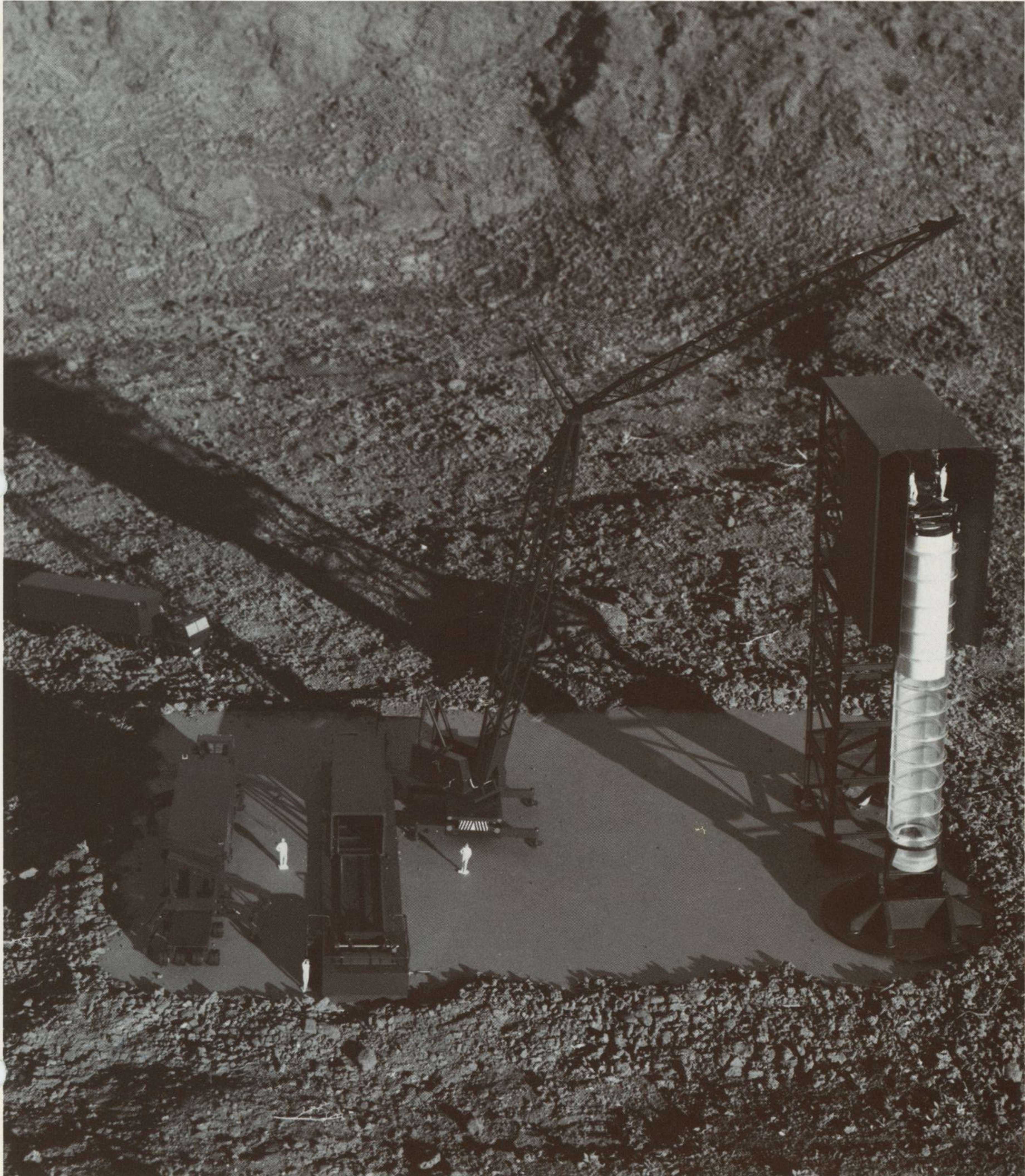


NUMBER 6/1978



Air Force selects division for major Missile X role

The Denver Division has been selected as the assembly, test, and system support (AT&SS) contractor for Missile X, the next generation intercontinental ballistic missile.

