fold, once some of the more salient issues had been resolved. This was not in response to any RRI policy, but was in fact a follow-over from original model rocketry concept (except for the fact that many of them were making their own motors). RRI had no problem with participants making their own motors (with the possible exception of some of the ones we saw, which were just plain unsafe by anyone's standards). Called "bombs with wings" by one RRI member, some of the propellant formulations, such as potassium permanganate and magnesium powder, or potassium chlorate and sugar were simply too dangerous. We even had someone show up at a launch with a motor they had made from copper tubing wrapped with several layers of piano wire. This was also much too hazardous to be allowed. One of the RRI

supervisors (Ed Dwyer) supposedly said to the creator, "We're going to have to bury that, son."

RRI had no problem with HPR types using materials such as steel in rocket motor cases or flight vehicles. After all, at the time, 95 % of almost all of the solid propellant rocket motors made in the world were made of steel. The requirement and rationale for using materials other than steel, was based solely upon some sort of misunderstanding of the nature of ductile vs. frangible materials, such as those used in early Congreve rockets made from forged cast iron tubes. The myth was perpetuated by America's commercial insurance industry, and persists to this very day, because no one wants to upset the apple cart.

While the RRI discouraged inexperienced people from making their own motors, RRI had no desire to intervene between the NAR and those people wanting to push the envelope, as long as we felt that it could be done safely. (Or at least done within RRI's framework of safety requirements). Those not wishing to make their own "High Power" motors could always depend on entrepreneurs such as Gary Rosenfield, Korey Kline, John Krell, Randy Sobsczeck, Jerry Irvine, Steve Buck, and even RRI's own Ray Goodson to show up with a suitable supply of them.

The Estacada Connection:

In very late 1980, the RRI was contacted by a School District in Clackamas County, Oregon, whose

Superintendent, Dr. Leroy Key, had heard about RRI launches from NASA Education Officer, Mr. Mike Donahoe of NASA Ames Research Center in Mountain View, California. Mr. Donahoe had attended several of the earlier Smoke Creek launches in the mid 1970's, was good friends with George and Ruth James, and had actually managed to convince Dr. von Braun's Chief Deputy Director, Dr. Konrad Dannenburg to attend one of our launches.

