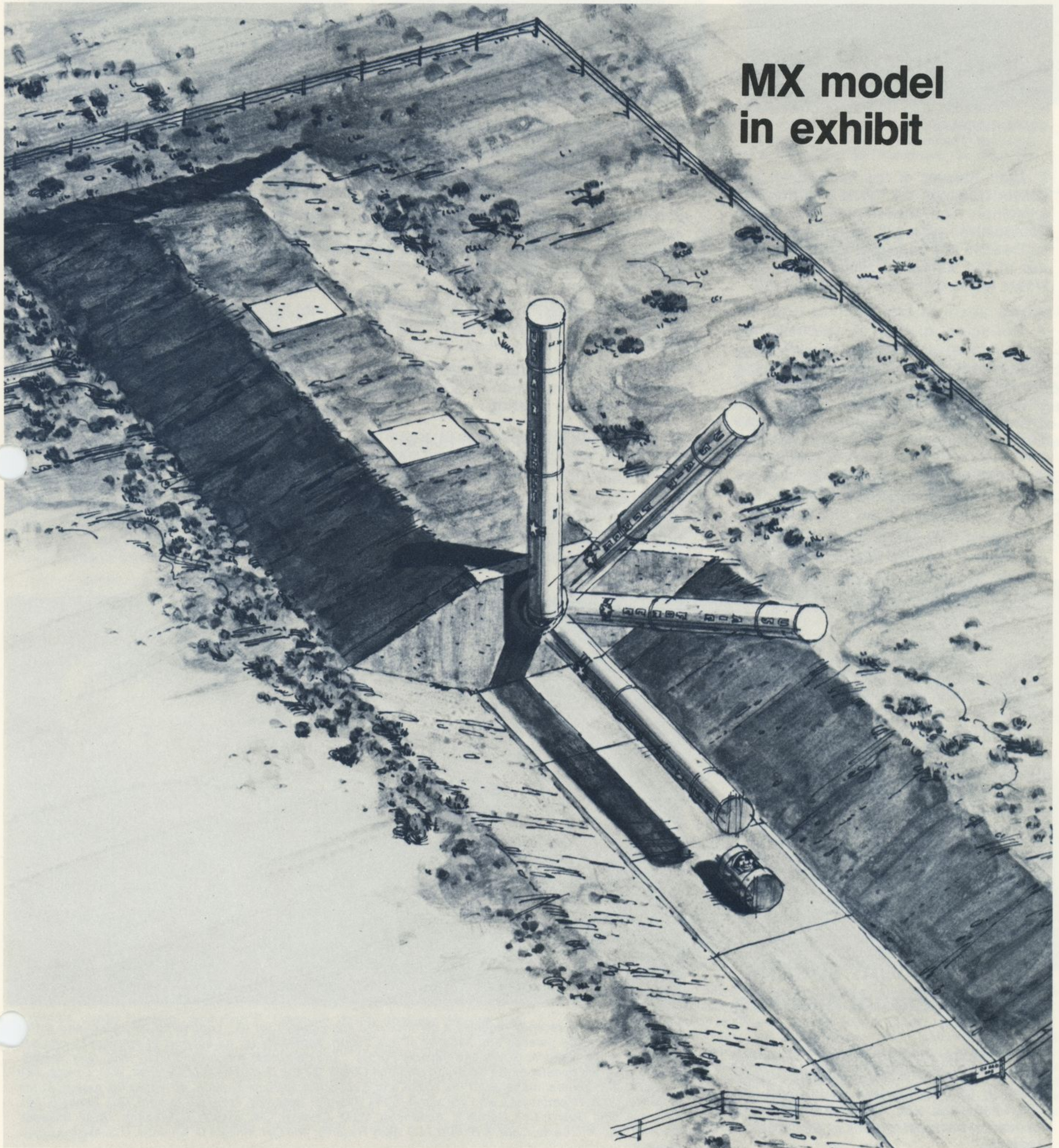


NUMBER 12/1980

**MX model
in exhibit**



Aerospace products to be exhibited at AFA convention

Denver Aerospace is participating in the Air Force Association 34th annual convention in Washington, DC with exhibits on the MX missile, the manned maneuvering unit (MMU), the space sextant, and the space operations simulators. The meeting is from September 15 through September 18 at the Sheraton Washington Hotel.

The MX portion of the exhibit includes a working model of the shelter and launcher. The exhibit also includes a one-twelfth scale model of the missile.

D. Blair Stewart of the MX project will deliver briefings on the MX during the exhibition. A new five-minute film, "MX in Perspective," also will be featured. It describes the MX basing concept and land use in the valleys of Nevada and Utah where MX is expected to be deployed.