The contract was awarded by the Air Force Space and Missile Systems Organization (SAMSO), the Defense Department's executive management agency for the project.

During the initial phase, the systems definition period, the division will help the Air Force derive the specifications for the Missile X development and test program.

Later, if Congress approves full-scale development, the division will assist the Air Force in development, flight test, and evaluation of the missile system. In addition, at that time, the division also will be responsible for the design and production of the missile transportation and handling equipment and the instrumentation and flight safety system.

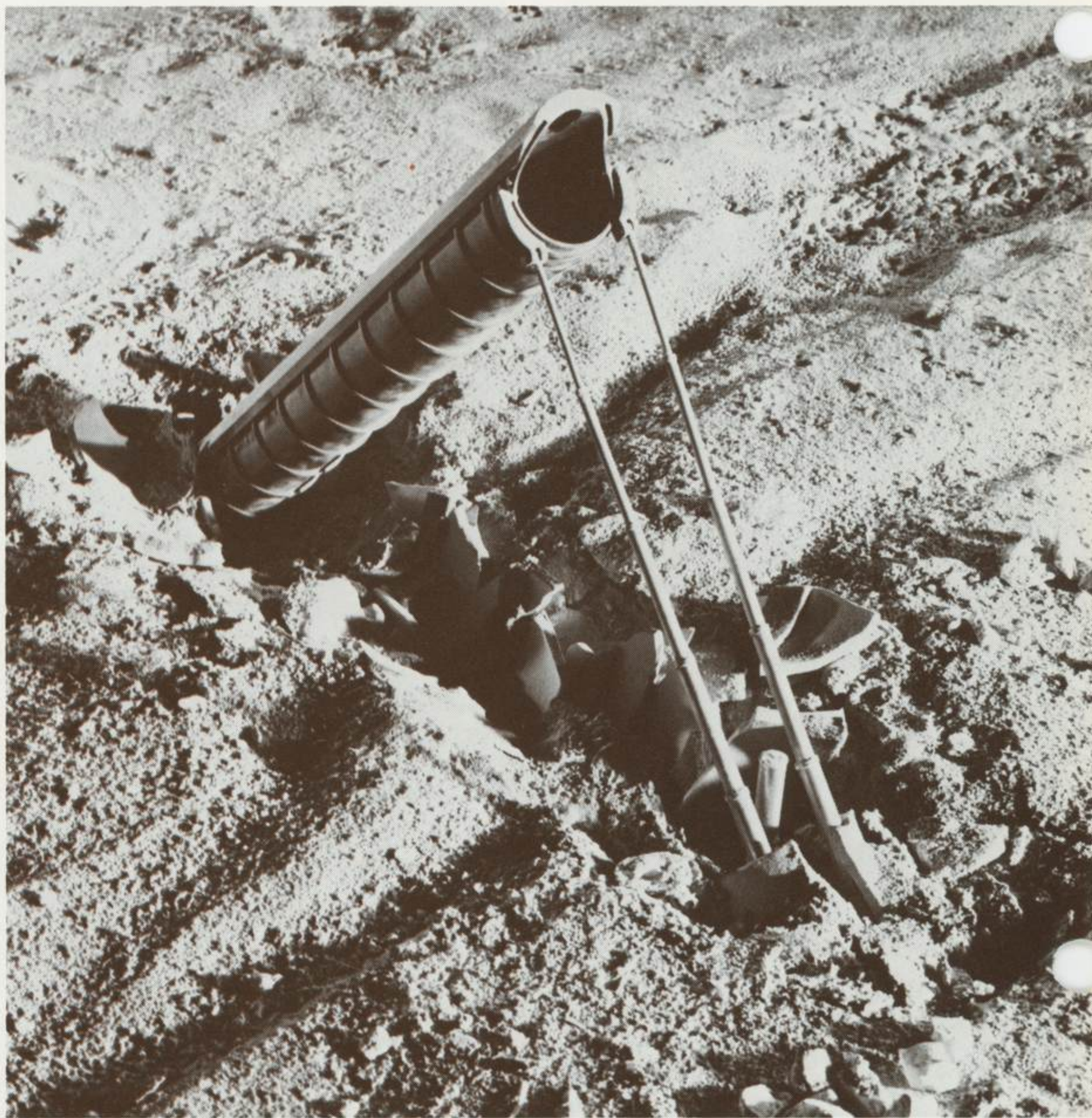
C. B. Hurtt, vice president of Martin Marietta Aerospace and general manager of the Denver Division, commenting on the selection of the division for the Missile X AT&SS contract, said:

"The thrill and excitement of being selected the contractor for the Missile X assembly and test ranks with the moments when we learned that we won the Titan, the Skylab, and the Viking contracts.

"This is the result of an incredible effort by our super MX team and I congratulate them. However, until Congress acts in favor of full-scale development of the MX system, I caution our employees and our neighbors against premature optimism regarding the impact of this contract on our division and our community.

"I believe the MX is a vital element of our nation's security. It is clear to me that the new advancements in Soviet Union technology and missile accuracy present a true peril to our country's strategic deterrent policy. The MX represents the newest United States system to offset or neutralize that threat. Therefore, I hope that the Congress acts promptly to go forward with the full-scale development of the MX system for the Air Force."

Initially, 250 employees from the division's present work force will be assigned to the MX project. It is expected the number of employees working on MX will reach a peak of 800 by the mid-1980s, 700 of them in Denver and the



In this model, the canister for Missile X has broken through the roof of the tunnel so the missile is in launch position. This is part of system being considered in the tunnel concept for the new intercontinental ballistic missile.

others at Vandenberg Air Force Base in California.

Most of the employees at Denver will be engineers and computer specialists and those at Vandenberg will be test technicians and engineers.

The four missile stages and the reentry components of the system will be produced by other aerospace companies under Air Force contract for eventual assembly by the Denver Division.

Walter O. Lowrie, the division vice president who headed the successful proposal effort, will be the Missile X program director. Lowrie was assigned to MX after directing the Viking project in which two highly complex scientific spacecraft were successfully landed on Mars for exploration of that planet.

The MX is a mobile system designed to be hidden in a complex of underground trenches or in multiple shelters to negate its vulnerability due to Soviet Union ad-

vances in missile technology and guidance accuracy.

The ICBM, in the trench concept, would be deployed in a series of widely dispersed 11-mile-long tunnels. It would be launched from a giant canister which would break through the roof of the tunnel and erect the missile into firing position.

In the shelter concept, specially-designed vehicles, some empty and some carrying missiles, would randomly rotate among numerous, widely dispersed underground shelters. The object would be to prevent an enemy from knowing which shelter contains the missile.

On the cover

Model of Missile X proposed test site is shown as it might be constructed at Vandenberg Air Force Base.

Lowrie to direct Missile X program

Walter O. Lowrie will be the Denver Division's project director for the Missile X assembly, test, and systems support program.

He formerly directed the highly successful program that designed, built, and landed two unmanned Viking spacecraft on Mars.

Lowrie joined Martin Marietta at its Baltimore division in 1948 after graduation from the Massachusetts Institute of Technology as an aeronautical engineer.

In 1957 he moved to the Denver Division where he was assigned as program manager for the Titan I ICBM. He was later quality manager for the Titan II and Titan III launch vehicles.

He directed the Viking effort from 1972 until January 1977. He was named a division vice president and head of technical operation for the division in 1975 and as-



sumed his Missile X duties in late 1977.

Lowrie is a member of the American Institute of Aeronautics and Astronautics and is chairman of the board of the Denver Metropolitan Science Center.

Alumni to honor employee

Walter Martyneec Jr., manager of administration for the division's technical operations, has been named to receive the 1978 Academy of Aeronautics alumni association meritorious award.