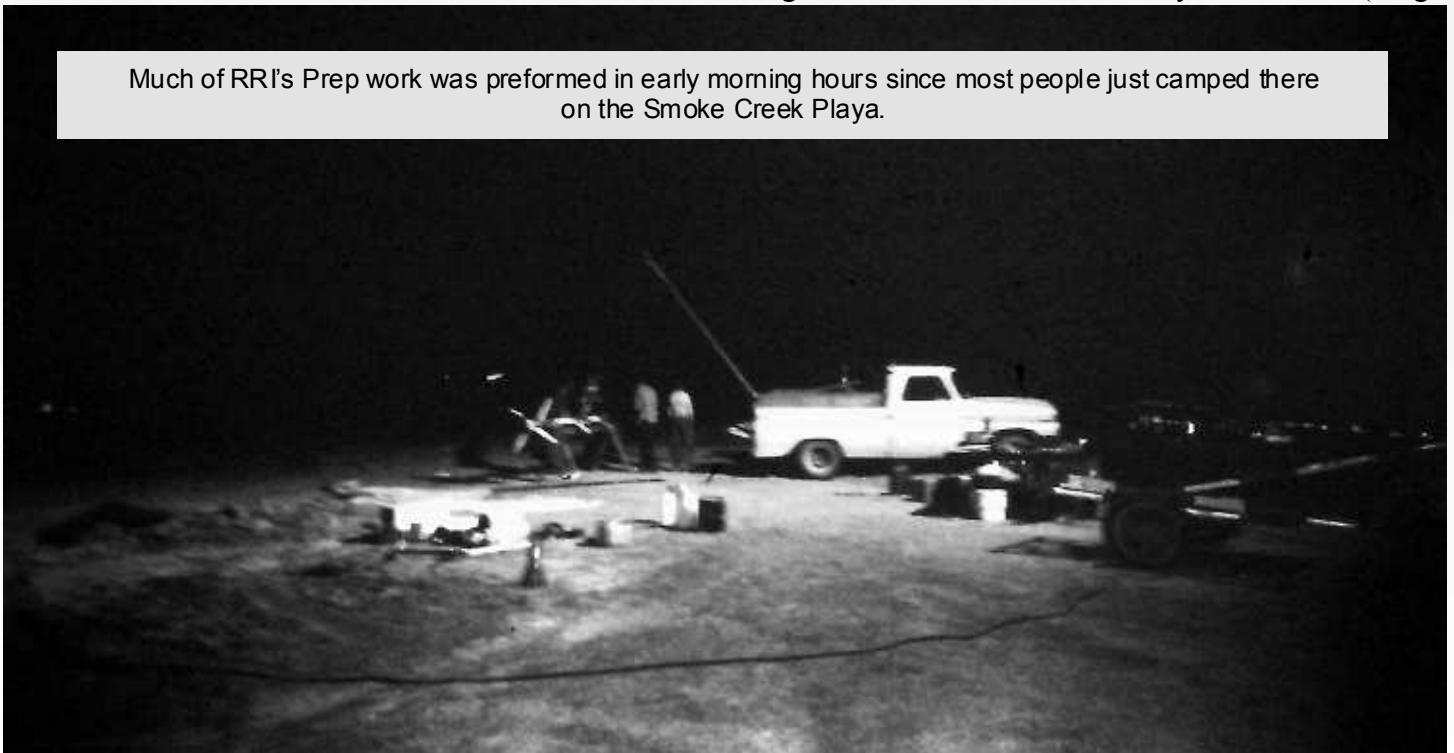
By New Year's, 1981, formal talks with the Estacada School District had been concluded, and it was decided that RRI would travel to Oregon to transfer the micrograin and Asphalt / Perchlorate rocket technology to the school district. This was done under the guidance of Chuck Piper of RRI, and was to be supervised locally by Dr. Key, who was the programs mentor, as well as the Superintendent Of Schools.

For an entire school year, the students, their advisors, and community sponsors studied, planned, and built rockets, and in the Spring of 1981 made their first pilgrimage to Smoke Creek with a half dozen micrograin rockets, and the same number of large Asphalt/ Perchlorate powered rockets. Dr. Key even recruited the Reno chapter of the Civil Air Patrol to help coordinate logistics with rocket recovery efforts.

The Momentous Event

On May 24, of 1981, an event took place that set the stage for what we know today as LDRS (Large

Much of RRI's Prep work was preformed in early morning hours since most people just camped there on the Smoke Creek Playa.



Dangerous Rocket Ships). This is what happened: Several members of The Rocket Research Institute and the Estacada, Oregon School District Research Program were setting up in the rocket assembly area, not too far from the field-trip campsite. In those days, rockets (in particular rocket motors) were not allowed in the camp-site, as many of them contained anywhere from 40 to 80 lbs. of propellant. Rocket motors vs campfires need I say more?

Just as the sun was rising, those present in the campsite were approached by two young men. "Good morning gentlemen", said Dr. Le Roy Key. "good morning", they replied back. Shortly, they were joined by several additional spectators, making their way in that general direction, eager to see what was happening. At the time, boxes containing rocket motors and payload sections were being unpacked and assembled.

Present with Dr. Key was Mr. Bill Stewart, who was the Estacada School District's Security Coordinator. Also In the assembly area were RRI supervisor Chuck Piper, and several of the Estacada High School students, who were loading several micrograin style rockets, and assembling some of the much larger single and two stage rockets powered by Asphalt / Perchlorate.

"Hey guys", Bill said. "Welcome to the middle of nowhere".

One of the spectators responded, "oh, we've been here before".