A full-scale model of the manned maneuvering unit will be shown along with photographs of astronauts testing the MMU during acceptance of the final engineering design in May. The exhibit also includes concepts for various uses of the MMU including Shuttle inspection and contingency operations, orbital payload deployment and retrieval, and assembly of large space systems.

The space operations simulator exhibit covers the moving base carriage, the neutral buoyance test chamber, and remote manipulator systems simulator.

A four-minute film describing the use of the space operations simulator in the development of flight techniques for the manned maneuvering unit and in training astronauts for MMU use also is featured in the exhibit.

The space sextant demonstration includes a model of the instrument that works with a star map and a drawing of the moon.

Orlando Aerospace also is participating in the exhibit, displaying a wide variety of its tactical weapons systems and sensors.

Vice president speaks at professional meeting

A.E. Hawkins, vice president for business operations, was the speaker at the August meeting of the National Estimating Society. His topic was, "What management needs from estimators and costs analysts."

On the cover

The artist's concept represents the model of Missile X that will be on exhibit at the Air Force Association annual convention in Washington, D.C.

Governor cites employee for conference work

Irma Jean Guire, Denver Aerospace chief of protocol, has been cited for her work at the National Governors Association conference held recently in Denver.

In a letter, Colorado Governor Richard D. Lamm said, "I want to extend my personal gratitude to you for your help.... As Host Governor, I received many compliments from governors, their families, and many other attendees. They all had a great time and your work 'behind the scenes' was a major reason why.

"Martin Marietta should be proud of you. I do appreciate their loan of your time in helping with the meeting."

Ms Guire's principal task was to organize and coordinate the reception and barbecue at Currigan Hall for 1200 people.

In other community activity, Ms Guire has served on the Lakewood on Parade celebration committee since 1976, the past three years as senior vice president for dignitaries.

Growing pains at credit union

The rapid growth in membership and assets in the Red Rocks Federal Credit Union "Has surpassed all expectations and clearly reflects the desire of its members for continued success," said Charles W. Richards, credit union manager.

During the first six months of operation, the credit union has enrolled 2100 members and has collected almost three quarters of a million dollars in assets.

However, the loan program has been so successful that all currently available funds for revolving credit, automobile, and other secured loans have been used. The credit union has temporarily suspended loans, except for share secured loans, until savings deposits and payroll deductions replenish the loan funds.

The suspension of loan programs is expected to be short term, perhaps only a few weeks. During that period, loan policies are being reviewed so equitable distribution of loan funds can be made to future applicants.

Rapid growth has brought an increase in staff and facilities to better serve members.

"With such rapid expansion, growing pains are inevitable, and members' continued patience and support will lead to an even more prosperous organization," Richards said.



Denver Aerospace recently received a certificate of appreciation for its "continuing patriotism and active participation in the defense and security of this nation, especially for its support of employees who are members of the National Guard and Reserve Forces." The certificate was presented by Brig. Gen. John L. France, adjutant general of the Colorado National Guard, for the Department of Defense. W.O. Lowrie, vice president and general manager of the space and electronics systems division, accepted the award. At the presentation were employees who are active in the Guard or Reserves. From left to right, Col. James E. Ahl, Army National Guard; Col. Gerald E. Simonson, USAF Reserve; Col. Joseph T. Tutchtou, USAF Reserve; General France; Lowrie; Capt. A.B. Huff, U.S. Navy Reserve; and Col. William G. Cheadle, U.S. Marine Corps Reserve.

Recreation

Volleyball Leagues: Entry deadline for fall volleyball leagues is September 15. Two co-ed recreation leagues and a co-ed BB league are being formed. The recreation leagues will play Monday and Thursday nights from September 22 through November 17 at Arthur Henry Junior High School. The BB league will play Thursday night at Arapahoe Community College from September 25 through December 11. Randall K. White, ext. 599 (DSC), is volleyball commissioner. Recreation league commissioner is Joel Mendleson, ext. 5138; BB league commissioner is John Fisher, ext. 667 (DSC).

Golf Tourney Results: Medalist at the annual Martin Marietta Open golf tourney was David Banerian with a 73. Runnerup was Paul Morehead, 75. Women's medalist was Ellie Beeler and runnerup was Claudia Knox. Men's low net: Paul Nolan; runnerup, W.J. Raymond. Women's low net: Vicki Lewis; runnerup, Raven Rhiddlehoover. Closest to the pin for men: G.A. Parker, Richard Wiese, Rudolph Jugert, and Virgil Kraft. Longest drive, men: R.R. Romero, Jimmy Grubbs, C.R. Robinson, and Thomas Penhollow. Closest to the pin, women: Vickie Lewis and Claudia Knox. Longest drive, women: Pam Kenney and Donna Griffin.