The award will be presented at the Academy's annual alumni dinner May 13.

In his letter announcing the award, Walter M. Hartung, president of the Flushing, New York institution, said, "... I speak for the entire Academy family ... when I say that no one more richly deserves being so honored ... The record speaks for itself: your long and distinguished engineering career; your expert counseling services over the years to the Academy advisory council; your generous support of the annual fund drives; and your invaluable assistance to and genuine interest in young Academy graduates seeking employment in the exciting aerospace industry. You are not only a model graduate but an ideal award recipient."

Martin Marietta exhibits systems at Hanover air show

The latest developments in U.S. precision tactical weapon delivery systems were shown for the first time in Europe by Martin Marietta Aerospace April 26 through May 4 at the Hanover International Aerospace Exhibition. The systems, based on advanced technology in microelectronics, lasers, and other electro-optical equipment, are being applied to military helicopters and fixed-wing aircraft, ground combat vehicles, and anti-armor artillery.

Participation in the exhibit is part of Martin Marietta Aerospace's expanding European marketing effort. The company also will exhibit at the Farnborough Air Show, southwest of London, in September. In conjunction with the air shows, Aerospace representatives will hold briefings for the European press and will conduct an advertising program in European trade publications. The advertisements will be selected from those used in the 1977 U.S. advertising program.

Plans are being made to exhibit at the 1979 Paris Air Show with the Denver Division's teleoperator retrieval system expected to be the feature of the exhibit.

Orlando Division work was featured at



Hanover. The exhibit included material and presentations on the fire-control/navigation system (TADS/PNVS) being developed for the U.S. Army advanced attack helicopter, the Copperhead laser-guided artillery projectile, and Pave Penny airborne laser spot tracker.

The Martin Marietta display also featured systems being developed in cooperation with European firms: the ATLAS (automatic tracking laser illumination system) and Bussard laser-guided mortar round.

John H. Boyd Jr., left, presents \$600 check to Walter Martyneec and Kenneth E. Sedlmayr for Operation Santa Claus. The Christmas-in-April gift was the division's matching contribution for the paper drive held earlier.

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Astronauts begin tests of mini-spacecraft

Space Shuttle astronauts have begun tests of a unique space device designed by the Denver Division to boost Skylab into a higher orbit or onto a safe reentry trajectory.

Fred Haise and Jack Lousma, pilots for one of the first Shuttle missions, are using the division's space simulator to become familiar with the teleoperator retrieval system (TRS). The remotely-controlled small propulsion stage will serve as a space tug to move Skylab and other spacecraft.

Haise, a Shuttle orbiter pilot, and Lousma, who will fly the TRS when it moves Skylab, are assisting division engineers in the design of the TRS control panel. TRS is being built for NASA.

The 157,000-pound Skylab space station is expected to reenter the Earth's atmosphere in 1980 unless it is boosted to higher orbit.

Plans call for the TRS to be carried to the vicinity of Skylab in the cargo bay of an early Space Shuttle orbiter. Lousma, using television and a remote command and control system, will guide the stage from the Shuttle's bay to a rendezvous with Skylab and dock TRS with Skylab.

Powered by its small hydrazine engines, the stage will maneuver Skylab into a higher orbit or onto a safe reentry trajectory. The TRS will return to Shuttle for the return flight to Earth.

The division's space simulator duplicates, through computers, the actions of spacecraft in space. The simulator has been programmed to reproduce the slow tumbling motion of Skylab to provide a realistic test of the TRS.

The Skylab Multiple Docking Adaptor, which was built by the Denver Division, has been incorporated into the simulator to enable Shuttle astronauts to define the intricate maneuvers required to dock with Skylab. The astronaut consultations are expected to last several weeks at the convenience of the Shuttle crew members.



Recreation program designed for employees

"There is always something going on in the division's recreation program," Ilene R. Goorman, who recently became coordinator of the program, said. "Some of the activities are seasonal and some go on all year. The programs are open to all employees."