"Where ya from?", asked Bill.

"We're from the San Francisco. Bay Area and some of us are from The greater Los Angeles area".

One of the fellows introduces himself... "Hi, I'm Jerry Irvine. I own a small start-up rocket company, and I publish *CALIFORNIA ROCKETRY MAGAZINE*". "This is John Krell, Tom Johnson, and Randy Sobczek", Jerry continued.

"Glad to know you," Bill responded.

(Someone yells out), "Has anyone seen Gary yet"??

(Someone fires back), He and Melodi are over with the big rocket at the campsite".

"OK?" (muddled conversation continues)

High Power Model Rockets prep along side RRI's Steelmotored EX Rockets



Bill and the rest of us noticed that several of the visitors were obviously wearing disguises. One of the non-disguised member of their party approaches with a super-8 movie camera in hand, and begins filming the others standing in front of the partially assembled rockets.

Someone says something unintelligible, and gestures with his hands, and they all break out laughing. "What's so funny, and what's with the fake noses, dark glasses, and beards?" Bill Stewart asks.

"Well, it's a long story" one of them says, "but it's sort of a spoof we are acting out to convince the NAR that their rules are stupid". "You see, we're all members of NAR, and were not supposed to be here". "We're traveling incognito", chimed in one of the others. That person was Korey Kline (AKA, Ace of Space and founder of Ace Rockets).

Bill, who had no idea of what they were talking about, asks Le Roy Key. "What's the NAR"?

Le Roy responds, "It's the World's biggest rocket club. They build model rockets. Kind of like the NRA (National Rifle Association) of rocketry".

"Oh, OK, I got ya", Bill responds. Bill then asks, "So what are you guys doing here? What kind of rockets are you flying today?"

"Well ", one of them named Mike Morris responds; we brought with us what we believe to be the world's largest model rocket and some other smaller ones too. You know cardboard and balsa wood". He points to an RV parked approximately 700 feet in the distance, with an enormous rocket strapped to the top of it.

"Wow.....cool" every one exclaims, in unison.

Large Dangerous Steel Rocket Ships

Soon, another group approaches the assembly area. "Well, here we are" says one of them.

Bill Stewart asks, "So, who are you guys and what's your interest in all of this?"

One of them responds, "I'm Roger Johnson, and this is my friend Bill Wood, and we're here to watch the world's largest model rocket and these Large Dangerous Steel Rocket Ships go up" (he pauses and motions to another group of approaching visitors) "See guys. What did I tell you, Large Dangerous Non-NAR certified Steel Rocket Motors and Large Dangerous Steel Rocket Ships".

Another of the group responds, "Yeah, and they're probably not California State Fire marshal approved either".

The fellow with the movie camera came over to get more footage, and everyone made sure that their disguises were securely in place. He ran a couple minutes of film through the camera, and they all walked away laughing: not realizing that they had set the stage for an event that would be acted out again, and again by future generations of rocketeers on a yearly basis at different locations all across America, where hundreds of people from all over the country would gather to have a good time launching Large Dangerous Rocket Ships.

While there are other similar versions of this story and actual movie footage of Roger Johnson uttering that same phrase at California's Lake Lucerne launches, and other places, one must put into perspective, that the veracity of these stories is not as important as the results they achieved. While the word 'steel' was dropped from the phraseology, for obvious reasons, the tradition of large

George James and the EX Kids with an RRI Cargo Rocket ready for launch. Research Rocketry was a bit different then.



models, with large motors, continued up until the present LDRS.

Tripoli Rocketry Association (TRA) incorporated in 1986 and became the largest HPR organization in the world. Amends were somewhat made with the NAR, and together they successfully joined forces against the BATFE, who had sought to slate our hobby for extinction.

As for the RRI, an unfortunate series of events led to its demise, and by 1983 Smoke Creek was no more. The RRI has tried for many years now to revive itself, as an active rocket society, but simply has not been able to muster the where-with- all to re-invent itself.