Photo Contest Winners: Nearly 300 entries were received in the recent Photo Club contest. Winners were: *Nature*, Larry D. Hoffman, first; Larry Spletstoser, second; Richard J. Burtzloff, third; *People*, Gordon Hornbaker, first; Fred A. Luhman, second; Bonnie York, third; *Animals*, Sharon Hunter, first; Buzz Morrison, second; James Walker, third. The winning photographs are on display in the engineering building near the cafeteria. Those interested in joining the club should call John Gaudio, ext. 3731.

Hunter Education: The Skyline Hunting and Fishing Club is conducting a hunter education program beginning September 16. Instructor is Dorlan DeWitt. Those interested in the course should call Richard Benson, ext. 5241.

Radio Course: The Waterton Amateur Radio Society will begin an amateur radio operator course September 16. To register for the course, call David Roberts, ext. 5689; Thomas Dickerson, ext. 5997; or Edward Buchanan, ext. 5215.



Employee of the month award for July was presented Chester F. Culver, left, by William T. Gansert, space launch systems production operations director. Culver was honored for his outstanding performance as end of the line quality inspector for production operations, including preparation, coordination, and processing paper work for eight vehicles on schedule and without error.

Aluminum company has new president

Dr. Bernard W. Gamson has been elected a corporate vice president and named president of Martin Marietta Aluminum.

Gamson, 62, succeeds Frank X. Bradley, who has retired after 21 years with Martin Marietta—the past six as the Aluminum company president.

Gift matching program is healthy, growing

Recent status reports on Martin Marietta's employee educational and cultural gift-matching programs indicate that both are in good health and growing.

Since inauguration last year of the two-for-one educational gift-matching program—representing a \$2 for \$1 match by the corporation—the corporation, its directors, and employees have provided \$348,600, nearly four times the amount contributed to colleges and universities during any year since the gift-matching program began in 1968. The expanded program has a \$25 minimum and a \$2000 maximum gift limit per year per employee for each educational institution.

The arts and cultural gift-matching program has also reported positive response by employees around the corporation. Some \$10,000 was disbursed to 33 organizations during its first six months of trial operation. Under the program, Martin Marietta matches contributions from salaried employees from a \$25 minimum to a \$1000 maximum per calendar year.

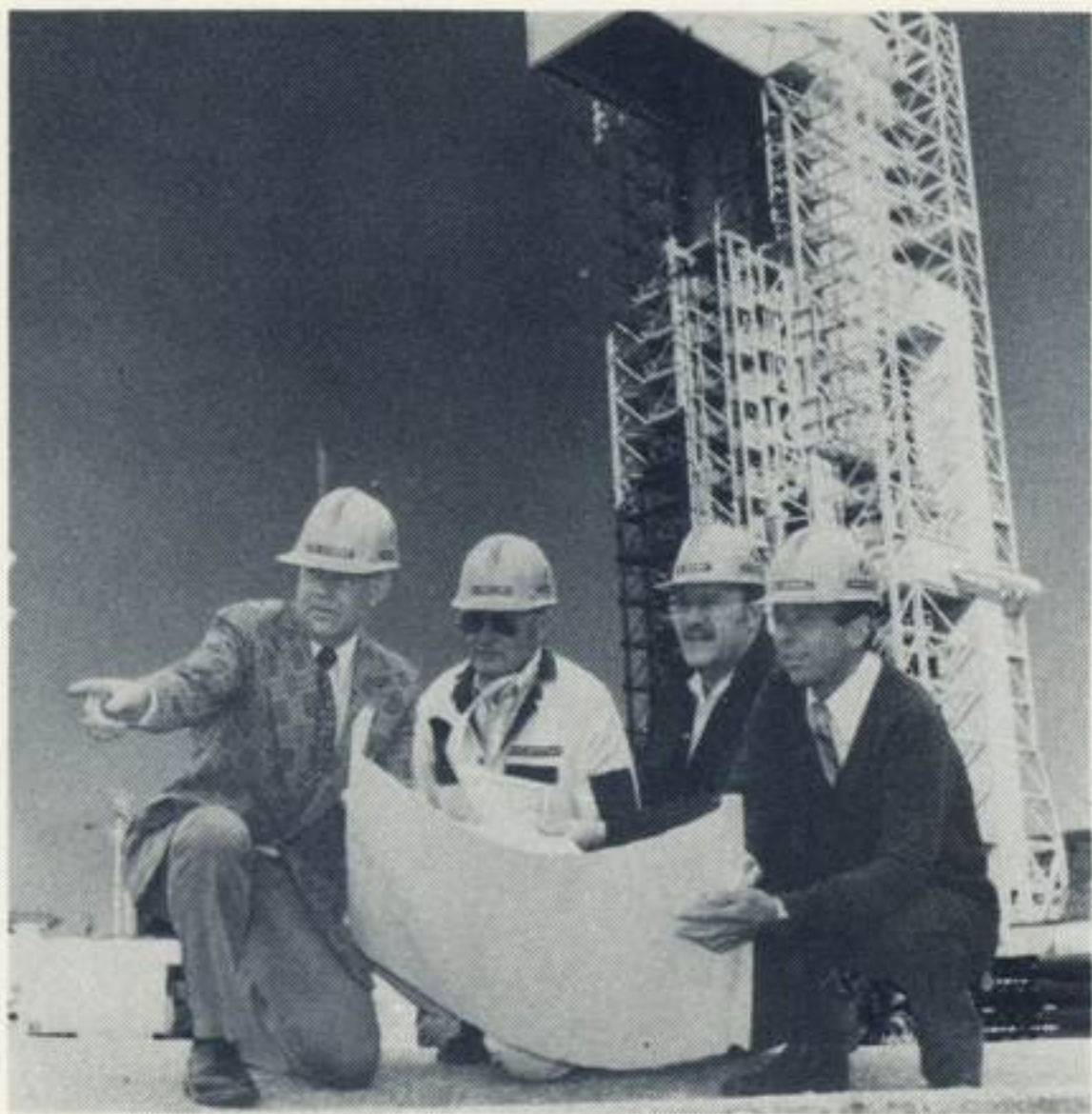
Guidelines and application forms for these programs are available from Denver Aerospace employee relations office.