Included in the recreation program are:

Skyline Hunting and Fishing club; Ridge Riders Saddle club; tennis; radio club;

long distance running; chess club; basketball league; slow pitch softball league; gun club; golf; bowling; and physical fitness.

"We are interested in helping to provide recreational activities that employees want," Mrs. Goorman said. "For this reason, I would like to encourage employees who have suggestions to call me. Together we can perhaps create new programs."

In top photo, Astronaut Jack Lousma sits at controls in simulator checking out teleoperator retrieval design. A.M. Lex Ray, a Denver Division employee, and Astronaut Gordon Fullerton use simulator television system, bottom photo, to check view from simulated aft flight deck of Space Shuttle orbiter.

Photos on this page were taken on National Secretaries Day to honor secretaries at the Denver Division.

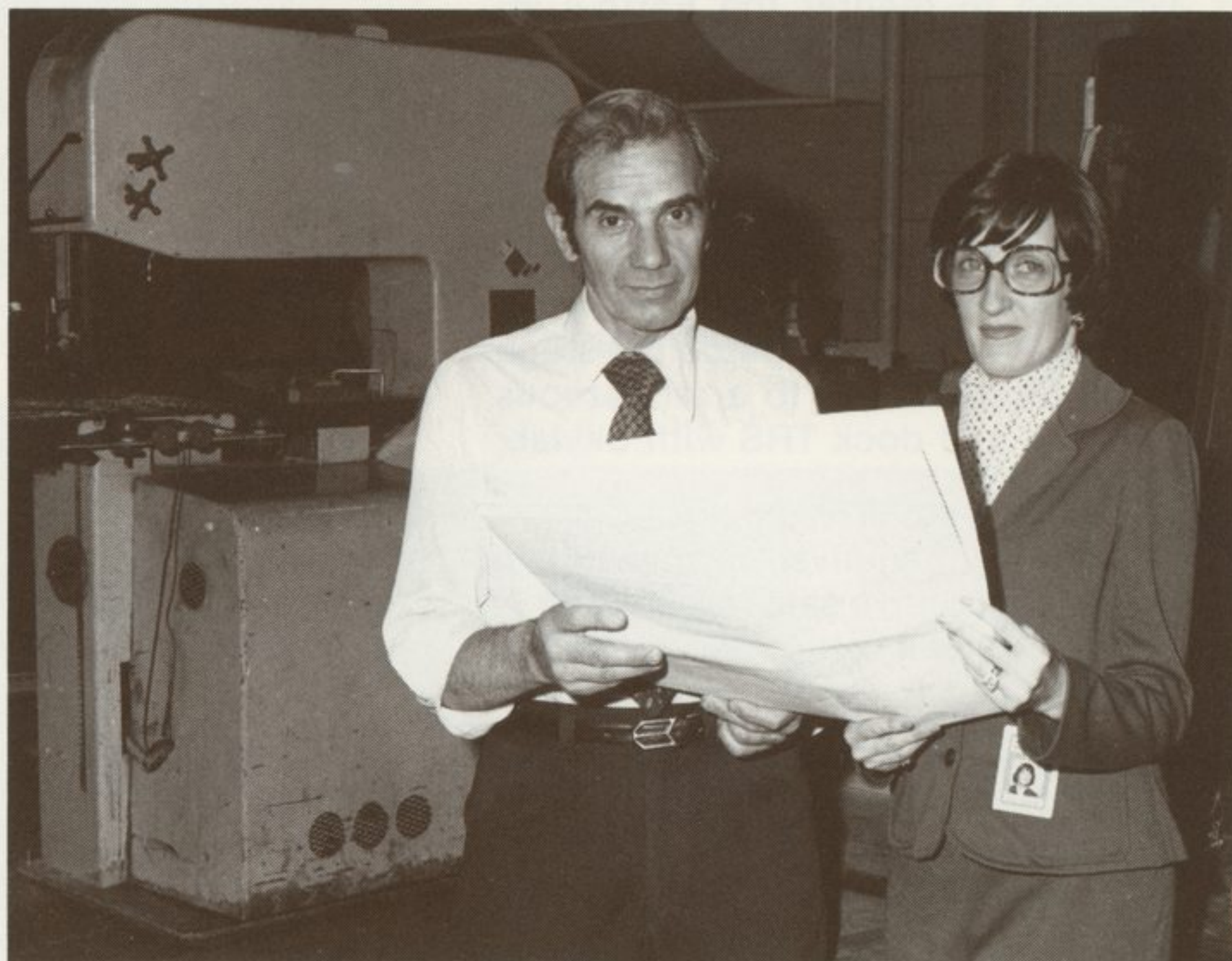
The tape dispenser/paper weight presented each secretary on National Secretary's Day was accompanied by a note from C. B. Hurtt, vice president and general manager of the Denver Division which said:

"Please accept this gift as management's expression of thanks for a job well done. This past year has been one of great excitement. Under such circumstances we may not always express our appreciation for the key role you play in our everyday activities. On this, your special day, many thanks from all of us."

Newest of the secretaries at work on National Secretaries Day was Ann Hinkins who had been on her job in the Air Force plant representatives office for just two days.



**Secretaries Week
April 1978**



Nancy Ulvick, manufacturing engineering secretary, has been at the division six months. She took time away from her desk to learn more about the work of her department from Albert Barsotti, assistant foreman in tool manufacturing and jig fixtures.



Hazel Chapman has been a secretary at the Denver Division for 18 years – all of them in the same department. She is shown here checking personnel files in detail manufacturing.



Katherine M. White kept working as the photographer was taking her picture, never hesitating to answer the phone even though the camera was being focused. She has been at the division 17 years.



Beginning her 26-year Martin Marietta career in Baltimore, Betty Hilton moved to Denver in 1956 and has worked on major division projects since then, including Skylab. She has been in professional and industrial relations since January.

At Michoud

Three Space Shuttle main engines fired in main propulsion tests

The first static firing test of the cluster of three Space Shuttle main engines took place on April 21 at the NASA National Space Technology Laboratories in Bay St. Louis, Mississippi.

The liquid oxygen and liquid hydrogen propellants were fed to the engines from the main propulsion external tank built by Martin Marietta at Michoud, and delivered to NASA in rollout ceremonies last fall.

This first firing was mainly an ignition test lasting only one second, shorter than the planned 2.35 second burn.

NASA officials blamed the early shut off on a temperature irregularity in the high pressure fuel turbo pump on the engines.

The next test firing is scheduled in mid-May and will be for 15 seconds at 70 percent thrust.



Philip M. Baptiste, right, executive director, Opportunities Industrialization Center of Greater New Orleans, receives a \$500 check from Hugh Farabaugh, left, director of professional and industrial relations, Michoud Operations. The money is a Martin Marietta Corporation Foundation Gift to the Industrialization Center which assists disadvantaged members of the New Orleans work force. William V. Willis, standing, is Michoud operations coordinator for the center.



Top award winners at Canaveral operations Gold Medallion banquet were, left to right, John A. Cunningham, Launch Vehicle Readiness, and Cyril M. Holly and Richard J. Tennis, Launch Vehicle Flight Success.

At Canaveral

Canaveral employees honored at banquet

The annual Canaveral operations Gold Medallion awards banquet was held recently at the Eau Gallie Yacht Club in Indian Harbour Beach with F. J. Scheffler, director of Canaveral operations, presenting the awards.

Highest honors went to John A. Cunningham, who received cash, the medallion, and a certificate for the Launch Vehicle Readiness award, and to Cyril M. Holly and Richard J. Tennis, who received the top Launch Vehicle Flight Success award and a top cash award.

Innovation awards were presented to Martin S. Blankfield, Mary P. Knittel, George L. Pestik, and Douglas N. Gilman.

A dual award was presented to Gerald L. Moskovitz and James W. Weddle for their outstanding performance as a team during systems checkout and validation testing.