We offer this historical accounting as our contribution to the LDRS folklore, and hope that those who read it will appreciate it in the spirit in which it was intended and understand how 'LARGE DANGEROUS STEEL ROCKET SHIPS' became 'LARGE DANGEROUS ROCKETSHIPS'.

So now you know!

Disclaimer

Notice!! While it is believed that the accounts described here-in are historically accurate, they were neither solicited, requested, nor endorsed by Tripoli Rocketry Association Inc., its membership, or its Board of Directors. Comments, editorial statements, and opinions expressed here-in are those of the author.

Quotations and statements made by individuals describing these historical events may not be completely accurate, as over 30 years has elapsed since the accounts described took place.

Thankyou,
Chuck Piper, TRAMember #135 Present Assistant Director RRI



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It is reprinted here as an updated version.

LDRS HISTORY

By Christopher T. Pearson

THE STORY OF THE FIRST ORGANIZED NATIONAL HIGH-POWER SPORT LAUNCH, THE FIRST TO GET AN FAA WAIVER, AND THE FIRST TO CAUSE THE NAR TO EXPEL MEMBERS.

The LDRS story actually got started a number of years before the first LDRS was held in a northern Ohio farm field. Here's how the official LDRS began:

As with many people, I started into model rocketry as a teenager, but more adult things, like cars, motorcycles, girls, a job and college forced me to put rocketry on the backburner for a while. When I got back into rocketry, even though I was heavily involved in NAR competition until 1978, I wanted to try something different. I got started in highpower rocketry, as it existed then, back in 1976. I quickly made contacts with people all over the country that were involved in the emerging high-power hobby. Some of these people were Gary Rosenfield (then of Pro-Jet, predecessor of Composite Dynamics and Aerotech), Roger Johnson (aka: The Rocket Clown), Korey (the Ace from Space) Kline of Ace Rockets, the first High-Power rocket kit company, Mark Mahyle of Small Rocket Sounding Systems, another composite motor and kit company, along with others who were, at the time, taking "model rocket technology" to the limits. MRT, (Model Rocket Technology), as it was also called, referred to high-power rockets made from model rocket components.

Between 1972 and 1978, unless you had an "in" with a motor manufacturer, about the only thing there was for the High-Power crowd was either clustering D12's or using FSI motors. Centuri/Enerjet had ceased motor production, although limited motors were still available and being used. This was before any of the early composite rocket motor companies arrived on the scene. Some of the people that were visible in the early High-Power community were Scott Dixon of Vulcan Systems, and Irv Waite, formerly of Rocket Development Company, father of the Enerjet line of composite rocket motors. They were both producing professional rocket motors for military and industrial use, but for the right amount of \$\$\$, they could be persuaded to make motors for you.

Before this time, there were many notable, and now very rare and collectable, High-Power rocket motors.

Chris Pearson with his
ACE Mongrel #1 at LDRS-1



John Rakonnen and Pro-Dyne, maker of F thru G class motors. Coaster, who made large E, F and G black powder motors, and Centuri Mini-Max, also D, E, and F black powder motors. They had all vanished from the rocketry scene by 1970. Gary Rosenfield was one of the new breed of composite motor manufacturers, as his first company, ProJet, produced F and G composite motors. Mark Mahyle of SSRS (later known as Crown Rocket Technology) entered the foray with E thru H composites motors, and a little known company called Plasmajet, run by John Krell and Randy Sobczak, made F thru I motors. So with those new motor manufacturers producing a new generation of motors, a number of high-power kit manufacturers soon followed suit. Unfortunately, as with most hobby-type businesses, many people entered the hobby and left just as quickly. Gary Rosenfield joined forces with John Davis and

formed Composite Dynamics, which gave rocketry mass-marketed composite 24mm E and F motors, as well as the first endburning composite, the 29mm E9, a motor which, ten years earlier, Enerjet had called "impossible". Other early companies produced specialized items for the high-power community such as launchers, pads, etc.