New president named for Aggregate division

John W. Bourdeaux has been named president of Martin Marietta Aggregates' central division, succeeding Gene M. Mason, who has retired.



Ridge Riders Saddle Club members and their families took first place in the mounted division of Littleton's recent Western Welcome Week parade. The riders were under the direction of Merle McCaslin. The club has participated in the annual event for 20 years and frequently has taken the top award. The parade is one of the many club events during the year. Others include gymkhanas, trail rides, and family nights.



Checking engineering plans for the modification of the mobile service tower are Edward M. Carson, installations engineer; Donald R. Shilling, technician; Duane G. Norris, planner; and Donald E. Gosnell, senior group engineer.

Mobile service tower modified for Titan 34D

How do you modify an existing 25-story mobile service tower to accommodate the newest stretched member in the Titan III family—the 34D—while continuing to provide the capability of check out and launch of existing Titan III vehicles?

The answer: design and modify the facility and supporting equipment for dual capability.

The Titan 34D core vehicle has a lengthened ten-foot diameter first stage and a modified second stage with additional avionics. It will serve as the primary Department of Defense launch vehicle during the transition to the Space Shuttle reusable boosters. When Shuttle becomes operational, the 34D booster will be used primarily as back-up to Shuttle.

Modification to the mobile service tower at Vandenberg Air Force base space launch complex 4E includes reworking the relocating folding platforms, umbilical booms, and the design and fabrication of portable work stands.

The modifications will permit both the shorter Titan III and the longer 34D to be prepared for launch from the same service tower. To launch a standard vehicle, a 40-ton launch mount space and pressure baffle will be installed at the start of the launch cycle. The spacer will position the standard vehicle so that stage II work areas will be at the same level as for the 34D.

Modification is scheduled to be complete in early 1981.

Construction begins on Vandenberg MX facilities

Construction on the first of the Missile processing and flight test facilities has begun at Vandenberg Air Force Base. Under construction are the integrated test facility, the missile assembly building, and the mechanical facility building. Road improvement and construction and utilities installation will begin soon. First test launch is expected in January 1983.

Denver Aerospace Vandenberg operations personnel and subcontractors are monitoring construction activities and preparing for the installation and check out of the MX ground support systems. The effort also includes the responsibility for specification development, design review, construction surveillance, and environmental monitoring.

Environmental monitoring includes dust control, erosion control, protection of existing water supplies, and protection and restoration of native flora and fauna.

Archaeologists and Native Americans are present to insure that archaeological artifacts are properly identified and preserved. The site was once the home of the Chumash Indians. Of particular interest are remnants of ancient settlements and manufactured tools and weapons. Four candidate archaeological sites have been identified and some artifacts have been uncovered.