Unbeknownst to the NAR, a number of people at the time were flying high-power rockets at local sport launches or side by side with competition rockets at NAR events. Unlike NARAM's today, where the sport range is busier than the competition range, sport flying was almost unheard of at a NAR launch. At one of our regional meets early in 1980, several uncertified F, G and H motors were flown in overweight rockets. Somehow, word of this leaked out and later that year while at NARAM-22, another SNOAR member and I were called on the carpet by Mark Bundick, the National Contest Board Chairman and questioned about it. This is where the famous, "Who flew the G?" quote came from.

My high-power contacts in California told me of all the extreme rocket flying that was happening out there: huge clusters of F and G motors, real metal vehicles, special effects rockets and so on. I wanted to observe what was going on in high-power rocketry on the west coast, so, in 1981, I journeyed to Smoke Creek, Nevada, to attend the annual Memorial Day Amateur Rocket Launch. This was sponsored by the Rocket Research Institute, and is primarily for the zinc/sulphur crowd, but they allowed the launching of large model rockets and MRT vehicles, along with a lot of professional pyrotechnics people who lit up the nighttime sky with fireworks demonstrations. While there, I heard Roger Johnson say something that was to stay with me long after the launch, and that was "We're going to fly some

large and dangerous rocket ships!"

To tell you the truth, I was actually somewhat disappointed by what I saw flying out at Smoke Creek. Except for the zinc/sulphur and asphalt/per chlorate rockets being flown by Dr. Key's high school group, it was rather mundane. It was nothing like what is flown at LDRS today. Primarily a lot of four-inch stuff with clusters of F and G motors, and an occasional H or I motor. And as for the launch facilities, you walked out away from the cars, stuck a rod in the desert floor and ignited the motors with fuse and a match! Nothing like I was led to believe was flown.

Later that summer, the NAR section that I belonged to ran a regional meet in which we flew a number of E and F competition events, which was very rare for sections even today. We advertised it as a meet for "you Large and Dangerous Rocket Ship fans." Also flown during that event were actual High-Power rockets powered by non-certified motors.

It was only a few months later that I let my NAR membership lapse after being a member for 14 years. When other NAR members asked me the reason, I explained that it was because I wanted to fly rockets that would exceed the NAR's limits, and I didn't want to cause problems by doing so. I was later told by a NAR official that this was probably the best way to have done it, rather than openly flying High-Power and daring the NAR to do something about it, as some people did.

Shortly after that I began planning what would later become the first national High-Power rocket launch, LDRS. The name LDRS was an acronym for "Large and Dangerous Rocket Ships", just as I had heard Roger Johnson say it at Smoke Creek the year before. LDRS

was the first MRT, or high-power rocketry, event that was promoted as such. I found out what I needed to do to get a FAA waiver to legally fly "amateur" rockets. When I contacted the Oberlin

Air Traffic Control Center about the waiver, they were baffled! They had never issued a waiver before! So it was a learning experience for both of us.

Feeling rather the rogue at the time, I even managed to get the



Roger Johnson, Richard Morris, Melodi Rosenfield, THE HELIX ROCKET, Kore Kline, Michael Morris (holding 80 fired F40 motors still glued together) and Gary Rosenfield at Smoke Creek, Nevada in the late '70s

event listed in the contest events schedule in the Model Rocketeer, the NAR's magazine for one issue before they discovered its true nature. The following is how it appeared.

LDRS-1 Sport Launch, 24-25 July, 1982, Medina, OH (SNOAR). Three unofficial "events," prizes to be awarded (no national contest points). Contact: Chris Johnston, 26481 Shirley, Euclid, OH 44132; (216) 731-3839.

-From Model Rocketeer, May, 1982 Con Calendar

Then, late one night a couple of months before the launch, I received a rather nasty phone call from a very PO'ed then-editor of the magazine, Chris Travares, questioning me about the true nature of the launch. So I told him. Needless to say, he was not pleased. After that, they ran a disclaimer in the next few issues warning about "intentional amateur activities" and urging NAR members not to attend.

LDRS-1, previously appearing in this space has been determined to include intentional amateur activity not announced in the original notice sent to the Model Rocketeer. NAR members are urged not to participate in LDRS-1

-From Model Rocketeer, June, 1982, Con Calendar

We were under a great amount of pressure from the NAR officials, after all, in their arrogance they thought that they were in control of all model rocketry (at the time even Estes bowed down to them) and here was someone who was organizing a launch to publicly do

what they specifically forbade. This was something that they never had happen before. Frantically, Pat Miller, the president of the NAR at the time, offered to send me a list of all active NAR members so I could check to see if the attendees were members and forbid them to fly. Yeah ... right! NAR officials attempted to coerce certain members that they knew would be attending, asking them to write down names, take photographs, and generally "rat" on everyone that was there. To the best of my knowledge, no one volunteered to fink either before or after the launch.

LDRS-1, as well as LDRS-2 through 5, were all held on a farm field near Medina, Ohio. And not a real great flying field, either. There were houses nearby and lots of trees a short distance from the launch site. "So why did we launch there?" one might ask. Simple! The field was owned by Mike Wagner, who was a member in the local NAR section (SNOAR, or the Suburban Northern Ohio Association of Rocketry). It was actually listed as a private airstrip, so it was uncultivated, smooth, and big enough for most model rocketry activity.

LDRS-1 went off without a hitch. People came from all the surrounding states and one as far away as California to attend. There were a grand total of 47 people at the launch. Not 47 flyers, 47 people! For launching hardware we had the SNOAR model rocket racks and one launcher with interchangeable rods up to 1/2"! A far cry from the launch range at LDRS today! A lot of FSI E and F motor clusters were flown, along with clusters of D12's. Left-over Composite Dynamics motors were flown, along with Plasmajets and SSRS motors. The



Group Photo of First Flyers at LDRS-1

highlight of the launch was rockets flown with single composite Rocket Development Corp. H and I motors! WOW!

After the launch, the club newsletter, SNOAR News ran an article on LDRS-1 complete with pictures. As a result, every NAR members pictured was contacted by NAR officials about alleged "safety code violations," and several were expelled after so-called "disciplinary hearings".

With the success of LDRS-1, plans were quickly made to continue the launch. More launchers were added and better crowd control was implemented. The following year, more people came from the west coast, notably Gary Rosenfield and Korey Kline. LDRS-2 featured the first composite J motor flown at a LDRS, courtesy of Scott Dixon of Vulcan Systems, who attended, which was flown by the author. It also featured the first power shred at an LDRS, also by yours truly. Korey Kline flew a bunch of his highpower Ace Rocket kits. Aerotech flew a number of prototype high-rate motors.

In the next two years, the NAR zealots tried every which way to prevent LDRS from happening. They threatened to contact the FAA to check the waiver (I told them to go ahead), got in touch with the Medina city prosecutor, fire and police departments, even the Bureau of Alcohol, Tobacco, and Firearms (otherwise known as the ATF), in attempts to shut it down. They

failed.

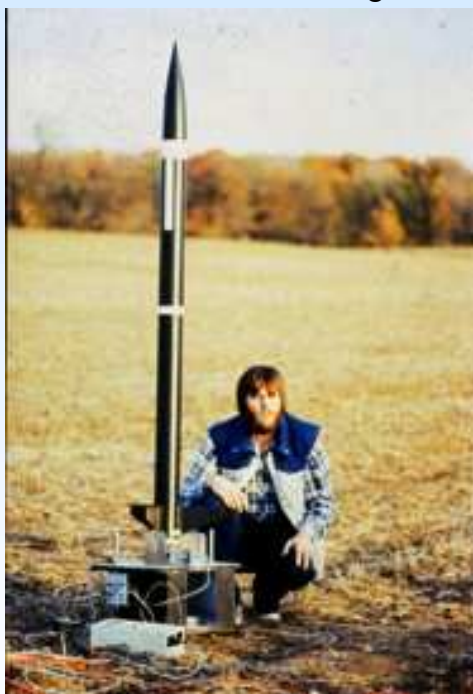
Each year LDRS got bigger, the motors and rockets got bigger, and the NAR saw its senior membership shrinking as more and more of them left model rocketry, ceased model rocket competition and entered the High-Power rocketry sport.