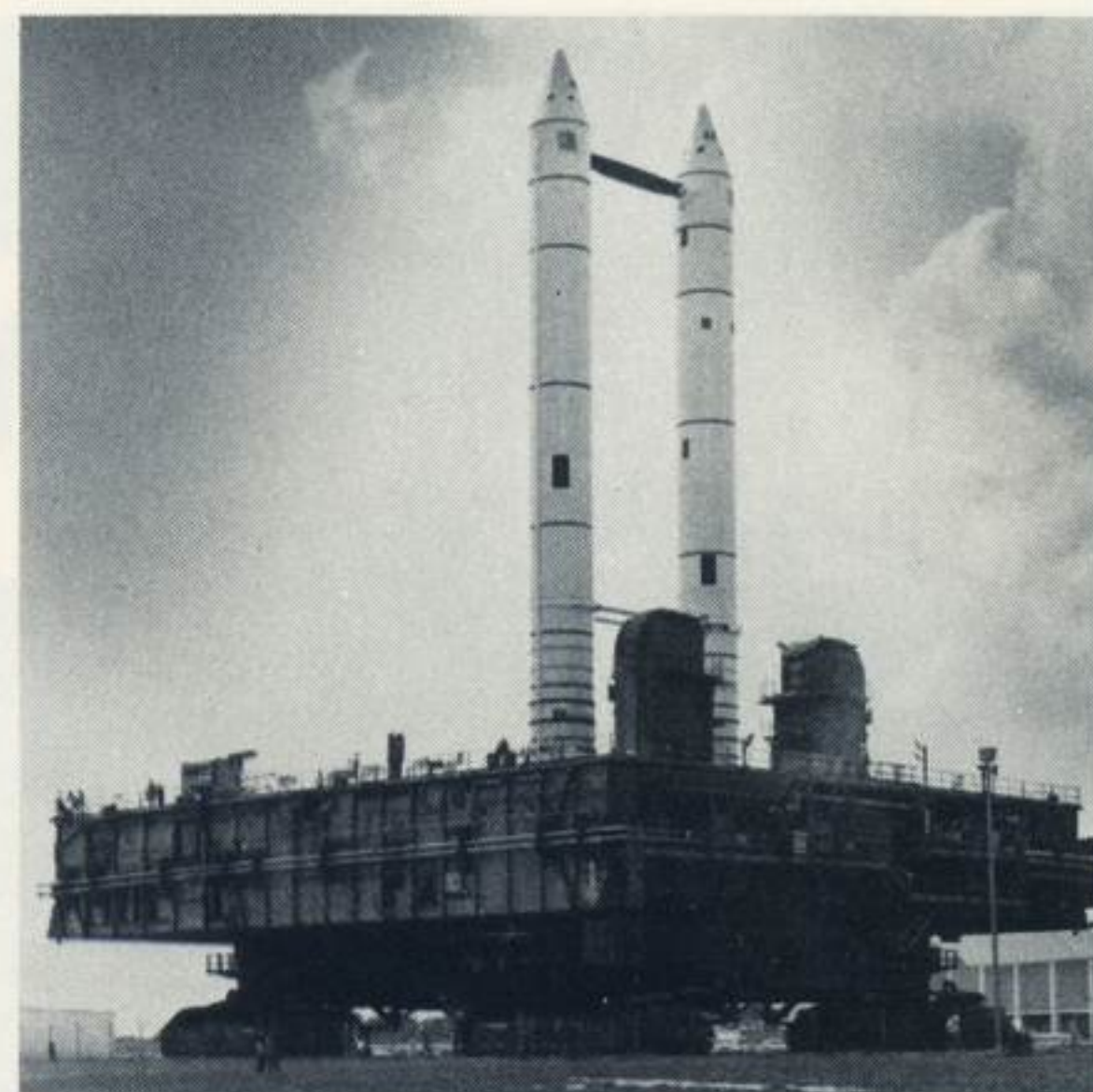


A Martin Marietta Corporation gift of \$3500 was presented recently to the United Way of Brevard County. L.S. Favata, left, external tank operations, presented the check to John P. Nelson, United Way executive director.

Canaveral security chief elected to NCMS office

James H. Mathena, Canaveral operations security chief, has been elected vice president of the National Classification Management Society (NCMS).

The Society, with members from government and industry, is devoted to advancement of security classification management as a profession and develops and refines principles and techniques of security classification management and information security.



A flight external tank/solid rocket booster thrust beam connects boosters to support a recent series of tests at Kennedy Space Center.

Shuttle solid rockets rolled out for tests

One-third of Space Shuttle recently was rolled out into daylight for the first time in more than a year for a series of tests.

The Shuttle's twin solid rocket boosters, aboard a mobile launch platform, rolled 375 feet out of the Kennedy Space Center's vehicle assembly building. To support the tests, a flight thrust beam was installed by Denver Aerospace external tank operations personnel at KSC. The beam, located near the top of the solid rockets, weighs about 1200 pounds.

The tests were conducted to determine how much the rocket boosters will flex under loads placed on them by external tank.

The flight thrust beam was removed at the end of the tests and returned to Michoud. An identical beam is installed in the first flight external tank undergoing check out and modification work at KSC. The beam is inside the external tank between the liquid oxygen and liquid hydrogen tanks. It connects the rocket boosters' forward attach points and absorbs their thrust loads placed on the Shuttle.

The external tank is scheduled to be attached to the solid rockets in late October. The orbiter is to be attached to the external tank in late November.

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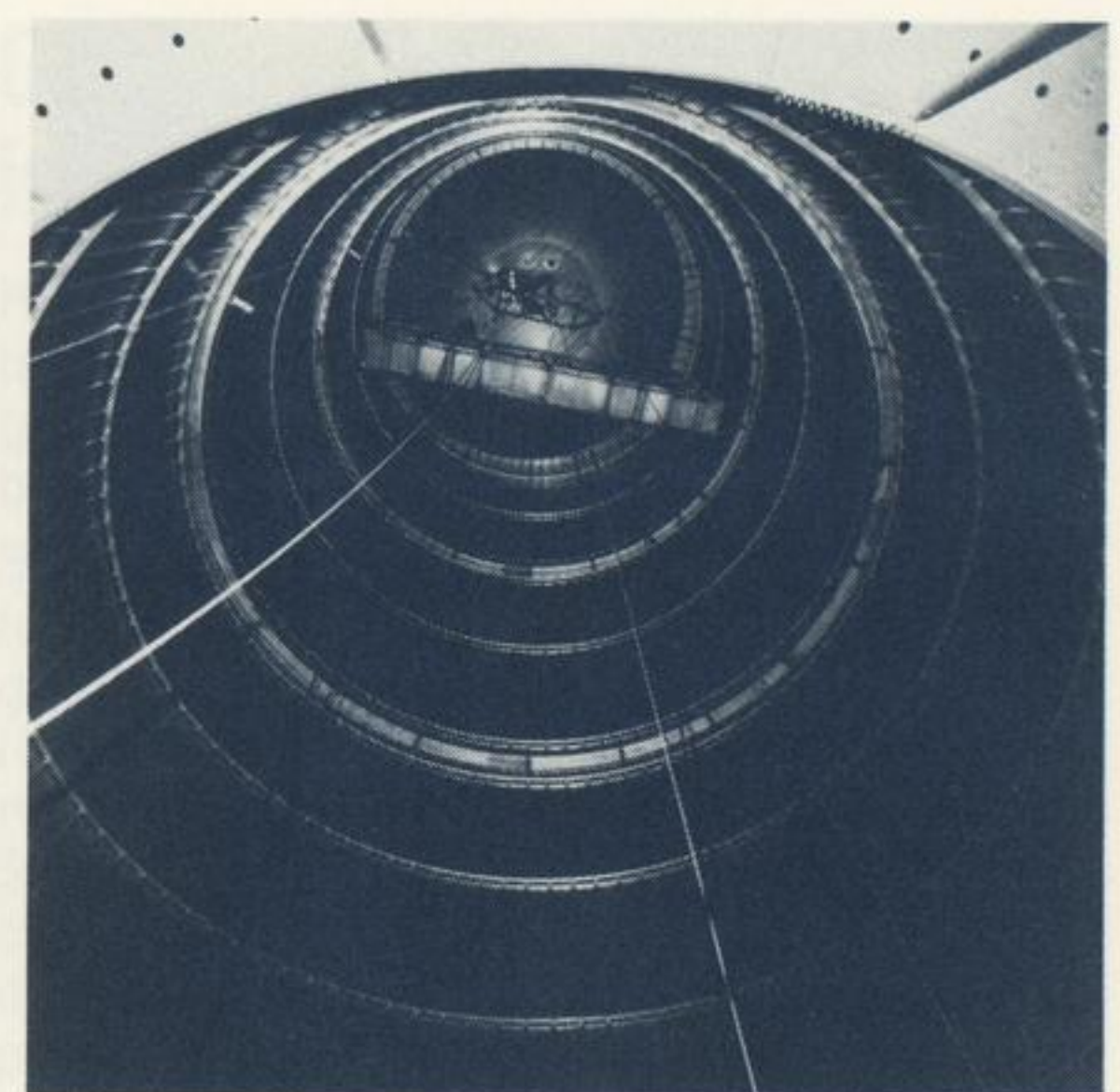
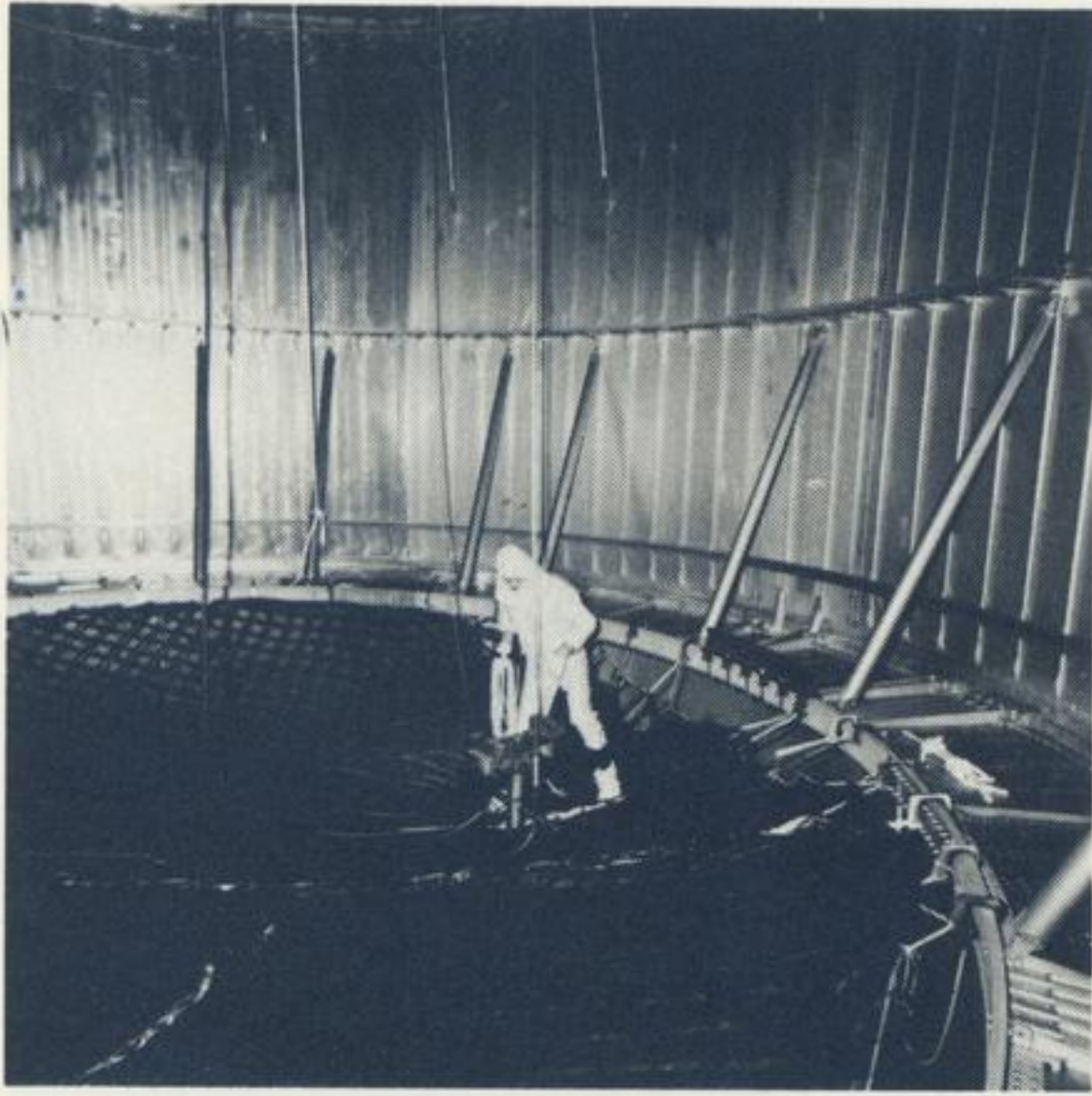
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Denver Division