By the time LDRS-3 rolled around, the NAR was forced to admit that we might be right and started the first "Blue Ribbon Commission" for the study of High-Power rocketry. Pat Miller attended LDRS-3 to observe and walked away very impressed with what he saw. At one point during the first day's activities, I offered to let him launch my rocket with clustered F 100 motors, but he politely refused. It was only 150n-sec! Later, he told me privately that the degree of craftsmanship that he saw at LDRS, along with the way the range was operated was better than any NARAM he had been to.

Negotiations began after that with the HPR/LDRS committee, which had such notable High-Power people like Chuck Mund, Jim Dunlap, and SNOAR members Chris Johnston and Bob Geier. Guidelines were drawn up by the committee, along with a proposed safety code, and submitted to the Commission. Experiments were conducted by Trip Barber to ascertain the power limits of the new composite motors. Some High-Power manufacturers, including AeroTech and North Coast Rocketry, were



Curt Hughes with his beautifully detailed ACEALLEGRO LARGO



Mike Nelson published *HIGH POWER ROCKETRY* in the early 80s.



Bill Barber soon to one of the first Tripoli Board of Directors.



Left: Larry Broadbent with one of his prototype STARGATE SYSTEMS kits.
Above: John Phillips with his 12 clustered D-12's
Right: Scott Pierce shows the business end of his 167 motor cluster record attempt.



contacted to give their input in certain subjects, such as motor design and airframe construction. Others donated materials for the testing.

The Blue Ribbon Commission gave its findings, and out of this came the new revised NAR/HIAA Safety Code, which was undoubtedly the most profound change in the hobby since its inception.

At LDRS-4 the crowd on the field was exceeding 100

people. It featured the first AeroTech K motor flight and the first L motor flight, another Vulcan Systems motor in a minimum diameter airframe, which we never saw again. Soon after this, the so-called "Son of Blue Ribbon Commission" was formed to study the true LDRS type of rockets, over and above the 3.3 pounds which were now called Model Rockets. Members of the Commission visited LDRS-5 and were impressed by the quality of workmanship of the rockets, the reliability of the motors, the vehicles in flight, and especially the strict safety rules which were



Frame from an 8mm movie showing Jim Dunlap with his super detailed upscale ORBITAL TRANSPORT. Goes to show there really were some Large & Dangerous Rocket Ships back then..



Korey Kline and Gary Rosenfield ready a rocket using a proto-type AeroTech Composite motor.

leased to a local farmer soon after that and plans were made to plow it for crops. As a club, we had just one more high-power sport launch there, just a couple of months after LDRS-5. I'm sure that we probably put a few rockets into the Medina town square, and I think that we were really beginning to scare the locals!

Also, after the problems that happened that year, both on and off the launch range, I was reluctant to organize any more events. Several people had attempted to use the launch to further their personal and political agendas and I became very discouraged, not to mention, totally burned out. Furthermore, North Coast Rocketry, the company that I founded and was operating out of my house was consuming increasing amounts of my spare time. With the request of Tripoli officials, I allowed the copyrighted term "LDRS" to be used by the Tripoli Rocketry Association for the name of their national launch. Others have followed the example that was started by LDRS and have organized other regional type events, some with more success than others. LDRS-6, held in Hartsel, Colorado, was the first national event sponsored by Tripoli in conjunction with Vulcan Systems, Inc.