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External tank operations employees work on modifications inside the liquid hydrogen tank at Kennedy Space Center. In the first photo, one of two tripod assemblies that help stabilize the two-person movable platform during assembly and dismantling is installed. Tag lines leading to a swiveling beam assembly are checked in the center photo. In the photo at right, the platform is raised inside the 97-foot long liquid hydrogen tank. The platform, attached to a swiveling beam assembly, can rotate 360 degrees to permit access to the total length of the tank.

Move to new building is completed at Michoud

In a move described as "no small task," more than 700 employees are now working in newer, more energy-efficient facilities at the Michoud Assembly Facility.

The 12-phase project, moved furniture and equipment for the finance, engineering, contracts, and computer services departments to offices in a newer, two-story building about 1000 feet from former locations. Moves were made on weekends to minimize disruptions.

"Overall, the move went rather smooth-

ly," said Randall A. Tassin, facilities manager. "This is especially true when you consider the number of people involved. We moved about 100 tons of furniture and equipment."

The move had been planned since 1975 so buildings constructed in the 1940s could be vacated. It was projected that it would cost \$1 million to refurbish the older structures. Although the move cost almost that much, the amount will be recovered in three to five years because of

energy savings and reduced maintenance costs.

Facilities, production operations, product assurance, engineering liaison, and mission success departments, with 815 employees, will remain in the buildings adjacent to the main external tank assembly facility. The older facilities will be upgraded.

The move went so smoothly that 95 percent of the telephone numbers are unchanged and most departments were in operation the Monday afternoon following the department's move.



Outstanding individual employee effort was recently recognized at Canaveral operations. Honored, seated left to right, were David McNeill, SCAPE technician; James W. Weddle, quality inspector; and Paul D. Daymude, quality engineer. McNeill was commended for 10 years of sustained performance in SCAPE suit maintenance and operation. Weddle was cited by Aerojet Services Company, by the commander of the 6555th ATG, and by Canaveral operations for discovering an improper installation of a stage I oxidizer thrust chamber valve. Daymude was recognized for outstanding performance in quality planning during an extended critical time span. Others participating in the presentations were, standing left to right, James N. Wilson, PTPS lead engineer; Jack B. Gilbert, quality manager; and Thurman C. Coberly, quality supervisor.



Four Canaveral operations employees have been commended for outstanding individual effort in support of programs. Those cited, seated left to right, were Brooks E. Kilgore, instrumentation technician; Donald Andrus, quality inspector; Warren C. Swank, electrical technician; and Gail H. Faison, PACE technician. Faison was honored for his effort in solving complex on-site problems in the programmable aerospace check out equipment (PACE). Kilgore, Warren, and Andrus were cited for outstanding technical effort during a major modification to Complex 40 propellant loading system. Participating in the presentations were, standing left to right, William H. Habern, quality supervisor; Dennis L. Langley, lead engineer for ground instrumentation; and Nicholas T. Geso, group engineer for electrical/electronics.

After-hours shrimp fishing an Arthur family affair

The air is heavy with moisture; your forehead beads with perspiration as you head the boat into the setting sun. The even, easy swells gently rock the boat as the tail of the 1000-foot net begins dragging off the back of the vessel. The exhaust deepens two octaves as the net fills and grows taught. Within an hour the net will hold thousands of Louisiana shrimp.

While this scene is repeated hundreds of times a day by commercial fishermen, this time it is different: the boat is skippered and crewed by the Arthur family after putting in eight hours at Michoud.

Russell J. Arthur, who was recently put in charge of Michoud's new employee suggestion system, has always loved to fish. Melvin Arthur Sr., who works at Michoud for Boeing Services, has always taken his sons out on the water whenever the opportunity arose. Three years ago the family decided to buy its own boat. Since then it has become the family's focus during the warmer shrimping months.

When the warmer months arrive, the family men gather to perform all the endless maintenance a boat demands, while their wives and children visit, cook, and play. Later, when the shrimp come in, the women divide the chore of cleaning and cooking the shrimp as well as packaging most of it for the freezer for use later. "There is a great pleasure not only in having shrimp in December but in knowing you caught it yourself," Russell Arthur admits.

The Arthurs exhibit the same family closeness and teamwork at work as on their boat. Melvin Arthur Jr. is a supervisor on the major weld tool.

"When I graduated with my master's degree in 1978, my brother and father had convinced me Martin Marietta was the best employer in the area. There wasn't an office position available then, so I took a job in the factory. I figured I would just work my way up," Russell Arthur explained. "Besides, there was room for one more body in the car pool.

"I wouldn't work anywhere else! Louisiana is too beautiful and the external tank program is too challenging."



The Arthur family solves a carburetor problem on their 28-foot shrimp boat. Melvin Arthur Sr., left, has worked for Boeing at Michoud since 1963. He recommended Martin Marietta to his oldest son, Melvin Jr., right, who started work there in 1976. He liked the company enough to recommend it to his brother Russell, center, who started work in the factory after finishing his MBA in 1978.



A fellow shrimp boat out on the lake at sunset.



The catch.

Michoud credit union response 'gratifying'

Response to the initial sign-up period for the Martin Marietta Michoud division credit union "has been most gratifying," according to Harold Foley, member of the supervisory committee.

During the first week, more than 600 employees joined; by mid-July, a month after opening, 800 employees enrolled.

Foley reports 99 percent of the members are using the payroll deduction plan. Money deposited is being put in savings and investment accounts drawing the highest dividends.

"The turnout was much greater than expected," Foley said. "We expected about 30 percent participation, but we have 36 percent of the employees as active members."

While the credit union office is being refurbished, the part-time office manager, David Combs, is available daily from 10 am to 1 pm on the second floor of building 102, column EJ-43, to answer questions and to enroll new members.