I would like to believe that LDRS was a deciding factor in the Model Rocket Safety Code change, and that it was also a factor for the emerging interest in High-Power rocketry, as with LDRS came the development of many of the leading High-Power rocketry companies that changed the face of rocketry as we know it. Never again would we think of Estes-type model rockets when discussing rocketry. Motors evolved from 13, 18 and 24mm "toy" black powder motors to 2.3, 4 inch diameter and larger professional expendable and reloadable composite motors. From clusters of D12's to clusters of M motors. We now have a variety of "alternative fuel" hybrid motors. Rockets leaped from ounces, to pounds, to tens and then hundreds of pounds. From paper and balsa wood to fiberglass, carbon fiber and Kevlar. And there is no end in sight.

LDRS was the first, and set the example for others to follow. I can only hope that the number of High-Power launches continues to increase all over the country, as the sport of High-Power rocketry continues to grow

I urge the sponsors of future LDRS's to continue the tradition of well run meets stressing safety, as LDRS is the standard all others are judged by.

enforced at the meet. The result of this was the new NAR code for High-Power rocketry which allowed NAR members to fly high-power rockets beyond the 3.3 pound weight limit.

After LDRS-4 we realized that because of motor and vehicle development, we had far exceeded the limitations of the flying field, and for the next year there was an attempt to hold LDRS-5 at El Dorado Dry Lake near Las Vegas. Unfortunately, the FAA waiver was refused and hastily plans went ahead to hold it once again in Medina.

Unfortunately, LDRS-5 was the last national High-Power launch to be held in Medina, as the field we flew on was



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HISTORICAL FOOTNOTE

FOR THOSE WHO REMEMBER BEING THERE

Historical footnote: Recently I visited Medina and the old flying field. Although there are many new homes on Station Road near the launch site, the fields around the old LDRS field are still covered with crops. The actual field is apparently being used once again as a private airport and landing strip, as there was an aviation windsock on a tower on the field (not visible in photo). The photo shown is the field used for LDRS-1 thru 5 and was taken from the northwest corner looking southeast. The one rocket-eating tree is visible. The field looks better now than it did when we were flying on it! What I believe to be the old Wagner home is abandoned and falling apart, although the barn buildings are still in good shape, perhaps being used to shelter aircraft.

The saga of the LK Motel and Restaurant where everyone stayed and ate has changed with time as well. The photos show it as it stands today.

Despite much searching, I was unable to get any historical photos of the original motel, but I found this generic postcard printed by the LK chain itself. It's a pretty good representation of the motel in Medina. The Medina LK Motel has been turned into retail strip stores as can be seen in the photos. The LK Restaurant was originally turned into a church, with a large addition in the back, as shown in the photos, but now it is a Salvation Army store.



Left wing of the old LK Motel



Right Wing of the same.



Front of the LK Restaurant; Side of restaurant facing the motel with a large addition built in back

Rare LK Restaurant Post Card showing things as they used to be



ALWAYS KEEP YOU THINKING

THE PERKS OF BEING OVER 50

- Kidnappers are not very interested in you.
- In a hostage situation you are likely to be released first
- No one expects you to run -- anywhere.
- People call at 9 PM and ask, "Did I wake you?"
- People no longer view you as a hypochondriac.
- There is nothing left to learn the hard way.
- Things you buy now won't wear out.
- You can eat dinner at 4 P.M.
- You can live without sex but not without your glasses
- You enjoy hearing about other people's operations.
- You get into heated arguments about pension plans.
- You no longer think of speed limits as a challenge.
- You quit trying to hold your stomach in, no matter who walks into the room.
- You sing along with elevator music.
- Your eyes won't get much worse.
- Your investment in health insurance is finally beginning to pay off.
- Your joints are more accurate meteorologists than the national weather service.
- Your secrets are safe with your friends because they can't remember them either.
- Your supply of brain cells is finally down to a manageable size.



*It's Amazing The Difference
A Haircut Makes. . . .*

